codling wind park

Observations Response Document

codling
wind park

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Abbreviations

Abbreviation	Term in full
AA	Appropriate Assessment
ABR	Auditory Brainstem Response
ACCC	Aarhus Convention Compliance Committee
ACP	An Coimisiún Pleanála
ADD	Acoustic Deterrent Device
AESI	Adverse Effects on Site Integrity
AEZ	Archaeological Exclusion Zone
AIE	Access to Information on the Environment
AIS	Automatic Identification System
ALARP	As Low As Reasonably Practicable
AONB	Area of Outstanding Natural Beauty
ASCOBANS	Agreement on the Conservation of Small Cetaceans of the Baltic, north East Atlantic Irish and North Seas
ASSIs	Areas of Special Scientific Interest
BoCC	Birds of Conservation Concern
BTO	British Trust for Ornithology
BWI	Bird Watch Ireland
CAP	Climate Action Plan
CBF	Community Benefit Fund
CDP	County Development Plan
CEA	Cumulative Effects Assessment
CECs	Contaminants of Emerging Concern
CEFAS	Centre for Environment, Fisheries and Aquaculture Science
CEMP	Construction Environmental Management Plan
CETUS	Cetacean, Elasmobranch, Turtle, and Seabird distribution modelling platform
CIEEM	Chartered Institute of Ecology and Environmental Management
CIL	Commissioner of Irish Lights
CJEU	Court of Justice of the European Union
CO_2eq	Carbon dioxide equivalent
CPA	Coastal Planning Authority

Abbreviation	Term in full
CPO	Compulsory Purchase Order
CPUE	Catch Per Unit Effort
CRM	Collision Risk Modelling
CWP	Codling Wind Park
CZM	Coastal Zone Management
DAA	Dublin Airport Authority
DAFM	Department of Agriculture, Food and the Marine
DAHG	Department of Arts, Heritage and the Gaeltacht
DAS	Distributed Acoustic Sensing
DAU	Development Applications Unit
dB $L_{E,p,ss}$	Decibels Sound Exposure, Sound Pressure, Single Strike
DCC	Dublin City Council
DDV	Drop-Down Video
DEB	Dynamic Energy Budget
DECC	Department of the Environment, Climate and Communications
DEFRA	Department for Environment Food and Rural Affairs
DHLGH	Department of Housing, Local Government and Heritage
DLRCC	Dun Laoghaire Rathdown County Council
DMAP	Designated Maritime Area Plan
DoT	Department of Transport
DPC	Dublin Port Company
ECMG	East Coast Monitoring Group
ECoW	Ecological Clerk of Works
eDNA	Environmental Deoxyribonucleic Acid
EDR	Effective Deterrent Range
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EMF	Electromagnetic Fields
EPA	Environmental Protection Agency
ESAS	European Seabirds at Sea
EVMP	Ecological Vessel Management Plan
FIR	Further Information Request
FLO	Fisheries Liaison Officer

Abbreviation	Term in full
FMMS	Fisheries Management and Mitigation Strategy
FSA	Formal Safety Assessment
GES	Good Environmental Status
GHG	Greenhouse Gas
GIS	Geographic Information Systems
GLVIA	Guidelines for Landscape and Visual Impact Assessment
GPG	Good Practice Guideline
GW	Gigawatt
HF	High Frequency
HPAI	Highly Pathogenic Avian Influenza
HSA	Health and Safety Authority
HSE	Health and Safety Executive
IAA	Irish Aviation Authority
IAMMWG	Inter-Agency Marine Mammal Working Group
IAS	Integrated Automation System
IBTS	International Bottom Trawl Survey
ICES	International Council for the Exploration of the Sea
IEMA	Institute of Environmental Management and Assessment
IFP	Instrument Flight Procedure
IMMA	Important Marine Mammal Area
IMO	International Management Organisation
INNS	Invasive Non Native Species
IOA	Institute of Acoustics
IoM	Isle of Man
iPCoD	Interim Population Consequences of Disturbance
IPPEMP	In Principle Project Environmental Monitoring Plan
IRCG	Irish Coastguard
IUCN	International Union for Conservation of Nature
iVMS	Inshore Vessel Monitoring System
IWDG	Irish Whale and Dolphin Group
IWeBs	Irish Wetland Bird Survey
JNCC	Joint Nature Conservation Committee
LCA	Landscape Character Assessment

Abbreviation	Term in full
LOBE	Level of Onset of Biologically adverse Effects
LoD	Limit of Deviation / Limits of Deviation
LPUE	Landings Per Unit Effort
LSE	Likely Significant Effects
LVIA	Landscape and Visual Impact Assessment
MAC	Maritime Area Consent
MAMP	Marine Archaeology Management Plan
MARPOL	Marine Pollution
MCA	Maritime and Coastguard Agency
MCZ	Marine Conservation Zone
MGN	Marine Guidance Note
MI	Marine Institute
MLWS	Mean Low Water Springs
MMEA	Manx Marine Environmental Assessment
MMMP	Marine Mammal Mitigation Protocol
MMO	Marine Mammal Observer
MNH	Manx National Heritage
MNRs	Manx Nature Reserves
MPA	Marine Protected Area
MPPS	Marine Planning Policy Statement
MSFD	Marine Strategy Framework Directive
MSL	Mean Sea Level
MSO	Marine Survey Office
MSP	Maritime Spatial Planning
MU	Management Unit
MUL	Maritime Usage Licence
MW	Megawatt
NAS	Noise Abatement Systems
NIGFS	Northern Irish Groundfish Survey
NIS	Natura Impact Statement
NISA	North Irish Sea Array
NMFS	National Marine Fisheries Service
NMPF	National Marine Planning Framework

Abbreviation	Term in full
NMS	National Monuments Service
NPL	National Physical Laboratory
NPO	National Policy Objective
NPWS	National Parks and Wildlife Service
NRA	Navigational Risk Assessment
NSIP	Nationally Significant Infrastructure Projects
NTS	Non-Technical Summary
OC	Organic Carbon
OECC	Offshore Export Cable Corridor
OMB	Operations and Maintenance Base
OMS	Ornithology Monitoring Strategy
ORE	Offshore Renewable Energy
OREDP	Offshore Renewable Energy Development Plan
ORESS	Offshore Renewable Electricity Support Scheme
OSPAR	Oslo and Paris Conventions
OSS	Offshore Substation
OWF	Offshore Wind Farm
PAD	Protocol for Archaeological Discoveries
PAM	Passive Acoustic Monitoring
PDA	Planning and Development Act
PEMP	Project Environmental Monitoring Plan
PFCs	Perfluorinated Chemicals
PINS	Planning Inspectorate
PLONOR	Pose Little Or No Risk
pNHA	Proposed Natural Heritage Area
PTS	Permanent Threshold Shift
PVA	Population Viability Analysis
QI	Qualifying Interest
RED III	Renewable Energy Directive III
RSCA	Regional Seascape Character Assessment
RSPB	The Royal Society for the Protection of Birds
SAA	Special Amenity Area
SAC	Special Area of Conservation

Abbreviation	Term in full
SAMS	Scottish Association for Marine Science
SAR	Search and Rescue
SBP	Sub Bottom Profiling
SCANS	Small Cetacean Abundance in European Atlantic Waters and the North Sea
SCI	Site of Community Importance
SEA	Strategic Environmental Assessment.
SEL_{cum}	Cumulative Sound Exposure Level
SELss	Sound Exposure Level Single-Strike
SF6	Sulphur Hexafluoride
SFPA	Sea-Fisheries Protection Authority
SLoO	Single Line of Orientation
SLVIA	Seascape, Landscape and Visual Impact Assessment
SMRU	Sea Mammal Research Unit
SNCB	Statutory Nature Conservation Body
SPA	Special Protection Area
SSC	Suspended Sediment Concentration
TCA	Townscape Character Assessment
tCO2e	Tonnes of Carbon Dioxide Equivalent
TFEU	Treaty on the Functioning of the European Union
TG-Noise	Technical Group on Underwater Noise
TII	Transport Infrastructure Ireland
TSC	Territorial Sea Committee
TSO	Transmission System Operator
TTS	Temporary Threshold Shift
UAIA	Underwater Archaeological Impact Assessment
UÉ	Uisce Éireann
UHRS	Ultra High Resolution Surveys
UWN	Under Water Noise
UXO	Unexploded Ordnance
VER	Valued Ecological Receptor
VHF	Very High Frequency
VMS	Vessel Monitoring System

Abbreviation	Term in full
VOR	VHF Omnidirectional Range
WFD	Water Framework Directive
WTG	Wind Turbine Generator
ZoI	Zone of Influence
ZTV	Zone of Theoretical Visibility

1 INTRODUCTION AND DOCUMENT PURPOSE

1.1 Submission of the CWP Project Planning Application

1. Codling Wind Park Ltd., a joint venture project between EDF Renewables and Fred. Olsen Seawind, is proposing to develop the Codling Wind Park (CWP) Project, a proposed offshore wind farm (OWF) located in the Irish Sea approximately 13–22 km off the east coast of Ireland, at County Wicklow.

2. On Friday 6th September 2024 Codling Wind Park Ltd. (referred to hereafter as the 'Applicant') applied for planning permission to An Coimisiún Pleanála (ACP) (referred to hereafter as the 'Commission') under Section 291 of the Planning and Development Act (PDA) 2000, as amended, for the construction, operation and decommissioning of the CWP Project. The application comprised of:

    1. Planning Documents
    2. Planning Drawings
    3. Planning Report
    4. Planning Report Appendices
    5. Public and Stakeholder Consultation Report
    6. Environmental Impact Assessment Report (EIAR)
    7. Natura Impact Statement (NIS)
    8. Supporting Documents

3. This information was provided in hard and soft copy for the Commission and the relevant coastal planning authorities (CPAs):

    - Dublin City Council;
    - Dún Laoghaire & Rathdown County Council; and
    - Wicklow County Council

4. Soft copies of the planning application were also provided in the form of USB drives to each of the prescribed and transboundary bodies listed in **Appendix A** of the **FIR Response Document**.

5. Lodgement of the planning application initiated an eight week consultation period, formally commencing 23rd September 2024 and ending 18th November 2024.

6. During this period the planning application, including the EIAR and the NIS, were made available for inspection by the general public at the offices of the Commission and at each of the above-mentioned CPAs. The planning application was also available to view and download at the CWP Project planning application website: www.codlingwindparkplanningapplication.ie

7. Notices published at the time of the application confirmed the purpose of the consultation period; to provide an opportunity for CPAs, prescribed bodies, transboundary bodies and other third parties (including the general public) to review the planning application documentation and submit formal observations to the Commission relating to –

    i. the implications of the proposed development for proper planning and sustainable development;
    ii. the likely effects on the environment of the proposed development; and
    iii. the likely significant adverse effects on the integrity of a European site, (in the context of the Birds and Habitats Directives).

1.2 Receipt of the submissions

8. On 29th November 2024, the Commission issued a suite of documents to the Applicant including a total of 56 submissions. This was followed by four further submissions, resulting in a total of 60 submissions made to the Commission in relation to the CWP Project application.

9. On 1st August 2025 the Applicant received a letter from the Commission inviting a response by the Applicant to the submissions received and observations made.

1.3 Purpose of this document

10. This document has been prepared in response to the Commission's invitation to respond to the submissions received and observations made in relation to the CWP Project planning application.

11. The document summarises the matters raised and provides a response to these, with cross reference where appropriate to the relevant documents that make up the CWP Project planning application, including the EIAR and NIS, and other documents that make up the Applicant's FIR response. **Table 1-1** below provides an overview of the documents that make up the FIR response.

Table 1-1 FIR response schedule of documents

Document	Appendices
FIR Response Document This document provides a point by point response to each request made in the Commission's FIR. It cross refers to information provided in the documents listed below.	• Appendix A - List of prescribed and transboundary bodies • Appendix B - Schedule of post application consultations • Appendix C - Data validation statements • Appendix D - Letter from IRCG r.e. Safety Justification • Appendix E - Marine Guidance Note 654 Compliance Checklist • Appendix F - Offshore and Intertidal Ornithology Cumulative Migratory Collision Risk Modelling • Appendix G - Utility of Radar • Appendix H - Suitability of DAS for Characterising Manx Shearwater Activity • Appendix I - Alternative Outputs Referencing NatureScot Higher Displacement and Mortality Rates • Appendix J - Site-specific Flight Height Distribution Data for Collision Risk Modelling • Appendix K - Project-Only PVA Requirement Review • Appendix L - Potential Appendix for alternative outputs for TTS • Appendix M - NMS approval of draft Marine Archaeology Management Plan (MAMP) • Appendix N - Letter from AirNav Ireland r.e. Dublin Airport

Document	Appendices
	• Appendix O - SLVIA additional maps • Appendix P - Temporary bailey bridge drawings
Observations Response Document This document provides a point by point response to observations received on the Applicant's planning application.	• Appendix A – Schedule of Transboundary Consultations
EIAR Addendum This document provides new or revised information to support and / or update the planning application EIAR and Non Technical Summary (NTS). **Part 1** - Non-Technical Summary and Chapters 1 to 13 of the EIAR. **Part 2** - Chapters 14 to 34 of the EIAR.	• Appendix 4-A Updated preliminary offshore export cable crossing schedule • Appendix 6-A Modelling Report Addendum • Appendix 6-B Intertidal Assessment • Appendix 7-A Water Framework Directive Assessment Addendum • Appendix 8-A Benthic Subtidal Survey Report 2025 • Appendix 8-B Landfall and Intertidal Survey Report 2025 • Appendix 8-C DDV Wicklow Reef Survey Report 2025 • Appendix 9-A CWP Migratory Fish eDNA Survey Report 2025 • Appendix 9-B Noise overlap with spawning and nursery ground calculations • Appendix 9-C Underwater Noise Modelling Assessment • Appendix 10-A Tern and Black Guillemot Survey Report 2025 • Appendix 10-B Migration Survey Report • Appendix 10-C ESAS Survey Report 2025 • Appendix 10-D Baseline and contemporary data comparison • Appendix 10-E Intertidal Crepuscular Tern Survey Report 2025 • Appendix 10-F Intertidal Waterbirds Survey Report 2025 • Appendix 10-G Regional Population Assessment • Appendix 10-H Kittiwake Displacement Matrices • Appendix 10-I Design-based Density, Abundance Estimates and Distributional Response of the Red-throated Diver • Appendix 10-J Parameterisation of Red-throated Diver Displacement Rates • Appendix 10-K Roseate Tern Collision Risk Modelling • Appendix 10-L Great Black-backed Gull Population Viability Analysis Parameter Log

Document	Appendices
	• Appendix 11-A Update to Marine Mammal Baseline Characterisation • Appendix 11-B SMRU Consulting TTS Position Statement • Appendix 11-C Assessment of disturbance from mitigated pile driving – Full results • Appendix 12-A Evidence of fishing within OWF array areas • Appendix 13-A Offshore Bat Survey Report 2025 • Appendix 13-B LUX Assessment Report • Appendix 16-A IRCG Safety Justification • Appendix 16-B Navigational Risk Assessment Addendum • Appendix 21-A Badger and Otter Survey Report 2025 • Appendix 21-B Bat Assessment 2025
NIS Addendum This document provides new or revised information to support and/ or update the planning application NIS. It is split into three parts; **Part 1** – Introduction, Screening and SAC/ SPA Project Alone Assessment. **Part 2** – SAC In-combination Assessment **Part 3** – SPA In-combination Assessment	• Appendix A - SPAs Site Specific Conservation Objectives • Appendix B - SACs Site Specific Conservation Objectives
Cumulative Effects Assessment (CEA) Report This document provides updated cumulative assessments for each of the EIA topics. It is split into three parts; **Part 1** – Introduction and Methodology **Part 2** – Offshore Topics (Chapters 6 to 18 of the EIAR) **Part 3** – Onshore and Project-wide Topics (Chapters 19 to 32 of the EIAR)	**Part 1:** • Appendix 1 - Long list of other development **Part 2:** • Appendix 1 - Ornithology Quantitative Tables
Other Documents	• **Planning Report Addendum:** Appendix 1 - NMPF Compliance / MSFD Assessment

Document	Appendices
• Fisheries Management and Mitigation Strategy (FMMS) • Marine Mammal Mitigation Protocol (MMMP) • Ecological Vessel Management Plan (EVMP) • In Principle Project Environmental Monitoring Plan (IPPEMP) • Construction Environmental Management Plan (CEMP) • Construction & Demolition Waste Management Plan (CDWMP) • Marine Archaeology Management Plan (MAMP) • Planning Report Addendum • Regulation 54 Derogation Application	• There are no FIR appendices associated with the other stand-alone documents
Planning Drawings Planning drawings updated in response to the FIR.	• 0063 Export cable Burial and Protection details Revision B

12. The Applicants responses to the observations received are intended to assist the Commission in its role as the competent authority and decision maker for the CWP Project under Section 291 of the PDA 2000 (as amended).

13. The Commission's decision on whether to grant planning permission for the CWP Project shall be informed by the Inspector's report which shall include the Commission's own EIA and AA. The Inspector's report shall conclude with a recommendation for whether planning permission should be granted.

14. The purpose of this document is to assist the Commission in preparing its inspectors report, by ensuring that all pertinent matters raised during the consultation period have been responded to.

15. The Inspector's report shall be considered by the Board of the Commission who will make the final decision or 'Direction' on whether to grant planning permission.

1.4 Document structure

16. The structure of this document is as follows:

- **Section 1: Introduction and document purpose**
- **Section 2: Analysis of the observations received** - the approach and methodology adopted to analyse the submissions received and to provide a high level overview of what that analysis is showing.
- **Section 3: Methodology for responding** – an explanation of the approach taken by the Applicant in responding to different types of submissions.
- **Section 4: Applicant's response to coastal planning authorities**
- **Section 5: Applicant's response to prescribed bodies**
- **Section 6: Applicant's response to transboundary bodies**
- **Section 7: Applicant's response to registered environmental charities and state agencies**
- **Section 8: Applicant's response to other third parties**
- **Section 9: Planning Conditions**

2 SUMMARY OF THE OBSERVATIONS RECEIVED

2.1 List submissions received by type

17. At the conclusion of the consultation period the Applicant received a total of 60 submissions. These ranged in length from one or two pages to more than 1000 pages of text, including maps, figures and technical appendices.

18. Out of the 60 observations received, 14 (23%) expressed support for the project.

19. A complete list of all submissions received, including the names of organisations and individuals, is provided in **Table 2-1** below. A list confirming which of the notified CPAs, prescribed bodies and transboundary bodies responded to the planning application is provided in **Appendix A** of the **FIR Response Document**.

Table 2-1 List of all submissions received

Type	Name of Organisation
Coastal Planning Authorities	Dún Laoghaire–Rathdown County Council
	Dublin City Council
Prescribed bodies	Minister for Housing, Local Government and Heritage
	Minister for Agriculture, Food and the Marine
	Maritime Area Regulatory Authority
	Marine Institute
	Fáilte Ireland
	An Taisce
	Irish Aviation Authority
	Commissioner of Irish Lights
	Loughs Agency
Transboundary bodies	Department for Infrastructure (Northern Ireland)
	Department of Infrastructure (Isle of Man)
	Marine Directorate (Scotland)
Registered environmental charities and state agencies	BirdWatch Ireland
	Dublin Port Company
	Irish Whale and Dolphin Group
	Transport Infrastructure Ireland
	Uisce Éireann
Other third parties	Alan Richardson

	Alyson Carney
	Aoife McDonnell
	Barry MacCauley
	Blue Ireland Coalition
	Bray and District Chamber
	Clanna Gael Fontenoy CLG
	Coastal Concern Alliance
	Dalkey Community Council
	Derek Mitchell
	East Coast Fishers
	Enda Mannion
	Errigal Bay Ltd
	Eugene Horgan
	Fiona Treacy
	Golden Venture Fishing Ltd
	Greagoir O'Cathasaigh (on behalf of Wild Ireland Defence)
	Halfmoon Swimming and Waterpolo Club
	Laurel Fiszer Storey
	Loman Cusack Design Ltd
	Muireann McDonnell
	Newcastle Village Forum
	Pauline Horgan
	Peter Sweetman and Elizabeth Davidson (on behalf of Wild Ireland Defence)
	Philip Wheatley
	Rathnew GAA Club
	Ronan Keane
	Sandymount Community Centre
	Sofrimar Unlimited Company
	South East Coastal Protection Alliance DAC
	Stephen Gargan
	Susan McDonnell
	Sustainable Greystones
	The Bear Group

	Tim Storey
	Wicklow Enterprise Park
	Wicklow Rowing Club
	Wicklow Wildlife Welfare

20. To assist with managing and understanding the number of submissions received, interpretating the analysis and ensuring the necessary technical experts were deployed to review submissions, the submissions were categorised into one of the following types:

- Type 1 – Coastal planning authorities
- Type 2 – Prescribed bodies
- Type 3 – Transboundary bodies
- Type 4 – Registered environmental charities and state agencies
- Type 5 – Other third parties

21. **Figure 1** below summarises the split of the 60 submissions received across the five submission types.

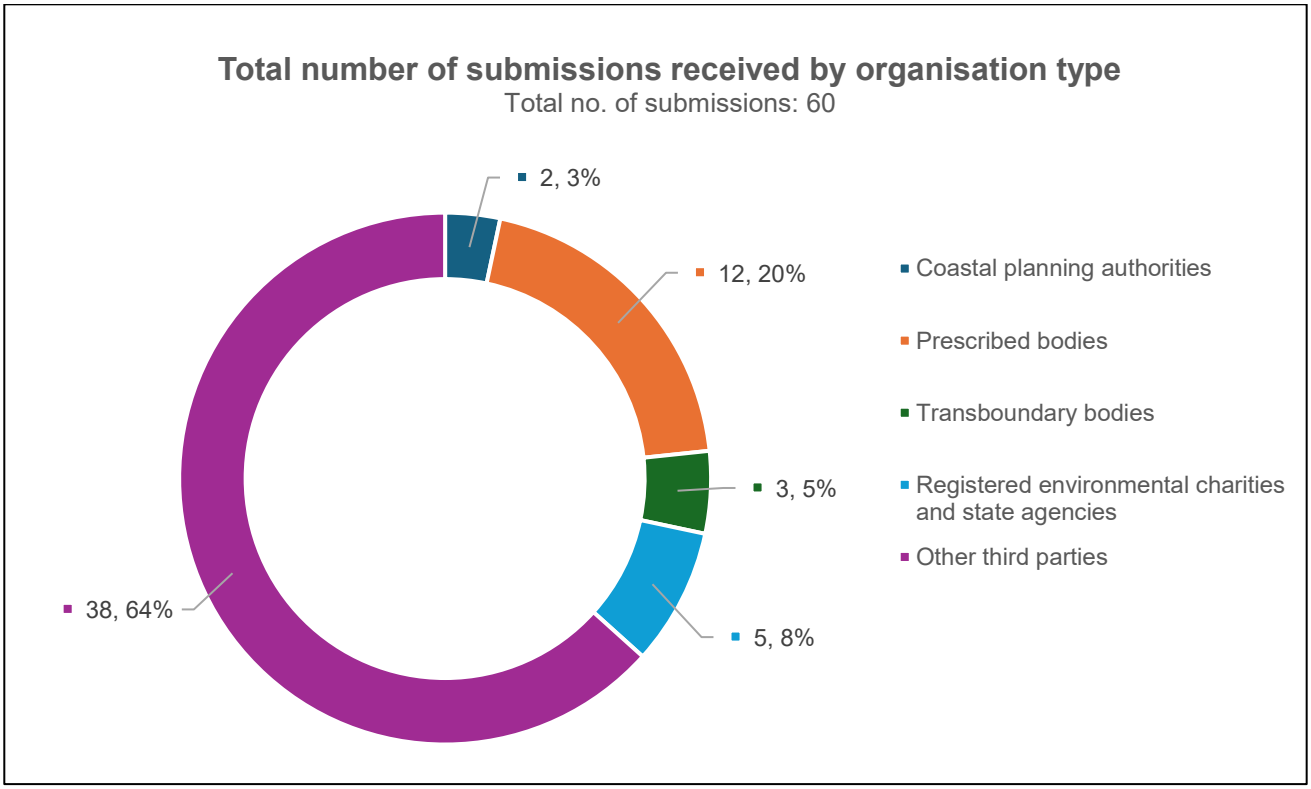

Figure 1 Total number of submissions received by organisation type

22. As shown by **Figure 1**, the majority (64%) of the submissions received by the Applicant were from third parties, which includes members of the public. **Figure 2** provides more detailed breakdown of the third party submissions received. As shown by **Figure 2** the majority (45%) of the third party submissions received by the Applicant were from residential associations and groups, or residents/ individuals and their representatives.

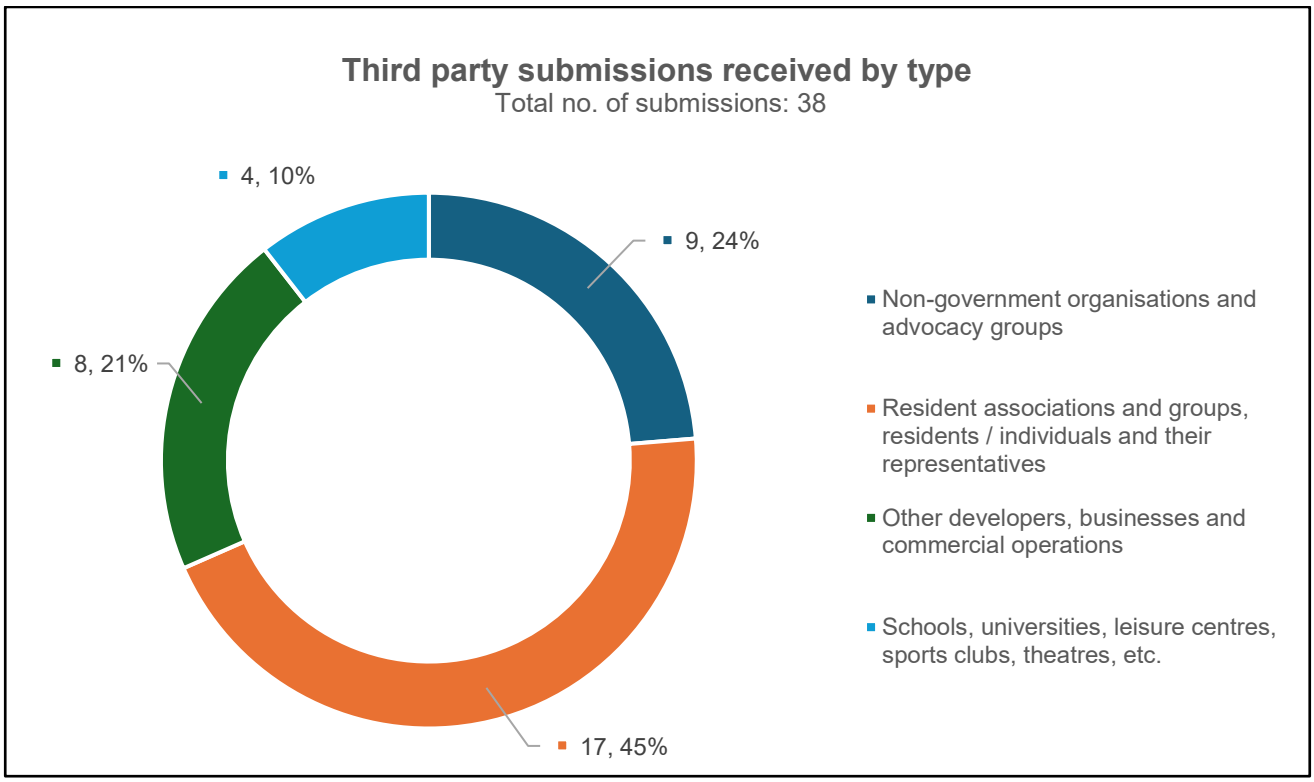

Figure 2 Third party submissions received by type

3 METHODOLOGY FOR RESPONDING

3.1 Responding to individual submissions

23. To assist the Commission in preparing its inspectors report, the Applicant has provided an individual response for each of the following submission types:

- Type 1 - Coastal planning authorities
- Type 2 - Prescribed bodies
- Type 3 - Transboundary bodies
- Type 4 - Registered environmental charities and state agencies

24. A list of the submissions received for each of the above types is provided in **Table 2-1** above.

25. Responding individually to these submissions reflects the more specific and technical nature of the observations provided, which typically reflects the specific interests and responsibilities of the organisation in question.

26. This approach has also allowed the Applicant to respond to a number of proposed planning conditions, put forwards by organisations within these submission types.

3.2 Thematic responses to other third parties

27. Submissions received from other third parties made up 64 % of the total number of submissions received by the Applicant. A list of the submission received by other third parties is provided in **Table 2-1** above. Each of these, including the individual statements and observations contained within them, have been reviewed carefully by the Applicant.

28. It was found that these submissions covered a range of themes which corresponded to the chapters of the EIAR, including the introductory chapters. Other dominant themes corresponded to the volumes of the NIS and other planning application documentation such as policy considerations within the **Planning Report**.

29. Within each main theme a dominant set of sub themes have emerged, which consist of the same or similar observations. For example, concerns were raised in multiple third party submissions about the potential cumulative seascape and landscape effects from multiple OWF projects along the east coast of Ireland. As such, it is possible to distinguish a clear sub theme for cumulative effects under the main theme of Seascape, Landscape and Visual Effects.

30. Furthermore, the analysis found there to be a common set of sub themes across each of the main EIA themes. For instance, multiple observers raised concerns about cumulative effects in relation to SLVIA, but also in relation to several other EIA topics, such as ornithology and marine mammals.

31. The Applicant also notes that several of the third party submissions received were found to be identical or in some cases almost identical to one another.

32. Given the analysis described above it was determined that a thematic response to the third party submissions, using common themes and sub themes, would be the most suitable approach. This would avoid significant repetition in this document that would otherwise result from responding to each third party submission individually.

33. Whilst a thematic approach has been adopted, care was taken to ensure that all pertinent issues have been responded to. For instance, the summary matters described and responded to under each sub

theme are not necessarily matters raised in multiple submissions, although they are likely to have been raised by more than one third party.

34. Thematic responses to the other third party submissions are provided in **Section 8** of this document. For each summary matter the Applicant has noted the relevant observer IDs (1-38 noted in the above list of third party observations) so that the Commission may understand which organisations / individuals made observations relevant to that particular matter.

4 APPLICANTS RESPONSE TO COASTAL PLANNING AUTHORITIES

4.1 Dun Laoghaire Rathdown County Council

4.1.1 Summary of issues raised

35. The following sections provide a response to matters raised by Dun Laoghaire Rathdown County Council (DLRCC). The matters raised have been responded to under the following headings:

- Proposed planning conditions;
- Minimum depth of cover above the CWP Project offshore export cables in the zone of greater burial depth;
- Overlap between the zone of greater burial depth and DLRCC's channel dredge footprint; and
- Cable protection within the zone of greater burial depth.

36. For the purposes of the Applicant's response, the area east of Dun Laoghaire Harbour where it is proposed to bury cables deeper to protect potential future operations at the Harbour is referred to as the zone of greater burial depth. This is consistent with the terminology used in the planning application. DLRCC and the Commission refer to this area as the 'East of Dun Laoghaire Harbour Zone of Deeper Burial Depth' or simply 'Zone of Deeper Burial Depth'. These terms all refer to the same area as shown in planning drawing **0010 Offshore Site Layout Plan Option A (75 WTGs)** submitted with the CWP Project planning application.

4.1.2 Proposed planning conditions

4.1.2.1 Summary of matter raised

37. In the interest of safeguarding future operations at Dun Laoghaire Harbour, DLRCC proposes the following planning condition to be included in the planning consent:

> *'Within the entirety of the East of Dun Laoghaire Harbour Zone of Deeper Burial Depth, the* transmission cable line(s) shall be buried with a minimum depth of cover of 3m'.

4.1.2.2 Applicant's response

38. The Applicant's response to the matters described in **Sections 4.1.3** to **4.1.5** below confirms that the Applicant will comply with this condition.

4.1.3 Minimum depth of cover above the CWP Project offshore export cables in the zone of greater burial depth Summary of matter raised

39. DLRCC seeks clarity on the minimum depth of cover of the export cables in the zone of greater burial depth where this interfaces with Dun Laoghaire Harbour's channel dredge footprint to accommodate cruise ships and select commercial vessels within the harbour in the short to mid-term future.

40. DLRCC notes that the planning application includes some inconsistencies with regards to the depth of the transmission infrastructure trench within the zone of greater burial depth. It is considered essential

that the transmission trench is installed at adequate depths in order to safeguard future operations of Dun Laoghaire Harbour, a piece of strategic infrastructure in the County.

4.1.3.1 Applicant's response

41. The CWP Project has sought planning permission for a trench depth of 3m in the zone of greater burial depth, as opposed to 3m depth of cover. The Applicant also recognises that certain parts of the planning application refer to a trench depth of 3m, whilst other parts refer to 3m depth of cover.

42. Updates to the planning application documents listed below have been made to confirm the intention to lay offshore export cables at a *minimum depth of cover of 3m* in the zone of greater burial depth, and to ensure this depth of cover is consistently described across the suite of documents. These updates have been made in response to the matters raised by DLRCC, and in response to item 18a of the Commission's FIR.

- Revision A of planning drawing 0063 Export cable burial and protection details included with the CWP Project planning application is superseded by Revision B in the Other Documents and Drawings that support the Applicant's FIR response.
- Sections 4.7.5 and 4.7.6 of EIAR Volume 2, Chapter 4 Project Description;
- Sections 6.9 and Section 6.10.1 of EIAR Volume 3, Chapter 6 Marine geology, sediments and coastal processes;
- Section 8.8.3 of EIAR Volume 3, Chapter 8 Subtidal and intertidal ecology;
- Sections 12.8.2 and 12.9 of EIAR Volume 3, Commercial fisheries;
- Sections 16.8.1, 16.9 and 16.10.1 of EIAR Volume 3, Chapter 16 Shipping and Navigation;
- Section 18.8.2 of EIAR Volume 3, Chapter 18 Material assets – Marine infrastructure
- Section 16.1 of EIAR Volume 4, Appendix 6.3 Navigational Risk Assessment is updated by Section 16.1 of Appendix 16-B Navigational Risk Assessment Addendum of the EIAR Addendum.
- Section 33.1 of EIAR Volume 5, Chapter 33 Summary of mitigation and monitoring
- Updated Fisheries Mitigation and Management Strategy (FMMS) as updated in response to the Commission's FIR.

43. The updated minimum depth of cover of the cables in the zone of greater burial depth has also been considered in the Applicant's response to item 6k of the Commission's FIR (see **FIR Response Document**) and relevant third party observations (see **Section 8**).

4.1.4 Overlap between the zone of greater burial depth and DLRCC's channel dredge footprint

4.1.4.1 Summary of matter raised

44. DLRCC seeks clarity on whether the zone of greater burial depth sufficiently covers DLRCC's channel dredge footprint, particularly to the eastern section of the proposed southern approach channel.

4.1.4.2 Applicant's response

45. Figure 4 in Appendix 1 of DLRCC's observation (Technical Note from Ayesa, dated 23/10/24), copied below, shows that one of CWP's proposed offshore export cable alignments is located outside of the zone of greater burial depth but inside DLRCC's channel dredge footprint.

46. Schedule 1 of the **Planning Documents**, submitted with the Applicant's planning application, contains '*Form 22 Supplementary Opinion of Flexibility'* which confirms the flexibility granted by the Commission

on the location of offshore export cables as follows; '…*Horizontal alignment of offshore export cable within and outside of array, with defined* [Limit of Deviation] *LOD*…'. The LOD is described as '…*the offshore export cable corridor (OECC) outside of the array site*'.

47. Therefore, under the provisions the Commission's Opinion of Flexibility [ACP-318588-23M], the Applicant confirms that the offshore export cable outside of the zone of greater burial depth can be routed outside of DLRCC's channel dredge footprint without needing to update planning documents or drawings to reflect this.

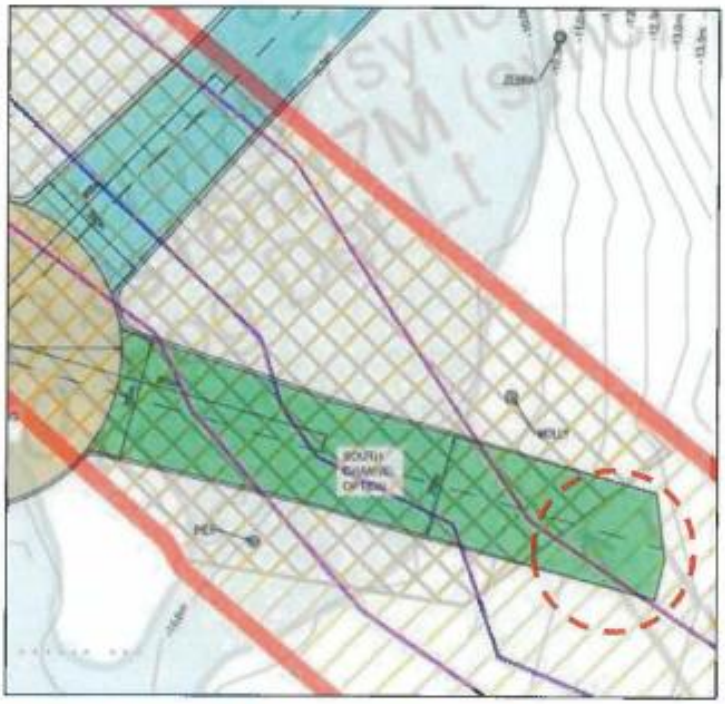

Figure 4 - Area of South approach channel where cable burial appears not to lie within the deeper burial zone

4.1.5 Cable protection within the zone of greater burial depth

4.1.5.1 Summary of matter raised

48. DLRCC seeks clarity on the intention to lay cable protection within the zone of greater burial depth where the target burial depth is not achieved. In their view, secondary protection will not be feasible in this area, as placement of rock or concrete mattress on the cables would conflict with DLRCC's required dredge depths.

4.1.5.2 Applicant's response

49. Revision A of planning drawing **0063 Export cable burial and protection details**, included with the CWP Project planning application, has been updated and is superseded by Revision B in the **Updated Planning Drawings** that support the Applicant's response to the Commission's FIR. The drawing has been updated to confirm and clarify that the Applicant does not intend to install secondary cable protection in the zone of greater burial depth.

4.2 Dublin City Council

4.2.1 Summary of issues raised

50. The following section provides a response to matters raised by Dublin City Council (DCC). The matters raised have been responded to under the following headings:

- Proposed planning conditions

4.2.2 Proposed planning conditions

51. DCC recommends planning conditions to be attached to the CWP Project planning permission relative to the onshore transmission infrastructure.

4.2.2.1 Applicant's response

52. The Applicant notes the recommended conditions and has no comments with the exception of two proposed amendments relating to Conditions 3 and 21.

53. Condition 3 currently states:

'During the construction and demolition phases, the proposed development shall comply with British Standard 5228 ' Noise Control on Construction and open sites Part

> *(a) Code of practice for basic information and procedures for noise control.'*
> *(b) Noise levels from the proposed development shall not be so loud, so continuous, so repeated, of such duration or pitch or occurring at such times as to give reasonable cause for annoyance to a person in any premises in the neighbourhood or to a person lawfully using any public place.'*

54. The Applicant's proposed amendment for Condition 3 is detailed in bold and strikethrough text:

'*During the construction and demolition phases, the proposed development shall comply* ***with British Standard 5228 ' Noise Control on Construction and open sites Part a) Code of practice for basic information and procedures for noise control and BS 5228 (2009 +A1 2014) 'Code of Practice for Noise and Vibration Control on Construction and Open Sites –Part 1: Noise and Part 2: Vibration'****.*

~~*Noise levels from the proposed development shall not be so loud, so continuous, so repeated, of such duration or pitch or occurring at such times as to give reasonable cause for annoyance to a person in any premises in the neighbourhood or to a person lawfully using any public place.*~~

It is proposed that the requirement from *(b)* is presented under Condition 21 for the operational phase (see amendment below).

55. Condition 21 currently states:

'*The following requirements of the Air Quality Monitoring & Noise Control Unit shall be complied with:*

Construction Phase

a) A Construction Management Plan shall be submitted to, and agreed in writing, by the Planning Authority, prior to commencement of development. This plan shall be developed with reference to the 'Construction and Demolition Good Practice Guide' produced by the Air Quality Monitoring and Noise Control Unit of Dublin City Council.

b) The hours of operation during the construction phase shall be restricted to 7.00am to 6pm, Monday to Friday, and 8.00am to 2.00pm on Saturdays. Permission to work outside of these hours must be subject to the approval of Dublin City Council.

Operational Phase

c) The LAeq level measured over 15 minutes (daytime) or 5 minutes (nighttime) at a noise sensitive premises when the substation is operating shall not exceed the LA90 (15 minutes day or 5 minutes night),by 5 decibels or more, measured from the same position, under the same conditions and during a comparable period with no plant in operation.

d) For the purposes of potential tonal noise associated with the use the level in hertz measured as a third octave band shall not exceed the neighbouring third octave bands, by more than 5dB when measured as an LLeq (15 minutes day time, 5 minutes nighttime).

56. The Applicant's proposed amendment for Condition 21 relates to the operational phase text and the amended text is presented in bold:

Operational Phase

Noise levels from the proposed development shall not be so loud, so continuous, so repeated, of such duration or pitch or occurring at such times as to give reasonable cause for annoyance to a person in any premises in the neighbourhood or to a person lawfully using any public place. In particular the rated noise levels from the proposed development shall not constitute reasonable grounds for complaint as provided for in B.S. 4142. Method for rating industrial noise affecting mixed residential and industrial area*.*

c) The LAeq level measured over 15 minutes (daytime) or 5 minutes (nighttime) at a noise sensitive premises location when the substation is operating shall not exceed the LA90 (15 minutes day or 5 minutes night),by 5 decibels or more, measured from the same position, under the same conditions and during a comparable period with no plant in operation.

d) For the purposes of potential tonal noise associated with the use the level in hertz measured as a third octave band shall not exceed the neighbouring third octave bands, by more than 5dB when measured as an LLeq (15 minutes day time, 5 minutes nighttime) in line with the Survey Method (Annex K) from International Standard ISO 1996-2:2017 Acoustics — Description, measurement and assessment of environmental noise — Part 2: Determination of sound pressure levels.

5 APPLICANT'S RESPONSE TO PRESCRIBED BODIES

5.1 An Taisce

5.1.1 Summary of issues raised

57. The following section provides a response to matters raised by An Taisce. The matters raised have been responded to under the following headings:

- Underwater noise
- Bird impacts
- Ecological sensitivity
- Seabed habitat impacts
- SAC impacts
- Bat impacts
- Invasive species

5.1.2 Underwater Noise

5.1.2.1 Summary of matter raised

58. An Taisce requested clarification regarding potential monopile vibropiling and the extent to which benthic layer surveying conducted so far may confirm its feasibility. They note that noise-related mitigation measures are crucial in respect of this application, and it is important that potential impacts to marine organisms from additional vibration, particularly along the seabed, are considered when assessing purported environmental benefits of this method.

5.1.2.2 Applicant's response

59. As set out in EIAR **Volume 2**, **Chapter 4 Project Description**, it may also be possible that the WTG monopiles are installed via vibropiling, where the pile is embedded using vibration rather than hammering or drilling.

60. This method has the benefit of reduced noise emissions compared to hammering but may not be suitable due to the ground conditions within the array site. The use of this method will be investigated further and confirmed post-consent once pre-construction geotechnical surveys are complete.

61. The underwater noise impact assessments presented within the relevant chapters of **Volume 3** of the EIAR, including but not limited to **Chapter 8 Subtidal and Intertidal Ecology**, **Chapter 9 Fish, Shellfish and Turtle Ecology** and **Chapter 11 Marine Mammals**, have demonstrated that the project can be constructed through traditional percussive piling methods whilst avoiding significant adverse effects. However, as set out in the updated **MMMP**, the Applicant has to mitigate potential impacts from underwater noise during the construction of the project. In this regard, the Applicant commits to a limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events, and the implementation of noise abatement in the event high order UXO clearance is required (refer to the updated **MMMP** submitted in response to the Commission's FIR).

62. Further to this, the Applicant will continue to review available technology and where new installation technology is available with a demonstrable reduction in noise at source the Applicant will review and

consider the practical implementation of alternative technology if available. **Appendix A.1.5.2** of the updated **MMMP** provides specific consideration of vibratory hammers as an alternative installation technique.

5.1.2.3 Summary of matter raised

63. An Taisce note that Temporary Threshold Shift (TTS) is considered injury under the Department of Arts, Heritage and the Gaeltacht (DAHG) 2014 Irish guidance and recommend that TTS impacts require consideration and mitigation under the requirements of the Habitats Directive. An Taisce recommends that the Commission take its interpretation of TTS as an injury into account when assessing the applicant's omission of TTS consideration in its mitigation approach, and the cumulative underwater noise impact to marine mammals arising from the simultaneous construction phase activities of OWF projects in the Irish Sea.

64. An Taisce note the reasons provided as to why the current TTS onset thresholds are inappropriate to determine a biologically significant level of TTS and thus, why PTS only was used in the impact assessment for auditory injury from piling.

65. An Taisce also submit that there is a lack of consideration of TTS in the marine mammal assessment and recommends that impact assessment and mitigation approaches should make a meaningful attempt to utilise these TTS onset thresholds.

5.1.2.4 Applicant's response

66. The Applicant highlights that the DAHG 2014 guidance is ambiguous as to whether or not TTS is classified as injury under the Wildlife Act as it states that TTS "*may constitute such an injury*". It is unclear how "*may*" should be interpreted. It is the opinion of the Applicant that TTS assessed at the TTS-onset level does not constitute injury and that predicted TTS-onset ranges should not require mitigation. This position is fully detailed in **Appendix 11-B SMRU Consulting TTS Position Statement** of the **EIAR Addendum**, and summarised here:

- Whilst there is a lack of legal and regulatory consensus regarding the definition of 'auditory injury', most countries do not consider TTS to be auditory injury.
- TTS represents a short-term reduction in hearing sensitivity, typically recovering within an hour for small shifts (4–5 dB). Not all TTS-inducing exposures lead to tissue damage (and thus lead to physical injury).
- TTS effects from pile driving have been shown to be frequency-specific (e.g. 4-8 kHz in harbour porpoises). As such, their impact on marine mammal biological functions (communication, predator/prey detection) is currently considered to be limited.
- Current TTS-onset thresholds from the National Marine Fisheries Service (NMFS) 2024 guidance are based on the smallest measurable changes in hearing, not on levels likely to cause functional impairment. These thresholds were originally developed to support estimations of PTS-onset, not to serve as regulatory thresholds for ecologically significant impact.
- What level of threshold shift might be considered biologically meaningful is currently unknown, and no biologically meaningful TTS thresholds have been established.
- TTS predictions based on SEL_{cum} are highly conservative as they omit: (i) the potential for TTS recovery between pile strikes or during breaks in pile driving, and (ii) distance-related effects on the impulsive characteristics of the sound. These factors likely lead to overestimations of impact ranges.
- Until there is sufficient scientific evidence to indicate a level and duration of TTS that may have a biologically meaningful effect on individuals, it is more appropriate to focus environmental impact

assessments on PTS (as true auditory injury) and behavioural disturbance (e.g. disruption to foraging or migration).

67. It is also noted that the NMFS 2024 guidance differentiates between "auditory injury" and "TTS", where TTS is defined as:

> *"A temporary, reversible increase in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level (ANSI 1995; Yost 2007). Based on data from cetacean TTS measurements (see Southall et al. 2019 for a review), a TTS of 6 dB is considered the minimum threshold shift clearly larger than any day-to-day or session-to session variation in a subject's normal hearing ability (Schlundt et al. 2000; Finneran et al. 2000; Finneran et al. 2002)"*

68. and auditory injury is defined as:

> *"Damage to the inner ear that can result in destruction of tissue, such as the loss of cochlear neuron synapses or auditory neuropathy (Houser 2021; Finneran 2024). Auditory injury may or may not result in a permanent threshold shift (PTS)."*

69. Notwithstanding the above, the Applicant can confirm that when considered in the context of European sites there is no interaction between the modelled TTS contours and any European sites, and as such in situ effects can be ruled out. Further to this ex situ effects are not anticipated to result in any meaningful or adverse interaction (See **NIS Addendum**).

5.1.2.5 Summary of matter raised

70. An Taisce consider the DAHG 2014 guidance on underwater noise to be out of date. An Taisce recommend that international best practice be referred to for noise mitigation, and that further information be sought with regards the application of international best practice to the CWP Project.

71. An Taisce recommend that consideration of marine mammal mitigation measures from Denmark and Germany would strengthen the applicant's proposal by integrating the full suite of available best practice mitigation approaches.

5.1.2.6 Applicant's response

72. **Appendix 9-C Underwater Noise Modelling Assessment** of the **EIAR Addendum** provides consideration of the mitigation measures used in other countries (Germany, Belgium, Denmark, Netherlands and the new UK proposed thresholds).

73. To mitigate potential impacts from underwater noise during the construction of the CWP Project, the Applicant commits to a limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events, and the implementation of noise abatement in the event high order UXO clearance is required.

74. The updated **MMMP** integrates the full suite of available best practice mitigation approaches, including: use of noise limits, use of noise abatement, establishment of a mitigation zone monitored by MMO (supplemented by PAM), use of ADDs to deter marine mammals out of the mitigation zone and use of soft-starts and ramp-ups.

75. In summary, the following mitigation measures are detailed in the updated **MMMP**:

- Geophysical surveys (multibeam, single beam, side-scan sonar & sub-bottom profiler surveys):
  - Pre-survey visual watch of 500 m radius by an MMO for 30 min
  - Ramp-up where possible

- UXO clearance:
    - Preference for low order clearance over high order clearance where possible
    - Only using minimum quantity of explosive as donor charge
    - Activities to occur in daylight only
    - Pre-detonation MMO watch of 1 km radius for 30 min
    - Implementation of noise abatement in the event high order clearance is required
    - Use of ADD if predicted PTS impact ranges exceed the 1 km monitored zone
- Piling
    - Limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events
    - Pre-piling MMO watch of 1 km radius for 30 min (supported by PAM)
    - 20 minute piling soft-start at 10% of maximum hammer energy, followed by a gradual ramp-up to full hammer energy

5.1.2.7 Summary of matter raised

76. An Taisce recommend that a noise abatement approach be taken in the subject proposal to reduce underwater noise.

5.1.2.8 Applicant's response

77. To mitigate potential impacts from underwater noise during the construction of the CWP Project, the Applicant commits to a limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events.

78. To mitigate potential impacts from underwater noise associated with high order UXO clearance, the Applicant commits to the implementation of noise abatement in the event high order clearance is required.

79. These mitigation measures are presented in the updated **MMMP** and have been incorporated into the EIAR and NIS via the in the **EIAR Addendum** and **NIS Addendum** submitted in response to the Commission's FIR.

5.1.2.9 Summary of matter raised

80. An Taisce welcome the mitigation measures proposed within the MMMP but recommend air bubble curtains be considered as an additional mitigation measure.

5.1.2.10 Applicant's response

81. To mitigate potential impacts from underwater noise during the construction of the project, the Applicant commits to a limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events. To mitigate potential impacts from underwater noise associated with high order UXO clearance, the Applicant commits to the implementation of noise abatement in the event high order clearance is required.

82. Given the rapid evolvement of noise abatement methods and not knowing what technologies may be most suitable at the time of pile driving, the Applicant cannot commit to a specific noise abatement technology at present. **Appendix A.1.5.2** of the updated **MMMP** provides a detailed review of currently available NAS technologies, assurance that NAS will be effective in mitigating UWN impacts, and an

explanation as to why it is not possible or best practice to commit to one technology at this stage. The Commission support the position on agnostic NAS commitment because a single commercial provider cannot be committed to at this stage.

83. Further information on mitigation measures are presented in the updated **MMMP**, and have been incorporated into the EIAR and NIS via the in the **EIAR Addendum** and **NIS Addendum** submitted in response to the Commission's FIR.

5.1.3 Bird impacts

5.1.3.1 Summary of matter raised

84. An Taisce raised concerns that the development may obstruct migratory bird movements, potentially impacting colonies and migration routes associated with multiple SPAs and SACs, including Wicklow Head SPA, the Murrough SPA, South Dublin Bay SAC, and others.

5.1.3.2 Applicant's response

85. NIS **Volume 5 - Assessment of Implications for Special Protection Areas (SPAs)** (Parts 1 & 2) assesses the potential impact of the CWP Project on migratory bird species, including collision risk, displacement, and barrier effects. The assessment considers the connectivity between the project and designated sites such as Wicklow Head SPA (004127), Dalkey Islands SPA (004172), South Dublin Bay and River Tolka SPA (004024), and South Dublin Bay SAC (000210) (noting that the latter is designated for habitats rather than bird species). The findings confirm that the CWP Project does not present a significant constraint to movement, ensuring that migratory routes remain viable.

86. Collision risk modelling (CRM) applies species-specific avoidance rates and confirms that migratory birds are expected to navigate the wind farm safely, with no significant population-level effects. Displacement effects have been assessed (see **Section 2.2** of NIS **Volume 5** (Part 1) for South Dublin Bay and River Tolka SPA, **Section 2.4** of NIS **Volume 5** (Part 1) for Dalkey Islands SPA, and **Section 4.4** of **Volume 5** (Part 2) for Wicklow Head SPA) demonstrating that alternative foraging and resting areas are available. Species-specific responses indicate that displacement will not result in adverse effects on population viability.

87. In summary, the findings of the **NIS** confirm that the CWP Project will not result in adverse effects on migratory birds or the integrity of the designated sites. The findings of the NIS submitted with the planning application are supported and affirmed by the **NIS Addendum** that supports the Applicant's response to the Commission's FIR. An updated **IPPEMP** has also been provided which sets out the Applicant's proposals for post consent monitoring to develop the scientific understanding of ORE within the context of the western Irish Sea.

88. EIAR **Volume 2**, **Chapter 3 Site Selection and Consideration of alternatives** and **Volume 3**, **Chapter 10 Ornithology** describe the design mitigation to minimise impacts on birds, including a reduction in the number wind turbines proposed, increased minimum blade tip clearance and downward-facing low-intensity lighting to reduce attraction risk.

5.1.3.3 Summary of matter raised

89. An Taisce advises considering bird impacts beyond SPA and SAC boundaries, including displacement from migratory routes and increased collision risk (project specific and cumulative). This is due to

attraction to lighting in poor weather and artificial reef effects which could attract bird species. They recommended joint seabird monitoring across Phase 1 OWF projects to assess cumulative impacts.

5.1.3.4 Applicant's response

90. The assessment of bird impacts for the CWP Project does extend beyond the boundaries of SPAs and SACs, as recommended by An Taisce. Both ex situ (outside designated sites) and in situ (within designated sites) effects have been considered throughout the NIS and EIAR. Specifically, NIS **Volume 5 - Assessment of Implications for Special Protection Areas** (SPAs) (Parts 1 & 2) assesses the potential impact of the development on migratory bird species, including collision risk, displacement, and barrier effects. The assessment considers the connectivity between the project and designated sites such as Wicklow Head SPA (004127), Dalkey Islands SPA (004172), South Dublin Bay and River Tolka SPA (004024), and South Dublin Bay SAC (000210) (noting that the latter is designated for habitats rather than bird species). Both *ex situ* and *in situ* effects are considered throughout the NIS and as such it is considered robust with regards the consideration of potential impacts outside of the delineated areas.

91. The findings confirm that flight reorientation due to wind farm presence is expected to be minor, with no significant impact on energy expenditure or survival rates (see **Section 2.2** of NIS **Volume 5 (Part 1)** for South Dublin Bay and River Tolka SPA,, **Section 2.4** of NIS **Volume 5 (Part 1)** for Dalkey Islands SPA, and **Section 4.4** of **Volume 5 (Part 2)** for Wicklow Head SPA for a summary of the assessment conclusions). Long-distance migratory species have demonstrated adaptive behaviour in response to offshore wind farm infrastructure, with no evidence of population-level consequences.

92. Lighting-related attraction risks have been assessed, with mitigation measures incorporated into the project design, including downward-facing, low-intensity lighting to reduce skyward light spill. The NIS (including the **NIS Addendum** for offshore impacts on species such as Manx Shearwater) confirms that these measures significantly mitigate attraction risks, particularly in poor visibility conditions where disoriented flight may otherwise occur. With these measures in place, no AESI are predicted (see NIS **Section 2.2** of **Volume 5 (Part 1)** and **Section 4.4** of **Volume 5 (Part 2)** for a summary of conclusions for onshore works, and the **NIS Addendum** which considers lighting impacts on sensitive offshore receptors such as Manx Shearwater).

93. The artificial reef effect has been evaluated, with findings indicating that while some seabird species, particularly gulls and terns, may be drawn to increased prey availability near turbine foundations, collision risk remains low (see **Section 2.2** of **Volume 5 (Part 1)** and **Section 4.4** of **Volume 5 (Part 2)** for a summary of conclusions). Species-specific foraging strategies and avoidance behaviour significantly reduce the likelihood of turbine interaction. With these considerations, no AESI are predicated.

94. The findings of the NIS submitted with the planning application are supported and affirmed by the **NIS Addendum** that supports the Applicant's response to the Commission's FIR. This includes an update to the in-combination assessment for SPAs (see **NIS Addendum (Part 3)**), which ensures that the effects of multiple proposed OWFs in the Irish Sea are fully considered. The findings conclude that while seabird populations may experience cumulative pressures, these do not result in an AESI.

95. The project supports collaborative monitoring initiatives, as outlined in the updated **IPPEMP** and in the commitment to the East Coast Monitoring Group (ECMG) which is proposed to enhance data collection on seabird interactions with OWFs, refine future impact assessments and contribute towards the scientific understanding of ORE in the western Irish Sea.

5.1.3.5 Summary of matter raised

96. An Taisce questioned the EIAR's negligible impact conclusion, suggesting it overlooks frequent bird flight paths through the turbine area and cumulative collision and displacement effects from other OWFs in the Irish Sea.

5.1.3.6 Applicant's response

97. As noted in EIAR **Volume 3, Chapter 10 Ornithology** and the associated **Volume 4, Appendix 10.3 Collision Risk Modelling**, the CRM undertaken incorporates industry leading stochastic migratory CRM which takes a precautionary approach. The approach assumes migratory pathways, through reference to the peer reviewed literature, and estimates the proportion of migration flights within migration pathways that will pass through a proposed OWF footprint. It then uses this along with details of the size of the population migrating, the OWF parameters, the migratory periods to be modelled and biometric and behavioural data relating to the species being modelled, to predict the number of collisions within each migratory bio-season specified. The approach is considered to be best practice across multiple jurisdictions and is appropriate for the purposes of both EIA and AA.

98. The same precautionary approach is then applied to the assessment of in-combination effects whereby the outputs of other projects are combined with those of the proposed development to produce a precautionary and appropriate assessment.

99. The conclusions drawn are that there are no significant or adverse effects on migratory pathways, either for the project alone or in-combination with other plans and projects. Given the conservative parameters and precautionary approach these conclusions are considered to be robust and scientifically justified.

5.1.3.7 Summary of matter raised

100. An Taisce considers that displacement and barrier effect impacts during the construction phase are underestimated within assessments, in particular noting the potential for consequences from perceived underestimation of these effects within cumulative impact assessments.

101. An Taisce also note a study by Welcker et al., 2016 evidencing barrier effect and displacement impacts, during the operational phase of an OWF, as resulting in increased energy expenditure by seabirds.

5.1.3.8 Applicant's response

102. Assessment of project-only construction phase displacement and barrier effects is presented within **Volume 3, Chapter 10 Ornithology** of the EIAR. These effects are considered together under Impact 2 – Disturbance and displacement. The assessment concludes that there will be no significant effects on ornithological receptors from potential disturbance and displacement during the construction phase of the project.

103. In response to the Commission's FIR, project-only impact assessments of construction phase and operation and maintenance phase displacement and barrier effects to red-throated diver have been updated. This is presented in **Section 10.10.3** of the **EIAR Addendum (Part 1)**.

104. In response to the Commission's FIR, project-only impact assessments of construction phase and operation and maintenance phase displacement and barrier effects to kittiwake, which had previously

been screened out in **Volume 3, Chapter 10 Ornithology** of the EIAR have been included within **Section 10.10.3** of the **EIAR Addendum (Part 1)**.

105. The Welcker et al., 2016 paper, whilst not referred to specifically within the assessment for CWP, has been superseded by more recent publications which are used to inform the assessments. The methodology provided within **Volume 3, Chapter 10 Ornithology** of the EIAR, notes that energy expenditure forms a core aspect of the assessment, and uses a matrix-based approach to link energetic consequences of displacement to levels of additional mortality.

106. Within the array site such impacts are not considered to cease after completion of construction (nor is this stated within the assessment), instead such impacts are replaced with the disturbance and displacement impacts estimated to occur during the operation and maintenance phase of the project.

107. The Welcker et al., 2016 paper relates to operation and maintenance phase displacement impacts from an OWF in the German North Sea. Where displacement proportions are used within the impact assessment, the consideration of these proportions is provided within the assessment.

108. An update to the planning application CEA has been provided in response to the Commission's FIR. This update, presented in **Section 7** and **Section 8** of the **CEA Report (Part 2)**, includes an updated assessment of cumulative construction and operation and maintenance phase displacement impacts. It supersedes the CEA section of **Volume 3, Chapter 10 Ornithology** and **Volume 4, Appendix 10.1 Cumulative Effects Assessment** of the EIAR.

109. Assessments presented within the EIAR and NIS, and both the **EIAR Addendum** and **NIS Addendum**, adequately consider the exclusion of seabird features from areas of marine habitat and the energetic consequences of barrier effects from array infrastructure.

5.1.3.9 Summary of matter raised

110. An Taisce make the observation that seabird population estimates used within impact assessment do not reflect seabird population declines resultant from HPAI (bird flu) outbreaks [during the 2022 and 2023 breeding seasons] and point to NatureScot advice recommending correction to account for such declines where necessary.

5.1.3.10 Applicant's response

111. HPAI impacts to receptor populations are referenced within **Section 10.6.7** and **Section 10.6.8** of **Volume 3, Chapter 10 Ornithology** of the EIAR.

112. Baseline digital aerial and boat-based surveys used to quantify impacts to regional seabird populations (**Volume 3, Chapter 10 Ornithology** of the EIAR) and to particular SPA breeding populations (**Volume 5 - Assessment of Implications for Special Protection Areas** and **Volume 6 - In-combination Assessment** of the NIS) were undertaken prior to HPAI impacts to seabird populations within the Irish Sea. Similarly, breeding colony count data used to determine regional breeding populations were, with the notable exception of Wicklow Head, also collected prior to the occurrence of HPAI in the Irish Sea region (as outlined within **Volume 4**, **Appendix 10.5 Offshore Ornithology Baseline Characterisation Report** of the EIAR).

113. The Applicant directs the observer to **Section 2.7.3** of the **FIR Response Document** (item 7d), in which justification is provided as to why baseline characterisation datasets collected prior to HPAI outbreaks in 2022 and 2023 remain a robust and appropriate basis for impact assessment. This is further evidenced by the characterisation validation surveys described within the **EIAR Addendum (Part 1)** and the associated appendices, which demonstrates populations to be recovering.

114. In relation to NatureScot's recommendation to make corrections to account for HPAI related population declines where necessary, the Applicant highlights monitoring undertaken at Irish east coast breeding colonies in 2025 (Preston et al., 2025; and Arklow, 2026). This monitoring demonstrates that colony counts at breeding seabird sites within the region (e.g. Howth Head, Ireland's Eye, Bray Head, Lambay and Wicklow Head which may have been affected by HPAI in 2022/23) were generally higher in 2025 than in 2024 and for the most recently available counts which preceded the 2022/23 HPAI event. This is the case for species known to have been affected by HPAI elsewhere (such as guillemot, kittiwake, razorbill, herring gull and gannet).

115. As such, local seabird populations, if affected by HPAI in 2022/23, have recovered to pre-2022/23 HPAI outbreak sizes by the 2025 breeding season and no corrections are required.

5.1.3.11 Summary of matter raised

116. An Taisce consider that assessments within the NIS of direct effect of habitat loss to common tern from South Dublin Bay and River Tolka Estuary SPA do not give adequate consideration to the ecology of this species.

5.1.3.12 Applicant's response

117. Direct effects on habitat are considered within the EIAR and the NIS and assessed to have no significant effect and no adverse effect on site integrity (to South Dublin Bay and River Tolka Estuary SPA) respectively. The assessments take a precautionary approach whereby it is assumed that within the array site, at the Codling Bank, project infrastructure may replace or alter areas of seabed, thereby, potentially affecting the habitat of prey species of common terns from South Dublin Bay and River Tolka Estuary SPA. Furthermore it is assumed that project infrastructure may occupy a proportion of the sea surface area in which common terns may forage.

118. The assessment of AESI for South Dublin Bay and River Tolka Estuary SPA within **Volume 5** of the NIS considers the alteration of seabed under Impact 3 (Changes of prey availability), with the maximum area of seabed habitat impacted totalling approximately 6.3 km^2 during the construction period and approximately 0.6 km^2 during the operation and maintenance period (see **Table 10-28** within **Volume 3, Chapter 10 Ornithology** of the EIAR).

119. The assessment of AESI for South Dublin Bay and River Tolka Estuary SPA within **Volume 5** of the NIS also considers under Impact 1 (Direct effects on habitat), however the loss of sea surface area is assessed to be inconsequentially small with the maximum area of sea surface habitat occupied by turbine infrastructure totalling less than 0.05 km^2 when all infrastructure is installed. It is in relation to this impact that the Applicant's statement on habitat loss relating to a negligible proportion of the sea area available to common tern from South Dublin Bay and River Tolka Estuary was made.

120. As presented within the assessment of AESI for South Dublin Bay and River Tolka Estuary SPA within **Volume 5** of the NIS, and in accordance with best practice and through reference to the best available scientific literature, the mean maximum (plus one standard deviation) foraging range of common tern is stated in Woodward et al., 2019 as 26.9 km. The minimum separation distance between the array site and South Dublin Bay and River Tolka Estuary SPA is 26.2 km. As such it is the case that only negligible proportions of sea surface or seabed areas impacted by the CWP Project (as described above) will occur within the foraging range of common terns from South Dublin Bay and River Tolka Estuary SPA; i.e. a small proportion of the total 0.05 km sq of lost foraging habitat lies within a small area at the outermost edge of the foraging range of common tern from South Dublin Bay and River Tolka Estuary SPA. The total loss of available habitat is therefore ecologically insignificant as it is

inconsequentially small and in a location that has no greater degree of importance than the wider foraging area that will remain available.

121. This indication of there being minimal potential for breeding season connectivity between the array site and South Dublin Bay and River Tolka Estuary SPA is supported by baseline survey observations. As summarised within **Section 5.1.9** of **Volume 4, Appendix 10.5 Offshore Ornithology Baseline Characterisation Report** of the EIAR, estimated abundances of common tern within the array site were extremely low during the breeding season, increasing somewhat during the post-breeding period. Very low levels of site use by common tern of the array site and surrounding areas during the breeding season continued to be observed during additional boat-based and digital aerial surveys undertaken to inform the FIR (see **Appendix 10-D Baseline and contemporary data comparison** of the **EIAR Addendum**).

122. During the non-breeding season it is acknowledged that terns may forage more widely, however a consequence of this is a much larger availability in foraging habitat within the larger area encompassed by that increased foraging range.

123. As such, the assessment of potential for AESI upon the common tern qualifying interest (QI) of South Dublin Bay and River Tolka Estuary is considered to give due consideration to the ecology of the species. Conclusions that areas of habitat impacted within the array site are negligible in relation to the potential foraging area used by breeding common tern from South Dublin Bay and River Tolka Estuary SPA are also robust.

5.1.3.13 Summary of matter raised

124. An Taisce highlight the observation of colour ringed little terns from The Murrough SPA at the Gronant little tern colony in north Wales and point out that a straight line flight path between these sites passes through the array site. This potential passage through the array is noted as requiring close consideration within impact assessment.

5.1.3.14 Applicant's response

125. As described within **Section 5.1.23** of **Volume 4, Appendix 10.5 Offshore Ornithology Baseline Characterisation Report** of the EIAR, during 15 boat-based and 24 digital aerial baseline surveys spanning a combined period of approximately 3.5 years, there were three separate records of little tern in the array site;

- A single record of two individuals together during the post-breeding period [September];
- A record of a single little tern within 2 km of the array site in May; and
- A record of a single little tern within 2 km of the array site in August.

126. Very low levels of use by little tern of the array site and surrounding areas during the breeding season continued to be observed during additional boat-based and digital aerial surveys undertaken to inform the FIR (see **Appendix 10-D Baseline and contemporary data comparison** of the **EIAR Addendum**).

127. On this basis flight activity rates of little tern within the array site were concluded to be very low and no potential for likely significant effects was identified upon regional breeding populations, or the breeding population at Kilcoole within The Murrough SPA (which is considerably beyond all published breeding season foraging ranges relating to this species). Occasional passage events by individuals through the array site during post-breeding dispersal periods, spring or autumn migration or within breeding season movements between colonies by breeding adults (as evidenced to potentially occur within Wilson et al., 2021) may occur. The infrequent, occasional, nature of such passage is not

considered to constitute an impact pathway by which collision effects or barrier effects may result in likely significant effects to the regional breeding population, or adverse effects on the site integrity of The Murrough SPA.

128. As such, assessments presented within the EIAR and NIS are considered to robustly account for potential impacts upon regional breeding populations of little tern and breeding populations at relevant European Sites.

5.1.4 Ecological sensitivity

5.1.4.1 Summary of matter raised

129. An Taisce wish to highlight important findings from the DHLGH (2023) 'Ecological Sensitivity Analysis of the Western Irish Sea' report to inform future designation of Marine Protected Areas. Although An Taisce consider that the report had significant gaps the report nevertheless does provide important information on ecological sensitivities in the area of the subject proposal.

5.1.4.2 Applicant's response

130. EIAR **Volume 4**, **Appendix 8.4 Marine Protected Areas Assessment Report** considers the features of the aforementioned MPA Advisory Group report (2023). It details where in the CWP Project planning application suitable level of assessment has been provided to allow a decision to be reached that will, in order of preference, and in accordance with legal requirements, demonstrate that the CWP Project has avoided, minimised, or mitigated significant impacts on features that may be required to develop and further establish the MPA network.

131. The potential interaction between the CWP Project and the MPA areas of search is minimal, with direct overlap only present in an area of lowest selection frequency, as demonstrated in Annex A Figures 1 – Figure 35 of **Appendix 8.4**. As such the likelihood of any direct impacts that may impact the features of interest for MPAs is considered low.

5.1.4.3 Summary of matter raised

132. An Taisce state the DHLGH (2023) 'Ecological Sensitivity Analysis of the Western Irish Sea' report findings demonstrate that there is an abundance of marine organisms which have a medium or high sensitivity to a range of aspects of ORE developments across all phases, with implications for biodiversity and fisheries. Also, that there is a general insufficiency in evidence on the wider ORE impacts.

5.1.4.4 Applicant's response

133. The topic chapters, Chapter 6 Marine Geology, Sediments and Coastal Processes, Chapter 8 Subtidal and Intertidal Ecology, Chapter 9 Fish, Shellfish and Turtle Ecology and Chapter 12 Commercial Fisheries within Volume 3 the EIAR, detail the baseline data collected to inform the understanding of biodiversity and fisheries. This baseline data is similar in the level of detail acceptable in other EU jurisdictions and supports robust assessment of the likely significant effects on biodiversity and fisheries. The assessment uses this data, supported by reference to appropriate ecological sensitivity analyses provided for within the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater,

Coastal and Marine (the 'CIEEM Guidelines') (CIEEM, 2022) and the DHLGH (2023) report, to firstly describe the impacts on the relevant receptor and then provide a robust impact assessment that is in line both with international and national guidance. Furthermore, the analysis of sensitivity is in line with published standards and international best practice and is therefore considered appropriate.

134. Taking into account the additional data and information provided in the **EIAR Addendum** in response to the Commission's FIR, it is considered that no data gaps exist that would prevent the Commission from making a sound planning decision, at the date of determination.

135. Assessment in the relevant chapters of **Volume 3** of the EIAR (supported by the **EIAR Addendum**) is sufficiently detailed, adequately assesses the likely environmental impacts, outlines proposed mitigation measures, and concludes no significant effects with regards the EIA.

5.1.4.5 Summary of matter raised

136. An Taisce recommend the Commission utilise the data and findings from the DHLGH (2023) 'Ecological Sensitivity Analysis of the Western Irish Sea' report to assist in assessing the projects potential ecological impacts, particularly in areas known to have a high concentration of sensitive species. proposed mitigation measures and decisions about the siting of offshore renewable energy should also be informed by the report.

5.1.4.6 Applicant's response

137. **Volume 3, Chapter 9 Fish Shellfish and Turtle Ecology** of the EIAR details the scope of the assessment covering vulnerable species, or species of conservation importance which are considered to occur in the vicinity of the CWP Project offshore development area. This has been informed by the DHLGH (2023) 'Ecological Sensitivity Analysis of the Western Irish Sea' report.

138. **Section 9.6.7** of **Volume 3, Chapter 9 Fish Shellfish and Turtle Ecology** provides the rationale behind why a Valued Ecological Receptor ('VER') approach has been adopted as outlined in the relevant CIEEM Guidelines (CIEEM, 2022). The proposed mitigation measures in relation to fish shellfish and turtle ecology are provided in **Section 9.9** and the assessment concludes no significant effects in the context of EIA.

139. Similarly, **Section 8.6.6** of **Volume 3, Chapter 8 Subtidal and Benthic Ecology** of the EIAR details the identification of the benthic and intertidal ecology receptors which are considered to occur in the vicinity of the CWP Project offshore development area; several of which are features analysed in the DHLGH (2023) 'Ecological Sensitivity Analysis of the Western Irish Sea' report. **Section 8.9** provides details on the proposed mitigation measures in relation to subtidal and benthic ecology. The assessment concludes no significant effects in the context of EIA.

5.1.5 Seabed habitat impacts

5.1.5.1 Summary of matter raised

140. An Taisce consider robust ecological surveys conducted prior to the commencement of construction and operations should inform a highly rigorous approach to mitigation and monitoring in the array site and offshore export cable landfall area in Dublin Bay.

5.1.5.2 Applicant's response

141. **Volume 3**, **Chapter 8 Subtidal and Benthic Ecology** of the EIAR details the baseline data available in relation to the array site and OECC, inclusive of Dublin Bay. This baseline data is similar in the level of detail acceptable in other EU jurisdictions and supports a robust assessment of the likely significant effects on ecological habitats. The baseline data and assessment inform the proposed mitigation measures which are considered appropriate in relation to subtidal and benthic ecology. EIAR **Volume 3, Chapter 8 Subtidal and Benthic Ecology** concludes no significant effects in the context of EIA.

142. In response to the Commission's FIR additional data has been collected which supports and validates the conclusions of EIAR **Volume 3, Chapter 8 Subtidal and Benthic Ecology**. This data, which includes sediment contaminant analysis within Dublin Bay, is described in **Section 8.6** of the **EIAR Addendum (Part 1)**.

143. The updated **IPPEMP** details proposed monitoring which includes pre- and post-construction benthic surveys.

5.1.5.3 Summary of matter raised

144. An Taisce note the extent and importance of circalittoral coarse sediment across the CWP array site and OECC. These areas are likely to contain important ecosystem engineers and food sources within the marine food web and perform a carbon sequestration function. Consequently, there is a need for rigorous assessment and mitigation measures where necessary.

5.1.5.4 Applicant's response

145. **Volume 3, Chapter 8 Subtidal and Benthic Ecology** of the EIAR details the scope of the assessment, characterises the receiving environment in the level of detail acceptable in other EU jurisdictions, and details the proposed mitigation measures considered appropriate and effective in relation to subtidal and benthic ecology. The assessment is robust, follows industry guidance and concludes no significant effects in the context of EIA. The locations of offshore infrastructure have been developed to avoid known sensitive ecological habitats, and further geophysical surveys will facilitate the micrositing around sensitive habitats such as *Sabellaria spinulosa* closer to the time of construction.

146. It is worth noting that the area of long term seabed habitat loss associated with each offshore component is presented in **Table 8-12** of EIAR **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology**. Coarse sediment habitats cover c.153 km^2 of the offshore development area (95%). Overall, the total percentage of coarse habitats within the offshore development area affected by long-term habitat loss is 0.37% (accounting for limits of deviation). Over the wider study area, the impact of long-term habitat loss will affect up to 0.01% of the available coarse sediment habitats present.

147. In response to Item 17a of the FIR (see **FIR Response Document**), changes in carbon sequestration as a result of the CWP Project have been quantified, and the impact on climate assessed. This information is presented in **Section 28** of the **EIAR Addendum (Part 2)**, which should be read in conjunction with **Volume 3**, **Chapter 28 Climate - Carbon Balance Assessment** of the EIAR.

5.1.5.5 Summary of matter raised

148. An Taisce recommend that close consideration is given to the volumes of suspended sediment material generated from cable and wind turbine foundation installation. Possible effects include

decreasing light levels at the seafloor, decrease in oxygen concentrations and altered sediment properties. Suspended sedimentation can also clog the filter-feeding apparatus of animals.

5.1.5.6 Applicant's response

149. For the CWP Project planning application, **Appendix 6.3 Modelling Report** of **Volume 4, Chapter 6 Marine Geology, Sediments and Coastal Processes** included predictive sediment transport modelling of a set of representative worst-case construction scenarios. These scenarios addressed sediment liberation into the water column across the array area, export corridor and transition zone during dredge disposal and/or cable trenching activities.

150. In response to the Commissions FIR, the modelling was refined and resubmitted as **Appendix 6-A Modelling Report** to the **EIAR Addendum**. The updates expand the assessment to incorporate the full scope of construction phase works proposed. These updates include activities associated with the installation of export, inter-array, and interconnector cables; foundation drilling for WTGs and OSSs; and the disposal of dredge material following seabed clearance works. Modelling was performed to identify the greatest extent of potential sediment plumes, level of dispersion above background levels (mg/L), and accumulated level of deposited material on the seabed. In EIAR **Volume 3, Chapter 8 Subtidal and Intertidal Ecology** the study area is defined by the greatest Zone of Influence (ZoI) of relevance for benthic ecology, which is defined by the maximum extent of Suspended Sediment Concentration (SSC), however on a precautionary basis the study area has been maintained at 20 km as the maximum extent of SSC of 10 km is derived from predictive modelling..

151. Together, these modelling outputs form the evidence base for the assessment in EIAR **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology** (supported by the **EIAR Addendum (Part 1)**), which concludes no significant effects in the context of EIA.

5.1.5.7 Summary of matter raised

152. An Taisce note that of the three proposed foundation installation methods, foundation drilling may cause the highest SSC from drill arisings and should be assessed. **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology** of the EIAR suggests that the sediment plume from seabed preparation could disperse 3-4 km west of the array site, while **Volume 3**, **Chapter 6 Marine Geology, Sediments and Coastal Processes** of the EIAR predicts sediment plumes from dredge disposal could reach up to 10 km. Wicklow Reef SAC, located approximately 5 km southwest of the site, requires consideration due to the potential presence of the reef-forming *Sabellaria* worm.

5.1.5.8 Applicant's response

153. The impacts of any sediment arisings from the CWP Project on the habitats of Wicklow Reef SAC are considered within **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology** of the EIAR, however it is noted that the nearest reef feature within Wicklow Reef SAC is c. 6 km from the closest point of the CWP Project (see **Section 8.6** of **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology**). The sediment plume modelling in the EIAR showed that increases in SSC arising in the southern portion of the CWP Project may travel up to 4 km in a westerly direction (with minimal deposition (c. 2 cm) within that 4 km distance). **Volume 3, Chapter 8 Subtidal and Intertidal Ecology** of the EIAR also states that the greatest direction and distance of dispersion of disturbed material is 9-10 km east (see **Section 8.4** of **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology**). Potential sediment arising from other activities, including drilling, will be lesser in volume and as such are considered to be assessed by virtue of the representative scenario assessed (see **Section 8.8** and **8.10** of **Volume 3**,

Chapter 8 Subtidal and Intertidal Ecology, and the supporting **Appendix 8.2** in **Volume 4**). As such, it was considered that there will be no effects on the features of the Wicklow Reef SAC from increases in SSC or smothering arising from the CWP Project (see **Section 8.10** of **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology** of the EIAR).

154. An update to the reporting of the sediment transport simulations to further clarify the proposed construction phase works (which includes foundation drilling activities) has been provided in response to the Commissions FIR. This update, presented in **Section 6.3** of **Appendix 6-A Modelling Report Addendum** of the **EIAR Addendum**, states that the sediment plumes generated deposit rapidly on to the seabed, or are dispersed to background levels within c. 2 km of the drilling locations. The updated sediment plume modelling predicts that plumes of suspended sediment generated during dredge disposal and cable installation activities (trenching) will travel in a north-south / slight east direction. Although plumes generated at the array site may travel up to 7 km they will not reach the Wicklow Reef SAC due to their direction of travel – the SAC lies to the south west of the array site.

155. In response to item 8d of the FIR (see **FIR Response Document**), the Applicant also commissioned a DDV survey of the section of Wicklow Reef SAC which lies within the Applicant's Foreshore Investigation Licence, and an area just north of the SAC. The results are provided in **Appendix 8-C DDV Wicklow Reef Survey Report 2025** of the **EIAR Addendum** and summarised in **Section 8.6** of the **EIAR Addendum (Part 1).** In brief**,** the findings provide additional scientific data on the habitats present within the SAC, but do not meaningfully change any of the information or assessment presented within the EIAR. The survey has identified limited areas of potential biogenic and / or stony reef habitat, and whilst this does not change the assessment, the Applicant submits this data in support of SAC monitoring and to enhance the scientific understanding of the Wicklow Head SAC.

156. In summary, although the Wicklow Reef SAC lies to the south of the OECC, plumes generated (which may travel up to 6 km) will not reach the Wicklow Reef SAC which is greater than 11 km from the OECC at its closest point and therefore the conclusions in the EIAR remain valid.

5.1.5.9 Summary of matter raised

157. An Taisce note that the cable installation works will have a 15 m wide impact from trenching of the seabed and recommend an ecosystem- and biodiversity-focused siting approach to cable routing prior to any development consent of the CWP Project in order to protect the sensitive sandbank habitat in the area.

5.1.5.10 Applicant's response

158. **Volume 2**, **Chapter 3 Site Selection and Consideration of Alternatives** of the EIAR describes the detailed environmental assessment completed to identify and select the locations for the CWP Project offshore infrastructure, including offshore cables. **Volume 2**, **Chapter 4 Project Description** of the EIAR describes the locational flexibility afforded to the project to enable realignment of cables if required within defined Limits of Deviation.

159. By providing locational flexibility around the final placement of the offshore infrastructure the Applicant has committed to a programme of mitigations to reduce the impact of the development which includes undertaking pre-construction geophysical surveys (see **Section 8.14** of **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology** of the EIAR**)** to facilitate the micro siting around sensitive habitats.

160. Site specific habitat mapping recorded no occurrences of sandbanks in the CWP Project offshore development area (see **Volume 4, Appendix 8.3 Benthic Baseline Report** of the EIAR). However, as sandbanks are predicted to occur in the wider study area, any potential impacts from the CWP Project are assessed in **Section 8.10** of **Volume 3, Chapter 8 Subtidal and Intertidal Ecology**.

161. With regards the array area, Codling Bank is a geomorphological feature and therefore not a benthic ecology receptor, however, **Section 8.6** of **Chapter 8 Subtidal and Intertidal Ecology** of the EIAR provides a comprehensive baseline characterisation including the Codling Bank. Further update has been provided to **Section 8.6.1** of the **EIAR Addendum (Part 1)** summarising the type of benthic communities found at Codling Bank to further enhance the baseline considered as part of the assessment and also site selection.

162. Further to the comprehensive characterisation presented in the EIAR and **EIAR Addendum**, and the commitment to undertake a survey to inform mitigation, it is proposed that monitoring be undertaken to develop the scientific understanding of ORE within the context of the western Irish Sea (see **updated IPPEMP**).

5.1.5.11 Summary of matter raised

163. An Taisce request further information on the micrositing of CWP Project infrastructure should pre-construction surveys identify sensitive habitats containing *Sabellaria spinulosa* reef.

5.1.5.12 Applicant's response

164. The locations of offshore infrastructure been developed to avoid known sensitive ecological habitats, including areas with suitable conditions for *Sabellaria spinulosa* which can form reefs under some circumstances.

165. Reefs were not identified during the EIAR characterisation surveys (see **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology** of the EIAR) and the Applicant notes that abundances of *Sabellaria spinulosa* were relatively low during the 2025 characterisation validation surveys (**Appendix 8-A Benthic Subtidal Survey Report 2025** and **Appendix 8-C DDV Wicklow Reef Survey Report 2025** of the **EIAR Addendum**), and no stations were classified as reef habitat.

166. However, as an ephemeral feature it will be necessary to validate the results in advance of construction. A pre-construction geophysical survey will therefore be undertaken to facilitate the micrositing around sensitive habitats such as *Sabellaria spinulosa*.

167. Such features will be avoided by the locational flexibility (defined Limits of Deviation (LoD)) afforded to the Applicant for permanent and temporary offshore infrastructure, as detailed under the provisions the Commission's Opinion of Flexibility [ACP-318588-23M] (see **Schedule 1** of the **Planning Documents**). **Volume 2, Chapter 4 Project Description** of the EIAR describes the LoDs around project infrastructure, and refers to planning drawings that show the extent of these LoDs.

5.1.5.13 Summary of matter raised

168. An Taisce urge the applicant to assess geophysical survey data for the presence of sensitive sandbank habitats, which are highly biodiverse and serve as important nursery areas for fish and feeding grounds for seabirds.

169. An Taisce note the CWP Project has potential to introduce new pressures on the ecological integrity of the sandbank habitat and highlight the NMPF's requirement to: a) avoid, b) minimise, or c) mitigate for net loss of coastal habitat.

5.1.5.14 Applicant's response

170. **Volume 3, Chapter 8 Subtidal and Intertidal Ecology** of the EIAR provides a baseline of all habitats potentially affected by the CWP Project that have been identified through a combination of site specific and publicly available data, including site specific geophysical data (see **Section 8.6** of **Chapter 8 Subtidal and Intertidal Ecology**). INFOMAR Seabed Substrate (2019) data suggests the CWP array site is homogenous with coarse sediment throughout. This is supported by EUSeamap (2021) broad habitat data which also models the area as consisting of infralittoral and circalittoral coarse sediments with one small area of circalittoral mixed sediment.

171. **Volume 4, Appendix 8.3 Benthic Baseline Report** of the EIAR broadly concurs with the publicly available data while also identifying habitats to a higher level. The sediment types at the stations sampled in the array site were gravel, gravel and cobbles, boulders and sand, gravelly sand, sandy gravel and slightly gravelly sand. While Annex I Sandbanks (1110) are predicted to occur along the OECC by JNCC (Gridded distribution map for Annex I sandbanks as reported by EU member states for 2018 Habitats Directive Article 17 reporting) and in a small section on the nearshore side of the array site, specific habitat mapping recorded no occurrences of sandbanks in the CWP Project offshore development area (see **Volume 4, Appendix 8.3 Benthic Baseline Report** of the EIAR). As sandbanks are predicted to occur in the wider study area any potential impacts from the CWP Project are assessed in **Section 8.10** of **Volume 3, Chapter 8 Subtidal and Intertidal Ecology**. Furthermore, an assessment of higher trophic levels including fish, mammals, and ornithology receptors has been undertaken which takes into account any effects on the underlying habitats (see **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology**, **Chapter 11 Marine Mammals** and **Chapter 10 Ornithology** of the EIAR).

172. As advised in **Section 2.8.1** of the **FIR Response Document**, CWP has undertaken a validation survey to provide contemporary data of the seabed within the offshore development area. In summary, the Applicant commissioned an additional benthic subtidal survey using both benthic grab and DDV at 46 sampling stations to provide further coverage across the array site and OECC, the survey design was agreed with the Marine Institute (MI) in August 2025. The results are summarised in **Section 8.6** of the **EIAR Addendum (Part 1)** and provided in full in **Appendix 8-A Benthic Subtidal Survey Report 2025** of the **EIAR Addendum**. Relevant paragraphs of **Section 8.10** (Impact Assessment) of the **EIAR Addendum (Part 1)** have been updated to reflect the additional baseline information**.** The additional baseline data validates both the baseline characterisation and confirms that there is no change to the impact assessment conclusions of the EIAR as a consequence of the additional data.

173. The Applicant have also committed to a programme of mitigations to reduce the impact of the CWP Project which include undertaking pre-construction geophysical surveys (see **Section 8.14** of **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology** of the EIAR) to facilitate the micrositing around sensitive habitats. Such features will be avoided by the locational flexibility afforded to the Applicant for permanent and temporary offshore infrastructure, as detailed under the provisions the Commission's Opinion of Flexibility [ACP-318588-23M] (see **Schedule 1** of the **Planning Documents**).

174. In summary, with the proposed mitigations, potential effects on seabed habitats are not predicted to be significant in EIA terms and no adverse effects are predicted in the context of AA.

5.1.6 SAC impacts

5.1.6.1 Summary of matter raised

175. An Taisce consider it is essential that rigorous mitigation measures are applied for cable infrastructure activity in Dublin Bay, due to its high ecological priority and UNESCO Biosphere designation. The proposed cabling infrastructure towards the landfall point traverses the designed 'Core Zone' within the Biosphere designation.

5.1.6.2 Applicant's response

176. The cable installation works through the intertidal zone in Dublin Bay, as described in EIAR **Volume 2**, **Chapter 4 Project Description**, have been fully assessed within the EIAR and NIS. Any effects associated with the works were concluded to be temporary and not significant and therefore acceptable. Likewise, in the context of AA, the NIS identified no adverse effects on the integrity of European Sites as a result of the proposed cable installation. The results of the EIA and AA demonstrate that open cut cable duct installation is an environmentally acceptable option, considering the relevant mitigation measures proposed.

177. **Volume 3, Chapter 8 Subtidal and Benthic Ecology** of the EIAR details the proposed mitigation measures considered appropriate and deliverable in relation to subtidal and benthic ecology. These include a pre-construction geophysical survey undertaken to facilitate the micrositing around sensitive habitats such as *Sabellaria spinulosa*, and implementation of a CEMP (as updated in response to the Commission's FIR) that has been prepared to provide a management framework, to ensure appropriate controls are in place to manage environmental risks associated with the construction of the CWP Project. The assessment concludes no significant effects in the context of EIA.

5.1.6.3 Summary of matter raised

178. An Taisce emphasised the conservation importance of South Dublin Bay SAC, SPA, and pNHA, highlighting the need to protect the SAC's QIs from impacts related to cable infrastructure installation.

5.1.6.4 Applicant's response

179. NIS **Volume 4 – Assessment of Implications for Special Areas of Conservation** evaluates the potential effects of cable installation on the QIs of South Dublin Bay SAC (000210), which is part of a wider designated network that includes the South Dublin Bay and River Tolka Estuary SPA (004024).

180. The assessment confirms that any disturbance to mudflats and sandflats will be localised and temporary, with affected areas expected to recover naturally through sediment redistribution and ecological succession.

181. The temporary nature of any intertidal habitat disturbance has been assessed, with findings confirming that natural sediment transport processes will facilitate recovery following construction. The NIS confirms no AESI for the South Dublin Bay SAC (see **Section 2.1** of NIS **Volume 4**).

5.1.6.5 Summary of matter raised

182. An Taisce suggest that, for the cable infrastructure in Dublin Bay, mitigation measures are necessary due to the area's high ecological value and designation as a UNESCO Biosphere in 2015. They stress the importance of protecting the QIs of South Dublin Bay SAC, including mudflats, sandflats, and seagrass species. An Taisce recommends developing mitigation measures for the entirety of the impact assessment for predicted effects including direct impacts on habitats, increased SSC and deposition, remobilisation of contaminated sediments, and temperature changes associated with Electromagnetic Fields.

183. An Taisce also raised concerns about the potential effects of the CWP Project on abundances of intertidal species in this area through the interruption of tidal influence, in particular on Zostera seagrass species, which serves important habitat and carbon sequestration functions.

5.1.6.6 Applicant's response

184. NIS **Volume 4 – Assessment of Implications for Special Areas of Conservation** assesses the potential adverse effects on the site integrity of the South Dublin Bay SAC. The South Dublin Bay SAC was screened into the NIS for Mudflats and sandflats not covered by seawater at low tide, Annual vegetation of drift lines, *Salicornia* and other annuals colonising mud and sand; and Embryonic shifting dunes. All impacts where Likely Significant Effects (LSE) could not be ruled out were considered:

- Direct impacts on habitats
- Increased Suspended Sediment Concentrations and Sediment Deposition
- Remobilisation of contaminated sediments
- Introduction of INNS
- Presence of EMF / temperature changes

185. The impact of entanglement is not considered relevant to benthic habitats and species as there is no meaningful pathway for this impact to affect benthic habitats and species. Accordingly, it is not addressed in either the EIAR or NIS. The impacts to be assessed for benthic and intertidal ecology were agreed through consultation at Scoping (CWP, 2021).

186. No artificial substrate will be introduced in the South Dublin Bay SAC, and therefore that impact is not considered in the NIS. Habitat loss and habitat creation, by way of the introduction of infrastructure and scour and / or cable protection, is however considered in **Section 8.10** of **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology** of the **EIAR**.

187. The mapped extent of the Zostera habitat is outside the CWP Project offshore development area and as such no direct effects are envisaged (i.e. no direct effects on habitats or presence of EMF/temperature changes). Surveys undertaken in 2025 also validate the lack of *Zostera* beds in the CWP Project offshore development area. These are summarised in **Section 8.6** of the **EIAR Addendum (Part 1)** and provided in full in **Appendix 6-A Modelling Report Addendum** of the **EIAR Addendum**. Relevant indirect effects are assessed with respect to the Zostera habitat which is a component of the QI feature "mudflats and sandflats not covered by seawater at low tide [1140]" and an area of Zostera is located within the mudflat and sandflat in South Dublin Bay near Merion Gate.

188. The NIS determined that only 'Introduction of INNS' requires additional mitigation. All other impacts do not result in adverse effects on site integrity, and therefore additional mitigation is not required. It should be noted that the adoption of industry standard pollution prevention measures allowed impacts arising from accidental pollution to be screened out in Stage 1 of the assessment process (see **Volume 3 Screening** of the NIS).

189. Following the application of INNS mitigation measures, detailed within the updated **CEMP**, there was determined to be no impediment to any Conservation Objective of the site being met, and therefore no adverse effect on site integrity predicted from the project alone or in combination with other plans or projects (see **Volume 4 - Assessment of Implications for Special Areas of Conservation** of the NIS).

190. In addition to the NIS, **Section 8.10** of **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology** of the **EIAR** assesses the impact of building a cofferdam and associated trenching for cabling infrastructure on the intertidal species whose recoverability to habitat disturbance is fully assessed. Recoverability forms part of the receptor sensitivity and is assessed as high for the mudflats and sandflats as it is characterised by opportunistic polychaetes and mobile amphipods that are indicative of, and adapted to, natural and / or anthropogenic disturbance, and recover quickly, < 1 year (Ashley, 2016). Overall, sensitivity was deemed medium given the high value and medium tolerance (resilience) of the habitat to this impact. The magnitude of impact was deemed low as c. 2% of the tidal mudflats and sandflats Annex I habitat within the SAC has the potential to be impacted by habitat disturbance. Furthermore, **Volume 3, Chapter 6, Marine Geology, Sediments and Coastal Processes** of the EIAR found no significant impact on coastal processes from these works.

191. Notwithstanding the conclusions of the NIS and EIAR, monitoring proposals relevant South Dublin Bay SAC are included within the Applicant's updated **IPPEMP**. Pre-construction and post-construction surveys will be targeted to areas where construction activities are planned and where there is deemed to be potential for Annex I reef. These surveys will build upon the baseline characterisation surveys, including the data validation surveys conducted in 2025 as part of the **EIAR Addendum**, which validate the characterisation data used for the EIAR and provide an early pre-construction baseline dataset.

5.1.6.7 Summary of matter raised

192. An Taisce raised concerns about the potential effects of the CWP Project on the reef-building worm *Sabellaria alveollata* and recommends avoiding dredged material disposal near this sensitive habitat. They stress the importance of assessing and mitigating the impacts of elevated SSC on this rare habitat.

5.1.6.8 Applicant's response

193. The Wicklow Reef SAC is the only site which is designated for subtidal *Sabellaria alveollata* reef habitat in Ireland. This site is considered in **Volume 3 Screening** of the NIS. Based upon predictive sediment plume modelling and subtidal survey conducted for the CWP Project, there will be no connectivity between effects associated with the CWP Project and the habitats of the Wicklow Reef SAC (see **Volume 4**, **Appendix 6.3 Modelling Report** of the EIAR; **Appendix 6-A Modelling Report Addendum** of the **EIAR Addendum**; and **Appendix 8-A Benthic Subtidal Survey Report 2025** and **Appendix 8-C DDV Wicklow Reef Survey Report 2025** of the **EIAR Addendum**).

194. The subtidal survey data provided in the **EIAR Addendum** was subject to a reefiness assessment and analysed to determine epifaunal biotopes present in the offshore development area. Of the 46 stations sampled across the OECC and array site, seven stations, located in the array site, were assessed as having attributes that could contribute to a determination of low resemblance stony reef, including composition, elevation and biota. It should be noted however, that for assessing stony reef, the attribute of extent and elevation is best assessed using geophysical data (Golding *et. al*. 2020). Existing geophysical data for the site classified the entire array site as sedimentary and as such, the small areas of rocky or stony habitat present are unlikely to be considered as having a 'low resemblance' to Annex I stony reef.

195. Notwithstanding the above, the CWP Project can confirm that dredge disposal is only proposed to be undertaken within the boundaries of the CWP Project offshore development area. Sediment dispersal from activities undertaken by the Applicant during construction is predicted to disperse in a primarily easterly direction, with only limited dispersal to the south and west. The sediment plume modelling confirms no pathway for impact on the Wicklow Reef SAC and no potential for LSE. It was therefore appropriately screened out of further assessment.

196. However, as an ephemeral feature it will be necessary to validate the results in advance of construction. A pre-construction geophysical survey and benthic surveys will therefore be undertaken (as set out in the updated **IPPEMP**) to facilitate the micrositing around sensitive habitats such as *Sabellaria alveollata*.

5.1.6.9 Summary of matter raised

197. An Taisce raised concerns about the potential effects of the CWP Project on the Rockabill to Dalkey Island SAC, specifically that the biodiverse reef may be sensitive to the effects of suspended sediment deposition arising as a result of the subject proposal.

5.1.6.10 Applicant's response

198. In the NIS the Rockabill to Dalkey Island SAC was screened in for reefs and harbour porpoise. The NIS screened in a number of potential impact pathways for reefs. These were direct impacts on habitats; increased SSC leading to smothering; remobilisation of contaminated sediments; introduction of INNS; and presence of EMF / temperature changes. The conclusion drawn for all impacts was no adverse effect on site integrity.

199. The results of the updated sediment modelling (provided in **Appendix 6-A Modelling Report Addendum** of the **EIAR Addendum**) support and validate the previous modelling results. An update is provided in **the NIS Addendum (Part 1)** to reflect the updated modelling presented in **Appendix 6-A** (*ibid*) in relation to Rockabill to Dalkey Island SAC. Given this, the additional sediment plume modelling supports conclusions of the original assessment that based upon the modelling of sediment transport arising from the CWP Project activities, there is no potential for increases in SSC to affect the protected habitats within the Rockabill to Dalkey SAC.

200. With respect to the reef habitats, the assessment has determined that only INNS presents a risk to site conservation objectives, with no pathway for other impacts to cause adverse effects on site integrity. No mitigation was considered to be required for the other impacts screened in as these impacts were assessed as having no adverse effects on site integrity, and did not require mitigation measures to be applied. It should be noted that the adoption of industry standard pollution prevention measures allowed impacts arising from accidental pollution to be screened out in Stage 1 of the assessment process (see **Volume 3 Screening** of the NIS). Following the application of INNS mitigation for the reef habitat, there was determined to be no impediment to any of the Conservation Objectives for the reef feature being met, and therefore no adverse effect on site integrity predicted from the project alone or in combination with other plans or projects.

5.1.7 Bat impacts

5.1.7.1 Summary of matter raised

201. An Taisce highlight the four bat species given close consideration and potential impacts assessed within **Volume 3, Chapter 13 Offshore Bats** of the EIAR, however they raise uncertainty regarding bat behaviours at sea and note that impacts on other species cannot be ruled out due to uncertainty regarding bat flight heights.

5.1.7.2 Applicant's response

202. The assessment described in **Volume 3**, **Chapter 13 Offshore Bats** focuses on species known to or considered likely to use the offshore environment. The array site is approximately 13 - 22 km offshore. Species not recorded as occurring this far into the offshore environment across Europe are not included in the assessment, regardless of the potential flight heights, as there is no evidence recorded to suggest such species would be found as far offshore.

203. As highlighted within **Volume 3**, **Chapter 13 Offshore Bats** of the EIAR the potential flight heights in the offshore environment are largely unknown, though assumed based on known behaviours, both on and offshore. Additional research by the All-Ireland Nathusius's pipistrelle project (DHLGH, 2025) has identified that four of the 13 radio tagged Leisler's bats appeared to fly at over 1500 m above sea level over land, and none of the tagged bats left the coast of Ireland. The All-Ireland Nathusius's pipistrelle project concluded that there is no evidence to suggest current overseas migration but that it remains possible. This information was published following submission of the EIAR, however a review of this All-Ireland research and other studies, including a review by Natural England, have been included in **Section 13** of the **EIAR Addendum (Part 1)** to provide updated information into potential behaviours of bats offshore. Despite this additional information, as flight heights during migration or within the offshore environment are unknown, it was not possible to discount or include species based on presence within the swept area. Instead, the potential for collision is assessed on a precautionary basis within **Section 13.10.2** of **Volume 3**, **Chapter 13 Offshore Bats** of the EIAR for all species considered likely or potentially present within the array site.

204. To assess the potential for bat activity within the array site targeted surveys of the area were undertaken using a chartered vessel in 2025, the results of which are provided in **Appendix 13-A Offshore Bat Survey Report** of the **EIAR Addendum**. In addition, a repeat of the 2022 headlands surveys was undertaken in 2025, the results and comparison of the 2022 and 2025 headland surveys is provided in **Appendix 13-A** of the **EIAR Addendum**. These survey results validate the findings of the 2022 baseline surveys, as described in **Appendix C - Data validation statements** of the **FIR Response Document**.

5.1.7.3 Summary of matter raised

205. An Taisce highlight the value in ongoing monitoring in relation to bats. An Taisce also recommended that all possible best practice mitigation measures are implemented while further mitigation measures including feathering and curtailment may be required should bat activity be identified within the area of turbines.

5.1.7.4 Applicant's response

206. In line with the comments made by An Taisce, **Volume 3**, **Chapter 13 Offshore Bats** of the EIAR specified that ongoing monitoring will be undertaken to inform any adaptive management measures. Additional mitigation through adaptive management is not considered necessary at this time, however the Applicant is committed to construction and operation phase monitoring (including automated static detector monitoring) and following best practice measures during construction such as limiting the use of lighting to directional lighting and the appointment of an Ecological Clerk of Works (ECoW) for the construction phase.

207. Further to this, the Applicant has committed to joining the ECMG which, through strategic monitoring, would have an increased opportunity of detecting bats using the offshore environment in this area. Please also refer to the updated **IPPEMP** which details the proposed approach to operational phase monitoring.

5.1.7.5 Summary of matter raised

208. An Taisce recommend that OWF developers share monitoring data on bat activity, movements, and turbine collisions in the Irish Sea. This collaboration would help to overcome data gaps such as potential bat migratory routes between Ireland and Wales.

5.1.7.6 Applicant's response

209. As identified in **Volume 3**, **Chapter 13 Offshore Bats** of the EIAR, the Applicant is committed to participating in the ECMG, which will be principally made up of OWF developments in the region, to discuss and agree potential strategic monitoring initiatives for a variety of potential receptors including offshore bats. **Volume 3**, **Chapter 13 Offshore Bats** also includes the Applicant's commitment to operational phase monitoring which will gather further data into how bats move through the area. An invitation to join the ECMG will be extended to relevant stakeholders and data sharing is considered a key component of the ECMG.

5.1.8 Invasive species

5.1.8.1 Summary of matter raised

210. An Taisce raise concerns over the potential risk of invasive species being introduced through ballast water on ships and highlight the need for appropriate biosecurity measures. They submit that appropriate mitigation measures should be in place to mitigate the risk of invasive species within the marine environment.

211. An Taisce also advise the Commission to seek clarification from the applicant on whether construction contractor information is available, including vessels to be used and their origin. This would assist pre-construction invasive species management planning and ensure that a precautionary approach to invasive species mitigation is adhered to.

5.1.8.2 Applicant's response

212. The EIAR details the scope of the assessment covering invasive alien species (termed invasive non native species (INNS) in the CWP Project planning application). The scope of the assessment was

discussed and agreed with NPWS in 2021 (see **Section 8.2** of EIAR **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology**).

213. The EIAR introduces mitigation measures in the form of an Offshore Biosecurity Plan. A draft of this document accompanied the planning application as Appendix A of the **CEMP**.

214. The Offshore Biosecurity Plan includes a commitment that all vessels working on the CWP Project, throughout all phases of the project, will be subject to the **CEMP**, irrespective of (a) country of vessel origin, (b) the number of vessel movements or (c) species of concern. The Applicant is seeking permission to construct the proposed project and apply mitigation as necessary to all activities immaterial of vessel origin etc. As such the availability of contractor information is not considered to be of significance.

215. Biosecurity measures will include adherence to International Management Organisation (IMO) Guidelines for the Control and Management of Ships' Biofouling to Minimize the Transfer of Invasive Aquatic Species (IMO, 2024), and will comply, where applicable, with the International Convention for the Control and Management of Ships' Ballast Water and Sediments (IMO, 2004). With this mitigation in place for all CWP Project activities, the potential for introduction or spread of any INNS is reduced to as low as reasonably practicable.

216. Following the application of INNS mitigation (comprehensive biosecurity management measures detailed in **Appendix A** of the **CEMP**), there was determined to be no impediment to any Conservation Objective and no adverse effect on site integrity predicted from the project alone or in combination with other plans or projects. Similarly, in the context of EIA, no significant effects have been identified in **Volume 3, Chapter 8 Benthic and Intertidal Ecology** of the EIAR.

217. The Applicant notes that an updated **CEMP** has been provided in response to the Commission's FIR. This document supersedes the **CEMP** submitted with the CWP Project planning application but retains all of the abovementioned mitigation commitments with regards to INNS.

5.1.8.3 Summary of matter raised

218. Regarding the potential impact from the introduction of invasive species, An Taisce note the importance of the International Convention for the Control and Management of Ships' Ballast Water and Sediments, and the associated Sea Pollution (Ballast Water Management Convention) Regulations 2023.

5.1.8.4 Applicant's response

219. The International Convention for the Control and Management of Ships' Ballast Water and Sediments referred to by An Taisce is considered within the **CEMP**, alongside other relevant legislation. As previously stated, all activities on the CWP Project will operate under an agreed **CEMP** including biosecurity management measures which will detail the measures to minimise the potential to introduce INNS into the environment.

220. With this mitigation in place for all CWP Project activities, the potential for introduction or spread of any INNS is reduced to as low as reasonably practicable.

221. Following the application of INNS mitigation (comprehensive biosecurity management measures detailed in **Appendix A** of the **CEMP**), there was determined to be no impediment to any conservation objective and no adverse effect on site integrity predicted from the project alone or in combination with other plans or projects in the context of AA.

222. Likewise, in the context of EIA, no significant effects with respect to INNS have been identified in **Volume 3, Chapter 8 Benthic and Intertidal Ecology** of the EIAR.

5.2 Commissioner of Irish Lights

5.2.1 Summary of issues raised

223. The following section provides a response to matters raised by the Commissioner of Irish Lights (CIL). The matters raised have been responded to under the following headings:

- Proposed planning conditions

5.2.2 Proposed planning conditions

5.2.2.1 Summary of matter raised

224. The CIL recommends planning conditions to be attached to the CWP Project planning permission specific to lighting and marine aids to navigation.

5.2.2.2 Applicant's response

225. The Applicant held a meeting with the CIL on 29th October 2025 with the intention to review and discuss the CILs observations.

226. CIL confirmed that the **Lighting and Marking Plan** submitted with the CWP Project planning application was suitable for this stage. It will be discussed in further detail post-consent once a final layout has been selected.

227. In summary, the Applicant notes the recommended conditions and has no comments.

5.3 Department of Agriculture, Food and the Marine

5.3.1 Summary of issues raised

228. The following section provides a response to matters raised by the Department of Agriculture, Food and the Marine (DAFM). The matters raised have been responded to under the following headings:

- Effects on commercial fisheries

5.3.2 Effects on commercial fisheries

5.3.2.1 Summary of matter raised

229. The DAFM recommend monitoring of moderate and minor effects on fisheries due to the proposed construction and presence of turbines, including that of electromagnetic fields.

5.3.2.2 Applicant's response

230. The Applicant confirms that a Moderate significant effect was assessed for whelk potting across the array site and OECC and a Moderate significant effect was assessed for crab and lobster potting across the OECC. Mitigation is proposed in **Volume3**, **Chapter 12 Commercial Fisheries** of the EIAR that will lower the residual significance to a level that is not significant in EIA terms.

231. As described in **Volume 3, Chapter 12 Commercial Fisheries** and the updated **IPPEMP**, the Applicant is committed to pre- and post-construction monitoring of commercial fisheries activity which is anticipated to include:

- Undertaking a review of fisheries data from Sea-Fisheries Protection Authority (SFPA) for period of five years (covering the array area site and OECC, including all potting activity) and;
- Undertaking a dedicated pre- and post-construction monitoring programme to determine changes in whelk catch per unit effort (CPUE) within the array site.

232. The Applicant will promote co-existence and minimise potential disruption to normal commercial fishing practices through implementation of a **Fisheries Management and Mitigation Strategy** (**FMMS**). In response to the Commission's FIR, the **FMMS** has been updated and submitted with the Applicant's response. The **FMMS** recognises that there may be instances where the relocation of static fishing gear may be necessary as a result of survey or construction works. Where this is the case, the Applicant will endeavour to enter into reasonable, justifiable and evidence-based cooperation agreements with affected fishermen who can demonstrate a legitimate economical dependency on the CWP Project offshore development area wherever possible.

233. The proposed monitoring will inform whether there have been any changes to the ability to catch target species, from both a biological / resource perspective and practicality of gear deployment.

234. In addition, the updated **FMMS** commits, with other Phase 1 OWF Projects, to collaborative monitoring and research to detect, evidence and respond to any unanticipated changes in fishing patterns. This includes supporting voluntary deployment of inshore VMS (iVMS) on selected vessels, in collaboration with the Marine Institute and the fishing industry, to enable real-time and longer-term monitoring of the spatial distribution of fishing activity within and around array site and OECC areas. This monitoring will also establish a robust baseline against which any redistribution/displacement during construction and operation can be assessed. The Applicant will facilitate uptake and coordination through the project fisheries liaison roles and will support independent scientific oversight (e.g. Marine Institute and/or an academic partner) in the design, delivery and interpretation of monitoring, including exploring a dedicated research programme focused on cumulative displacement.

235. EIAR **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology**, supported by **Volume 4, Appendix 9.3 Noise overlap with spawning and nursery ground calculations** and **Volume 4, Appendix 9.4 Underwater Noise Assessment** of the EIAR considered the potential impacts of underwater noise and electromagnetic fields (EMF) (amongst other potential impacts) on commercially exploited species. This concluded that the effect of EMF and noise were not significant for any of the commercial species in EIA terms. The **EIAR Addendum (Part 1), as supported by Appendix 9-B Noise overlap with spawning and nursery ground calculations,** and **9-C Underwater Noise Modelling Assessment**.

236. In response to item 11j of the FIR (see **FIR Response Document**), the Applicant has provided additional information regarding the EMF effects on fish and shellfish receptors. The additional information provided in **Section 9.10.2** of the **EIAR Addendum (Part 1)** supports the conclusion that the magnitude of impact from EMF on fish and shellfish receptors is predicted to be negligible. This validates the original EIA conclusion of no significant effects in the context of EIA.

5.3.2.3 Summary of matter raised

237. The DAFM considers that effects on fishing activity in or near the proposed area of development may be of far greater significance than envisaged, particularly the impacts on pot fisheries.

5.3.2.4 Applicant's response

238. As described in **Volume 3**, **Chapter 12 Commercial Fisheries** and the updated **IPPEMP**, the Applicant is committed to fisheries activity monitoring pre and post construction. In addition, pre- and post-survey observation trips have been offered to fishermen, targeting the CWP Project to further facilitate co-existence opportunities.

239. The aim of the commercial fisheries monitoring is to provide an accurate representation of fishing activity and CPUE in areas of relevance to the proposed development. The results of the monitoring may inform further updates to the **FMMS**. This means that if the effect to the potting fisheries is greater than predicted in the EIAR, there is opportunity for additional mitigation to be developed through a later update to the **FMMS** based on the monitoring evidence.

240. Further, the Applicant notes that the assessment is informed by a substantial baseline evidence base, comprising site-specific scouting surveys, landings statistics, VMS and other spatial fisheries datasets, and ongoing consultation with fishers and other stakeholders. Although individual datasets have recognised limitations, the range of sources analysed allows corroboration and verification across the evidence base and provides an appropriate, comprehensive and robust characterisation of the existing environment. The Applicant is therefore satisfied that the assessment provides a reliable basis for evaluating effects on pot fisheries.

241. In addition, the updated **FMMS** commits, with other Phase 1 Projects, to collaborative monitoring and research to detect, evidence and respond to any unanticipated changes in fishing patterns. This includes supporting voluntary deployment of iVMS on selected vessels, in collaboration with the Marine Institute and the fishing industry, to enable real-time and longer-term monitoring of the spatial distribution of fishing activity within and around array site and OECC areas, and to establish a robust baseline against which any redistribution/displacement during construction and operation can be assessed. The Applicant will facilitate uptake and coordination through the project fisheries liaison roles and will support independent scientific oversight (e.g. Marine Institute and/or an academic partner) in the design, delivery and interpretation of monitoring, including exploring a dedicated research programme focused on cumulative displacement.

5.3.2.5 Summary of matter raised

242. The DAFM would urge that timely consultation and active engagement with inshore fishing representatives continues to take place.

5.3.2.6 Applicant's response

243. The Applicant is committed to timely, transparent and frequent consultation and engagement with the fishing industry, including inshore fishers and fishing representatives. Details of consultation undertaken to inform the EIA is provided in **Section 12.2** of EIAR **Volume 3**, **Chapter 12 Commercial Fisheries**. Further consultation that has taken place since the submission of the planning application is detailed in **Appendix B - Schedule of post application consultations** of the **FIR Response Document**.

244. The Applicant has a Commercial Fisheries Manager and Fisheries Liaison Officer (FLO) in place to facilitate this communication, and commits to maintaining these active liaison arrangements to ensure timely engagement, information-sharing and effective implementation of the **FMMS**. The **FMMS** defines roles and responsibilities in relation to liaison and sets out a timeline for information dissemination to the fishing industry.

245. As described in **Appendix B - Schedule of post application consultations** of the **FIR Response Document**, post application consultation has included regular collaborative meetings with other Phase 1 OWF Project developers to agree a coordinated approach to issues such as cumulative displacement. The Applicant has also, together with other Phase 1 OWF Project developers, met with the Marine Institute to discuss approaches to resolving cumulative displacement, and continues to participate actively in the Seafood/ORE Working Group, where fisheries coexistence, displacement and related mitigation approaches are being considered in a wider sectoral context. In addition, ongoing direct engagement with fishers has continued through the FLO, including quayside engagement and day-to-day liaison with affected fishers and their representatives.

5.3.2.7 Summary of matter raised

246. The DAFM suggest the €100,000 annual budget as set out for a dedicated €500,000 Fisheries Fund from 2023 for five years is quite low and of too short a time frame in order to support initiatives for the fisheries affected by the proposed development.

5.3.2.8 Applicant's response

247. The Applicant notes that the Fisheries Fund has been developed as a goodwill initiative to support locally relevant fisheries initiatives and legacy measures via the Fisheries Charter, and is separate from, and not relied upon as, project mitigation for the purposes of the EIA conclusions.

248. The initial annual value and five-year duration were set to provide an early and deliverable programme of support, with priorities and allocations to be agreed through the Fisheries Charter; the Applicant will keep the Fund's operation under review through that governance process.

249. The Applicant further confirms that the primary mechanisms for addressing and managing fisheries impacts are (i) the embedded and additional mitigation measures set out in **Volume 3**, **Chapter 12 Commercial Fisheries** of the EIAR, and (ii) the fisheries management measures and monitoring commitments included within the updated **FMMS**. These measures are intended to avoid, reduce and manage impacts, and (where required) to enable adaptive responses informed by monitoring and engagement throughout the project lifecycle.

250. With regard to financial support arrangements, the Applicant confirms that construction-phase disruption provisions are addressed separately to the Fisheries Fund. In particular, where commercial fishermen can demonstrate a legitimate economic dependency on the CWP Project offshore development area and experience verifiable, project-related disruption during survey and/or construction activities, the Applicant will seek to agree reasonable, justifiable and evidence-based cooperation agreements, which may include disruption payments, as appropriate and proportionate. These arrangements are intended to address temporary, project-related interruption to fishing operations during construction and are implemented through the updated **FMMS** and associated fisheries liaison processes.

251. The Fisheries Fund is therefore intended to operate as an additional, complementary measure, supporting fisheries-related initiatives identified through the Fisheries Charter (e.g., safety, training, improved data/evidence, innovation, stewardship, or community benefit), rather than as a substitute for (or cap on) compensation or disruption arrangements where these are justified. The Applicant will

continue engagement with the Department and relevant stakeholders through the Fisheries Charter governance arrangements and fisheries liaison to ensure that the Fund is targeted effectively, and will keep its operation under review as the CWP Project progresses.

5.3.2.9 Summary of matter raised

252. The DAFM suggested that this fund should also apply to vessels that access the Codling Bank in order to traverse to other fishing grounds.

5.3.2.10 Applicant's response

253. The Applicant confirms that the potential impact of increased steaming times to fishing grounds as a result of the CWP Project was assessed in **Volume 3, Chapter 12 Commercial Fisheries** in the EIAR for every phase of the development, with impacts found to be not significant in EIA terms. Any increases in steaming time associated with advisory safe passing distances are anticipated to be highly localised, short-term and are not expected to result in any discernible increases in steaming times or vessel running costs.

254. On this basis, the Applicant does not consider it necessary or proportionate for the Fisheries Fund to apply to vessels that are only transiting the Codling Bank area, where no material project-related effect is predicted for transit activity. The Fisheries Fund is intended to benefit the fishing industry operating within the vicinity of the Codling Bank area, supporting initiatives to promote the fishing industry and long-term sustainable fishing, rather than to provide payments in respect of transit activity.

255. The Applicant further confirms that potential effects on fishing vessels in transit (and all other vessel traffic) are considered within EIAR **Chapter 16 Shipping and Navigation**, including routing around construction activities where relevant.

256. Separately, where a vessel can demonstrate verifiable, project-related disruption to fishing activity (i.e., impacts on fishing operations rather than transit), the Applicant will seek to manage such effects through the updated **FMMS**, including co-operation agreements where fishermen can demonstrate a legitimate economic dependency on the CWP Project offshore development area.

5.3.2.11 Summary of matter raised

257. The DAFM advises that spawning and nursery grounds be considered, in addition to seafood (commercially targeted species), specific reference is made to Objective 2, and Table 7-1.

5.3.2.12 Applicant's response

258. It is unclear what objective or table is being referred to within the submission, but notwithstanding this, the assessments presented within **Volume 3**, **Chapter 12 Commercial Fisheries** and **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** considers the implications of the CWP Project on spawning and nursery grounds, and commercially targeted species. The assessments are informed through reference to appropriate characterisation of the receiving environment and conclude that there will be no significant effects from the CWP Project on any spawning grounds, nursery grounds, or commercially targeted species. These conclusions are drawn through reference to appropriate scientific literature and are considered to be robust.

259. Updates to **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** in **Section 9** of the **EIAR Addendum (Part 1)** support and reaffirm the assessment conclusions (i.e. no significant effects in the context of EIA).

5.4 Department of Housing, Local Government and Heritage - Development Applications Unit (Archaeology)

5.4.1 Summary of issues raised

260. The following section provides a response to matters raised by the DHLGH Development Applications Unit (DAU) in relation to archaeology.

261. The matters raised have been responded to under the following headings:

- Comments on the EIAR
- Proposed planning conditions

262. Matters raised by the DAU in regards to nature conservation are responded to in **Section 5.5** of this document.

5.4.2 Comments on the EIAR

5.4.2.1 Summary of matter raised

263. The DAU recommend that all wrecks older than 100 years within the offshore development area (regardless of whether or not they have been located) and zones of high archaeological potential are avoided in the final project design through the implementation of AEZs.

5.4.2.2 Applicant's response

264. As described in **Appendix B - Schedule of post application consultations** of the **FIR Response Document**, the Applicant notes that a meeting was held with the DAU on 21st October 2025 to discuss DAU's observations and proposed planning conditions in regards marine archaeology. A further meeting was held on 23rd January 2026 to agree the draft **Marine Archaeology Management Plan** (**MAMP**). Points of discussion and agreement from the abovementioned meetings are referred to below and have informed the Applicant's responses to the observations made.

265. The Applicant notes the recommendation and confirms that AEZs around known features of archaeological interest (i.e. A1 and A3 classified geophysical anomalies) which have high archaeological potential have been recommended (see **Volume 3**, **Chapter 14 Marine Archaeology and Cultural Heritage** of the EIAR). If wrecks older than 100 years old are discovered whilst project activities are being undertaken, these will be protected by means of implementing a temporary AEZ until character and extent is confirmed, and until an appropriate AEZ around the buffered extents of the site is agreed with the National Monuments Service (NMS).

266. For seabed features of likely/possible archaeological interest (i.e. A2 classified geophysical anomalies), there is currently insufficient information to confirm their date and character. These anomalies will be avoided by the locational flexibility afforded to the Applicant for permanent and temporary offshore infrastructure, as detail under the provisions the Commission's Opinion of Flexibility [ACP-318588-23M] (see **Schedule 1** of the **Planning Documents**).

267. If avoidance is not possible, further appraisal is proposed prior to construction, to confirm their character. If the character of the anomaly is confirmed as being of high archaeological interest or consists of a wreck older than 100 years old, this will have an appropriate AEZ around the buffered extents of the anomaly implemented and agreed with the NMS.

268. For recorded wrecking events (Recorded Losses), AEZs have not been proposed as the location (coordinate position) of these events has not been confirmed.

269. If further information is exposed as a result of investigations undertaken prior to construction, and the character and date of a wrecking event is confirmed, the mitigation measures and the draft MAMP will be updated accordingly. In summary the Applicant is of the opinion, based on experience and best practice guidance, that cultural heritage features will be sufficiently safeguarded with the mitigation measures proposed in **Volume 3**, **Chapter 14 Marine Archaeology and Cultural Heritage** the EIAR.

270. A draft **MAMP** has been developed in consultation with the DAU and will be updated and finalised pre-construction following development of the final project design and in consultation with the NMS. The draft **MAMP** has been accepted in writing by the DAU (see **Appendix M - NMS approval of draft Marine Archaeology Management Plan (MAMP**) of the **FIR Response Document**) and is provided as part of the **Other Documents** that accompany the Applicant's response to the Commission's FIR. The draft **MAMP** confirms that AEZs around known features of archaeological interest which have high archaeological potential have been recommended. A protocol for archaeological discoveries (PAD) will also be implemented as best practice.

5.4.2.3 Summary of matter raised

271. The DAU recommend that any further geotechnical campaign is the subject of archaeological assessment, for the review and approval of the NMS.

5.4.2.4 Applicant's response

272. The Applicant notes the recommendation and confirms that any future geotechnical surveys will involve suitably qualified geoarchaeologist in the planning, acquisition and review of geotechnical datasets. The scope and methodology will be set out in an activity-specific archaeological method statement, prepared in consultation with, and submitted for review and approval of, the NMS prior to commencement of geotechnical works. This is clarified in the **Section 14** of the **EIAR Addendum (Part 2)** and in the draft **MAMP** that accompany the Applicant's response to the Commission's FIR.

5.4.2.5 Summary of matter raised

273. The DAU recommend that the final OWF design is the subject of archaeological assessment, for the review and approval of the Department.

5.4.2.6 Applicant's response

274. The Applicant notes the recommendation and confirms that the final design of CWP Project will be subject to an Underwater Archaeological Impact Assessment (UAIA). The Applicant notes that this will be a validation exercise of the impact assessment completed to date as the approach taken by the Applicant to consider locational flexibility within the EIA will ensure that no new impacts are identified, and no new mitigations required. The UAIA will be submitted for review and approval to the NMS prior

to commencement of construction works. This detail is provided in the draft **MAMP** that accompany the Applicant's response to the Commission's FIR.

5.4.2.7 Summary of matter raised

275. The DAU recommend that all future geotechnical cores are archaeologically assessed and where anthropogenic material is identified, they are subject to geoarchaeological and palaeoenvironmental analysis and scientific dating.

5.4.2.8 Applicant's response

276. The Applicant notes the recommendation and confirms that any future geotechnical cores and core logs from the CWP Project will be made available for geoarchaeological assessment by a suitably qualified archaeological contractor. The scope and methodology will be set out in an activity-specific archaeological method statement, prepared in consultation with, and submitted for review and approval of, the NMS prior to commencement of geotechnical works. The archaeological method statement will include clear provisions for the development of a collection, retention and storage strategy for cores, to allow for geoarchaeological and palaeoenvironmental analysis to take place. This detail is provided in the draft **MAMP** that accompany the Applicant's response to the Commission's FIR.

5.4.2.9 Summary of matter raised

277. The DAU recommend that archaeological onboard monitoring encompass all construction activities which have the potential to impact on the seabed and / or on underwater cultural heritage.

5.4.2.10 Applicant's response

278. CWP notes the recommendation. **Volume 3, Chapter 14 Marine Archaeology and Cultural Heritage** of the EIAR details the proposed mitigation measures in relation to underwater cultural heritage. Updates to reflect the matter raised regarding archaeological monitoring are provided in **Section 4.4** of the draft **MAMP**.

279. Archaeological monitoring will be conducted during intertidal/foreshore works and during construction works with potential for the discovery of material on the seabed and/or recovery of material to the surface. In instances where archaeological monitoring is not required, with the agreement of the NMS, a PAD will be implemented as best practice.

5.4.2.11 Summary of matter raised

280. The DAU recommend that a MAMP is collated and provided to the Department for review and approval.

5.4.2.12 Applicant's response

281. CWP notes the recommendation. A draft **MAMP** has been developed in consultation with the DAU and will be updated and finalised pre-construction following development of the final project design and in consultation with the NMS.

282. A meeting was held with the DAU on 23rd January 2026 to review the draft **MAMP** which was subsequently accepted by the DAU on 25th February 2026 (see **Appendix M - NMS approval of draft Marine Archaeology Management Plan (MAMP)** of the **FIR Response Document**).

5.4.3 Proposed planning conditions

5.4.3.1 Summary of matter raised

283. The DAU recommends planning conditions to be attached to the CWP Project planning permission relative marine archaeology and cultural heritage.

5.4.3.2 Applicant's response

284. The Applicant notes that a meeting was held with the DAU on 21st October 2025 to discuss DAU's observations and proposed planning conditions in regards marine archaeology. In summary CWP notes the recommended conditions and has no comments.

5.5 Department of Housing, Local Government and Heritage - Development Applications Unit – Nature Conservation

285. The following section provides a response to matters raised by the National Parks and Wildlife Service (NPWS) of the DHLGH DAU. The matters raised have been responded to under the following headings:

- Potential impacts on qualifying interest marine habitats in South Dublin Bay SAC
- Bird impacts
- Bat impacts (onshore and migratory)
- Nature conservation
- Onshore biodiversity (badgers)
- Onshore biodiversity (otters)
- Onshore biodiversity (landscaping)

5.5.1 Potential impacts on qualifying interest marine habitats in South Dublin Bay SAC

5.5.1.1 Summary of matter raised

286. The NPWS recommended that horizontal directional drilling is used at the landfall to bring the offshore export cables onshore. It was noted that the open cut method proposed by the Applicant is not consistent with best practice in terms of management of impacts on intertidal sediment communities.

5.5.1.2 Applicant's response

287. The matter raised is fully addressed by the Applicant's response to item 6(g)(iii) of the Commission's FIR (see **Section 2.6** of the **FIR Response Document**) which provides further information in relation to the cable installation methodology within the intertidal area.

5.5.2 Bird impacts

5.5.2.1 Summary of matter raised

288. The NPWS notes that the proportion of the western Irish Sea (as surveyed by the ObSERVE programme) which is covered by the array site and its 2 km surrounding buffer is approximately 2.1-2.5%.

289. The observer compares the estimated densities (individuals per km^2) of seabird species within the western Irish Sea area (from ObSERVE data) with seasonal mean peak densities of each species within the CWP Project array site plus a 2 km surrounding buffer. This is calculated by dividing mean peak seasonal abundance estimates within that area as stated within **Volume 4, Appendix 10.5 Offshore Ornithology Baseline Characterisation Report** of the EIAR by the area within the array site plus its 2km buffer. Following this rationale the NPWS notes that the calculated seasonal mean peak densities of each species within the array site and its 2 km buffer are generally higher than densities at the wider Irish Sea scale.

290. NPWS compares the seasonal mean peak abundances of each species within the CWP array site plus its 2 km surrounding buffer with total estimated abundances of the western Irish Sea area from ObSERVE data and repeats the observation above via an alternative presentation, by noting that the estimated abundances of each species within the array site and its 2 km buffer are generally greater than the abundances which would be attributed to that area if it held 2.1 -2.5% of the estimated western Irish Sea area populations as calculated from ObSERVE data.

291. The above comparisons are used to evidence the 'disproportionate importance within the western Irish Sea' of the CWP Project array site and its surrounding 2 km buffer. It is, however, noted that it is unclear if this predicted relative importance of Codling Bank (or other sand banks) influenced decisions to site an OWF development upon Codling Bank.

5.5.2.2 Applicant's response

292. In relation to the comparisons used to evidence the disproportionate importance within the western Irish Sea of the CWP array site and its surrounding 2 km buffer, the Applicant wishes to highlight that the observer is comparing mean peak seasonal values [as is stated within **Volume 4, Appendix 10.5 Offshore Ornithology Baseline Characterisation Report** of the EIAR] with values derived from single surveys [ObSERVE data]. Mathematically, and through reference to current guidance, this is not considered to be appropriate.

293. Mean peak seasonal values (derived from the highest counts of a species during multiple surveys within a season and averaged across years) are likely to be, on average, higher than values for a single survey within a season. As such, and not withstanding fundamental differences between the resolution and data collection methodologies and data treatment approaches applied for the datasets compared, the comparison presented by NPWS is considered inappropriate in this context. The Applicant refers to Figure 79 of Jessop et al., 2018, which shows overall density heatmaps of seabirds at a 4 km by 4 km resolution (for all species grouped) across the western Irish Sea area as determined from data collected during ObSERVE surveys during one survey within each of the summer, autumn and winter periods of 2016. Inspection of this figure, with consideration of the location of the CWP Project array site (which appears to largely overlap with grid squares corresponding with the low to moderate overall seabird densities) indicates the array site within the wider western Irish Sea region to be of low to moderate importance.

294. Further to this, disparities highlighted within the relative density / abundance comparison analysis presented by the observer are unfortunately inaccurate. The figures presented by NPWS for return

migration density (*55.45 kittiwakes per km sq within the CWP Project array site plus its 2 km buffer (compared to western Irish Sea average winter densities of 0.57 to 2.49 kittiwakes km sq*)), and the presented equivalent estimated abundance figure (*12,733 kittiwakes within the CWP Project array site plus its 2 km buffer (compared to total western Irish Sea estimates of 5,255 to 27,446 individuals*)) are not correct. The correct values for these figures, from information presented within **Volume 4, Appendix 10.5 Offshore Ornithology Baseline Characterisation Report** of the EIAR, would be 2.36 individuals per km sq and 543 individuals within the CWP array site plus 2 km buffer, respectively. This correction evidences the relative low importance of the CWP array site (plus 2 km buffer).

295. Further evidence of the relative low importance of the CWP array site (plus 2 km buffer) comes from additional digital aerial surveys completed from April 2024 to August 2025 to validate baseline datasets for the purposes of the FIR response. Information from these surveys is summarised in **Appendix 10-D Baseline and contemporary data comparison** of the **EIAR Addendum**, where site-use descriptors (abundance and flight density) within and around the array site are characterised to be similar to, or lower than those noted during the 2020-2022 baseline period.

5.5.2.3 Summary of matter raised

296. NPWS submit that a 'thorough cumulative assessment of existing and proposed offshore renewable energy projects for the western Irish Sea that considers all potentially interdependent issues' is required. NPWS further submit that this assessment should include consideration of: ecosystem change that may affect changes in prey availability; changes in fisheries target species that may affect bycatch rates, benthic habitats or competition between marine birds and the fishing industry; changes in patterns of boat activity and potential displacement consequences upon sensitive bird species; and changes in patterns of distribution and abundance of seabirds within the western Irish Sea (particularly those species predicted to be displaced from ORE structures e.g. auks, divers, Gannet.

5.5.2.4 Applicant's response

297. An update to the planning application CEA has been provided in response to the Commission's FIR. This update, presented in **Section 7** and **Section 8** of the **CEA Report (Part 2)**, includes an updated assessment of cumulative construction and operation and maintenance phase impacts such as displacement, and all other impacts for which there is a potential meaningful contribution to cumulative impacts made by the CWP Project. It supersedes the CEA section of **Volume 3**, **Chapter 10 Ornithology** and **Volume 4**, **Appendix 10.1 Cumulative Effects Assessment** of the EIAR.

5.5.2.5 Summary of matter raised

298. The NPWS submit that the impact assessment presented by the Applicant is constrained by various gaps in understanding and highlights the following topics: patterns of bird migration over the array site; behavioural responses of birds potentially flying through the proposed ORE site (e.g. avoidance rates, barrier effects) and those birds foraging on the bank; and how such responses impact on the bird abundances using the bank and the wider western Irish Sea. The observer directs the Applicant to current best practice from nearby jurisdictions (NatureScot, 2023; SNCB, 2017; inter alia) suggesting that particular species-specific avoidance rates, as well as displacement distances and associated mortality rates, are utilised.

5.5.2.6 Applicant's response

299. The Applicant acknowledges the presence of uncertainty relating to parameters informing the assessments of impacts to seabird and migrant receptors. The presence of such uncertainty when estimating impacts to populations with complex ecological systems is an inevitability. Consequently, baseline data collection to inform impact assessment and methodologies employed to estimate impact magnitudes have aligned with agreed best practice, through reference to existing OWF approaches, and guidance, to minimise uncertainty. Since uncertainty cannot be eliminated from the impact assessment, agreed best practice, and guidance has been followed in order to appropriately apply precaution within impact assessments. For example, it is not currently practicable or feasible to robustly characterise the proportion of flight height activity of various non-seabird migrant species which may correspond with potential rotor swept altitudes (and thereby result in a risk of collision). As such, for the majority of migrant species, in the absence of empirical data, the precautionary assumption that all individuals occur at collision risk altitudes is applied. Even with this precautionary approach all conclusions are that there will not be a significant effect.

300. As such, where uncertainty may exist, a high degree of precaution is incorporated to ensure that conclusions of non-significance in an EIA context, or no adverse effects on site integrity in the context of AA, are robust and beyond reasonable scientific doubt.

301. In relation to observations highlighting perceived data gaps regarding patterns of bird migration over the array site, the Applicant directs the observer towards **Section 2.7.2** of the **FIR Response Document**, addressing this topic in relation to further information requested by the Commission.

302. The Applicant acknowledges the observer's direction towards current best practice from nearby jurisdictions and directs the observer towards **Section 3.7.8** of the **FIR Response Document**, which addresses this topic. Assessments presented within the EIAR and NIS (as detailed in **Section 10.3.3** of **Volume 3, Chapter 10 Ornithology** of the EIAR and **Section 2.1** of **Volume 2 - Introduction** of the NIS), include consideration of evidence relating to displacement and mortality rates and justification of those values which were considered best supported by available evidence and used as a basis for assessment.

5.5.2.7 Summary of matter raised

303. The NPWS recommends revision of application documentation to clarify the areas and degrees of uncertainty in its conclusions, as well as the outcomes from the use of the various mathematical formulae that underpin the assessment. Such clarifications are considered particularly important when the assessment uses a mortality rate value at the lower end of a suggested range (rather than the higher end) and when an upper range of a species' estimated population size is used in the denominator of a formula predicting overall mortality rates (rather than the low end of the range).

5.5.2.8 Applicant's response

304. With regard to the observer's recommendation that application documentation is revised to clarify areas and degrees of uncertainty within quantitative assessments, the Applicant highlights that where quantitative assessments are undertaken, any uncertainty associated with the assessments is already highlighted. Further, a range of input values have been applied as recommended within guidance or as a result of consultation, and a review undertaken to highlight which inputs the Applicant considers most appropriate.

305. Updates have been made to the planning application documents in response to the Commission's FIR. In relation to requests for clarification of mathematical processes underpinning assessment, the

Applicant directs the observer to **Section 10** of the **CEA Report (Part 2)** (including **Appendix 1 - Ornithology Quantitative Tables**) and **NIS Addendum (Part 3)**. These documents, relating to revised CEA and in-combination assessments provide a clear breakdown of the processes followed to assess cumulative and in-combination quantitative impact assessments using modelling parameters considered to be best supported by available evidence for the project's contribution.

306. The Applicant also directs the observer to **Appendix I - Alternative Outputs Referencing NatureScot Higher Displacement and Mortality Rates** of the **FIR Response Document,** in which a step-wise process is used to determine outputs for alternative displacement rates approaches, from lowest to highest mortality rates referenced in guidance.

5.5.2.9 Summary of matter raised

307. The NPWS references more recently available kittiwake productivity rate of 0.506 (± 0.305 SD) fledged young per pair available from Wicklow Head SPA, and recommends that assessment of impacts to the kittiwake breeding population of Wicklow Head SPA is updated to use this value instead of '0.604 chicks per pair to a maximum average productivity rate of 0.700 chicks per pair'. The observer also states that the apportioning tool (NatureScot, 2020) used by the Applicant to apportion kittiwake impacts to breeding colonies can have limitations and recommends that assessments informed by the use of mean foraging range clearly incorporate the uncertainty associated with mean foraging range estimates.

5.5.2.10 Applicant's response

308. The Applicant acknowledges that NPWS has provided an alternative to the productivity rate used in the assessment for impacts to kittiwake at Wicklow Head SPA (0.506 ± 0.305 fledged young per pair; compared to 0.604 ± 0.326) and directs the observer to **Section 2.7.18** of the **FIR Response Document**, which addresses a request by the Commission that [in PVA modelling] "*…regional rates (e.g. Irish Sea)* [0.508 ± 290] *or colony specific rates (where the data are considered appropriate and robust) must be applied*".

309. As the Irish Sea regional productivity rate suggested by the Commission is extremely similar to the productivity rate for Wicklow Head SPA provided by NPWS, and the robustness of the latter value is unclear, where population modelling has been undertaken for kittiwake from Wicklow Head SPA in relation to the provision on further information, Irish Sea regional productivity rates were used. Given the close similarity of these productivity values, and the insensitivity of PVA counterfactual output parameters to this input, any model output differences resultant from use of NPWS provided or Irish Sea regional productivity rates would be negligible.

310. Assessments presented within the NIS robustly and adequately consider in-combination impacts to the kittiwake SCI of Wicklow Head SPA, having given due consideration to available productivity data and in a manner consistent with the wider rationale for appropriately addressing potential HPAI effects.

311. With regard to incorporation of uncertainty into impact assessments, the Applicant highlights that the foraging range based approach to impact apportioning is based upon the standard industry approach using the interim guidance from NatureScot (2018). This approach was submitted to and agreed with NPWS Method Statement - Offshore Wind Ornithology Assessment for East Coast Phase 1 projects in 2022. Uncertainty relating to foraging range is accounted for within this approach through the weighting of impacts towards colonies which are closer to impacted areas than those within distant forage range.

5.5.2.11 Summary of matter raised

312. The NPWS submit that assessments of impacts to migratory waterbirds are based upon published literature and that no surveys of migratory waterbird movements through the array site were undertaken. The observer notes that the CRM undertaken to estimate collision risk mortalities for migratory waterbird species therefore relies upon limited empirical data on the migratory movements of waterbirds in the proposed development area. Further, NPWS submit that low levels of confidence associated with the avoidance rates have not been adequately considered during the assessment of collision impacts to migratory waterbirds and recommends that these factors are further considered.

313. NPWS recommends the implementation of methodologies to gather detailed empirical data on the migratory movements of waterbirds in the proposed development area to facilitate the robust assessment of impacts to these receptors and specifically mentions consideration of technologies such as radar to achieve this.

314. NPWS also recommends that consideration is given to how survey methods to collect information relating to the movement of migratory waterbirds through the development site may be used to mitigate potential impacts to those receptors during the operational phase of the project.

5.5.2.12 Applicant's response

315. The Applicant acknowledges the observation that impact assessment to migratory waterbirds presented within the EIAR is based upon published literature and does not include specific migratory bird surveys of the array site. The Applicant notes that the published literature used to inform migratory collision risk models is derived from syntheses of a very large volume of empirical data relating to migratory passage over the Irish Sea. As such the model used is considered to be robust. The literature used includes meta analyses of migratory risk such as Wright, 2012, which draw upon a wide range of empirical data; namely the locations of designated sites, known migration sites, ringing recoveries and for some species, tracking studies. Similarly, estimates relating to flyway populations used to determine how many individuals from each species may pass through the array site, are based upon empirical datasets such as national waterbird censuses (such as Burke et al., 2018) and IWeBs counts.

316. Furthermore, in relation to similar observations raised in the Commission's FIR, the Applicant directs the observer to **Section 3.7.2** of the **FIR Response Document.** To address commentary by the Commission (FIR items 7b and 7c) regarding a lack of survey data collected within and surrounding the array site to inform baseline characterisations for migratory birds, the Applicant has undertaken a range of site-specific surveys during the 2025 migratory periods, and provided additional site-specific survey information relevant to migratory species from works undertaken prior to submission, but not previously included in baseline characterisations (**Appendix 10-B Migration Survey Report** of the **EIAR Addendum**).

317. The assessment of impacts to migratory species presented within the EIAR and NIS is considered to utilise the most appropriate available datasets and tools and, in the absence of Irish guidance, conform with appropriate UK European guidance and precedence.

5.5.2.13 Summary of matter raised

318. The NPWS recommends that the period in which proposed mitigation in the form of restrictions upon the installation of export cables and onshore structure works within the nearshore (<500 m from MLWS), intertidal, and landfall zones is extended from September to March (inclusive), to September to mid-April (inclusive), in order to minimise impacts on all waterbird species.

5.5.2.14 Applicant's response

319. The Applicant acknowledges and accepts this amendment. Where this mitigation was referenced within **Volume 3, Chapter 10 Ornithology** of the EIAR, corresponding sub-sections within **Section 10** of the **EIAR Addendum (Part 1)** have been amended.

320. This amendment has also been reflected in the updated **CEMP** and within **Section 33** of the **EIAR Addendum (Part 2)**.

5.5.2.15 Summary of matter raised

321. The NPWS submit that impacts are assessed in relation to some terrestrial SCI species for the SPA network and not others (such as chough and kingfisher) and considers this a shortcoming in the assessment.

322. The observer states that it is not clear that 'barriers to connectivity' have been fully considered in relation to terrestrial bird species and directs the Applicant towards the following data sources to inform such assessments: daily logs collected by local bird observatories, Birding forums and the Migration Atlas (Wernham et al., 2002).

323. The observer outlines a number of data sources could have been more fully considered in the initial screening with respect to identifying potential impacts on land-based avifauna: BTO birdtrack data, ringing and tracking data for a number of species.

324. The observer highlights that no site-specific survey data were collected by the Applicant in relation to potential use of offshore project areas by terrestrial species and assert that assessments for such species in relation to avoidance or collision risk are based only on general assumptions.

325. The observer provides a list of survey and monitoring options that could have been undertaken but were not considered and / or taken forward by the Applicant. These include passive acoustic monitoring, a review of ringing/tracking/bird observatory data and thermal imaging surveys. The observer summarises that the Applicant should have implemented such methods, or utilised radar or emerging technologies to more thoroughly assess potential impacts to terrestrial species and recommends that the potential effects of the proposed development, in relation to predicted mortalities from both collision and avoidance/displacement/barrier impacts for relevant non-marine bird species, should be analysed in more depth, at both the scale of the Codling Bank ORE array and at the broader scale of existing and proposed offshore renewable energy developments in the western Irish Sea in order to better understand the potential effects upon them, and any associated SPAs.

5.5.2.16 Applicant's response

326. Impacts to species such as chough and kingfisher were not assessed as there were considered to be no pathways for the CWP Project to impact on these generally non-migratory features. Where terrestrial SCIs were included in assessment of offshore project elements, those SCIs were considered to be migratory species.

327. 'Barriers to connectivity' for migratory non-seabird species are considered within the EIAR and NIS in relation to disturbance and displacement impacts during the operational phase, where they are termed barrier effects (Offshore and intertidal – operation and maintenance: impact 2 in **Section 10.10** in **Volume 3, Chapter 10 Ornithology** of the EIAR). As outlined within the assessment, the scientific data confirm the potential additional energetic costs associated with relatively small additions to migratory distances associated with barrier effects would be, at most, negligible in relation to total migratory energetic costs and would have no noticeable effect upon survival rates of future

reproductive outputs (Masden et al., 2009). As such, the additional data sources referenced by the observer, if incorporated into impact assessment, would not alter assessments of receptor sensitivities to barrier effects, the impact magnitudes of those barrier effects or, ultimately, the significance of those barrier effects. As such, data used to inform assessments of barrier effects to migratory non- seabird species, and the methodology used to assess those effects are considered to be sufficiently robust to inform assessment conclusions.

328. In relation to similar observations raised in the Commissions FIR, the Applicant directs the observer to **Section 2.7.2** of the **FIR Response Document.** To address commentary by the Commission regarding a lack of survey data collected within and surrounding the array site to inform baseline characterisations for migratory birds, the Applicant has undertaken a range of site-specific surveys during the 2025 migratory periods, and provided additional site-specific survey information relevant to migratory species from works undertaken prior to submission, but not previously included in baseline characterisations. Additional potential data sources listed to inform barrier effect assessments would not meaningfully alter the assessment process or conclusions.

329. The Applicant considers that assessments of collision risk and barrier effect presented within the EIAR and relevant FIR response documents (i.e. the **EIAR Addendum**) consider an appropriate suite of receptors, are based upon robust migratory datasets and modelling processes and align with guidance and industry precedence, including but not limited to the NatureScot publication *Guidance Note 7: Guidance to support Offshore Wind Applications: Marine Ornithology - Advice for assessing collision risk of marine birds* (NatureScot, 2025).

5.5.3 Bat impacts (onshore and migratory)

5.5.3.1 Summary of matter raised

330. The NPWS stated that in relation to bats, more recent data from 2023 would have been useful, and that at-sea data would also be potentially useful.

331. The main risk identified by the department is collision / barotrauma during the operational phase, particularly affecting four bat species (Leisler's bat, soprano pipistrelle, common pipistrelle, and Nathusius's pipistrelle). The NPWS suggest that the potential cumulative impact of existing and proposed offshore renewable energy developments along the east coast have not been taken into consideration.

332. The department requested additional information to address effective mitigation measures to reduce and minimise the potential impacts on migrating bats. They also highlight the need to address potential deliberate disturbance under Article 16 of the Habitats Directive.

5.5.3.2 Applicant's response

333. **Volume 3, Chapter 13 Offshore Bats** of the EIAR sets out the baseline environment which has been informed by data collected by the Applicant and Dublin Array OWF and in consultation with NPWS. It is considered that this baseline data is sufficient and that no information gaps exist. The characterisation of the receiving environment for bats has included these primary and broader third-party datasets to allow a precautionary assessment to be undertaken in the context of EIA and AA. As acknowledged by the survey authors in their survey report, further detail or survey will not identify any material difference in the species that may be present, or for further mitigation to be proposed for implementation.

334. Notwithstanding the above, similar observations are raised in the Commission's FIR and as such additional surveys involving a repeat of the 2022 headlands surveys as well as a chartered vessel for data collection within the array site were undertaken in 2025. The results of the surveys are provided in **Appendix 13-A Offshore Bat Survey Report 2025** of the **EIAR Addendum** which includes a comparison of the 2022 and 2025 headland surveys. These survey results validate the findings of the 2022 baseline surveys, as described in **Appendix C - Data validation statements** of the **FIR Response Document**. As such, the results of these surveys do not change the assessment or proposed mitigation measures presented in the EIAR and NIS.

335. The impact assessment in **Section 13.10** of **Volume 3**, **Chapter 13 Offshore Bats** of the EIAR includes an assessment of the potential collision risk with a precautionary approach to identify potential migratory bats, and have shown that while there may potentially be collision impacts that this would not result in a significant effect on the populations of these species.

336. **Section 10** of the **CEA Report (Part 2)** assesses the cumulative effects between the CWP Project and other development including those with potential to impact bats migrating between Ireland and Wales. It is considered that the CEA accurately reflects the potential cumulative effects on offshore bats.

337. As described in the updated **IPPEMP** offshore bat monitoring will be undertaken for a minimum of 3 operational years with acoustic detectors deployed on 10 WTGs and on each of the three OSSs. **Volume 3, Chapter 13 Offshore Bats** of the EIAR also includes the Applicant's commitment to operational phase monitoring which will gather further data into if and how bats move through the area.

338. There is no evidence in the EIAR or **EIAR Addendum** of deliberate disturbance within the meaning of Article 16 of the Habitats Directive. To address the unlikely event of roosting bats being found on offshore structures or boats / vessels additional mitigation measures are included within the EIAR and updated **IPPEMP**. As specified in the EIAR, in this unlikely scenario, the bats would be protected from disturbance and the experienced ECoW contacted for advice on how to safeguard the bat. Any bats found roosting during any phase of the development would be logged to further inform the use of the array site by bats.

339. The mitigation and monitoring measures included within **Volume 3, Chapter 13 Offshore Bats** and the updated **IPPEMP** are considered to be appropriate. The assessments concluded that with the mitigation and monitoring measures in place, there would be no significant residual effects from the CWP Project alone or cumulatively alongside other developments as a result of collision during the operation and maintenance phase.

5.5.4 Nature conservation

5.5.4.1 Summary of matter raised

340. The NPWS raise concerns regarding direct impacts from cable installation in South Dublin Bay SAC, specifically on Mudflats and sandflats not covered by seawater at low tide and Reef qualifying features. They suggest insufficient evidence is given to ascertain no long term change to the Angulus Tenuis community and recommend additional information e.g. sediment modelling to assess impacts of increases in SSC on the communities referred to in the Conservation Objectives.

5.5.4.2 Applicant's response

341. The following habitats are designated features of the South Dublin Bay SAC:

- Mudflats and sandflats not covered by seawater at low tide [1140]

- Annual vegetation of drift lines [1210]
- Salicornia and other annuals colonising mud and sand [1310]
- Embryonic shifting dunes [2110]

342. Reefs are not a designated feature of the site.

343. Direct impacts on the mudflats and sandflats of the SAC are considered in detail in **Volume 4, Section 2** of the NIS and in **Volume 3, Chapter 8 Benthic and Intertidal Ecology** of the EIAR, including specific reference to the Angulus tenuis community complex which is reported as being widespread within the SAC (NPWS, 2013). Although it is recognised that the response to and recovery from a given pressure will vary from species to species and at the community level, it is relevant to consider species specific responses when determining the impacts from a given activity in order to consider how the community may be affected overall. In this case, the evidence identifies the key species that may be affected and their ability to recover, allowing us to draw conclusions about potential changes at the community level. Overall, it is concluded that the impact area is relatively small compared to the widespread habitat and community extent. Additionally, recovery at the community level is expected in the short term. Therefore, it is predicted that there will be no impediment to achieving the Conservation Objectives, and no adverse effects on site integrity, either alone or in combination with other plans or projects.

344. The NPWS suggests that additional sediment modelling may be required to fully determine the nature of the impacts, however as the work in the intertidal will be undertaken during low tide, sediment plumes from activities in the SAC will be minimised. As part of the response to the Commissions FIR, a comprehensive assessment of the intertidal works, and their potential effects on coastal processes, has been provided in **Appendix 6-B Intertidal Assessment** of the **EIAR Addendum.** The findings of this assessment conclude that effects on sediment transport and morphology, within the SAC and the broader dynamic sandy foreshore and intertidal environment, are localised and reversible. Further to this, sediment plumes from offshore activities are described in detail by the updated modelling (see **Section 6** of the **EIAR Addendum (Part 1)** and associated **Appendix 6-A Modelling Report Addendum**). Furthermore, the habitats referred to in relation to this observation are not considered sensitive to increases in SSC or deposition of sediment at the levels expected to arise from any activity proposed within the CWP Project development area (Tillin et al., 2024), and thus it is not considered necessary to undertake further modelling in order to reach a conclusion beyond reasonable scientific doubt of no adverse effects on site integrity.

5.5.4.3 Summary of matter raised

345. NPWS highlight the ecological importance of the Zostera (eelgrass) beds and the different ecological sensitivities of the two Zostera (intertidal and subtidal) species and suggest the evidence of sensitivities provided is inadequate for the inter-tidal species and request a more detailed examination of the potential impacts in relation to the Conservation Objectives in provided.

5.5.4.4 Applicant's response

346. The South Dublin Bay SAC was screened in for Mudflats and sandflats not covered by seawater at low tide; Annual vegetation of drift lines; Salicornia and other annuals colonising mud and sand; and Embryonic shifting dunes. The Zostera habitat forms part of the feature 'mudflats and sandflats not covered by seawater at low tide [1140]'.

347. In **Volume 4, Section 2** of the NIS, following the application of mitigation, there was determined to be no impediment to the Conservation Objectives of the site being met, and no adverse effect on site integrity predicted from the project alone or in combination with other plans or projects.

348. The mapped extent of the *Zostera* habitat is outside the CWP Project area and as such no direct effects will occur (i.e. no direct effects on habitats or presence of EMF / temperature changes). All relevant indirect effects are assessed in relation to the Zostera Community, including the impacts of increased SSC, resuspension of contaminated sediments, and introduction of INNS in **Volume 4**, **Section 2** of the **NIS** and **Volume 3**, **Chapter 8 Benthic and Intertidal Ecology** of the EIAR.

349. As per the NIS, considering the predominant tidal direction, any increase in SSC created during subtidal works (e.g., dredging, dredge disposal, or subtidal cable installation) is not predicted to interact with the intertidal area in any meaningful way as material is predicted to be transported southwards and eastwards. The levels of sediment arising from the construction activities are therefore predicted to be less than or similar to the natural background levels experienced on a daily or annual basis by the habitats present. Sediment transport modelling provided in **Volume 4, Appendix 6.3 Modelling Report** of the EIAR and **Appendix 6-A Modelling Report Addendum** of the **EIAR Addendum** confirms this conclusion. Regional data contained within the Integrated Mapping for the Sustainable Development of Ireland's Marine Resource (INFOMAR) Programme shows increasing fine sediments and muds as you move towards the inshore sheltered areas within Dublin Bay. Coughlan et al., 2021, through a detailed hydrodynamic modelling exercise of the entire Irish Sea Basin, concluded that in these sheltered areas of finer sediment low seabed mobility exists; principally due to the low tidal current speeds in these areas, which have created areas of net sediment accretion. The marine QIs of South Dublin Bay SAC can therefore be concluded to be habitats that have formed within this area of net accretion and are thus tolerant of increases in and deposition of suspended sediments.

350. The CWP Project has conducted an additional intertidal survey including sampling for contaminants, the results of which are provided in **Section 8.6** of the **EIAR Addendum (Part 1)** and relevant paragraphs of **Section 8.10** of the **EIAR Addendum (Part 1)** have been updated to reflect the additional baseline information and sediment modelling to inform the assessment of the remobilisation of contaminated sediments in the intertidal area.There are considered to be low levels of contamination in the area, and coupled with the low levels of sediment mobility, effects arising from the remobilisation of contaminated sediments are not predicted to affect the Zostera community.

351. With respect to the introduction of INNS, it was recognised that in the absence of mitigation, the introduction of INNS may lead to impediments to the site Conservation Objectives and lead to adverse effects on site integrity. Following the application of INNS mitigation however (comprehensive biosecurity management measures detailed in **Appendix A** of the **CEMP** and as updated in response to the Commission's FIR), there was determined to be no impediment to any Conservation Objective of the site being met, and no adverse effect on site integrity predicted from the project alone or in combination with other plans or projects in **Volume 4, Section 2** and **Volume 6 Part 1** of the **NIS** and in **Volume 3, Chapter 8 Benthic and Intertidal Ecology** of the EIAR. CWP has also set out monitoring proposals within an updated **IPPEMP** to inform mitigation and demonstrate that the mitigation has been successful**,** where pre-construction and post-construction surveys will be targeted to areas where construction activities are planned and where there is deemed to be potential for Annex I reef. These surveys will build upon the baseline characterisation surveys, including the data validation surveys conducted in 2025 as part of the **EIAR Addendum**, which validate the characterisation data used for the EIAR and provide an early pre-construction baseline dataset.

352. Though it is recognised that the sensitivity of *Zostera noltii* and *Z. marina* may differ, with respect to the specific effects arising from the CWP Project, Z. marina has slightly higher sensitivity to impacts of increases in SSC and smothering than *Z. noltii* therefore providing a precautionary assessment of this impact on the *Z.noltii* bed (Tyler-Walters H. (2008), Tyler-Walters H. (2005)). In addition the increases in suspended sediment are transient and within those naturally experienced by the habitat (**Volume 4, Appendix 6.3 Modelling Report** of the EIAR and **Appendix 6-A Modelling Report Addendum** of the **EIAR Addendum**), the conclusions that the impacts will not adversely affect the Conservation Objectives, and that no adverse effects on site integrity will arise can be reached with no scientific doubt.

5.5.4.5 Summary of matter raised

353. The NPWS stated that elevated concentrations of heavy metals in sediment samples have been arbitrarily discounted. These metals could inhibit local fauna and flora through direct ingestion or bioaccumulation. The NPWS recommends that the NIS and EIAR be revised to present a more detailed assessment of the implications of elevated heavy metal concentrations in sediment samples.

5.5.4.6 Applicant's response

354. Relevant information from publicly available and site specific sources were reviewed in order to inform the assessment relative to contaminated sediment effects in the NIS and EIAR, which was presented in **Volume 4** of the NIS and **Volume 3, Chapter 8 Subtidal and Intertidal Ecology** of the EIAR respectively.

355. In the baseline site specific surveys and updated baseline validation site specific surveys (2025), results of which are provided in **Section 8.6** of the **EIAR Addendum (Part 1)** and relevant paragraphs of **Section 8.10** of the **EIAR Addendum (Part 1)**, contaminated sediment results showed low levels of chemical contaminants at stations sampled within the offshore development area. The majority of contaminants levels at sampled stations were below the Irish Lower AL and Cefas AL1 and are therefore below regulatory thresholds (see **Volume 4, Appendix 8.3 Benthic Baseline Report** of the EIAR and **Appendix 8-A Benthic Subtidal Survey Report 2025** of the **EIAR Addendum**). Typically, contaminated sediments are only associated with finer sediments as they do not bind effectively with coarse sands and gravels. Published marine sediment contaminant data in the area also indicates a general low background level of contamination, with no patterns of consistently high levels of contaminants recorded spatially or temporally (data.gov.ie, 2007). Testing for contaminants in North Dublin Bay from all relevant baseline and baseline validation surveys has shown the levels of heavy metal contaminants to be below the Cefas Action Level 1 guidelines (McBreen & Wilson, 2003) (see **Volume 4, Appendix 8.3 Benthic Baseline Report** of the EIAR and **Appendix 8-A Benthic Subtidal Survey Report 2025** of the **EIAR Addendum)**. This is consistent with the 'good' chemical status (2016–2021) of the Water Framework Directive water body, indicating low background incidence of contaminants within sediments in the wider area.

356. Considering the low levels of contaminants recorded at the site, and the publicly available literature which corroborates this position, it is considered that further discussion of the consequences of the remobilisation of contaminated sediment would not alter the conclusions which are based on available scientific data and are made in the absence of scientific doubt.

5.5.4.7 Summary of matter raised

357. The NPWS recommend that the NIS and EIAR are revised to present a more detailed assessment of the risk of introduction of IAS which considers vessel movements and a range of IAS.

5.5.4.8 Applicant's response

358. **Volume 3, Chapter 8 Subtidal and Intertidal Ecology** of the EIAR details the scope of the assessment covering invasive alien species (termed invasive INNS in the planning application). This scope was agreed with NPWS in 2021 (see **Section 8.2** of EIAR **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology**).

359. The assessment introduces mitigation measures in the form of an Offshore Biosecurity Plan. A draft of this document accompanied the planning application as Appendix A of the **CEMP**.

360. The measures include a commitment that all vessels working on the CWP Project, throughout all phases of the project, will be subject to the **CEMP**, irrespective of (a) country of vessel origin, (b) the number of vessel movements or (c) species of concern. As such, the frequency of vessels from outside of Ireland has been considered and is mitigated. The Offshore Biosecurity Plan introduces measures that will address all threats from all species. Further detail will not identify any material difference in the type of risk species that may be introduced, the route of introduction, nor will it alter the mitigation measures that have been proposed. The measures are consistent with national and international best practice as described within the Offshore Biosecurity Plan.

361. The Applicant notes that an updated **CEMP** has been provided in response to the Commission's FIR. This document supersedes the **CEMP** submitted with the CWP Project planning application but retains all of the abovementioned mitigation commitments with regards to INNS.

362. In summary the assessment in **Volume 3, Chapter 8 Subtidal and Intertidal Ecology** of the EIAR is sufficiently detailed, adequately assesses the likely environmental impacts and outlines proposed mitigation measures. No additional assessment is required, as the proposed mitigation addresses all potential risks. Following implementation of these measures, the residual impacts are not considered significant in the context of EIA.

5.5.4.9 Summary of matter raised

363. The NPWS recommend a broader scope of in-combination assessment is required to consider existing issues such as water quality or climate change combined with other projects or plans within South Dublin Bay SAC.

5.5.4.10 Applicant's response

364. The Habitats Regulations require that, before deciding whether to undertake or grant any consent, permission, or other authorisation for a plan or project, a Competent Authority must carry out an AA where the plan or project (a) is likely to have a significant effect on a European site or European offshore marine site (either alone or in combination with other plans or projects), and (b) is not directly connected with or necessary to the management of that site. This assessment must consider the implications of the plan or project for the site in view of its Conservation Objectives.

365. Accordingly, the NIS presents an assessment against other plans and projects in order that the Competent Authority is in possession of the relevant information against which to make a determination. The NIS is sufficiently detailed and provides a robust assessment of all potential impacts from the CWP Project alone, and in combination with other plans or projects on South Dublin Bay SAC.

366. Notwithstanding the above, in response to the Commission's FIR the Applicant has provided an update to the SAC in-combination assessment (see **NIS Addendum (Part 2)**) to account for the most recent information available for the other Phase 1 OWF Projects and the Dublin Port Company 3FM Project which would have not been available at the time of planning application submission. This includes assessment of new (additional) projects which were not previously identified, and those which had planning status update for project, plans and activities that were included in the original submission.

367. The approach adopted with regards cumulative and in combination effects is in line with relevant guidance, including CIEEM Guidelines (CIEEM, 2022) and the Environmental Protection Agency (EPA) Guidelines on the Information to be contained in Environmental Impact Assessment Reports

(May 2022) (the EIAR Guidelines). It is also in accordance with the Habitats Regulations, as noted above. Given this, no further re-evaluation of in-combination effects is required, as the existing assessment meets all legal and scientific requirements.

5.5.4.11 Summary of matter raised

368. The NPWS recommend further consideration of impacts from the operation and maintenance and decommissioning stages of the CWP Project is given in the NIS.

5.5.4.12 Applicant's response

369. The relevant phases for which each impact is considered are set out in **Volume 3 Screening** of the NIS, and assessed in **Volumes 4, 5,** and **6** of the NIS, with relevant updates provided within the **NIS Addendum.**

370. Though all phases are considered, including decommissioning where relevant, the greatest effects typically arise during construction (excepting those impacts which are only relevant for operation and maintenance phases, e.g. EMF and temperature changes, for which a rigorous assessment was undertaken) and as such the effects during construction warrant the greatest detail in terms of assessment.

371. Conclusions are made in light of all relevant phases as detailed in **Volume 3 Screening** of the NIS, and subsequent volumes. This accords with EPA Guidance on EIAR, and NPWS publication *Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities*.

372. The conclusions drawn are that there are no adverse effects on site integrity for any of the sites considered, from either CWP Project alone or in-combination with other relevant plans and projects.

5.5.4.13 Summary of matter raised

373. The NPWS highlight that no site-specific surveys were conducted for pinnipeds at the landfall site. Ancillary records did not provide density information. They recommend that data is sought from the grey seal population monitoring programme and that additional information on the potential for impact on pinniped species at the landfall site should also be requested.

5.5.4.14 Applicant's response

374. **Volume 4**, **Appendix 11.3 Baseline Technical Report** of the EIAR includes consideration of the NPWS grey seal population monitoring programme reports (Ó Cadhla et al., 2007 and Ó Cadhla et al., 2013). These surveys included Lambay Island and Ireland's Eye, Co. Dublin, both of which are located to the north of the Howth Peninsula and not in Dublin Bay where the CWP Project landfall is occurring. As these locations are outside the immediate area of the CWP Project landfall site, the Applicant undertook site specific landfall surveys at the intertidal area. These surveys were carried out between October 2019 and September 2021. A total of 11 grey seals and two harbour seals were recorded and included in the baseline.

375. Since submission of the CWP Project planning application, a new paper has been published on seal counts in Dublin Bay area (Berrow et al., 2024). Berrow et al., 2024 conducted surveys of haul-out sites close to Dublin Port between June 2023 and January 2024, during a period with increased construction activity in the area related to Dublin Port's Masterplan 2040. These surveys included sites

within Dublin Bay (Bull Island, Sandy Cove and the Dalkey & Maidens Islands) as well as other sites north of the Dublin Bay area (Skerries, Smugglers Cove, Rush Head, Lambay Island and Irelands Eye). Grey seals were counted in highest numbers on Lambay Island and Ireland's Eye. Harbour seals were counted in highest numbers on Lambay Island and at Rush Head. This paper showed that counts in 2023-2024 are consistent with those counted in 2017 by Morris and Duck (2019).

376. Additionally, between January 2025 and January 2026, the Applicant has conducted monthly seal haul-out surveys at the landfall site. The results of the surveys are detailed in **Appendix 11-A Baseline Technical Report Addendum** of the **EIAR Addendum** and are consistent with the characterisation provided within the planning application; the new data therefore validate the existing data and the assessment conclusions have not materially changed.

377. NPWS incorrectly states that the planning application EIAR used Morris and Duck (2019) to calculate density. The Applicant would like to clarify that Morris and Duck (2019) was not used to calculate seal density. The Morris and Duck (2019) data was used to infer the population size (which is considered appropriate given the recent counts in 2023-2024 are consistent with the 2017 counts).

378. **Volume 3**, **Chapter 11 Marine Mammals** of the EIAR provides an assessment of the potential impacts arising at landfall, and the onshore substation on the banks of the River Liffey, Dublin. This included an assessment of the potential impact of impact piling at both locations and concluded no significant impact to seals or other marine mammals. The landfall assessment, as with the array area assessment, used the seal at-sea usage maps from Carter et al., 2022 for seal at-sea densities. This is considered to be a robust density estimate to use in the quantitative assessment.

5.5.4.15 Summary of matter raised

379. The NPWS recommend that passive acoustic monitoring (PAM) should be carried out (with respect to harbour porpoise and minke whale presence), and that further information should be sought on the use of the cable landfall by marine mammals.

5.5.4.16 Applicant's response

380. In addition to site-specific surveys (boat-based and visual), **Volume 4**, **Appendix 11.3 Baseline Technical Report** of the EIAR includes consideration of a number of different data sources to inform cetacean occurrence in the vicinity of the CWP Project. The studies reviewed included data from acoustic surveys as well as visual observations, covering both the offshore and inshore areas. It was concluded that harbour porpoise is abundant in the Irish Sea and minke whales are likely to be present throughout the year, albeit in higher numbers during summer. Therefore, there is a certainty that these species may be present within the project area at any given time, which is reflected in the precautionary approach to assessment which assumes the presence of both species. As such additional data (such as PAM) would not materially alter the characterisation of the receiving environment, the conclusions of the assessment, nor the proposed mitigation measures which are considered appropriate to mitigate potential significant effects. As such, no further survey is required to confirm the likelihood of harbour porpoise and minke whale presence within the site (array area and landfall).

381. The Applicant agrees that "*There is currently no detailed information available on individual or group movements by harbour porpoise within or into/out of the two closest SACs, nor is it known whether individuals/groups of the species demonstrate any faithfulness to either of these SAC sites (i.e. site fidelity or residency)*". However, PAM would not have provided this information, as it cannot provide data on individual movements. This information could only be obtained from either tagging studies or photo-ID studies (neither of which is currently feasible for harbour porpoise).

382. It should also be noted that the density estimates are the most important factor in estimating the impacts on cetacean populations as they allow a quantification of the number of animals affected which allows for quantitative population modelling. In **Volume 3**, **Chapter 11 Marine Mammals** of the EIAR, a range of density estimates were taken forward to the quantitative assessment for both, harbour porpoise and minke whale. The comments from NPWS are noted, however, at this time, there are significant limitations and complications associated with obtaining density estimates from PAM data. This is because the estimation of detection probability function (e.g. the likelihood that the PAM systems will log acoustic cues from cetaceans at different distances, which is a key requirement for density estimation), is still an active area of research and cannot be reliably used to estimate porpoise density at this time. Therefore, the addition of PAM surveys would not have enhanced the ability to derive a suitable density estimate to be used in the quantitative assessment.

383. In order to assess whether a development could result in a significant effect on marine mammal receptors, the EIAR, in accordance with the relevant guidance, aims to characterise the receiving environment with regards likely receptors present, quantify (where possible) the number of individuals impacted through specific impact pathways, and establish whether the predicted level of impact is sufficient to result in a population level effect. To quantify potential impacts in terms of the number of animals impacted, it is necessary to know the density of a given marine mammal receptor within the impacted area. Thus, the primary purpose of the marine mammal baseline characterisation report is to identify the appropriate density, and abundance estimates to take forward to the quantitative assessment in the EIAR for each marine mammal species.

384. Baseline characterisation PAM can be useful to understand the species of vocalising marine mammals present in the area. While PAM can provide good information on species presence or absence and how this changes temporally on a fine scale (especially for odontocete species), it currently remains difficult to obtain a density estimate from PAM data for most species. This is due to issues relating to estimating the cue rate and subsequent detection probability function (e.g. the likelihood that the PAM systems will log acoustic cues from cetaceans at different distances, which is a key requirement for density estimation), and differentiating between species (especially dolphin species). Since the quantitative assessment in the EIAR is focussed on predicting the number of individuals impacted, the use of baseline characterisation PAM will not provide the necessary data to inform this assessment. The Applicant would however like to highlight that when considered at an appropriate strategic scale PAM is a useful monitoring tool to identify changes in detection rates and assess impacts from cumulative offshore wind farm construction activities in a before-during-after or impact-gradient analysis (or a hybrid of the two), which is reflected in the updated **IPPEMP**.

5.5.4.17 Summary of matter raised

385. The NPWS recommends that the assessment should include TTS as a measure of injury.

386. Additionally, a post-construction marine mammal monitoring plan and a system to report and investigate incidents involving marine mammals (such as collisions or entanglements) should be included as further information to the Commission. The applicant should also consider and assess the effectiveness of various marine mammal risk management options, such as Noise Abatement Systems, as part of the proposed development. Detailed plans and justifications for the use of ADDs, including an estimation of the number of individuals of each species likely to be affected, should be provided.

387. Finally, PAM should be used only as a supplementary tool to Marine Mammal Observers (MMO), not as the primary mitigation tool, in line with NPWS (2014) guidance.

5.5.4.18 Applicant's response

388. With regards to the assessment of TTS the Applicant refers NPWS to its response to item 10a of the Commission's FIR (see **FIR Response Document**) and the relevant information provided within **Section 11** of the **EIAR Addendum (Part 1)**, including **Appendix 11-B SMRU Consulting TTS Position Statement**.

389. With regards post-construction monitoring the Applicant confirms that site specific monitoring of marine mammals is included as a component of the updated **IPPEMP.** Marine mammal monitoring is also an integral aspect of the updated **MMMP**, which provides for visual and acoustic monitoring during construction. The Applicant proposes to undertake acoustic monitoring, and visual monitoring which meets the requirements of NPWS. It is also proposed that strategic monitoring of marine mammals forms a component of the ECMG.

390. To mitigate potential impacts from underwater noise during the construction of the CWP Project, the Applicant commits to a limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events, and the implementation of noise abatement in the event high order UXO clearance is required. Further mitigation measures are detailed in the updated **MMMP** and summarised in response to observations made by An Taisce in **Section 5.1** of this document.

391. The Applicant has updated the **MMMP** to comply with NPWS (2014) guidance, including consideration of the use of PAM as a complement to MMOs. It is noted that no updated guidance has been issued in the interim and that the MMMP may require further updates post-consent to comply with any new guidance available in the future and at the time of construction.

5.5.5 Onshore biodiversity (badgers)

5.5.5.1 Summary of matter raised

392. The NPWS recommended that further badger surveys are undertaken and that a Badger Mitigation Strategy is developed for the area.

5.5.5.2 Applicant's response

393. **Volume 3, Chapter 21 Onshore Biodiversity** of the EIAR sets out the baseline environment in relation to badger, informed by data collected by the Applicant. It is considered that this baseline data collected for the submission of the EIAR is robust and sufficient to allow a precautionary assessment to be undertaken in the EIA.

394. Notwithstanding this, additional badger surveys were undertaken in 2025 which focussed on known badger setts on the Poolbeg Peninsula and included the deployment of cameras, under licence, during July and December 2025. The additional data collected in 2025 is summarised in **Section 21** of the **EIAR Addendum (Part 2)** and presented in detail within **Appendix 21-A Badger and Otter Survey Report 2025** of the **EIAR Addendum**.

395. Analysis of the 2025 data has demonstrated that while additional evidence of badger was observed, there was limited material change to the baseline for this receptor. It was determined that no material change to the existing assessment conclusions would result from the 2025 data, and a revised impact assessment is therefore not required.

396. The mitigation measures presented in the **Volume 3, Chapter 21 Onshore Biodiversity** of the EIAR are considered appropriate and deliverable. They include:

- Pre-construction badger surveys;
- Measures to exclude and close badger setts, in the event that one is identified;
- Measures to avoid disturbance/noise on setts located within proximity of the construction works
- Replanting proposals of the berm at landfall to increase foraging habitat for the local badger population; and
- The appointment of an Ecological Clerk of Works who will oversee construction works and monitor impacts for the duration of the construction programme.

397. The recommendation from NPWS on the production of a Badger Mitigation Strategy is noted. The Applicant is committed to producing this document, alongside the pre-construction badger surveys which will be undertaken in advance of construction activities commencing for the onshore transmission infrastructure. The development of the Badger Mitigation Strategy for the onshore development area is now reflected in **Section 21** of the **EIAR Addendum (Part 2)**.

5.5.6 Onshore biodiversity (otters)

5.5.6.1 Summary of matter raised

398. The NPWS recommended that a new otter survey of the Liffey Estuary shoreline in the vicinity of the substation site is carried out. If a holt or couch is found, an Otter Mitigation Survey should be prepared.

5.5.6.2 Applicant's response

399. **Volume 3, Chapter 21 Onshore Biodiversity** of the EIAR sets out the baseline environment in relation to otter, informed by data collected by the Applicant. It is considered that the baseline data collected for the submission of the EIAR is robust and sufficient to allow a precautionary assessment to be undertaken in the EIA.

400. Notwithstanding this, additional otter surveys were undertaken in 2025 which focussed on the rock armour located on the northern boundary of the onshore substation site. Cameras were also deployed under licence in July 2025 for a period of 12 nights. The additional data collected in 2025 is summarised in **Section 21** of the **EIAR Addendum (Part 2)** and presented in detail within **Appendix 21-A Badger and Otter Survey Report 2025** of the **EIAR Addendum**.

401. No otter holts or couches were detected during the 2025 survey, the outputs of which validate and support the existing baseline characterisation presented **Volume 3, Chapter 21 Onshore Biodiversity** of the EIAR. It was determined that no material change to the existing assessment conclusions would result from the 2025 data and a revised impact assessment to account of this data is not required.

402. The mitigation measures presented in the original **Volume 3, Chapter 21 Onshore Biodiversity** are considered appropriate and deliverable. They include:

- Pre-construction otter surveys;
- Seeking a derogation licence, and implementing appropriate mitigation measures in the event that a new holt is identified; and
- The appointment of an Ecological Clerk of Works who will oversee construction works and monitor impacts for the duration of the construction programme

403. The recommendation from NPWS on the production of an Otter Mitigation Strategy is noted. CWPL is committed to producing this document, alongside the pre-construction otter surveys which will be undertaken in advance of construction activities commencing for the onshore transmission

infrastructure. The development of the Otter Mitigation Strategy for the onshore development area is now reflected in **Section 21** of the **EIAR Addendum (Part 2)**.

5.5.7 Onshore biodiversity (landscaping)

5.5.7.1 Summary of matter raised

404. The NPWS has recommended that the landscaping plans along the Shellybanks Road and the Pigeon House Road use the existing seedbank, rather than the currently proposed wildflower planting.

5.5.7.2 Applicant's response

405. CWP notes the DHLGH recommendation and has no comments.

5.6 Department of Transport (The Irish Coastguard)

406. The following section provides a response to matters raised by the Department of Transport – The Irish Coastguard (IRCG). The matters raised have been responded to under the following headings:

- WTG layout and search and rescue (SAR) lanes
- Emergency Response Cooperation Plan
- Proposed planning conditions

5.6.1 WTG layout and search and rescue lanes

5.6.1.1 Summary of matter raised

407. The IRCG states that for WTG Layout Option A, the offshore substation within a search and rescue (SAR) Lane should be moved to align with the WTGs to achieve a minimum SAR lane width of 500 m.

5.6.1.2 Applicant's response

408. The Applicant met with the IRCG on the 9th October 2025 to explain the rationale behind the OSS location, and the complexities associated with moving it (which in summary relates to various environmental, physical and technical constraints). The Applicant has designed WTG Layout Option A to comply with both Maritime and Coastguard Agency (MCA) Marine Guidance Note (MGN) 654 (MCA, 2021) and the Department for Transport (DoT) Marine Navigational Safety & Emergency Response Risk of Offshore Renewable Energy Installations guidance (DoT, 2025a), including the DoT Standard Operating Procedures 07 2025 Guidance and Operational Considerations for SAR and Emergency Response (DoT, 2025b). The Applicant considers that the layout complies with these guidance documents.

409. The Applicant confirms that SAR lanes of a minimum of 500 m are maintained in one line of orientation (East / West). SAR lanes are maintained in a second line of orientation (North / South) apart from in one lane where an OSS is located. The layout is therefore strictly a Single Line of Orientation (SLoO) layout, noting the majority of the layout accommodates multiple lines of orientation. IRCG guidance

requires SLoO layouts be supported by a Safety Justification, and this was confirmed in the meetings with IRCG on the 9th October 2025 and the 26th November 2025.

410. A Safety Justification was therefore submitted to IRCG on the 2nd December 2025 (see **Appendix 16-A IRCG Safety Justification** of the **EIAR Addendum**). Following review, the IRCG confirmed on the 11th February 2026 via letter (**Appendix D - Letter from IRCG r.e. Safety Justification** of the **FIR Response Document**) that they are content that the relevant requirements had been met, subject to implementation of observations made in the Safety Justification.

411. **Volume 3, Chapter 16 Shipping and Navigation** of the EIAR concluded that impacts associated with emergency response were Not Significant and As Low As Reasonably Practicable (ALARP) assuming the identified mitigation is in place and following further engagement with IRCG and subsequent submission of the Safety Justification. As noted above, the IRCG have confirmed that they are content that the relevant requirements have been met, subject to implementation of observations made in the Safety Justification. As such, it is not considered that moving the OSS would result in a material difference to the findings of the EIA or NRA.

5.6.1.3 Summary of matter raised

412. The IRCG states that for WTG Layout Option B, the offshore substation within a SAR Lane should be moved to align with the WTGs to achieve a minimum SAR lane width of 500 m.

5.6.1.4 Applicant's response

413. The Applicant met with the IRCG on the 9th October 2025 to explain the rationale behind the OSS location, and the complexities associated with moving it (which in summary relates to various environmental, physical and technical constraints). The Applicant has designed WTG Layout Option B to comply with both Maritime and Coastguard Agency (MCA) Marine Guidance Note (MGN) 654 (MCA, 2021) and the Department for Transport (DoT) Marine Navigational Safety & Emergency Response Risk of Offshore Renewable Energy Installations guidance (DoT, 2025a), including the DoT Standard Operating Procedures 07 2025 Guidance and Operational Considerations for SAR and Emergency Response (DoT, 2025b). The Applicant considers that the layout complies with these guidance documents.

414. The Applicant confirms that SAR lanes of a minimum of 500 m are maintained in one line of orientation (East / West). SAR lanes are maintained in a second line of orientation (North / South) apart from in one lane where an OSS is located. The layout is therefore strictly a Single Line of Orientation (SLoO) layout, noting the majority of the layout accommodates multiple lines of orientation. IRCG guidance requires SLoO layouts be supported by a Safety Justification, and this was confirmed in the meetings with IRCG on the 9th October 2025 and the 26th November 2025.

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416. **Volume 3, Chapter 16 Shipping and Navigation** of the EIAR concluded that impacts associated with emergency response were Not Significant and As Low As Reasonably Practicable (ALARP) assuming the identified mitigation is in place and following further engagement with IRCG and subsequent submission of the Safety Justification. As noted above, the IRCG have confirmed that they are content that the relevant requirements have been met, subject to implementation of observations made in the

Safety Justification. As such, it is not considered that moving the OSS would result in a material difference to the findings of the EIA or NRA.

5.6.1.5 Summary of matter raised

417. In regards to WTG Layout Option A, the Irish Coast Guard notes that SAR lane widths could be reduced through the implementation of locational flexibility on the location of WTGs and OSSs.

5.6.1.6 Applicant's response

418. The CWP Project will ensure that LoDs are applied such that a SLoO (i.e., a minimum of 500 m SAR lanes) is maintained as per MGN 654 and DoT Marine Navigational Safety & Emergency Response Risk of Offshore Renewable Energy Installations guidance and DoT Standard Operating Procedures 07 2025 Guidance and Operational Considerations for SAR and Emergency Response. This was discussed with IRCG in a meeting held on the 26th November 2025, with the commitment to applying LoD in such a way that a full SLoO is maintained now clearly captured in the EIAR. Following review, the IRCG confirmed via a letter (**Appendix D - Letter from IRCG r.e. Safety Justification** of the **FIR Response Document**) that they are content that the relevant requirements had been met, subject to implementation of observations made in the Safety Justification.

5.6.1.7 Summary of matter raised

419. In regards to WTG Layout Option B, the Irish Coast Guard notes that SAR lane widths could be reduced through the implementation of locational flexibility on the location of WTGs and OSSs.

5.6.1.8 Applicant's response

420. As noted previously, the CWP Project will ensure that LoDs are applied such that a SLoO (i.e., a minimum of 500 m SAR lanes) is maintained as per MGN 654 and DoT Marine Navigational Safety & Emergency Response Risk of Offshore Renewable Energy Installations guidance and DoT Standard Operating Procedures 07 2025 Guidance and Operational Considerations for SAR and Emergency Response. This was discussed with IRCG in a meeting held on the 26th November 2025, with the commitment to applying LoD in such a way that a full SLoO is maintained now clearly captured in the EIAR. Following review, the IRCG confirmed via a letter (**Appendix D - Letter from IRCG r.e. Safety Justification** of the **FIR Response Document**) that they are content that the relevant requirements had been met, subject to implementation of observations made in the Safety Justification.

5.6.1.9 Summary of matter raised

421. The IRCG confirmed that they are available for discussions around LoD or other unforeseen circumstances impacting layout prior to construction.

5.6.1.10 Applicant's response

422. As noted previously, the Applicant has met with the IRCG on the 9th October 2025 and the 26th November 2025 to discuss the layouts and LoD. The Applicant will continue to engage with the IRCG prior to construction.

5.6.2 Emergency Response Cooperation Plan

5.6.2.1 Summary of matter raised

423. The IRCG states that the primary party responsible for the OSSs in the event of an emergency must be clear and set out in the Emergency Response Cooperation Plan.

5.6.2.2 Applicant's response

424. As set out in **Volume 3**, **Chapter 16 Shipping and Navigation** of the EIAR, the Applicant will agree emergency response plans with IRCG. These plans will follow IRCG template contents (as set out in draft form in DoT Marine Navigational Safety & Emergency Response Risk of Offshore Renewable Energy Installations guidance) which contains a requirement to include a "clear and concise" plan to show who is responsible for emergency response liaison as it pertains to the transmission assets.

5.6.3 Proposed planning conditions

5.6.3.1 Summary of matter raised

425. The IRCG recommends planning conditions to be attached to the CWP Project planning permission specific to shipping and navigation.

5.6.3.2 Applicant's response

426. The Applicant notes the suggested conditions and has no comments.

5.7 Department of Transport (Marine Survey Office)

5.7.1 Proposed planning conditions

5.7.1.1 Summary of matter raised

427. The Marine Survey Office (MSO) recommends planning conditions to be attached to the CWP Project planning permission specific to shipping and navigation.

5.7.1.2 Applicant's response

428. The Applicant held a meeting with the MSO on 23rd October 2025 with the intention to review and discuss the MSOs observations and proposed conditions. **Appendix B - Schedule of post application consultations** of the **FIR Response Document** provides a summary of the points discussed.

429. In summary CWP notes the recommended conditions and has no comments.

5.8 Fáilte Ireland

5.8.1 Summary of issues raised

430. The following section provides a response to matters raised by Fáilte Ireland. The matters raised have been responded to under the following headings:

- Visitor perceptions of the impacts of offshore wind farms
- Community benefit fund
- Adequacy of the detail provided in the baseline assessment
- Consideration of the construction and operational phase impacts on tourism
- Consideration of cumulative impacts on tourism along the east coast of Ireland
- Concerns regarding the location and scale of the CWP Project

5.8.2 Visitor perceptions of the impacts of offshore wind farms

5.8.2.1 Summary of matter raised

431. Fáilte Ireland comments that the 2017 study on perceptions of Brittas Bay which found that most tourists were not influenced by the presence of the OWF is not an appropriate basis for comparison with the CWP Project, mainly as the height of the turbines for the CWP Project is expected to be larger. Fáilte Ireland references 'Impacts of offshore wind farms on local tourism and recreation: a research study' (Glasson et al., 2022), referring to a quote in the study that visitor perceptions of the impacts of OWFs may change overtime.

432. Fáilte Ireland also queried the assessment of potential alternatives including locating the development at a greater distance from the coast.

5.8.2.2 Applicant's response

433. Since the submission of the CWP Project planning application additional desk-top surveys have been undertaken which consider the relationship between OWFs and tourism and which also incorporate an updated survey of the popular tourist and recreational attractions potentially impacted by the CWP Project. A revised tourism and recreational impact assessment has been completed to account for this additional data. The data and revised impact assessment that support **Volume 3**, **Chapter 29 Population** of the EIAR are presented in **Section 29 Population** of the **EIAR Addendum (Part 2)**. The inclusion of this information within the **EIAR Addendum** is in response to item 1c of the FIR (see **FIR Response Document**)

434. Taking account of the Fáilte Ireland 2017 study and the reference to Glasson et al., 2022, the revised tourism assessment considers the relationship between wind developments (both onshore and offshore) and tourism activity. A number of studies within the UK and Ireland were considered. It was concluded that there is no general relationship between the development of wind energy projects and

the performance of the tourism economy. On this basis, the assessment of the impact on the tourism economy and tourism and recreation assets considers the specific environmental impacts that receptors will experience as a result of the CWP Project such as visual impact, traffic and air quality. The assessment considers how these impacts may result in changes to visitor and user behaviour.

435. The assessment concludes that there would be no significant effects on tourism and recreational assets during the construction, operational and maintenance or decommissioning phases of the CWP Project. This updated assessment is sufficiently detailed and adequately assesses the potential impacts of the CWP Project in relation to tourism and recreation.

436. The Fáilte Ireland submission also queried if a full assessment of alternatives has been given to locating such a development at greater distance from the coast/near coast area. EIAR **Volume 2**, **Chapter 3 Site Selection and Consideration of Alternatives** describes how the location of the CWP Project array site was originally determined, supported by additional analysis of current legislation, policy and environmental and technical constraints to validate the original site selection conclusions. The information provided in this chapter of the EIAR is sufficient to meet the requirements of the EIA Directive and adheres to the EIAR Guidelines (EPA, 2022).

5.8.3 Community Benefit Fund

5.8.3.1 Summary of matter raised

437. It is noted that coastal and marine communities will benefit from offshore renewable electricity projects through the community benefit fund process that will be established for each project. Fáilte Ireland are supportive of this framework and the opportunity it provides for investment in the sustainable development of the area including tourism as a key sector and economic driver.

5.8.3.2 Applicant's response

438. The Applicant notes the Fáilte Ireland observation and has no comments.

5.8.4 Adequacy of the detail provided in the baseline assessment

5.8.4.1 Summary of matter raised

439. Fáilte Ireland requested that the Commission gives detailed consideration to the 'the adequacy of the detail provided in the description of the baseline tourism environment, particularly in terms of the absence of characterisation or sensitivity applied to the tourism assets and environment'.

5.8.4.2 Applicant's response

440. As noted above, additional desk-top surveys have been undertaken which considered the relationship between OWFs and tourism and which also incorporate an updated survey of the popular tourist and recreational attractions. A revised tourism and recreational impact assessment has been completed to account for this additional data. The data and revised impact assessment that support **Volume 3**, **Chapter 29 Population** of the EIAR are presented in **Section 29** of the **EIAR Addendum (Part 2)**.

The inclusion of this information within the **EIAR Addendum** is in response to item 1c of the FIR (see **FIR Response Document**)

441. The characterisation of the baseline environment considered tourism and recreation within 50 km of the offshore infrastructure, which aligns with the study area presented in **Volume 3**, **Chapter 15 Seascape, Landscape and Visual Impact Assessment** of the EIAR**.** A 5 km study area around the onshore substation site was considered for the onshore and landfall components**.** Tourism and recreational receptors were identified from within these study areas.

442. A detailed methodology is provided for the impact assessment in **Section 29** of the **EIAR Addendum (Part 2)**. This includes definitions for the sensitivity of both the tourism sector and tourism and recreation assets. These sensitivity definitions range from *High* to *Negligible* and are assigned to receptors relative to the onshore and offshore components of the CWP Project. The significance of effects is then determined by correlating the magnitude of the impact and the sensitivity of the receptors.

443. This approach provides a consistent and transparent assessment of predicted effects and adheres to the EIAR Guidelines (EPA, 2022).

444. This updated tourism and recreation assessment presented in **Section 29** of the **EIAR Addendum (Part 2)** is sufficiently detailed and adequately assesses the potential impacts of the CWP Project in relation to tourism and recreation.

5.8.5 Consideration of the construction and operational phase impacts on tourism

5.8.5.1 Summary of matter raised

445. Fáilte Ireland has queried the lack of a sufficiently detailed consideration of the potential construction and specifically the operation phase impacts on tourism.

5.8.5.2 Applicant's response

446. As noted above, additional desk-top surveys have been undertaken which considered the relationship between OWFs and tourism and which also incorporate an updated survey of the popular tourist and recreational attractions. A revised tourism and recreational impact assessment was completed to account for this additional data. The data and revised impact assessment that support **Volume 3**, **Chapter 29 Population** of the EIAR are presented in **Section 29** of the **EIAR Addendum (Part 2)**. The inclusion of this information within the **EIAR Addendum** is in response to item 1c of the FIR (see **FIR Response Document**)

447. A detailed methodology is provided for the impact assessment. This approach included for the assessment of the construction, operational and maintenance and decommissioning phases of the Project on tourism and recreational assets.

448. This approach provided a consistent and transparent assessment of predicted effects for each phase of the Project and adheres to the EIAR Guidelines (EPA, 2022).

449. The assessment concludes that there would be no significant effects on tourism and recreational assets during the construction, operational and maintenance or decommissioning phases of the CWP Project. This updated tourism and recreation assessment is sufficiently detailed and adequately assesses the potential impacts of the Project in relation to tourism and recreation.

450.

5.8.6 Consideration of cumulative impacts on tourism along the east coast of Ireland

5.8.6.1 Summary of matter raised

451. Fáilte Ireland has queried the absence of a sufficiently detailed assessment of cumulative impacts on tourism that considers the full extent of the east coast of Ireland.

5.8.6.2 Applicant's response

452. An update to the planning application CEA has been provided in response to the Commissions FIR (see item 5 of the **FIR Response Document**). An update to the CEA for EIAR **Volume 3**, **Chapter 29 Population** is presented in **Section 27** of the **CEA Report (Part 3)** that accompanies the Applicant's response to the FIR. The updated assessment supersedes EIAR **Volume 4**, **Appendix 29.1 Cumulative Effects Assessment**.

453. The updated CEA considers the potential cumulative effects on tourism during the construction, operational and decommissioning phases of the CWP Project. It is sufficiently detailed and adequately assesses the potential cumulative effects of the CWP Project in relation to tourism.

454. The assessment concludes that there would be no significant cumulative effects resulting from the CWP Project alongside other developments, during the construction, operational and maintenance or decommissioning phases. The assessment concludes that there will be no significant cumulative effects on tourism assets.

5.8.7 Concerns regarding the location and scale of the CWP Project

5.8.7.1 Summary of matter raised

455. Fáilte Ireland questioned the appropriateness of the proximity and scale of the CWP Project given its specific location along the east coast.

5.8.7.2 Applicant's response

456. EIAR **Volume 2**, **Chapter 3 Site Selection and Consideration of Alternatives** describes how the location of the CWP Project array site was originally determined, supported by additional analysis to validate the original site selection conclusions. Importantly, for each stage of the array site selection process, the consideration of current legislation, policy and environmental and technical constraints has demonstrated that the conclusions of the original assessment by FORL remain valid and that the preferred array site remains an appropriate site for the deployment of an OWF.

457. Furthermore, it is the Irish Government's recognition of the advanced status of the CWP Project, including the original site selection and alternatives assessment, that led to the status of the CWP Project as a Phase 1 Project, enabling the Applicant to successfully apply to the Minister for the DECC for a MAC to more quickly advance Phase 1 Project commissioning and decarbonisation.

458. Notwithstanding the above, EIAR **Volume 3**, **Chapter 15 Seascape, Landscape and Visual Impact Assessment** gives recognition to the likely significance of visual effects on coastal receptors during the operational phase of the CWP Project.

459. The Applicant has sought to reduce the number of WTGs as far as possible. This is evident in the proposed reduction in the number of WTGs from up to 140 (at EIA Scoping) to 75 (Option A) or 60

(Option B). Other steps taken by the Applicant to reduce the visual impacts of the offshore infrastructure is described in **Section 15.9** of **Chapter 15 Seascape, Landscape and Visual Impact Assessment**.

5.9 Health and Safety Authority

5.9.1 Summary of issues raised

460. No observations were made in the submission received from the HSA.

5.10 Irish Aviation Authority

5.10.1 Summary of issues raised

461. The following section provides a response to matters raised by the Irish Aviation Authority (IAA). The matters raised have been responded to under the following headings:

- Future consultation with aviation stakeholders
- Proposed planning conditions

5.10.2 Future consultation with aviation stakeholders

5.10.2.1 Summary of matter raised

462. The IAA recommends that engagement is carried out with DAA Dublin Airport and Air Nav Ireland to confirm any potential impact on instrument night procedures and communication, navigation and surveillance equipment at Dublin Airport. The observer further states that engagement should be carried out with the Department of Defence, the IRCG and the Search and Rescue operator to assess any implications on aviation operations within the area.

5.10.2.2 Applicant's response

463. The Applicant notes the suggested requirements for further consultation. The Applicant has since engaged with Air Nav Ireland and DAA Dublin Airport to discuss potential impacts on instrument flight procedures and communication, navigation and surveillance equipment at Dublin Airport. A meeting was held on 21st October 2025 and a letter received on 23rd October 2025 confirmed Air Nav Ireland and DAA have no concerns regarding potential impact on instrument flight procedures, obstacle limitation surfaces or communication, navigation and surveillance facilities at Dublin Airport (see **Appendix N - Letter from AirNav Ireland r.e. Dublin Airport** of the **FIR Response Document**).

464. The Applicant also met with IRCG on the 9th October 2025 and the 26th November 2025 to discuss SAR requirements and marine activity in the vicinity of the CWP Project (refer to **Section 5.6** of this document).

465. The Applicant will continue to engage with the IRCG, IAA and the Department for Defence to develop a joint marine and aviation Lighting and Marking Plan that builds on the **Lighting and Marking Plan** submitted with the CWP Project planning application. This engagement will be carried out post-consent once the wind turbine layout has been finalised.

5.10.3 Proposed planning conditions

5.10.3.1 Summary of matter raised

466. The IAA recommends planning conditions to be attached to the CWP Project planning permission specific to aviation and radar.

5.10.3.2 Applicant's response

467. The Applicant notes the recommended conditions and has no comments.

5.11 Loughs Agency

5.11.1 Summary of issues raised

468. The following section provides a response to matters raised by the Loughs Agency. The matters raised have been responded to under the following headings:

- Comments on the EIAR
- Monitoring of migration movements
- Climate change
- Collaborative working
- Impacts separated by phase
- Equal species consideration

5.11.2 Comments on the EIAR

5.11.2.1 Summary of matter raised

469. Loughs Agency agree with the key impacts from the proposed development on fish and shellfish species but highlight a wider knowledge gap in impacts on these receptors.

5.11.2.2 Applicant's response

470. The assessment in **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR considers best available scientific information on fish and shellfish, the impact, and the interaction between the two in order to determine whether the impact will be significant (in EIA terms) (see **Section 9.10** of **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR).

471. In addition, the CWP Project has acquired recent environmental deoxyribonucleic acid (eDNA) survey results which have been incorporated into the **EIAR Addendum** to supplement desk-based literature review (Coull et al., 1998 and Ellis et al., 2012) to inform and validate the baseline (see **Section 9.6** of the **EIAR Addendum (Part 1)** and **Appendix 9-A CWP Migratory Fish eDNA Survey Report 2025**). Any limitations in the data provided, particularly around the change in landings data to reflect the refined study area, do not affect the conclusions of this assessment because the data are used together to generate an indication of the likely community composition of fish that are present within

the area, and this is combined with other literature / data sources to generate the most complete understanding of the baseline environment possible.

472. Furthermore, in response to FIR item 11a, each impact has been re-assessed against a regional study area. The local, Irish Sea and national study areas, as defined in **Section 9.4.1** of **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR, remain unchanged. Results of this updated assessment are presented in **Section 9.10** of the **EIAR Addendum (Part 1)**.

473. The assessment of each impact is considered adequate and robust, and mitigation measures are therefore appropriate , with all relevant impacts reduced to not significant in the context of EIA. Further detail will not identify any material difference in the type of impact, the mechanism by which the impact may manifest, nor will it alter the mitigation measures that have been proposed.

474. The project supports collaborative monitoring initiatives, as outlined in the updated **IPPEMP** and in the commitment to the ECMG referred to within the relevant chapter(s) of the assessment, to enhance data collection, refine future impact assessments, and validate mitigation measures.

5.11.3 Monitoring of migration movements

5.11.3.1 Summary of matter raised

475. Loughs Agency recommend a migratory salmonid baseline survey to track the migration of salmonids and other highly mobile species in the area, which are protected under the EU Habitats Directive.

5.11.3.2 Applicant's response

476. **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR provides a detailed description of the existing environment including migratory species and specifically salmonids, including a broader national study area which has been used for the purpose of capturing transboundary diadromous fish migrations (see **Section 9.6**). A wealth of publicly available data sources were used to inform this baseline and baseline survey requirements were agreed at Scoping, following consultation, by NPWS in 2021.

477. In addition, the Applicant has acquired recent eDNA survey results which have been incorporated into the **EIAR Addendum** and provide site specific data of the fish community present to compliment and validate the original baseline characterisation. The eDNA surveys, targeted to capture salmon migration periods, were undertaken in June and October 2025 to provide information on fish species present at 18 locations across the offshore development area with a focus on the presence of migratory salmon. Water samples were taken from each location, processed on board and analysed in a laboratory. These surveys validate the characterisation data used for the EIAR and provide an early pre-construction baseline dataset. The Applicant is of the opinion that this data is adequate to provide a robust assessment of all potential impacts from the CWP Project on mobile species which are protected under the EU Habitats Directive.

478. A precautionary approach has been adopted within both the EIAR and NIS which assumes the presence of relevant migratory species. The conclusion drawn across both the EIAR and NIS is that there will be no significant effects, or adverse effect on the integrity of any site as a result of the CWP Project alone, or in-combination with other plans and project. As such, it was not deemed necessary for the purposes of validation or removal of uncertainty in terms of the EIA conclusions to undertake any survey or monitoring studies for fish, shellfish, or turtle ecology.

479. Notwithstanding the robustness of the existing assessment, to increase the data quality and mitigate the risk of mortality that is associated with invasive methodologies such as telemetry or net surveys, it

is proposed to adopt eDNA survey methodologies within the array site, OECC, and the River Liffey as part of the pre-construction surveys. In addition to baseline surveys before construction starts, monitoring is proposed as set out in the updated **IPPEMP**. Whilst the principal focus and reporting will be on migratory species, the eDNA surveys will provide information on non-migratory fish and shellfish species present, including prey species such as sandeel, and commercially important species.

5.11.4 Climate Change

5.11.4.1 Summary of matter raised

480. Loughs Agency highlight that climate change is affecting the behaviour of mobile species and these impacts when combined with expected changes to other offshore elements considered within the CWP Scoping Report, could lead to significant negative impacts on aquatic species.

5.11.4.2 Applicant's response

481. **Section 9.6** of **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR presents the baseline characterisation for fish, shellfish, and turtle receptors. The description of the baseline is supported and validated by the additional data provided in **Section 9.6** of the **EIAR Addendum (Part 1)**, including **Appendix 9-A CWP Migratory Fish eDNA Survey Report 2025** and **Appendix 9-B Noise overlap with spawning and nursery ground calculations**.

482. Pre-existing and future impact on the behaviour distribution of fish as a result of climate change has already been established (in so far as is possible) as part of the baseline and is therefore inherently considered as part of the impact assessment. The baseline characterisation, the consideration of the baseline in the absence of the proposed project, and the assessment of the project over its proposed lifetime intrinsically considers the potential impact of the project within an inherently dynamic baseline receiving environment. The conclusions drawn for fish, shellfish and turtle ecology are that there are no significant impacts anticipated, either for the project alone or in combination with projects and plans. These conclusions are drawn for the lifetime of the project, and are considered to be robust, and in accordance with existing regional evidence which demonstrates the contribution of offshore wind to cumulative effects on fish to be minimal.

483. Furthermore, whilst noting the importance of matter raised, it should be highlight that in the absence of renewable energy (i.e. projects required to tackle climate change), fish species can be expected to decline due to climate change related impacts.

484. Overall, as a result of the multiple datasets utilised, the characterisation of the baseline environment for fish, shellfish, and turtle receptors is considered to be robust for the purposes of EIA, any further data would not materially alter the characterisation presented, or the assessment on which it is based.

485. The conclusion drawn across both the EIAR and NIS is that there will be no significant effects, or adverse effect on the integrity of any site as a result of the CWP Project alone, or in-combination with other plans and projects.

5.11.4.3 Summary of matter raised

486. Loughs Agency suggests potential changes in marine processes, benthic and intertidal ecology, marine mammals, offshore ornithology, commercial fisheries, shipping routes and climate change have the potential to effect highly mobile species and shellfish beds, and the combined effect of these interrelated changes should be modelled.

5.11.4.4 Applicant's response

487. The assessment presented within the EIAR chapter, and **EIAR Addendum**, inherently considers the potential impacts during the lifetime of the project, which includes cumulative, inter-related, and future baseline (in the absence of the project). The EIAR inter-related effects assessment (the methodology for which is described in **Chapter 5 EIA Methodology** of the EIAR) considers the potential for all relevant effects across multiple topics (including climate) to interact, spatially and temporally, to create inter-related effects on a receptor group. This includes incorporating the findings of the individual assessment chapters to describe potential additional effects that may be of greater significance when compared to individual effects acting on a receptor group. Further to this the future baseline is described with regards the likely impacts as a result of climate change, in the absence of the proposed project.

488. Overall, the inter-related effects assessment for each of the abovementioned receptor groups did not identify effects of greater significance when compared to the significance of individual effects acting on each receptor group.

489. In the absence of renewable energy (i.e. projects required to tackle climate change), the impact of climate change on the receptor groups referred to above can be expected to increase. The CWP Project will have a positive impact in terms greenhouse gas (GHG) emission reduction, and therefore an indirect positive impact on the abovementioned receptor groups.

5.11.5 Collaborative working

5.11.5.1 Summary of matter raised

490. Loughs Agency suggest working with projects such as CETUS to help fill existing knowledge gaps.

5.11.5.2 Applicant's response

491. CWP Project note the suggestion. As a result of the multiple datasets utilised, the characterisation of the baseline environment for fish, shellfish, and turtle receptors and all other receptor groups is considered to be robust for the purposes of EIA. Any further data would not materially alter the characterisation presented, or the assessment (and proposed mitigation) on which it is based.

5.11.6 Impacts separate by phase

5.11.6.1 Summary of matter raised

492. Loughs Agency request potential impacts from CWP Project are separated into pre-construction, construction, operational and decommissioning phase.

5.11.6.2 Applicant's response

493. Within **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR, and within all other EIA topic chapters, impacts are categorised into phases using a standard approach for reporting impacts associated with OWF projects, i.e: Construction (including pre-construction activities); Operation and Maintenance; and Decommissioning. This structure aligns with the EIAR Guidelines (EPA 2022).

5.11.7 Equal Species Consideration

5.11.7.1 Summary of matter raised

494. Loughs Agency highlights that all species should be given equal consideration, whether or not of commercial importance, as they are of intrinsic and ecosystem value.

5.11.7.2 Applicant's response

495. Within **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR the list of species identified in the study areas was reviewed and assessed against a number of ecological criteria (e.g., SAC qualifying feature, spawning within the offshore development area and MPA sensitivity list), as well as commercial importance to determine relevant VER's against which the assessment would be presented. This approach aligns with the CIEEM 2024 Guidance which promotes good practice in Ecological Impact Assessment to ensure a robust assessment of all habitats, species and ecosystems with the potential to be impacted. This approach was agreed at Scoping, following consultation, by NPWS in 2021. The impact on commercial fishing is assessed in detail in **Volume 3, Chapter 12 Commercial Fisheries** of the EIAR, with relevant updates presented in **Section 12** of the **EIAR Addendum (Part 1)**.

5.12 Marine Institute

5.12.1 Summary of issues raised

496. The following section provides a response to matters raised by the Marine Institute. The matters raised have been responded to under the following headings:

- Implications of the proposed development for proper planning and sustainable development
- Likely effects of the proposed development on the environment or any European site
- On-going monitoring
- Availability of marine data and evidence to ACP
- Summary of recommendations
- Comments from Bord Iascaigh Mhara

5.12.2 Implications of the proposed development for proper planning and sustainable development – fisheries

5.12.2.1 Summary of matter raised

497. The Marine Institute cannot rule out significant impacts on the pot fishery in this area (including displacement of effort) from this project.

5.12.2.2 Applicant's response

498. The Applicant notes this response and highlights the following relevant findings of the EIAR:

- The EIAR identified a potential significant effect on pot fishing due to loss of grounds or restricted access to fishing grounds across the array site and OECC.
- In response, A **FMMS** submitted with the planning application (and as updated in response to the Commission's FIR) will be implemented to ensure positive co-existence procedures.
- Monitoring commitments provided in the **IPPEMP** (and as updated in response to the Commission's FIR) will address uncertainties around co-existence and will inform future updates to the **FMMS**.
- The Applicant has committed to defined, deliverable measures within the **FMMS** that are available now and will be implemented through construction, including:
    - Ongoing fisheries liaison (Commercial Fisheries Manager and Fisheries Liaison Officer);
    - Commitment to promote co-existence and minimise disruption;
    - Evidence-based cooperation agreements where fishermen can demonstrate legitimate economic dependency and verifiable project-related disruption (which may include disruption arrangements during construction, as appropriate); and
    - A structured monitoring programme to detect and evidence displacement and changes in fishery performance, including monitoring of potting activity distribution (supported by collaborative iVMS initiatives where available/agreed) and tracking of fishery performance indicators such as CPUE/LPUE trends for key pot fisheries (including whelk and crab/lobster) before and after construction, to inform adaptive management.

499. Further to the above, the Applicant notes that the assessment of effects on pot fisheries, including displacement, was undertaken using a clearly defined and systematic assessment methodology, informed by relevant legislation, policy and guidance, and supported by a substantial baseline evidence base (see **Volume 3, Chapter 12 Commercial Fisheries** of the **EIAR)**. The commercial fisheries baseline was developed from a wide range of data sources, including fisheries datasets, landings information, Marine Institute and BIM sources, fisheries scouting surveys, and information provided through consultation with fishers and their representatives. While limitations in individual datasets are recognised, the assessment explains that the range of sources analysed has enabled corroboration and verification of the evidence base and provided a robust and appropriate basis for characterising the existing environment and undertaking the impact assessment.

500. In addition, **Volume 4, Appendix 12.3 Commercial Fisheries Technical Report** of the EIAR concludes that, notwithstanding recognised uncertainties, the available data, industry consultation and expert judgement provide sufficient knowledge to characterise the existing environment for the purposes of the EIA.

501. The Applicant further notes that, in response to concerns raised in observations and in the Commission's FIR regarding cumulative displacement effects, the **FMMS** has been updated to provide further and more specific commitments in relation to coexistence, monitoring and adaptive management.

502. Taking account of the original assessment, the embedded and additional mitigation, and the updated **FMMS** commitments, the residual effect on pot fisheries is assessed to be not significant in EIA terms.

5.12.2.3 Summary of matter raised

503. The Marine Institute suggests impacts on whelk fishery should be considered in a cumulative way, taking into account other ORE projects, marine protected areas, and other competing ocean uses.

5.12.2.4 Applicant's response

504. Impacts on the whelk potting fishery were assessed directly as part of the CEA for commercial fisheries (**Volume 4, Appendix 12.1 Cumulative Effects Assessment** of the EIAR), alongside other relevant commercial fisheries receptors, with specific consideration of the potential for cumulative effects arising from multiple offshore wind developments and other competing marine uses. Other projects / activities assessed in the CEA included offshore wind farm projects, aggregate dredging activity, oil and gas activity and the implementation of restrictions to fishing in marine protected areas.

505. At the request of the Commission (item 5 of the FIR) an update to the CEA for commercial fisheries has been provided in **Section 10** of the **CEA Report (Part 2)**. This assessment supersedes EIAR **Volume 4**, **Appendix 12.1 Cumulative Effects Assessment**.

506. The CEA recognises that the Phase 1 OWF projects with the potential to interact with potting fleets have incorporated project-specific mitigation to address loss of access effects for whelk potting and crab and lobster potting; this includes, for example, Dublin Array (array area and export cable corridor) and Arklow (export cable corridor). Mitigation cannot be applied to implementation of restrictions to fishing in marine protected areas, including Special Areas of Conservation (SACs) and Special Protected Areas (SPAs).

507. **Section 10** of the **CEA Report (Part 2)** concludes that there is the potential for a significant cumulative effect on pot fisheries related to displacement during the construction phase. This is due to the difficulty in attributing displacement occurring across multiple projects to one specific project. Mitigation at an individual project level is recognised as effective for mitigating the impact of loss of fishing grounds; however, displaced vessels may seek alternative grounds, leading to increased competition and potential secondary effects on catch rates and profitability.

508. In response to these cumulative concerns and the Commission's FIR, the Applicant has updated the **FMMS**, which commits to collaborative displacement monitoring by the Phase 1 Project developers, focused on pot fisheries, including whelk, crab and lobster. This will include monitoring of changes in the spatial distribution of potting activity (where data availability allows, including consideration of iVMS-enabled approaches in collaboration with the Marine Institute and industry) and monitoring of fishery performance indicators for the whelk fishery, including CPUE/LPUE trends pre- and post-construction, to help identify any material changes consistent with displacement or increased competition at an Irish Sea scale. The outcomes of this monitoring will be used to inform ongoing liaison and, where necessary, adaptive management and cumulative mitigation discussions via the Seafood / ORE Working Group.

509. Recognising that cumulative mitigation cannot be unilaterally defined or delivered by a single project, the Applicant's project-specific mitigation and monitoring commitments shall be in place irrespective of this wider process. On that basis, taking account of the embedded mitigation and updated **FMMS** commitments, the residual cumulative effect on pot fisheries is assessed as not significant in EIA terms.

5.12.2.5 Summary of matter raised

510. The Marine Institute commented that the CWP Project should be considered in the context of the available port facilities for construction and maintenance, including any necessary upgrades to local ports and transport networks.

5.12.2.6 Applicant's response

511. The Applicant notes that upgrades to port facilities and transport networks may be required in Ireland and elsewhere overseas to facilitate future ORE development, however such upgrades are not proposed by the Applicant and do not fall within the scope of the CWP Project planning application.

Any such development will be subject to relevant planning requirements by the relevant Applicant(s) for the location(s) in question.

5.12.3 Likely effects of the proposed development on the environment or any European site

5.12.3.1 Summary of matter raised

512. The Marine Institute consider there to be no obvious omissions in the assessment analyses but note that they consider the evidence base for effects on fish to be weak and as such the Marine Institute are not in a position to draw a conclusion regarding adverse effects.

5.12.3.2 Applicant's response

513. **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR details the baseline data available in relation to fish populations and essential fish habitat. In addition, the Applicant has acquired recent eDNA survey results which were targeted to capture salmon migration periods, and which have been incorporated into the **EIAR Addendum** and **NIS Addendum**, as well as additional data sources.

514. This baseline data is similar in the level of detail acceptable in other EU jurisdictions and is sufficient to inform a robust assessment of the likely significant effects on fish and fish habitats. By way of example this approach has been adopted on the Awel y Mor OWF in Wales, the Triton Knoll OWF in England, and aligns with both English guidance provided by the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) and the relevant Irish guidance (Guidance on Marine Baseline Ecological Assessments & Monitoring Activities for Offshore Renewable Energy Projects Part 1 April 2018) which notes that projects should 'Examine available stock/cpue data or conduct trawl / acoustic surveys to identify species present at the site if data is not available from other sources'.

515. The Applicant has consulted the relevant bodies (see **Section 9.2** of **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR) previously and agreed that other sources, and stock/cpue data, are available and therefore further invasive and destructive surveys would not be proportionate or appropriate.

5.12.3.3 Summary of matter raised

516. The Marine Institute recommends that monitoring programmes be established to measure the effects of noise from the construction phase. These should establish baselines before the construction phase and then monitor the relevant ecosystem components during and after construction has been completed. Monitoring should be at appropriate spatial and temporal scales. The fishing industry should be involved, in a consultative capacity, in the design and operation of monitoring programmes.

5.12.3.4 Applicant's response

517. The updated **IPPEMP** provides details of proposed monitoring of underwater noise plus other ecosystem components. Noise measurements will be made in line with National Physical Laboratory (NPL) Good Practice Guide 133 for underwater noise measurement (Robinson et al., 2014).

518. The Applicant will, through the updated **FMMS**, continue to engage with the fishing industry on matters relevant to commercial fishing.

5.12.3.5 Summary of matter raised

519. The Marine Institute state Sulphur hexafluoride (SF6) should be subject to correct and approved storage procedures to prevent any accidental release. Guidance from EPA for Operators of Equipment Containing SF6 and Equipment Containing PFCs should be followed.

5.12.3.6 Applicant's response

520. The CWP Project acknowledges the Marine Institute's recommendation regarding the storage and management of Sulphur hexafluoride (SF6). The Applicant is fully committed to ensuring that all SF6-containing equipment is stored, handled, and maintained strictly in accordance with the Environmental Protection Agency's (EPA) "Guidance for Operators of Equipment Containing SF6 and Equipment Containing PFCs" and all other relevant statutory requirements. To this end, detailed procedures for the storage, use, and disposal of SF6 will be set out in the **CEMP**, which will be finalised prior to commencement of works. These procedures will include regular inspection, leak detection, and maintenance protocols, as well as clear lines of responsibility for compliance.

5.12.4 On-going monitoring

5.12.4.1 Summary of matter raised

521. The Marine Institute advises key parameters are monitored (e.g., water and sediment quality, benthic habitats, fish populations etc) to establish pre-construction conditions against which future changes can be subject to on-going monitoring during construction, operation, and decommissioning phases.

5.12.4.2 Applicant's response

522. Baseline data collection has been ongoing through pre-application site surveys where appropriate and more recently through additional surveys completed in response to the Commission's FIR. This data, combined with data from desk based sources, provides the basis for appropriate characterisation of the receiving environment and a robust impact assessment. It should be noted that it was agreed through consultation with the SFPA and DHLGH that no site-specific fish or shellfish surveys needed to be undertaken during the baseline site investigation survey campaign.

523. As well as the significant survey effort to accurately characterise the baseline environment for the purposes of the EIA and AA, the Applicant has also provided details of proposed surveys and monitoring pre-, during and post construction (operation), and decommissioning phases. Details of this for each relevant topic is set out clearly within the updated **IPPEMP**.

524. The **IPPEMP** has been updated to reflect requests made in the Commission's FIR and forms a framework document which will be updated to form the PEMP as project development progresses. The PEMP will be submitted to the relevant Regulatory Authority for approval, prior to the start of construction. This will be based on further discussions post consent with the Commission and the relevant regulatory authorities to agree the exact detail (timings, methodologies etc.) of the monitoring that is required.

5.12.4.3 Summary of matter raised

525. The Marine Institute advises monitoring activities align with existing national monitoring programmes to ensure consistency and avoid duplication.

5.12.4.4 Applicant's response

526. The updated **IPPEMP** is intended to provide a framework which will be developed into a Project Environmental Monitoring Plan (PEMP) which will be submitted to the Regulatory Authority for approval, prior to the start of construction. Updates will be based on further discussions post consent with the Commission and the relevant regulatory authorities to agree the exact detail (timings, methodologies etc.) of the monitoring that is required.

5.12.5 Availability of marine data and evidence to the Commission

5.12.5.1 Summary of matter raised

527. The Marine Institute recommends it is designated as the centralised agency for storing and managing offshore energy monitoring data. Integrated data collection, collation and management procedures for all OWF should be established nationally. These should comply with international standards and best practice.

5.12.5.2 Applicant's response

528. The Applicant would support the Marine Institute's recommendation, however the confidentiality of commercially valuable data would need to be safeguarded.

5.12.6 Summary of recommendations

5.12.6.1 Summary of matter raised

529. The Marine Institute recommend that chemicals used in the construction and operation of the CWP Project should be selected from the OSPAR PLONOR list or those of lowest risk. MI also recommends the use of chemicals already registered under the OSPAR Harmonised Mandatory Control System for the offshore oil and gas industry).

5.12.6.2 Applicant's response

530. Experience from constructing and operating OWFs in other jurisdictions have shown that OWF installation vessels and operations can use different chemicals than those typically used in oil and gas operations. The Applicant proposes that the type of chemicals should be considered in the context of their use. For chemicals that are used in an open system, the Applicant proposes that the chemical

should pose lowest risk, and be selected from the OSPAR PLONOR list or OSPAR Harmonised Mandatory Control System. If this is not possible, the Applicant should seek approval from the relevant regulatory authority prior to their use. This approval request should include information such as safety data sheet, depth and current at the Site, quantities or volumes and the proposed frequency of use.

531. For chemicals used in closed containment systems, the Applicant proposes that chemicals from the OSPAR PLONOR list or those of lowest risk should be selected. If this is not possible, the Applicant should inform the relevant regulatory authority of its intended use.

532. The steps the Applicant proposes to take to prevent chemical spills is described in the **CEMP**, including the **updated CEMP**.

5.12.6.3 Summary of matter raised

533. Marine Institute recommend a cumulative effects assessment be undertaken of offshore wind developments and fisheries on seabird populations.

5.12.6.4 Applicant's response

534. An update to the planning application CEA for seabirds has been provided in response to the Commission's FIR. This update, presented in **Section 7** of the **CEA Report (Part 2)**, includes an updated assessment of cumulative construction and operation and maintenance phase displacement impacts. It supersedes the CEA section of **Volume 3**, **Chapter 10 Ornithology** and **Volume 4**, **Appendix 10.1 Cumulative Effects Assessment** of the EIAR.

535. The assessment of cumulative effects on seabird populations has been undertaken in accordance with best practice and CEA guidance referred to in the **CEA Report**. Stage 2 of the CEA (topic specific screening) is presented in **Appendix 1** of the **CEA Report (Part 1)**. This exercise established a shortlist of other development for each EIA topic using set screening criteria. In the case of ornithology, existing fisheries form part of the baseline and as such are not considered to be type of cumulative development. This approach is in accordance with CIEEM guidance.

5.12.6.5 Summary of matter raised

536. The Marine Institute recommends further information is included in relation to how the lighting management plan reduces impacts to marine ornithology, through lighting regime and / or designed-in measures.

5.12.6.6 Applicant's response

537. The Applicant acknowledges the observer's comments regarding the mitigation of marine lighting impacts to offshore ornithology.

538. In response to a request by the Commission, a qualitative assessment on the impacts of artificial lighting upon Manx shearwater has been carried out and is provided as Impact 2a in **Section 10.10.3** of the **EIAR Addendum (Part 1)**. This section provides an examination as to the significance of any effects arising as a result of artificial lighting associated with the CWP Project and associated anthropogenic activities in an EIA context.

539. For the project-alone assessment, the impact magnitude for artificial light impacts upon Manx shearwater was assessed as negligible. In accordance with the receptor sensitivity being assessed as

medium, the impact significance was assessed as being imperceptible and therefore not significant in EIA terms. (See **Impact 2a** in **Section 10.10.3** of the **EIAR Addendum (Part 1)**).

540. With regards to the CEA, only potential impacts assessed as being "not significant" or above are included. The impact of artificial lighting upon Manx shearwater within the marine environment is assessed as being "imperceptible". As such, this impact is not taken forward to the CEA, as there is no potential for an imperceptible impact to contribute to a significant cumulative effect.

541. In an AA context, **Volume 5 - Assessment of Implications for Special Protection Areas (Part 2)** of the NIS**,** supported by the **NIS Addendum (Part 1),** concludes no AESI in relation to this impact, on the basis of a qualitative assessment. Similarly, no AESI is predicted in relation to this impact from the CWP Project in-combination with other development (see **NIS Addendum (Part 3)**).

542. Information regarding construction and operation phase lighting requirements for offshore project elements is provided within the **Lighting and Marking Plan** submitted with the CWP Project planning application. This plan outlines the proposed lighting and marking of the offshore aspects of the project based upon consideration of the relevant guidance in relation to marine vessels and aircraft. In accordance with this guidance the Applicant commits to complying with the final lighting and marking instructions for the project as directed from Irish Lights, the IAA and the Irish IRCG. Beyond compliance with these instructions, the Applicant considers further mitigation measures would not meaningfully alter the assessment conclusions, and as such further measures to reduce non-significant effects are not required.

5.12.6.7 Summary of matter raised

543. In relation to the assessment of displacement impacts to red-throated diver, the Marine Institute recommends the use of a 100% displacement rate within a 10 km buffer of the array site instead of within a 2 km buffer which they state was used in the assessment. The observer also notes that a citation supporting the use of a 2 km buffer is missing from the reference list.

5.12.6.8 Applicant's response

544. The Applicant can confirm that reference made by the Marine Institute to a 2 km buffer being used for the CWP Project assessment is not correct. The assessment, as presented within the EIAR and NIS, utilised a 4 km buffer for displacement.

545. The observer is directed to the Applicant's response to items 7f and 7k of the Commissions FIR (see **FIR Response Document**) which concern requests made by the Commission that displacement impacts to red-throated diver are reassessed with consideration of a 10km buffer from the array site.

546. Accordingly, with reference to additional digital aerial survey data collected after the submission of the CWP Project planning application, **Section 10.10.3** of the **EIAR Addendum (Part 1)** reassesses displacement impacts to regional red-throated diver populations within a 10km buffer of the array site. Displacement impacts to SPA red-throated diver populations are reassessed within a 10km buffer of the array site in **NIS Addendum (Part 1)**.

547. These update assessments are supported by **Appendix 10-I Design-based Density, Abundance Estimates and Distributional Response of the Red-throated Diver** and **Appendix 10-J Parameterisation of Red-throated Diver Displacement Rates** of the **EIAR Addendum**.

548. The Applicant disagrees with the observer's interpretation of joint SNCB (2022) advice and highlights within this document the statement *'Displacement* [of red-throated diver] *will not be 100% throughout the distance over which the effect occurs but there will likely be a gradation, with decreasing effects at increased distance from an OWF"*. Accordingly, reassessments of red-throated diver displacement

impacts within 10 km of the array site have utilised a banded approach based upon conservative interpretation of best available evidence to incorporate reductions in displacement rates with increasing distance from the array site.

549. The Applicant considers the updated assessment of displacement impacts undertaken in relation to red-throated diver within the **EIAR Addendum** and the **NIS Addendum** to be robust and to align with available guidance. The assessments are not predicted to result in significant effects to regional red-throated diver populations, or to adversely affect the integrity of surrounding SPAs.

5.12.6.9 Summary of matter raised

550. The Marine Institute recommends the use of individual-based models to be used alongside the matrix-based approach to displacement analysis. Particular emphasis is made to the potential utility of individual-based models in determining non-significant effects for indirect and cumulative impacts.

5.12.6.10 Applicant's response

551. The Applicant acknowledges the observer's comments regarding the potential utility for individual-based modelling. The Applicant would note that a key consideration has been possible cumulative effects, and as such displacement analysis based upon matrix-model approaches is the approach followed by other projects in the Irish Sea. Adopting consistent approaches is considered to be in line with standard practice, ensures methodological consistency, and allows a comparative cumulative assessment of potential impacts to regional populations and in-combination impacts to SPA populations.

552. While there is an individual based energetics model used in OWF assessments in Scotland (i.e. SeabORD - Searle et al., 2018), it's utility beyond the region (Forth and Tay, Scotland) where it was developed remains very uncertain. There are two main approaches to applying this model. One approach requires large quantities of breeding seabird tracking data across multiple years, which are not available from the seabird colonies on east coast of Ireland. The second approach assumes that prey are evenly distributed in space and assumes that foraging seabirds follow a predictable decay in abundance with increasing distance from their colony. It is known that these assumptions are not met.

553. It appears that, for projects beyond the Forth and Tay region, NatureScot are increasingly advising that the SeabORD model is not used and the preference is that the matrix approach is applied. For example, see NatureScot comments on the following projects:

- Muir Mhòr[1]
- Buchan[2]
- Caledonia[3]

554. It is also important to note that SeabORD can only be applied in the breeding season, so a matrix approach to displacement assessment would be required for the non-breeding season. SeabORD is based on research from tracked birds from a single colony (Searle et al., 2018). It is also based on a relatively short part of the breeding season when seabirds can be safely trapped and tagged (late egg

[1] https://marine.gov.scot/sites/default/files/muir_mhor_section_36_application_consultation_-_consultee_responses_24-04_redacted.pdf
[2] https://marine.gov.scot/sites/default/files/buchan_offshore_wind_-_section_36_consent_and_marine_licence_application_-_consultation_responses.pdf
[3] caledonia_north_and_caledonia_south_offshore_wind_farms_-_representations.pdf

to early chick stage), so it is likely that it does not represent the effects of distribution responses across the whole of the breeding season.

555. The application of the SeabORD model to the western Irish Sea is inappropriate at this time due to a lack of suitable input seabird tracking data to inform the model and the high uncertainly associated with applying the model beyond the Forth and Tay region of Scotland. It has not been recommended to be used in OWF assessments in England and Wales by the relevant statutory advisors.

556. Displacement analysis utilising the matrix approach within the EIAR and NIS are therefore considered to provide a robust assessment of potential impacts, and the assessment methodology followed is consistent with guidance (SNCB (2022) Joint SNCB Interim Displacement Advice Note: Advice on how to present assessment information on the extent and potential consequences of seabird displacement from Offshore Wind Farm (OWF) developments) and as agreed in consultation with SNCBs, such as NPWS (November 2023 – as shown in **Section 10.2** of EIAR **Volume 3, Chapter 10 Ornithology**).

5.12.6.11 Summary of matter raised

557. The Marine Institute recommends post-construction monitoring during the O&M phase to validate CRM results. Should mortality be higher than what was predicted the observer suggests that additional mitigative measures be considered.

5.12.6.12 Applicant's response

558. The Applicant directs the observer to **Section 4.7** of the updated **IPPEMP**, in which proposed in-principle monitoring measures outlined include the use of tagging of kittiwake and guillemot, and autonomous monitoring, stereoscopic camera systems, to contribute to scientific understanding of collision avoidance in the western Irish Sea. The detailed scope of monitoring surveys, their programmes and methodologies shall be submitted to the relevant Regulatory Authority for written approval prior to the commencement of construction.

559. Notwithstanding commitments outlined within the updated **IPPEMP**, the Applicant seeks to highlight that collision risk modelling undertaken to inform the EIAR and NIS is based upon input parameters which are precautionary. The Applicant considers assessments of collision risk to be appropriate and, given the highly precautionary nature of the collision risk assessment methodology and the resultant conclusions of impacts being non-significant, the Applicant considers there to be no requirement for subsequent monitoring to validate or identify additional mitigative measures.

5.12.7 Comments from Bord Iascaigh Mhara

5.12.7.1 Summary of matter raised

560. The Marine Institute - Bord Iascaigh Mhara highlighted a recent paper by Bonsu et al., 2024 which found lack of ecological data, research and feasibility studies prevent fisheries co-location with OWF.

5.12.7.2 Applicant's response

561. The Applicant notes the Marine Institute / Bord Iascaigh Mhara reference to Bonsu et al., 2024. That paper concludes that, although co-location of fishing activity within OWFs is increasingly discussed (particularly for passive/static gears), delivery is often constrained by a lack of ecological evidence, limited feasibility testing and an absence of agreed operational arrangements. Key barriers highlighted

include: insufficient baseline and post-construction ecological data to evidence effects; uncertainty regarding the practical and economic viability of fishing within arrays; and the need for clear safety protocols, governance/consenting arrangements, and liability/insurance clarity to enable routine access.

562. The Applicant agrees that strengthening the evidence base is important at a national level. As a project, measures through the updated **FMMS** will be implemented to help address these evidence gaps for the principal fisheries relevant to the project (potting for whelk). This includes a dedicated programme of pre- and post-construction monitoring of whelk catch performance (CPUE) within the array area (with appropriate comparison/control). The monitoring is intended to evidence whether catch rates change materially over time and will also inform the practicality of resumption of potting activity within the operational array site. The Applicant will use the monitoring outputs, together with ongoing fisheries liaison, to inform adaptive management if required.

563. In addition, the Applicant notes that emerging evidence indicates that static gear fisheries can resume within operational OWFs without clear adverse change relative to pre-construction patterns. For example, Fitkov-Norris et al., 2025 assessed fishing effort responses across multiple European OWFs and reported that overall reductions in effort were driven primarily by mobile gears (trawlers and seiners), whereas fixed/static gears showed no significant reduction, supporting the view that co-location is feasible for static gears (including pots/traps), which is the predominant fishing method in the area.

564. In addition, the Applicant commissioned a technical note to review fishing activity within operational UK OWFs using AIS data (see **Appendix 12-A Evidence of fishing within OWF array areas** of the **EIAR Addendum**). That work reviewed a full 12-month period of data for six operational OWFs in 2023, including Westermost Rough, Gwynt y Môr and Hornsea One, with vessel tracks extracted within the wind farm boundaries and subject to quality assurance, including cross-checking of vessel identity/type and supporting information to assist in determining fishing activity. The purpose of the note was not to confirm that fishing will necessarily be possible in every future project, but to provide evidence of observed fishing activity within operational wind farms. The results show fishing vessel presence within a number of operational arrays, including Gwynt y Môr, Westermost Rough and Hornsea One, thereby providing further practical evidence that fishing activity, including relevant static gear fisheries, can and does resume within operational wind farms. The evidence from Gwynt y Môr is of particular relevance, given its location in the Irish Sea and the existing understanding that whelk fishermen off north Wales operate within operational wind farms. On that basis, and taking account of the monitoring, liaison and adaptive management measures secured through the updated **FMMS**, the Applicant remains confident that safe and workable co-existence can be realised within the CWP Project.

565. Overall, the Applicant's position is that the CWP Project is responding in a practical way to the evidence gaps highlighted by Bonsu et al., 2024 through targeted monitoring (including CPUE monitoring for whelk) and ongoing engagement with the fishing industry, to both evidence outcomes and inform safe, workable co-existence during construction and into operation.

5.12.7.3 Summary of matter raised

566. The Marine Institute - Bord Iascaigh Mhara note there is no evidence to support the contention that fisheries can simply be relocated to a new location.

5.12.7.4 Applicant's response

567. The Applicant notes that the assessment is not based on an assumption that fishing activity can simply be relocated to alternative grounds without consequence. Rather, the EIAR explicitly considers the sensitivity of each fleet, including the tolerance of the receptor and its adaptability having regard to the availability of alternative fishing. This methodology is set out within **Section 12.4** of **Volume 3, Chapter 12 Commercial Fisheries** of the EIAR. On that basis, the potting fleet was assessed to have an overall medium sensitivity to loss of access, based on being vulnerable to the impact and having low levels of alternative fishing grounds and a relatively low operational range based on the size / capacity of vessels and extent of whelk fishing grounds. The assessment also drew on a substantial baseline evidence base, including site-specific scouting surveys, landings data, spatial fisheries datasets, fisher-supplied information and consultation with fishers and their representatives. The EIAR states that, while limitations of individual datasets are recognised, the range of data sources analysed enables corroboration and verification across the evidence base, such that the characterisation of the existing environment is appropriate, comprehensive and robust for informing the impact assessment.

568. The supporting **Volume 4, Appendix 12.3 Commercial Fisheries Technical Report** of the EIAR similarly concludes that, given the range of datasets assessed and the comprehensive analysis undertaken, the report is adequate for the purposes of an EIAR assessment. The Applicant is therefore satisfied that the assessment of displacement effects is robust and appropriately precautionary, rather than relying on any simplistic assumption of relocation. For long-term loss or restricted access to established fishing grounds, the highest residual significance was minor. For long-term displacement of fishing activity into other areas, the highest significance was minor. None of the predicted effects are significant in EIA terms.

569. The Applicant will promote co-existence and minimise potential disruption to normal commercial fishing practices through implementation of the updated **FMMS**. In addition, the Applicant notes that available evidence indicates that static gear fisheries can resume within operational offshore wind farms, such that there is no reason to conclude that co-existence would not be possible at the CWP Project. The EIAR already records that the CWP Project is fully committed to co-existence with the fishing industry within the array site and supports the resumption of fishing during the operational and maintenance phase. It also notes the understanding that whelk fishermen off north Wales and in the North Sea operate within operational wind farms, and on that basis expects that potting activity can resume within the array site during operation and maintenance, albeit not necessarily to the full extent of pre-project conditions and therefore assessed on a precautionary basis. Since submission of the EIAR, the Applicant has also commissioned a technical note reviewing AIS data for operational UK offshore wind farms, which identifies fishing vessel activity within a number of operational arrays, including Gwynt y Môr, Westermost Rough and Hornsea One (see **Appendix 12-A Evidence of fishing within OWF array areas** of the **EIAR Addendum**). While that note does not seek to prove that fishing will be possible in every future project, it does provide further practical evidence that fishing activity has been observed within operational OWFs. This is of particular relevance in the case of Gwynt y Môr, given its Irish Sea location and the existing understanding that it supports a whelk-related potting fishery. Taking account of this evidence, together with the **FMMS** commitments to liaison, mitigation, monitoring and adaptive management, the Applicant remains satisfied that the residual effect is not significant in EIA terms.

5.12.7.5 Summary of matter raised

570. The Marine Institute - Bord Iascaigh Mhara support pre and post-construction monitoring of fisheries catch rates within the array site and gear trials.

5.12.7.6 Applicant's response

571. The Applicant welcomes the support of pre- and post-construction monitoring of catch rates within the array site and gear trials. The Applicant confirms that a defined commercial fisheries monitoring programme is committed to through the project's fisheries management framework, including a dedicated pre- and post-construction monitoring programme to determine changes in catch per unit effort (CPUE) for whelk within the array area. The aim of this monitoring is to provide an accurate representation of fishing activity and CPUE in areas relevant to the CWP Project, and the findings will be used (where appropriate) to inform pre-construction updates to the **FMMS** and adaptive management.

572. In addition, consultation with Marine Institute during the EIA process (see **Section 12.2** of **Volume 3**, **Chapter 12 Commercial Fisheries** of the EIAR) supported the need for well-designed pre- and post-construction survey/monitoring alongside ongoing fisheries engagement. The Applicant will therefore implement the monitoring programme alongside continued fisheries consultation and liaison, including engagement through appropriate regional and national fisheries forums, to support robust design, interpretation of results, and proportionate response where monitoring indicates a material change.

573. The Applicant further confirms that the monitoring approach is intended to provide an accurate representation of fishing activity and CPUE in areas of relevance to the CWP Project. As set out in the updated **FMMS**, this will include review of fisheries data from the Sea-Fisheries Protection Authority for a five-year period and a dedicated pre- and post-construction monitoring programme to determine changes in whelk CPUE within the array area. The results of this monitoring may inform future updates to the **FMMS**. In addition, pre- and post-survey observation trips have been offered to fishermen, targeting the CWP Project to further facilitate co-existence opportunities. Further information on the monitoring framework is set out in the updated **IPPEMP** provided in response to the Commission's FIR.

5.13 Maritime Area Regulatory Authority

5.13.1 Summary of issues raised

574. The following section provides a response to matters raised by the Maritime Area Regulatory Authority (MARA). The matters raised have been responded to under the following headings:

- Proposed planning conditions

5.13.2 Proposed planning conditions

5.13.2.1 Summary of matter raised

575. The MARA propose that several planning conditions are applied to any planning permission granted.

5.13.2.2 Applicant's response

576. The Applicant notes the recommended conditions and has no comments.

5.14 Minister for Housing, Local Government and Heritage

5.14.1 Summary of issues raised

577. No observations were made in the submission received from the Minister for Housing, Local Government and Heritage.

6 APPLICANTS RESPONSE TO TRANSBOUNDARY BODIES

6.1 Isle of Man Territorial Sea Committee

6.1.1 Summary of issues raised

578. The following section provides a response to matters raised by the Isle of Man Territorial Sea Committee (TSC). The matters raised have been responded to under the following headings:

- Development proposed in Isle of Man territorial waters that may be of relevance to the cumulative effects assessment
- Data sources
- Subtidal and intertidal ecology
- Fish, shellfish and turtle ecology
- Marine Mammals
- Natura Impact Statement
- Commercial fisheries
- Ornithology
- Offshore Bats
- Shipping and navigation
- Landscape and seascape

6.1.2 Development proposed in Isle of Man territorial waters that may be of relevance to the cumulative effects assessment

6.1.2.1 Summary of matter raised

579. Isle of Man TSC noted that there is an OWF proposed within the Isle of Man territorial waters, named Mooir Vanin OWF. It was noted that this may be of relevance to the CWP Project cumulative effects assessment.

6.1.2.2 Applicant's response

580. The Applicant confirms that Mooir Vannin OWF was identified at Stage 1 of the CEA and included in the long list of other development as 'Isle of Mann' OWF.

581. The proposed development is located approximately 154 km to north east of the CWP Project planning application boundary. Consequently, in the context of the CWP Project cumulative effects assessment (CEA), there is limited potential for a physical overlap between effects from the two developments. It was therefore screened out of the CEA for the majority of topics at Stage 2 of the CEA.

582. An update to the planning application CEA has been provided in response to the Commissions FIR. This update, presented in the **CEA Report**, accounts for the submission of a planning application for the Moor Vanin OWF project in March 2025, and therefore a change in the CEA tier status of the project from Tier 3 to Tier 1.

6.1.2.3 Summary of matter raised

583. Isle of Man TSC noted that the Department of Infrastructure (DOI) has issued a Seaward Production Innovate Licence to Crogga Limited in respect of the hydrocarbon block 112/25. This licence commenced on 1 January 2019.

6.1.2.4 Applicant's response

584. The Applicant thanks the Isle of Man TSC for bringing the licence to the Applicant's attention but understands that the licence in question has now expired, and would therefore have no bearing on the CEA undertaken for the CWP Project and the conclusions of the EIA and NIS.

6.1.3 Data sources

6.1.3.1 Summary of matter raised

585. The Isle of Man TSC note the Manx Marine Environmental Assessment (MMEA) provides a useful overview of the Island's marine environment and should be taken into account as part of both the transboundary and possibly also the cumulative impacts assessment as part of this application. There has been requests to use more up to date data sources where they are available.

6.1.3.2 Applicant's response

586. The assessment has considered Isle of Man marine receptors where these are considered to potentially fall within the ZoI of the project. Examples include the assessment presented in EIAR **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** which considers the potential underwater noise impacts on receptors within Isle of Man territorial waters. **Table 9-2** of **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** summarises the data sources that have informed a comprehensive desk-based review, and site specific survey data. These include historic and contemporary data sources spanning from 1998 to 2025, including eDNA surveys which provide a contemporary account of fish, shellfish and marine mammal species. Whilst the Applicant has considered the MMEA and agrees it is a useful overview of the Isle of Man's marine environment, it is not considered to materially alter the characterisation of the receiving environment, the assessment conclusions, or the mitigation measures proposed.

587. The Applicant has, as presented within relevant sections of the **EIAR Addendum**, the **FIR Response Document**, and the updated **MMMP**, refined the proposed project mitigation to introduce an underwater noise limit which significantly reduces the propagation of underwater noise and any potential interaction with Isle of Man territorial waters.

588. In summary, given the distance between Isle of Man territorial waters and the CWP Project (~100 km), and the introduction of refined mitigation for underwater noise it is not anticipated that there will be any significant effects on the Isle of Man marine environment. The additional data would not meaningfully change these conclusions and as such the MMEA has not been incorporated within the assessment.

6.1.4 Subtidal and intertidal ecology

6.1.4.1 Summary of matter raised

589. The Isle of Man TSC agrees with the conclusion that climate change is unlikely to alter baseline conditions during the project's lifespan while recommending more evidence is provided to support this conclusion.

6.1.4.2 Applicant's response

590. **Section 8.6.8** of EIAR **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology** explains that whilst the impacts of climate change may result in slight changes to benthic habitats due to increased storm events, other impacts such as increased temperature and acidity will happen gradually and are unlikely to change baseline conditions over the lifetime of the CWP Project.

591. The information presented on climate change and future trends in EIAR **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology** is deemed adequate to enable the competent authority to make a determination in light of potential future trends and changes. Further information would not materially alter either the characterisation of the receiving environment or the conclusions of the assessment.

6.1.4.3 Summary of matter raised

592. The Isle of Man TSC request a diagram to illustrate dredging and disposal.

6.1.4.4 Applicant's response

593. Information including diagrams/ figures presented in **Volume 3, Chapter 8, Benthic Subtidal and Intertidal Ecology** of the EIAR, in relation to dredging and sediment disposal is taken directly from **Volume 3, Chapter 6 Marine Geology, Sediments and Coastal Processes** of the EIAR, which is supported by **Volume 4, Appendix 6.3 Modelling Report** of the EIAR. Figures illustrating the implications of the CWP Project are presented in **Volume 4, Appendix 6.3 Modelling Report**.

594. An additional sediment plume modelling exercise was undertaken, including mapping of the potential extent of the areas of increased SSC, the results of which are provided in **Appendix 6-A Modelling Report Addendum** of the **EIAR Addendum**. This is also reflected in **Section 8.10** of the **EIAR Addendum (Part 1)**.

6.1.4.5 Summary of matter raised

595. The Isle of Man TSC seeks clarification that the assessment of suspended sediment concentrations modelling predictions considers the potential for repeated disturbances of sediment during construction of the CWP Project.

6.1.4.6 Applicant's response

596. Yes, it does. **Volume 3, Chapter 8 Benthic Subtidal and Intertidal Ecology** of the EIAR considers the potential for the impact of elevated SSC and associated sediment deposition to occur several times over the course of each of the construction, operation and maintenance and decommissioning phases.

The significance of the effect from this impact on all identified benthic ecology receptors is presented in **Section 8.10** of **Volume 3, Chapter 8 Benthic Subtidal and Intertidal Ecology** of the EIAR). Additional sediment plume modelling was undertaken, the results of which are provided in **Appendix 6-A** of the **EIAR Addendum.** All conclusions drawn with regards to elevated SSC are that the impact will be not significant.

6.1.4.7 Summary of matter raised

597. The Isle of Man TSC suggests caution in assessing habitat creation via hard substrates as a positive impact, as any increase in species richness would not be natural and any habitat created through CWP Project infrastructure will be lost during decommissioning.

6.1.4.8 Applicant's response

598. The assessment within **Volume 3, Chapter 8 Benthic Subtidal and Intertidal Ecology** of the EIAR recognises that the introduction of hard substrate represents a change in habitat type in many areas and is assessed cautiously as a result. Nevertheless, there will be an increase in diversity around any introduced substrata and this should not be arbitrarily discounted. The decommissioning assessment already recognises that any hard substrate introduced will be removed as part of the decommissioning phase (see **Section 8.10**, of **Volume 3, Chapter 8 Benthic Subtidal and Intertidal Ecology** of the EIAR). All conclusions drawn, with regards to habitat creation and decommissioning, are that a slight adverse impact on benthic and intertidal ecology is predicted for all habitats, which is not significant in EIA terms.

6.1.4.9 Summary of matter raised

599. The Isle of Man TSC highlights that the CEA within **Volume 3**, **Chapter 8 Benthic Subtidal and Intertidal Ecology** of the EIAR is brief whilst acknowledging the CEA is provided within the referenced appendix.

6.1.4.10 Applicant's response

600. **Section 8.11** of **Volume 3, Chapter 8 Benthic Subtidal and Intertidal Ecology** of the EIAR is a summary of the CEA for benthic, subtidal and intertidal ecology presented in **Volume 4, Appendix 8.1 CEA**, and is not intended to repeat text unnecessarily.

601. An update to the planning application CEA has been provided in response to the Commissions FIR. This update is presented in **Section 5** of the **CEA Report (Part 2)**. All conclusions drawn, with regards to cumulative impacts, are an effect of slight, imperceptible or not significant adverse impact on benthic and intertidal ecology predicted for all habitats, which is not significant in EIA terms.

6.1.5 Fish, shellfish and turtle ecology

6.1.5.1 Summary of matter raised

602. The Isle of Man TSC suggests that **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR focusses on Irish waters and lacks assessment of other jurisdictions.

603. The Isle of Man TSC note that potential developments should consider transboundary effects of jurisdictions whose conservation areas are subject to the referenced international conventions but not the EU Directives.

6.1.5.2 Applicant's response

604. The impact assessment for fish, shellfish and turtle Ecology is based upon ZoIs for predicted impacts. As per **Section 9.12** of **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR, due to the mobile nature of the receptors considered in this chapter, and the use of study areas that capture all ZoIs, it is considered that any potential transboundary effects are assessed (e.g impacts of underwater noise on distant spawning or nursery grounds).

605. With the relevant mitigations in place, the EIAR determined all such effects to be not significant in EIA terms, and therefore no significant transboundary effects are predicted.

606. An update to **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR has been made in response to items 11a and 11g of the Commission's FIR. **Section 9.4.1** and **Section 9.10** of the **EIAR Addendum (Part 1)** include a revised regional study area assessment using ICES statistical rectangles 36E3; 36E4; 35E3; 35E4; 34E3; and 34E4 together with clarification of the underwater noise assessment methodology.

607. The updated assessment confirms that the defined study areas capture all relevant ZoIs and that the original conclusions remain unchanged.

6.1.5.3 Summary of matter raised

608. Isle of Man TSC suggests the wider study area is arbitrary regarding recognised fish stocks, the associated fishing interests and transboundary effects and should be further justified in **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR.

6.1.5.4 Applicant's response

609. Respectfully, the submission does not explain why a conclusion has been reached that the wider study area is arbitrary regarding recognised fish stocks. Nor does it explain what specific concerns underlie the submission or by reference to what alternative datasets the study area ought to have been determined. **Section 9.4** of **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR outlines the study areas for the assessment which were defined to ensure a comprehensive broadscale understanding of the receiving environment, which is presented within the description of the existing environment. The principal guidance and best practice documents used to inform the assessment of potential impacts on fish, turtle and shellfish ecology are provided in **Section 9.3.3** of **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR. The study areas were informed through reference to the predicted ZoI of the project and defined spatially on the basis of International Council for the Exploration of the Sea (ICES) statistical rectangles to allow reference to be made to relevant comprehensive datasets. ICES statistical rectangles are the smallest spatial unit over which relevant fisheries data is aggregated, and as such allows a robust and repeatable analysis to be undertaken against existing management data and transboundary party data.

610. An update to **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR has been made in response to item 11a of the Commission's FIR. **Section 9.4.1** and **Section 9.10** of the **EIAR Addendum (Part 1)** present a revised assessment using a regional study area comprising ICES statistical rectangles 36E3, 36E4, 35E3, 35E4, 34E3 and 34E4 as requested.

611. In addition, baseline datasets have been updated in response to item 11d of the Commission's FIR, with integration of the Marine Institute (2024) dataset within the **EIAR Addendum** where relevant.

612. The updated assessment confirms that the conclusions of the original assessment remain unchanged.

6.1.5.5 Summary of matter raised

613. Isle of Man TSC note the omission of Isle of Man statutorily protected areas from the assessment whilst noting the Isle of Man is within the national study area.

6.1.5.6 Applicant's response

614. It is recognised that the Isle of Man statutorily protected areas are not listed in **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR. However, it should be noted that the assessment is undertaken on a receptor led basis, and all relevant species the subject of that statutory protection are considered in the assessment, including those that may be features of designated sites. Furthermore, though the Isle of Man is included in the National Study Area, no impacts are predicted to interact with the Isle of Man territorial waters, and therefore there is no likely interaction with Manx Nature Reserves (MNRs) (see **Section 9.10** of **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR).

6.1.5.7 Summary of matter raised

615. The Isle of Man Territorial Sea Committee highlights that the study area bisects recognised nephrops and scallop habitats and seeks clarification over whether the assessment considers the potential impact of displacement of fishing effort into the aforementioned areas.

6.1.5.8 Applicant's response

616. **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR assessment considers that changes in anthropogenic activities such as fishing exploitation rates can influence fish, shellfish and turtle populations (Kempf et al., 2022). Commercial and recreational fishing is subject to numerous factors which may cause populations to differ from the baseline provided. This could be a result of, for example, changes in fisheries management policies and legislation, increase in running costs such as fuel prices, alterations in species distribution and abundance, or the introduction of marine conservation areas. Potential impacts on shellfish (including Nephrops and scallops) have been assessed in the above referenced chapter, using the (VER) approach, as not significant.

617. It should also be noted that the Commercial Fisheries assessment (**Volume 3**, **Chapter 12 Commercial Fisheries** of the EIAR) found the potential for displacement of the aforementioned fisheries to be not significant, and as such no significant changes to fishing pressure which may influence the fish, shellfish and turtle assessment are predicted (see **Section 9.10** of **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR).

6.1.5.9 Summary of matter raised

618. The Isle of Man TSC queried the lack of reference to ICES advice or Bangor University surveys on shared fish and shellfish stocks.

6.1.5.10 Applicant's response

619. The assessment within both **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology**, and **Volume 3, Chapter 12 Commercial Fisheries** of the EIAR consider ICES data and academic institute data, alongside Irish regulatory and academic data. Examples include the landing data for ICES statistical rectangles 36E3 which provide characterisation of Atlantic scallop, and Nephrops (see paragraph 49 to 51 of **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology**). Whilst data from Bangor University is not specifically referred, the receiving environment is fully and appropriately characterised at a site specific and ZoI/regional scale by reference to ICES data and the Irish documentation such as the Marine Atlas. Notwithstanding this the **EIAR Addendum** has been updated to further consider all recent and relevant data (see **Appendix C - Data validation statements** of the **FIR Response Document**).

6.1.5.11 Summary of matter raised

620. The Isle of Man TSC referred the Applicant to additional data sources for fish, shellfish, turtle and sharks in Manx waters, including specific reference was made to the latest ICES management advice for herring in the north Irish Sea.

6.1.5.12 Applicant's response

621. The Applicant notes the suggested material, and has, where relevant, referred to it. For example, **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** refers to Isle of Man data for the presence of basking sharks (see paragraph 70). It is important to note that the ZoI for the CWP Project is generally limited to areas that do not interact with the Isle of Man territorial waters, but, for the purposes of impact pathways that do have the potential for minor interaction with Isle of Man territorial waters, the information has been referred to. For example, **Section 9** of the **EIAR Addendum (Part 1)** now refers to the 2018 Manx Marine Environmental Assessment Report in characterising regional herring spawning grounds.

6.1.5.13 Summary of matter raised

622. The Isle of Man TSC queried the relationship between the CWP Project and ongoing work in the Manx section of the Western Irish Sea Mud Belt in relation to Functional Unit (FU) 15.

6.1.5.14 Applicant's response

623. The Applicant can confirm that the assessment presented **in Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR, complemented by the **EIAR Addendum (Part 1)**, considers the potential for impacts at a site specific and regional scale, including where relevant Isle of Man waters. Impacts on Nephrops are limited to direct disturbance within the array site, and secondary impacts from suspended sediment which are assessed in the EIAR and **EIAR Addendum**. Secondary impacts from suspended sediment are limited to within 7km of the CWP Project.

6.1.5.15 Summary of matter raised

624. The Isle of Man TSC refers to **Table 9.9** of **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR and seek to clarify how species not captured by trawl are accounted for in the assessment, specifically king scallop.

6.1.5.16 Applicant's response

625. **Section 9.4.2** of **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR presents a summary of the data and information sources used within the assessment. Through consultation with statutory and non-statutory organisations the data sources listed have been deemed sufficient to develop a baseline for fish, shellfish (including king scallop) and turtle ecology which allows a robust impact assessment to be undertaken. Data were gathered from a wide variety of data sources using the most up-to-date data at the time of writing. Such baseline data remain valid and provide an appropriate characterisation of the receiving environment at the time of application.

626. Publicly available datasets are utilised to establish the full list of receptors that are considered in the assessment. Key data sources are provided in **Table 9-2** of **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR. This includes fisheries data such as commercial landings, and information on spawning and nursery habitats. The full list of receptors considered in the assessment, which includes species identified from a range of sources, is presented in **Section 9.6** of **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR.

627. The limitations in the data (described in **Table 9-6**), particularly around the landings data, do not affect the conclusions of the assessment because the data are used together to generate an indication of the likely community composition of fish that are present within the area, and this is combined with other literature / data sources to generate the most complete picture of the baseline possible.

6.1.5.17 Summary of matter raised

628. The Isle of Man Territorial Sea Committee highlight the effective sampling season for queen scallop (above around 12C (July-October)) and seek clarification on the ICES survey sampling periods and frequencies.

6.1.5.18 Applicant's response

629. **Table 9-9** of **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR presents a summary of the Northern Irish Groundfish Survey (NIGFS) which is conducted annually as part of the internationally coordinated International Bottom Trawl Survey (IBTS) (ICES, 2022). The Applicant has no role in this survey. The data is simply presented as one of many data sources used to determine the relevant receptors for the assessment. Data sources were agreed at Scoping, following consultation, by NPWS in 2021. As a result of the multiple datasets utilised, the characterisation is considered to be robust for the purposes of EIAR.

6.1.5.19 Summary of matter raised

630. The Isle of Man TSC questioned the lack of consideration given to Queen Scallop in EIAR **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology**. Reference was made to scallop landings data provided in The UK Scallop Fishery report from by Poseidon Aquatic Resource Management.

6.1.5.20 Applicant's response

631. The Applicant can confirm that the assessment presented in the EIAR, complemented by the **EIAR Addendum**, considers the potential for impacts at a site specific and regional scale, including where relevant Isle of Man waters. Impacts on queen scallops are not explicitly assessed as they do not form a VER as defined within the chapter, however the assessment considers VERs that function as proxies, in this case the assessment of impacts to shellfish includes the Atlantic scallop. Impacts to shellfish are limited to direct disturbance within the array site, and secondary impacts from suspended sediment which are assessed in the EIAR and **EIAR Addendum**. Secondary impacts from suspended sediment are limited to within 7km of the proposed project.

6.1.5.21 Summary of matter raised

632. The Isle of Man TSC noted that Table 9-10 does not appear to contain all relevant species listed in the text and in table 9-18.

6.1.5.22 Applicant's response

633. The Applicant can confirm that the assessment presented in the EIAR, complemented by the **EIAR Addendum**, considers all relevant spawning and nursery grounds within the National Study Area, and more specifically the ZoI as characterised by the ICES Regional Study Area. Updates have been made within the **EIAR Addendum** to consider recent data and re present the characterisation according to requests made by the Commission.

6.1.5.23 Summary of matter raised

634. The Isle of Man TSC queried the rationale for the including certain designated sites for fish and shellfish in Section 9.6.6, but not others (i.e. the Manx MNRs).

6.1.5.24 Applicant's response

635. Unfortunately, the provided documentation link does not work. Notwithstanding this the Applicant has reviewed the available information on Manx Marine Nature Reserve byelaws and can confirm that there is no meaningful interaction which could result in interaction with Manx MNRs for fish and shellfish. Beyond this the Applicant can confirm that potential impacts on relevant receptors, such as basking shark, sandeel, harbour porpoise, and kittiwake are considered within the relevant chapters of the EIAR, complemented by the **EIAR Addendum**. The Applicant can confirm that there are no significant effects predicted on any Manx designated sites, or ecological receptors.

6.1.5.25 Summary of matter raised

636. The Isle of Man TSC suggest not all jurisdictions including the Isle of Man are considered in the transboundary impact assessment despite lying within the national study area.

6.1.5.26 Applicant's response

637. Respectfully, this submission is incorrect. The assessment was based upon ZoIs for predicted impacts. As per **Section 9.4** of **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR, the national study area includes the Isle of Man and data relating to surrounding spawning and nursery grounds, basking shark and turtle density, against which far-field indirect impacts (e.g., impacts arising from noise propagation), are considered in this assessment. Given the use of study areas that capture all ZoIs, it is considered that any potential transboundary effects are assessed (e.g. impacts of underwater noise on distant spawning or nursery grounds). All such impacts have been found to be not significant, with mitigation where required, and as such no significant transboundary effects are predicted.

6.1.5.27 Summary of matter raised

638. The Isle of Man TSC state that the study area is not adequately defined from the perspective of shared stocks.

6.1.5.28 Applicant's response

639. The Applicant can confirm that **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** and **Chapter 12 Commercial Fisheries** of the EIAR consider the implications of the CWP Project on commercial and ecologically sensitive fish species, including regional stocks. This includes relevant commercial and designated species such as whiting, skate, and herring. The **EIAR Addendum** updates and validates the characterisation of the receiving environment presented within the EIAR.

640. The conclusion drawn is that the characterisation is adequate for the purposes of undertaking EIA and complies with the relevant guidance, including but not limited to the EIAR Guidelines (EPA, 2022) and the CIEEM Guidelines (CIEEM, 2024).

641. The conclusions drawn are beyond reasonable scientific doubt.

6.1.5.29 Summary of matter raised

642. The Isle of Man TSC raise concerns that the study area does not account for transboundary impacts on protected migratory, species such as Atlantic salmon and European eels which are designated features of several MNR's.

6.1.5.30 Applicant's response

643. Respectfully, this submission is incorrect. The assessment is undertaken on a receptor led basis, and all relevant species are considered in the assessment, including those that may be features of designated sites. For example, all diadromous fish and species of conservation importance, including both Atlantic salmon and European eel, which are described in **Section 9.6** of **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR and considered in the assessment. The national study area encompasses the Isle of Man, and this area was defined for the purpose of capturing transboundary diadromous fish migration routes in response to consultee concerns in relation to migrating salmonids. Migratory species are categorised under the VERs approach and assessed for effects of all potential impacts during all project phases in **Section 9.10** of the above referenced chapter. This provides a comprehensive and robust assessment of transboundary impacts on

protected migratory species, such as migratory salmon and eel, all of which are assessed to be not significant, with mitigation where required. Furthermore, though the Isle of Man is included in the national study area, no impacts are predicted to interact with the Isle of Man territorial waters.

644. In the context of AA, **Volume 4 - Assessment of Implications for Special Areas of Conservation** of the NIS assesses impacts on a vast network of migratory fish sites, as such all likely effects have been considered.

6.1.5.31 Summary of matter raised

645. The Isle of Man TSC query the lack of explicit consideration of Manx MNRs in the context of transboundary effects.

6.1.5.32 Applicant's response

646. The Applicant can confirm that the ZoI of the CWP project is limited, and there is minimal potential for interaction with Manx MNRs. Interactions are limited to underwater noise, which is considered inconsequential with the addition of the proposed mitigation which limits underwater noise to 169dB at 750m, and suspended sediment which is limited to 7km from the point of origin. Other potential impact pathways are considered at the relevant biogeographic range, such as the potential for collision and/or displacement of ornithological features. The conclusion drawn is that there are no likely significant effects, and as such there is no potential for significant effects on Manx MNRs.

6.1.5.33 Summary of matter raised

647. The Isle of Man TSC suggests queen scallops are missing from **Table 9-18** and **Table 9-81** of **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR.

6.1.5.34 Applicant's response

648. As **Section 9.6** of **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR states, the number of fish, shellfish and turtle species present within the study areas are extensive and, therefore it is impractical to assess each individual species. As such, a VER approach has been adopted as outlined in the CIEEM (2022) guidance and as agreed at Scoping, following consultation with NPWS in 2021. Importantly Queen scallop are considered within the baseline characterisation, and King scallop then considered within the assessment as a proxy.

649. It is accepted within guidance that different species from the VERs list will be sensitive to different potential impacts arising from the construction, O&M and decommissioning of the CWP Project. Therefore, receptor groups have been identified within the assessment for each potential impact based on their biological traits, and their sensitivity to that impact (e.g., elasmobranchs for EMF), rather than assessing fixed groups of species throughout. Through identification of receptor groups, it is considered that all species that might be affected by the CWP Project, even if not detailed in the VERs list, are appropriately assessed, as the groups identified for assessment of each impact are representative of any fish or shellfish species that may be present. In this case therefore, whilst Queen scallop are not presented as a VER, the characterisation of the receiving environment and assessment of potential impacts to ecological receptors is considered to be robust and compliant with relevant guidance.

650. Therefore, as per the above description of receptor group assessments, should any species be present, due to the assessment of representative species through the VERs approach, it is concluded that all species that may be affected are suitably assessed.

6.1.5.35 Summary of matter raised

651. The Isle of Man TSC highlight that no future monitoring of fish, shellfish and turtle ecology, nor for the introduction of INNS, is proposed.

6.1.5.36 Applicant's response

652. **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR provides assessment of impacts on fish, shellfish and turtle ecology as a result of the construction, operation and maintenance and decommissioning phases of the CWP Project which are predicted to be not significant, with available scientific literature supporting this conclusion beyond reasonable scientific doubt. As such, it was not deemed necessary for the purposes of validation or removal of uncertainty in terms of the EIA conclusions to undertake any future monitoring for fish, shellfish, or turtle ecology (see **Section 9.14** of **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR). Notwithstanding this, the Applicant has included proposed monitoring, using eDNA methodologies, to contribute to the scientific understanding of salmonid and other highly mobile species behaviour within the western Irish Sea with regards disturbance during ORE construction (see updated **IPPEMP** for further information.

653. Primary mitigation for INNS includes control of invasive species measures in line with International Maritime Organization guidance (IMO, 2024) which are secured through the implementation of the **CEMP** (see the Applicant's response to observations made by An Taisce in **Section 5.1.8** of this document). The associated standards and procedures will be incorporated by all vessels and as such the potential magnitude of impact is reduced as far as is reasonably practicable to negligible. Based on the predicted level of effect, it is concluded that no additional monitoring is required in relation to INNS beyond that described in the updated **CEMP** and summarised in the updated **IPPEMP**.

6.1.5.37 Summary of matter raised

654. The Isle of Man TSC note that no consultation responses were received regarding turtles and ask if this is because there are no turtles or because no one made any specific comments.

6.1.5.38 Applicant's response

655. The Applicant can confirm that no comments were received regarding turtles during the Scoping phase and is unable to comment on why this was the case.

656. The Applicant notes that Isle of Man TSC were consulted at Scoping in 2021. **Section 9.6.5** of **Chapter 9 Fish, Shellfish and Turtle Ecology**, states that recordings of turtles have declined in the last decade (Botterell et al., 2020). It has been estimated that 0.06 leatherbacks are found per 100 km^2 in the Celtic and Irish Seas (Doyle et al., 2007) and while other species do occur, the leatherback is the only regular summer visitor to these waters. No marine turtles were recorded during the CWP Project's monthly site-specific surveys. No recordings on the east coast of Ireland were noted during the ObSERVE surveys (Rogan et al., 2018).

6.1.5.39 Summary of matter raised

657. The Isle of Man TSC raise concerns that the national study area is not large enough to adequately consider potential impacts on turtles including leatherback turtles.

6.1.5.40 Applicant's response

658. Respectfully, the submission does not explain why a conclusion has been reached that the study area is not large enough to adequately consider impacts on turtles. Nor does it explain what specific concerns underlie the submission or by reference to what alternative datasets the study area ought to have been determined. The assessment (**Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR) study areas were defined to ensure a comprehensive broadscale understanding of the receiving environment is presented within the description of the existing environment (see **Section 9.6** of the abovementioned chapter). The study areas were informed through reference to the predicted ZoIs and defined spatially on the basis of ICES statistical rectangles to allow reference to be made to relevant comprehensive datasets. As all ZoIs are encompassed within the study area, it is deemed suitable for the assessment purposes (see **Section 9.4** of **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR). In the case of turtles, as outlined in **Section 9.6** of the referenced chapter, it has been estimated that 0.06 leatherbacks are found per 100 km^2 in the Celtic and Irish Seas and while other species do occur, the leatherback is the only regular summer visitor to these waters. Given this, there is no evidence to suggest that increasing the study area would materially alter these findings and therefore it would not introduce any new or significant effects.

659. An update to the planning application assessment has been provided in response to item 11a of the Commission's FIR. **Section 9.4.1** and **Section 9.10** of the **EIAR Addendum (Part 1)** include a revised regional study area assessment using specified ICES statistical rectangles.

660. The updated assessment confirms that the defined study areas capture all relevant ZoIs and that the conclusions in relation to marine turtles remain unchanged.

6.1.5.41 Summary of matter raised

661. The Isle of Man TSC note further resources are available for basking sharks, specifically https://www.baskingshark.ie/ and https://www.sharktrust.org/.

6.1.5.42 Applicant's response

662. A number of data sets for basking sharks are listed in **Table 9.2** of **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR, these include tracking studies and sighting schemes, as well as data from common aggregation sites around Ireland, Scotland and the Isle of Man. The data included within the EIAR and **EIAR Addendum** correspond with the suggested information and as such the additional web resources would not materially change the baseline characterisation or the assessment conclusions in relation to basking shark.

6.1.5.43 Summary of matter raised

663. The Isle of Man TSC raises concerns over the validity of the data sources referenced with regards to basking sharks around the Isle of Man.

6.1.5.44 Applicant's response

664. The abundance of basking sharks around the CWP Project offshore development area was considered using more up to date data sets including the ObSERVE surveys in which only one basking shark sighting was recorded off the east coast of Ireland (during a summer survey; Rogan et al., 2018). No basking sharks were recording during the CWP Project's site-specific surveys.

665. The assessment in relation to basking sharks considered their potential presence, though notes they are unlikely to be present in the ZoIs for the CWP Project in great numbers. No impacts on basking sharks are predicted in Isle of Man territorial waters, and accordingly, changes in the distribution of basking sharks around the Isle of Man are not predicted and therefore mitigation is not deemed to be required.

6.1.5.45 Summary of matter raised

666. The Isle of Man TSC noted that the reference to the Isle of Man as a hotspot for basking sharks is incorrect and should be reconsidered based on more current data sources. They noted that a distribution map for the species would be helpful.

6.1.5.46 Applicant's response

667. The Applicant welcomes the correction that the Isle of Man is not a hot spot for Basking shark. The Applicant notes that the term 'hot spot' was drawn directly from the literature, and in this case papers drafted by Sims, 2008, Witt et al., 2012 and Speedie et al., 2009. These sources are then complemented by Berrow and Heardman, 1994; Southall et al., 2005; Doherty et al., 2017, Dolton et al., 2019; and Lieber et al., 2020. The Applicant therefore considers that whilst noting the Isle of Man is no longer a hot spot for basking shark, the literature and evidence base on which the assessment is drafted is adequate and appropriate for the purposes of undertaking an EIA.

6.1.5.47 Summary of matter raised

668. The Isle of Man TSC noted that basking sharks are a Species of Conservation Importance and should therefore be listed in Section 6.6.6.

6.1.5.48 Applicant's response

669. The Applicant notes that basking shark are a species of conservation importance, which is reflected in paragraph 74 of **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR and **Table 9-18** of the same. The reference to section 6.6.6 appears to be a typographic error.

6.1.5.49 Summary of matter raised

670. The Isle of Man TSC highlights that there is no mention of MNR's in the Species of Conservation Importance section.

6.1.5.50 Applicant's response

671. The assessment is undertaken on a receptor led basis, and all relevant species (or suitable equivalents through the VERs approach) are considered in the assessment, including those that may be features of designated sites (see **Section 9.6** of **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR). Furthermore, though the Isle of Man is included in the national study area, no impacts are predicted to interact with the Isle of Man territorial waters and as such no changes to the impact assessment are deemed necessary.

6.1.5.51 Summary of matter raised

672. In regards to Figures 9.22 to 9.29, the Isle of Man TSC noted that the figures do not show the nursey and spawning grounds in the context of the regional study area.

6.1.5.52 Applicant's response

673. The Applicant has updated all figures associated with **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR with regards underwater noise. The updated figures, which reflect the introduction of mitigation for underwater noise, are presented in **Section 9** of the **EIAR Addendum (Part 1)**.

6.1.5.53 Summary of matter raised

674. The Isle of Man TSC agree that there will not be large numbers of turtles present in the area, however as threatened species any impacts either to individuals or the population should not occur.

675. It is appreciated that the likelihood of a vessel strike is low but should that occur it could be fatal and as both turtles and basking sharks are endangered species, every effort must be made to ensure this does not happen.

676. It is important to ensure a robust Environmental Vessel Management Plan (EVMP) is followed, which includes reduced speed limits within the wind farm area and predetermined routes from harbour to reduce the impact of vessel strikes.

6.1.5.54 Applicant's response

677. The Applicant can confirm that no significant effects are anticipated on fish, shellfish and marine turtles. The Applicant has undertaken to introduce additional measures to protect the marine environment including the introduction of the updated **Ecological Vessel Management Plan (EVMP)**, and the updated **MMMP**. As such the Applicant can conclude beyond reasonable scientific doubt that no significant impacts will occur to marine turtles or basking shark.

6.1.5.55 Summary of matter raised

678. The Isle of Man TSC disagree with the 'medium' value assigned to basking shark and turtles in order to assess likely significant effects. It is the Isle of Man TSC's view that both species are of international importance.

6.1.5.56 Applicant's response

679. The Applicant can confirm that as a result of the very low occurrences of marine turtles and basking shark no significant effects are anticipated. As noted above the Applicant has undertaken to introduce mitigation measures to protect the marine environment, including from vessels and underwater noise impacts. The assessment methodology presented in **Section 9.4** of **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR is in accordance with CIEEM guidance and Irish EPA guidance, and is now complemented by the **EIAR Addendum**. The Applicant considers the categorisation of sensitivity, which incorporates inter alia conservation importance to be appropriate.

6.1.5.57 Summary of matter raised

680. The Isle of Man TSC queried the lack of detailed provided in Section 9.11 Cumulative Impacts.

6.1.5.58 Applicant's response

681. **Section 9.11** of **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR is a summary of the CEA for fish, shellfish and turtle ecology presented in **Volume 4, Appendix 9.1 CEA**, and is not intended to repeat text unnecessarily.

682. An update to the planning application CEA has been provided in response to the Commissions FIR. This update is presented in **Section 6** of the **CEA Report (Part 2)**. All conclusions drawn with regards to cumulative impacts are not significant in EIA terms.

6.1.5.59 Summary of matter raised

683. The Isle of Man TSC suggest that a more thorough desk based study is needed to fill the data gap regarding turtles and basking sharks.

6.1.5.60 Applicant's response

684. The Applicant has undertaken a characterisation validation exercise which includes further Digital Aerial Surveys, out to a buffer of 10km, and environmental DNA surveys. The validation exercise has demonstrated the application to be an accurate characterisation of the receiving environment and as such no further data is required to inform the EIAR.

6.1.5.61 Summary of matter rised

685. The Isle of Man TSC commented on the lack of information in the assessment regarding jellyfish numbers which are a prey species for leatherback turtles.

6.1.5.62 Applicant's response

686. The Applicant notes the reference to prey species such as jellyfish not being considered within the impact assessment. Whilst jellyfish are not referred to, the EIAR considers predator prey relationships where there is a risk of significant effect. As recorded numbers of marine turtles are low, and with potential impacts mitigated with the introduction of noise limits and vessel management plans (the

former reducing potential impacts on the marine environment generally), the risk of a significant effect on marine turtles is considered inconsequential. Further assessment of jellyfish, in this context, would not support the EIAR in fulfilling its duty to consider potential significant effects, and as such would not materially alter the assessment conclusions.

6.1.6 Marine mammals

6.1.6.1 Summary of matter raised

687. The Isle of Man TSC questioned the lack of surveys in the wider area, beyond the array site.

688. The Isle of Man TSC are content that enough time has been spent surveying but queried why the boat-based surveys were completed over 2 periods and not completed for the usual 2 year survey period.

6.1.6.2 Applicant's response

689. The CWP site-specific surveys for marine mammals covered the array site plus a 4 km buffer. This is typical for OWF baseline surveys (a 4 km buffer was used for the other east coast Phase 1 OWF Projects (Dublin Array, NISA, Oriel and Arklow Bank Wind Park 2)). It is acknowledged that these surveys do not cover the whole impact area (i.e. for impacts such as disturbance from piling). Therefore, wider scale surveys such as SCANS are used to provide robust density estimates at a wider scale.

690. The Applicant notes that Isle of Man TSC are content with the survey timescales. As detailed in **Volume 4**, **Appendix 11.3 Baseline Technical Report** of the EIAR, a full 24 months of site-specific DAS were conducted between May 2020 and April 2022, with boat based surveys complimenting these to comprise a very robust industry leading dataset. The rationale for the 2 periods is an initial survey was undertaken in 2013-14 to support project refinement, followed by EIA standard boat based surveys undertaken up to and including initial COVID constraints. As a result of these constraints, the transition to a full 24 month DAS was considered to be appropriate, in particular given the extensive boat based survey which supports the DAS.

691. Since the CWP Project planning application, the Applicant has also conducted additional site-specific DAS:

- CWP Project array site + 4 km buffer + inshore area: Nov 2024 – Apr 2025
- CWP Project array site + 10 km buffer: May 2025 – Nov 2025

692. The Applicant has also collated further recent data, such as SCANS, as noted in response to An Taisce (see **Section 5.1.2** of this document)

693. The composite of the existing characterisation data, and the more recent data which validates these datasets, demonstrate the original conclusions to be robust. However, with the introduction of additional mitigation in response to the Commission's FIR the assessments have been updated (see **Section 11** of the **EIAR Addendum (Part 1)**).

6.1.6.3 Summary of matter raised

694. The IoM TSC highlight a discrepancy in the dates listed for the vessel surveys.

6.1.6.4 Applicant's response

695. The discrepancy arose from a typographical error. The Applicant confirms that the boat based surveys were completed between October 2018 and August 2020, as detailed in the summary of surveys provided in Table 3 in **Volume 4**, **Appendix 11.3 Baseline Technical Report** of the EIAR.

6.1.6.5 Summary of matter raised

696. The Isle of Man TSC note that relevant Manx data should have been considered in characterising the baseline for marine mammals.

6.1.6.6 Applicant's responses

697. The Applicant can confirm that as part of the characterisation validation exercise an updated marine mammal technical report has been provided (see **Appendix 11-A Update to Marine Mammal Baseline Characterisation** of the **EIAR Addendum**) which considers additional contemporary data from multiple sources including Manx data, and including the most recent SCANS, ObSERVE, site specific DAS, and landfall surveys.

6.1.6.7 Summary of matter raised

698. The IoM TSC query what is meant by "changes that last for years" in the definition of duration under a high magnitude score.

6.1.6.8 Applicant's response

699. The definitions for duration within the magnitude scoring used in EIAR **Volume 3**, **Chapter 11 Marine Mammals** is "behavioural changes that last up to a year" for medium magnitude and "behavioural changes that last for years" for high magnitude. Therefore, anything that results in a behavioural change that lasts for over a year would result in a high duration score. However, the Applicant highlights that duration should also be considered alongside frequency, probability and consequence when deciding upon the final magnitude score.

700. The definition of magnitude follows the guidelines set out by CIEEM (2018). As per the guidance, duration is considered in the context of relevant ecological characteristics - such as the lifecycle of the species in question - and therefore cannot be precisely described for all marine mammals at the definition stage (for example, the lifespan of a harbour porpoise differs from that of a minke whale). There is no formal weighting system applied in the assessment; instead, the final magnitude is determined using population modelling for piling impacts, and expert judgement is applied where modelling is not available.

6.1.6.9 Summary of matter raised

701. The IoM TSC query why SCANS IV data have not been used in the marine mammal assessment.

6.1.6.10 Applicant's response

702. EIAR **Volume 3**, **Chapter 11 Marine Mammals** does use the SCANS IV density information in the quantitative impact assessment. It is used alongside the site-specific density estimate (where available), the SCANS III density surface, and the Irish Sea density surface to acknowledge the range of different density estimates available in the Irish Sea for cetacean species. The characterisation is therefore considered to be robust.

6.1.6.11 Summary of matter raised

703. The Isle of Man TSC queried the use of both SCANS III and SCANS IV data to establish density estimates, nothing the need for consistency. The Isle of Man TSC also queried the Applicant's decision not to use the SCANS IV for bottlenose dolphin, noting that the data from SCANS IV may be accurate.

6.1.6.12 Applicant's response

704. The Applicant can confirm that as part of the characterisation validation exercise an updated marine mammal technical report has been provided (see **Appendix 11-A Update to Marine Mammal Baseline Characterisation** of the **EIAR Addendum**) which considers additional contemporary data from multiple sources including Manx data, and including the most recent SCANS, ObSERVE, site specific DAS, and landfall surveys.

6.1.6.13 Summary of matter raised

705. The IoM TSC query why seals were not included in the aerial or boat-based surveys.

6.1.6.14 Applicant's response

706. **Volume 4**, **Appendix 11.3 Baseline Technical Report** of the EIAR details the results of the site-specific surveys. Seals were recorded during both the boat-based surveys and the aerial surveys (primarily "unidentified" seals, with some sightings of grey and harbour seals) (see tables 2, 3, and 4 in **Appendix 11.3 Baseline Technical Report**). Given the high proportion of unidentified seals, it was not possible to obtain any density estimates from the site-specific surveys for seal species. As such, other publicly available data sources were used to estimate seal at-sea density (Carter et al., 2020 and Carter et al., 2022). The characterisation is therefore considered to be robust.

707. Since the 2024 Application, the Applicant has now conducted monthly seal haul-out surveys at the landfall site between Jan 2025 to Jan 2026. These are detailed in **Appendix 11-A Update to Marine Mammal Baseline Characterisation** of the **EIAR Addendum** alongside recent NPWS data**.**

6.1.6.15 Summary of matter raised

708. The Isle of Man TSC commented that harbour seals may have favourable conservation status in Irish waters, but that is not the case elsewhere, and that this should be taken into consideration.

6.1.6.16 Applicant's response

709. The Applicant notes this observation. In response to the FIR the Applicant has undertaken a characterisation validation exercise, and updated assessment for underwater noise to reflect recent changes in guidance, updates to conservation status, and the introduction of the underwater noise mitigation. With the introduction of the commitment to underwater noise limits (please refer to the updated **MMMP** for further details) there is limited interaction with seals anticipated.

6.1.6.17 Summary of matter raised

710. IoM TSC notes a typo. The report states grey seals rather than harbour seals.

6.1.6.18 Applicant's response

711. This is noted by the Applicant.

6.1.6.19 Summary of matter raised

712. The IoM TSC states that any permanent damage to any marine mammal is unacceptable regardless of if it is one individual or one hundred.

713. The Isle of Man TSC suggested that a bubble curtain may be used to reduce auditory impacts on marine mammals during pre-construction surveys.

6.1.6.20 Applicant's response

714. The risk of auditory injury (Permanent Threshold Shift) is assessed in EIAR **Volume 3, Chapter 11 Marine Mammals** and the updated **MMMP** provides measures to mitigate the impact of PTS. For pre-construction surveys, with the proposed updated MMMP and implementation of DAHG (2014) guidance the residual impact is negligible. As such no further mitigation, such as bubble curtains, is required for pre-construction surveys.

715. Further to this, the updated **MMMP** provides an outline of the additional mitigation measures that will be implemented where required to reduce the risk of cumulative PTS to negligible levels, including: use of ADDs to deter marine mammals from the immediate vicinity of the piling location, use of at source noise abatement methods, and use of alternative piling methods. The final **MMMP** with selected mitigation measures will be provided post consent once a piling contractor is in place and final detailed installation methods are known.

716. Since the submission of the CWP Project planning application the Applicant has made the following commitments:

- To mitigate potential impacts from underwater noise during the construction of the project, CWP commits to a limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events.
- To mitigate potential impacts from underwater noise associated with high order UXO clearance, CWP commits to the implementation of noise abatement in the event high order clearance is required.

717. This has been reflected in updated underwater noise modelling (**Appendix 9-C Underwater Noise Modelling Assessment** of the **EIAR Addendum**) and an update to the marine mammal impact assessment, presented in **Section 11** of the **EIAR Addendum (Part 1)**.

718. The updated **MMMP** includes the abovementioned commitment to a limit on underwater noise propagation. It is noted that the reduction in underwater noise can be achieved by multiple means, and as such the updated **MMMP** provides an appraisal of the types of technology available and the effectiveness of those technologies at reducing underwater noise.

719. The updated **MMMP** also notes that it is not necessary or appropriate to commit to a specific noise abatement technology at this stage, as this may preclude the ability to incorporate best available technology at the time of construction.

6.1.6.21 Summary of matter raised

720. The Isle of Man TSC disagree with the assumption that the behaviour of grey seals in response to pile driving in the Irish Sea would be similar to that displayed by grey seals in the Wadden Sea.

6.1.6.22 Applicant's response

721. The Applicant considers the characterisation of grey seal behaviour to be correct, and accurate given the activity within the area. It is considered that the use of magnitude, specifically consequence as a component of magnitude, appropriately considers the potential impact against the site-specific baseline and whether the effect (such as noise) would be sufficiently above baseline to affect the behaviour and distribution of the receptor to affect viability.

722. Sensitivity, and specifically tolerance as a component of sensitivity, considers whether the effect may cause a change in reproduction, with species tolerance dependent on the species.

723. With regards grey seals the sensitivity to pile driving is based on sources including tagging of 20 grey seals in the Wadden Sea, with the seals exhibiting varying responses including no response and changes in swimming direction. The presentation of sensitivity is further supported by an expert elicitation workshop as reported by Booth et al., 2019 which identifies grey seals as being reasonably able to compensate for short term lost foraging opportunities, but notes that 'weaned of the year' individuals would be the most vulnerable. The sensitivity is further supported by scientific literature that the Applicant considers to be an appropriate evidence base on which to draw conclusions for the purpose of the EIA. The conclusions drawn (in the EIAR) were that there would be no significant effect. Notwithstanding this the Applicant has committed to underwater noise mitigation within the updated **MMMP** and reflected this within the **Section 11** of the **EIAR Addendum (Part 1)**.

6.1.6.23 Summary of matter raised

724. The Isle of Man TSC suggest that experimental studies on captive seal behaviour cannot be used to predict the response of seals in the wild.

6.1.6.24 Applicant's response

725. As noted in the response above, the Applicant considers the broad evidence base used to support the EIAR to represent the best available scientific evidence, and the conclusions to be beyond reasonable scientific doubt. The captive seal behaviour referred to in Hastie et al., 2021 is a component of the scientific evidence amongst a broad range.

6.1.6.25 Summary of matter raised

726. The Isle of Man TSC raised concerns about the cumulative effects of projects that do not necessarily overlap in terms of piling disturbance contours. The impact on displaced animals beyond the disturbance area was queried.

6.1.6.26 Applicant's response

727. The cumulative assessment for marine mammals considers the potential implications of the proposed project alone, and cumulatively with other projects and plans. The assessment considers the potential loss of cumulative habitat through reference to a range of thresholds and metrics. The methods used are considered to be in accordance with guidance and best practice.

728. Notwithstanding this the Applicant has provided an updated CEA for marine mammals (see **Section 9** of the **CEA Report (Part 2)**) to account for recent project developments at an appropriate regional scale, and to ensure the assessment is in accordance with updated guidance (such as JNCC, 2025). As such the conclusions drawn for the project alone and cumulative assessments are robust and beyond reasonable scientific doubt.

6.1.6.27 Summary of matter raised

729. The Isle of Man TSC were in agreement that monitoring of impacts on marine mammals during piling would be useful and could aid future projects. Monitoring of noise generated by the installation of the first few piles would be useful to build knowledge around the installation of these larger turbines.

6.1.6.28 Applicant's response

730. The Applicant can confirm that monitoring of underwater noise is included within the updated **IPPEMP**.

6.1.6.29 Summary of matter raised

731. The Isle of Man TSC queried the lack of consideration in the impact assessment of the recently recognised Central Irish Important Marine Mammal Area (IMMA).

6.1.6.30 Applicant's response

732. The Applicant has considered all relevant designated sites at appropriate local and regional scales. Whilst the Central Irish Sea IMMA is not a statutory designated site, and as such does not form part of the formal assessment, the IMMA is coincidental with a number of European designated sites that are fully and appropriately considered. **Volume 4 - Assessment of Implications for Special Areas of Conservation** of the NIS (complimented by the **NIS Addendum**) concludes no AESI for any designated sites as a result of the CWP Project. The assessment also concludes on the basis of appropriate management units for species, and draws a robust conclusion that the CWP Project will not impede favourable conservation status nor result in meaningful impacts at a population level. As such the addition of the Central Irish Sea IMMA, whilst interesting regional context, would not materially alter the conclusions of the assessment.

6.1.6.31 Summary of matter raised

733. The Isle of Man TSC noted the importance of using local data to help understand seasonal fluctuations in marine mammal density estimates. It was noted that SCANS data provides a big picture snap shot of the baseline conditions but does not reflect regional subtlety or seasonal changes.

734. The Isle of Man TSC raised concerns that assessing impacts at a MU level may fail to identify significant effects at a more local scale (i.e. within the Irish Sea).

6.1.6.32 Applicant's response

735. The Applicant has presented a characterisation of the receiving environment that draws on multiple data sources including but not limited to landfall marine mammal observations, site specific DAS, and vessel observations. Since the submission of the CWP Project planning application the Applicant has undertaken a number of validation surveys that are reported within the **EIAR Addendum** and associated appendices. These documents demonstrate that the original characterisation remains robust and appropriate. The composite is significantly more than standard practice, representing over 40 months of site specific monthly surveys, which combined with boat based surveys, landfall surveys, and regional surveys undertaken by regulatory bodies, and surveys such as SCANS IV and SCANS V are considered an appropriate characterisation of the receiving environment for the purposes of EIA.

736. Further to this the assessment presented within the EIAR, complemented by the **EIAR Addendum**, considers multiple abundance estimates in order to provide a robust account of local and MU level impacts. As such the assessment is considered to align with guidance and represent best available scientific evidence.

6.1.6.33 Summary of matter raised

737. The Isle of Man TSC questioned why Manx MNRs were not considered in the assessment despite noise modelling showing that dose response contours for monopile pile driving will reach the southern end of the Isle of Man.

6.1.6.34 Applicant's response

738. The Applicant has considered designated sites where there is potential for a meaningful or potential significant effect, this is in accordance with the EIA Directive and Habitats Directive. Notwithstanding this the Applicant has committed to an underwater noise restriction, as described within the updated **MMMP**, which further reduces the underwater noise impacts and removes any meaningful interaction with Manx MNRs.

6.1.6.35 Summary of matter raised

739. The Isle of Man TSC note that predicted noise levels at a distance of 750m are presented.

6.1.6.36 Applicant's response

740. As noted within **Volume 4**, **Appendix 9.4 Underwater Noise Assessment** of the EIAR, and updated by **Appendix 9-C Underwater Noise Modelling Assessment** of the EIAR Addendum, the predicted noise levels at a distance of 750m is presented as it is a common consideration for underwater noise studies at OWFs and has the added advantage of being comparable with other modelling or measurements.

6.1.6.37 Summary of matter raised

741. The Isle of Man TSC queries how the marine mammal chapter can conclude no cumulative impacts with other projects when cumulative PTS ranges reach 69 km.

6.1.6.38 Applicant's response

742. An update to the planning application CEA has been provided in response to the Commissions FIR. This update is presented in **Section 9** of the **CEA Report (Part 2)**.

743. The CEA does not include an assessment of auditory injury from pile driving (or other activities) for the reason outlined in **Table 9-1** of the abovementioned report, which states that 'Mitigation measures will be put in place to reduce injury risk to marine mammals to negligible levels (as a requirement of European Protected Species legislation) for both the CWP Project alone, and other relevant plans and projects that may produce noise. This requirement is a legal requirement of all relevant jurisdictions'.

744. The updated **MMMP** provides a list of primary mitigation measures that will be applied to reduce the risk of auditory injury (PTS) to marine mammals during the construction of the CWP Project. The updated **MMMP** also provides an outline of the additional mitigation measures that will be implemented to reduce the risk of cumulative PTS to negligible levels as required, including use of ADDs to deter marine mammals from the immediate vicinity of the pile, use of at source noise abatement methods and use of alternative piling methods. The final **MMMP** with specific mitigation measures will be provided post consent once a piling contractor is in place and final detailed installation methods are known. It is expected that all other projects included in the cumulative effects assessment will be required to mitigate the risk of auditory injury (PTS).

745. Furthermore, since the submission of the CWP Project planning application, the Applicant has made the following commitments:

- To mitigate potential impacts from underwater noise during the construction of the project, CWP commits to a limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events.
- To mitigate potential impacts from underwater noise associated with high order UXO clearance, CWP commits to the implementation of noise abatement in the event high order clearance is required.

746. This update has been reflected in **Section 11** of the **EIAR Addendum (Part 1)**, and within **Section 9** of the **CEA Report (Part 2)**

6.1.6.39 Summary of matter raised

747. The Isle of Man TSC questioned whether the predicted noise levels from construction vessels as presented in EIAR **Volume 4**, **Appendix 9.4 Underwater Noise Assessment**, are appropriate for the vessels that will be within the array during construction, operation and maintenance and decommissioning.

6.1.6.40 Applicant's response

748. Yes, the assessment considers appropriately representative vessels, by drawing on industry information and expertise. The Applicant also confirms the same for the updated underwater noise modelling assessment presented **Appendix 9-C Underwater Noise Modelling Assessment** of the **EIAR Addendum**.

6.1.6.41 Summary of matter raised

749. The Isle of Man TSC have suggested that Table 3-4 of the IPPEMP should include the three bullet points in Section 4.5.2 of the IPPEMP. Additionally, all cetacean species should be included in the monitoring and not just harbour porpoise and minke whales.

6.1.6.42 Applicant's response

750. The Applicant confirms that the **IPPEMP** has been updated to confirm the use of DAS to undertake pre-construction and post-construction monitoring of marine mammals more broadly, in addition to the key species of harbour porpoise and Minke (please refer to the updated **IPPEMP**).

6.1.6.43 Summary of matter raised

751. The Isle of Man TSC suggested the use of PAM to avoid offshore construction delays when visual observations by an MMO are not possible.

6.1.6.44 Applicant's response

752. The Applicant confirms that the updated **MMMP** considers the use of PAM as a compliment to MMO.

6.1.6.45 Summary of matter raised

753. The Isle of Man TSC is seeking clarification regarding the soft start and ramp up procedures and whether or not this forms primary mitigation for impacts to marine mammals.

6.1.6.46 Applicant's response

754. The Applicant confirms that the updated MMMP considers the use of soft start and ramp up procedures as part of the suite of primary mitigation measures.

6.1.6.47 Summary of matter raised

755. In regards to the MMMP, the Isle of Man TSC would expect to see MMO and PAM being utilised for 30 minutes before piling commences and a soft-start procedure put in place. The use of ADDs would be advantageous and help reduce the risk further.

6.1.6.48 Applicant's response

756. The Applicant confirms that the updated MMMP considers the use of appropriate primary mitigation measures that meet the requirements of Irish guidance; this includes MMO, complementary PAM, and ADD where required for UXO. The MMMP also includes appropriate noise limits that the project will implement for foundation piling.

6.1.7 Natura Impact Statement

6.1.7.1 Summary of matter raised

757. The IoM TSC query why the Manx MNRs have not been mentioned or assessed.

6.1.7.2 Applicant's response

758. As the Manx MNRs are not considered under the EU Habitats Directive, they are not sites that should be included within the NIS. Notwithstanding this, the EIAR considers the appropriate MU for all species assessed, and as noted by IoM these incorporate IoM MNRs. Further to this the Zo for the CWP Project is such that there is no meaningful interaction with IoM territorial waters and as such no meaningful interaction with Manx MNRs. The addition of IoM designated sites would not therefore meaningfully change the characterisation of the receiving environment, the relevant species considered, nor would it alter the conclusions of the assessment, which is no significant effect in the context of EIA and no AESI with regards AA.

6.1.7.3 Summary of matter raised

759. With reference to assessments in the NIS, the Isle of Man TSC expressed caution in referring to unconfirmed mitigation measures in the MMMP.

6.1.7.4 Applicant's response

760. The Applicant confirms that the updated **MMMP** considers the use of appropriate primary mitigation measures that meet the requirements of Irish guidance; this includes MMO, complementary PAM, and ADD where required for UXO. The MMMP also includes appropriate noise limits that the project will implement for foundation piling.

6.1.7.5 Summary of matter raised

761. The Isle of Man TSC raised concerns about displacement effects on harbour porpoise and the impact of this on other areas.

6.1.7.6 Applicant's response

762. The Applicant confirms that within the EIAR and NIS (and the **EIAR Addendum** and **NIS Addendum** which support the planning application documents), disturbance to harbour porpoise and other relevant marine mammals is considered.

763. The assessments conclude that no adverse effects are anticipated on harbour porpoise or other marine mammals at a population or designated site (both *ex-situ* and *in-situ*).

764. The Applicant also confirms that further mitigation has been introduced within the updated **MMMP** to reduce underwater noise to 169 dB $L_{E,p,ss,05}$ at 750m, which reduces all underwater noise impacts, including displacement to insignificant levels both for the project alone and cumulatively. Given the conclusion that impacts will be insignificant, and that this is beyond reasonable scientific doubt, it can similarly be concluded beyond reasonable scientific doubt that adequate habitat for harbour porpoise will remain.

6.1.7.7 Summary of matter raised

765. The Isle of Man TSC highlighted the mobile nature grey seals around the wider Irish Sea and the need for this to be considered in the assessment.

6.1.7.8 Applicant's response

766. The Applicant has presented a characterisation of the receiving environment for marine mammals generally, and grey seals specifically, that draws on multiple data sources including but not limited to landfall marine mammal observations, site specific DAS and vessel observations.

767. Since the submission of the CWP Project planning application the Applicant has undertaken a number of validation surveys that are reported within the **EIAR Addendum** and associated appendices. The validation surveys confirm that the original characterisation remains robust and appropriate. The composite is significantly more than standard practice, representing over 40 months of site specific monthly surveys, which combined with boat based surveys, landfall surveys, and regional surveys undertaken by regulatory bodies, and surveys such as SCANS IV and SCANS V are considered an appropriate characterisation of the receiving environment for the purposes of EIA.

768. Further to this, the EIAR and **EIAR Addendum**, notes the high mobility of seals at both a local level, and in the context of the transboundary assessment. As such the assessment is considered robust and adequately accounts for the mobility of species, including grey seals.

6.1.7.9 Summary of matter raised

769. With regards to biogenetic modelling for harbour porpoise, the Isle of Man TSC questioned the appropriateness of using an adapted model for long-finned pilot whales.

6.1.7.10 Applicant's response

770. The Applicant can confirm that whilst the model is adapted from the same model framework, it is fully parameterised for harbour porpoise. As such the Applicant can confirm that the model is appropriate to use, as are the conclusions based upon it.

6.1.7.11 Summary of matter raised

771. The Isle of Man TSC note the Manx data on designated features has not been considered in drafting the NIS, for examples the Marine Environmental Assessment (MMEA) report.

6.1.7.12 Applicant's response

772. The Applicant notes that the observation refers to the lack of reference to Manx designated sites and data within the NIS. The Applicant considers the NIS to adequately consider in situ impacts to European designated sites, and whilst potentially relevant at a broad regional scale for the EIAR, Manx sites are not relevant in the context of European designated sites. With regards the MMEA report the Applicant can confirm that further data has been considered where it is deemed necessary to understand the risk of a potential significant effect.

6.1.8 Commercial fisheries

6.1.8.1 Summary of matter raised

773. The Isle of Man TSC request that relevant fishing organisations on the Isle of Man are included as consultees via the Fisheries Liaison Officer.

6.1.8.2 Applicant's response

774. The Fisheries Liaison Officer will add Isle of Man to their distribution list for Marine Notices etc. and ensure any Isle of Man fishers active within the vicinity of the project are consulted.

6.1.8.3 Summary of matter raised

775. The Isle of Man TSC raised concerns about the cumulative displacement effect of the Phase 1 Projects on fishing grounds between the Isle of Mann and Northern Ireland. They request that the developers monitor the potential change in fishing behaviour as a result of displacement, including:

- Spatial distribution of fishing activity of impacted fleets;
- Changes in landings, effort, and landings per unit effort, in the western Irish Sea fisheries;
- Changes in relative benthic status before, during and after construction and throughout the operational phase; and
- Changes in number of vessels engaged in demersal trawl fisheries in the western North Irish Sea fishing grounds.

6.1.8.4 Response

776. The Applicant notes the Isle of Man TSC's view that no direct impacts to Isle of Man fisheries or IOM fishing vessels are anticipated, aside from potential navigation/shipping considerations (addressed separately), but that indirect or cumulative effects could arise across the Irish Sea due to the overall reduction in fishing opportunity during construction and operation of multiple offshore wind developments.

777. In response, the Applicant can confirm that:

- No interaction with Nephrops or mixed demersal otter trawl fleets from the CWP Project is predicted. The CWP Project array site and OECC do not overlap with traditional demersal otter trawl grounds for Nephrops (prawn) trawling or mixed whitefish fisheries. As such, no direct effects are predicted on these fleets from the CWP Project, and no CWP Project-driven displacement of Nephrops/whitefish effort is anticipated.
- The key fisheries relevant to the CWP Project local study area are pot fisheries, particularly potting for whelk, and potting for edible crab and lobster, predominantly by under 15m vessels. These fisheries represent the principal activity with potential to interact with the CWP Project footprint, rather than demersal trawl fleets.

778. The Applicant also recognises DEFA's point that cumulative displacement from multiple developments (particularly on the eastern seaboard of the Republic of Ireland) could, in theory, contribute to wider Irish Sea redistribution of effort, with potential consequences for sensitive areas (including MCZs) and benthic pressures. While the CWP Project is not predicted to interact with the Nephrops/whitefish fleets, the Applicant has engaged with other Phase 1 OWF Project developers to ensure cumulative issues are addressed in a coordinated manner. In particular:

- The Applicant has discussed cumulative effects (including displacement) with other Phase 1 Project developers; and
- The **FMMS** has been updated as part of the Applicant's response to the Commission's FIR to support collaborative research, including the use of iiVMS to improve understanding of real-time/actual displacement and changes in fishing behaviour at an Irish Sea scale.

779. Through this collaborative approach, the monitoring themes highlighted by DEFA (e.g., spatial redistribution of fishing activity, changes in effort/LPUE, and longer-term indicators of benthic status) can be considered proportionately at the cumulative level, and in consultation with relevant fleets and regulators.

780. In summary, the Applicant confirms no predicted overlap or interaction with Nephrops or mixed whitefish demersal trawl fisheries, and therefore no project-specific effects are anticipated for those fleets. The Applicant nevertheless acknowledges the importance of cumulative/indirect displacement considerations across the Irish Sea and is supporting coordinated monitoring and evidence-building (including iVMS-enabled collaboration) with other Phase 1 Project developers.

6.1.8.5 Summary of matter raised

781. The Isle of Man TSC raised concerns about commercial fishing displacement on the productivity of Isle of Man queen scallop grounds.

6.1.8.6 Applicant's response

782. The Applicant has reviewed the available evidence for queen scallop activity within the CWP Project array site and can confirm the following findings from **Volume 3**, **Chapter 12 Commercial Fisheries** of the EIAR and the associated technical appendix:

- Landings data from the SFPA for Irish vessels indicates no queen scallop fishery within the array site. Based on landings data by ICES rectangle for 2015 to 2020, 0 tonnes of queen scallop landings are recorded by Irish vessels from ICES rectangle 35E4, which is the rectangle overlapping the CWP Project array site. On this basis, no direct effect on queen scallop landings is predicted from the CWP Project.
- Dredge activity is not evidenced within the array site footprint. Spatial fisheries activity data indicate dredge activity occurs immediately north of the array site, but not within the array site itself. Therefore, the Applicant does not anticipate direct interaction with dredge fisheries within the Project footprint.

783. These findings are further informed by extensive consultation undertaken with relevant fisheries stakeholders and authorities throughout the EIA and project development process.

784. Accordingly, no project-specific impact to queen scallop fishing activity is predicted, and therefore no CWP Project-driven displacement from the Kish Bank queen scallop grounds is anticipated. As a result, the specific indirect pathways raised, i.e., displacement into Liverpool Bay/North Wales leading to increased effort, and subsequent knock-on effects for queen scallop stock productivity and settlement relevant to IOM fisheries, are not expected to arise as a result of the CWP Project.

785. In summary, based on SFPA landings (2015 to 2020) for ICES rectangle 35E4 and available spatial evidence for dredging activity, the Applicant predicts no interaction with the queen scallop fishery within the array site and no associated displacement attributable to the CWP Project.

6.1.9 Ornithology

6.1.9.1 Summary of matter raised

786. With regards to ornithology, the Isle of Man TSC notes that the EIAR fails to consider impacts on Manx sites including Manx MNRs, Areas of Special Scientific Interest (ASSIs) and key seabird sites in Manx National Heritage (MNH) ownership. It is also noted that no European level assessment has been made for potential Bern Convention Emerald Sites, equivalent to SPA.

6.1.9.2 Applicant's response

787. With regards ornithological features the Applicant can confirm that there are no significant effects on ornithological receptors at a bioregional population scale, and at a European site scale. Should the limited impacts be apportioned to a greater number of sites, this would reduce the apportioned impact further, and as such impacts to Manx designated sites would become inconsequential.

788. With regards other receptors for which Manx designated sites exist, it is the Applicant's position that the impacts associated with the project are spatially discrete, and mitigated where impacts have the potential to be broader field. For example in the case of underwater noise.

789. Construction phase impacts such as physical disturbance, and vessel presence, and operational phase impacts are all limited to the very near field (the planning application boundary in this case). Other construction phase impacts such as suspended sediment is limited to 7km from the point of release. As such there is no likelihood of interaction with Manx sites (*in-situ*) and a *de minimis* likelihood of meaningful ex situ effects. With regards the broader scale impact of underwater noise the Applicant has introduced mitigation which results in the impacts being significantly reduced, with no interaction with local European designated sites, and no meaningful regional population impacts. Therefore, it is the Applicant's position that there is a de minimis risk of interaction with Manx sites, either *in-situ* or *ex-situ*.

6.1.9.3 Summary of matter raised

790. The Isle of Man TSC questions whether the mitigation measures outlined within **Table 10-31** of **Volume 3, Chapter 10 Ornithology** of the EIAR relate to ornithology.

6.1.9.4 Applicant's response

791. Mitigation measures relating directly or indirectly to impacts upon ornithological receptors are referenced within **Table 10-31** in **Volume 3, Chapter 10 Ornithology** of the EIAR. The Applicant acknowledges the observer's comment and can confirm the reference to **Table 10-31** is correct. The table provides primary mitigation measures adopted as part of the evolution of the project design and approach to construction to avoid or otherwise reduce adverse impacts on the environment.

6.1.9.5 Summary of matter raised

792. The Isle of Man TSC queried a lack of justification for why tolerance of certain ornithological species is stated as very high.

6.1.9.6 Applicant's response

793. The Applicant notes that tolerance is defined within the application documentation for ornithology (EIAR **Volume 3**, **Chapter 10 Ornithology**) as follows:

> *The tolerance of a population is considered as the potential for an impact to affect survival and / or reproductive rates, with consideration given to:*
>
> - *The persistence of such effects while the impact is ongoing (i.e., habituation) or after the impact ceases (i.e., recoverability); and*
> - *The ability of the receptor to adapt behaviours to avoid effects to survival and / or reproductive rates.*

794. In this context the tolerance reflects a populations ability to adapt and recover from the degree of impact, in the form of mortality of individuals. Given the limited impact anticipated as a result of the proposed CWP Project there is limited impact at a population level.

6.1.9.7 Summary of matter raised

795. The Isle of Man TSC noted that it is incorrect to scope out transboundary effects purely based on the proximity to international boundaries. It is still possible to cause transboundary impacts without being close to a border.

6.1.9.8 Applicant's response

796. The Applicant recognises the observation and can confirm that scoping distances are applied principally to the ZoI associated with the impact pathway, in accordance with guidance (CIEEM 2024), which may be limited to spatially discrete areas, or greater. In cases where the ZoI is greater, as a result of anticipated movement of a receptor within a management unit, biogeographic region, or foraging distance, the distance informs the scoping process. This has been applied throughout the assessment.

6.1.9.9 Summary of matter raised

797. The Isle of Man TSC highlighted a number of additional ornithology related data sources relevant that should have been considered in preparing the EIAR.

6.1.9.10 Applicant's response

798. **Section 10.6** of EIAR **Volume 3, Chapter 10 Ornithology describes** the baseline conditions with respect to ornithological receptors within the offshore and onshore development areas. The description of the baseline environment is informed by a wide variety of data sources.

799. Reference is made in **Section 10.6** of the **EIAR Addendum (Part 1)** to a suite of additional ornithology surveys undertaken in response to the Commission's FIR. Additional surveys undertaken since the submission of the CWP Project planning application include:

- Tern and Black Guillemot surveys undertaken at the onshore substation site in 2025. The results are provided in **Appendix 10-A Tern and Black Guillemot Survey Report** of the **EIAR Addendum**;
- Coastal vantage point surveys, boat-based transect surveys of the array site and surrounding areas and stationary boat-based nocturnal acoustic surveys within the array site. The results of which are provided in **Appendix 10-B Migration Survey Report** of the **EIAR Addendum**;
- DAS and boat-based ESAS surveys, of the array site and surrounding areas. The results of which are provided in in **Appendix 10-C ESAS Survey Report** and **Appendix 10-D Baseline and Contemporary Survey Data Comparison** of the **EIAR Addendum**; and
- Intertidal surveys of the OECC landfall area. The results of which are provided in **Appendix 10-E Intertidal Crepuscular Tern Survey Report** and **Appendix 10-F Intertidal Waterbirds Survey Report** of the **EIAR Addendum**.

800. The additional data, summarised above and in **Section 10.6** of the **EIAR Addendum (Part 1)**, validates and supports the existing baseline characterisation for ornithology presented in **Section 10.6** of EIAR **Volume 3**, **Chapter 10 Ornithology**.

801. In summary, it can be concluded with confidence that the scientific information submitted in support of the planning application, including the **EIAR Addendum**, is relevant and appropriate for drawing robust conclusions for the purposes of EIA and AA.

802. Where further data may be available it is considered that these would not meaningfully alter the conclusions drawn. The conclusions of no significant adverse effects, and/or no adverse effect on site integrity are considered to be demonstrably robust and beyond reasonable scientific doubt.

6.1.10 Offshore Bats

6.1.10.1 Summary of matter raised

803. The Isle of Man TSC stated that potential impacts on migratory bat populations on the Isle of Man have not been considered.

6.1.10.2 Applicant's response

804. Recent research, (Lagerveld et al., 2024) recorded oversea crossings of over 200 km, however the research highlighted that bats appeared to use routes based on the shortest distance of oversea

crossings by migrating along the coast rather than straight across the open ocean. The shortest route from Ireland to the Isle of Man, through the CWP array site is approximately 143 km. The shortest route from the Isle of Man to Northern Ireland is 55 km. It is anticipated that if bats are regularly crossing the Irish Sea, they would likely do so via the shorter route i.e. to Northern Ireland.

805. The Isle of Man bat population size is not known. All potentially migratory bat species, including Nathusius pipistrelles, have been recorded by the Manx Bat Group throughout the year. It is therefore likely there is a resident (non-migratory) population which would not be at risk from collision with the CWP array.

806. The potential effects on bats from the CWP Project (disturbance, direct mortality and lighting) have been assessed within the EIAR and **EIAR Addendum (Part 1)** and therefore impacts on any individuals associated with the Isle of Man bat population have been considered. No significant effects were anticipated on offshore bats associated within the CWP Project.

6.1.10.3 Summary of matter raised

807. The Isle of Man TSC queried whether the mitigation measures described in Table 13-24 of the EIAR are relevant to bats.

6.1.10.4 Applicant's response

808. **Table 13-24** of **Volume 3**, **Chapter 13 Offshore bats** is correct and relevant to bats. The spacing between the WTGs allows for animals to avoid the rotor swept area whilst moving through the array site. The EVMP has been developed in part to reduce the number of nighttime vessel movements which could disrupt offshore foraging bats and allowed for the estimation of this impact. The updated **CEMP** includes, among other things, the provision of the experienced Ecological Clerk of Works (ECoW) to be contacted in the unlikely event of a bat being identified during construction.

6.1.10.5 Summary of matter raised

809. The Isle of Man TSC queried how bat data collected on offshore construction vessels will be used to aid future research into bat movements within the area. It was asked if the data can be shared with local conservationists.

6.1.10.6 Applicant's response

810. Any bats recorded offshore would be logged with the ECoW. This log of bats would be shared with the ECMG as part of the updated **IPPEMP**.

6.1.10.7 Summary of matter raised

811. The Isle of Man TSC request that the assessment of collision on bats should also include for barotrauma which may be a significant cause of mortality rate.

6.1.10.8 Applicant's response

812. The cause of fatality to bats from wind turbines has been the subject of significant research. Rollins et al., 2012 found that at most 6% of fatalities were caused by barotrauma while Lawson et al., 2020 found that bats would have to take an unlikely flight path along the blades to be in the area of pressure change that would cause barotrauma. However, the impacts associated with collision described within EIAR **Volume 3**, **Chapter 13 Offshore Bats** and **Section 13** of the **EIAR Addendum (Part 1)** includes for all potential direct mortality to bats associated with the offshore WTGs. The residual effects of this were assessed to be not significant in EIA terms.

6.1.10.9 Summary of matter raised

813. The Isle of Man TSC recommend that monitoring for bats offshore takes place before and during construction in order to inform mitigation during the operational phase. More detail is requested on potential mitigations including curtailment.

6.1.10.10 Applicant's response

814. An update to **Section 13.6** of EIAR **Volume 3**, **Chapter 13 Offshore Bats** has been made to summarise new data obtained in 2025 from a repeat of the 2022 migratory land-based (headland) surveys, undertaken in response to item 14a of the Commission's FIR. The additional data, summarised in **Section 13.6** of the **EIAR Addendum (Part 1)**, validates and supports the existing baseline characterisation for offshore bats presented in **Section 13.6** of EIAR **Volume 3**, **Chapter 13 Offshore Bats**.

815. In addition to repeating the migratory headland surveys, the Applicant, in response to item 15a of the Commission's FIR, also undertook boat based bat detection surveys within the array site. This information adds to the baseline described in the EIAR and is summarised in **Section 13.6** of the **EIAR Addendum (Part 1)**.

816. It is proposed that these form the pre-construction baseline, with no bats having been recorded in the array site. The updated **IPPEMP** includes an outline of construction, post-construction, and decommissioning phase monitoring within the array site. No further pre-construction monitoring is anticipated as there is no infrastructure within the array site suitable for deploying the bat detectors and further boat-based surveys would not be proportionate when considering the findings of the 2025 surveys.

6.1.10.11 Summary of matter raised

817. The Isle of Man TSC note that a lack of significant effects at a local population level in Ireland does not exclude the potential for significant transboundary effects on local populations elsewhere.

6.1.10.12 Applicant's response

818. A discussion around potential transboundary impacts is included in **Section 13.12** of EIAR **Volume 3**, **Chapter 13 Offshore Bats**, which details that by assessing impacts on the Irish population, which is smaller than the larger international population from which bats may have travelled from, no significant transboundary impacts are anticipated. Therefore, potential transboundary impacts including populations outwith the surveyed area are included within the EIAR.

819. As outlined above, the shortest route from Ireland to the Isle of Man, through the CWP Project array site is approximately 143 km. Comparatively, the shortest route from the Isle of Man to Northern Ireland is 55 km. While it is possible for Nathusius pipistrelle bats to fly 145 km in a single night, the 55 km route would be a significantly shorter distance for an exposed open water crossing. In line with recent research (Lagerveld et al., 2024) bats are assumed to migrate along coastlines before making the shorter open water crossings, therefore it is anticipated that if bats are regularly crossing the Irish Sea to the Isle of Man, they would likely do so via the shorter route i.e. to Northern Ireland.

820. The Isle of Man bat population size is not known and as all potentially migratory bat species, including Nathusius pipistrelles, have been recorded by the Manx Bat Group throughout the year, it is likely there is a resident (non-migratory) population which would not be at risk from collision with the CWP Project array. However, the potential effects on bats from the CWP Project have been assessed within the EIAR and **EIAR Addendum** and therefore impacts on any individuals associated with the Isle of Man bat population have been considered within that. No significant effects were anticipated on offshore bats associated within the proposed development.

821. As per the updated **IPPEMP** the proposed development is committed to participating in the ECMG, to discuss and agree potential strategic monitoring initiatives in relation to offshore bats. The need for strategic monitoring, and the level of participation by individual projects, will be determined by the conclusions of the EIA process, in consultation with statutory and technical stakeholders, and with a focus on validation and evidence gathering.

6.1.11 Shipping and navigation / aviation and radar

6.1.11.1 Summary of matter raised

822. The Isle of Man TSC suggests engagement with the Isle of Man Steam Packet Company to ensure there are no impacts to the well-established shipping routes from the Isle of Man to Ireland.

6.1.11.2 Applicant's response

823. Impacts on vessel routeing have been assessed in EIAR **Volume 3**, **Chapter 16 Shipping and Navigation** and EIAR **Volume 4**, **Appendix 16.3 Navigational Risk Assessment**. The assessment concludes no significant effects on vessel routeing from the CWP Project alone or cumulatively with other relevant plans and projects. It is noted that ferry routeing out of Dublin to the Isle of Man passes north of all CWP Project infrastructure and as such will not be impacted.

6.1.11.3 Summary of matter raised

824. The TSC would request that the impact on infrastructure and transport activities, including but not limited to, Manx shipping and navigation and aviation interests, including airport radar issues are also fully considered.

6.1.11.4 Applicant's response

825. Impacts on vessel routeing have been assessed in EIAR **Volume 3**, **Chapter 16 Shipping and Navigation** and **Volume 4**, **Appendix 16.3 Navigational Risk Assessment**. The assessment concludes no significant effects on vessel routeing from the CWP Project alone or cumulatively with

other relevant plans and projects. It is noted that ferry routeing out of Dublin to the Isle of Man passes north of all CWP infrastructure and as such will not be impacted.

826. Similarly, EIAR **Volume 3**, **Chapter 17 Aviation, Military and Radar** concludes no significant effects on aviation, military and radar, including transboundary effects.

6.1.12 Landscape and seascape

6.1.12.1 Summary of matter raised

827. The Isle of Man Department of Environment, Food and Agriculture suggest that the CWP Project also has the possibility for potential transboundary impacts on Manx land / seascapes.

6.1.12.2 Applicant's response

828. **Section 15.12** of EIAR **Volume 3, Chapter 15 Seascape, Landscape and Visual Impacts** confirms that there will be no transboundary impacts in relation to the SLVIA associated with seascape, landscape / townscape, national designated landscapes and visual receptors.

6.2 NatureScot

6.2.1 Summary of issues raised

829. The following section provides a response to matters raised by NatureScot. The matters raised have been responded to under the following headings:

- Gannet disturbance and displacement
- Gannet collision risk
- Manx shearwater
- Kittiwake

6.2.2 Gannet disturbance and displacement

6.2.2.1 Summary of matter raised

830. NatureScot notes that the parameters for gannet assessment used by the Applicant differ from those recommended by NatureScot. Nevertheless, NatureScot's conclusion of no AESI in relation to displacement of gannet from Ailsa Craig SPA aligns with the assessment conclusion provided by the Applicant within **Volume 5 - Assessment of Implications for Special Protection Areas** of the NIS.

6.2.2.2 Applicant's response

831. The Applicant agrees with the observer's conclusion of no AESI.

6.2.3 Gannet collision risk

6.2.3.1 Summary of matter raised

832. NatureScot highlights a discrepancy between Scottish and English guidance in relation to the consideration of displacement impacts upon gannet. Nevertheless, the observer's conclusion of no AESI in relation to displacement of gannet from Ailsa Craig SPA aligns with the assessment conclusion provided by the Applicant within **Volume 5 - Assessment of Implications for Special Protection Areas** of the **NIS**.

6.2.3.2 Applicant's response

833. The Applicant acknowledges the differences described by the observer in relation to the consideration of macro avoidance for gannet and notes the agreed conclusion of no AESI for gannet at Ailsa Craig SPA despite this difference in interpretation.

834. The Applicant directs the observer to **Section 2.7.11** of the **FIR Response Document** in which collision impacts to gannet have been reassessed to align with NatureScot guidance (2023) regarding the incorporation of macro avoidance into collision quantification.

6.2.4 Manx shearwater

6.2.4.1 Summary of matter raised

835. NatureScot draws attention to a recent literature review undertaken by NatureScot upon collision and displacement impacts in petrels and shearwaters and states that for these nocturnally active species, there is evidence of sensitivity to attraction to lighting which may exacerbate potential negative impacts [through collision or displacement] associated with OWF infrastructure. The observer also highlights that the demographic parameters of these species (low productivity / high survival rates) may make their populations particularly vulnerable to additional mortality resultant from OWFs.

6.2.4.2 Applicant's response

836. The Applicant acknowledges the potential for lighting upon OWF infrastructure to exacerbate displacement or collision impacts to nocturnal procellariforms identified within the NatureScot review. The Applicant can confirm that the potential impacts associated with lighting are assessed in the EIAR for the onshore substation and landfall works.

837. The Applicant directs the observer to Impact 2a in **Section 10.10.3** of the **EIAR Addendum (Part 1)** in which the effects of artificial light emissions from OWF infrastructure upon Manx shearwater have been assessed in response to the Commission's FIR.

838. A qualitative assessment on the impacts of artificial lighting upon Manx shearwater has been carried. In accordance with the receptor sensitivity being assessed as medium, the impact significance was assessed as being imperceptible and therefore not significant in EIA terms.

6.2.5 Kittiwake

6.2.5.1 Summary of matter raised

839. NatureScot draws attention to NatureScot Guidance Note 8, which, as guidance to Scottish OWF assessments, recommends assessing kittiwake in relation to displacement impacts based upon a displacement rate of 30% and mortality rates of between 1 and 3%. Nevertheless, the observer's conclusion of no AESI in relation to impacts upon kittiwake from Scottish SPAs aligns with the assessment conclusion provided by the Applicant within **Volume 5 - Assessment of Implications for Special Protection Areas** of the NIS.

840. Nevertheless, for NatureScot's own records, NatureScot would like to understand the effects of the project on birds from Scottish SPAs and therefore request that further information that is provided.

6.2.5.2 Applicant's response

841. The Applicant acknowledges the differences described by the observer between Scottish guidance and the assessment in relation to the consideration of displacement impacts to kittiwake and notes the agreed conclusion of no AESI for kittiwake features of Scottish SPAs despite this difference in interpretation.

842. The Applicant directs the observer to **Section 2.7.8** of the **FIR Response Document** in which displacement impacts to kittiwake have been reassessed to align with NatureScot guidance (2023). Specifically, the Applicant directs the observer to **Section 4.18.1 of the NIS Addendum (Part 1)** in which displacement impacts for the CWP Project to the kittiwake feature of Ailsa Craig SPA are assessed and concluded to result in no AESI.

6.3 Northern Ireland Department for Infrastructure

6.3.1 Summary of issues raised

843. The Applicant received, via the Commission, a submission from the Northern Ireland Department for Infrastructure confirming that '*the Department wish to participate in the transboundary process and to make comments to An Bord Pleanála. Accordingly we will undertake the appropriate consultations and advertisements and will revert to you in due course when these are complete'.*

844. It was subsequently confirmed by the Commission that no further submissions from the Department were received.

7 APPLICANTS RESPONSE TO REGISTERED ENVIRONMENTAL CHARITIES AND STATE AGENCIES

7.1 BirdWatch Ireland

7.1.1 Summary of issues raised

845. The following section provides a response to matters raised by BirdWatch Ireland. The matters raised have been responded to under the following headings:

- Data and knowledge gaps
- Limited definition of tolerance
- Offshore concerns
- Estuarine/Liffey and onshore concerns
- Cumulative and other concerns

7.1.2 Data and knowledge gaps

7.1.2.1 Summary of matter raised

846. BWI raise general concerns regarding knowledge gaps in relation to OWF impacts upon important and threatened bird species, which may include unforeseen potential effects. In response to such uncertainty BWI advocates the adoption of risk avoiding / conservative approaches to development and request additional research to address knowledge gaps.

7.1.2.2 Applicant's response

847. The scope of assessment undertaken within **Volume 3, Chapter 10 Ornithology** of the EIAR, and the NIS, is informed by a substantive body of scientific evidence in relation to the impacts of OWF developments upon seabird species within the marine environment. The scientific evidence combines peer reviewed scientific literature, national guidance, and monitoring from other jurisdictions. Notably the scope of the assessment is informed by the Guidance on Marine Baseline Ecological Assessments & Monitoring Activities for Offshore Renewable Energy Projects Part 1 (Department of Housing, Planning and Local Government (DHPLG), 2018), which lists potential likely negative impacts, alongside suggested monitoring strategies. As such the assessment follows widely used precedence for considering those impacts identified as having the potential to give rise to likely significant effects from that body of evidence as agreed in consultation with SNCBs.

848. Assessments presented within the EIAR and NIS are regarded to adequately consider this identified suite of potential impacts both in relation to the project alone and cumulatively with other projects.

7.1.3 Limited definition of tolerance

7.1.3.1 Summary of matter raised

849. BWI raise concerns relating to aspects of the definition of tolerance set out in **Volume 3**, **Chapter 10 Ornithology** of the EIAR. Specifically, they submit that because a receptor is considered tolerant of an impact this does not equate to that impact not having an effect upon the demographic parameters of that species. They express the view that the focus within the EIAR upon direct mortality resultant from impacts does not adequately consider fitness effects upon individuals within impacted populations and suggest that definitions of tolerance and impact assessments are altered to account for this.

7.1.3.2 Applicant's response

850. **Volume 3, Chapter 10 Ornithology** of the EIAR outlines the concept of receptor tolerance as a component informing receptor sensitivity. Receptor sensitivity is considered in relation to impact magnitude to determine impact significance. As such, receptor tolerance and impact magnitude are considered separately within the EIA process, following an approach consistent with industry best practice (i.e. CIEEM, 2024). For example, if a receptor is able to adapt its behaviours to avoid or habituate to an impact, it is generally considered to be less sensitive to that impact and the overall significance attributed to the impact is likely to be lower. The magnitude of the impact is considered separately from that receptor's ability to tolerate the impact. As such, it is acknowledged and adequately addressed within the assessment framework utilised within the EIAR that receptors may have varying degrees of tolerance to impacts and (so long as a receptor is not entirely tolerant of an impact) that impacts may negatively affect tolerance receptors.

851. Where impacts are not by default assumed to equate to the mortality of the impacted individual (i.e. such as for displacement impacts), the focus upon mortality resultant from impacts within the impact magnitude sections of the EIAR relates to the rationale that sublethal (i.e. fitness) and lethal impact consequences are linked when viewed at a population scale. Only the latter is generally able to be assessed in any meaningful way within the EIA framework. For impacts such as displacement, mortality estimates represent an overall estimated consequence of sublethal effects to the number of individuals impacted, presented as a metric which is compatible with regional population estimates. For example, a group of displaced individuals will experience a range of mostly adverse fitness consequences associated with that displacement, this in turn will impact (mostly adversely) the conditions of the individuals within that group, which in turn may affect (again mostly adversely) the probability of their survival over defined time periods. The number of individuals from the impacted population which will die as a result of these slight changes in survival probabilities is used to represent the metric by which to determine the magnitude of such effects.

852. As such, fitness effects to ornithological receptors are currently considered within the EIAR following a methodology which aligns with established best practice.

7.1.4 Offshore concerns

7.1.4.1 Summary of matter raised

853. BWI raises the concern that a number of passage migratory, non breeding and rare but regularly occurring species have not been appropriately assessed within **Volume 3, Chapter 10 Ornithology** of the EIAR. These include species which BWI believes should have been assessed on account of their conservation status. In particular the following species are mentioned in relation to this

observation: European storm petrel, great skua, Balearic shearwater and Arctic skua. The observer requests that impacts upon such species are more fully assessed. BWI also note that impacts on prey species, in particular from diverted commercial fishing effort, are not considered.

7.1.4.2 Applicant's response

854. The scarce and infrequently occurring species mentioned by BWI were screened out for assessment for each impact within **Volume 3, Chapter 10 Ornithology** of the EIAR on account of their general absence from offshore areas potentially impacted by the project, or their occurrence in such areas only infrequently and in very low numbers. This is in accordance with best practice and relevant guidance which requires that only important ecological features that could be significantly affected (including negative and positive effects) be identified. This is consistent with EIA Regulations, which only require investigation of likely significant effects, and relevant guidance (CIEEM, 2024).

855. The paucity of records of such species within potentially impacted areas during baseline digital aerial and boat based surveys, in addition to the absence of important sites for such species in the immediate vicinity of the project and other studies to support assumptions relating to the scarcity of such species within the western Irish Sea (such as Jessop et al., 2018) informed the rationale for screening these species out. In line with best practice, which notes only likely significant effects should be assessed, the rationale is that, should potential impacts occur to individuals from such species, the number of individuals affected from those species would be extremely low. The associated impacts would therefore be non-tangible, with no potential to constitute a pathway via which likely significant effects could occur to regional populations. As such, the Applicant considers that the scope of seabird receptors assessed within **Volume 3, Chapter 10 Ornithology** of the EIAR is appropriate and that the screening out of scarce and infrequently occurring species undertaken is supported by the baseline dataset from site specific surveys and wider desk-based reviews.

856. Notwithstanding the adequacy of the characterisation data and approach to screening species for the assessment, which aligns with relevant guidance, the Applicant would also note that the updated **IPPEMP** provides for monitoring which will contribute to the scientific understanding of ornithology at a site-specific scale. Further to this the Applicant is committed to the ECMG which provides the opportunity to further the scientific understanding of ornithology at a regional scale.

857. With regards impacts on prey species, in particular from diverted commercial fishing effort, the Applicant can confirm that impacts on prey species are considered in the **EIAR Addendum**, in the context of displacement effects on species such as red throated diver, and also within the EIAR. Within the EIAR (**Volume 3, Chapter 10 Ornithology**) prey effects are considered both from a project alone and cumulative perspective, concluding that there will be no significant effect, principally through reference to the existing literature and **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology**. **Volume 3**, **Chapter 12 Commercial Fisheries** of the EIAR also considers impacts on fish and shellfish species, again principally through reference to **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology**. Within the latter direct, indirect, and cumulative effects are considered and concluded that displacement of commercial fisheries will not be significant, and similarly **Chapter 9 Fish, Shellfish and Turtle Ecology** concludes no significant effect on fish and shellfish species. Given the absence of any significant effects on commercial fisheries displacement, fish and shellfish species, and prey effects on ornithology, it can be concluded beyond reasonable scientific doubt that any impact on ornithology as a result of impacts on prey species from diverted commercial fishing effort will be nugatory.

7.1.4.3 Summary of matter raised

858. BWI consider the use of shag as a proxy for cormorant within **Table 10-115** 'Screening of key seabird species for risk of collision' within **Volume 3, Chapter 10 Ornithology** of the EIAR is inappropriate. BWI note differences between the flight behaviours of cormorant and shag (citing Jongbloed, 2016) and request that the assessment of collision impacts for cormorant is redone.

7.1.4.4 Applicant's response

859. The Applicant acknowledges BWI's comments with regard to the use of shag as a proxy for cormorant in relation to collision impact screening and directs the observer to **Section 2.7.12** of the **FIR Response Document** in which the use of shag as a proxy for cormorant is addressed.

860. In light of the species-specific collision sensitivity parameters provided in the updated assessment, it is concluded that, despite the use of proxy species for cormorant in the original EIAR assessment, the screening-out of this species from a full collision risk modelling assessment remains accurate, and this species remains screened out of the collision modelling.

7.1.4.5 Summary of matter raised

861. BWI raises concerns relating to the lack of assessment of roseate tern from the Rockabill SPA breeding population and requests that additional assessment of impacts to this species and this colony is undertaken, particularly into potential migratory movements through the array site. BWI note studies demonstrating connectivity between roseate tern populations at Rockabill SPA, Lady's Island Lake SPA and Coquet Island SPA and also highlights that part of the roseate tern population breeding within Coquet Island SPA appear to migrate through the Irish Sea. BWI request that the Applicant consider the connectivity between these sites and the offshore footprint of the project in the assessment.

7.1.4.6 Applicant's response

862. As noted within **Volume 3, Chapter 10 Ornithology**, and in line with best practice, foraging ranges are based on peer reviewed scientific literature, notably Woodward et al., 2019. The foraging range for roseate tern, as provided within the EIAR and NIS and based on mean max plus one standard deviation, is 23.2 km. The decision to screen out the Rockabill SPA roseate tern breeding population SCI is therefore on the basis of the project being outside the established foraging range of that species. As also noted within the EIAR and NIS this is consistent with site specific tracking studies of roseate tern from Rockabill SPA during the 2018 breeding season. The site specific tracking study concluded no connectivity with sea areas south of Dublin. This is also consistent with the absence of records of this species during baseline surveys within the array site or surrounding 2 km buffer in the migration free breeding period.

863. As such, the decision to screen out impacts to the breeding roseate tern population of Rockabill SPA during the breeding season, based on scientific literature and site specific studies, is considered robust. This on the basis of non-connectivity and therefore no potential for LSE.

864. It is acknowledged that roseate tern breeding within Rockabill SPA may subsequently migrate through the array site or pass through the array site en route to this SPA breeding colony (or during movements to or from the other metapopulation colonies mentioned by the observer). In this regard the Applicant directs the observer to **Section 2.7.4** of the **FIR Response Document**, **Section 10.10.3** of the **EIAR Addendum (Part 1)** and the **NIS Addendum (Part 1)** in which potential collision impacts associated

with migratory passage of roseate tern from Rockabill SPA and Coquet Island SPA are assessed. As Lady's Island Lake SPA is located to the south of the CWP Project, the array site is not considered to lie within the migratory pathway between this SPA and the wintering grounds of this species on the coasts of west Africa.

865. Collision impacts to the regional roseate tern population associated with migratory passage through the array site are assessed to be imperceptible and not significant in EIA terms.

866. In the context of AA, collision impacts to the roseate tern populations of Rockabill SPA and Coquet Island SPA associated with migratory passage through the array site are assessed to result in no AESI.

7.1.4.7 Summary of matter raised

867. BWI submit that impacts assessed in relation to little tern within the EIAR and NIS are underestimated. BWI highlight a study by Wilson et al., 2021 which demonstrates movements of this species across the Irish Sea involving post-fledging juveniles and adult birds within breeding periods and, in particular, showing connectivity between little terns from the Kilcoole breeding colony within The Murrough SPA and the Gronant little tern colony in north Wales. BWI characterise such movements of little terns, which occur outside of the spring and autumn migration periods, as being 'equal and frequent' and 'rapid and bi-directional' and state concerns that these movements are not acknowledged within assessments. BWI conclude that, on this basis, they cannot support conclusions of no or non-significant impacts on little terns until assessment incorporates consideration of these movements across the project's marine footprint.

7.1.4.8 Applicant's response

868. As described within **Section 5.1.23** of **Volume 4, Appendix 10.5 Offshore Ornithology Baseline Characterisation Report** of the EIAR, there was only a single record (of two individuals together during the post-breeding period [September]) of little tern within the array site during baseline surveys, in addition to two further records of single little tern within 2 km of the array site (May and August).

869. Baseline survey effort across three years, was considered when characterising site use by little terns during spring migration, the breeding season, the post-breeding dispersal period and autumn migration. Flight activity rates of little tern were therefore concluded as being very low and subsequent decisions to classify impact magnitudes as 'negligible' were made on this basis.

870. Very low levels of site use by little tern of the array site and surrounding areas during the breeding season continued to be observed during additional DAS and boat-based surveys undertaken to inform the FIR (see **Appendix 10-D Baseline and Contemporary Survey Data Comparison** of the **EIAR Addendum**).

871. Occasional passage events by individuals through the array site when considered in relation to the extremely low numbers of this species recorded within and around the array site over the course of three seasons of survey effort, are not considered to constitute an impact pathway by which collision effects or barrier effects may result in likely significant effects to the regional breeding population, or adverse effects on site integrity of The Murrough SPA.

872. As such, assessments presented within the EIAR and NIS are considered to adequately account for potential impacts upon regional breeding populations of little tern and breeding populations at relevant European Sites.

7.1.4.9 Summary of matter raised

873. BWI state that maps showing bird density and location within the CWP Project marine footprint should be provided from baseline surveys within the ornithology chapter of the EIAR, on the basis that it is difficult to understand the information collected in their absence.

7.1.4.10 Applicant's response

874. We note the observer's request for additional spatial representation of seabird distribution. Information presented within **Volume 4, Appendix 10.5 Offshore Ornithology Baseline Characterisation Report** of the EIAR, in relation to each seabird species recorded during baseline boat-based and DAS of the array site and surrounding buffer was carefully considered so as to include only information considered relevant to the assessment of impacts associated with the array site. The provision of maps to demonstrate where each species were observed within the baseline survey area and how their densities varied across that area was not considered relevant to inform the Impact Assessment undertaken within **Volume 3, Chapter 10 Ornithology** of the EIAR as fine scale considerations of distribution within and surrounding the array site do not factor into quantitative or qualitative methods to determine the magnitudes of the impacts assessed. For example, estimations of displacement mortality for a species are based upon calculated abundances within the entire array site and appropriate buffer, while modelling to estimate collision mortality utilised the average density of birds in flight within the array site.

875. An exception to this (the presentation of spatial information) relates to the reassessment of red-throated diver displacement impacts undertaken in response to FIR items 7f and 7k (see **FIR Response Document**). This exception was made given the proximity of the project to the Murrough SPA, and the sensitivity of red-throated diver to displacement during the construction and operation period of OWFs. This included examination of the distributions within spatial overlap between the Murrough SPA and a 10km buffer area around the array site. The Applicant directs the observer to **Appendix 10-I Design-based Density, Abundance Estimate, and Distributional Response of the Red-throated Diver** of the **EIAR Addendum** in which the distributions of red-throated diver within the array site, a 10 km buffer to the west, and the Murrough SPA are presented.

876. Maps relating to distributions of birds within intertidal areas of South Dublin Bay were included in **Volume 4**, **Appendix 10.5 Offshore Ornithology Baseline Characterisation Report** of the EIAR because qualitative and quantitative methods to determine impact magnitudes to each species were dependent on the distribution of those species surrounding the export cable landfall area within South Dublin Bay. As such, the presentation (or otherwise) of spatial information relating to ornithological receptors provided for the EIAR and NIS are considered to adequately inform the impact assessments undertaken, and to not be critical for the interpretation of assessment conclusions.

7.1.4.11 Summary of matter raised

877. BWI note that baseline surveys of the array site have been undertaken during ideal weather and point out that seabirds continue to utilise offshore habitats during conditions which are less benign. They highlight that the usage of marine footprints by seabirds may be increased or different during such periods and indicate that such effects are not captured with impacts assessments from baseline datasets. As such BWI advises caution in relation to consideration of the undertaken assessment and suggests that additional studies be undertaken to address uncertainties associated with site use during poor weather conditions and at night. Specifically they highlight the value of GPS tracking studies to collect such data and also mention radar as an alternative method.

7.1.4.12 Applicant's response

878. Baseline surveys of the array site have, by necessity, been collected during conditions when it was safe to do so and when detection and identification of ornithological receptors was possible (i.e. when it was possible to collect robust ornithological data (in terms of visibility)). The absence of data from less optimal conditions is not an impediment to assessment and does not materially alter assessment conclusions.

879. Variations in weather conditions or diurnal cycles are accounted for in different ways within the assessment, either through conservatism through application of appropriate abundance estimates, or through incorporation of variance within methodologies such as modelling.

880. For example, mean seasonal peak abundance values is used as a basis from which the number of individuals potentially experiencing displacement and associated risk of mortality is assessed. By using mean peak values, as per best practice, displacement mortality estimations from baseline datasets collected during diurnal, good weather conditions incorporate a considerable amount of conservatism. Uncertainty on bird activity during weather or diurnal variation is therefore addressed through conservative use of mean peak abundance. Despite potential uncertainty relating to mean seasonal abundances associated with adverse weather conditions or diurnal cycles, it is considered extremely unlikely that mean abundances including such periods could exceed mean peak abundances during diurnal good weather conditions.

881. Further to this, nocturnal activity rates based upon existing empirical data and / or a consensus of expert opinions are incorporated into collision risk modelling. This uses best available data on species-specific observations and, by this means, nocturnal periods, during which the collection of baseline data is not feasible, are incorporated into assessments of collision mortality. In relation to potential collision impacts during diurnal periods in which wind speeds are too high to permit the collection of baseline data, the Applicant directs the observer to a recent tracking study of kittiwake from a breeding colony in the north-east of Scotland (Davies et al., 2024). This study outlines three aspects of kittiwake behaviour in relation to wind speed: Firstly, as wind speeds increased, fewer individuals flew, with a switch observed from flying behaviours (commuting and foraging) to non-flying behaviours. Secondly, as wind speeds increased, the proportion of individuals undertaking commuting flying behaviours compared to foraging flying behaviours decreased and, notably, the mean flight hight of commuting flight behaviours was considerably greater than of foraging flying behaviours (i.e. with increasing wind speed, flying birds switched to lower types of flying behaviours), Finally, within flying behaviours (both commuting and, to a lesser extent, foraging), as wind speeds increased, mean flight height decreased. In short, during conditions corresponding with those in which digital aerial or boat-based surveys could not be undertaken, fewer birds were flying and those which were flying at lower altitudes. This study therefore indicates that, for kittiwake at least, baseline surveys undertaken during benign (low wind speed) conditions may result in overestimates to flight densities and proportions of individuals at collision risk height used within collision risk modelling.

882. As such the Applicant considers that the use of the baseline datasets collected during diurnal periods in which weather conditions were generally benign to be appropriately addressed through the introduction of additional conservatism within the assessments. The additional survey methodologies proposed by BWI, whilst acknowledged as offering the ability to reduce the conservatism within assessments by introducing more empirical data, would not materially alter the conclusions of such assessments.

883. The Applicant also seeks to highlight that the suggested method to collect information relating to the behaviour of birds during nocturnal periods or in poor weather conditions (i.e. tracking studies), will not collect the baseline site data upon which assessments of collision or displacement are ultimately based (i.e. you cannot infer flight densities or total site abundances from tracking data).

884. The Applicant does, however, acknowledge the value of such surveys during the operational phase of the project, when, with site infrastructure in situ, species specific responses to that infrastructure may be used to support the scientific understanding more broadly, and may reduce the conservatism inherent within future assessments for other future OWF projects.

7.1.5 Estuarine/Liffey and onshore concerns

7.1.5.1 Summary of matter raised

885. BWI has raised concerns on the proximity of the tern nesting dolphins to the CWP Project. BWI indicate that construction and operation of the onshore substation could limit perceived or actual views for the terns on the CDL Dolphin and request that additional mitigation strategies are implemented before construction to ensure that the CDL tern colony is not lost. BWI also request two additional mitigation items:

- That the period of limited construction and screening is extended to mid-April
- That monitoring during construction is undertaken by a qualified individual familiar with seabird and tern behaviour

7.1.5.2 Applicant's response

886. Perceived or actual views on the CDL Dolphin during the construction and operational phases.

Construction phase

887. EIAR **Volume 3, Chapter 10 Ornithology** addresses the construction phase effects of the onshore substation on the breeding tern colonies. **Section 10.10** of the referenced chapter assessed the breeding tern colonies as being at risk of disturbance / displacement during the construction phase. A number of mitigation measures were detailed for the tern breeding phase which included:

- Noise and lighting requirements;
- Construction work and visual screening restrictions; and
- Construction phase monitoring.

888. The construction work and screening restrictions included the provision of a solid screen hoarding of 2.5 m in height which would screen construction activities within 75m of the CDL Dolphin. The solid screen will be installed on the perimeter of the onshore substation site.

889. There will be no direct impediment to the existing views from the CDL Dolphin breeding colony and it will continue to have views of the waters edge from all boundaries.

890. In relation to the ESB Dolphin it was determined that any construction phase effects would be Imperceptible (not significant) due to the physical distance between the breeding colony and the construction works for the CWP Project and also taking account of the implementation of the above measures.

891. In EIAR **Volume 3, Chapter 10 Ornithology**, the construction work and screening restrictions were proposed from the period of 1 May – 15 August. The Applicant notes BirdWatch Ireland's request that this period is extended to mid-April The Applicant also note BirdWatch Ireland's request that monitoring is undertaken by a qualified individual familiar with seabird and tern behaviour and has no comments. These requests have been accepted and the updates to the construction mitigation are reflected in **Section 10** of the **EIAR Addendum (Part 1).**

892. The mitigation measures proposed for the construction phase are considered appropriate and deliverable. The assessment is sufficiently detailed and adequately assesses the potential impacts of the CWP Project in relation to the construction phase activities.

893. With the application of these measures, it was determined that any construction phase effects on the CDL Dolphin would be Imperceptible (not significant).

Operational and Maintenance phase

894. **Section 10** of the **EIAR Addendum (Part 1)** considers the threat of predation for arctic terns on the CDL Dolphin in terms of the potential for reduced sight lines and visibility.

895. During the operational and maintenance phase, existing views from the CDL Dolphin will be maintained from all boundaries and the onshore substation will be set back c. 25-30 m from the Dolphin. In this regard, the existing visibility of predators from the water's edge on all boundaries of the Dolphin will not be impacted, with expanses of open water within the wider port environment.

896. **Figures 10-A** and **10-B** of the **EIAR Addendum (Part 1)** show the onshore substation with east and west views during the O&M phase, demonstrating that existing visibility is not impacted and the expanse of water surrounding the Dolphin.

897. **Section 10.10** of the **EIAR Addendum (Part 1)** also recognises that terns are existing within an already developed environment with a wide range of shipping and industrial infrastructure in close proximity. This is outlined in EIAR **Volume 4**, **Appendix 10.9 Investigation of disturbance tolerance of terns breeding near to the onshore substation site**. Whilst the primary aim of this study was to investigate the level of tolerance of breeding terns to forms of disturbance, it also describes how the background environment for the CDL Dolphin, is a built environment with industrial facilities, waterborne and port infrastructure in close proximity.

898. **Section 10.10** of the **EIAR Addendum (Part 1)** also references other tern colonies that successfully coexist with built or industrial environments, such as the Port of Edinburgh and the Farne Islands. This demonstrates that with appropriate mitigation and site management, terns will co-exist within these dynamic environments**.**

899. The design of the onshore substation is considered appropriate for the site, where in terms of the perceived risk of predation, the existing visibility is maintained on the boundaries of the CDL Dolphin for the arctic tern colony. Additionally, the design of the onshore substation has incorporated prey deterrents and its location south of the Dolphin, could potentially reduce the ability for ambush predators to impact the Dolphin.

900. The assessment concluded that there would be no significant effects on the terns at the CDL Dolphin, as a result of the presence of buildings and infrastructure.

901. The design of the onshore substation is considered appropriate for the site. It has taken account of the breeding tern colonies and the assessment concluded that the significance of effects would be Slight and Not Significant for the CDL and ESB Dolphins respectively. These effects are not significant in EIA terms. The assessment is sufficiently detailed and adequately assesses the potential impacts of the onshore substation during the operational and maintenance phase.

7.1.5.3 Summary of matter raised

902. BWI have concerns on the close proximity of the tern colonies with the CWP Project and the DPC Masterplan proposal (new quay and vessel turning circle) and requests that a full cumulative impact

assessment of the CWP Project's onshore construction with the DPC Masterplan proposal be done before any construction begins.

7.1.5.4 Applicant's response

903. EIAR **Volume 3**, **Chapter 10 Ornithology** determined that any project alone construction phase residual effects on the breeding tern colonies from disturbance / displacement during the construction phase would be 'imperceptible' and therefore not significant in EIA terms for both the CDL and ESB Dolphins.

904. The CEA for Estuarine/Liffey & Onshore Ornithology (see **Section 8** of the **CEA Report (Part 2)** which supersedes the planning application CEA) screens in residual effects that would have the potential for a significant cumulative effect with other developments. Potential impacts that were assessed as 'imperceptible' were not taken forward as there is no potential for the CWP Project to meaningfully contribute to a significant cumulative effect.

905. Residual effects associated with disturbance / displacement during the construction phase were therefore not considered within **Section 8** of the **CEA Report (Part 2)**. However, to respond fully to the observation made a review of potential cumulative effects with the DPC 3FM project was undertaken.

906. The CWP Project construction phase is anticipated to take place over a four-year period, with works for the onshore substation undertaken over approximately a three-year window, within that.

907. Chapter 5 Project Description of the DPC 3FM EIAR outlines that the 3FM Project would be developed over a c. 15-year construction period. An indicative construction sequence is provided in Chapter 5 and Appendix 5.4 of the DPC 3FM EIAR. Construction works associated with the provision of the New Nora/ESB Jetty and the Container Terminal (Area N) are scheduled over 2030-2034. The installation of the turning circle is scheduled for completion at the end of 2030/31. It is therefore likely that there will be some construction phase overlap between the CWP Project and DPC 3FM Project.

908. When considering the DPC 3FM works against the CWP Project delivery, the following was noted:

- Enabling works such as site access, development of the piled combi-wall around the perimeter of the onshore substation site and infilling the south east corner of the onshore substation site would be undertaken once, by either the Applicant or DPC. The construction of these elements does not require works by both projects (one or other would carry out the works) and responsibility for their delivery will be agreed on in advance of construction commencing by both parties.
- No works associated with either of the projects will take place within 50 metres of each other and also in proximity to the ESB and CDL Dolphins.
- The CWP Project has committed to a series of construction phase mitigation measures for the tern colonies (see previous response). Measures relate to noise and lighting requirements, visual screening, restricted periods for certain construction activities and construction phase monitoring.
- The DPC 3FM EIAR Chapter 7 Biodiversity also outlines the mitigation that the DPC 3FM Project will implement during the construction phase, to minimise impacts on the breeding tern colonies. The DPC 3FM EIAR is also supplemented with the submission of a 3FM Project Combined Response Report submitted to the Commission in March 2025. Measures relate to restricted periods for certain construction activities and monitoring.

909. The DPC 3FM EIAR concluded a residual project alone effect of 'imperceptible' (not significant) on nesting terns with regard to human and underwater noise disturbance. For the CWP Project alone, a residual effect of 'imperceptible' (not significant) was concluded for the construction phase disturbance effects on the breeding tern colonies.

910. If construction works do overlap, both projects will be constructing in adherence with proposed mitigation and as such it is considered that the combined residual effect is 'imperceptible' (not significant) and would not give rise to a significant cumulative effect on the breeding tern colonies.

7.1.5.5 Summary of matter raised

911. Birdwatch Ireland has commented that the Black guillemots and Sand martins may not take up the proposed additional nesting mitigation, at the onshore substation site.

7.1.5.6 Applicant's response

912. EIAR **Volume 3, Chapter 10 Ornithology** addresses the effects that the loss of habitat may have on the sand martin and black guillemot as a result of the construction of the onshore substation. Mitigation measures set out in the referenced chapter include:

- Provision of a sand martin wall at the onshore substation site with a minimum of 36 nesting cavities, to mitigate the displacement of at least four pairs of breeding sand martin; and
- Provision of 4 no. nest boxes for Black guillemots on/within the perimeter quay walls, to mitigate the displacement of at least 2 pairs of Black guillemot.

913. The assessment is sufficiently detailed and followed established best practices, drawing upon existing research on artificial nesting sites. The assessment considered the potential effectiveness of such mitigation measures, including factors influencing nest site selection by black guillemots and sand martins. The mitigation measures proposed for these species are considered appropriate and deliverable.

914. Notably, Black Guillemots have been recorded successfully occupying artificial nest structures in Dublin Port[4], providing strong evidence that they can adapt to and utilise these measures. This precedent supports the viability of the proposed mitigation measures and indicates that, when designed and positioned appropriately, artificial nesting structures can contribute to maintaining or even enhancing breeding populations.

915. The artificial nesting sites proposed in **Section 10.10** of the assessment are based on sound ecological principles and have been designed to maximise the likelihood of success. The structures aim to replicate the key attributes of natural nesting sites, offering safe, sheltered, and appropriately located breeding opportunities for the two target species.

916. Furthermore, the area where these artificial nesting sites will be introduced has already been identified in the Applicant's assessment as "sub-optimal nesting habitat" for these species. This reinforces the importance of providing alternative nesting opportunities, as the existing natural conditions may not support optimal breeding success.

[4] DPC 3FM EIAR: Chapter 7 - Biodiversity (Volume 2 Part 2).pdf

7.1.6 Cumulative and other concerns

7.1.6.1 Summary of matter raised

917. BWI observe that breeding colonies of common tern throughout Ireland were severely adversely affected by HPAI outbreaks in 2023 and request that impact assessments based upon regional population estimates prior to this outbreak are redone.

7.1.6.2 Applicant's response

918. HPAI impacts to receptor populations are referenced within **Section 10.6.7** and **Section 10.6.8** of **Volume 3**, **Chapter 10 Ornithology** of the EIAR.

919. The Applicant directs the observer to its response to item 7d of the Commissions FIR (see **FIR Response Document**), which provides justification as to why baseline characterisation datasets collected prior to HPAI outbreaks in 2022 and 2023 remain a robust and appropriate basis for impact assessment. Tern mortalities attributed to HPAI from 2024 onwards have fallen to very low levels in comparison to those noted in 2022/23 (UK Gov, Animal and Plant Health Agency, 2026). Consequently, it is appropriate to consider the 2023 HPAI mortality event to Irish breeding tern populations as an acute (rather than ongoing) impact, the demographic effects of which are likely to be undetectable at impacted populations when project related impacts may occur.

920. Also of relevance is Natural England guidance (2022), which states that if breeding colony sizes have been impacted by HPAI (and the effects of this are still detectable at the colony) "*… the scale of impact* [from the project] *is likely to remain in proportion to the size of the colony. For instance, if a population were reduced by 10% then we would expect 10% fewer collisions*". This rationale forms the basis of current best practice, which is not correct for HPAI related population declines in instances where impact assessments draw from datasets collected prior to the HPAI events of 2022/23.

921. As such, assessments presented within the EIAR and NIS are considered to adequately account for HPAI impacts upon regional breeding populations and breeding populations at relevant European Sites in accordance with present SNCB guidance and OWF application precedent from the UK, which has been followed in the absence of Irish SNCB guidance.

7.1.6.3 Summary of matter raised

922. BWI acknowledge proposed mitigation measures which restrict construction phase activities within intertidal areas of South Dublin Bay to occurring within the April to August period. BWI note that this area continues to be used by birds during the period of the year in which construction works would be permitted. BWI note that, at times during the April to August period, the intertidal habitats within South Dublin Bay may be utilised by 'notable, and sometimes nationally and internationally important, numbers of the SPA's QI species including Redshank (*Tringa totanus*), Black-tailed godwit (*Limosa limosa*), and Oystercatcher (*Haematopus ostralegus*)...'. They acknowledge that summer is the best time for cable laying works and other construction within the intertidal habitat, but request that an alternative works plan should be implemented when species are present in large numbers within habitat near to construction areas.

923. BWI also acknowledge proposed mitigation measures to limit construction hours to between sunrise to 1 hour before sunset from mid-July through the entire month of August in order to prevent impacts to post-breeding terns. BWI note the particular importance of this area for juvenile terns prior to their

autumn migration and request that the limit to construction hours during this period is expanded to commence one hour after sunrise [rather than sunrise].

7.1.6.4 Applicant's response

924. The Applicant submits that **Figures 5.25, 5.37** and **5.47** within **Volume 4, Appendix 10.5 Offshore Ornithology Baseline Characterisation Report** of the EIAR, which present the results of the extensive baseline characterisation surveys, highlight concentrated areas of use for oystercatcher, black-tailed godwit and redshank, respectively. The surveys which are presented in **Appendix 10.5** record the species, primarily within the southern parts of South Dublin Bay, generally away from the proposed cable route landfall corridor through intertidal habitats. The Applicant also directs the observer to **Appendix 10-D Baseline and contemporary data comparison** of the **EIAR Addendum** which demonstrates that the areas used by these receptors within 2025 also are primarily within the southern parts of South Dublin Bay, generally away from the proposed cable route landfall corridor through intertidal habitats.

925. Where site use by small numbers of intertidal waterbirds occurs within this period the extent of available intertidal habitat is such that a large amount of unaffected alternative foraging habitat would remain available to any relatively small numbers of individuals which may be affected. As such the mitigation measures are considered to be appropriate, in line with best practice, and adequate to mitigate the risk of significant effects.

926. With regard to mitigation measures to limit construction impacts to roosting terns, the Applicant directs the observer to **Section 2.7.20** of the **FIR Response Document** in which the timing of mitigation measures is addressed. The Applicant considers that existing proposed diurnal restriction mitigation measures will adequately mitigate potential impacts to post-breeding tern aggregations within South Dublin Bay SPA.

927. As such, the proposed measures are in line with best practice, and precedents at the specific location, and appropriate to avoid significant impacts to regional waterbird or tern populations, and to avoid a potential adverse effect to the integrity of South Dublin Bay and River Tolka Estuary SPA. Alterations to construction phase mitigations within South Dublin Bay proposed by the observer will not meaningfully reduce potential disturbance impacts upon ornithological receptors in such a way as to alter assessment conclusions relating to residual impacts but may result in extended construction durations.

7.1.6.5 Summary of matter raised

928. BWI raises concerns that impacts have not been considered additively across the operational period of the project within the EIAR and NIS and request that assessments are redone to address this.

7.1.6.6 Applicant's response

929. In line with best practice, and the relevant industry guidance for undertaking ecological impact assessment (CIEEM, 2024) the assessments throughout the EIAR and NIS are presented as annual mortality values. This is entirely in line with the recommended guidance and aligns specifically with the offshore wind farm case study for ornithology presented within the CIEEM Guidelines (CIEEM, 2024).

930. Further to this, impacts are presented as annual values and also considered during the lifetime of the proposed project (both project alone and cumulatively). Population Viability Analysis (PVA) is used to facilitate this assessment of operational phase impacts. PVA is used where potential annual mortality

impact sizes are considered to be sufficiently large to potentially result in significant differences between impacted and unimpacted population sizes over the operational duration of the project; i.e. where the annual mortality as a result of the impact is different to the baseline annual mortality. The purpose of PVA is to model the changes to an impacted population if it was subject to those impacts annually during the lifetime of the project.

931. As such, impacts across the 25 year operational lifetime are considered to be appropriately considered within the EIAR, in accordance with best practice and relevant UK and Ireland guidelines. With regard to this matter raised by BWI, an alternative additive method will not identify greater adverse impacts on regional seabird populations than presently assessed.

7.1.6.7 Summary of matter raised

932. BWI submit that they consider the approach presented within **Volume 4**, **Appendix 10.1 Cumulative Effects Assessment** of the EIAR difficult to understand and, consequently, that the conclusions relating to CEA are difficult to assess or support. In particular they submit that the presentation of multiple scenarios relating to cumulative effects with other projects grouped depending on their stage within the planning process is confusing and that they are not confident in the assumptions being made about the viability [i.e. probability of consent] of other projects.

933. BWI comment that for a number of species, for impact scenarios relating to the upper ranges of modelled impact parameters which are considered to be potentially feasible, predicted increases to annual regional mortality rates resultant from cumulative effects approach 1% and state 'We acknowledge that unless a species has crossed over the 1% threshold there is no legal obligation to consider the impacts to the species further, but the number of species found with high predicted increases to annual regional mortality in the additional scenarios is particularly worrisome especially given these cumulative scenarios are ‘still potentially feasible’ outcomes'.

934. BWI further note concerns in relation to migrant and non-breeding seabirds, stating that none of these species are assessed within the CEA. They note that, while cumulative impacts to common tern are assessed, they consider that impacts to this receptor may be underestimated on account of recent population declines resulting from HPAI. The observer disagrees with CEA conclusions which do not identify any significant cumulative effects resulting from the CWP Project alongside other developments.

7.1.6.8 Applicant’s response

935. With regards to the CEA, the Applicant directs the observer to **Section 7** and **Section 8** of the **CEA Report (Part 2)** which supersede **Volume 4**, **Appendix 10.1 Cumulative Effects Assessment** of the EIAR. This update has been made in response to item 5 of the Commissions FIR.

936. The Applicant considers the approach to be transparent and in compliance with relevant guidance, notably including but not limited to the CIEEM Guidelines (CIEEM, 2024). This approach is considered to provide a structured approach to assessing cumulative effects.

937. With regards the risk associated with annual regional mortality rate increases approaching 1% being significant, the Applicant notes that in accordance with the relevant CIEEM Guidelines; where cumulative impacts do not result in a 1% increase to the regional baseline mortality rate, the consequences of such additional impacts upon population trajectories over the course of the 25 year operational lifespan of the project, are considered within the range of natural stochasticity upon those population trends, and not significant. Consequently, with consideration of the criteria for determining magnitude of impact as outlined in **Table 10-10** of **Volume 3, Chapter 10 Ornithology** of the EIAR,

annual increases to baseline mortality rates of <1% were determined to equate to low or negligible impact magnitudes.

938. Where impacts were assessed to have a greater than 'imperceptible' level of impact significance those impacts were considered within the CEA. In the majority of cases project-only level impacts to migratory species or overwintering receptors were assessed to be of imperceptible significance and, accordingly, screened out of the CEA from requiring further assessment. Exceptions to this include the following species which were considered in relation to impacts upon non-breeding populations: red-throated diver, Sterna terns and great-black-backed gull. As such, the Applicant disagrees with the observation that no migrant or non-breeding seabirds are considered within the CEA and asserts that impacts to non-breeding seabird populations have been appropriately considered.

939. In relation to cumulative collision risk to migratory non-seabird species, the Applicant directs the observer to **Appendix F - Offshore and Intertidal Ornithology Cumulative Migratory Collision Risk Modelling** of the **FIR Response Document**, which calculates cumulative collision impacts from Phase 1 OWF Projects to Irish migratory bird populations to be negligibly small. These impacts are assessed not to result in significant impacts to regional migratory populations.

940. In relation to concerns regarding the underestimation of cumulative impacts to the regional common tern population after the effects of HPAI, the Applicant directs the observer to the previous response on this matter.

941. Insofar as the observer disagreeing with the CEA conclusions, the Applicant notes that the CEA was undertaken using impact magnitudes calculated using inherently conservative methodologies in accordance with best available guidance. The assessment of such impacts when considered cumulatively with the effects of other relevant projects is robust and in accordance with guidance and industry precedence.

7.1.6.9 Summary of matter raised

942. BirdWatch Ireland submit that with the increase in turbines and expansion of OWF development, the Irish Sea is in danger of becoming congested with OWFs despite insufficient understanding of how this will impact the important bird populations of this area. EIAR **Volume 3, Chapter 10 Ornithology** and the supporting appendices, particularly in **Volume 4, Appendix 10.1 Cumulative Effects Assessment**, mention that associated displacement from the CWP Project array site will not be significant for the majority of the bird species assessed due to the 'large expanse of available habitat outside of the array site'. BirdWatch Ireland believe the assessment does not take this concern into account appropriately and is not appropriate or applicable as a conclusion.

7.1.6.10 Applicant's response

943. EIAR **Volume 3**, **Chapter 10 Ornithology** details the scope and conclusions of the ornithology impact assessment. The assessment considers a number of potential impact pathways inter alia displacement, collision risk (breeding and non breeding), and impediment to migratory pathways that may arise from the project alone and / or cumulatively with other relevant plans and projects. The approach to assessment represents best practice and uses the best available science and data to draw a conclusion that is beyond reasonable scientific doubt. In summary the assessment in EIAR **Volume 3**, **Chapter 10 Ornithology** is sufficiently detailed, adequately assesses the likely environmental impacts, outlines proposed mitigation measures, and concludes no significant effects in the context of EIA.

944. Notwithstanding the above, updates to EIAR **Volume 3**, **Chapter 10 Ornithology** have been made in response to the Commission's FIR (Items 7a to 7x). These updates, provided in **Section 10** of the

EIAR Addendum (Part 1), support and reaffirm the assessment conclusions (i.e. no significant effects in the context of EIA).

945. At the request of the Commission an update to the CEA for ornithology has also been provided in **Section 7** and **Section 8** of the **CEA Report (Part 2)**. This assessment, which supersedes EIAR **Volume 4**, **Appendix 10.1 Cumulative Effects Assessment**, identifies no likely significant cumulative effects on ornithological receptors from the CWP Project with other relevant plans and projects.

7.1.6.11 Summary of matter raised

946. BWI raise concerns that impacts assessments undertaken within **Volume 3, Chapter 10 Ornithology** of the EIAR do provide adequate consideration of impacts to the fitness of affected individuals or impacts to migratory species and suggest that analyses are redone to account for this.

947. BWI request more transparent cumulative assessments to allow them to better understand the conclusions made within the EIAR.

948. BWI note their support of conservative and cautionary approaches being applied to impact assessment and highlight that much is unknown about seabird and migratory bird use of the Irish marine environment.

949. BWI request additional studies are undertaken in relation to potential beneficial consequences of OWF infrastructure to fish spawning conditions and associated benefits to foraging seabirds.

950. BWI request that funding is provided to studies to determine the efficacy of painting turbine blades to reduce potential collision impacts.

951. BWI encourage additional tern tracking works to better understand the migration of terns through the array site.

952. BWI conclude that additional research and assessments are required before conclusions of non-significance to ornithological receptors can be reached.

7.1.6.12 Applicant's response

953. BWIs concerns regarding the adequate consideration of fitness when assessing impacts on affected individuals has been responded to in **Section 7.1.3** of this document. Likewise, in relation to requests for more transparent cumulative assessments, the Applicant directs the observer to the relevant responses above.

954. The Applicant considers that an appropriate degree of conservatism has been applied throughout assessments presented within the EIAR and NIS and that where uncertainty exists in relation to the potential impact to an ornithological receptor, additional conservatism has been appropriately applied during assessment in order to ensure that assessment conclusions are sufficiently robust.

955. The Applicant notes the observer's requests for potential additional studies and recognises the value of such studies for the broader strategic understanding of birds, but considers that such additional measures are not necessary for the characterisation of ornithological baselines for EIAR and NIS purposes. Characterisation of ornithological baseline conditions are in line with relevant Irish and UK guidelines, and are sufficiently detailed to draw appropriate and robust conclusions. Where uncertainty occurs assessment methodologies incorporate additional conservatism, such that conclusions presented with EIAR and NIS assessments are robust, and can be considered to be beyond reasonable scientific doubt.

956. Notwithstanding the adequacy of the characterisation data and approach to assessment, which aligns with relevant guidance, The Applicant would also note that the updated **IPPEMP** provides for monitoring which will contribute to the scientific understanding of ornithology at a site specific scale. Further to this, the Applicant has committed to the ECMG which provides the opportunity to further the scientific understanding of ornithology at a regional scale.

7.2 Dublin Port Company

7.2.1 Summary of issues raised

957. The following section provides a response to matters raised by Dublin Port Company. The matters raised have been responded to under the following heading:

- Proposed planning conditions

7.2.2 Proposed planning conditions

7.2.2.1 Summary of matter raised

958. Dublin Port Company recommends planning conditions to be attached to the CWP Project planning permission concerning the free and safe passage of navigation for Dublin Port.

7.2.2.2 Applicant's response

959. The Applicant notes the requested condition from Dublin Port Company, requiring liaison with the Dublin Port Harbour Master in relation to any works adjoining the River Liffey and adjoining berths, to ensure that the free and safe passage of navigation continues to be facilitated in the Port. The Applicant notes the recommended condition and has no comments.

7.3 Irish Whale and Dolphin Group

7.3.1 Summary of issues raised

960. The following section provides a response to matters raised by the Irish Whale and Dolphin Group (IWDG). The matters raised have been responded to under the following headings:

- Marine mammal mitigation
- Comments on the EIAR
- General discussion

7.3.2 Marine mammal mitigation

7.3.2.1 Summary of matter raised

961. IWDG notes a lack of evidence that ADDs can deter minke whales out to the cumulative PTS-onset ranges. IWDG recommend that Noise Abatement Systems (NAS) should be applied at the CWP Project due to far ranging effects as a result of underwater noise during piling.

7.3.2.2 Applicant's response

962. To mitigate potential impacts from underwater noise during the construction of the project the Applicant commits to a limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events. This has been reflected in the updated **MMMP**.

963. The PTS impact ranges for minke whales from mitigated piling are predicted to be 70m.

7.3.3 Comments on the EIAR

7.3.3.1 Summary of matter raised

964. IWDG highlighted that the use of dose-response estimated for 2.2 m piles installed with a hammer energy of 2,400 kJ is not comparable to 9.5 m monopiles and hammer energy of up to 4,400 kJ.

7.3.3.2 Applicant's response

965. The Applicant acknowledges that the dose-response function from the Beatrice Wind Farm in Scotland is based on harbour porpoise response to impact piling of 2.2m diameter pin piles with a maximum hammer energy of 1,800 or 2,400 kJ. However, as noted by the observer, the dose-response function obtained from this study provides the proportional response associated with received Sound Exposure Level Single-Strike (SEL_{SS}) noise level. For the CWP Project, the assessment of behavioural disturbance due to piling using the dose-response approach is informed by the underwater noise modelling, which has been carried out based on project-specific piling parameters (detailed in **Volume 4**, **Appendix 9.4 UWN Assessment** of the EIAR, updated by **Appendix 9-C Underwater Noise Modelling Assessment**, and supported by **Section 11** of the **EIAR Addendum (Part 1)**).

966. As such, the source levels for a 4,400 kJ hammer have been used in the modelling to estimate the range at which received levels will occur, specific to 9.5 m diameter monopile at a range of modelling locations. The proportional response based on Graham et al. 2017 was subsequently applied to the project-specific received SELss noise levels (this assumes porpoise will respond at specific received levels in the same way as they do in the Moray Firth, there is no reason to assume otherwise). As such, the assessment presented in **Volume 3, Chapter 11 Marine Mammals** of the EIAR is considered proportional to the scale of the project as it is based on project-specific parameters applied at the underwater noise modelling stage.

967. **Section 11** of the **EIAR Addendum (Part 1)** presents an assessment using updated JNCC (2025) EDRs for harbour porpoise for unmitigated and mitigated piling (in addition to the dose-response approach).

968. With regards to received noise levels and metrics used in the assessment of injury and disturbance, please refer to the relevant responses to An Taisce (see **Section 5.1.2** of this document).

7.3.3.3 Summary of matter raised

969. The IWDG highlights that TTS has not been assessed for geophysical surveys, however they note that the Applicant commits to mitigate by applying the DAHG (2014) guidance which is currently appropriate.

7.3.3.4 Applicant's response

970. **Volume 3**, **Chapter 11 Marine Mammals** of the EIAR outlines why the current TTS onset thresholds are inappropriate to determine a biologically significant level of TTS and thus, PTS only is used in the impact assessment for auditory injury. Notwithstanding this, the Applicant has provided the TTS modelling outputs as **Appendix L - TTS modelling outputs** to the **FIR Response Document**.

971. The Applicant has committed to a **MMMP** for geophysical surveys based on the DAHG (2014) guidance, which the IWDG confirms is appropriate. An updated **MMMP**, which replaces the planning application MMMP, is included with this FIR Response.

7.3.4 General discussion

7.3.4.1 Summary of matter raised

972. IWDG explained two strategies applied internationally to protect receptors in the marine environment from the effects of excessive noise during piling, e.g. "source and threshold" and "receiver and exposure". The observer does not specify any recommendations with respect to CWP Project in this response.

7.3.4.2 Applicant's response

973. Information from IWDG is noted. The Applicant has considered both "source and threshold" (noise abatement, alternative hammer types) and "receiver and exposure" (MMP/PAM/ADD) methods in identifying appropriate marine mammal mitigation in the updated **MMMP.**

7.3.4.3 Summary of matter raised

974. IWDG highlight that evidence shows a decline in harbour porpoise in the Irish and Celtic Seas, supported by previous studies and the newly release ObSERVE II report which was released after the Applicant submitted its planning application. IWDG consider porpoise to be particularly vulnerable to disturbance from underwater noise (citing the Wisniewska et al., 2026).

7.3.4.4 Applicant's response

975. As outlined in **Volume 4**, **Appendix 11.3 Baseline Technical Report** of the EIAR and **Appendix 11-A Update to Marine Mammal Baseline Characterisation** of the **EIAR Addendum**, while harbour porpoise were assessed as having a Favourable conservation status in Irish waters (NPWS, 2019), large scale surveys (SCANS II-III and ObSERVE) have estimated a decline in harbour porpoise abundance in the Celtic and Irish Seas MU. As discussed in **Volume**, **4 Appendix 11.3 Baseline Technical Report**, the SCANS III density surface report (Lacey et al., 2022) states that the decline

between SCANS II (2005) and SCANS III (2016) in the Celtic Sea could be a distributional shift into Irish waters covered by the ObSERVE surveys, where high densities of porpoise were recorded. The SCANS surveys in the Irish Sea did not indicate a decline: the SCANS III abundance estimate for the Irish Sea in 2016 was 9,376 porpoise (Hammond et al., 2021), while the SCANS IV abundance estimate for the Irish Sea in 2022 was 16,098 porpoise (Gilles et al., 2023); this is further considered in the updated **Appendix 11-A Update to Marine Mammal Baseline Characterisation** of the **EIAR Addendum**.

976. It is also important to note that while the surveys of the Rockabill to Dalkey Island SAC showed a decline in porpoise density (Berrow et al., 2021), the authors state that "*This does not necessarily imply a decline in overall population size but perhaps changes in distribution and habitat use at a local scale*". At the time of the CWP Project planning application, there was no clear evidence of a decline in the harbour porpoise population of the Celtic and Irish Sea, and this remains unknown until an updated abundance and trend estimate is provided by the IAMMWG using the latest SCANS IV and ObSERVE II data. Therefore, the assessment provided is considered robust given the evidence available at the time of the assessment.

977. When considering the sensitivity of harbour porpoise to disturbance, **Volume 3, Chapter 11 Marine Mammals** of the EIAR does consider the Wisniewska et al., 2016 paper. It provides detailed information as to why the conclusions of this paper have been contested in the literature since, and disputes the conclusion that porpoise exist on an 'energetic knife-edge' as Wisniewska et al., 2016 claim, but do not provide clear justification for in their paper. Based on all available data (including studies of porpoise responses to OWF construction), **Volume 3**, **Chapter 11 Marine Mammals** of the EIAR concluded that the best available data indicates "that harbour porpoise are somewhat resilient to and can compensate for temporary disturbance effects due to pile driving". Additionally, the current iPCoD model assume that for harbour porpoise, each day of disturbance may result in 6 hours of non-foraging time. The results for the CWP Project showed that the level of disturbance is not sufficient to result in any changes at the Irish Sea harbour porpoise population level, since the impacted population is predicted to continue at a stable trajectory; the same as the unimpacted population. Therefore, it is concluded that there is no risk to harbour porpoise MU population as a result of temporary displacement from foraging grounds / temporary inability to forage.

7.3.4.5 Summary of matter raised

978. The IWDG highlight that there is evidence of strong avoidance by porpoise to ADDs, but data is lacking for responses of minke whales and dolphins to ADDs. The IWDG highlight that it is challenging to balance the level and frequency from ADDs so as to not ensonify large areas of habitat in addition to piling.

7.3.4.6 Applicant's response

979. To mitigate potential impacts from underwater noise during the construction of the project the Applicant commits to a limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events. This has been reflected in the updated **MMMP** and **Section 11** of the **EIAR Addendum (Part 1)**. The PTS impact ranges for mitigated piling are 70m for minke whales and <50 m for dolphins. Therefore, ADD use is not required to mitigate PTS from piling.

980. To mitigate potential impacts from underwater noise associated with high order UXO clearance, the Applicant commits to the implementation of noise abatement in the event high order clearance is required. This has also been reflected in the updated **MMMP** and **Section 11** of **EIAR Addendum (Part 1)**.

- For low-order clearance, the maximum PTS impact range is 130 m for minke whales and 60 m for dolphins. Therefore ADD use is not required to mitigate PTS from low-order UXO clearance.
- For high-order clearance of a 750 kg UXO + donor with noise abatement, the maximum PTS impact range is 1.1 km for minke whales, 290 m for dolphins and 5.1 km for harbour porpoise. Thus, the predicted PTS impact ranges exceed the 1 km mitigation zone. Therefore, an ADD will be operated for a pre- determined length of time, concurrent to the pre-detonation search, to deter marine mammals to a greater distance prior to any detonation. For the site specific UXO clearance activities, it will be necessary to operate the ADD for different durations according to the UXO disposal method used, UXO/charge size, and associated predicted impact ranges.

981. The updated **MMMP** also highlights that where ADDs are proposed to be used, the duration of their use is balanced against the increased disturbance impact to marine mammals caused by their use. Therefore, where ADDs are used for mitigation purposes, the duration of their activation would need to be discussed and agreed with NPWS to ensure that the additional impact of disturbance is proportionate.

7.3.4.7 Summary of matter raised

982. The IWDG state Ireland's Marine Strategy: Assessment (Article 8), Determination of Good Environmental Status (GES)(Article 9) and Environmental Targets (Article 10) as part of the EU Marine Strategy Framework Directive (MSFD) acknowledges the potential for both continuous and impulsive noise to cause behavioural disturbance and injury to marine animals and states that under the MSFD, to achieve good environmental status (GES) impulsive noise and continuous noise must not exceed levels that adversely affect populations of marine animals.

7.3.4.8 Applicant's response

983. **Volume 3, Chapter 11 Marine Mammals** of the EIAR together with **Section 11** of the **EIAR Addendum (Part 1)** provides consideration of relevant MSFD targets, is sufficiently detailed and, adequately assesses the likely environmental impacts. The chapter is accompanied by the updated **MMMP**, which provides the proposed project mitigation for underwater noise. It is considered that the assessment and proposed mitigation is demonstrably in accordance with international best practice.

984. The mitigation measures are therefore considered to be appropriate and deliverable. With the proposed mitigation measures in place the UWN impacts are not predicted to be significant in EIA terms on any of the relevant receptors.

985. Further to this the Applicant can confirm that an updated MSFD assessment has been provided which considers relevant NMPF and MSFD thresholds and concludes that there is no impediment to Good Environmental Status being achieved (see **Appendix 1** - **NMPF Compliance / MSFD Assessment** to the **Planning Report Addendum** provided in response to the Commissions FIR).

7.3.4.9 Summary of matter raised

986. IWDG highlight the 2022 threshold values for the spatial and temporal extent of underwater noise agreed at an EU level. They note that an assessment of the status of underwater noise in Irish waters was referenced in the Marine Strategy update documents and note that the assessment was coarse scale and narrow in scope.

7.3.4.10 Applicant's response

987. The IWDG comment is not related to the CWP Project planning application, but to an assessment of the status of underwater noise in Irish waters referenced in the Marine Strategy update documents.

988. The Applicant notes that the guidance provided to the MSFD on EU threshold values for impulsive noise relate to "a proportion of an assessment/habitat area utilised by a species of interest" and a "Level of Onset of Biologically adverse Effects (LOBE)". Neither "assessment/habitat area" nor a "threshold for LOBE" is defined in the guidance. The guidance (Sigray et al., 2023) states: "EU Member States are to establish threshold values for the levels of underwater noise that should not be exceeded, through cooperation at EU level, considering regional and subregional specificities."

989. To take into account regional or subregional specificities, TG-Noise recommend that Member states "establish LOBE values on a regional level guided by expert group advice". Ireland has not yet defined either "assessment/habitat area" or "threshold for LOBE", nor has it agreed to the recommended short-term and long-term exposure thresholds of 20% and 10%. Therefore, until Ireland has provided guidance on these parameters, it is not possible to conduct an assessment against them.

990. In the absence of this the Applicant has undertaken an assessment based on best available scientific data and practice, and the assessment conclusions and mitigation measures are considered to be robust. Notwithstanding this, the Applicant has submitted an assessment that considers the MSFD criteria and thresholds presented in Ireland's Marine Strategy (see **Appendix 1 - NMPF Compliance / MSFD Assessment** to the **Planning Report Addendum** provided in response to the Commissions FIR).

7.3.4.11 Summary of matter raised

991. IWDG highlight that under Ireland's obligations under the MSFD and Habitats Directive and the development of ORE, windfarm developers should ensure that excess noise does not pollute the marine environment during windfarm construction. They reference Merchant et al., 2022 which concludes that there is now a growing recognition that implementing quieting measures may be a prudent response to the mounting evidence of detrimental effects on individual animals.

7.3.4.12 Applicant's response

992. The IWDG comment is not related to the CWP Project planning application, but to Ireland's obligations under the MSFD and Habitats Directive driving increased scrutiny of underwater noise.

993. However, since the submission of the planning application the Applicant has made the following commitments:

- To mitigate potential impacts from underwater noise during the construction of the project, the Applicant commits to a limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events.
- To mitigate potential impacts from underwater noise associated with high order UXO clearance, the Applicant commits to the implementation of noise abatement in the event high order clearance is required.

7.3.4.13 Summary of matter raised

994. IWDG highlight that the merits of the source and threshold approach in comparison to the receiver and exposure methods are currently the subject of research and investigation in Ireland (the GOMOREUS

project and the UNGORE project). They note that it is expected that DHLGH will produce new guidance documents which will inform ORE developers, the relevant agencies (ACP, MARA, NPWS) and Government departments of their obligations. The new guidance will outline the regulatory framework and necessary technical measures applicable to protect the marine environment from underwater noise during the development of ORE in Irish waters.

7.3.4.14 Applicant's response

995. The Applicant is aware of both the GOMOREUS and UNGORE projects, and like IWDG, is awaiting DHLGHs review of these and the provision of new guidance. The new guidance was not available to inform the assessment provided in **Volume 3 Chapter 11 Marine Mammals** of the EIAR and is not available to inform the Applicant's FIR response. Thus, the marine mammal assessments have been undertaken in line with the current guidance and best practice methods.

7.3.4.15 Summary of matter raised

996. IWDG calls the Applicant to reformulate the MMMP, to consider Cumulative PTS, TTS, and disturbance metrics in their assessment, and to commit to adopting noise abatement technology.

7.3.4.16 Applicant's response

997. To mitigate potential impacts from underwater noise during the construction of the CWP Project, the Applicant commits to a limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events, and the implementation of noise abatement in the event high order UXO clearance is required.

998. The following mitigation measures are detailed in the updated **MMMP** submitted in response to the Commission's FIR:

- Geophysical surveys (Multibeam, single beam, side-scan sonar & sub-bottom profiler surveys):
    - Pre-survey visual watch of 500 m radius by an MMO for 30 min
    - Ramp-up where possible
- UXO clearance:
    - Preference for low order clearance over high order clearance where possible
    - Only using minimum quantity of explosive as donor charge
    - Activities to occur in daylight only
    - Pre-detonation MMO watch of 1 km radius for 30 min
    - Implementation of noise abatement in the event high order clearance is required
    - Use of ADD if predicted PTS impact ranges exceed the 1 km monitored zone
- Piling
    - Limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events
    - Pre-piling MMO watch of 1 km radius for 30 min (supported by PAM)
    - 20 minute piling soft-start at 10% of maximum hammer energy, followed by a gradual ramp-up to full hammer energy.

7.4 Transport Infrastructure Ireland

7.4.1 Summary of issues raised

999. The following section provides a response to matters raised by Transport Infrastructure Ireland (TII). The matters raised have been responded to under the following heading:

- Proposed planning conditions

7.4.2 Proposed planning conditions

7.4.2.1 Summary of matter raised

1000. TII recommend planning conditions to be attached to the planning permission concerning construction traffic management and abnormal loads.

7.4.2.2 Applicant's response

1001. CWP notes the requested conditions from TII and has no comments.

7.5 Uisce Éireann

7.5.1 Summary of issues raised

1002. The following section provides a response to matters raised by Uisce Éireann (UÉ). The matters raised have been responded to under the following headings:

- Pre-connection enquiry
- Protection of UÉ assets
- Future planned UÉ infrastructure

7.5.2 Pre-connection enquiry

7.5.2.1 Summary of matter raised

1003. A pre-connection enquiry for water services was submitted by Codling Wind Park Ltd and assessed to be feasible, though subject to a finalised connection agreement with Uisce Éireann.

7.5.2.2 Applicant's response

1004. CWP notes the comment from UÉ and has nothing to add.

7.5.3 Protection of UÉ assets

7.5.3.1 Summary of matter raised

1005. Where there are interactions with UÉ assets, UÉ has requested that detailed design of CWP Project infrastructure is undertaken in accordance with UÉ Standard Details and Codes of Practice, that designs are agreed with UÉ and that the Applicant enters into a Build Over Agreement.

7.5.3.2 Applicant's response

1006. As noted in the UÉ submission, a mitigation strategy has been offered by the Applicant addressing UÉ assets. UÉ are satisfied with this strategy in principle, subject to detailed design.

1007. The Applicant notes the request from UÉ relating to Standard Details, Codes of Practice and the Build Over Agreement and has no comments.

7.5.4 Future planning UÉ assets

7.5.4.1 Summary of matter raised

1008. UÉ has noted satisfaction in relation to build over/diversion agreement(s) and that these details are being finalised between UE and the Applicant prior to commencement of works.

7.5.4.2 Applicant's response

1009. CWP notes the observation from UÉ and has no comments.

8 APPLICANTS RESPONSE TO OTHER THIRD PARTIES

8.1 Legislation, Consents and Policy

1010. The following section provides thematic responses to matters raised by third parties in relation to legislation and consents. The matters raised have been responded to under the following sub themes:

- History of the CWP Project (including historic and existing consents)
- The CWP Project Maritime Area Consent (MAC)
- Legislation and Policy Framework for Phase 1 OWF Projects
- Compliance with legislation
- Policy interpretation – National level
- Policy interpretation – Local level

8.1.1 History of the CWP Project

8.1.1.1 Summary of matter raised

1011. Observers questioned the manner in which the Foreshore Lease for the original CWP Project was granted and highlighted concerns regarding historic foreshore licences that relate to the project. Others questioned the Applicants compliance with the condition of the lease.

8.1.1.2 Applicant's response

1012. Under Section 293(1) of the 2000 Act, the Commission is entitled to have regard to the historical Foreshore Lease, Foreshore Lease application and licences as information before it. The **Planning Report** sets out that background.

1013. However, the Applicant does not seek to rely on the Foreshore Lease as creating any presumption or having any material weight in favour of the grant of permission for the CWP Project. As noted in para 262 of the **Planning Report**, these matters are relevant only in so far as they were the criteria used by the Oireachtas, in the Maritime Area and Planning (MAP) Act 2021 to determine which projects were sufficiently advanced to make a contribution to the decarbonisation targets in the Climate Action Plan 2021 and consequently should be permitted to apply for a MAC prior to the establishment of the MARA. All such projects proposed "material changes … to that which was originally applied for and assessed under the Foreshore Acts, which changes require further assessment."

1014. Accordingly, the Applicant, in seeking permission, relies instead on the consistency of the CWP Project with the current policy framework, with particular emphasis on the matters listed in Section 293(3) of the 2000 Act.

8.1.1.3 Summary of matter raised

1015. Observers commented that the Applicant has been using equipment outside of the remit of their existing foreshore license. It is alleged that the Applicant used Air Guns and did not submit a compliant (or any) MMO report to NPWS within 30 days of the activities as outlined in the 2014 guidelines, which are statutory. In addition, mitigation measures required under the statutory 2014 marine mammal

guidelines, including soft-start, were alleged not to have been adequately implemented by the Applicant and their contractors in the recent past.

8.1.1.4 Applicant's response

1016. The Applicant has not used equipment outside of the remit of their existing foreshore licence and the Applicant has submitted MMO reports to the NPWS as required.

1017. The observation is a fundamental misunderstanding of the technology used. An airgun is being misunderstood to mean large scale seismic surveys by the Oil and Gas industry. In practice an 'airgun' is a simplification of what is a wider range of sources that use the same 'production of air' as a noise source from which to discriminate seabed and sub seabed features. For the purposes of the Foreshore Licence in question it relates to UHRS (ultra high resolution surveys) and SBP (sub bottom profiling). This equipment was assessed and consented in the Foreshore Licence application process. In addition, MMO reports were submitted to NPWS in accordance with 2014 guidelines. These matters were raised in *Copeland & Ors v Minister for Housing* (2023/946JR) which sought to challenge the validity of a foreshore licence granted to the Applicant by the Minister and the Applicant has provided sworn evidence of compliance.

1018. In any event, these matters are not relevant to the objectives of maritime spatial planning and the principles of proper planning and sustainable development, which are concerned with the merits of the project, and not the applicant for permission.

1019. In that regard, prior non-compliance with planning permissions and other consents is not a relevant factor in the Commission's determination. Section 35 of the PDA does not apply to this application. That provision allows planning authorities (and not the Commission) to refuse permission due to past failures to comply with planning permissions. It does not apply to applications under Section 291 of the 2000 Act.

1020. Instead, the Applicant's fitness to occupy the site and carry out the project is regulated by the MAP Act 2021, which requires MARA (or the Minister in the case of Phase 1 OWF Projects) to have regard to whether an applicant for a MAC is a fit and proper person, having regard, among other things, to the previous performance of the applicant when granted a foreshore licence. The Applicant's MAC requires it to continue to be a fit and proper person within the meaning of the 2021 MAP Act for the duration of the MAC.

8.1.2 The CWP Project Maritime Area Consent

8.1.2.1 Summary of matter raised

1021. On 19 May 2020, the Irish Government announced that six offshore renewable energy projects had been designated as Relevant Projects, including the CWP Project. Observers questioned the legality of this decision with respect to the EIA Directive, the SEA Directive, the Public Participation Directive and the Aarhus Convention. Observers questioned the lack of transparency and objectivity of the competent authority in the granting of MACs for Phase 1 OWF Projects, including the CWP Project, and the lack of environmental assessment, including consideration for alternatives and for fisheries and AA undertaken as part of this process. According to observers, the grant of these MACs should be "re-evaluated". Some considered the MAC was in contravention of the Habitats and Birds Directives.

1022. It was also submitted that the grant of a MAC is a transfer of public property that was done without due regard to the public interest and in an undemocratic manner The observers believe that the Relevant

Projects were given an unfair advantage and this will have a direct impact on competition within the energy market and made specific reference to Public Procurement Directive and the Treaty for the Functioning of the EU (Article 107).

8.1.2.2 Applicant's response

1023. Under Section 293(1) of the 2000 Act, the Commission is entitled to have regard to the CWP Project's status as a Relevant Project and as holder of MAC. The Applicant sets out the relevance of those matters in the **Planning Report**. The Applicant does not seek to rely on that status or the MAC as creating any presumption or having any material weight in favour of the grant of permission for the CWP Project. They are referred to as part of the background and in explaining that the Applicant was required to hold a MAC before it could apply for permission.

1024. Section 107 of the MAP Act 2021 provides that "*A person shall not question the validity of any decision made or other act done by the MARA in the performance or purported performance of a function under this Part in relation to a MAC application, MAC or foreshore authorisation otherwise than by way of an application for judicial review under Order 84.*" No such application for judicial review has been made. Accordingly, the Applicant is entitled, and the Commission is required, to presume that the MAC is valid and the Applicant is consequently entitled to make the application for permission under Section 286(3) of the 2000 Act.

1025. In any event, none of the Habitats Directive, EIA Directive, SEA Directive, the Public Participation Directive or the Aarhus Convention apply to the 19 May 2020 decision or the grant of the MAC for the CWP Project. The 19 May 2020 decision was a decision to invite applications for MACs. MACs are statutory consents that allow the holders to apply for permission for development in a specified part of the maritime area and, subject to receiving permission, to occupy the area for that purpose. Neither the invitation to apply for a MAC, nor the MAC itself, entitles the invitee or MAC holder to proceed with a project nor does it constrain the Commission in its consideration of any subsequent application for permission.

1026. Whether the MAC is a transfer of public property is not relevant to the Commission's consideration of the application for permission. Without prejudice to that, the MAC is not a transfer of public property. The State retains the freehold in the area subject to the MAC and the MAC is not a lease or an agreement for lease. The MAC simply sets out the terms on which the Applicant can occupy State property in the maritime area.

1027. The submissions in relation to the Public Procurement Directive and Article 107 TFEU are vague, unparticularised and in any event are matters entrusted to other public authorities than the Commission.

8.1.3 Legislation and Policy Framework for Phase 1 OWF Projects

8.1.3.1 Summary of matter raised

1028. Observers alleged that there are the following gaps and flaws in the legislation and policy framework for Phase 1 OWF Projects. Overall, they deem the development to be developer-led and not plan-led.

- There is no Statutory Marine Planning Policy Statement
- There is no Maritime Spatial Plan as required by Directive 2014/89/EU (the MSP Directive),
- In the absence of a Maritime Spatial Plan, Directive 2008/56/EC (the Marine Strategy Framework Directive or MSFD) cannot be complied with;

- The Offshore Renewable Energy Development Plan stated that it would undergo full review in 2020, but no such review was undertaken;
- There is no adequate legislative protection for marine biodiversity in the absence of Marine Protected Areas;
- There is no Designated Maritime Area Plan for the CWP Project;
- The proposed development is premature as there are no offshore development planning guidelines or marine planning guidelines; and
- There is no national landscape character assessment.

8.1.3.2 Applicant's response

1029. The Applicant is satisfied that there are no policy gaps that would prevent the Commission granting permission for the CWP Project.

1030. As a matter of Irish law, the Commission is required to apply the policy framework that exists at the date of its decision on the application for permission. the Commission cannot "*take decisions based on considerations that fall outside this framework, or based on documents that are preliminary, scoping, proposed, consultative, or otherwise lack the status of statutory guidelines that the Board is obliged to consider.* (*Element Power Ireland Limited v An Bord Pleanála* [2017] IEHC 550, para 49). These observations invite the Commission to do just that, contrary to the Commission's legal obligations.

1031. Much of the legal analysis set out in the submissions is predicated on a misunderstanding that Government policy has endorsed the location of the Phase 1 Projects. In fact, it is neutral in relation to whether the sites are suitable for offshore renewable energy development.

1032. While the statutory and policy framework is neutral on the suitability of these locations, it provides detailed criteria on how to evaluate the sites proposed for the Phase 1 Projects. The Commission is therefore entitled and obliged to form its own view of the merits of the CWP Project location in light of that statutory framework. The Applicant's position is that the **Planning Report**, EIAR and NIS comprehensively demonstrates that the location of the project is consistent with the policy framework set out in Section 293 of the 2000 Act.

1033. For the avoidance of doubt, the Applicant notes the Commission has in the past been challenged for explicitly stating that it would not have regard to observations and submissions in so far as they criticised the policy framework (*Balz v An Bord Pleanála* [209] IESC 90) The Applicant accepts that the Commission must consider the criticism made of the policy framework and the assessment methodologies, even where those are based on statutory policy. The Applicant is satisfied that it has fully answered any material criticism in that regard under the relevant topic headings.

1034. The Minister has not yet published statutory marine planning policy statement The **Planning Report** contains an assessment of the CWP Project relative to the non-statutory Marine Planning Policy Statement (MPPS) in anticipation that some of the contents may be adopted in the statutory version. The **Planning Report Addendum** which accompanies the Applicant response to the Commission's FIR also addresses the draft MPPS that underwent public consultation in the summer of 2025.

1035. The NMPF is a maritime spatial plan for the purposes of Directive 2014/89/EU. It was adopted under Part 5 of the Planning and Development (Amendment) Act 2018, which transposed the Directive into Irish law and has been recognised as comprehensive by the European Commission (COM/2022/185 final) While the NMPF does not offer policy support for the location of the Phase 1 Projects, it sets out a detailed framework against which the Commission can assess the merits of their locations.

1036. The application provides all of the information required to apply the Marine Strategy Framework Directive (Directive 2008/56/EC) to the CWP Project, in particular in EIAR **Volume 3**, **Chapter 7 Marine Water Quality**. MSFD has been transposed in Ireland and is detailed in Ireland's Marine

Strategy Framework Directive Marine Strategy Part 1 and Part 2. There is no requirement under MSFD to prepare a marine spatial plan. This requirement is derived from the MSP Directive. The NMPF is the plan prepared in accordance with the MSP Directive. The NMPF is consistent with and has regard to MSFD. Like all Directives, it is binding as to the results to be achieved, but the means of implementation are a matter for Member States. The OREDP and the Interim Review of the OREDP are fully considered in the **Planning Report**. This is another policy which does not endorse the location of any of the Phase 1 Projects, but is essential context to understand the Government's policy of allowing those projects to apply for permission on the basis that the Commission will assess the planning merits of the project locations by reference to evaluative criteria, rather than pre-approved sites.

1037. The Commission is entitled to grant permission for development prior to the designation of Marine Protected Areas. The criteria that apply in those circumstances are as set out in the NMPF Protected Marine Sites Policy 4 and addressed in Appendix A to the **Planning Report Appendices** and in EIAR **Volume 4**, **Appendix 8.4 Marine Protected Areas Assessment Report**.

1038. There is no legal requirement for DMAPs, offshore planning guidelines or a national landscape character assessment to be in place before the Commission can grant permission for development in the maritime area. Having considered the policy framework, Section 13, ORE Policy 2 of NMPF, which is dealt with by the Applicant in Appendix A of the **Planning Report Appendices,** states: '*Proposals must be consistent with national policy, including the Offshore Renewable Energy Development Plan (OREDP) and its successor.* ***Relevant Projects designated pursuant to the Transition Protocol and those projects that can objectively enable delivery on the Government's 2030 targets will be prioritised for assessment under the new consenting regime****.* ***Into the future****, areas designated for offshore energy development, under the Designated Marine Area Plan process set out in the Maritime Area Planning Bill, will underpin a plan-led approach to consenting*'. **[bold text added by the applicant].** The NMPF clearly envisages that the Phase 1 Projects (i.e. the Relevant Projects) were not premature. Under NMPF ORE Policy 9, it further states inter alia: '*Prior to specific guidelines being available, policy and best practice relating to visualisation assessment should be used. This consideration must be included as part of statutory environmental assessments where such assessment is required'*. The NMPF clearly envisaged the possibility of no guidelines being available at the time of lodgement of applications. The Phase 1 Projects are therefore not premature.

1039. The Applicant is satisfied that legal and policy requirements are robustly addressed in the planning application and that there is no impediment to the Commission determining the application. The Applicant is satisfied that it has demonstrated in the section 4 of the **Planning Report**, that the proposed development is aligned with and supported by the national policy framework including but not limited to the Climate Action Plan 2024 and the NMPF. This is aligned with section 15(1) of the Climate Action and Low Carbon Development Act 2015, Section 30(1) of the Maritime Area Planning Act 2021 and Section 293(2)(b) and 293(3) of the Planning and Development Act 2000, as amended. The development is policy-led.

8.1.3.3 Summary of matter raised

1040. Observers contend the development is premature pending the designation of Codling Bank as an SAC (Annex I sandbank habitat). It is alleged that the CWP Project is being proposed on Annex I habitat that should have been designated an SAC.

8.1.3.4 Applicant's response

1041. The Commission cannot question the validity of the Minister's decision not to designate Codling Bank as an SAC for the purposes of the Habitats Directive. This follows from the Court of Appeal decision

in *Clonres v Minister for Housing* [2022] IECA 172. That decision involved a judicial review seeking to compel the Minister to designate sports grounds in Dublin as part of the South Dublin Bay and River Tolka SPA. The Court of Appeal found that any challenge to a failure to designate must be instituted by way of judicial review within three months of the decision.

1042. Without prejudice to that position, the CWP Project is not located on an Annex I habitat such that it would be eligible for designation. The Applicant has no knowledge of the internal Departmental dealings alleged and reserves its rights to take issue with the truth and accuracy of those statements in this process or any other proceedings.

8.1.3.5 Summary of matter raised

1043. Observers commented that under Section 15 (1) of the Climate Action and Low Carbon Act 2015, as amended, the Commission must act consistently with the Climate Action Plan (CAP) 2024, in so far as it requires guidelines and the designation of ORE DMAPs. The proposal is therefore premature.

8.1.3.6 Applicant's response

1044. Section 15 of the Climate Action and Low Carbon Development Act 2015, as amended requires that the Commission perform its functions in so far as practicable in a manner consistent with:

(a) the most recent approved climate action plan,
(b) the most recent approved national long term climate action strategy,
(c) the most recent approved national adaptation framework and approved sectoral adaptation plans,
(d) the furtherance of the national climate objective, and
(e) the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State.

1045. The Climate Action and Low Carbon Development Act 2015 does not require that DMAPs or marine management guidelines be in place before the determination of the Phase 1 Projects. **Section 4.3** of **Planning Report** describes how the CWP Project will be particularly supportive of the achievement of reduction of carbon emissions for the electricity sector, and will make substantial contribution to the achievement of its carbon budget by 2030. The project is fully consistent with the furtherance of the national climate objective.

8.1.4 Compliance with Legislation

8.1.4.1 Summary of matter raised

1046. Observers stated that derogation licenses in the marine environment cannot be issued by NPWS and can only be issued by the Commission, (where an EIA is required) or by MARA. Observers noted that the CWP Project will result in disturbance of Annex IV species under Article 12 and Article 13 of the Habitats Directive and expressed concerns about the granting of derogation licences retrospectively. This should be subject to public consultation. The observers note that the application would fail on two counts: demonstration of no feasible alternative and need for substantial compensatory measures to mitigate biodiversity losses.

8.1.4.2 Applicant's response

1047. It is incorrect to state that a derogation licence (whether in the maritime area or otherwise) is required to or can be issued by the Commission. That said, the Applicant accepts that, under current legislation, a Regulation 54 Derogation Licence must be sought from and granted by the Minister for Housing (on the advice on NPWS). The Commission will need to request that licence from the Applicant and consider it as part of its EIA before it can grant permission. See in that regard the CJEU's decision in *Hellfire Massy Residents Association* Case C-166/22 (para 36):

> *[I]n the specific case where, first, the execution of a project that is subject to the dual requirement for assessment and development consent laid down in Article 2(1) of Directive 2011/92 involves the developer applying for and obtaining a derogation from the plant and animal species protection measures prescribed in the provisions of national law transposing Articles 12 and 13 of Directive 92/43 and where, second, a Member State confers power to grant such a derogation on an authority other than the one on which it confers power to give development consent for the project, that potential derogation must necessarily be adopted before development consent is given. If it were otherwise, that development consent would be given on an incomplete basis and would not, therefore, meet the applicable requirements.*

1048. Current legislation is in the process of change. Directive (EU) 2023/2413 (the Third Renewable Energy Directive) provides that (outside renewables acceleration areas), any killing or disturbance of the species protected under Article 12(1) of Directive 92/43/EEC and Article 5 of Directive 2009/147/EC shall not be considered to be deliberate where a renewable energy project has adopted necessary mitigation measures. These provisions have not yet been transposed into Irish law. Once they are transposed, the Applicant anticipates that (a) the CWP Project will be located outside a renewables acceleration area and (b) that the mitigation measures proposed in this application will constitute necessary mitigation measures, such that no derogation licence will be required. It is clear that, once RED III is implemented in Irish law, disturbance arising from a renewable project will not be treated as deliberate where appropriate mitigation measures have been applied. Accordingly, where the relevant provisions are transposed and the requirement for a derogation licence no longer applies, the Applicant will consider its derogation position once RED III is fully implemented.

8.1.4.3 Summary of matter raised

1049. Observers commented that the CWP Project planning application is not supported by screening for AA or AA by the competent authority.

8.1.4.4 Applicant's response

1050. The OPR Practice Note PN01 on Screening for AA states that *"Screening must be carried out even if a NIS has been submitted."* The Commission will note that the application was accompanied by both an AA Screening Report and a NIS. The submission appears to be based on a misconception that the Commission must make and publish an AA screening decision or AA for consultation as part of the decision-making process. That is not the case. The statutory provisions in relation to AA for a section 291 application are materially the same as for any other application process under the 2000 Act. That is confirmed by, among other things, Section 291(3)(d), which requires the public notices to state that, where applicable, a NIS has been prepared in respect of the proposed development. The screening information and NIS have been extensively considered by prescribed bodies and members of the

public in the public consultation process and there is no impediment to the Commission performing its obligations under Article 6(3) of the Habitats Directive and domestic implementing legislation.

8.1.4.5 Summary of matter raised

1051. Habitats Directive requires surveillance of the conservation status of habitats and species and for the exchange of information for research carried out at State and community level. There is an obligation to inform the public of the extent of Annex I habitats within or close to the application area which has not been complied with.

8.1.4.6 Applicant's response

1052. This is not relevant to the consideration of this application by the Commission. All of the information necessary to screen or conduct an AA of European sites, QIs and SCIs is set out in the NIS and the **NIS Addendum**.

8.1.4.7 Summary of matter raised

1053. Observers claim that the grant of permission for proposed development would be contrary to the Nature Restoration Law.

8.1.4.8 Applicant's response

1054. The observers purport to cite obligations under the EU Nature Restoration Law, but those obligations are not found there. What the observers have put forward instead is their preferred policy framework for achieving the legally binding targets in the Nature Restoration Law. The Government will in due course adopt the necessary additional policies and measures necessary to achieve those binding obligations. In the meantime, the planning application documentation establishes that there will be no AESI of any Natura 2000 Site for the purposes of the Habitats and Birds Directives, no significant impacts on onshore or offshore biodiversity for the purposes of the EIA Directive, and no impediment to achieving Good Environmental Status for the purposes of the Water Framework Directive or Marine Strategy Framework Directive. Submissions to the contrary are fully addressed under the relevant topic headings in this document.

8.1.4.9 Summary of matter raised

1055. Observers commented that in the absence of an appeal mechanism from the Commission, there is no compliance with Planning and Development Act, the AIE Regulations, the EPA Act and the Aarhus Convention and EU Law.

8.1.4.10 Applicant's response

1056. None of the laws cited requires an appeal mechanism. On the contrary, the 2000 Act explicitly requires an application for the CWP Project to be made directly to the Commission without provision for appeal.

8.1.5 Policy interpretation – National Level

8.1.5.1 Summary of matter raised

1057. The government has opted to prioritise the development of offshore renewable energy as a means to reduce CO2 emissions. There is no basis in law or planning policy that such reduction is more important than any other consideration. The observers consider that the State should not be bound by just the EU targets and associated fines above all else, but must consider the broader reasonableness of plans for OWFs. The Government could opt to pay EU fines given that it is likely that such fines will never be paid.

8.1.5.2 Applicant's response

1058. At the outset, reference is made to the Climate Action and Low Carbon Development Act 2015, specifically:

- section 3 which establishes the National Transition Objective, namely that the State shall, so as to reduce the extent of further global warming, pursue and achieve, by no later than the end of the year 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy; and
- section 15 which requires that relevant bodies (which includes the Commission) shall, in so far as practicable, perform their function in a manner consistent with the furtherance of the national climate objective and the objective of mitigating greenhouse gas emissions in the State. The objective of reducing greenhouse gas emissions is clearly reflected in the national policy framework discussed in **Section 4** of the **Planning Report.**

1059. Reference is made to the Environmental Protection Agency '*Ireland's State of the Environment Report*' 2024 which presents current information on the quality of Ireland's environment. The assessment is carried out every four years. In section 16, the report states: *'despite our climate action ambitions, significantly faster progress is needed to decarbonise all sectors of Ireland's economy and to implement a climate-resilient future'*. It further states *'Ireland's greenhouse gas emissions per capita are among the highest in the EU.[…] Ireland's greenhouse gas emissions in 2023 were still only 10.1% below 2005 levels, well short of Ireland's EU Effort Sharing Regulation reduction commitment of 42% by 2030'*.

1060. The absolute urgent need to act is reflected in the policy framework discussed in **Section 4** of the **Planning Report** which clearly demonstrates the strategic importance of the development and of the development of offshore wind energy to support Irish commitments toward a significant reduction of greenhouse gas emissions. It is government policy to pursue a significant reduction in greenhouse gas emissions through the development of offshore wind energy instead of accepting financial consequences.

1061. The high primacy of the climate targets is acknowledged in the Coolglass Wind Farm decision Coolglass v ACP [2026] IESC 5, where the Supreme Court found that the Commission is required to perform its functions in a manner consistent with section 15 of the Climate Action and Low Carbon Development Act 2015 (as amended) insofar as is practicable, which includes the national climate objective, set out below and which is discussed in **Section 8.1.3.5** above.

1062. Furthermore, the government has not prioritised the reduction of GHG emissions over other considerations, specifically environmental and nature conservation considerations. The NMPF requires careful consideration of environmental and nature conservation impacts of offshore development. As stated in preceding paragraphs, the planning application documentation establishes that there will be no AESI of any Natura 2000 Site for the purposes of the Habitats and Birds Directives,

no significant impacts on onshore or offshore biodiversity for the purposes of the EIA Directive and no impediment to achieving Good Environmental Status for the purposes of the Water Framework Directive or Marine Strategy Framework Directive.

8.1.5.3 Summary of matter raised

1063. In relation to the NMPF, observers stated that there is no evidence to support the CWP Project's strategic, economic or social importance to the State, or that public benefits outweigh the significant impacts upon fishing activity, and that any such conclusion would require a cost-benefit analysis to be carried out. A cost-benefit analysis would have to reflect the NMPF statement that biodiversity benefits far outweigh financial benefits. It would not be possible to mitigate impacts on fisheries, particularly on whelk fishing. The project therefore materially contravenes NMPF Fisheries Policies 1 and 2.

8.1.5.4 Applicant's response

1064. **Section 4.3** of the **Planning Report** clearly sets out the Project's strategic, economic and social importance to the State.

1065. The glossary of the NMPF defines public benefit as follows:

> *'This term is used in a number of policies and requires a proposal to consider public benefit where significant impact cannot be avoided, minimised or mitigated. Where consideration of public benefit is required, a proposal must demonstrate that the overall benefits that will result from it outweigh any significant impact on particular marine activity identified within a policy. The definition of public benefit will vary depending upon the marine activity addressed by the policy, as well as* ***proposal specific features such as scale, location, timing and nature of the proposal****. Where evidence of public benefit is put forward as part of a proposal, it is for decision makers to evaluate in a proportionate and appropriate way whether or not the public benefit of a proposal will outweigh the significant impact(s). Evaluation of public benefit should balance consideration of environmental, social (community, health), and economic factors as well as all phases of a proposal such as exploratory works, installation, operation and decommissioning. Decision makers should seek advice from the expert bodies related to the topics of policies and / or proposals where relevant, details of which may be found in supporting text throughout this NMPF'. [****Bold text added by the Applicant****].*

1066. There is ample evidence in the application documentation, particularly the **Planning Report**, of the public benefit to be accrued from the development. Crucially, the development will make the most significant contribution by a single project to the reduction of carbon emissions with a projected GHG abatement of 1.28 million tonnes of CO2eq for every operational year. This would represent 42.5% of the total carbon budget for the electricity sector in the year 2030.

1067. The Applicant has clearly demonstrated how the different factors and environmental considerations were weighed when selecting the site in the EIAR (see also **Section 8.2** of this document).The NMPF does not require the preparation of a cost-benefit analysis as part of a planning application. The reference to 'cost-benefit analyses' in the NMPF is envisaged as a support to policy creation and not a development management requirement.

1068. **Appendix A** of the **Planning Report Appendices** provides a response to NMPF Fisheries Policies 1 and 2. The development does not materially contravene Fisheries Policies 1 and 2 of the NMPF.

8.1.5.5 Summary of matter raised

1069. Observers stated that the FMMS has not been prepared in consultation with local fishing and seafood producer industries and contains ineffective mitigation measures. The Commission should disregard the FMMS as it breaches NMPF Fisheries Policy 2 requiring consultation.

8.1.5.6 Applicant's response

1070. **Appendix A** of the **Planning Report Appendices** provides the response to NMPF Fisheries Policy 2. All contents of the FMMS have been consulted on with the fisheries stakeholders and they have been invited to comment on the document through the planning process. This feedback, alongside the Commission's FIR, has informed the updated **FMMS** provided as part of the Applicant's FIR response. In summary, the **FMMS** remains fit-for-purpose and complies with the requirement of the policy.

1071. Industry feedback will inform the development of the post-consent FMMS, which will be based on policies and stakeholder feedback relevant at that time.

8.1.5.7 Summary of matter raised

1072. Observers commented that the CWP Project is non-compliant with NMPF ORE Policy 1, because there is no account taken of the carbon released from the installation of monopiles in the first 10-20m of seabed.

8.1.5.8 Applicant's response

1073. NMPF ORE Policy 1 states:

'Proposals that assist the State in meeting the Government's offshore renewable energy targets, including the target of achieving 5GW of capacity in offshore wind by 2030 and proposals that maximise the long-term shift from use of fossil fuels to renewable electricity energy, in line with decarbonisation targets, should be supported. All proposals will be rigorously assessed to ensure compliance with environmental standards and seek to minimise impacts on the marine environment, marine ecology and other maritime users'.

1074. The **Planning Report** demonstrates compliance with this policy. The Applicant also refers the observers to **Section 8.18.2** which explains the consideration of seabed disturbance within EIAR **Volume 3**, **Chapter 28 Climate - Carbon Balance Assessment** (as amended by **Section 28** of the **EIAR Addendum** (**Part 2**)).

8.1.5.9 Summary of matter raised

1075. Observers comment that the application contravenes NMPF ORE Policy 2 because there is no SEA or spatial plan. NPMF ORE Policy 2 requires that proposals must be consistent with '*national policy, including the Offshore Renewable Energy Development Plan (OREDP) and its successor. Relevant Projects designated pursuant to the Transition Protocol and those projects that can objectively enable delivery on the Government's 2030 targets will be prioritised for assessment under the new consenting regime. Into the future, areas designated for offshore energy development, under the Designated Marine Area Plan process set out in the Maritime Area Planning Bill, will underpin a plan-led approach to consenting (or development of our marine resources)'*.

8.1.5.10 Applicant's response

1076. As stated in **Section 8.3.1** of this report, the application regards a project, and does not fall under the remit of the SEA Directive. **Section 4** of the **Planning Report** demonstrate compliance with OREDP and the draft OREDP II. NMPF ORE Policy 2 specifically notes that the Relevant Projects will be prioritised for assessment. The project is a Relevant Project. The proposed development complies with NMPF ORE Policy 2.

8.1.5.11 Summary of matter raised

1077. Observers commented that the natural capital of the CWP Project site was not adequately considered in the planning application documentation and the application is in material contravention of NMPF Biodiversity Policy 3.

8.1.5.12 Applicant's response

1078. At the outset, the applicant notes that the use of the term 'nature capital' in submissions is theoretical and unspecific.

1079. The NMPF itself does not specifically define natural capital assets. On p36 of the NMPF, it provides examples and note that these deliver *'a flow of services that economies depend on, from provision of food, fuel and fibre that traded on markets, to non-market services like flood mitigation, air and water purification, and carbon sequestration, as well as less tangible benefits such as physical and mental health, inspiration and wonder*'. The NMPF also includes Biodiversity Policy 3 which specifically refers to natural capital assets.

1080. **Appendix A** of the **Planning Report Appendices** specifically responds to NMPF Biodiversity Policy 3 which considers the protection of biodiversity by reference to relevant policy criteria. Further elaboration is provided in the **Planning Report Addendum** that accompanies the Applicant's FIR response. Furthermore, the EIAR has identified and assessed the impact of the development on biodiversity. It has considered impacts to habitats assets (e.g. intertidal and subtidal habitats), species assets (phytoplankton, macroalgae, fish, shellfish, marine mammals, birds) and abiotic assets. **Annex 1** of **Appendix A** of the **Planning Report Appendices** specifically addresses ecosystem services. As stated in the aforementioned document, the development complies.

8.1.5.13 Summary of matter raised

1081. There is a breach of Protected Marine Sites Policies 1 and 3, as NIS and EIAR do not adequately assess impacts of the project with other OWF projects cumulatively. This is made worse with the use of design flexibility. There is potentially significant cumulative impacts and the development may be in contravention of NMPF Protected Marine Sites Policies 1, 2, 3 and 4.

8.1.5.14 Applicant's response

1082. **Appendix A** of the **Planning Report Appendices** provides the response to NMPF.

1083. Reference is made to EIAR **Volume 4**, **Appendix 8.4 Marine Protected Areas Assessment Report** which was submitted with the application. It considers the features identified in the MPA Advisory Group Report of 2023. It notes that the project has avoided all significant effects and introduced relevant mitigation measures to ensure the conclusion of no significant effects. The NIS submitted by

the applicant concludes no AESI on any SPA or SAC from the project on its own or in-combination with other developments. The applicant has sought to avoid significant reduction in the distribution and extent of important habitats or habitats that important species depend upon. The Applicant has also carried a detailed and robust CEA (see the **CEA Report**) and in-combination assessment (see NIS **Volume 6 - In-combination Assessment - Part 1** and **Part 2** and **NIS Addendum (Part 1** and **Part 2)**.

1084. The Applicant has submitted robust information in the EIAR and the NIS that confirms that the development is not in contravention of the Protected Marine Sites Policies of the NMPF. Where there was any outstanding doubt by the Commission, this has been dealt with by the FIR and the Applicant's response to it.

1085. The **Planning Report Addendum** confirms that there is no material contravention of the NMPF Protected Marine Sites Policies.

8.1.5.15 Summary of matter raised

1086. In relation to seascape and landscape impacts, observers submitted views that the project is non-compliant with relevant national policies, such as the NMPF Seascape and Landscape Policy 1, the National Planning Framework (NPF) National Policy Objective 41a, and the European Landscape Convention.

8.1.5.16 Applicant's response

1087. Since the application was lodged, the NPF was replaced with the Revised NPF 2025. In the new iteration, NPO 41a has been replaced with NPO 52 which aims to '*Ensure that Ireland's coastal resource is managed to sustain its physical character and environmental quality.*'

1088. The Seascape and Landscape Policy 1 of the NMPF is drafted in such manner that it allows for certain developments to proceed on the basis that a development can set out the reasons for proceeding. The background to this policy in the NMPF is set against the provisions of the European Landscape Convention and National Landscape Strategy. It clearly acknowledges under 'Key Issues for Marine Planning' that the effects of the offshore renewable energy development should be considered, noting that

> *'response to this policy should include reference to any material matters set out in relevant land-based plans such as coastal county development plans, e.g. coastal views and prospects. […] The final part of this policy identifies the need to set out the reasons for proceeding where significant adverse impacts on the seascape and landscape of the area cannot be avoided, minimised or mitigated. Where this is required, reasoning should include how optimisation of space might be achieved, what measures are proposed to minimise and mitigate significant adverse impact (if such steps are not possible, a description of why this is), as well as setting out the reasons why a given proposal should proceed in light of the likely impact. Reasoning should also include identification of any public benefits that may be achieved through the proposal to allow consideration alongside identified significant adverse impacts'.*

1089. Similarly, the Wicklow CDP refers to the European Landscape Convention and the National Landscape Strategy as the relevant policy framework against which the landscape policies were devised. The provisions of the European Convention of Landscape are considered in **Section 23.6.4** of EIAR **Volume 3**, **Chapter 23 Landscape and Visual Impact Assessment**.

1090. **Appendix A** of the **Planning Report Appendices** submitted with the planning application details the assessment of the CWP Project against the NMPF policies. Appendix A.16 specifically responds to

Seascape and Landscape Policy 1 while **Section 5.2** of the **Planning Report** elaborates on potential inconsistencies between the development and landscape policies. This section fully acknowledges that the development gives rise to some significant effects as summarised in **Table 15.**23a in **Volume 3**, **Chapter 15 Seascape, Landscape, Visual Impact Assessment (SLVIA)**. **Appendix A** of the **Planning Report Appendices** then sets out the reasons for proceeding.

1091. In relation to physical character, there is a general misconception that 'character' is narrowed to matters of aesthetic. Physical character extends to the geology and coastal processes that effect the coastline. The wording of the Revised NPF refers to 'management' of the coastal resources, without specifically elaborating on landscape. The **Planning Report Addendum** has fully addressed the Revised NPF, including NPO 52 under **Section 4.3.3**. It refers to the EIAR which has not identified significant effects giving rise to coastal erosion, as evidenced in **Volume 3**, **Chapter 6 Marine Geology, Sediments and Coastal Processes** and **Volume 3**, **Chapter 7 Marine Water Quality** of the EIAR.

1092. As discussed extensively in the **Planning Report,** the development of CWP will make the most significant contribution by a single project to the reduction of carbon emissions with a projected GHG abatement of 1.28 million tonnes of CO2eq for every operational year. This would represent 42.5% of the total carbon budget for the electricity sector in the year 2030. While the potential effects on the landscape are potentially long term, the benefits of 25 years of clean and domestic renewable energy as part of the energy mix should be given due consideration in the assessment.

1093. The CWP Project will provide an indigenous energy which will contribute national energy security.

1094. There is no impediment to Commission granting permission having considered the policy framework as set out by the Observers.

8.1.5.17 Summary of matter raised

1095. Observers commented that the CWP Project is in material contravention of NMPF Co-existence Policy 1. The applicant should have shown consideration of opportunities for coexistence and should have included alternative locations for the purpose of coexistence. There is limited to no coexistence between offshore wind and fisheries. There will be direct impacts on employment particularly in vulnerable rural areas and the Gaeltacht area. The EU legislation requires that the uses be balanced.

8.1.5.18 Applicant's response

1096. **Appendix A** of the **Planning Report Appendices** submitted with the planning application details the assessment of the CWP Project against the NMPF policies. Appendix A.11 states:

'As presented within EIAR Volume 3, Chapter 12 Commercial Fisheries, a number of measures have been adopted to facilitate co-existence, including the project WTG layout options being developed to avoid or minimise interaction with known areas of high fishing density, where possible. As avoidance is not always possible, the layouts have also been developed to increase the potential for coexistence.

[…]

The project will facilitate the operational coexistence. Fishing will not be excluded from the Project area as the array layout has considered fishing activity that occurs in the area. Infrastructure has been sited appropriately to facilitate co-existence where possible. Operational safety zones may apply around structures and would usually be up to 50m. However, given the total area of the offshore Project area, it is not expected that the impact would be significant. The design of the inter-array, interconnector and export cables will not present any restriction to fishing effort in the local area'.

1097. The design of the array facilitates coexistence but notwithstanding this, the Applicant has prepared the **FMMS** which**,** in response to concerns raised in observations and in the Commission's FIR regarding cumulative displacement effects, has been updated to provide further and more specific commitments in relation to coexistence, monitoring and adaptive management. In summary the development is not in material contravention of the NMPF Co-Existence Policy 1.

1098. The Applicant has also established a Fisheries Fund to benefit the fishing industry operating withing and around the Codling Bank area. This fund will support long-term sustainable fishing and therefore will support, indirectly, vulnerable rural areas and the Gaeltacht area.

8.1.5.19 Summary of matter raised

1099. The submission highlights that NMPF Underwater Noise Policy 1 requires submission of a Noise Assessment Statement, but none was provided.

8.1.5.20 Applicant's response

1100. Reference is made to EIAR **Volume 3, Chapter 11 Marine Mammals** which states that the chapter provides the requisite information for a Noise Assessment Statement as required under Underwater Noise Policy 1 of the NMPF. The same statement is reiterated under **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology**. Furthermore, an assessment of the impact is considered in Impact 2 of the aforementioned Chapter 9 and impact 1 – 9 of Chapter 11. The Applicant also refers to the updated **MMMP** submitted with the FIR response which seeks to ensure appropriate controls are in place to manage environmental risks associated with the construction and operation of the offshore components of the CWP Project. **Volume 4 - Assessment of Implications for Special Areas of Conservation** of the NIS (complimented by the **NIS Addendum (Part 1)**) also presents consideration of underwater noise in the context of European designated sites. The information provided by the Applicant is sufficient in addressing the NMPF requirements in relation to underwater noise.

8.1.5.21 Summary of matter raised

1101. The observer highlights that the NMPF supports floating wind. Paragraph 141 of Chapter 3 Site Selection and Consideration of Alternatives of the EIAR does not adequately assess floating wind and site selection is based on commercial reasons.

8.1.5.22 Applicant's response

1102. ORE Policy 1 of the NMPF requires the achievement of offshore renewable energy targets. It does not specify that all offshore renewable energy proposals should be for floating wind. Reference is also made to the section Background and Context of Chapter 13 – Energy - Offshore Renewable which states:

> *'The term 'offshore renewable energy' covers a number of technology types and includes wind (fixed and floating), wave and tidal, all of which rely on harnessing the motion of wind or water to generate energy. The initial focus for ORE will be in developing wind in the shallower waters off Ireland's eastern and southern coasts, in line with current technology maturity and our target of achieving 5GW of capacity in offshore wind by 2030. The expected rapid development of emerging technologies, including offshore floating wind power, will facilitate development in the deeper waters off our southern and western coasts in the medium to longer term'.*

1103. The NMPF clearly envisages that fixed technology would be used on the east coast, with floating technology to be deployed to the south and west in the medium to longer term.

1104. Paragraph 141 of EIAR **Volume 2**, **Chapter 3 Site Selection and Consideration of Alternatives** provides a rationale for not using floating technology. In addition, the prioritisation of fixed over floating was a government decision.

8.1.5.23 Summary of matter raised

1105. Observers commented that the CWP Project target generating capacity exceeds the carrying capacity of the environment, as specified within the OREDP 2014 and is not on a site identified in the OREDP. The 2014 ORDEP, including the associated SEA, is outdated and inadequate. The lack of an up-to-date spatial framework with SEA means that the Commission is not able to undertake robust appraisal and environmental assessment of Phase 1 Projects.

8.1.5.24 Applicant's response

1106. The OREDP and associated SEA considered several existing projects, including the original CWP array site (1100 MW). These existing and proposed projects were taken into account in the cumulative assessment undertaken for the OREDP. The SEA indicated that the East Coast (south) could accommodate 3000-3300 MW of fixed wind without likely significant effects on the environment after mitigation has been taken into account. This indicates that the CWP Project can be developed in conjunction with other sites in the East Coast (South) area without likely significant effects at a plan level (See **Section 4.3.14** of the **Planning Report)**.

1107. The NMPF provides the relevant framework for the assessment of planning applications for marine developments, including wind, as evidenced under section 293(2) of the act. The NMPF was adopted in response to the transposition of the Maritime Spatial Planning Directive, specifically article 4. The plan was subject of a full SEA. Further response in relation to the adequacy of the policy framework can be found under **Section 8.1.3.2** of this report.

8.1.5.25 Summary of matter raised

1108. Observers allege the Draft OREDP II has not been taken into account, and there is no evidence that updated data has been considered in the NIS/EIAR which is important for the Commission to ensure AA carried out in accordance with best scientific evidence.

8.1.5.26 Applicant's response

1109. As can be seen **Section 4.3.16** of the **Planning Report** which discusses OREDP II, the project aligns with the Draft OREDP II. The plan also specifically notes the role of the Phase 1 Projects in delivering half of the 2030 offshore renewable energy target.

1110. Reference is made to the responses in **Section 5** of this report which elaborates further on the use of best available scientific evidence.

8.1.5.27 Summary of matter raised

1111. Observers stated that a cost benefit analysis, including a comparison of alternatives, has not been produced to satisfy the Public Expenditure Code which forms part of government policy to which the Board is obliged to have regard, inter alia, under section 143 of the Planning and Development Act 2000, as amended.

8.1.5.28 Applicant's response

1112. The **Planning Report** submitted as part of the planning application demonstrates that the development is of strategic, economic or social importance to the State. There is no requirement in planning policy or legislation to carry out a cost-benefit analysis as part of the planning application process. The Public Spending Code[5] guides financial decision making in the public sector and is not a matter for consideration by the Commission. The Applicant also notes that the consideration of alternatives within the remit of the code applies to programmes which set out objectives and to public projects. As stated in preceding sections referring to SEA, the project is neither a plan nor a programme. It is also not a public project. The introduction of the Public Spending Code is very clear to that effect insofar as it states: *'All Irish public bodies are obliged to treat public funds with care, and to ensure that the best possible value-for-money is obtained whenever public money is being spent or invested*.' On this basis, no cost-benefit analysis of the CWP Project is required.

8.1.6 Policy interpretation – Local Level

8.1.6.1 Summary of matter raised

1113. Observers contend that the project is inconsistent with the introduction to Chapter 7 of the Wicklow County Development Plan in so far as it will have adverse effects on tourism business, fishing, chartering and sailing activity.

8.1.6.2 Applicant's response

1114. At the outset, the Applicant notes that matters pertaining to tourism in Wicklow are covered by Chapter 11 of the CDP and not Chapter 7. The quote provided by observers is not an objective of the CPD but rather provides the context in which the CDP Tourism and Recreation policies and objectives are drafted.

1115. Reference is made to **Volume 3, Chapter 29 Population** and **Section 29** of the **EIAR Addendum (Part 2)** which addresses the issues of tourism and employment. Generally, the chapter has identified that the construction and operation and maintenance phases of the project would have negligible impact on tourism economy.

1116. Furthermore, the observers do not provide evidence as to why the development would have adverse effects on sailing as there are very limited restrictions to sailing activities or chartering either at the array site or along the cable corridors during construction. Any disruption to activities due to construction, specifically laying of cables outside of the limits of the Dún Laoghaire Harbour will be minor and temporary and would not prevent sailing activity or chartering in the area.

[5] https://assets.gov.ie/20041/e8edcfee69f84876990fa6ebf4bed13f.pdf

1117. As has been demonstrated in the response to observations relating to NMPF Co-Existence Policy 1, co-existence is facilitated with fishing activities, which in the context of recreation and tourism, are understood by the Applicant as being recreational fishing.

1118. The development is aligned with Chapter 11 Tourism and Recreation of the Wicklow CDP.

8.1.6.3 Summary of matter raised

1119. In relation to the potential effects of the CWP Project on seascape and landscape, observers submitted views that the project is non-compliant with relevant policies and objectives of the Wicklow County Development Plan.

8.1.6.4 Applicant's response

1120. The policies and objectives of the Wicklow CDP are fully addressed in **Section 4.6.1** and **Section 5.2.1** para 339 to 366 and 600 to 609 of the **Planning Report**. CPO 19.8 is identified as a policy within Coastal Cell 8 for Wicklow Head / Kilcoole in Chapter 19 Marine Spatial Planning and CZM. These policies seek to address the different characteristics or pressures that apply to the varied coastline. In the **Planning Report**, the applicants have accepted that the development is inconsistent with the certain landscape and coastal zone management policies contained in the CDP. CWPL has also set pit the reasons for proceeding in respect of Seascape and Landscape Policy 1 of the NMPF. The Applicant's position is that the relevant legislation clearly prioritises consistency with the NMPF over consistency with county development plans and that the NMPF deliberately introduces flexibility in relation to SLVIA considerations.

1121. While the Commission can only grant permission for developments that materially contravene in the NMPF in specified circumstances, it has a wide discretion to grant permission for developments that materially contravene county development plans, provided it has had regard to them.

1122. The NMPF recognises the importance of seascape and landscape, but, in contrast to county development plans, does not provide unqualified protection for them. Rather Seascape and Landscape Policy 1 acknowledges that permission may be granted where there are adverse impacts on seascape and landscape:

> "*Proposals should demonstrate how the likely significant impacts of a development on the seascape and landscape of an area have been considered. Proposals will only be supported if they demonstrate that they, in order of preference: a) avoid, b) minimise, or c) mitigate landscape of the area. significant adverse impacts on the seascape and d) If it is not possible to mitigate significant adverse impacts, proposals must set out the reasons for proceeding.*"

1123. The Applicant has sought to avoid and minimise insofar as possible significant effects. In particular, the Applicant has sought to reduce the number of WTGs.

1124. The Applicant notes that there are significant adverse impacts on a small number of views protected under the Wicklow County Development Plan and the Greystones – Delgany and Kilcoole Local Framework Plan. The reasons for proceeding are set out in the **Planning Report**. The CWP Project is absolutely essential to Ireland's statutory climate mitigation goals, including the Climate Action Plan targets.

1125. In that regard, the NMPF's flexible approach to seascape and landscape impacts is an essential to the achievement of Ireland's statutory climate targets. It represents one of the ways in which those statutory targets are weaved into the planning code. In the Coolglass Wind Farm judgment the Supreme Court [2026] IESC 5, recognises that the Commission must act "*in a manner consistent with*" section 15 of the Climate Act 2015 (as amended), "*insofar as is practicable*" when performing its

functions, for example when it is deciding on an application for development consent. In that regard, the Court underscored that "*the pursuit and achievement of the climate objective is already woven into the planning process to a significant degree*". The Court goes on to state that "[b*]y the time a planning decision comes to be made, the manner in which it is proposed the State will meet its climate objectives has been set at a national level, percolating down to a local level through the specific context of the development plan. A planning authority is entitled to commence into consideration with a presumption that compliance with the development plan will itself be compliant with its s. 15(1) duty*".

1126. The *Coolglass* case related to an onshore wind farm and whether Commission, in refusing permission, had performed its functions in accordance with section 15. The Supreme Court in *Coolglass* was specifically considering the material contravention of a development plan, but its analysis is equally relevant to the NMPF. It noted in paragraph 109, on the relevance of s.15 to individual planning decisions, that: "*considerations of climate change mitigation are already woven into the detail of the planning code, sometimes in statute, and sometimes in the detailed strategies, guidelines, and plans, which planning authorities are required to have regard to, or indeed to implement*" (our emphasis).

8.2 Site selection and consideration of alternatives

1127. The following section provides thematic responses to matters raised by third parties in relation to site selection and consideration of alternatives. The matters raised have been responded to under the following sub themes:

- Project level site selection and consideration of alternatives
- Strategic level site selection and consideration of alternatives

8.2.1 Project level site selection and consideration of alternatives

8.2.1.1 Summary of matter raised

1128. Observers objected to the granting of consent for the CWP Project on the basis of the application failing to provide satisfactory alternatives for the array site. The following specific matters were raised:

- It is stated that all alternatives for the array site are within the same area. Observers also noted that the criteria used for site selection in 2002 does not reflect the modern situation including advances in technology, environmental awareness, and designation of additional SACs and SPAs. Furthermore, the comparison of environmental effects appears to have been based on concerns regarding ferry routes rather than pressing environmental constraints and fishing areas. A comparison of environment effects should be provided in relation to the alternatives considered.
- The Applicant has admitted to selecting the array site on wholly economic grounds due to the reduced costs of foundations in shallow waters. No regard was had to the effects on seascape or landscape.

8.2.1.2 Applicant's response

1129. EIAR **Volume 2**, **Chapter 3 Site Selection and Consideration of Alternatives** describes how the location of the CWP Project array site was originally determined, supported by additional analysis of current legislation, policy and environmental and technical constraints to validate the original site selection conclusions. The information provided in this chapter of the EIAR is sufficient to meet the requirements of the EIA Directive and adheres to the EIAR Guidelines (EPA, 2022).

1130. **Section 3.4** of **Chapter 3 Site Selection and Consideration of Alternatives** details the consideration of alternative array sites, including alternative sites away from Codling Bank and the east coast of Ireland. Where reasonable alternatives exist, a comparison of environmental effects is provided. This formed part of a multi criteria analysis that informed each stage of the array site selection process. This includes the consideration of technical and environmental constraints, as well as factors that would influence the economic viability of the project.

1131. **Section 3.8** of **Chapter 3 Site Selection and Consideration of Alternatives** identifies and potential seascape and landscape effects as key consideration at each stage of the array site selection process. For example, Section 3.8.3 notes the selection of Codling Bank over other potential sites on the east coast of Ireland due to its location, shape and extent, allowing for a reduced visual impact compared to alternatives sites.

1132. **Section 3.9.2** of **Chapter 3 Site Selection and Consideration of Alternatives** also refers to the WTG layout design principles adopted by the Applicant to reduce the visual impacts of the offshore infrastructure.

8.2.1.3 Summary of matter raised

1133. Observers commented that the CWP Project is located too close to the coastline and should be located further offshore. It was noted that the average distance from shore of OWFs under construction in the EU in 2020 was 42 km (Wind Europe Offshore Annual Report 2020). This compares to a 12 km distance to shore for CWP Project. The development should not be permitted within the 12 nm (22 km) of the coast to reduce visibility from the shore, and to limit environmental and economic impacts.

8.2.1.4 Applicant's response

1134. EIAR **Volume 2**, **Chapter 3 Site Selection and Consideration of Alternatives** describes the site selection process and consideration of alternatives carried out by the Applicant to determine the most appropriate location and design for the CWP Project. More specifically, **Section 3.8.6** of **Chapter 3 Site Selection and Consideration of Alternatives** details the current constraints that would restrict the placement of WTGs further offshore.

1135. Furthermore, as referenced in **Section 3.6.6** of the chapter, the Wind Energy Ireland (WEI) paper 'Briefing paper on proposals to block fixed-bottom wind turbines' (WEI, 2021) notes that '*as of the end of 2020, there were 7.8 GW of offshore wind capacity installed in Europe from 65 offshore wind farms located closer than 22 km [12 nm] from the coastline. Another 16 GW of projects within that distance either have planning permission or have applied for it.*' In 2023 the Awel y Mor OWF project was consented off the Welsh coast, and is comparable to the CWP Project in many ways. It is located 10.5 km off the coast in the Irish Sea, with a maximum total area of 78 km^2 and a maximum of 50 WTGs with a tip height of up to 332 m.

1136. Notwithstanding the above, EIAR **Volume 2**, **Chapter 3 Site Selection and Consideration of Alternatives** identifies potential seascape and landscape effects as key consideration at each stage of the array site selection process. For example, **Section 3.8.3** notes the selection of Codling Bank over other potential sites on the east coast of Ireland due to its location, shape and extent, allowing for a reduced visual impact compared to alternatives sites.

1137. **Section 3.9.2** of **Chapter 3 Site Selection and Consideration of Alternatives** also refers to the WTG layout design principles adopted by the Applicant to reduce the visual impacts of the offshore infrastructure. The Applicant has sought to reduce the number of WTGs as far as possible. This is evident in the proposed reduction in the number of WTGs from up to 140 (at EIA Scoping) to 75 (Option A) or 60 (Option B). Other steps taken by the Applicant to reduce the visual impacts of the offshore

infrastructure is describe in **Section 15.9** of **Chapter 15 Seascape, Landscape and Visual Impact Assessment**.

8.2.1.5 Summary of matter raised

1138. Observers questioned the technology proposed for the CWP Project, indicating that what is proposed is outdated. It is suggested that the Applicant should explore alternative technologies, such as floating turbines, which can be located further offshore.

8.2.1.6 Applicant's response

1139. Development of the CWP Project to date has involved extensive engagement with WTG suppliers to identify WTG models that are likely to be in production at the point of construction. This requires looking ahead at the most efficient and technologically advanced solutions, to maximise generating capacity in line with the project objectives whilst also minimising the number of WTGs as far as is practicable.

1140. As described in **Section 3.8.6** of EIAR **Volume 2**, **Chapter 3 Site Selection and Consideration of Alternatives**, while newer floating wind technology allows for the development of WTGs further from the coast in deeper water, it is less established than the fixed bottom technology that can be installed within the Codling Bank area. In summary, floating technology is not currently available at the commercial scale required to meet the Irish Government's renewable energy targets. By prioritising sites appropriate for fixed bottom technology, Government policy has ensured lower energy costs for consumers and higher certainty that developers can rely on tried and tested construction methods and mitigation to deliver the projects quickly and with the best chance of avoiding significant environmental effects.

1141. Finally, it should be noted that the Applicant is proposing advanced, technical solutions for other elements of the project, such as a novel onshore substation design to reduce the onshore development footprint (see **Section 3.16** of EIAR **Chapter 3 Site Selection and Consideration of Alternatives**).

8.2.1.7 Summary of matter raised

1142. Observers objected to the location of the CWP Project array site due to the potential impacts to sandbank habitat and associated biodiversity. It is stated by a number of observers that the array site is located on Annex I habitat 'sandbanks slightly covered by water all the time'.

8.2.1.8 Applicant's response

1143. Potential impacts to subtidal habitats and species associated with Codling Bank are presented in EIAR **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology**. In summary, the Applicant has undertaken robust characterisation of the benthic environment and confirms that there is no biogenic or geogenic reef habitat within the planning application boundary. Notwithstanding this, the Applicant recognises the ephemeral nature of biogenic reefs and as such the Applicant has committed to undertaking pre-construction surveys to inform any avoidance of ephemeral biogenic habitats that may be present at that time. Furthermore, taking into account the primary mitigation measures described in **Section 8.9** of the chapter, there are no significant effects predicted on subtidal ecology receptors. Similarly, no significant effects are predicated on associated species including fish (see **Chapter 9 Fish and Shellfish Ecology**), ornithology (see **Chapter 10 Ornithology**) and marine mammals (see **Chapter 11 Marine Mammals**).

1144. Updates to the abovementioned impact assessments have been made in response to the Commission's FIR. These updates, presented in the **EIAR Addendum**, have not altered the assessment conclusions.

1145. **Section 8.1.3.4** of this document responds to the assertion that the CWP Project is being proposed on Annex I habitat that should have been designated an SAC.

8.2.1.9 Summar of matter raised

1146. Observers questioned the consideration of commercial fisheries during the site selection and consideration of alternatives process. Inadequacy of alternatives and site selection consideration results in what the EIAR acknowledges to be potentially a very significant impact on commercial fishing and the whelk, lobster and crab industries.

8.2.1.10 Applicant's response

1147. EIAR **Volume 2**, **Chapter 3 Site Selection and Consideration of Alternatives** describes how the location of the CWP Project array site was refined to avoid, where possible, areas with a high density of commercial fishing activity. The shallowest areas associated with Codling Bank and India bank were identified as areas with an increased density of whelk fishing activity and were therefore avoided. Similarly, an area to the north east of the proposed array site was identified by the Howth Fishermen's Association as an area frequently trawled for ray and skate, and therefore removed from the study area for the array site.

1148. Data presented in **Section 3.8.4** of EIAR **Volume 2**, **Chapter 3 Site Selection and Consideration of Alternatives** highlights the extent of commercial fishing along the east coast of Ireland (notably pot fishing) and reflects the challenge for ORE development, or any other marine development, to avoid fishing areas entirely. The assessment of potential effects in EIAR **Volume 3**, **Chapter 12 Commercial Fisheries** (and as updated in the **EIAR Addendum (Part 1)**) and updated **FMMS** reflects this and describes the Applicant's intention to promote co-existence and to reduce potential disruption to commercial fishing practices as far as reasonably practicable.

8.2.1.11 Summary of matter raised

1149. Observers stated that OFWs should be excluded from high biodiversity and ecologically sensitive areas containing threatened marine species and habitats. It is noted that the CWP Project would, in its current location, negatively impact numerous Natura 2000 sites.

8.2.1.12 Applicant's response

1150. EIAR **Volume 2**, **Chapter 3 Site Selection and Consideration of Alternatives** describes how the location of the CWP Project array site was originally selected, and how the specific location of the array site was refined to avoid, where possible, areas with high ecological value. Potential effects to the qualifying features of Natura 2000 sites are considered in detail within the NIS and **NIS Addendum**, which concludes that there will be no AESI on any SPA or SAC from the project on its own or in-combination with other developments.

8.2.2 Strategic level site selection and consideration of alternatives

8.2.2.1 Summary of matter raised

1151. Observers argue that alternatives to ORE are possible, stating that there are numerous less sensitive [onshore] locations that could host OWFs without jeopardising biodiversity. Examples include state-controlled areas such as Coillte's forestry plantations and Bord na Móna's decommissioned and spent boglands. These sites offer a strategic alternative for wind energy development with considerably lower conservation value. Furthermore, the economic argument favours land-based wind farms, which are approximately three times less costly per megawatt (MW) compared to offshore installations.

8.2.2.2 Applicant's response

1152. A key objective of the CWP Project is to contribute to the Irish Government's offshore renewable energy targets in support of the Climate Action Plan. Alternative forms of energy generation (i.e. projects that are not OWFs) are not feasible alternatives when considering this objective.

8.3 Project design and approach to construction

1153. The following section provides thematic responses to matters raised by third parties in relation to the project design and approach to construction. The matters raised have been responded to under the following sub themes:

- Project definition
- Project design and construction details
- Site investigations and pre-construction surveys
- Decommissioning and rehabilitation

8.3.1 Project definition

8.3.1.1 Summary of matter raised

1154. Observers referred to the Commission's opinion on design flexibility for the CWP Project, suggesting a lack of project definition and information gaps from which to base an EIA and AA. Observers noted that the design flexibility afforded to the applicant gives rise to scientific doubt, is too wide to be consistent with the obligations under the EIA Directive and goes beyond what is envisaged by Circular PL11/23. If further geophysical surveys are required to establish the final project design, then the information should be collected before any consent process is attempted.

8.3.1.2 Applicant's response

1155. Wherever possible the location and detailed parameters of the CWP Project components are identified and described in full within the EIAR. However, for the reasons set out in EIAR **Volume 2**, **Chapter 4 Project Description**, certain design decisions and installation methods will be confirmed post-consent, requiring a degree of flexibility in the planning consent. Under section 287A / B of the Planning and Development Act 2000 (as amended) the Applicant procured an opinion from the Commission under 287B to confirm that it was appropriate that this application be made and determined before certain details of the development are confirmed. The Commission issued that opinion on 22 March 2024 (ACP-318588-23), as amended on 25 April 2024 (ACP-318588M). This was included with the planning application.

1156. All the design elements within the scope of Sections 287A and B are described in the planning application by way of options, parameters or a combination of options and parameters, and the planning application was made in accordance with the details or groups of details specified in the opinion. This fully aligns with the requirements of the Planning and Development Act 2000 (as amended) and Circular Letter: MPP 01/2023 r.e. An Opinion on Design Flexibility for Maritime Development.

1157. It should be noted that the Applicant already has a high degree of confidence as to the WTG locations and the alignment of the offshore export cables. This is reflected in the planning application which identifies specific locations and alignments for the offshore infrastructure, with limited flexibility sought in the form a Limit of Deviation (LoD). The design flexibility approved by the Commission has been assessed in full compliance with the EU Directives, including the EIA and Habitats Directives, as is demonstrated throughout the EIAR and NIS. The Applicant is not seeking flexibility for the onshore elements of the project.

1158. The undertaking of addition geophysical surveys post consent to supplement existing data is typical for OWFs and is necessary to identify changes that will occur in the marine environment after the date of application. The main purpose of these surveys is therefore to validate the final approaches to construction, including health and safety management details. They will also provide information on any changes to habitats on the seabed that would need to be worked around or mitigated.

8.3.1.3 Summary of matter raised

1159. Observers queried why the Applicant is unable to confirm which sections of the offshore cables will be buried, noting that the extent and location of offshore cable protection is unconfirmed.

8.3.1.4 Applicant's response

1160. EIAR **Volume 2**, **Chapter 4 Project Description** (and as updated by the **EIAR Addendum (Part 1)**) explains that Applicant will, where practicable, bury all cables to a minimum depth of cover. In cases where depth of cover is inadequate, cable protection will be implemented as mitigation to avoid risks to other marine operations. Anticipated locations of cable protection are provided in EIAR **Volume 4**, **Appendix 4.1 Cable Protection Locations**.

1161. Updates to the planning application documents (see **Section 4.1** of this document) have been made to confirm the intention to lay offshore export cables at a minimum depth of cover of 3m in the zone of greater burial depth adjacent to Dún Laoghaire Harbour. The Applicant does not intend to install secondary cable protection in the zone of greater burial depth.

8.3.1.5 Summary of matter raised

1162. Observers stated that the 100m limit of deviation for the locations of the OSSs and WTGs and the 250m deviation for offshore export cables make the impacts of construction impossible to estimate.

8.3.1.6 Applicant's response

1163. **Section 5.10** of EIAR **Volume 2**, **Chapter 5 EIA Methodology** describes the approach taken by the Applicant to address design flexibility in the EIA. **Section 5.10.6** notes that each EIAR chapter

assesses the specific preferred location or alignment of the proposed infrastructure, while also considering the proposed LoD for that infrastructure, where relevant.

1164. Where relevant, the LoD assessment is provided in a separate appendix to the main EIAR chapter, which typically demonstrates that the LoD would not give rise to new effects or a materially different magnitude of impact. However, where alternative locations could give rise to new effects or a materially different magnitude of impact, then this has been fully assessed in the main chapter. Therefore, all potential impacts from the flexibility sought have been assessed, as is recoded in detail in the application documents.

8.3.1.7 Summary of matter raised

1165. Observers described the description of the development as inadequate, noting that drawings are indicative only.

8.3.1.8 Applicant's response

1166. EIAR **Volume 2**, **Chapter 4 Project Description** (and as updated in the **EIAR Addendum (Part 1)**) provides a detailed description of the CWP Project in line with the requirements of the of the EIA Directive and the EIAR Guidelines (EPA, 2022).

1167. The **Planning Drawings** have been prepared in accordance with the requirements of the of the Planning and Development Regulations 2001 and present the CWP Project in line with the Commission's s287B opinion.

8.3.2 Project design and construction details

8.3.2.1 Summary of matter raised

1168. Observers raised concerns about the disturbance to the seabed, referencing a range of values for the disturbed area as a result of cable and foundation installation, including seabed clearance activities. It was also noted that the installation of the offshore cables will require 40 m wide trenches.

8.3.2.2 Applicant's response

1169. It is not clear to the Applicant how certain values referenced in the observations have been calculated, however the area of temporary seabed habitat disturbance associated with each offshore component, including seabed preparation, is presented in **Table 8-12** of EIAR **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology**.

1170. The volume of seabed material that will be disturbed during sand wave clearance activities within the array site and the OECC is defined in **Table 4-3** of EIAR **Volume 2**, **Chapter 4 Project Description**.

1171. The width of seabed affected by offshore cable installation is as specified in **Section 3.6.4** and **3.7.5** of **Chapter 4 Project Description**. In summary, a 15 m temporary disturbance width is described and assessed in the EIA for cable installation, encompassing the pre-lay grapnel run (PLGR), footprint of the burial tool on the seabed, trenching works and any spoil that may be generated at either side of the trench. The footprint for sand wave reduction (where required) would be additional to this, as detailed **in Section 4.5.6**.

1172. At the landfall, for open cut cable duct installation across Dublin Bay, a 40 m temporary disturbance width over a length of 300 m per cable is described and assessed in the EIA (see **Section 4.8.4** of **Chapter 4 Project Description**). This temporary disturbance width encompasses the trenching works, as well as the footprint for associated excavators and any spoil that is be generated at either side of the trench. Across the full suite of topics, the EIAR (and as updated by the **EIAR Addendum**) concludes no likely significant effects as a result of works to install offshore foundations and cables following implementation of mitigation. Similarly, the NIS (and as updated by the **NIS Addendum**) predicts no AESI following implementation of mitigation.

8.3.2.3 Summary of matter raised

1173. Observers questioned why scour protection is required at all WTG and OSS foundation locations.

8.3.2.4 Applicant's response

1174. Scour protection is required to ensure that erosion of the seabed around the monopile foundation does not affect the stability or integrity of the structure. The metocean conditions at the CWP Project array site, as described in EIAR **Volume 3**, **Chapter 6 Marine Geology, Sediments and Coastal Processes**, dictate the requirement for scour protection at all WTG and OSS locations.

8.3.2.5 Summary of matter raised

1175. Observers noted that 294 km of offshore cables will be installed and up to 75 WTGs. It is suggested that this would require 1.5 million tonnes of material to be imported for seabed protection and the 'levelling' of 2,486 acres of seabed.

8.3.2.6 Applicant's response

1176. Details including the total length of offshore cables, the extent of cable protection and volumes of scour protection for WTGs and OSSs are provided in EIAR **Volume 2**, **Chapter 4 Project Description**.

1177. The area of temporary seabed habitat disturbance associated with each offshore component, including seabed preparation, is presented in **Table 8-12** of EIAR **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology**. The total area presented in this chapter for temporary seabed habitat disturbance is the key parameter for the purposes of the assessment, and considers all relevant seabed activities, not only sand wave levelling.

8.3.2.7 Summary of matter raised

1178. Observers stated that the area of scour protection to be installed for WTGs, OSSs and for offshore cables is calculated to be at least 579,520 m^2.

8.3.2.8 Applicant's response

1179. The area of long term seabed habitat loss associated with each offshore component is presented in **Table 8-12** of EIAR **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology** (as updated by **Section 8** of the **EIAR Addendum (Part 1)**).

1180. Within the array site, coarse sediment habitats cover c. 99.997% of the habitats present. Based upon the intended locations of the WTGs and OSSs including scour protection and IACs including cable protection, 0.39% of the coarse sediment habitats within the array site have the potential to be impacted by long-term habitat loss. However, considering the LoD for the location of WTGs and OSSs including scour protection and IACs including cable protection, it is considered that 0.40% of the coarse sediment habitats within the array site have the potential to be impacted by long-term habitat loss.

1181. Coarse sediment habitats cover c. 80% of the OECC and based on the PD and representative scenario parameters, and assuming cable protection is installed in the representative locations identified, the maximum area of coarse sediment habitats with potential to be impacted by long-term habitat loss during the operational phase accounts for c. 0.25% of the OECC. When considering the LoD for the offshore export cables, as set out in the Project Description, 0.28% of the coarse sediments in the OECC have the potential to be impacted by long-term habitat loss.

8.3.2.9 Summary of matter raised

1182. Observers indicated that the assumed 3.5 hours of impact piling per WTG is incorrect and will take significantly longer than this.

8.3.2.10 Applicant's response

1183. The Applicant confirms that all information provided on WTG and OSS foundation impact piling within EIAR **Volume 2**, **Chapter 4 Project Description** is correct.

8.3.2.11 Summary of matter raised

1184. Observers commented that the assumed grout volume of 25 m^3 per monopile is incorrect, noting that the value should be greater than this.

8.3.2.12 Applicant's response

1185. Grout is typically used to provide a structural connection between the transition piece and monopile. This represents a small section of the overall monopile length. The Applicant confirms that all information provided on WTG and OSS foundation design within EIAR **Volume 2**, **Chapter 4 Project Description** is correct.

8.3.2.13 Summary of matter raised

1186. Observers commented that the total volume of WTG monopile drill arisings (24,615 m^3), is not clearly described.

8.3.2.14 Applicant's response

1187. The potential requirement for drilling to facilitate WTG monopile installation is described in **Section 4.6.2** of EIAR **Volume 2**, **Chapter 4 Project Description**. Here it states that, based on currently available seabed data, it is estimated that 15% of the monopile locations, including OSS locations, for each layout option may require drilling (i.e. 12 locations for WTG Layout Option A and 10 locations for WTG Layout Option B). As the volume of drill arisings per WTG / OSS foundation is known, the total volume of drill arisings for each WTG Layout Option can be established as 24,516 m^3 for WTG Layout Option A (as opposed to 24,615 m^3 as indicated by the observers). This information is provided in **Table 4-6** of EIAR **Chapter 4 Project Description**.

8.3.2.15 Summary of matter raised

1188. Observers commented that the total volume of scour protection per WTG location (5,365 m^3) is incorrect. It should be greater than this, assuming a scour protection height of 3.1 m.

8.3.2.16 Applicant's response

1189. The Applicant confirms that all information provided on WTG scour protection design within EIAR **Volume 2**, **Chapter 4 Project Description** is correct.

8.3.2.17 Summary of matter raised

1190. Observers stated that the WTG and OSS monopile foundation shall be driven into the seabed to unspecified depths.

8.3.2.18 Applicant's response

1191. WTG and OSS embedment depths for each WTG Layout Option are described in of EIAR **Volume 2**, **Chapter 4 Project Description**. The depths are specified in **Table 4-5** and **Table 4-15**, respectively.

8.3.2.19 Summary of matter raised

1192. Observers commented that intensive pile driving for WTG and OSS monopiles is planned for 12 months of the total four year construction programme.

8.3.2.20 Applicant's response

1193. As detailed in **Section 4.4** of EIAR **Volume 2**, **Chapter 4 Project Description**, WTG and OSS foundation installation is anticipated to last for a total duration of 12 months, however actual pile driving for monopile foundation installation will last for a fraction of this time. **Table 4-6** presents the monopile installation parameters associated with WTG Layout Options A and B, including total piling hours (262.5 hours for WTG Layout Option A and 210 hours for WTG Layout Option B). Similarly, **Table 4-16** presents the total piling hours for OSS monopile installation (10.5 hours for both WTG Layout Options).

1194. The processes for transporting and installing the WTG and OSS monopiles are described in **Section 4.6.2** and **Section 4.7.3** of EIAR **Chapter 4 Project Description**, respectively.

8.3.2.21 Summary of matter raised

1195. Observers stated that the Applicant has made no commitment to bury offshore cables, and that burial will only occur where practicable to do so.

8.3.2.22 Applicant's response

1196. **Section 4.6.5** of EIAR **Volume 2**, **Chapter 4 Project Description** explains that the Applicant will, where practicable, bury all cables to a minimum depth of cover. In cases where depth of cover is inadequate, cable protection will be implemented as mitigation to avoid risks to other marine operations. It should be noted that cable burial is the preferred method of protection, and secondary cable protection will only be used where cable burial is not appropriate or achievable. Anticipated locations of cable protection are provided in EIAR **Volume 4**, **Appendix 4.1 Cable Protection Locations**.

1197. Updates to the planning application documents (see **Section 4.1** of the document) have been made to confirm the intention to lay offshore export cables at a minimum depth of cover of 3m in the zone of greater burial depth adjacent to Dún Laoghaire Harbour. The Applicant does not intend to install secondary cable protection in the zone of greater burial depth.

8.3.3 Site investigations and pre-construction surveys

8.3.3.1 Summary of matter raised

1198. Observers note that inadequate detail is provided with regard to the details of the planned pre-construction survey activities.

8.3.3.2 Applicant's response

1199. The types of pre-construction surveys that will be conducted are described in **Section 4.5.1** of EIAR **Volume 2**, **Chapter 4 Project Description**. The potential effects of these surveys are considered, where relevant, in the EIAR topic chapters (**Chapters 6 – 32**) (and as updated by the **EIAR Addendum**). For example, **Section 11.10.1** of EIAR **Volume 3**, **Chapter 11 Marine Mammals** (as updated by the **EIAR Addendum (Part 1)**) provides an assessment of potential auditory injury to marine mammals from pre-construction surveys.

8.3.3.3 Summary of matter raised

1200. Observers expressed concerns about the need to undertake further geotechnical and geophysical surveys in advance of construction. These surveys will have an impact on the ecosystem and on Natura 2000 sites and their associated ecology / biodiversity importance.

8.3.3.4 Applicant's response

1201. The undertaking of pre-construction surveys to supplement existing data is typical for OWFs and is necessary to identify changes that will occur in the marine environment after the date of application. It is also critical to de-risk the project from an engineering and health and safety perspective.

1202. The types of pre-construction surveys that will be conducted are described in **Section 4.5.1** of EIAR **Chapter 4 Project Description**. The potential effects of these surveys are assessed in the NIS, and where relevant, in the EIAR topic chapters (**Chapters 6 – 32**).

8.3.4 Decommissioning and rehabilitation

8.3.4.1 Summary of matter raised

1203. Observers stated that there are no proposals to decommission any of the WTG or OSS foundations, or the associated scour protection. The Rehabilitation Schedule involves leaving artificial structures in situ which constitutes dumping at sea.

8.3.4.2 Applicant's response

1204. In accordance with Section 96 of the MAP Act 2021, as amended, prior to the expiration of the CWP Project MAC, the Applicant is required to rehabilitate the MAC consent area and any other part of the maritime area affected by the CWP Project.

1205. The Applicant's proposed approach to rehabilitation (i.e. decommissioning) is described in the **Rehabilitation Schedule** which accompanies the CWP Project planning application. For WTG and OSS foundations, including scour protection, a summary of the Applicant's proposed approach to rehabilitation is provided in **Section 4.4.3**.

1206. It is recognised that, should development permission be granted, this **Rehabilitation Schedule** will form a binding commitment on the Applicant. It is anticipated that the **Rehabilitation Schedule** will need to be updated throughout the lifecycle of the CWP Project to reflect changes to regulatory requirements and to incorporate any new guidance and improvements in knowledge and understanding of the rehabilitation process and impacts on the marine environment.

1207. The Dumping at Sea (DAS) permitting process is separate process which regulates the dumping at sea from vessels, aircraft or offshore installation of a substance or material. It typically relates to the movement of seabed material, such as the movement and dumping of dredged material offshore. A DAS permit is not required for the installation or removal of the CWP Project permanent infrastructure, which is subject to separate regulatory obligations described above.

8.3.4.3 Summary of matter raised

1208. Observers commented that the financial risks associated with the future decommissioning of the CWP Project should be insured by the developer. This is to ensure that the State does not bear these future costs. There are currently no assurances of funds to pay for decommissioning.

8.3.4.4 Applicant's response

1209. Under the requirements of the MAC, and in accordance with the **Rehabilitation Schedule** provided with the planning application, the Applicant will rehabilitate the maritime area affected by the development of the CWP Project. Under the requirements of the MAC the Applicant is obliged, upon receiving planning consent, to put a rehabilitation bond in place prior to the commencement of any works. This bond will ensure the proper performance of the Applicant's obligations to rehabilitate the site and will cover the any other liabilities which may be incurred in relation to rehabilitation.

8.3.4.5 Summary of matter raised

1210. Observers commented that a 25 year operational period is unrealistic in context of international trend of retooling and replacing with larger turbines at end of life.

8.3.4.6 Applicant's response

1211. The Applicant confirms that the operational lifetime of the CWP Project is 25 years. At the end of this 25 year period, the CWP Project could be repowered or decommissioned. If repowered during the period of the Maritime Area Consent (MAC), this would be subject to a new consent application supported by an EIAR and NIS.

8.4 Approach to EIA

1212. The following section provides thematic responses to matters raised by third parties in relation to the Applicant's approach to EIA, focusing on general matters raised. Topic specific matters concerning assessment methodologies are dealt with separately in **Sections 8.6** to **8.19** of this document.

1213. The matters raised in relation to approach to EIA have been responded to under the following sub themes:

- Data and modelling
- Mitigation
- Cumulative effects/ in-combination effects
- Operations and maintenance base (OMB)

8.4.1 Data and modelling

8.4.1.1 Summary of matter raised

1214. Observers noted that all data from previous geophysical surveys should have been made available as part of the CWP Project planning application. This includes data from previous foreshore licences and data collected for the existing Arklow Bank OWF. It is noted that this should include raw data such as high resolution side scan sonar data.

8.4.1.2 Applicant's response

1215. The EIAR Guidelines (EPA, 2022) states that '*the description of the baseline scenario* [in an EIAR] *needs to be sufficiently accurate to provide a reliable reference against which effects can be assessed and against which environmental monitoring of the effects of the project can be measured*'.

1216. In this regard, the Applicant has provided sufficient data in the EIAR to provide an accurate and robust characterisation of the baseline environment, informed by field-based surveys, desk-based assessments and consultation with prescribed bodies and relevant stakeholders. The Applicant is under no obligation to share raw data not required for the purposes of EIA, and is unable to share data collected and owned by other third parties (i.e. data collected for the existing Arklow Bank OWF).

8.4.1.3 Summary of matter raised

1217. Observers commented that some of the Foreshore Licences that provided the data for the planning application are currently under judicial review and, if found to have been granted illegally, will have a bearing on the validity of any determination in respect to this planning application, in particular that a grant of permission for the principal project will constitute project splitting.

8.4.1.4 Applicant's response

1218. The Minister for Housing has granted two Foreshore Licences for site investigations for the project and MARA has recently also granted a Marine Usage Licence to the Applicant for that purpose, which will be valid until February 2029 (MUL230034).

1219. All the data informing the EIAR was gathered under Foreshore Licence dated 26 January 2021 (FS007045). Mr Joe Behan sought judicial review of this licence. Those proceedings were settled on 5 March 2024 and the licence was surrendered on 10 December 2024. It would be absurd and contrary to the spirit and letter of the EIA and Habitats Directives for the Commission to disregard the data, which is the best scientific knowledge on the conditions of the baseline environment for this development. Without prejudice to that, Mr Behan did not challenge the validity or status of the data, the proceedings are now at an end, and Section 50 of the Planning and Development Act prohibits the validity of the licence being questioned in any other way.

1220. The second Foreshore Licence is also subject to judicial review, but these proceedings have concluded and the validity of the second Foreshore Licence has been confirmed.

1221. Finally, the applicant has assessed and seeks permission for all pre-construction surveys necessary for the purposes of constructing the development, as described in the EIAR.

8.4.1.5 Summary of matter raised

1222. Observers stated that the EIA is inadequate with regards to the precautionary principle, and it relies inappropriately on reductionist models without proper regard for structural and metrical uncertainty.

8.4.1.6 Applicant's response

1223. EIA involves the prediction of impacts that may occur in the future, and therefore uncertainty is an inherent part of this. However, as long as the application is compliant with relevant legislation and

guidance, there is no inadequacy in the EIA. CWP's planning application is compliant with relevant legislation and guidance.

1224. Where appropriate, the CWP Project EIAR (**Chapters 6–32**) draws attention to limitations about factors that may affect the reliability of baseline data and the certainty of impact prediction, as is stipulated in legislation and guidance. These include the availability and completeness of baseline data, as well as the reliance on models to inform impact prediction.

1225. Whilst limitations in models exist, those that have been used are validated against site specific data in line with industry best practice, and are considered appropriate for the purposes of assessing impacts in line with the requirements of the EIA Directive.

1226. It should also be noted that models and modelling assumptions used for the purposes of EIA are developed and adjusted to account for species and ecosystem uncertainties. This ensures that the modelling outputs are appropriately conservative. To give one example, for ornithology, as a result of the limited empirical data on migratory bird flight height, a precautionary approach is adopted within the collision risk modelling (CRM) which assumes all migratory birds are flying at collision risk height. As the CWP Project has a set minimum blade tip clearance height of 37.72 m (above lowest astronomical tide (LAT)) this approach assumes a flight height that in many cases is overly conservative, however it is deemed appropriate to adopt the precautionary principle.

1227. Despite more recent empirical data that indicates key collision risk species such as kittiwake have a marked degree of avoidance, and specifically during periods of strong wind adopt a much lower flight height, the CRM assumes kittiwake to be at collision risk flight height. As there will be periods during which kittiwake are evidently at lower height, or exhibiting a greater degree of avoidance, this ensures the CRM is appropriately precautionary.

1228. Similarly, within the underwater noise modelling process conservatism is inherent. The empirical data on which the modelling is based consistently demonstrates that the model over estimates the range of impact. The degree to which the over estimate is seen is site specific, but is frequently between 5 and 10%. In order to provide a precautionary assessment this over estimate or conservatism is retained, and mitigated where required. The examples provided above demonstrate how the precautionary principle has been applied at the modelling and assessment stages of CWP Project EIA.

1229. It should be noted that updates to EIAR **Volume 5**, **Chapter 33 Summary of Mitigation and Monitoring** and the **IPPEMP** have been made in response to the Commissions FIR. The updated documents have been provided as part of the Applicants FIR response.

8.4.1.7 Summary of matter raised

1230. Observers requested that the Commission should disregard any mitigation measures which require any type of regulatory oversight and disregard any mitigation measures which are self-regulated due to lack of accountability.

8.4.1.8 Applicant's response

1231. There is no legal basis for the Commission to disregard mitigation measures proposed and it is unlawful for the Commission to fetter its discretion to impose appropriate conditions as proposed in these submissions. These submissions are premised on baseless and defamatory allegations regarding the Applicant's compliance with previous consents and concern matters that are not relevant to the Commission's determination. It is acknowledged that Section 35 of the Planning and Development Act 2000 allows a planning authority to refuse permission to applicants who have not complied with prior planning permission and carried out substantial unauthorised development, but

that section does not apply to applications for permission under Section 291. The public interest in compliance is instead protected by MARA in the MAC application process, in which it must determine whether or not applicants for a MAC are fit and proper persons. Among the criteria MARA must take account of in that regard is the applicant's prior history of compliance. Finally, the Commission's statutory function is to determine whether and under what conditions it is appropriate for development to be authorised. It is not responsible for enforcement, which function lies with MARA, the coastal planning authorities and the Courts.

8.4.1.9 Summary of matter raised

1232. Observers questioned who will be in control of supervising the CWP Project construction works and monitoring compliance with the proposed environmental mitigations.

8.4.1.10 Applicant's response

1233. The supervision and enforcement of controls and mitigations for works to 3 nautical miles from the high water of ordinary or medium tides shall be the responsibility of the relevant planning authorities (DCC and DLRCC). MARA shall be responsible for supervision and enforcement everywhere else in the maritime area.

8.4.2 Cumulative effects/ In-combination effects

8.4.2.1 Summary of matter raised

1234. Observers commented that the planning application fails to adequately assess the cumulative effects of other licence applications and other marine activities in the vicinity of the offshore development area.

1235. Observers also commented that the planning application fails to consider the potential cumulative effects with other proposed OWFs along the east coast of Ireland.

8.4.2.2 Applicant's response

1236. An update to the planning application CEA has been provided in response to the Commissions FIR. This update, presented in the **CEA Report**, includes a long list of other development identified during Stage 1 of the CEA. The long list for offshore development includes other licence applications and other marine activities in the vicinity of the offshore development area. Stage 2 of the CEA applies screening criteria to the long list, in order to establish topic specific shortlists of other development and to ensure that the CEA is proportionate. The topic specific other development shortlists are presented in the topic specific sections of the **CEA Report**. These include the other Phase 1 OWF Projects proposed along the east coast of Ireland.

8.4.2.3 Summary of matter raised

1237. Observers suggested there is insufficient detail of the timeline of construction activities and proposed start date to adequately consider cumulative / in-combination effects.

8.4.2.4 Applicant's response

1238. An update to the planning application CEA has been provided in response to the Commissions FIR. This update, presented in the **CEA Report**.

1239. An indicative construction programme for the CWP Project is presented in EIAR **Volume 2**, **Chapter 4 Project Description** (see **Plate 4-3**).

8.4.2.5 Summary of matter raised

1240. Observers note that the Climate Action Plan should have been screened in for the consideration of cumulative / in-combination effects.

8.4.2.6 Applicant's response

1241. The Climate Action Plan (2025) reaffirms the Irish Government's objective that by or before 2030, Ireland will achieve 80% of electricity demand from renewable sources, including 5 GW from offshore wind. Known projects and plans that will contribute to this target, including the Phase 1 Projects and the South Coast Designated Maritime Area Plan, have already been accounted for in the CEA and in-combination effects assessment for the CWP Project. For other ORE projects or plans that may contribute to this target, there is currently insufficient information within CAP 2025 or elsewhere in the public domain upon which to undertake a CEA and / or in-combination assessment.

1242. It is worth noting that an update to the planning application CEA has been provided in response to the Commissions FIR. This update, presented in the **CEA Report**.

8.4.2.7 Summary of matter raised

1243. Observers stated that the cumulative / in-combination effects assessment did not adequately consider the cumulation / in-combination effect of sequential projects.

8.4.2.8 Applicant's response

1244. Generally, for a cumulative or in-combination effect to arise from two or more projects, a temporal overlap of impacts arising from each must be established. This is because in most cases impacts are active only during certain phases of development, such as piling noise during construction. This is reflected in the guidance on Nationally Significant Infrastructure Projects (NSIP): Advice on Cumulative Effects Assessment (Planning Inspectorate (PINS), 2024), hereafter referred to as the 'PINS CEA Guidance (2024)', which states that the relative construction, operation and decommissioning programmes of the other existing and, or approved developments should be considered to establish whether there is temporal overlap and any potential for interaction.

1245. In line with above, the **CEA Report** notes the inclusion of temporal overlap at Stage 2 of the CEA in order to screen the CEA longlist and establish a shortlist of other development for each EIA topic.

1246. The Applicant notes that absence of a strict overlap may not necessarily preclude a cumulative effect, as receptors may become further affected by additional, non-temporally overlapping projects. This has been considered for each topic with other development being screened in for cumulative assessment if required.

8.4.2.9 Summary of matter raised

1247. Observers stated that the cumulative / in-combination effects assessment did not adequately consider the cumulation / in-combination effect of other development that will enable the CWP Project, such as port upgrades, dredging works and grid upgrades.

8.4.2.10 Applicant's response

1248. The CEA for the CWP Project has utilised available information on reasonably foreseeable developments at the time of preparing the CEA, as updated in the **CEA Report**, which supports the EIAR (and **EIAR Addendum**). Where a potential physical effect and / or temporal overlap with the CWP Project exists, these developments have been screened into the CEA. For example, for certain onshore topics, this includes the consideration of nearby grid infrastructure works proposed by ESB Networks.

1249. The Applicant notes that upgrades to port facilities and transport networks and other development may be required in Ireland and elsewhere overseas to facilitate future ORE development, however such developments are not proposed by the Applicant and do not fall within the scope of the CWP Project planning application.

1250. Any such development will be subject to relevant planning requirements by the relevant Applicant(s) for the location(s) in question. Furthermore, where such development requires an EIA and / or AA, and is located within the zone of influence of the CWP Project, it shall undertake its own CEA / in-combination assessments. This may require consideration of the CWP Project.

8.4.2.11 Summary of matter raised

1251. Observers commented that the tiered approach to cumulative/in-combination assessment is inadequate and all projects should get equal consideration.

8.4.2.12 Applicant's response

1252. The CEA, as updated in the **CEA Report** sets out the principal guidance documents that have informed the approach to the CWP Project CEA, including the PINS CEA Guidance (2024).

1253. This guidance has been applied for a number of both OWF and non-OWF projects in the UK and provides developers with a structured approach to assessing cumulative effects. The guidance is also regularly applied in Ireland for large scale onshore projects, noting that there is no single, industry standard approach to CEA in Ireland which often varies between projects.

1254. In accordance with PINS CEA Guidance (2024), each development in the long list of projects has been assigned to a tier, reflecting their current status in the planning and development process. This ensures that the CEA is undertaken to an appropriate level of detail based on the information available at the time of assessment.

1255. The tier definitions, presented in the **CEA Report (Part 1)**, have been updated to reflect the current planning status of the other east coast Phase 1 OWF Projects.

8.4.2.13 Summary of matter raised

1256. Observers stated that it is not acceptable to assess effects against the current baseline (e.g. vessel activity and shipping noise). Baseline activities should be considered in-combination with other activities.

8.4.2.14 Applicant's response

1257. The EIAR provides an accurate and robust characterisation of the baseline environment, informed by field-based surveys, desk-based assessments and consultation with prescribed bodies and relevant stakeholders. Baseline data has been collected and described in compliance with EIA and Habitats legislation and guidance. This provides a reliable reference against which the effects of the CWP Project have been assessed. Baseline activities are therefore inherently considered within the EIA for the CWP Project.

8.4.2.15 Summary of matter raised

1258. Observers suggested that the Minister for Housing and MARA should prepare a map of the east coast showing all OWF applications for surveys and other licences to better understand the cumulative impact on fishing grounds, the environment and ecology.

8.4.2.16 Applicant's response

1259. The Applicant notes the request made, however it is not a matter for consideration in the determination of this planning application.

8.4.3 OMB

8.4.3.1 Summary of matter raised

1260. Observers commented that an OMB for the CWP Project planning application should be assessed as part of the principal planning application, as operation of the OWF cannot occur without this in place.

8.4.3.2 Applicant's response

1261. **Section 4.11.5** of EIAR **Volume 2**, **Chapter 4 Project Description** gives details to confirm that an OMB at Wicklow Port remains the preferred operations and maintenance (O&M) solution for the CWP Project, but also explains that an OMB at Wicklow Port, or anywhere else, is not required for the O&M of the wind farm. As such there is no requirement to include or assesses a potential future OMB as part of the principal planning application.

8.5 Application Procedures

1262. The following section provides thematic responses to matters raised by third parties in relation to the application procedures. The matters raised have been responded to under the following sub themes:

- Consultation and access to information
- Procedural issues and information accessibility
- Oral hearing

8.5.1 Consultation and access to information

8.5.1.1 Summary of matter raised

1263. Observers questioned the adequacy of the pre-application consultation undertaken by the Applicant, noting that local communities had been ignored.

1264. It was also stated that none of the communications directed at the public by the developer during the period of the Covid-19 pandemic could be said to comply with the advice of the Aarhus Committee in ACCC/A/2020/2 (the Kazakhstan advice).

8.5.1.2 Applicant's response

1265. The Applicant wishes to point out that pre-application consultation is not a requirement of the Aarhus convention and secondly, the Kazakhstan advice note concerns the procedures for holding virtual public hearings as part of a statutory consent process when public health restriction prohibit an in-person hearing. There is no clear explanation as to how this advice applies to non-statutory public consultation in advance of submitting a planning application.

1266. Notwithstanding the above, the pre-application consultation undertaken by the Applicant goes above and beyond what is required by the Aarhus convention. This includes significant effort by the Applicant to maintain public participation during the Covid-19 pandemic, including the project's first phase of public consultation.

1267. Since the earliest stages of the CWP Project, the Applicant has been committed to actively informing and engaging with prescribed bodies, landowners, interested groups and the general public to facilitate the decision-making process, in line with best practice for project development. Full details of the consultation process that informed the planning application are presented in the **Public and Stakeholder Consultation Report** submitted as part of the planning application.

1268. Schedule 6 of the **Planning Documents** provides an overview of the pre-application consultation undertaken for the purposes of the planning application, and full details of pre-application consultation undertaken to inform the EIA are provided in the relevant topic chapters of the EIAR (**Volume 3**, **Chapters 6 – 32**). A summary of consultation with regards to the AA is provided in **Volume 2** of the NIS.

1269. **Appendix B - Schedule of post application consultations** to the **FIR Response Document** details further consultation that has happened since the submission of the CWP Project planning application.

8.5.1.3 Summary of matter raised

1270. Observers highlighted several other obstacles to stakeholder engagement, including i) lack of publicity to advertise the period during which observations can be made; ii) difficulty in understanding the implication for the environment due to a lack of project definition; and iii) the cost of preparing alternative expert reports and advice in the short timeframe.

8.5.1.4 Applicant's response

1271. The planning application for the CWP Project, including the associated public consultation period, was advertised by the Applicant in line with the Commission's application procedures under section 291 of the Planning and Development Act 2021, as amended. This included the publication of a notice in two local newspapers and one national newspaper, as well as the installation of site notices and social media posts prior to, and at the point of lodging the application. This went beyond the statutory requirement to publish notice of the application in two newspapers circulating in the area to which the proposed development relates, one of which should be a national newspaper.

1272. Furthermore, several print and online news articles were published in the lead up to, and shortly after lodgement of the CWP Project planning application. This included articles by RTÉ News, Irish Independent, The Irish Times, The Business Post, The Currency, Irish Examiner, Irish Building Portal, Renewables Now, Offshore Magazine, ReNews and Greystones Guide (Online).

1273. Submission of the planning application was also referred to on several radio stations including NewsTalk, East Coast FM and Today FM.

1274. The Applicant's response to concerns raised regarding the perceived lack of project definition is provided in **Section 8.3** of this document. Sufficient detail about the project was provided in the planning application in compliance with section 291 of the Planning and Development Act 2021, as amended to enable effective consultation.

1275. With regards to the cost of preparing alternative expert reports, the Applicant notes that this is not a matter for consideration in the determination of this planning application.

8.5.1.5 Summary of matter raised

1276. In regards to the formal consultation period, observers noted that fragmented documentation and restricted access to data made meaningful public participation difficult, violating the Aarhus Convention and the Public Consultation Directive 2003.

1277. It was also noted that the consultation period following the submission of the planning application was too short to be meaningful in a manner that complies with Article 6(4) of the Habitats Directive and the Aarhus Convention.

8.5.1.6 Applicant's Response

1278. The documentation has been structured in accordance with relevant EIA guidelines and best practice. Appropriate cross references to highlight linkages between documents are provided throughout the documentation and to avoid unnecessary repetition. All necessary information required to submit a compliant planning application to the Commission was included in CWP's submission, and added to CWP's application website.

1279. As noted in **Section 8.4**, the Applicant has provided sufficient data in the EIAR to provide an accurate and robust characterisation of the baseline environment against which effects can be assessed.

1280. With regards to the duration of the consultation period, the Applicant notes that section 291 of the Planning and Development Act 2021, as amended requires a minimum period of eight weeks from the publication of the planning application documents. This period was also specified in the marine application procedures guidance provided to the Applicant by the Commission.

1281. For the CWP Project, the eight week consultation period formally commenced on the 23rd September 2024 and ended on 18th November 2024. However the application documents were made accessible to the public two weeks prior to this, on the 6th September 2024.

1282. Article 6(4) of the Habitats Directive provides a derogation which would allow a plan or project to be approved in limited circumstances even though it would or may have an AESI on a European site. This is not the case for the CWP Project and therefore the Applicant wishes to highlight that it has no application to the consultation or any other part of the planning application.

8.5.1.7 Summary of matter raised

1283. With regards to the AA and potential impacts on Natura 2000 sites, observers described a lack of evidence that consultation has taken place with equivalent state authorities or bodies in other EU and European jurisdictions. It is stated that consultation with France, Portugal and Spain was inadequate.

1284. Observers commented that no evidence is provided in the planning application of notification to transboundary states.

8.5.1.8 Applicant's response

1285. Schedule 6 of the **Planning Documents** provides an overview of the pre-application consultation undertaken for the purposes of the planning application, and full details of pre-application consultation undertaken to inform the EIA are provided in the relevant topic chapters of the EIAR (**Volume 3**, **Chapters 6 – 32**). Where relevant to the topic question, feedback received from transboundary bodies is also described. For example, **Section 17.2** of EIAR **Volume 3**, **Chapter 17 Aviation, Military and Radar** refers to feedback from received from the UK Ministry of Defence. Likewise, EIAR **Volume 3**, **Chapter 16 Shipping and Navigation** refers to feedback from received from the UK Maritime Coastguard Agency.

1286. In most cases the Applicant did not receive a response to the requests made for feedback from transboundary bodies. **Appendix A** of this document is provided as a summary the pre-application consultation effort made by the Applicant with transboundary bodies. This includes requests for feedback to the relevant bodies in France.

1287. Considering the anticipated zone of the influence of the CWP Project, the report to inform AA Screening (see NIS **Volume 3 – Screening**) did not identify any potential for a likely significant effect on Natura 2000 sites in Spain or Portugal. Organisations within these states were therefore excluded from transboundary consultation.

8.5.2 Procedural issues and information accessibility

8.5.2.1 Summary of matter raised

1288. Observers mentioned that the photomontages are not easily found or downloadable from the Applicant's website. The failure to supply proper and easily accessible images meant those likely to be the most affected have not been able to properly study the visual impact.

8.5.2.2 Applicant's response

1289. Visualisations to support EIAR **Volume 3**, **Chapter 15 Seascape, Landscape and Visual Impact Assessment** were included in the planning application (see **Volume 4**, **Appendix 15.11 SLVIA Visualisations**). The visualisations were accessible online, via the Applicant's planning application website, throughout the public consultation period, and in hard form at locations specified on the published notices.

8.5.2.3 Summary of matter raised

1290. Observers noted that the GIS shapefile for the planning application boundary was not made available to the public until the 5th October representing an infringement of public participation rights imbued by the Aarhaus Convention.

8.5.2.4 Applicant's response

1291. The Applicant notes that provision of the planning application boundary shapefile, or any other GIS shapefile, is not a requirement for planning applications submitted under section 291 of the Planning and Development Act 2021, as amended. However, upon receiving a request from the Commission during the public consultation period, the shapefile was uploaded to the Applicants planning application website for information, and not as a statutory requirement.

8.5.2.5 Summary of matter raised

1292. Observers noted that Appendix 2 (Dynamic Energy Budget Model) to the Marine Mammals EIAR chapter was not submitted with the planning application

8.5.2.6 Applicant's response

1293. The Applicant confirms that the document in question was provided as part of the NIS (see **Appendix 2** of NIS **Volume 7 - Appendices**).

8.5.2.7 Summary of matter raised

1294. Observers questioned the limitation imposed on maximum file size for consultation responses.

8.5.2.8 Applicant's response

1295. The Applicant notes that this is a matter for the Commission and not a matter for consideration in the determination of this planning application.

8.5.3 Oral hearing

8.5.3.1 Summary of matter raised

1296. Observers have requested an oral hearing.

8.5.3.2 Applicant's response

1297. The Applicant notes that this is a matter for the Commission.

8.6 Marine Geology, Sediments and Coastal Processes

1298. The following section provides thematic responses to matters raised by third parties in relation to marine geology, sediments and coastal processes. The matters raised have been responded to under the following sub themes:

- Impact of Offshore Wind Farms: Sediment Disturbance and Resuspension
- Impact of Offshore Wind Farms: Sediment Transport and Deposition
- Impact of Offshore Wind Farms: Hydrodynamic Changes
- Impact of Offshore Wind Farms: Coastal Erosion and Stability
- Mitigation Measures
- Monitoring
- Cumulative Effects
- Request for Further Information

8.6.1 Impact of Offshore Wind Farms: Sediment Disturbance and Resuspension

8.6.1.1 Summary of matters raised

1299. The observations highlight the potential for construction activities, such as pile-driving, seabed preparation, and cable laying, to disturb and resuspend sediments. This can lead to increased turbidity and sediment deposition, which can affect benthic habitats and overall marine geology.

1300. Specific matters raised in this regard:

- The modelling is inadequate due to the data informing it;
- Specific dredge locations have not been identified;
- The seabed will be permanently disturbed, with the scale and nature of the disturbance not defined; and
- Marine organisms will be adversely affected.

8.6.1.2 Applicant's response

Construction activities can lead to increased turbidity and sediment deposition, which can affect benthic habitats and overall marine geology

1301. **Section 6.10.1** of **Volume 3, Chapter 6 Marine Geology, Sediments and Coastal Processes** of the EIAR (as amended by **Section 6.10.1** of the **EIAR Addendum (Part 1)**) details the scope of the assessment covering the potential for construction activities to disturb and resuspended sediment. The chapter and associated addendum incorporates and considers all construction activities that have the potential to liberate sediments into the water column (including pre-sweeping / sandwave levelling, cable installation and monopile installation), to predict SSC and depositional footprints.

1302. As is stated in **Section 6.10.2** of **Volume 3**, **Chapter 6 Marine Geology, Sediments and Coastal Processes** of the EIAR (as amended by **Section 6.10.2** of the **EIAR Addendum (Part 1)**), the CWP Project offshore infrastructure will a have a very low magnitude impact on the hydrodynamic, wave, sediment transport and coastal processes regimes that will persist over the lifetime of the project. The numerical modelling performed (further detailed below) during the assessment demonstrated that, under extreme high-energy conditions, changes in wave height, tidal current speed, and water level are limited to less than 7% proximal (within approximately 1 km) to the infrastructure, with conditions returning to be within natural variability beyond this distance when compared to pre-construction

scenarios. This aligns with the DECC (2018) guidelines which notes *inter alia* "*Offshore wind turbines are considered to have negligible impact on coastal processes due to the small effect the foundations have on tidal currents and sedimentation processes."* Additionally, the embedded mitigation, which includes for suitable spacing between turbines as part of the WTG layout and carefully designed scour protection, results in the WTG foundations having a negligible impact on regional sediment transport pathways.

The modelling is inadequate due to the data informing it

1303. The modelling approach adopted that underpins this assessment (detailed in **Volume 4**, **Appendix 6.3 Modelling Report** of the EIAR and as updated by **Appendix 6-A Modelling Report Addendum** of the **EIAR Addendum**) is considered to be adequate and fit-for-purpose. It aligns with guidance (produced for Wales) provided by Natural Resources Wales (Pye et al., 2017) and other offshore wind industry established guidance (Lambkin et al., 2009). The modelling that has been employed utilises industry standard software and was well validated against numerous site-specific and regional scale measurement data to demonstrate the model's "skill" and to ensure its suitability for the assessment, the model validation exercise performed (as shown in **Volume 4**, **Appendix 6.3** of the EIAR) showed good agreement between the measured and modelled hydrodynamics. Water level comparisons showed an RMSE of < 0.05 m, and modelled current speeds fell within 0.2 m/s of the measured current speeds. Waves also showed good agreement between modelled and measured data, with a difference of < 10% when compared, this is consistent with the criteria outlined in the industry guidance referenced above. Furthermore, the modelling approach that has been adopted by CWP (detailed in **Volume 4**, **Appendix 6.3** of the EIAR) has been employed on multiple existing consented OWF developments including: the Awel y Mor OWF (RWE, 2021) in Wales, the Hornsea 3 OWF (Dong Energy, 2017) and Dogger Bank Teesside A & B OWF (Forewind, 2014) in England. Additionally, this approach goes beyond methods of assessment that have been implemented to assess impacts related to the Marine Geology, Sediments and Coastal Processes elsewhere in Europe in the Netherlands (Pondera Consult (2024)), and Germany (EnbW (2022)).

Specific dredge locations have not been identified

1304. **Section 5.2.2** of **Volume 4**, **Appendix 6.3** of the EIAR describes the methodology used to identify representative locations for the dredge operations. The approach adopted considered both environmental and engineering constraints, ensuring that the selected locations are appropriate and representative of other potential areas of dredging. The conclusions that are obtained from the modelling, using these representative locations, are then discussed and generalised to account for dredging at any suitable location within the planning application boundary in **Section 6.10.1** of **Volume 3, Chapter 6 Marine Geology, Sediments and Coastal Processes** of the EIAR (as amended by **Section 6.10.1** of the **EIAR Addendum (Part 1)**).

The seabed will be permanently disturbed, with the scale and nature of the disturbance not defined

1305. Observers submitted comments that the CWP Project will result in the permanent disturbance of the seabed. As discussed in **Section 6.10.1** of **Volume 3**, **Chapter 6 Marine Geology, Sediments and Coastal Processes** of the EIAR (as amended by **Section 6.10.1** of the **EIAR Addendum (Part 1)**), the seabed disturbance associated with the CWP Project will be temporary. Whilst it is acknowledged that for the lifetime of the windfarm there will be a very small area of the seabed that is disturbed due to the footprint of the WTG foundations. In addition, any materials disturbed on the seabed (predominantly formed of coarse sediments during the dredge/disposal activities) will not be removed

from the local sediment budget and will be locally deposited, reworked, and reincorporated into the local sediment transport regime. The temporarily disturbed surface would then quickly achieve a new equilibrium condition.

Construction disturbance and dredging will lead to sediment suspension and increased turbidity, adversely affecting marine organisms

1306. This matter is addressed in **Section 8.8** (Subtidal and Intertidal Ecology) and **Section 8.9** (Fish, Shellfish and Turtle Ecology) of this document.

8.6.2 Impact of Offshore Wind Farms: Sediment Transport and Deposition

8.6.2.1 Summary of matters raised

1307. The observation(s) highlight the impact of construction on sediment transport and deposition patterns.

1308. Specific matters raised in this regard:

- Cumulative sediment deposition thickness resulting from activities such as cable trenching are based on a 30-day period, but the exact cumulative sediment deposition thickness cannot be accurately determined; and
- There is no consideration of the North West Irish Sea Gyre and its impacts on sediment dispersal and the life cycle of Nephrops.

8.6.2.2 Applicant's response

Cumulative sediment deposition thickness resulting from activities such as cable trenching are based on a 30-day period, but the exact cumulative sediment deposition thickness cannot be accurately determined

1309. **Section 6.10.1** of **Volume 3, Chapter 6 Marine Geology, Sediments and Coastal Processes** of the EIAR (as amended by **Section 6.10.1** of the **EIAR Addendum (Part 1)**) details the scope of the assessment covering the potential impact of construction activities on sediment transport and deposition patterns. It states that the modelling performed indicates that sediment deposition resulting from the cable trenching activities would be minimal and not discernible from the natural variability that is observed in the CWP Project offshore development area during storm events. In addition, any sediments deposited would be reworked and rapidly integrated into the prevailing sediment transport regime. Given this continuous reworking, additional cumulative sediment deposition over time because of construction activities is not considered likely.

1310. Observers raised concerns that the periods considered for cumulative estimates of sediment deposition are arbitrary, and therefore not reliable. The Applicant notes that this assertion does not reflect the methodology applied. The modelling underpinning the EIA / NIS does not assume arbitrary periods; rather, it uses a representative two-month hindcast period (i.e., summer 2004) that spans two full lunar tidal cycles (multiple spring and neap tides) and excludes high-energy events during which construction vessels would not operate. This period was selected to represent a realistic yet precautionary operational window with continuous 24-hour release scenarios under persistently operable conditions (see **Section 5.2.4** of **Appendix 6-A Modelling Report Addendum** of the **EIAR Addendum**). This approach ensures that cumulative deposition estimates are based on sustained,

worst-case conditions rather than fragmented or optimistic assumptions. By modelling uninterrupted releases over two months, the assessment captures the maximum potential for sediment accumulation and transport under representative hydrodynamic and wave forcing.

1311. Regarding model validation and accuracy. As noted previously, the modelling approach demonstrated good agreement with measured data and aligns with industry standards.

1312. Regarding significance of the deposition in relation to specific habitats and species concerned, the NIS evaluates predicted depositional thicknesses against the sensitivity of qualifying habitats and species throughout all relevant volumes, including **Volume 4 - Assessment of Implications for Special Areas of Conservation**, **Volume 5 - Assessment of Implications for Special Protection Areas Part 1** and **Volume 5 - Assessment of Implications for Special Protection Areas Part 2**. The same considerations are made within the relevant sections of the **NIS Addendum**.

There is no consideration of the North West Irish Sea Gyre and its impacts on sediment dispersal and the life cycle of Nephrops.

1313. Finally, as stated in **Volume 3**, **Chapter 6 Marine Geology Sediments and Coastal Processes** of the EIAR (as amended by **Section 6** of the **EIAR Addendum (Part 1)**) the CWP Project infrastructure will a have a very low magnitude, localised impact on the hydrodynamic and wave regimes that will persist over the lifetime of the Project. The numerical modelling performed during the assessment showed that changes of less than 1% in wave heights, tidal current speeds, and water levels are expected closer to the coastline, when compared to pre-construction conditions. Studies investigating the North West Irish Gyre (Hill et al., 2008, Scherer et al., 2016) indicated that the seasonal cyclic gyre is located at a distance greater than 50 km to the North of the CWP Project. Hence, the construction and operation of the CWP Project will have no impacts on the North West Irish Gyre.

8.6.3 Impact of Offshore Wind Farms: Hydrodynamic Changes

8.6.3.1 Summary of matters raised

1314. The observation(s) highlight the construction and operation of OWFs can alter local hydrodynamic conditions, affecting water flow patterns and sediment dynamics. These changes can have implications for coastal processes and sediment transport.

1315. Specific matters raised in this regard:

- Structures will alter tidal flow and sandbank profile; and
- Modelling is flawed and incomplete.

8.6.3.2 Applicant's response

1316. Observers submitted comments that the CWP Project will alter tidal flow, leading to changes to the sandbank profile and increasing the risk of coastal erosion. As stated in **Section 6.10.2** of **Volume 3**, **Chapter 6 Marine Geology, Sediments and Coastal Processes** of the EIAR (as amended by **Section 6.10.12** of the **EIAR Addendum**) the CWP Project offshore infrastructure will a have a very low magnitude impact on the hydrodynamic, wave, sediment transport and coastal processes regimes which will persist over the lifetime of the Project, as the numerical modelling performed during the assessment has shown that, under extreme high-energy conditions, changes in wave height, tidal current speed, and water level are limited to less than 7% proximal (within approximately 1 km) to the

infrastructure, with conditions returning to be within natural variability beyond this distance when compared to pre-construction scenarios.

1317. Observers raised concerns that the CWP Project omitted assessment of scour protection and its potential effects on seabed morphology or consequential impacts on species. As outlined in **Section 6.10.2** of **Volume 3**, **Chapter 6 Marine Geology, Sediments and Coastal Processes** of the EIAR (as amended by **Section 6.10.12** of the **EIAR Addendum (Part 1)**), scour protection is predicted to have negligible effects on the wider current regime beyond the MAC boundary as any associated wake or eddies will be confined to the near-field downstream along the tidal axis. In relation to morphological changes due to scour protection, the long-term habitat loss associated with scour protection is estimated to affect up to 0.01% of the available coarse sediment habitats (see **Section 8.10.2** of **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology** of the EIAR). Given the abundance of this habitat type in surrounding areas, any loss will not compromise ecosystem functions.

1318. Please refer to the previous response in “Sub Theme: Impact of Offshore Wind Farms: Sediment Disturbance and Resuspension” regarding model validation and accuracy. As noted, the modelling approach demonstrated good agreement with measured data and aligns with industry standards.

1319. Additionally, the modelling that was performed within the area of the Dublin Port, to assess the potential impact of CWP Project infrastructure on the tidal flow in the estuarine and nearshore environment (discussed in detail in **Section 2.3.1.1** of **Volume 4, Appendix 6.4** of the EIAR) indicated that the tidal flows will remain substantially unchanged in these locations as a result of the CWP Project. The modelling approach which underpinned the assessment of impacts on the tidal regime in the estuarine and nearshore (detailed in **Volume 4, Appendix 6.4** of the EIAR) has been employed for similar assessments in the preparation of EIARs for consented developments (e.g. Dublin Port's MP2 Project (RPS, 2021)). The modelling has been extensively calibrated and validated against site specific measurement data (detailed in **Appendix 6.4** of the EIAR) and is considered to be fit-for-purpose to accurately represent baseline conditions and for impact assessment.

1320. The assessment in **Volume 3, Chapter 6 Marine Geology, Sediments and Coastal Processes** of the EIAR and **EIAR Addendum** is sufficiently detailed, adequately assesses the likely environmental impacts, which are not predicted to be significant in EIA terms.

8.6.4 Impact of Offshore Wind Farms: Coastal Erosion and Stability

8.6.4.1 Summary of matters raised

1321. The observations highlight that Offshore wind farm construction can influence coastal erosion and stability. Disturbances to sandbanks and other sedimentary features can impact the natural sediment transport processes that help protect coastlines from erosion.

1322. Specific matters raised in this regard:

- Disruption to sand bank stability;
- Increased risk of coastal erosion; and
- Wave climate will be adversely effected.

8.6.4.2 Applicant’s response

1323. Observers raised concerns that the CWP Project will disrupt sandbank stability. Observers make this claim based on comparisons with other sandbanks (e.g, Arklow Bank) that are situated in proximity to Codling Bank.

1324. The Applicant notes that the stability of the Codling Bank and its unique characteristics when compared to the sandbanks on the eastern Irish seaboard is discussed in detail in **Section 6.6.5** of **Volume 3**, **Chapter 6 Marine Geology, Sediments and Coastal Processes** of the EIAR**.** This is evidenced from site-specific geophysical and geotechnical survey data that were acquired in 2013 and 2021 which demonstrate that observed vertical changes in the seabed elevation across the bank (within the array site) are limited, rarely exceeding the vertical tolerance of the data acquisition methodology itself i.e. indicating that Codling Bank is a stable feature. The acquired survey data also highlighted the coarse grained nature of the sediments observed and present on the seabed across the array site, providing further evidence of the stability of the seabed on Codling Bank.

1325. Observers also raised concerns that the CWP Project will increase the risk of coastal erosion. This is based on the experience of Brittas Bay following construction of Arklow Phase 1, as well as evidence from literature including Ballas (2018), which suggests that OWFs located 20–80 km from the coast can affect wave climate and potentially contribute to coastal erosion. Observers also highlight potential adverse effects on the wave climate.

1326. The Applicant disagrees with these observations. As is detailed in **Section 6.10.2** of **Chapter 6 Marine Geology, Sediments and Coastal Processes** of the EIAR (amended by **Section 6.10.12** of the **EIAR Addendum (Part 1)**), comprehensive numerical modelling has been undertaken to assess the potential impacts of the CWP Project on coastal hydrodynamics and waves and, by proxy, coastal erosion. The results (discussed in the document referenced above) indicated that the CWP Project infrastructure will a have a very low magnitude impact on the hydrodynamic, wave, sediment transport and coastal processes regimes which will persist over the lifetime of the project. Numerical modelling performed during the assessment has shown that, under extreme high-energy conditions, changes in wave height, tidal current speed, and water level are limited to less than 7% proximal (within approximately 1 km) to the infrastructure, with conditions returning to be within natural variability beyond this distance when compared to pre-construction scenarios.

1327. With negligible changes in the predominant hydrodynamic drivers, such as wave height and tidal current speeds, there will be no meaningful impact on coastal processes and therefore no meaningful change to coastal erosion risk.This aligns with the DECC (2018) guidelines which notes *inter alia* "*Offshore wind turbines are considered to have negligible impact on coastal processes due to the small effect the foundations have on tidal currents and sedimentation processes"*.

1328. Regarding model validation and accuracy. As noted previously, the modelling approach demonstrated good agreement with measured data and aligns with industry standards.

1329. In summary the assessment in **Volume 3, Chapter 6 Marine Geology, Sediments and Coastal Processes** of the EIAR, supported by the **EIAR Addendum (Part 1)**, is sufficiently detailed, adequately assesses the likely environmental impacts, which are not predicted to be significant in EIA terms.

8.6.5 Cumulative Effects

8.6.5.1 Summary of matters raised

1330. The observations highlight the potential cumulative impacts of multiple OWF projects on marine geology and sediments, and the need for comprehensive assessments to understand the broader implications of these developments on sediment dynamics and coastal stability.

8.6.5.2 Applicant's response

1331. Observers raised concerns that the CWP Project with multiple other OWF projects will have significant cumulative impacts on sediment dynamics and coastal stability. Observers base these concerns on Ballas (2018), which suggests that wind farms located 20–80 km from the coast can affect wave climate and potentially contribute to coastal erosion.

1332. As discussed in **Section 6.10.1** of **Volume 3, Chapter 6 Marine Geology, Sediments and Coastal Processes** of the EIAR (as amended by **Section 6.10.1** of the **EIAR Addendum (Part 1)**), the impacts of the CWP Project on the hydrodynamic and wave regime will be negligible at distances c. 1 km from the array site. Furthermore, **Section 3** of the **CEA Report (Part 2)** explains that across the region, rectilinear tides are observed flowing broadly North – South along the Eastern Irish Seaboard. Consequently, due to the locations, alignment, and distance between the Phase 1 OWF projects, limited cumulative effects on the prevailing tidal regime due to downstream tidal current wake effects are anticipated, with only minor, localised changes to the flow regime in terms of current velocity and direction expected. Such changes are not anticipated to generate significant cumulative effects.

1333. This approach of qualitatively assessing cumulative effects of OWF developments has been employed on multiple consented proposed OWF including: Salamander (ABPmer, 2024) and Green volt (Royal HaskoningDHV, 2022) in Scotland.

1334. In summary, the CEA in **Section 3** of the **CEA Report (Part 2)** is sufficiently detailed and adequately assesses the likely cumulative effects of the CWP Project with other OWF developments, which are not predicted to be significant in EIA terms.

8.6.6 Mitigation Measures

8.6.6.1 Summary of matters raised

1335. The observations question the mitigation measures that are proposed to minimise the impact of construction on marine geology, sediments and coastal processes. These include minimising sediment disturbance, using less invasive construction methods, and implementing sediment control measures.

1336. Specific matters raised in this regard:

- Sedimentation impacts cannot be adequately addressed; and
- Sediment control measures should be implemented.

8.6.6.2 Applicant's response

1337. **Volume 3, Chapter 6 Marine Geology, Sediments and Coastal Processes** of the EIAR details the proposed mitigation measures that are considered appropriate and deliverable in relation to marine geology, sediments and coastal processes. As part of the proposed mitigation, bedform clearance operations will be undertaken only where necessary, thereby minimising sediment disturbance and alteration to seabed morphology. Additionally, disposal of any material that has to be dredged will occur in suitable locations within the offshore development area, and in accordance with the requirements of a disposal at sea licence, which will be sought separately. This has the benefit of minimising impacts upon seabed morphology and the wider sediment regime.

1338. The Applicant is of the opinion, based on experience of the requirements for submarine interconnectors in Ireland, and constructing OWFs in other jurisdictions, that marine geology and

sediments will be sufficiently safeguarded with the mitigation measures proposed in the EIAR, and further mitigation would not materially alter the conclusions of the assessment.

8.6.7 Monitoring

8.6.7.1 Summary of matters raised

1339. The observations highlight the importance of ongoing monitoring of sediment dynamics and coastal processes during construction and operation, and more specifically the monitoring of changes in sediment transport and deposition.

8.6.7.2 Applicant's response

1340. For reasons highlighted in the responses above, **Volume 3**, **Chapter 6 Marine Geology, Sediments and Coastal Processes** of the EIAR (supported by **Section 6** of the **EIAR Addendum (Part 1)**) concludes no significant effects on marine geology, sediments and coastal process receptors as a result of the CWP Project. This conclusion is supported by evidence from other similarly consented OWF projects in the UK and is made beyond reasonable scientific doubt.

1341. As such, future monitoring of marine geology, sediments and coastal processes is not considered necessary for the purposes of validation or removal of uncertainty in regard to EIA conclusions.

1342. However, notwithstanding the above, the Applicant has updated the **IPPEMP** which provides for monitoring of the seabed and seabed morphology to inform ecological monitoring requirements.

8.6.8 Request for Further Information

8.6.8.1 Summary of matters raised

1343. The observations note assurances regarding coastal erosion are needed and called for detailed modelling of the potential impacts on coastal hydrodynamics.

8.6.8.2 Applicant's response

1344. Observers raised concerns regarding potential impacts on coastal erosion and made requests for more detailed modelling of coastal hydrodynamics.

1345. Please refer to the previous response in **Section 8.6.4** regarding impacts on coastal processes. As noted, the modelling predicts changes of less than 7%, under extreme high-energy conditions, in key coastal process drivers, therefore there can be no meaningful impact on coastal processes and hence no meaningful change to the coastal erosion risk as a result of the CWP Project.

1346. Furthermore, as discussed in **Section 8.6.3** the modelling performed indicated tidal flows within Dublin Port and adjacent nearshore areas will remain substantially unchanged as a result of the CWP Project.

1347. The assessment in **Volume 3, Chapter 6 Marine Geology, Sediments and Coastal Processes** of the EIAR and **EIAR Addendum** is sufficiently detailed, adequately assesses the likely environmental impacts, which are not predicted to be significant in EIA terms.

8.7 Marine Water Quality

1348. The following section provides thematic responses to matters raised by third parties in relation to marine water quality. The matters raised have been responded to under the following sub themes:

- Impact of Offshore Wind Farms: General impacts
- Impact of Offshore Wind Farms: Pollution and Contaminant Release
- Impact of Offshore Wind Farms: Hydrodynamic Changes
- Monitoring
- Cumulative Effects
- Request for Further Information

8.7.1 Impact of Offshore Wind Farms: General impacts

8.7.1.1 Summary of matters raised

1349. The observations highlight the potential negative impacts of construction activities, such as pile-driving, seabed preparation, and cable laying, on marine water quality, noting that increased sedimentation and turbidity can affect water clarity and quality. Observers emphasise the need to minimise sediment disturbance to protect water quality.

1350. Specific matters raised in this regard:

- Risk to water quality from SSC;
- Impacts to phytoplankton; and
- Hard structures such as WTG piles can proliferate blue mussels, leading to bio-deposition and anaerobic digestion, resulting in H_2S generation and deterioration of water quality.

8.7.1.2 Applicant's response

1351. Risk to water quality from increases in SSC is assessed in **Volume 3, Chapter 7 Marine Water Quality** and **Volume 4, Appendix 7.3 Water Framework Directive (WFD) Assessment** of the EIAR. These documents are supported by **Section 7** of the **EIAR Addendum (Part 1)** and **Appendix 7-A WFD Assessment** of the **EIAR Addendum** which have been prepared in response to the Commission's FIR.

1352. The expected concentration and duration of SSC increases are based on predictive sediment plume modelling conducted for the CWP Project (see **Volume 4**, **Appendix 6.3 Modelling Report** of the EIAR and as updated by **Appendix 6-A Modelling Report Addendum** of the **EIAR Addendum**). Based on the available empirical evidence, increases in SSC are anticipated to be within background variation for the affected area, and not expected to pose a risk water quality. Impacts to phytoplankton are included in these assessments and are concluded to be not significant.

1353. As assessed in **Section 8.10** of **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology** of the **EIAR,** the total percentage of the CWP offshore development area with the potential for habitat creation via the introduction of hard substrate is up to 0.37%. Tillin & Tyler-Walters (2015) note patterns of zonation are exhibited on submerged turbines with plumose anemones (*Metridium senile*) and tube building fan worms (*Spirobranchus* sp.) in the bottom region of structures and filter feeding species such as the blue mussel *Mytilus edulis* and barnacle species such as *Semibalanus balanoides* occur closer to the water level and in the splash zone (Tillin & Tyler-Walters, 2015). Current evidence does not support the assertion that proliferation leads to deterioration of water quality. In fact, blue mussels are

well-established filter feeders capable of processing over 25 litres of seawater per day (Interesting Engineering, 2025), thereby removing suspended particulates and contaminants, and contributing positively to local water clarity and biogeochemical cycling (Bedulina et al., 2024). Studies of mature offshore wind turbine fouling communities in the Belgian and Dutch North Sea further show that mussel colonisation enhances ecological function by providing secondary habitat, increasing species richness, and counteracting the dominance of single sessile species such as *Metridium senile,* a pattern typically associated with reduced, not increased, ecological quality (Rumes et al., 2021).

8.7.2 Impact of Offshore Wind Farms: Pollution and Contaminant Release

8.7.2.1 Summary of matters raised

1354. The observations highlight the potential release of pollutants and contaminants during construction and operation, including from accidental spills or the use of drilling fluids. This is a concern for marine water quality.

1355. Specific matters raised in this regard:

- Release of contaminants from dredging and construction;
- Continuing pollution during operation; and
- Thermal pollution and operational chemicals are not adequately assessed.

8.7.2.2 Applicant's response

1356. The risk of encountering sediment contamination during the construction of CWP Project offshore infrastructure has been determined through the collection of site specific data. The results, presented in **Volume 4**, **Appendix 8.3 Benthic Baseline Report** of the EIAR and in **Appendix 8-A 2025 Benthic Baseline Report** of the **EIAR Addendum**, showed consistently low levels of chemical contaminants at stations sampled within the offshore development area and intertidal area. The majority of contaminants levels at sampled stations were below the Irish Lower AL and Cefas AL1.

1357. In general, chemical contamination detected in site-specific samples and background sediment contamination in the Irish Sea is low and would be further diluted by natural disturbance events. The impact of direct disturbance resulting in resuspension of contaminated sediments on water quality is assessed in **Volume 3**, **Chapter 7 Marine Quality** and **Volume 4**, **Appendix 7.3 WFD Assessment** of the EIAR (supported by **Section 7** of the **EIAR Addendum (Part 1)** and **Appendix 7-A WFD Assessment** of the **EIAR Addendum**). The impact is considered to be equivalent to background levels of disturbance and redistribution of sediments due to high natural sediment mobility in the Irish Sea and therefore, the likelihood of any contamination being resuspended in sufficient quantities to affect water quality is highly unlikely, making the consequences on marine water quality of negligible significance.

1358. The potential for continuing pollution during operation is limited to accidental spills. The impact of accidental pollution events on water quality is assessed in **Volume 3**, **Chapter 7 Marine Quality** of the EIAR. The severity of an accidental pollution event is dependent on the nature of the spill – its size, proximity to sensitive features (such as protected areas), the properties of the spilled material and the capacity of responders to contain any spill, and as a result, is difficult to define. Emphasis is therefore on prevention and management by preparing management plans, such as the updated **CEMP**, which sets out appropriate management measures and response procedures to reduce and minimise the potential for spills to occur.

1359. Potential impacts relating to thermal pollution are assessed with no discernible increase in water temperature anticipated, and are assessed as not significant in **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology** of the EIAR.

1360. There is no proposed release of operational chemicals into the marine environment. All chemical use will be managed in accordance with the updated **CEMP**.

8.7.3 Impact of Offshore Wind Farms: Hydrodynamic Changes

8.7.3.1 Summary of matters raised

1361. The observations highlight that the construction and operation of offshore wind farms can alter local hydrodynamic conditions, which can affect sediment transport and water flow patterns. These changes can have implications for water quality, particularly in terms of sediment distribution and nutrient dynamics.

8.7.3.2 Applicant's response

1362. Hydromorphology is a characteristic of ecological status for WFD water bodies, while hydrographic conditions (Qualitative Descriptor D7) are considered for determining good environmental status under the MSFD, and are therefore relevant to marine water quality where significant changes are anticipated.

1363. Changes in hydrodynamics and hydromorphology are assessed in detail in **Volume 3, Chapter 6 Marine Geology, Sediments and Coastal Processes** of the EIAR (as updated by **Section 6** of the **EIAR Addendum (Part 1)**). Changes to hydrodynamic and wave conditions as well as alterations to the seabed are limited to WTG and OSS structures, which are expected to result in localised changes only and are not anticipated to have a significant effect on hydrodynamic, wave and sediment regimes. Localised changes in hydromorphology are therefore unlikely to significantly affect marine water quality.

1364. The updated summary of mitigation, provided in **Section 33** of the **EIAR Addendum (Part 2)**, includes measures that will minimise changes in hydrodynamics as a result of the CWP Project. For example, the Applicant will, where practicable, bury all cables within the offshore development area. This will minimise changes to the seabed that could result in changes to local hydrodynamics.

8.7.4 Cumulative Effects

8.7.4.1 Summary of matters raised

1365. Observers commented that there is no assessment of the cumulative impact of waste water treatment plant discharges and pollution from the CWP Project (PFAS, microplastics, CECs, thermal pollution, sediment etc).

8.7.4.2 Applicant's response

1366. The assessment of cumulative effects on marine water quality has been undertaken in accordance with best practice and CEA guidance referred to in the **CEA Report**. Stage 2 of the CEA (topic specific screening) is presented in Appendix 1 of the **CEA Report (Part 1)**. This exercise established a shortlist

of other development for each EIA topic using set screening criteria. In the case of marine water quality, discharges from existing waste water treatment works form part of the baseline and are therefore screened out of the CEA as a type of other development that requires consideration.

8.7.5 Monitoring

8.7.5.1 Summary of matters raised

1367. The observations highlight the importance of monitoring water quality during construction and operation, including monitoring turbidity levels, sediment deposition, and potential contaminant release.

8.7.5.2 Applicant's response

1368. To verify predictions and to address areas of uncertainty, monitoring is proposed as a key aspect of environmental management for the construction and O&M of the CWP Project. Monitoring, where proposed, is described within the updated **IPPEMP** which is provided in response to the Commission's FIR.

1369. The assessment of impacts on marine water quality as a result of the construction, O&M and decommissioning phases of the CWP Project are predicted to be not significant in EIA terms. Based on the predicted impacts, no specific monitoring in relation to marine water quality is proposed.

8.7.6 Request for Further Information

8.7.6.1 Summary of matters raised

1370. The observations request independent scientific research be carried out including detailed studies on the potential impacts of the project on marine water quality, including comprehensive baseline data collection, hydrodynamic modeling, and assessments of potential pollution sources. A stand-alone compliance report with the WFD is also requested.

8.7.6.2 Applicant's response

1371. The Applicant acknowledges the observers request to the Commission for further independent research on the potential impacts of the CWP Project on benthic habitats and ecology.

1372. The commissioning and delivery of such independent, baseline scientific research is a matter that rightly sits with the Government and its agencies, ensuring a consistent, publicly accessible dataset that can underpin marine spatial planning and support meaningful public participation.

1373. Within this framework, project-level applicants remain responsible for undertaking site-specific impact assessments, as required by legislation and best practice. In this regard the Applicant notes its position that the assessment in **Volume 3**, **Chapter 7 Marine Quality** and **Volume 4**, **Appendix 7.3 WFD Assessment** of the EIAR (supported by **Section 7** of the **EIAR Addendum (Part 1)** and **Appendix 7-A WFD Assessment** of the **EIAR Addendum**) is sufficiently detailed and adequately assesses the likely environmental impacts, which are not predicted to be significant in EIA terms. This assessment has been undertaken by competent experts in accordance with their professional obligations,

reputational standards, and indemnity requirements; thereby ensuring objective, evidence-based assessments that can be relied upon by decision-makers.

1374. Nonetheless, the Commission will apply independent scrutiny to the impact assessments submitted, aided by submissions from prescribed statutory authorities and its own advisors.

1375. The Applicant submitted a standalone WFD assessment with the planning application, which has since been updated to account for new information that has become available since the submission of the planning application (see **Appendix 7-A WFD Assessment** of the **EIAR Addendum**).

1376. In summary, the CWP works are not anticipated to affect the status of WFD protected areas or interfere with management measures and therefore will not result in deterioration of WFD status or prevent the attainment of good WFD status for any water body connected to the works. The CWP Project, alone or cumulatively with other development, will not lead to the deterioration of a water body or prevention of a water body to achieve good status, nor will it adversely impact the integrity of any WFD protected areas.

8.8 Subtidal and Intertidal Ecology

1377. The following section provides thematic responses to matters raised by third parties in relation to shellfish and intertidal ecology. The matters raised have been responded to under the following sub themes:

- Habitat and Species Diversity / Baseline Characterisation
- Impact of Offshore Wind Farms: Direct impacts
- Impact of Offshore Wind Farms: Impacts from changes in sediment flow, suspended sediment and deposition
- Impact of Offshore Wind Farms: Conservation Status and Threats
- Mitigation Measures
- Monitoring
- Cumulative Effects
- Requests for Further Information

8.8.1 Habitat and Species Diversity / Baseline Characterisation

8.8.1.1 Summary of matters raised

1378. The observations highlight the rich biodiversity of the Codling Bank, including various benthic species and habitats. The presence of important benthic habitats like sandbanks, biogenic reefs, and *Modiolus modiolus* (horse mussel) beds, which support a diverse range of marine life have not been adequately characterised.

1379. Specific matters raised in this regard:

- The EIA has not characterised the receiving environment adequately; and
- Appendix 8.3, Benthic Baseline Report does not align with not tally with previous benthic surveys reported in 2002.

8.8.1.2 Applicant's response

1380. **Volume 3, Chapter 8 Subtidal and Intertidal Ecology** of the **EIAR** provides a comprehensive baseline of all habitats potentially affected by the CWP Project that have been identified through a

combination of site specific and publicly available data, including site specific geophysical data (see **Section 8.6** of **Chapter 8 Subtidal and Intertidal Ecology**). Data sources to inform the baseline environment for benthic and intertidal ecology were agreed through consultation with NPWS and the Marine Institute at Scoping (CWP, 2021). Further to this the Applicant has undertaken a number of characterisation validation surveys in 2025 which are reported in **Appendix 8-A**, **Appendix 8-B**, and **Appendix 8-C** of the **EIAR Addendum**. The 2025 surveys demonstrate the existing characterisation to be valid and robust for the purposes of undertaking EIA.

1381. Additionally, INFOMAR Seabed Substrate (2019) data suggests the CWP Project array site is homogenous with coarse sediment throughout. This is supported by EUSeamap (2021) broad habitat data which also models the area as consisting of infralittoral and circalittoral coarse sediments with one small area of circalittoral mixed sediment. **Volume 4, Appendix 8.3 Benthic Baseline Report** of the EIAR, alongside the 2025 characterisation validation surveys reported in **Appendix 8-A**, **8-B**, and **8-C** of the **EIAR Addendum** aligns with the publicly available data while also identifying habitats to a higher level. The sediment types at the stations sampled in the array site were gravel, gravel and cobbles, boulders and sand, gravelly sand, sandy gravel and slightly gravelly sand. While Annex I Sandbanks (1110) are predicted to occur along the OECC by JNCC (Gridded distribution map for Annex I sandbanks as reported by EU member states for 2018 Habitats Directive Article 17 reporting) and in a small section on the nearshore side of the array, site specific habitat mapping recorded no occurrences of sandbanks in the CWP Project array site (see **Volume 4, Appendix 8.3 Benthic Baseline Report** of the EIAR).

1382. *Sabellaria spinulosa* reefs were not identified during the EIAR characterisation surveys (see **Volume 4**, **Appendix 8.3 Benthic Baseline Report** of the EIAR) and the Applicant notes that abundances of *Sabellaria spinulosa* were relatively low during the 2025 characterisation validation surveys (see **Appendix 8-A**, **8-B**, and **8-C** of the **EIAR Addendum**), and no stations were classified as reef habitat. Similarly no *Modiolus modiolus* or *Mytilus edulis* beds were found during the EIAR characterisation surveys or 2025 characterisation validation surveys.

1383. The 2002 survey data referred to by the observer is over 20 years old, and it would be expected that there would be some change in this period, in particular with regards ephemeral habitats such as mussels and *Sabellaria spinulosa*, hence the collection of new data for the current planning application. The updated characterisation retains a precautionary approach, assuming the presence of sensitive habitats that have been identified consistently within the datasets employed. As such the characterisation is considered appropriate and adequate for the purposes of undertaking EIA. Furthermore, as ephemeral features it will be necessary to validate the results in advance of construction. A pre-construction geophysical survey will therefore be undertaken to facilitate the micrositing around sensitive habitats such as *Sabellaria spinulosa*.

1384. It is also worth noting that a 2012 Aquafact survey report (Subtidal Benthic Investigations of the Greater Codling Bank, AQUAFACT International Services Ltd On behalf of The National Parks & Wildlife Service, October 2012) referred to within the FIR as received from the Commission describes a benthic grab survey at 40 locations across areas both within and outside the planning application boundary. The survey found that the majority of the bank was made up of coarse sediments, dominated by gravels and cobbles; this aligns with the characterisation presented within the application, and validated by the 2025 surveys. Considering this data was over 10 years old at the time of application, and as the environment within the planning application boundary is known to contain areas of strong hydrodynamic currents which can lead to changes over time in habitat extent and distribution, it was considered appropriate to rely on contemporary data. Further to this the Applicant had undertaken comparable surveys using benthic grab sampling methods equivalent to those described in the Aquafact (2012) report, it was considered that the more recent site specific data was the most suitable upon which to undertake the impact assessment on benthic ecology receptors.

1385. As stated in item 8o of the **FIR Response document**, Codling Bank is a geomorphological feature and therefore not a benthic ecology receptor. **Section 8.6** of **Chapter 8 Subtidal and Intertidal**

Ecology of the **EIAR** provides a comprehensive baseline characterisation in which the benthic receptors identified include the same benthic communities found in Codling Bank. As such, the impact assessment provided in **Section 8.10, Chapter 8 Subtidal and Intertidal Ecology** of the **EIAR** does provide suitable consideration of Codling Bank-associated benthic communities. An update has been provided to **Section 8.6.1 of the EIAR Addendum (Part 1)** summarising the type of benthic communities found at Codling Bank.

1386. For all impacts assessed during construction, operation and maintenance and decommissioning of the CWP Project on benthic and intertidal ecology, none are significant (see **Section 8.6** of **Chapter 8 Subtidal and Intertidal Ecology**, and **Section 8** of the **EIAR Addendum (Part 1)**) in EIA terms.

8.8.2 Impact of Offshore Wind Farms: Direct impacts

8.8.2.1 Summary of matters raised

1387. The observations highlight the potential negative impacts of OWF construction on benthic habitats, including physical disturbance, and habitat loss. Noting the need for thorough environmental assessments to understand impacts on benthic communities.

1388. Specific matters raised in this regard:

- The construction and operation of the CWP Project will cause permanent loss of significant areas of seabed; and
- Hard structures such as WTG piles can proliferate blue mussels, leading to bio-deposition and anaerobic digestion, resulting in H2S generation and deterioration of water quality and benthic habitats.

8.8.2.2 Applicant's response

1389. **Volume 3, Chapter 8 Subtidal and Intertidal Ecology** of the EIAR provides a thorough assessment of all potential impacts of the CWP Project on the surrounding benthic habitats, including physical disturbance, and habitat loss. For all impacts assessed during construction, operation and maintenance and decommissioning of the CWP Project on benthic and intertidal ecology, none are predicted to be significant (see **Section 8.10** of **Volume 3, Chapter 8 Subtidal and Intertidal Ecology** and relevant updates made within **Section 8** of the **EIAR Addendum (Part 1)**).

1390. As assessed in **Section 8.10**, **Chapter 8 Subtidal and Intertidal Ecology** of the EIAR, the total percentage of the CWP offshore development area affected by long-term habitat loss is up to 0.37% and up to 0.01% of sedimentary habitats within the wider study area. As such, the magnitude of this impact on the benthic habitats is considered to be negligible, and not significant in EIA terms.

1391. As noted above the total percentage of the CWP offshore development area with the potential for habitat creation via the introduction of hard substrate is up to 0.37%. Tillin & Tyler-Walters (2015) note patterns of zonation are exhibited on submerged turbines with plumose anemones (*Metridium senile*) and tube building fan worms (*Spirobranchus* sp.) in the bottom region of structures and filter feeding species such as the blue mussel *Mytilus edulis* and barnacle species such as *Semibalanus balanoides* occur closer to the water level and in the splash zone (Tillin & Tyler-Walters, 2015). Current evidence does not support the assertion that proliferation leads to deterioration of water quality. In fact, blue mussels are well-established filter feeders capable of processing over 25 litres of seawater per day (Interesting Engineering, 2025), thereby removing suspended particulates and contaminants, and contributing positively to local water clarity and biogeochemical cycling (Bedulina et al., 2024). Studies of mature offshore wind turbine fouling communities in the Belgian and Dutch North Sea further show that mussel colonisation enhances ecological function by providing secondary habitat, increasing

species richness, and counteracting the dominance of single sessile species such as *Metridium senile,* a pattern typically associated with reduced, not increased, ecological quality (Rumes et al., 2021).

8.8.3 Impact of Offshore Wind Farms: Impacts from changes in sediment flow, suspended sediment and deposition

8.8.3.1 Summary of matters raised

1392. The observations highlight the potential negative impacts of OWF construction on benthic habitats, including from sedimentation and changes in SSC. Observers note the need for thorough environmental assessments to better understand impacts on benthic communities.

1393. Specific matters raised in this regard:

- Release of toxic waste from sediment in suspension;
- Increase in SSC; and
- Changes in sediment flow and nutrient supply.

8.8.3.2 Applicant's response

1394. **Volume 3, Chapter 8 Subtidal and Intertidal Ecology** of the **EIAR** provides a thorough assessment of all potential impacts of the CWP Project on the surrounding benthic habitats, including increase in SSC and deposition and the remobilisation of contaminated sediments. The assessment is based on survey data presented within **Volume 4, Appendix 8.3 Benthic Baseline Report** of the EIAR, that has since been validated by the 2025 characterisation validation surveys reported in **Appendix 8-A**, **8-B**, and **8-C** of the **EIAR Addendum**.

1395. Relevant information from publicly available and site specific sources were reviewed to inform the assessment of potential impact of remobilisation of contaminated sediments. Baseline site specific surveys for the purposes of the EIAR showed low levels of chemical contaminants at stations sampled within the offshore development area. The majority of contaminants levels at sampled stations were below the Irish Lower AL and Cefas AL1 (**Volume 4**, **Appendix 8.3 Benthic Baseline Report** of the EIAR). Typically, contaminated sediments are only associated with finer sediments as they do not bind effectively with coarse sands and gravels. Published marine sediment contaminant data in the area also indicates a general low background level of contamination, with no patterns of consistently high levels of contaminants recorded spatially or temporally (data.gov.ie, 2007). Published testing for contaminants in North Dublin Bay has shown the levels of heavy metal contaminants to be below the Cefas Action Level 1 guidelines (McBreen & Wilson, 2003). This is also consistent with the 'good' chemical status (2016–2021) of the WFD water body, indicating low background incidence of contaminants within sediments in the wider area.

1396. The potential impact of the remobilisation of contaminated sediments on all benthic and intertidal ecology receptors in the study area is assessed in **Section 8.10** of **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology** as not significant in EIA terms.

1397. **T**he above-mentioned conclusion is validated by the 2025 surveys which demonstrate contaminants to be below Irish Levels (see **Appendix 8-A 2025 Benthic Baseline Report** of the **EIAR Addendum**). The Applicant has provided an updated assessment of potential remobilisation of contaminated sediments within **Section 8.10.1** of the **EIAR Addendum (Part 1)**. This includes additional information on receptor sensitivity based upon published literature, and an updated assessment of impact magnitude which takes account of the recorded levels of contaminants within the offshore development area following 2025 surveys. Further detail on the type and level of contamination within the various

areas of the offshore development area is presented in **Section 8.6** of the **EIAR Addendum (Part 1)**, which, in summary, notes the presence of contaminants within the offshore development area to be below Irish Levels (and Cefas Action Levels). Therefore, the potential effect of remobilisation of contaminated sediments on the intertidal and subtidal receptors is considered to be slight, and not significant in EIA terms.

1398. **Volume 3**, **Chapter 8 Benthic Subtidal and Intertidal Ecology** of the EIAR also considers the potential impact of elevated SSC and associated sediment deposition. This is considered over each of the project phases, on all identified benthic ecology receptors (see **Section 8.10** of **Volume 3**, **Chapter 8 Benthic Subtidal and Intertidal Ecology**). The sediment dispersion modelling undertaken for the construction and installation of the project (see **Volume 4**, **Appendix 6.3 Modelling Report** of the EIAR and as updated by **Appendix 6-A Modelling Report Addendum** of the **EIAR Addendum**) demonstrates that increases in water column SSC and associated seafloor deposition are short-lived and spatially limited. Modelling shows that suspended sediments that are released rapidly disperse and return to baseline conditions within c. 11 days, with measurable depositional thicknesses on the seabed restricted to areas within, or up to 7 km from, the MAC boundary. These sediments are anticipated to be rapidly reworked and integrated into the existing sediment regime.

1399. The assessment reported in **Section 8.10** of **Volume 3**, **Chapter 8 Benthic Subtidal and Intertidal Ecology** (as amended by **Section 8.10** of the **EIAR Addendum (Part 1)**) found the impact of increases in SSC and sediment deposition to be not significant on all benthic and intertidal ecology receptors.

1400. Finally, as stated in **Section 6.10.2** of **Volume 3**, **Chapter 6 Marine Geology Sediments and Coastal Processes** of the EIAR (as amended by **Section 6.10.2** of the **EIAR Addendum (Part 1)**) the CWP Project infrastructure will a have a very low magnitude impact on the hydrodynamic and wave regimes that will persist over life time of the project. Currents and waves drive sediment transport patterns and pathways. There are no anticipated changes to sediment composition and sediment supply due to the construction of the CWP Project. Given no significant effect on the driving parameters, there is subsequently no corresponding difference in the potential rates and directions of sediment transport (sediment flow) anticipated. Further discussion on this is found in the Applicants response to items 6e and 6l of the Commission's FIR (see **FIR Response Document**).

8.8.4 Impact of Offshore Wind Farms: Conservation Status and Threats

8.8.4.1 Summary of matters raised

1401. The observations highlight the conservation status of various benthic habitats, with concerns about the potential degradation of these habitats due to OWF development. Specific habitats like biogenic reefs and mussel beds are referred to, highlighting their sensitivity to environmental changes.

8.8.4.2 Applicant's response

1402. The Applicant notes the observation regarding the sensitivity of specific habitats like biogenic reefs (i.e. *Sabellaria alveolata* / *spinulosa*) and mussel beds (i.e. *Modiolus modiolus* / *Mytilus edulis*).

1403. Potential impacts to biogenic reefs and proposed mitigation in this regard is addressed by the Applicant in response to matters raised by An Taisce (see **Section 5.1.5** and **Section 5.1.6** of this document).

1404. As stated previously, no *Modiolus modiolus* or *Mytilus edulis* beds were found during the EIAR characterisation surveys or 2025 characterisation validation surveys.

1405. As ephemeral features it will be necessary to validate the results in advance of construction. A pre-construction geophysical survey will therefore be undertaken to facilitate the micrositing around sensitive habitats.

8.8.5 Cumulative Effects

8.8.5.1 Summary of matters raised

1406. The observations highlight the importance of considering cumulative impacts from multiple projects and activities on benthic habitats.

8.8.5.2 Applicant's response

1407. A comprehensive assessment of cumulative effects on benthic habitats is provided in **Section 5** of the **CEA Report (Part 2)**. This assessment, which supersedes EIAR **Volume 4**, **Appendix 8.1 Cumulative Effects Assessment**, identifies no likely significant cumulative effects on benthic ecology receptors from the CWP Project with other relevant plans and projects.

8.8.6 Mitigation Measures

8.8.6.1 Summary of matters raised

1408. The observations highlight the need for technologies for OWFs to minimise environmental impacts on benthic habitats. Mitigation measures to reduce the negative effects on benthic communities, such as the use of less invasive construction methods and sensitive positioning of infrastructure, should be considered.

1409. Specific matters raised in this regard:

- Measures should be implemented to control the release of pollutants; and
- Measures should be implemented to prevent habitat destruction.

8.8.6.2 Applicant's response

1410. **Section 8.9** of **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology** of the EIAR sets out the primary mitigation measures that are relevant to subtidal and intertidal ecology. These measures include the positioning of offshore infrastructure to avoid known sensitive ecological habitats and inclusion of a pre-construction geophysical survey to facilitate micrositing around sensitive habitats. They also include the provision of a **CEMP** which details the following commitments:

- Measures proposed to ensure effective handling of chemicals, oils and fuels including compliance with the MARPOL convention;
- A Marine Pollution Prevention and Contingency Plan to address the procedures to be followed in the event of a marine pollution incident originating from the operations of the CWP Project;
- Offshore biosecurity and invasive species management detailing how the risk of introduction and spread of invasive non-native species will be minimised; and
- Offshore waste management and disposal arrangements.

1411. The assessment and associated mitigation measures are considered sufficient as they incorporate a comprehensive suite of avoidance, management, and contingency provisions, including

sensitive-habitat avoidance through informed infrastructure placement, pre-construction geophysical surveys to enable micrositing, and the implementation of a detailed **CEMP**.

8.8.7 Monitoring

8.8.7.1 Summary of matters raised

1412. The observations note that there is a need for comprehensive monitoring of benthic ecology during and after construction to ensure that any adverse impacts are identified and mitigated.

8.8.7.2 Applicant's response

1413. The assessment presented in **Volume 3, Chapter 8 Subtidal and Intertidal Ecology** of the EIAR**,** complemented by updates presented in **Section 8** of the **EIAR Addendum (Part 1)**, concludes no likely significant effects on all relevant benthic ecology receptors. This reflects the proposed mitigations referred to above which are sufficient to reduce potential impacts to acceptable levels (i.e. not significant in the context of EIA).

1414. The conclusions are supported by substantive bodies of evidence and are made beyond reasonable scientific doubt. As such, future monitoring of benthic ecology is not considered necessary for the purposes of validation or removal of uncertainty in regard to EIA conclusions.

1415. However, notwithstanding the above, relevant monitoring to inform mitigation, subject to consultation with the regulators and relevant stakeholders is detailed in the updated **IPPEMP**.

8.8.8 Requests for Further Information

8.8.8.1 Summary of matters raised

1416. The observation(s) highlights the need for more independent scientific research and data on benthic habitats to inform environmental assessments and decision-making. It emphasises the importance of making existing data publicly available to ensure meaningful public consultation and participation.

8.8.8.2 Applicant's response

1417. The Applicant acknowledges the observers request to the Commission for further independent research on the potential impacts of the CWP Project on benthic habitats and ecology.

1418. The commissioning and delivery of such independent, baseline scientific research is a matter that rightly sits with the Government and its agencies, ensuring a consistent, publicly accessible dataset that can underpin marine spatial planning and support meaningful public participation.

1419. Within this framework, project-level applicants remain responsible for undertaking site-specific impact assessments, as required by legislation and best practice. In this regard the Applicant notes its position that the assessment in **Volume 3, Chapter 8 Subtidal and Intertidal Ecology** of the EIAR (as amended by **Section 8** of the **EIAR Addendum (Part 1)**) is sufficiently detailed and adequately assesses the likely environmental impacts, which are not predicted to be significant in EIA terms. This assessment has been undertaken by competent experts in accordance with their professional obligations, reputational standards, and indemnity requirements; thereby ensuring objective, evidence-based assessments that can be relied upon by decision-makers.

1420. Nonetheless, the Commission will apply independent scrutiny to the impact assessments submitted, aided by submissions from prescribed statutory authorities and its own advisors.

1421. The assessment is informed by site specific survey data collected by the Applicant, including additional data collected in response to the Commission's FIR. The survey design and methodology for these surveys were agreed in consultation with regulators prior to the surveys being conducted. It is considered that this baseline data is sufficient and that no information gaps exist.

1422. Furthermore, the EIAR Guidelines (EPA, 2022) states that '*the description of the baseline scenario* [in an EIAR] *needs to be sufficiently accurate to provide a reliable reference against which effects can be assessed and against which environmental monitoring of the effects of the project can be measured'*. In this regard, the Applicant has provided sufficient data in the EIAR to provide an accurate and robust characterisation of the baseline environment, informed by site specific surveys, desk-based assessments and consultation with prescribed bodies and relevant stakeholders. The Applicant is under no obligation to share raw data not required for the purposes of EIA.

8.9 Fish, Shellfish and Turtle Ecology

1423. The following section provides thematic responses to matters raised by third parties in relation to fish, shellfish and turtle ecology. The matters raised have been responded to under the following sub themes:

- Habitat and Species Diversity / Baseline Characterisation
- Impact of Offshore Wind Farms: Spawning & Nursery Grounds
- Impact of Offshore Wind Farms: Disturbance
- Impact of Offshore Wind Farms: EMF
- Impact of Offshore Wind Farms: Conservation Status and Threats
- Mitigation Measures
- Monitoring
- Cumulative Effects

8.9.1 Habitat and Species Diversity / Baseline Characterisation

8.9.1.1 Summary of matters raised

1424. The observations highlight the rich biodiversity of the Codling Bank, including various fish and shellfish species. They note the presence of important habitats like sandbanks, which are crucial for many fish species and raises concerns about impacts.

1425. Specific matters raised in this regard:

- Baseline data adequacy and approach to the identification of receptors for assessment;
- Lack of recent data in relation to spawning and nursery grounds; and
- Sensitivity ratings of several species.

8.9.1.2 Applicant's response

1426. **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the **EIAR** provides a comprehensive characterisation of the baseline environment including European eel, angel shark and basking shark (see **Section 9.6** of **Chapter 9 Fish, Shellfish and Turtle Ecology**). The characterisation has been validated through contemporary site specific eDNA analysis which is presented in **Appendix 9-A CWP**

Migratory Fish eDNA Survey Report 2025 of the **EIAR Addendum**. The eDNA analysis provides a contemporary account of fish and marine species presence and demonstrates that the characterisation presented within the application documentation is robust and appropriate for the purposes of carrying out EIA.

1427. As **Section 9.6** of **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR states, the number of fish, shellfish and turtle species present within the study areas are extensive and, therefore it is impractical to assess each individual species. As such, a VER approach has been adopted to identify species of ecological importance against which the assessment is presented. This approach aligns with the CIEEM Guidelines (CIEEM, 2024) and as agreed at Scoping, following consultation, with NPWS in 2021. European eel, angel shark and basking shark are included in the VERs list and considered alongside other VERs within the assessment for all relevant impact pathways.

1428. Migratory species are categorised under the VER approach and assessed for effects of all potential impacts during all project phases in **Section 9.10** of **Chapter 9 Fish, Shellfish and Turtle Ecology** (as updated by **Section 9** of the **EIAR Addendum (Part 1)**). This provides a comprehensive and robust assessment of impacts on protected migratory species, such as European eel, all of which are assessed to be not significant, with mitigation where required. **Volume 4 - Assessment of Implications for Special Areas of Conservation** of the **NIS** (as updated by the **NIS Addendum**), assesses impacts on a vast network of designated site for migratory fish species and as such all likely effects have been considered.

1429. **Section 9.4** of **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR presents all data sources used to characterise the existing environment for fish, shellfish and turtle ecology. These data sources were agreed with NPWS at Scoping in 2021. Publicly available datasets are utilised to establish the full list of receptors that are considered in the assessment. This includes fisheries data such as commercial landings, and all available information on spawning and nursery grounds. Comprehensive information on spawning and nursery grounds present in the local, regional and Irish Sea study areas, including those of sandeel, is provided in **Section 9.6** of **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR. This is complimented and validated by additional data collected in response to the Commission's FIR (see **Section 9** and **Appendix 9-A CWP Migratory Fish eDNA Survey Report 2025** of the **EIAR Addendum**). The chapter also presents the full list of receptors considered in the assessment, which includes species identified from a range of sources.

1430. As a result of the multiple datasets utilised, the characterisation of the baseline for fish, shellfish and turtle ecology is considered to be robust for the purposes of EIA. It is not anticipated that any further data would materially alter the characterisation or the assessment on which it is based.

1431. It is accepted within guidance that different species from the VERs list will be sensitive to different potential impacts arising from the construction, O&M and decommissioning of the offshore development area. Therefore, receptor groups have been identified within the assessment for each potential impact based on their biological traits, and their sensitivity to that impact (e.g., elasmobranchs for EMF), rather than assessing fixed groups of species throughout. Through identification of receptor groups, it is considered that all species that might be affected by the CWP Project, even if not detailed in the VERs list, are appropriately assessed, as the groups identified for assessment of each impact are representative of any fish or shellfish species that may be present. This approach is consistent with the CIEEM Guidelines, and with the approach within the Marine Evidence–based Sensitivity Assessment (MarESA) – Guidance, published by MarLIN and referred to within the CIEEM Guidelines. Further to this the Applicant has updated the assessment within **Section 9** of the **EIAR Addendum (Part 1)** to provide more clarity on the sensitivity categorisation of species, in addition to further clarification on the presentation of impact magnitudes.

1432. **Volume 3, Chapter 12 Commercial Fisheries** (and **Section 12** of the **EIAR Addendum (Part 1)**) establishes the baseline environment and impact assessment for commercial fisheries e.g. fish stock assessments and **Volume 4**, **Appendix 8.4 Marine Protected Areas Assessment Report** of the

EIAR considers the features identified within the ecological sensitivity analysis conducted by the MPA Advisory Group, though no MPAs have yet been identified.

8.9.2 Impact of Offshore Wind Farms: Spawning & Nursery Grounds

8.9.2.1 Summary of matters raised

1433. The observations highlight the rich spawning and nursery grounds for fish and shellfish, and possible adverse impacts to these.

1434. Specific matters raised in this regard:

- International Council for the Exploration of the Sea (ICES) state OWF structures should not be permitted in spawning grounds; and
- Effects of large turbines on spawning habitat and sandeel breeding activity.

8.9.2.2 Applicant's response

1435. ICES (2024) advises that activities which may negatively impact spawning habitats, such as those for herring, should be approached with precaution. ICES emphasises the importance of assessing potential impacts on spawning and nursery areas during the planning stages of OWF developments. This includes considering factors like sedimentation, noise, and habitat alteration, which can affect fish population. The Applicant confirms that these impact pathways are assessed in **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR.

1436. In response to items 11e and 11f of the Commission's FIR, the Applicant has provided additional consideration of recoverability for benthic-associated fish and shellfish species and the provision of updated sediment plume modelling results, with spawning and nursery grounds overlaid, including for sandeel and herring. The updated assessment, provided in **Section 9.10.1** of the **EIAR Addendum (Part 1)**, confirms that the conclusions in relation to effects from temporary seabed disturbance and SSC remain unchanged.

1437. In summary the assessment in **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR, support by the **EIAR Addendum**, considers all potential impacts that may arise from the CWP Project on fish, shellfish, and turtle species, including spawning and nursery grounds. This was informed through responses to the Scoping Report, and consultation with statutory and non-statutory consultees. The assessment of each impact is adequate and robust and considers best available scientific information on the receptor, the impact, and the interaction between the two in order to determine whether the impact will be significant (in EIA terms). No significant effects from the CWP Project on any fish, shellfish and turtle ecology receptors, following mitigation where required, have beon identified.o

8.9.3 Impact of Offshore Wind Farms: Disturbance

8.9.3.1 Summary of matters raised

1438. The observation(s) highlight the potential disturbance impacts of OWF construction on fish and shellfish.

1439. Specific matters raised in this regard:

- Construction and operation of wind turbines can disturb benthic habitats, leading to changes in fish stocks;
- Adverse effects of sediment suspension and increased turbidity from construction activities on fish and shellfish species; and
- Adverse effects of underwater noise and vessel activity on fish and shellfish species.

8.9.3.2 Applicant's response

1440. As noted above, the assessment in **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR, supported by the **EIAR Addendum**, considers all potential impacts that may arise from the CWP Project on fish, shellfish, and turtle species. This includes temporary habitat disturbance, underwater noise and vibration, vessel impacts, temporary disturbance of the seabed leading to increases in SSC and associated deposition and collision risk with vessels during construction and decommissioning. Long-term habitat loss and operational noise during the operational phase are also considered.

1441. In response to items 11e, 11f and 11g of the Commission's FIR, the Applicant has provided further clarification and updated assessment within **Section 9.10.1** of the **EIAR Addendum (Part 1)**. This includes additional consideration of recoverability for benthic-associated species, underwater sediment plume modelling with spawning and nursery grounds overlaid, and clarification of the underwater noise assessment methodology, including the basis for stationary receptor modelling.

1442. The updated assessment confirms that the significance conclusions in relation to habitat disturbance, vessel impacts and SSC effects remain unchanged (i.e. not significant in the context of EIA). With regards to underwater noise, the Applicant commits to a limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events, and the implementation of noise abatement in the event high order UXO clearance is required. As a result of this the Applicant has reduced the predicted underwater noise impacts which are, as before, not significant in the context of EIA.

1443. In summary the assessment concludes that, following the application of mitigation where required, impacts on fish and shellfish receptors are not significant in EIA terms. These conclusions are based on the application of established impact assessment methodology and best available scientific evidence.

8.9.4 Impact of Offshore Wind Farms: EMF

8.9.4.1 Summary of matters raised

1444. The observations raise concerns regarding the effects of EMF from electrical cables on sensitive fish and shellfish receptors.

8.9.4.2 Applicant's response

1445. **Section 9.10** of EIAR **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** provides a robust assessment of the potential effects of EMF from subsea cables on all relevant receptors including; tope, blonde ray, spotted ray, cuckoo ray, thornback ray, undulate ray, basking shark, angel shark and European eel. The assessment concludes that potential EMF effects from cables on all receptors is determined to be not significant in EIA terms.

1446. In response to item 11j of the FIR (see **FIR Response Document**), the Applicant has provided additional information regarding the EMF effects on fish and shellfish receptors. The additional information provided in **Section 9.10.2** of the **EIAR Addendum (Part 1)** supports the conclusion that

the magnitude of impact from EMF on fish and shellfish receptors is predicted to be negligible. This validates the original EIA conclusion of no significant effects in the context of EIA.

8.9.5 Impact of Offshore Wind Farms: Conservation Status and Threats

8.9.5.1 Summary of matters raised

1447. The observations highlight the conservation status of various fish and shellfish species, with concerns raised about the potential degradation of habitats due to wind farm development. Specific species like the tope shark, spotted ray, and sandeel are mentioned, highlighting their sensitivity to environmental changes.

8.9.5.2 Applicant's response

1448. **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR (as updated by **Section 9** of the **EIAR Addendum (Part 1)**) describes species of conservation importance including designated sites within the study area (see **Section 9.6**). Potential impacts upon Annex II species and qualifying interests of designated sites are assessed (see **Section 9.10**).

1449. **Volume 4 - Assessment of Implications for Special Areas of Conservation** of the NIS (as updated by the **NIS Addendum**), provides a comprehensive assessment of the potential impacts from the CWP Project on the integrity of designated sites with the potential to be impacted. Furthermore, **Volume 4**, **Appendix 8.4 Marine Protected Areas Assessment Report** of the EIAR considers the features identified within the ecological sensitivity analysis conducted by the MPA Advisory Group, though no MPAs have yet been identified.

1450. The assessment concludes that no significant adverse effects on designated sites or species of conservation importance are predicted.

8.9.6 Cumulative Effects

8.9.6.1 Summary of matters raised

1451. The observations highlight the importance of considering cumulative impacts from multiple projects and activities on fish and shellfish habitats.

8.9.6.2 Applicant's response

1452. A comprehensive assessment of cumulative effects on fish and shellfish habitats is provided in **Section 6** of the **CEA Report (Part 2)**. This assessment, which supersedes EIAR **Volume 4**, **Appendix 9.1 Cumulative Effects Assessment**, identifies no likely significant cumulative effects on fish and shellfish ecology receptors from the CWP Project with other relevant plans and projects.

8.9.7 Mitigation Measures

8.9.7.1 Summary of matters raised

1453. The observations emphasise the need for effective mitigation of impacts to specific species.

1454. Specific matters raised include:

- EMF impacts on tope; and
- Underwater noise impacts on a number of species including herring.

8.9.7.2 Applicant's response

1455. **Section 9.10.2** of **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology of the EIAR** (as updated by **Section 9.10.2** of the **EIAR Addendum (Part 1)**) provides an assessment of the potential impacts of EMF from subsea cables on relevant receptors, including tope. As detailed within the updated assessment, the sensitivity of tope to EMF is assessed as low, the magnitude of impact negligible, and the significance of the effect 'not significant', which is not significant in the context of EIA. Therefore no additional mitigation is required beyond the primary mitigation described in **Section 9.9** of the chapter. This includes a commitment by the Applicant that cables will be suitably buried or protected by other means where burial is not practicable. This will reduce the potential for effects relating to the presence of Electromagnetic Fields (EMF).

1456. In response to item 11j of the FIR (see **FIR Response Document**), the Applicant has provided additional information regarding the EMF effects on fish and shellfish receptors. The additional information, provided in **Section 9.10.2** of the **EIAR Addendum (Part 1)** supports the conclusion that the significance of effect from EMF on fish and shellfish receptors is predicted to be negligible.

1457. In response to the Commission's FIR, underwater noise and vibration during construction and decommissioning phases, and operational noise on fish, shellfish and turtle ecology receptors are reassessed in **Section 9.10** of the **EIAR Addendum (Part 1)**).

1458. Receptors are assessed for this impact based upon their hearing group classifications. Atlantic herring are classified within Group 3 (fishes with swim bladders or other gas-filled body cavities which are involved in hearing) which are sensitive to both particle motion and sound pressure. Due to their ability to detect the pressure component of underwater noise, the frequency sensitivity ranges of these species and their acuity levels are greater, hence this group is frequently referred to as the 'hearing specialists'.

1459. For each of the potential effects of underwater noise on Atlantic herring (including mortality, recoverable injury and temporary threshold shift / behavioural responses) the significance of the effect is determined to be not significant. Accordingly, no additional mitigation is required beyond the primary mitigation described in **Section 9.9** of the **EIAR Addendum (Part 1)**. This accounts for the Applicant's introduction of underwater noise mitigation during the construction of the project, committing to a limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events, and the implementation of noise abatement in the event high order UXO clearance is required.

8.9.8 Monitoring

8.9.8.1 Summary of matters raised

1460. The observations emphasise the need for effective monitoring to better understand the environmental impact on fish and shellfish ecology, particularly the potential release of toxic waste and sediment pollutants from construction and dredging activities.

1461. Specific matters raised include:

- Monitoring to include oxygen, sedimentation and noise.

8.9.8.2 Applicant's response

1462. The assessment presented in **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR**,** complemented by updates presented in **Section 9** of the **EIAR Addendum (Part 1)**, concludes no likely significant effects on all relevant fish and shellfish receptors. This accounts for the proposed mitigations referred to above which are sufficient to reduce potential impacts to acceptable levels (i.e. not significant in the context of EIA).

1463. The conclusions are supported by substantive bodies of evidence and are made beyond reasonable scientific doubt. As such, future monitoring of fish and shellfish ecology is not considered necessary for the purposes of validation or removal of uncertainty in regard to EIA conclusions.

1464. However, notwithstanding the above, it is proposed within the updated **IPPEMP** to contribute to the scientific understanding of salmonid and other highly mobile species behaviour within the Irish Sea with regards disturbance during construction. It is therefore proposed that eDNA methodologies be employed. Monitoring survey programmes and detailed methodologies for the purposes of monitoring shall be submitted to the relevant Regulatory Authority for written approval prior to the commencement of any survey works, as part of developing the PEMP.

1465. Underwater noise and benthic habitat surveys will be undertaken as outlined in the updated **IPPEMP.**

8.10 Ornithology

1466. The following section provides thematic responses to matters raised by third parties in relation to ornithology. The matters raised have been responded to under the following sub themes:

- Species of Conservation Concern / Baseline Characterisation
- Assessment Methodology: Quantification of project lifetime effects
- Impact of Offshore Wind Farms: Foraging and Breeding Habitats
- Impact of Offshore Wind Farms: Displacement and Habitat Loss
- Impact of Offshore Wind Farms: Collision Risk
- Mitigation Measures
- Monitoring
- Cumulative Effects
- Requests for Further Information

8.10.1 Species of Conservation Concern / Baseline Characterisation

8.10.1.1 Summary of matters raised

1467. Observers noted errors and omissions in the baseline accounts for ornithology.

1468. Specific matters raised in this regard:

- The EIAR uses incorrect kittiwake population counts. The 2023 seabird census [from Wicklow Head SPA] records 773 kittiwake compared to the 1,290 in EIAR Volume 3 Chapter 10 Ornithology;
- The EIAR does not adequately consider the OSPAR list of Threatened or Declining Sites or Habitats, which will drive allocation of future MPAs or to the IUCN Red List and the Birds of Conservation Concern in Ireland 2020-2026 reports;
- The EIAR omits aggregate baseline population data for key bird species of conservation importance, reducing transparency and potentially downplaying the project's impacts; and

- Comprehensive baseline data are required to inform impact assessment for the purpose of the EIAR.

8.10.1.2 Applicant's response

The EIAR uses incorrect kittiwake population counts. The 2023 seabird census [from Wicklow Head SPA] records 773 kittiwake compared to the 1,290 in EIAR Volume 3 Chapter 10 Ornithology;

1469. The kittiwake breeding count used in assessment in relation to Wicklow Head SPA is considered to be robust, and correct. Kittiwake breeding population counts used in the assessment in relation to Wicklow Head SPA were taken from more recent count data than those presented in Burnell et al., 2023, and further validated by consideration of the population trajectory that these data contribute to. The 773 population figure referenced in Burnell et al., 2023 refers to the number of apparently occupied nests (AON) counted during a 2019 breeding season survey of the site, while the 1,290 population figure referenced in assessment (**Volume 4**, **Appendix 10.5 Offshore Ornithology Baseline Characterisation Report)** relates to breeding adults (i.e. individuals) and is derived from a count undertaken in 2023 (of 645 AON). This figure corresponds with the recently defined population referenced within the site's conservation objectives document (NPWS, 2024).

The EIAR does not adequately consider the OSPAR list of Threatened or Declining Sites or Habitats, which will drive allocation of future MPAs or to the IUCN Red List and the Birds of Conservation Concern in Ireland 2020-2026 reports.

1470. Across OSPAR Convention signatory states there is variation in relation to how considerations of identified threatened / declining species are implemented within environmental impact assessments (Microsoft Word - p00628_Overall_Assessment_Impl_Rec2010_5.doc). In some nations it is not formally considered (the Netherlands), whereas in others it is implemented through administrative actions (e.g. Spain, the UK, Denmark and Germany), and in others its implementation is partly through legislation and partly through administrative processes (Sweden). In Ireland, no guidance is available in this regard. There is not therefore a clear method of considering the OSPAR list within EIA, however, critically, BoCC and IUCN Red-List status are criteria used to determine receptor Importance (as shown in **Table 10-7** of **Volume 3**, **Chapter 10 Ornithology** of the EIAR and **Section 10** of the **EIAR Addendum (Part 1)**) which form a comparative source of value classification.

1471. The OSPAR list of threatened / declining bird species includes two species of relevance in relation to the CWP Project planning application; kittiwake and roseate tern. Inclusion of information regarding the presence of these species on the OSPAR list of threatened / declining bird species would not alter the conservation Importance assigned to either receptor as both species are attributed the highest conservation importance status that can be supported from baseline datasets. That is 'Very High' in the case of kittiwake on account of conservation designations and very high potential connectivity with the Array site, and 'High' in the case of roseate tern on account of conservation designations and more limited potential connectivity with the array site. As such, including the OSPAR list of threatened / declining bird species among designations considered when attributing receptor conservation importances (**Tables 10-21** to **10-23** of **Volume 3**, **Chapter 10 Ornithology** of the EIAR) would make no difference to the impact assessments subsequently undertaken and the conclusions drawn from these.

The EIAR omits aggregate baseline population data for key bird species, reducing transparency and potentially downplaying the project's impacts.

1472. Within **Volume 3**, **Chapter 10 Ornithology** of the EIAR biogeographically appropriate regional population sizes of key seabird species in each biologically relevant season which informed impact assessments are provided in **Table 10-14**. Furthermore, the derivation of these regional population sizes is fully described within **Section 2.5** of **Volume 4**, **Appendix 10.5 Offshore Ornithology Baseline Characterisation Report**. The ongoing validity of the baseline characterisation is demonstrated within the **EIAR Addendum**, including **Appendix 10-D Baseline and contemporary data comparison**.

1473. Within the EIAR, for each species, impacts are considered in relation to regional population sizes within each relevant season. This approach, considering each species at spatial and temporal scales which are appropriate to that species, follows best practice assessment protocols from UK (see Guidance Note 5: Guidance to support offshore wind applications – recommendations for marine bird population estimates (NatureScot, 2023). Critically, this approach is consistent with the CIEEM Guidelines and reflects the approach presented in the model assessment of impacts on offshore ornithology presented for offshore wind farms in Appendix 2 of the guidelines.

1474. The Applicant asserts that, by considering the impacts to each component species of aggregate populations, following assessment methodologies which incorporate a high degree of inherent conservatism, impact assessments presented within the EIAR do not downplay project impacts, and are consistent with best practice and relevant guidance.

1475. In summary, impact assessments presented within the EIAR were undertaken in relation to the appropriate populations and assessment conclusions are sufficiently robust to inform the EIA process.

Comprehensive baseline data are required to inform impact assessment for the purpose of the EIAR.

1476. The Applicant asserts that impact assessments undertaken within **Volume 3**, **Chapter 10 Ornithology** of the EIAR (as updated by **Section 10** of the **EIAR Addendum (Part 1)**) are informed by comprehensive baseline datasets compiled in accordance with available guidance, best practice and appropriate precedence. Furthermore, following the submission of the CWP Project planning application, the characterisation data presented in the EIAR have been subject to a comprehensive validation exercise, informed by a number of additional data sources including site specific boat based surveys (acoustic and ESAS), digital aerial surveys, landfall surveys, and vantage point surveys, the composite of which is considered to represent an unparalleled dataset for the consenting of a single windfarm.

1477. The Applicant directs the observer to **Appendix 10-D Baseline and contemporary data comparison** of the **EIAR Addendum** which provides a direct comparison between the baseline data (upon which the assessments were based) and the contemporary data (collected as a means of validating the baseline data). In all cases, the contemporary data collected validates the baseline datasets described and assessed in the EIAR (and NIS), with the species observed, as well as numbers and distributions thereof being either similar (in the case of the intertidal environment) or smaller (as is the case in the offshore environment).

1478. The guidance referred to above includes, but is not limited to, Irish Guidance on Marine Baseline Ecological Assessments for Offshore Renewable Energy Projects (DHPLG, 2018), and the CIEEM Guidance. Where uncertainty occurs within impact assessments it is accounted for through the incorporation of additional conservatism to ensure that the impact significance conclusions presented within the EIAR are inherently conservative and conclusions of non-significance are beyond reasonable scientific doubt.

8.10.2 Assessment Methodology: Quantification of project lifetime effects

8.10.2.1 Summary of matters raised

1479. Observers Observers submitted comments highlighting perceived errors or shortcomings in the assessment methodology relating to treatment and presentation of displacement and collision impacts over the total operational lifetime of the project.

1480. Specific matters raised in this regard:

- Observations highlight that for kittiwake predicted annual collision mortalities from the CWP Project alone and cumulatively with other projects regionally (estimated to be 18.282 and 787.76 individuals respectively) translate to 640 fatalities from CWP Project alone and 27,571 fatalities cumulatively over a 35-year operational lifespan for the project.
- Observations highlight that for guillemot predicted annual displacement mortalities from the CWP Project alone and cumulatively with other projects regionally (estimated to be 84 and 237 individuals respectively) translate to 2,940 fatalities from CWP Project alone and 8,295 fatalities cumulatively over a 35-year operational lifespan for the project.
- Observations highlight that for razorbill predicted annual displacement mortalities from the CWP Project alone and cumulatively with other projects regionally (estimated to be 30.42 and 183.44 individuals respectively) translate to 1,064 fatalities from CWP Project alone and 6,420 fatalities cumulatively over a 35-year operational lifespan for the project.
- Observations highlight that for red-throated diver predicted annual displacement mortalities from CWP Project alone and cumulatively with other projects regionally (estimated to be 4.58 and 10.26 individuals respectively) translate to 160 fatalities from CWP Project alone and 369 fatalities cumulatively over a 35-year operational lifespan for the project.

8.10.2.2 Applicant's response

1481. The above observations regarding perceived deficiencies in the impact assessment methodologies, treatment and presentation of quantitative impacts across the operational lifespan of the project are treated collectively.

1482. Firstly, the Applicant wishes to draw attention to the 35-year project lifespan referenced by the observers when they are estimating total mortality figures across the project lifetime. This lifespan is incorrect, as the application for the CWP Project relates to a 25-year operational lifespan. Consequently, figures presented by the observers are overestimates (by 40%).

1483. Regardless of this overestimation, the approach adopted by the observer where annual mortality rates are multiplied by the operational period of the project, generates total impact estimates over the operational lifespan of the project which are many times larger than annual rates and may seem problematically large if considered in relation to the regional population at any given time (i.e. by considering this against a static population). Such comparisons at different temporal resolutions would, however, be erroneous as the population is not static.

1484. To illustrate this, consider the example of worst-case cumulative razorbill displacement mortality estimates (as presented in **Section 7** of the **CEA Report (Part 2)**). Each year during the operational period of the project, if a total of 280.41 razorbills are estimated to experience mortality as a consequence of displacement from the CWP Project and all other projects, this may, following the logic of the observation, be scaled to represent a total mortality of 7,010 razorbills across the 25-year operational period of the project. Without additional appropriate context, 7,010 razorbills may seem like a large number of mortalities and this appears to support the observer's inferences regarding the

assessment conclusions of low impact magnitude and consequent non-significant impacts to the regional population.

1485. The additional appropriate context for this project lifetime estimated total displacement mortality figure, however, comes through consideration of the baseline number of razorbills from the regional population which would be estimated to experience mortality during the 25-year operational period of the project from other causes. This equates to the annual regional baseline mortality estimate (82,906 individuals) multiplied by 25; a total of 2,072,650 individuals. An additional 7,010 mortalities to a baseline mortality of 2,072,650 razorbills within the regional population over the operational lifespan of the project equates to a 0.34% increase to total mortalities within this period. This proportional additional mortality is the same value as the calculated annual rate presented within **Table 7-7** in **Section 7** of the **CEA Report (Part 2)** in which an impact magnitude of Low is attributed to razorbill from operational phase cumulative displacement impacts. This results in an impact significance of Slight and not significant in EIA terms. The approach described by the observer could be applied to kittiwake, or any other species, but without the additional context described here it is not appropriate, nor does it meaningfully change conclusions for the EIAR or NIS.

1486. The Applicant has undertaken the assessment in accordance with following guidance in relation to contextualisation of impacts at the appropriate temporal scale (i.e. impacts considered as proportional increases to annual mortality rates): CIEEM Guidelines (CIEEM, 2024); and Guidance Note 11: Guidance to support Offshore Wind Applications: Marine Ornithology - Recommendations for Seabird Population Viability Analysis (PVA) (NatureScot, 2023), and following industry best practice and precedent. As such, assessments presented within the EIAR and NIS (and the associated FIR response documents) are considered to adequately assess impacts across the operational lifespan of the project, and the conclusions of non-significance relating to those assessments are considered robust.

8.10.3 Impact of Offshore Wind Farms: Foraging and Breeding Habitats

8.10.3.1 Summary of matters raised

1487. The observation highlight the importance of protecting key foraging and breeding habitats for seabirds, and that sandbanks and other shallow marine areas are critical foraging grounds for many seabird species, particularly during the breeding season.

1488. Specific matters raised in this regard:

- Trophic impacts on species may generally occur from impacts to prey species and/or potential displacement from feeding and breeding areas.
- The trophic impact on little terns at The Murrough SPA has not been assessed. Submissions cite Perrow et al., 2011 to evidence a potential effect between construction phase pile driving, reductions in prey availability and reductions in little tern breeding success at a nearby colony.
- Impacts on kittiwake are inadequately assessed, in particular the loss of access to sandeels during construction and the consequential impacts for feeding chicks and additional energy expenditures due to changing foraging behaviour.

8.10.3.2 Applicant's response

Trophic impacts on species may generally occur from impacts to prey species and/or potential displacement from feeding and breeding areas.

1489. Potential changes in prey availability impacts to seabird species are assessed within **Volume 3**, **Chapter 10 Ornithology** of the EIAR (see Offshore and Intertidal Impact 3 'Changes in prey availability'). Potential impacts to seabird species in relation to displacement from feeding areas are also assessed (see Offshore and Intertidal Impact 2 'Disturbance and displacement'). These impacts are assessed in accordance with best practice, guidance and/or industry precedence and for both impacts effects to all seabird receptors are concluded to be not significant in EIA terms. This is applicable to kittiwake, little tern, and other species.

1490. By way of example, the Applicant refers the observer to **Section 2.7.5** of the **FIR Response Document** which details of the reassessment of displacement impacts to red-throated diver at a 10 km impact range (rather than the 4 km impact range considered within the original application). In this reassessment impacts to the regional population are concluded to be not significant in EIA terms and impacts to the nearby Murrough SPA are concluded not to result in AESI.

1491. The Applicant also directs the observer to **Section 2.7.9** of the **FIR Response Document** which provides details of displacement impacts to kittiwake. In this assessment impacts to the regional population are concluded to be not significant in EIA terms and impacts to potentially connected SPA populations are concluded not to result in AESI.

The trophic impact on little terns at The Murrough SPA has not been assessed. Submissions cite Perrow et al., 2011, to evidence a potential effect between construction phase pile driving, reductions in prey availability and reductions in little tern breeding success at a nearby colony.

1492. Potential trophic impacts on little terns breeding at the Kilcoole colony within The Murrough SPA are assessed within **Volume 3, Chapter 10 Ornithology** of the EIAR (see Offshore and Intertidal Impact 3 'Changes in prey availability') during the construction and O&M phases of the project, and in accordance with relevant guidance. Particular consideration is given to the potential for changes to prey availability impact upon little tern during the construction phase (see paragraph 600 of **Volume 3**, **Chapter 10 Ornithology** of the EIAR). Changes in prey availability impacts to little tern are assessed to be Imperceptible and therefore not significant in EIA terms.

1493. The observers quote a paper by Perrow et al., 2011, which highlights a correlation between construction phase pile driving activities at Scroby Sands OWF, reductions in little tern prey availability and reductions in little tern breeding success at a nearby colony. It is important to note a number of distinct differences between the proposed CWP Project and Scroby Sands which make comparison inappropriate. Scroby Sands OWF is much closer inshore (within approximately 2 km of the coast) and closer to the potentially affected little tern colony than is the case for the CWP Project and the Kilcoole little tern colony (*c*.13.1 km from the array site at its closest point). Crucially, construction phase pile driving activities for Scroby Sands OWF occurred within offshore habitats considered to have potential connectivity with local little tern colonies on the basis of the species' limited breeding season foraging range [maximum 5 km (Woodward et al., 2019)], while pile-driving activities for the CWP Project would not occur within this breeding season foraging range of the Kilcoole little tern colony. Within the Applicant's impact assessment it is acknowledged that 'a large proportion of [some] prey species within this colony's foraging range may experience Temporary Threshold Shift' (i.e. hearing modulation effects) in relation to construction phase piling activities, where this effect is subsequently considered to have low potential to result in measurable demographic consequences.

1494. The Applicant therefore considers that trophic impacts to little tern have been assessed appropriately, and that the conclusions within the EIAR are robust.

Impacts on kittiwake are inadequately assessed, in particular the loss of access to sandeels during construction and the consequential impacts for feeding chicks and additional energy expenditures due to changing foraging behaviour.

1495. Potential changes in prey availability impacts to kittiwake (including consideration of impacts to sandeel populations during construction) are assessed within **Volume 3**, **Chapter 10 Ornithology** of the EIAR (see Offshore and Intertidal Impact 3 'Changes in prey availability'). This impact assessment specifically includes consideration of impacts to sandeel in relation to their availability as a kittiwake prey item. The proposed project area is not of importance for sandeel, not least because the sediment type does not support sandeel colonies due to the coarse nature of the sediment (see **Section 9.6** of **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR, as updated by **Section 9.6** of the **EIAR Addendum (Part 1)**).

1496. Whilst certain observations refer to reports such as Campanella et al., 2021, there is no reference to the Codling Bank, as inferred by the observation(s). The reports,recognise that the central Irish Sea (east of the Codling project area) is a consistent hotspot for juvenile sandeel, whilst the western English Channel is a consistent hotspot for spawning sandeel. The paper also refers to the use of seabed substrate data (specifically silt content) to aid in predicting distribution of sandeels, which is the approach adopted by the Applicant. Changes in prey availability impacts to kittiwake are assessed to be Imperceptible and therefore not significant in EIA terms.

1497. The Applicant also directs the observer to **Section 2.7.9** of the **FIR Response Document** in which details of displacement impacts to kittiwake are provided. In this assessment impacts to the regional population are concluded to be not significant in EIA terms and impacts to potentially connected SPA populations are concluded not to result in AESI.

8.10.4 Impact of Offshore Wind Farms: Displacement and Habitat Loss

8.10.4.1 Summary of matters raised

1498. The observations highlight the potential for seabirds to be displaced from their natural habitats due to the presence of wind turbines. Observers note displacement can lead to increased energy expenditure and reduced breeding success as birds are forced to find alternative foraging areas.

1499. Specific matters raised in this regard:

- High-density bird populations, including guillemots, razorbills, and red-throated divers, could be forced to abandon essential feeding areas and predictions of significant population declines due to displacement by the project.
- The EIAR does not adequately consider of the impact of underwater noise on red-throated diver, guillemot and razorbill.
- The EIAR's mitigation for displacement impacts considers only the impact of vessels and does not mitigate displacement from the wind farm itself.
- The following migratory non-seabirds should have been considered for barrier effect impacts: Whooper swan; Bewick's swan; Greenland white fronted goose; Long tailed duck; Eider; Turfed duck; Pochard, Shoveler; Pintail; Teal; Gadwall; Shelduck Wigeon; Leach's petrel; Slavonian grebe; Merlin; Purple sandpiper - Breeding and passage Ruff; Snipe; Whimbrel; Wood sandpiper; Red necked phalarope; Arctic skua; Great skua; Nightjar; Short eared owl.

- Manx shearwater should have been considered for displacement risk. Observers state that Manx shearwater were screened out on account of the use of the area by the receptor being described as 'minimal' and question the following statement being in relation to the EIAR (or NIS) "Manx shearwater is not considered to be sensitive to disturbance and displacement".
- Observations that Arctic terns should have been considered for displacement impact because they have habitat 25 m away from the onshore substation site.
- Observations relating to displacement impacts upon red-throated diver populations which specifically mention 100% displacement rates within a 4 km buffer area and a 10% mortality associated with such displacement (referencing UK SNCB guidance).
- Observations that displacement impacts to kittiwake have been inadequately considered. More specifically with regards to a report examining the effects of OWFs on seabird abundance which indicated a 45% reduction in kittiwake relative density during the breeding season, with an estimated response radius to OWFs of approximately 20 km (Peschko et. al, 2020)

8.10.4.2 Applicant's response

High-density bird populations, including guillemots, razorbills, and red-throated divers, could be forced to abandon essential feeding areas and predictions of significant population declines due to displacement by the project.

1500. Potential impacts to seabird species (including guillemots and razorbills) associated with displacement from feeding areas are assessed within **Volume 3**,**Chapter 10 Ornithology** of the EIAR (see Offshore and Intertidal Impact 2: Disturbance and displacement), where they are assessed to be Imperceptible to Not Significant (depending on species) and therefore not significantin EIA terms. These impacts are assessed in accordance with best practice, guidance and industry precedence. Impact significance conclusions presented within the EIAR are inherently conservative and conclusions of non-significance are beyond reasonable scientific doubt.

1501. The Applicant directs the observer to **Section 2.7.5** of the **FIR Response Document** in which details of the reassessment of displacement impacts to red-throated diver at a 10 km impact range (rather than the 4 km impact range considered within the original application) are provided. This applies the most precautionary displacement values advised within the guidance. In this reassessment impacts to the regional population are concluded to be not significant in EIA terms and impacts to the nearby Murrough SPA are concluded not to result in AESI.

1502. The Applicant also directs the observer to **Section 2.7.9** of the **FIR Response Document** in which details of displacement impacts to kittiwake are provided. In this assessment impacts to the regional population are concluded not to be significant in EIA terms and impacts to potentially connected SPA populations are concluded not to result in AESI.

The EIAR does not adequately consider of the impact of underwater noise on red-throated diver, guillemot and razorbill.

1503. It is relevant to note that to mitigate potential impacts from underwater noise during the construction of the project, the Applicant commits to a limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events, and the implementation of noise abatement in the event high order UXO clearance is required. The updated modelling to reflect this commitment is presented in **Appendix 9-C Underwater noise modelling assessment** of the **EIAR Addendum**.

1504. Notwithstanding the abovementioned commitment, underwater noise has the potential to affect seabird receptors through two possible pathways: either by behavioural responses resulting in displacement impacts to the receptors themselves or through impacts to their prey species.

1505. Behavioural response pathways are assessed within **Volume 3**, **Chapter 10 Ornithology** of the EIAR and **Section 10** of the **EIAR Addendum (Part 1)** (see Offshore and Intertidal Impact 2: Disturbance and displacement), where they are assessed to be Not Significant and therefore not significant in EIA terms.

1506. Underwater noise effects upon prey species are assessed within **Volume 3**, **Chapter 10 Ornithology** of the EIAR and **Section 10** of the **EIAR Addendum (Part 1)** (see Offshore and Intertidal Impact 3: Changes in prey availability), where they are assessed to be Imperceptible and Not Significant (depending on species) and therefore not significant in EIA terms. As such, the Applicant considers that underwater noise impacts to all seabird receptors (including red-throated diver, guillemot and razorbill) have been appropriately assessed and that conclusions of no significant effect are sufficiently robust and beyond scientifically reasonable doubt.

The EIAR's mitigation for displacement impacts considers only the impact of vessels and does not mitigate displacement from the wind farm itself.

1507. Displacement impacts in relation to the array site (during the construction and operational phases) are assessed within **Volume 3**, **Chapter 10 Ornithology** of the EIAR (see Offshore and Intertidal Impact 2: Disturbance and displacement), where they are assessed to be Imperceptible to Not Significant (depending on species) and therefore not significant in EIA terms. As such, no additional mitigation measures are required.

The following migratory non-seabirds should have been considered for barrier effect impacts: Whooper swan; Bewick's swan; Greenland white fronted goose; Long tailed duck; Eider; Tufted duck; Pochard, Shoveler; Pintail; Teal; Gadwall; Shelduck Wigeon; Leach's petrel; Slavonian grebe; Merlin; Purple sandpiper - Breeding and passage Ruff; Snipe; Whimbrel; Wood sandpiper; Red necked phalarope; Arctic skua; Great skua; Nightjar; Short eared owl.

1508. Barrier effects to the following migratory non-seabird species were specifically assessed within **Volume 3**, **Chapter 10 Ornithology** of the EIAR (see Offshore and Intertidal Impact 2: Disturbance and displacement): Whooper swan; Bewick's swan; Greenland white-fronted goose; Eider; Tufted duck, Shelduck, Wigeon, Pochard, Shoveler, Pintail, Teal, Merlin and Snipe. The impacts are assessed to be Imperceptible and therefore not significant in EIA terms.

1509. All of the other migratory non-seabird species listed by third party observers as not having been assessed in relation to barrier effects have been assessed in this regard within **Volume 3**, **Chapter 10 Ornithology** of the EIAR within the 'All other migratory species' category. For these species barrier effects are assessed to be Imperceptible and therefore not significant in EIA terms.

1510. Arctic skua, great skua and Leach's petrel are seabird species which were either not recorded during baseline surveys or were recorded so infrequently and in such low numbers that there is considered to be no route to impact for these species populations.

Manx shearwater should have been considered for displacement risk. Observers state that Manx shearwater were screened out on account of the use of the area by the receptor being described as 'minimal' and question the following statement being in relation to the EIAR (or NIS) "Manx shearwater is not considered to be sensitive to disturbance and displacement".

1511. Potential disturbance and displacement impacts to Manx shearwater are assessed within **Volume 3**, **Chapter 10 Ornithology** of the EIAR (see Offshore and Intertidal Impact 2: Disturbance and displacement) where they are assessed to be Imperceptible and therefore not significant in EIA terms.

Detailed consideration of displacement impacts to Manx shearwater were not screened out from the EIAR (or NIS), nor was the level of site use of the array site classed as minimal (Maximum bio-season mean peak density was characterised as 'medium' within the screening process for this impact).

1512. The text quoted by the observer relating to the sensitivity of Manx shearwater to disturbance and displacement does not occur within the Applicant's submission. The Applicant highlights literature reviews indicating the relative insensitivity of Manx shearwater to disturbance from vessel activity, however, clearly states that "their likelihood of spatial response to the presence of WTG infrastructure is less well understood" and, in an abundance of caution, proceeds to undertake an assessment of displacement impacts from the array site on the basis of this uncertainty.

Observations that Arctic terns should have been considered for displacement impact because they have habitat 25 m away from the onshore substation construction site.

1513. Potential disturbance and displacement impacts to Arctic tern nesting upon the CDL dolphin (approximately 25 m from the onshore substation construction site) are assessed within **Volume 3**, **Chapter 10 Ornithology** of the EIAR (see Onshore and Estuarine / Liffey Impact 2: Disturbance and displacement). With the application of the construction phase mitigation measures outlined within this impact assessment the residual effect of this potential impact is assessed to be Imperceptible and therefore not significant in EIA terms.

Concerns relating to displacement impacts upon red-throated diver populations. Specifically mention of 100% displacement rates within a 4 km buffer area and a 10% mortality associated with such displacement (referencing UK SNCB guidance).

1514. The Applicant directs the observer to **Section 2.7.5** of the **FIR Response Document** in which details of the reassessment of displacement impacts to red-throated diver at a 10 km impact range (rather than the 4 km impact range considered within the EIAR) are provided. As noted previously, the reassessment concludes potential impacts to be not significant in EIA terms, and potential impacts to the nearby Murrough SPA are concluded not to result in AESI.

Observations that displacement impacts to kittiwake have been inadequately considered. More specifically with regards to a report examining the effects of OWFs on seabird abundance which indicated a 45% reduction in kittiwake relative density during the breeding season, with an estimated response radius to OWFs of approximately 20 km (Peschko et al., 2020).

1515. In response to these observations the Applicant firstly highlights that a number of concerns have been raised in relation to the validity of the interpretation presented by Peschko et al., 2020. The concerns highlight uncertainty as to whether the reported effects are genuinely caused by the presence of OWF infrastructure. It is noted that the effects may be a reflection of unrelated correlation between the presence of OWF infrastructure and the naturally high inherent variability of kittiwake abundances within marine environments (for example see Caledonia OWF EIAR, 2024 [6]). Secondly, as a counterpoint to Peschko et al., 2020, multiple other recent studies have found no evidence to indicate the avoidance of OWFs by kittiwake (i.e. APEM, 2017; Percival and Ford, 2017; Trinder et al., 2024; and O'Hanlon et al., 2024).

6 https://www.caledoniaoffshorewind.com/wp-content/uploads/2024/12/Volume-7B-Appendix-6-2-Offshore-Ornithology-Distributional-Responses-Annex-4.pdf

1516. Within other jurisdictions, interpretations regarding the assessment of displacement impacts to kittiwake populations vary. However, in those jurisdictions most involved with the active consents of OWF developments within the Irish Sea (i.e. England and Wales), precedence is that displacement impacts to kittiwake are screened out on the basis of receptor insensitivity (and consequently that no amendments are made to reduce collision impacts through reduction in flight densities to account for theoretical macro-avoidance). The alternative is to reduce collision impacts in order to accommodate assumptions regarding displacement, as it would be evident that a displaced bird cannot simultaneously be subject to collision risk.

1517. The Applicant directs the observer to **Section 2.7.9** of the **FIR Response Document** in which details of displacement impacts to kittiwake are provided. In this assessment impacts to the regional population are concluded not to be significant in EIA terms and impacts to potentially connected SPA populations are concluded not to result in AESI.

8.10.5 Impact of Offshore Wind Farms: Collision Risk

8.10.5.1 Summary of matters raised

1518. The observations highlight the risk of seabirds colliding with wind turbine blades is a significant concern. Submissions note the various studies and data on collision risks for various seabird species and emphasise the need for careful site selection and turbine placement to minimise these risks.

1519. Specific matters raised in this regard:

- Kittiwakes, with a high tendency to fly at rotor-sweep height, face significant collision risks.
- The predicted significant decline in kittiwake populations due to collision risks is highlighted, noting the potential for local extinction of the species.
- The following migratory non-seabirds should have been considered for collision risk. Whooper swan; Bewick's swan; Greenland white fronted goose; Long tailed duck; Eider; Turfed duck; Pochard, Shoveler; Pintail; Teal; Gadwall; Shelduck Wigeon; Leach's petrel; Slavonian grebe; Merlin; Purple sandpiper - Breeding and passage Ruff; Snipe; Whimbrel; Wood sandpiper; Red necked phalarope; Arctic skua; Great skua; Nightjar; Short eared owl.
- Collision impacts to Manx shearwater have been inadequately considered. Specifically, Observers disagreed with the screening out of Manx shearwater in relation to collision impacts and contest the underlying assertion that this species is not considered to be vulnerable to collisions with operational turbines.
- Airspace wake effects caused by turbines have not been considered in assessment.

8.10.5.2 Applicant's response

Kittiwakes, with a high tendency to fly at rotor-sweep height, face significant collision risks.

1520. The largest rotor swept altitude range of the designs considered by the project is 36 to 312 m above mean sea level (MSL). Site specific empirical data of kittiwake flight activity within and surrounding the array site (which has been validated with contemporary site specific data, see **Appendix 10-C ESAS Survey Report** of the **EIAR Addendum**) indicate that, on average, only 1.83% of kittiwake flight activity occurs within this altitude range. Similarly, generic flight height distributions from Johnston et al., 2014, indicate that approximately 3.26% of kittiwake flight activity occurs within this altitude range. As such, the Applicant disagrees with the observation that this species has a 'high tendency to fly at rotor-sweep height', as empirical evidence at a site specific, regional and bioregional level indicates only a very small proportion of flight activity occurs within this altitude range. Further to this, given that

empirical evidence indicates kittiwake experience greater levels of collision risk when rotor swept areas correspond with lower altitudes above sea level, the CWP Project has brought forward a design that mitigates collision risk by adopting a minimum blade tip clearance of 36.0 m above MSL.

1521. Project only collision impacts to kittiwake are assessed within **Volume 3**, **Chapter 10 Ornithology** of the EIAR (see Offshore - Operation and maintenance: Impact 6 – Collision), where they are assessed to be of 'Negligible' magnitude and 'Slight' significance, which is not significant in EIA terms. Cumulative collision impacts to kittiwake are assessed within **Section 7** of the **CEA Report (Part 2)**, where they are assessed to be of 'Low' magnitude and 'Moderate' significance, which is not significant in EIA terms. The assessment is based on best practice, including the model presented within the CIEEM Guidelines (CIEEM, 2024) and as such the conclusions are considered to be robust and beyond reasonable scientific doubt.

1522. The Applicant also directs the observer to **Section 2.7.10** of the **FIR Response Document** in which additional justification of the use of site-specific flight height data to calculate collision impacts to kittiwake is provided (see also **Appendix J Site-specific Flight Height Distribution Data for Collision Risk Modelling** of the **FIR Response Document**).

The predicted significant decline in kittiwake populations due to collision risks is highlighted, noting the potential for local extinction of the species.

1523. The Applicant disagrees with observations that predicted impacts to kittiwake populations would be significant and the inference that these could significantly contribute to potential future regional extinction risks. The Applicant highlights that within **Volume 3**, **Chapter 10 Ornithology** of the EIAR collision impacts are assessed in relation to regional kittiwake populations (see Offshore - Operation and maintenance: Impact 6 - Collision), where they are assessed for the project alone to be 'Slight' therefore not significant in EIA terms.

1524. Furthermore, cumulative collision impacts to kittiwake are assessed within **Section 7** of the **CEA Report (Part 2)**, where they are assessed to be of 'Low' magnitude and 'Moderate' significance, which is not significant in EIA terms. This conclusion is supported by PVA modelling demonstrating that consequences to regional kittiwake population trends will be negligible. Furthermore, the Applicant directs the observer to recently published studies (Skov et al., 2025; and Cook, 2026) summarising the application of monitoring technologies at an operational OWF. The studies indicate that kittiwake collision avoidance rates are likely to be significantly greater than those used to quantify collision mortality associated with the CWP project. This observation highlights that a precautionary approach has been taken to assess collision impacts to kittiwake.

1525. The Applicant also directs the observer to **Section 2.7.9** of the **FIR Response Document** in which a rationale and summary of displacement impacts to kittiwake are provided, and also **Section 10** of the **EIAR Addendum (Part 1)** which provides detailed consideration of the potential impact of displacement. In the assessment presented within the **EIAR Addendum (Part 1)** impacts to the regional population are concluded not to be significant in EIA terms and impacts to potentially connected SPA populations are concluded not to result in AESI.

The following migratory non-seabirds should have been considered for collision risk: Whooper swan; Bewick's swan; Greenland white fronted goose; Long tailed duck; Eider; Tufted duck; Pochard; Shoveler; Pintail; Teal; Gadwall; Shelduck; Wigeon; Leach's petrel; Slavonian grebe; Merlin; Purple sandpiper - Breeding and passage Ruff; Snipe; Whimbrel; Wood sandpiper; Red necked phalarope; Arctic skua; Great skua; Nightjar; Short eared owl.

1526. Collision impacts to the following migratory non-seabird species were specifically assessed within **Volume 3**, **Chapter 10 Ornithology** of the EIAR (see Offshore - Operation and maintenance: Impact

6 – Collision): Whooper swan, Bewick's swan, Greenland white-fronted goose, Eider, Tufted duck, shelduck, wigeon, pochard, shoveler, pintail, teal, merlin and snipe. The impacts are assessed to be 'Imperceptible' and therefore not significant in EIA terms.

1527. All of the other migratory non-seabird species listed by third party observers as not having been assessed in relation to collision impacts have been assessed in this regard within **Volume 3**, **Chapter 10 Ornithology** of the EIAR in relation to Offshore - Operation and maintenance: Impact 6 - Collision, within the 'All other migratory species' category. For these species collision impacts are assessed to be 'Imperceptible' and therefore not significant in EIA terms.

1528. Arctic skua, great skua and Leach's petrel are seabird species which were either not recorded during baseline surveys or were recorded so infrequently and in such low numbers that there is considered to be no route to impact on the populations of these species.

Collision impacts to Manx shearwater have been inadequately considered. Specifically, observers disagreed with the screening out of Manx shearwater in relation to collision impacts and contest the underlying assertion that this species is not considered to be vulnerable to collisions with operational turbines.

1529. Desk-based reviews of the empirical data regarding relative collision risk for seabird species cite Manx shearwater among the species considered least at risk of collision mortality on account of the extremely low proportion of flight activity by this species which occurs at potential collision height. This rationale for screening out Manx shearwater in relation to collision impacts is described within **Table 10-115** in **Volume 3**, **Chapter 10 Ornithology** of the EIAR.

1530. In summary, if modelling were undertaken, it would need to account for the empirical evidence which records an extremely low proportion of flight activity by this species at collision risk height (<0.01%; Johnston et al., 2014). Therefore the model would inevitably result in predicted collision mortality estimates being negligibly small, with no likelihood of a significant effect. Further assessment, specifically the use of collision risk models to quantify collision mortality for Manx shearwater, will not identify any material difference in relation to collision risk assessments for this species. As such, the approach with regards collision risk in relation to Manx shearwater is considered robust and follows best practice.

Airspace wake effects caused by turbines have not been considered in assessment.

1531. Species specific avoidance rates used in models to quantify collision mortality are informed by empirical evidence relating to collision events within turbine arrays. As such, avoidance rates incorporate consideration of the ability of species to avoid turbines when passing through airspaces within arrays in which wake effects occur. Assessment of collision impacts is therefore considered to include consideration of turbine wake effects inherently within the modelling process.

8.10.6 Cumulative Effects

8.10.6.1 Summary of matters raised

1532. The observations highlight the importance of considering cumulative and in-combination effects of multiple OWF projects on bird populations, noting that the combined impact of several projects can have significant adverse effects on seabird populations and their habitats.

1533. Specific matters raised in this regard:

- The potential cumulative impacts on bird species, such as red-throated divers, guillemots, razorbills, and kittiwakes, are significant and have not been adequately addressed.
- A number of Phase 1 OWF Projects are absent or inadequately considered and should take account of Peschko et al., 2020, which indicates a 45% decline in kittiwake relative density during the breeding season with an estimated response radius to ORE of 20 km, which would affect every kittiwake in ObSERVE 1.
- The cumulative impact assessment does not take account of the cumulative effect on foraging habitat arising from the construction of the Arklow Bank Phase 2 and Dublin Array OWFs.

8.10.6.2 Applicant's response

The potential cumulative impacts on bird species, such as red-throated divers, guillemots, razorbills, and kittiwakes, are significant and have not been adequately addressed.

1534. An update to the planning application CEA for ornithology has been provided in response to the Commission's FIR. This update, presented in **Section 7** and **Section 8** of the **CEA Report (Part 2)**, includes an updated impact assessment of cumulative construction and operation and maintenance phase effects on all relevant species, including red-throated divers, guillemots, razorbills, and kittiwakes. It supersedes the CEA section of **Volume 3**, **Chapter 10 Ornithology** and **Volume 4**, **Appendix 10.1 Cumulative Effects Assessment** of the EIAR.

1535. The **CEA Report (Part 1)** sets out the principal guidance documents that have informed the approach to the CWP Project CEA, including the PINS CEA Guidance (2024). This guidance has been applied for a number of both OWF and non-OWF projects in the UK and provides developers with a structured approach to assessing cumulative effects. The guidance is also regularly applied in Ireland for large scale onshore projects, noting that there is no single, industry standard approach to CEA in Ireland which often varies between projects.

1536. In summary, the CEA for ornithology concludes no likely significant effects to any ornithological receptors resulting from the project and other development.

A number of Phase 1 projects are absent or inadequately considered and should take account of Peschko et al., 2020, which indicates a 45% decline in kittiwake relative density during the breeding season with an estimated response radius to ORE of 20 km, which would affect every kittiwake in ObSERVE 1.

1537. As previously discussed, the conclusions of Peschko et al., 2020 are refuted, from a geographically separate region, and contradicted by a larger and contemporary body of evidence.

1538. The Applicant also directs the observer to **Section 2.7.9** of the **FIR Response Document** in which details of displacement impacts to kittiwake are provided. In this assessment impacts to the regional population are concluded to be not significant in EIA terms and impacts to potentially connected SPA populations are concluded not to result in AESI (both alone and in-combination, where the in-combination assessment is possible).

The cumulative impact assessment does not take account of the cumulative effect on foraging habitat arising from the construction of the Arklow Bank Phase 2 and Dublin Array OWFs.

1539. An update to the planning application CEA for ornithology has been provided in response to the Commission's FIR. This update, presented in **Section 7** and **Section 8** of the **CEA Report (Part 2)**, includes an updated cumulative effects assessment for disturbance and displacement from potential foraging habitat of guillemot, razorbill, puffin, red-throated diver and gannet from the array site and surrounding area during the construction phase.

1540. For all construction phase impacts screened into the CEA (where there is potential for the CWP Project to meaningfully contribute to a significant cumulative effect), the potential for cumulative effects with Arklow Bank Phase 2, Dublin Array and the other Phase 1 Project OWFs have been considered.

1541. As such, the Applicant considers that cumulative impacts in relation to foraging habitat effects have been appropriately assessed and that the assessment conclusions are robust.

8.10.7 Mitigation Measures

8.10.7.1 Summary of matters raised

1542. Observers submitted comments highlighting perceived inadequacies in mitigation measures outlined within the EIAR.

1543. Specific matters raised in this regard:

- Concerns about the lack of adequate mitigation measures for protected and endangered bird species such as kittiwake, red-throated diver, and common scoters. It is stated that impacts such as displacement, collision risks and noise pollution are impossible to mitigate against; and
- The proposed mitigation measures for birds, particularly for displacement impacts, are ineffective. The focus on managing vessel activity during construction and operation does not address the displacement resulting from the presence of the wind farm itself.

8.10.7.2 Applicant's response

Concerns about the lack of adequate mitigation measures for protected and endangered bird species such as kittiwake, red-throated diver, and common scoters. It is stated that impacts such as displacement, collision risks and noise pollution are impossible to mitigate against.

1544. As set out within **Volume 3**, **Chapter 10 Ornithology** of the EIAR (as updated by **Section 10** of the **EIAR Addendum (Part 1)**) and **Section 7** of the **CEA Report (Part 2)**, all residual project alone and cumulative effects to all ornithological receptors are assessed to be not significant in EIA terms.

1545. Where impacts in the absence of additional mitigation would have been potentially significant in EIA terms, the Applicant has outlined additional mitigation measures to ensure that it can be concluded beyond reasonable scientific doubt that significant effects will be avoided.

1546. Mitigation measures include underwater noise management measures to mitigate noise pollution, seasonal restrictions on works within the intertidal zone to minimise disturbance and displacement and vessel activity management (as presented within the updated **EVMP**). This is in addition to embedded design measures such as the 36 m minimum blade tip clearance which has reduced the collision risk to insignificant levels. As such, mitigation measures outlined in relation to all ornithological receptors are considered appropriate, adequate and in accordance with best practice.

The proposed mitigation measures for birds, particularly for displacement impacts, are ineffective. The focus on managing vessel activity during construction and operation does not address the displacement resulting from the presence of the wind farm itself.

1547. For the assessment of displacement effects on ornithology the Applicant directs the observer to **Volume 3**, **Chapter 10 Ornithology** of the EIAR, **Section 10** of the **EIAR Addendum (Part 1)** (see Offshore and Intertidal Impact 2: Disturbance and displacement in both documents) and **Section 7** of the **CEA Report (Part 2)**.

1548. In all cases project-only and cumulative displacement impacts are assessed to be non-significant in EIA terms and, as such, mitigation is not required.

8.10.8 Monitoring

8.10.8.1 Summary of matters raised

1549. The observations highlight the need for ongoing monitoring of bird populations. Observers suggest tracking bird movements to assess collision rates that may inform adaptive management strategies.

1550. Specific matters raised in this regard:

- Need for long term monitoring to track changes in seabird abundance and distribution; and
- Monitoring of seabirds during construction and operation phases.

8.10.8.2 Applicant's response

1551. The assessment presented in **Volume 3, Chapter 10 Ornithology** of the EIAR**,** complemented by updates presented in **Section 10** of the **EIAR Addendum (Part 1)**, concludes no likely significant effects on all relevant ornithology receptors. This accounts for the proposed mitigations referred to above which are sufficient to reduce potential impacts to acceptable levels (i.e. not significant in the context of EIA). This includes cumulative effects as assessed in **Section 7** and **Section 8** of the **CEA Report (Part 2)**.

1552. The conclusions are supported by substantive bodies of evidence and are made beyond reasonable scientific doubt. As such, future monitoring of ornithology is not considered necessary for the purposes of validation or removal of uncertainty in regard to EIA conclusions.

1553. However, notwithstanding the above, it is proposed within the updated **IPPEMP** (see **Section 4.7**) to contribute to the scientific understanding of bird behaviour within the Irish Sea in response to the pressures associated with ORE. Further to this, in order to further the scientific understanding of the region and to inform future marine planning, the Applicant notes a commitment to consider strategic monitoring across the East Coast OWFs in consultation with Regulators and relevant stakeholders.

8.10.9 Requests for Further Information

8.10.9.1 Summary of matters raised

1554. The observations call for independent scientific research to establish no impact on the coast and no adverse effect on local SAC/SPAs, particularly concerning bird species and their habitats. This is so that the Commission can determine that all reasonable scientific doubt has been removed as to the effects of the proposed development on the integrity of Natura 2000 sites.

8.10.9.2 Applicant's response

1555. The Applicant acknowledges the observers request to the Commission for further independent research on the potential impacts of the CWP Project on ornithology.

1556. The commissioning and delivery of such independent, baseline scientific research is a matter that rightly sits with the Government and its agencies, ensuring a consistent, publicly accessible dataset that can underpin marine spatial planning and support meaningful public participation.

1557. Within this framework, project-level applicants remain responsible for undertaking site-specific impact assessments, as required by legislation and best practice. In this regard the Applicant notes its position that the assessment in **Volume 3, Chapter 10 Ornithology** of the EIAR (as amended by **Section 10** of the **EIAR Addendum (Part 1)**) is sufficiently detailed and adequately assesses the likely environmental impacts, which are not predicted to be significant in EIA terms. This assessment has been undertaken by competent experts in accordance with their professional obligations, reputational standards, and indemnity requirements; thereby ensuring objective, evidence-based assessments that can be relied upon by decision-makers.

1558. Nonetheless, the Commission will apply independent scrutiny to the impact assessments submitted, aided by submissions from prescribed statutory authorities and its own advisors.

8.11 Marine Mammals

1559. The following section provides thematic responses to matters raised by third parties in relation to marine mammals. The matters raised have been responded to under the following sub themes:

- Species of Conservation Concern / Baseline Characterisation
- Impact of Offshore Wind Farms: Impact of Noise Pollution
- Impact of Offshore Wind Farms: Disturbance and Displacement
- Impact of Offshore Wind Farms: Habitat Degradation
- Impact of Offshore Wind Farms: Collision Risk
- Mitigation Measures
- Monitoring
- Cumulative Effects

8.11.1 Species of Conservation Concern / Baseline Characterisation

8.11.1.1 Summary of matters raised

1560. Observers highlighted the need to protect specific marine mammal species of conservation concern, such as the harbour porpoise which is a qualifying interest of several SACs. Perceived data gaps were also highlighted.

1561. Specific matters raised in this regard:

- Marine mammal surveys are not year-round and fail to capture seasonal variations;
- Surveys relied on visual observations without passive acoustic monitoring which limits the detection of cetaceans in low-visibility conditions; and
- ObSERVE and SCANS IV should be included in the assessment.

8.11.1.2 Applicant's response

Marine mammal surveys are not year-round and fail to capture seasonal variations. Surveys relied on visual observations without passive acoustic monitoring which limits the detection of cetaceans in low-visibility conditions

1562. As detailed in **Section 2.1** of **Volume 4**, **Appendix 11.3 Baseline Technical Report** of the EIAR, the CWP site-specific surveys were conducted monthly, year-round, with vessel surveys in 2012-2014 and 2018-2020 and aerial surveys in 2020-2022. These surveys do therefore capture both seasonal and interannual variation.

1563. Since the submission of the CWP Project planning application further characterisation validation surveys have been undertaken which are reported within **Section 11** of the **EIAR Addendum (Part 1)**. This includes the following additional data provided in **Appendix 11-A Update to Marine Mammal Baseline Characterisation** to the **EIAR Addendum**:

- OBSERVE II (Giralt Paradell et al., 2024);
- SCANS IV density surface (Gilles et al., 2025) ;
- DAS (4km buffer around array site and entire area of The Murrough SPA) (Nov 2024 to Apr 2025);
- DAS (10km buffer around array site) (May 2025 – Nov 2025);
- Boat based visual surveys for marine mammals (supplementary records) (Apr to May 2025 and Sep to Oct 2025);
- Landfall surveys for seals (supplementary records) (Jan 2025 to Jan 2026);
- Seal haul-out surveys in Dublin Bay and wider area (Berrow et al., 2024);
- Aerial thermal-imaging survey of seals in Ireland in August 2024 (Morris et al., 2025); and
- Data from DPC surveys (DPC, 2025)

1564. Marine mammal density estimates change on a daily, monthly, seasonal and annual basis given the fact that they are highly mobile species with large home ranges. Density estimates obtained from different survey methods each have their own set of assumptions and limitations. Thus, it is expected that for a range of surveys conducted within the Irish Sea, there will be a large variety of resulting density estimates. For this reason, several density estimates were presented in the EIAR quantitative assessment for cetaceans. Since the submission of the EIAR, additional density estimates have become available (see full details in **Appendix 11-A Update to Marine Mammal Baseline Characterisation**). The additional data has served to further validate the density estimates used in the quantitative assessment in the EIAR. The **EIAR Addendum** therefore uses the same density estimates as was used in the EIAR for the quantitative impact assessment. For completeness, **Appendix 11-C Assessment of disturbance from mitigated pile driving – Full results** of the **EIAR Addendum** presents the quantitative assessment for disturbance from pile driving using both the density estimates presented in the EIAR and new density estimates that have since become available.

Surveys relied on visual observations without passive acoustic monitoring which limits the detection of cetaceans in low-visibility conditions

1565. Site-specific surveys are conducted during the best available weather window and in the best available conditions. Surveys for marine mammals were not conducted in low visibility conditions.

1566. The Applicant has provided a detailed response to FIR item 10r ii which requests clarification on the need for PAM to characterise the receiving environment for marine mammals (see **Section 2.10.18** of the **FIR Response Document**).

1567. In order to assess whether a development could result in a significant effect on marine mammal receptors, the EIAR, in accordance with the relevant guidance, aims to characterise the receiving environment with regards likely receptors present, quantify (where possible) the number of individuals impacted through specific impact pathways, and establish whether the predicted level of impact is

sufficient to result in a population level effect. To quantify potential impacts in terms of the number of animals impacted, it is necessary to know the density of a given marine mammal receptor within the impacted area. Thus, the primary purpose of the marine mammal baseline characterisation report is to identify the appropriate density, and abundance estimates to take forward to the quantitative assessment in the EIAR for each marine mammal species.

1568. Baseline characterisation PAM can be useful to understand the species of vocalising marine mammals present in the area. While PAM can provide good information on species presence or absence and how this changes temporally on a fine scale (especially for odontocete species), it currently remains difficult to obtain a density estimate from PAM data for most species. This is due to issues relating to estimating the cue rate and subsequent detection probability function (e.g. the likelihood that the PAM systems will log acoustic cues from cetaceans at different distances, which is a key requirement for density estimation), and differentiating between species (especially dolphin species). Since the quantitative assessment in the EIAR is focussed on predicting the number of individuals impacted, the use of baseline characterisation PAM will not provide the necessary data to inform this assessment.

ObSERVE and SCANS IV should be included in the assessment

1569. Observers submitted comments that the assessment did not consider the SCANS IV and ObSERVE surveys. Both the ObSERVE surveys (Rogan et al., 2018) and the SCANS IV surveys (Gilles et al., 2023) were taken into account and considered for each species in **Volume 4**, **Appendix 11.3 Baseline Technical Report** of the EIAR. It is noted that the spatial extent of the ObSERVE surveys was limited and did not cover the entire area potentially affected by impacts such as disturbance from piling. As there is no evidence that the ObSERVE density estimates were applicable outside of the ObSERVE survey area, they could not be used in the quantitative assessment for larger scale impacts. The SCANS IV densities were, therefore, taken forwards to the quantitative assessment.

1570. Further, the Applicant has included the OBSERVE II (Giralt Paradell et al., 2024) surveys and the SCANS IV density surface (Gilles et al., 2025) data in **Appendix 11-A Update to Marine Mammal Baseline Characterisation** of the **EIAR Addendum**.

8.11.2 Impact of Offshore Wind Farms: Impact of Noise Pollution

8.11.2.1 Summary of matters raised

1571. Observers highlighted the potential for significant impact of noise pollution from construction activities, such as pile-driving, geophysical surveys, and UXO (unexploded ordnance) clearance on marine mammals. Observers note that noise can cause temporary or permanent hearing damage, disrupt communication, and lead to behavioural changes.

1572. Specific matters raised in this regard:

- Construction noise associated with piling could result in PTS for harbour porpoise, impairing essential behaviours;
- The updated TTS threshold in the Finneran et al., 2023 paper should be applied in the assessment for bottlenose dolphin;
- The significant impacts associated with noise pollution, habitat disturbance and potential collision risks with vessels and turbines cannot be ruled out;
- Habituation to anthropogenic noise represents invalid analytical process under the EIA Directive.
- Long-term habitat exclusion will occur;

- Harbour porpoises will die as a result of the piling works;
- UXO assessment does not apply appropriate frequency weighting; and
- No presentation of mitigated PTS is provided.

8.11.2.2 Applicant's response

Construction noise associated with piling could result in PTS for harbour porpoise, impairing essential behaviours

1573. The Applicant agrees that underwater noise during construction can result in PTS and this impact was therefore scoped in to the EIA for marine mammals. A detailed quantitative assessment of PTS is provided in **Section 11.10** of **Volume 3**, **Chapter 11 Marine Mammals** of the **EIAR** (see Impact 5: Auditory injury (PTS) from piling – WTGs and OSSs). This assessment has subsequently been updated in response to item 10a of the Commission's FIR (see **FIR Response Document**). The updated assessment, presented in **Section 11** of the **EIAR Addendum (Part 1)**, uses the updated NMFS (2024) thresholds for auditory injury.

1574. The Applicant has also submitted an updated MMMP that complies with DAHG (2014) guidance. The MMMP has been updated in response to item 10c of the Commission's FIR and includes following commitments:

- Limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events
- Pre-piling MMO watch of 1 km radius for 30 min (supported by PAM)
- 20 minute piling soft-start at 10% of maximum hammer energy, followed by a gradual ramp-up to full hammer energy.

1575. The mitigation applied will ensure potential impacts are 'Negligible' and not significant in EIA terms.

The updated TTS threshold in the Finneran et al., 2023 paper should be applied in the assessment for bottlenose dolphin.

1576. The Applicant is aware of the Finneran et al., 2023 paper. The purpose of the Finneran et al., 2023 study was to *"measure TTS in bottlenose dolphins at a number of different exposure frequencies, to increase the available data for developing an auditory weighting function for predicting TTS onset"*. There is no apparent intention that the findings should be directly applicable to impact assessments. Instead, the authors indicate that the findings should be used in combination with other studies to develop an updated HF auditory weighting function. As such, updated auditory weighting function was not provided by Finneran et al., 2023 and is not available to inform the impact assessment for the CWP Project. Additionally, for the reasons below, an update based on Finneran et al., 2023 is not recommended:

- While the study does suggest that a revision to TTS thresholds may be necessary, it does not propose a revised threshold or discuss application in a wider context.
- The study was limited to two captive animals. The results were not consistent between the two subjects, and only one of them was tested with sounds <1 kHz. This would not suggest that the results should lead to revised criteria.
- The findings at 8 kHz are not consistent with previous work, nor was there a clear relationship between the behavioural results and the ABR results, so they should be viewed with caution until they can be validated by further studies.
- All tests were conducted using steady state, narrowband pure tones which are not representative of pile driving noise. Therefore, it cannot be assumed that the same results would be found using broadband impulsive noise (like pile driving).

1577. In the absence of an updated HF auditory weighting function and criteria, although the study contributes to the overall knowledge of effects of noise on bottlenose dolphins, the impact assessment (EIA and NIS) for the CWP Project could not and should not have incorporated the findings of Finneran et al., 2023.

The significant impacts associated with noise pollution, habitat disturbance and potential collision risks with vessels and turbines cannot be ruled out

1578. **Volume 3, Chapter 11 Marine Mammals** of the EIAR (as updated by **Section 11** of the **EIAR Addendum (Part 1)**) considers in detail, potential impacts to marine mammals from increased noise, habitat disturbance and collision risk with vessels and turbines.

1579. **Section 11.15** of **Volume 3, Chapter 11 Marine Mammals** of the EIAR summarises the impact assessment undertaken and confirms the significance of any residual effects, following the application of additional mitigation (including the **MMMP**). In summary there are expected to be no significant adverse effects to marine mammals; a conclusion which validated by new data and assessment updates provided within the **EIAR Addendum**.

1580. Notwithstanding the above, updates to both the **EVMP** and **MMMP** have been made in response to the Commission's FIR, including a commitment to noise limits.

Habituation to anthropogenic noise represents invalid analytical process under the EIA Directive

1581. Observers commented that the inference that marine mammals are already habituated to anthropogenic noise and disturbance or dredging activity represents an invalid analytical process under the EIA Directive.

1582. In the assessment presented in **Volume 3**, **Chapter 11 Marine Mammals** of the EIAR**,** the habituation (e.g. high level of tolerance to stressor) is only discussed when referring to findings of Pirotta et al., 2013 peer-reviewed scientific paper. With regards to vessel disturbance, the EIAR states that "*the introduction of additional vessels during construction of the CWP Project is not a novel impact for marine mammals present in the area*", however the assessment does not consider any lesser effect due to potential habituation. With regards to dredging, at no point in the EIAR does it suggest that porpoise in the vicinity of the CWP Project are already habituated to anthropogenic noise from dredging.

Long-term habitat exclusion will occur

1583. A detailed justification for why barrier to movement/ loss of habitat was scoped out from the impact assessment for the construction and O&M phases is provided in **Table 11-11** in **Volume 3, Chapter 11 Marine Mammals** of the EIAR.

Harbour porpoises will die as a result of the piling works

1584. Detailed assessment by the Applicant in **Volume 3, Chapter 11 Marine Mammals** of the EIAR (as updated by **Section 11** of the **EIAR Addendum (Part 1)**), concludes no significant residual effects to marine mammals following the application of mitigation. There is no evidence that mortality to harbour porpoise will occur as a result of the CWP Project.

UXO assessment does not apply appropriate frequency weighting

1585. The assessment of PTS from UXO clearance provided in **Volume 3, Chapter 11 Marine Mammals** of the EIAR incorporates the Southall et al., 2019 hearing group frequency weightings, and the use of TTS as a proxy for disturbance from UXO clearance. For more details regarding the use of appropriate metrics and criteria see **Section 2.2.** of **Volume 4**, **Appendix 9.4 Underwater Noise Assessment** of the EIAR and **Appendix 9-C Underwater Noise Modelling Assessment** of the **EIAR Addendum**.

1586. The assessment of PTS from UXO clearance has subsequently been updated in response to the Commissions FIR (see **Section 11.10** of the **EIAR Addendum (Part 1)**). The assessment uses the NMFS (2024) hearing group weightings for auditory injury (PTS) and for TTS (as a proxy for disturbance).

No presentation of mitigated PTS is provided

1587. Mitigated PTS ranges were not provided in the EIAR because the exact mitigation methods are yet to be determined and will be defined in discussion with the Commission and NPWS. This was confirmed within the planning application **MMMP** which stated that**:**

> "In the event that it is deemed necessary by ABP and NPWS to mitigate the current cumulative PTS onset range, the CWP Project commits to implementing Noise Abatement Systems to ensure an effective reduction of underwater noise of 10 dB SELss.".

1588. As such the characterisation of the receiving environment, the assessment based on this, and the conclusions of no significant effects are considered to be robust for the purposes of EIA.

1589. Notwithstanding the above, since the submission of the CWP Project planning application, to mitigate potential impacts from underwater noise during the construction of the project, the Applicant commits to a limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events.

1590. To reflect this commitment, **Section 11.10** of the **EIAR Addendum (Part 1)** presents PTS impact ranges for both unmitigated and mitigated piling.

1591. Similarly, to mitigate potential impacts from underwater noise associated with high order UXO clearance, CWP commits to the implementation of noise abatement in the event high order clearance is required. To reflect this commitment, **Section 10.10** of the **EIAR Addendum (Part 1)** presents PTS impact ranges for both unmitigated and mitigated UXO clearance.

1592. The abovementioned commitments are detailed in the updated **MMMP** submitted in response to the Commission's FIR.

8.11.3 Impact of Offshore Wind Farms: Disturbance and Displacement

8.11.3.1 Summary of matters raised

1593. Observers highlighted the potential for marine mammals to be disturbed and displaced from their natural habitats due to construction and operational activities. Observers note that this includes the effects of increased vessel traffic and the presence of wind turbines.

1594. Specific matters raised in this regard:

- The assessment does not consider JNCC guidance on likely significant effects (20% of the relevant area on any given day or an average of 10% of the site over a season threshold), which should be considered in relation to the EIAR.

- The assessment does not adequately assess energy sources above 95-110dB.
- The assessment does not consider prolonged TTS or repeated TTS leading to PTS.
- The assessment does not consider vessel traffic masking echolocation, disrupting foraging, causing avoidance behaviours and increasing risk of vessel strikes.
- The assessment does not consider introduction of physical barriers.

The assessment does not consider JNCC guidance on likely significant effects (20% of the relevant area on any given day or an average of 10% of the site over a season threshold), which should be considered in relation to the EIAR

1595. The JNCC (2020) guidance states that significant disturbance is considered to occur if harbour porpoise are excluded from 20% of the relevant area on any given day or an average of 10% of the site over a season. It is highlighted by the Applicant that this is specific to SACs only and thus is relevant to the NIS rather than the wider EIA. Additionally, the JNCC (2020) guidance is specific to porpoise SACs in England, Wales and Northern Ireland, whilst Ireland has not adopted the same thresholds for their SACs. **Volume 4 - Assessment of Implications for Special Areas of Conservation** of the NIS includes the area thresholds for porpoise SACs for English, Welsh and Northern Irish SACs. Additionally, **Volume 4** of the NIS also presents the area thresholds for Irish SACs illustratively since Ireland has not adopted these thresholds. The **NIS Addendum (Part 1)**, updated to incorporate updated modelling and revised mitigation commitments, reflects both the effective deterrent range (EDR) referred to in the observation and the following updates:

- Updated guidance from Southall et al., 2019 to NMFS (2024) for PTS thresholds and marine mammal hearing ranges;
- Updated guidance on the use of EDRs for high and low order UXO clearance, and geophysical surveys (JNCC, 2025);
- The commitment to mitigated pile driving and UXO clearance as described in the updated **MMMP**;
- Updates made to the **EIAR Addendum** in response to the FIR and observations, and
- In response to FIR Items 10aa and 10bb (see **FIR Response Document**)

1596. With regards the EDR approach, the assessment(s) presented in both the **EIAR Addendum (Part 1)** and **NIS Addendum (Part 1)** reflect the most recent guidance (JNCC, 2025) which revises the EDR for certain activities, such as a reduction of the EDR for monopiles without noise abatement from 26km to 20km. The Applicant has however made a commitment to reduce noise to 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events. The revisions to the EDR guidance reflect up to date best available scientific evidence, and is therefore considered an appropriate basis for the assessment.

The assessment does not adequately assess energy sources above 95-110dB

1597. Observers commented that the assessment does not adequately assess disturbance from piling at noise levels above 95-110dB dB re. 1 µPa (SPL,VHF-weighted).

1598. A dose-response function can be applied to different metrics:

- probability of response vs: distance
- probability of response vs received level SEL_{ss} unweighted
- probability of response vs received level SEL_{ss} VHF-weighted.

1599. The Graham et al., 2017 dose-response function used in the quantitative impact assessment is probability of response vs received level SEL_{ss} unweighted. The methodology used to assess disturbance from pile driving is based on a dose-response function which uses received levels of 120-180 dB SEL_{ss} (unweighted), which allows the dose-response function to be applied to other cetacean

species (which could not be done with a VHF-weighted dose-response function). The use of the SEL_{ss} unweighted dose-response function is accepted in Scotland, England and Wales.

The assessment does not consider prolonged TTS or repeated TTS leading to PTS

1600. The assessment for pile driving presented in **Volume 3**, **Chapter 11 Marine Mammals** of the EIAR is based on the noise exposure thresholds and guidance in Southall et al., 2019. The SEL metric integrates cumulative (repeated) exposures which can lead to PTS. This follows the recommended 24 hour accumulation period. For more details regarding the use of appropriate metrics and criteria see **Section 2.2.** of **Volume 4**, **Appendix 9.4 Underwater Noise Assessment** of the EIAR and **Appendix 9-C Underwater Noise Modelling Assessment** of the **EIAR Addendum**.

The assessment does not consider vessel traffic masking echolocation, disrupting foraging, causing avoidance behaviours and increasing risk of vessel strikes

1601. The risk of both vessel disturbance and vessel collision risk to marine mammals and is assessed in **Section 11.10** of **Volume 3**, **Chapter 11 Marine Mammals** of the EIAR.

1602. It should be noted that the Applicant has committed to a **EVMP** to minimise the risk of vessel collisions with marine mammals, and to reduce the risk of disturbance to marine mammals. The **EVMP** has, in response to comments on disturbance to birds, been updated in response to the Commission's FIR.

The assessment does not consider introduction of physical barriers, including those from mitigation measures such as ADD, soft start, and bubble curtains.

1603. **Section 11.7** in **Volume 3**, **Chapter 11 Marine Mammals** of the EIAR explains why barrier to movement/ loss of habitat was excluded from the assessment for both the construction and O&M phases.

1604. All evidence collated to date shows that while individuals may be displaced in the short-term during construction activities, they return to the area of impact after the cessation of activities. Therefore, while disturbance leading to temporary displacement may occur, this is expected to be spatially and temporally small scale and thus it is not expected that construction activities will result in a permanent barrier to the movement of marine mammals in the area, and the likelihood of a significant effect can therefore be ruled out beyond reasonable scientific doubt. A number of studies have reported the presence of marine mammals within OWF footprints. For example, at the Horns Rev and Nysted OWFs in Denmark, long-term monitoring showed that both harbour porpoise and harbour seals were sighted regularly within the operational OWFs, and within two years of operation, the populations had returned to levels that were comparable with the wider area.

1605. With regards barrier effects from mitigation measures such as ADD and soft start, as noted by Phillips et al., 2025 in a strategic review of mitigation aspects such as ADD deployment, ADD use has not caused injury, but is acknowledged as potentially causing disturbance where more than one ADD is deployed. The assessment of underwater noise impacts relies on modelling the likely propagation of noise over a given period. The modelling includes the soft start duration, and progressive increase in hammer energy (ramp up). The overall duration of the underwater noise impact presented in the impact assessment considers the impact of ADD deployment and the efficacy of different forms of noise abatement to achieve the proposed underwater noise limit (for example see **Table 3.1**, **Section 3.3.2** and **Section 5.2.1** of the updated **MMMP**).

1606. As such the approach to assessment and modelling undertaken, the assessment informed by this, and the conclusions of no significant effects are considered to be robust for the purposes of EIA.

8.11.4 Impact of Offshore Wind Farms: Habitat Degradation

8.11.4.1 Summary of matters raised

1607. Observers commented that the assessment does not assess the risk of chemical discharges or spills.

8.11.4.2 Applicant's response

1608. **Table 11-11** in **Volume 3, Chapter 11 Marine Mammals** of the planning application EIAR details why the risk of pollution was scoped out from the assessment for the construction phase. It is also highlighted that the Applicant has committed to a **CEMP** to ensure appropriate controls are in place to manage environmental risk (including effective handling of chemicals, oils and fuels). A separate EMP, based on the same principles as the CEMP, will be submitted for the operational phase of the CWP Project.

1609. As such, given that impacts unlikely to result in a significant effect are scoped out, the assessment, and conclusions of no significant adverse effects are considered to be robust for the purposes of EIA,.

8.11.5 Impact of Offshore Wind Farms: Collision Risk

8.11.5.1 Summary of matters raised

1610. Observers highlighted the risk of marine mammals being struck by vessels associated with the CWP Project noting that the risk is particularly significant for species that may be disoriented by noise pollution.

1611. Specific matters raised in this regard:

- Increased risk of collision due to TTS; and
- Significant adverse impacts from collisions with vessels and turbines.

8.11.5.2 Applicant's response

1612. Potential impacts to marine mammals from both underwater noise and vessel collision risk are considered in **Section 11.10** of **Volume 3**, **Chapter 11 Marine Mammals** of the EIAR (as updated by **Section 11** of the **EIAR Addendum (Part 1)**). For both impact pathways the assessment concludes that no significant adverse effects on marine mammal species are predicted taking into account proposed mitigation. This includes underwater noise commitments within the updated **MMMP**, including a proposed limit on underwater noise alongside an **EVMP** to reduce the risk of vessel collisions with marine mammals.

1613. Given the above, the risk of vessel collisions arising either from vessel presence or as a result of construction noise increasing collision risk, is considered to be negligible. The assessment, and conclusions of no significant adverse effects are considered to be robust for the purposes of EIA.

8.11.6 Cumulative Effects

8.11.6.1 Summary of matters raised

1614. Observers highlighted the importance of considering cumulative and in-combination effects of multiple OWF projects on marine mammals. The combined impact of several projects can have significant adverse effects on marine mammal populations and their habitats.

1615. Specific matters raised in this regard:

- The cumulative assessment does not consider geophysical surveys in the region (which may be contributing to the 40% recent declines).
- Cumulative impacts from the south coast DMAP should be included.
- Existing levels of vehicle traffic should not be included as part of the baseline. They should be considered an additional pressure and considered by way of cumulative assessment.
- TTS and fast moving traffic stunning marine mammals making them vulnerable to vessel strikes.

8.11.6.2 Applicant's response

The cumulative assessment does not consider geophysical surveys in the region (which may be contributing to the 40% recent declines)

1616. OWF pre-construction geophysical surveys were considered in the CEA for marine mammals in **Volume 4, Appendix 11.1 Cumulative Effects Assessment**.

1617. At the request of the Commission (item 5 of the FIR) an update to the CEA for marine mammals has been provided in **Section 9** of the **CEA Report (Part 2)**. The updated assessment, which supersedes EIAR **Volume 4**, **Appendix 11.1 Cumulative Effects Assessment**, also considers geophysical surveys in the region.

1618. There is no known evidence that geophysical surveys have contributed to a decline in porpoise numbers in the region, which is further supported by the characterisation validation surveys and desk-based review undertaken of sources such as SCANS IV which present a regional overview of marine mammal populations.

Cumulative impacts from the south coast DMAP should be included.

1619. The south coast DMAP was considered in the CEA for marine mammals in **Volume 4, Appendix 11.1 Cumulative Effects Assessment**.

1620. At the request of the Commission (item 5 of the FIR) an update to the CEA for marine mammals has been provided in **Section 9** of the **CEA Report (Part 2)**. The updated assessment, which supersedes EIAR **Volume 4**, **Appendix 11.1 Cumulative Effects Assessment**, also considers the future projects associated with south coast DMAP. However, there is currently insufficient data available for these projects to undertake a meaningful assessment. They were therefore screened out of the CEA for marine mammals at Stage 2 of the CEA.

Existing levels of vehicle traffic should not be included as part of the baseline. They should be considered an additional pressure and considered by way of cumulative assessment.

1621. In line with the CIEEM (2018) "*Ecological baseline conditions are those which exist in the absence of proposed activities. The impact assessment determines how the conditions will change in relation to this baseline to facilitate a clear understanding of the effects of a project*". As such, the existing levels of vessel traffic are considered as baseline, and it is deemed appropriate for the purpose of the EIA.

The cumulative assessment does not consider the risk that TTS and fast moving marine traffic will stun marine mammals making them vulnerable to vessel strikes.

1622. Potential impacts to marine mammals from vessel collision risk are considered in **Section 11.10** of **Volume 3**, **Chapter 11 Marine Mammals** of the EIAR. The Applicant has committed to an **EVMP** to reduce to risk of vessel collisions with marine mammals. Given this commitment, the risk of vessel collisions is considered to be of 'Negligible' significance. As such, the CEA (see **Section 9** of the **CEA Report (Part 2)**) screens out vessel collisions from the CEA.

1623. Only potential impacts assessed in EIAR **Volume 3**, **Chapter 11 Marine Mammals** as having a significance rating of 'Low' or above are included in the CEA. Those assessed as having a significance rating of 'negligible' are not taken forward as there is no potential for them to have a meaningful contribution to a significant cumulative effect.

8.11.7 Mitigation Measures

8.11.7.1 Summary of matters raised

1624. Observers highlighted the need for appropriate mitigation measures for marine mammals.

1625. Specific matters raised in this regard:

- Mitigation will only be partially effective to protect Porpoises due to limitations of acoustic deterrents, soft-start procedures, and temporal management.
- Observers refer to Agreement on the Conservation of Small Cetaceans of the Baltic, north East Atlantic Irish and North Seas (ASCOBANS) guidelines which recommend that total anthropogenic removal, including mortality from bycatch and vessel strikes, should not exceed 1.7%.
- Proposed mitigation, such as ADDs and soft start, is not enough to prevent PTS. Temporal management is proposed, although noting it will not fully mitigate impacts to porpoise.
- Marine Mammals Reports were not submitted as required by OWF developers and when submitted show numerous breaches of the guidelines and use of unauthorised equipment.
- The final choice of equipment for pre-construction geophysical and geotechnical surveys is not defined.

8.11.7.2 Applicant's response

Mitigation will only be partially effective to protect Porpoises due to limitations of acoustic deterrents, soft-start Procedures, and temporal management.

1626. The updated **MMMP** fully acknowledges the limitations of ADDs and what is known on the current EDRs for different species. The updated **MMMP** provides additional mitigation measures that can be used where MMO/PAM/ADD cannot adequately mitigate the predicted cumulative PTS ranges (noise

abatement and alternative hammer types). In proposing mitigation measures for the CWP Project, the Applicant has reviewed and integrated the full suite of best practice mitigation approaches available.

1627. Furthermore, in response to the Commission's FIR, to mitigate potential impacts from underwater noise during the construction of the project, the Applicant commits to a limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events. This is reflected in the updated **MMMP**.

Observers refer to Agreement on the Conservation of Small Cetaceans of the Baltic, north East Atlantic Irish and North Seas (ASCOBANS) guidelines which recommend that total anthropogenic removal, including mortality from bycatch and vessel strikes, should not exceed 1.7%.

1628. The observation provides reference in relation to the ASCOBANS guidance which refers to anthropogenic removals (mortality from bycatch or vessel strikes).

1629. The risk of vessel collision is assessed in **Section 11.10** of **Volume 3, Chapter 11 Marine Mammals** of the EIAR. To mitigate this risk the Applicant has committed to an **EVMP** which shall reduce the risk of vessel collisions. The significance of the effect is therefore considered to be negligible and no direct mortality of marine mammals is expected to occur from the CWP Project.

Proposed mitigation, such as ADDs and soft start, is not enough to prevent PTS. Temporal management is proposed, although noting it will not fully mitigate impacts to porpoise.

1630. The update **MMMP** fully acknowledges these limitations and therefore includes consideration of other mitigation methods such as pre-piling searches as well as at-source noise abatement methods and alternative hammer types if required. Temporal management is not feasible for a species that is present year-round. In proposing mitigation measures for the CWP Project, the Applicant has reviewed and integrated the full suite of best practice mitigation approaches available.

1631. Furthermore, in response to the Commission's FIR, to mitigate potential impacts from underwater noise during the construction of the project, the Applicant commits to a limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events. This is reflected in the updated **MMMP**.

The final choice of equipment for pre-construction geophysical and geotechnical surveys is not defined.

1632. Post-consent pre-construction surveys have not yet been undertaken. At this time, it is not possible to identify the exact survey equipment that will be used in future geophysical surveys, and as such the assessment in EIAR **Volume 3, Chapter 11 Marine Mammals** for auditory injury and disturbance considers typical equipment, in part informed by the equipment used in previous licensed surveys which therefore represents a reasonable worst case impact.

8.11.8 Monitoring

8.11.8.1 Summary of matters raised

1633. Observers highlighted the need for ongoing monitoring of marine mammal populations.

1634. Specific matters raised in this regard:

- Suggests tracking marine mammal movements; and
- Monitoring of underwater noise.

8.11.8.2 Applicant's response

1635. The Applicant can confirm that site specific monitoring of marine mammals to contribute to the scientific understanding of ORE at a strategic scale within the western Irish Sea is included as a component of updated **IPPEMP**; updated in response to the Commission's FIR.

1636. Marine mammal monitoring is also an integral aspect of the **MMMP**, which details visual and acoustic monitoring during construction (see updated MMMP in response to the Commission's FIR).

1637. Finally, as noted previously, It is also proposed that strategic monitoring of marine mammals forms a component of the ECMG.

8.12 Commercial Fisheries

1638. The following section provides thematic responses to matters raised by third parties in relation to commercial fisheries. The matters raised have been responded to under the following sub themes:

- Impact of Offshore Wind Farms: Displacement of Fishing Activities
- Impact of Offshore Wind Farms: Effects on Commercially Exploited Species
- Impact of Offshore Wind Farms: Impact on Whelk Fishing Grounds
- Impact of Offshore Wind Farms: Habitat Loss and Degradation
- Impact of Offshore Wind Farms: Interference with Communication Systems
- Impact of Offshore Wind Farms: Trawling Risk for Fishing Vessels
- Cumulative Effects
- Mitigation Measures

8.12.1 Impact of Offshore Wind Farms: Displacement of Fishing Activities

8.12.1.1 Summary of matters raised

1639. The observations highlight the potential for displacement of fishing activities due to the presence of wind turbines and associated infrastructure. It is noted that fishermen may be forced to move to less productive areas, leading to reduced catches and economic losses.

8.12.1.2 Applicant's response

1640. The Applicant refers to the observers to **Section 5.12** of this document which provide a detailed response to observations made by the Marine Institute (and Bord Iascaigh Mhara) regarding commercial fisheries displacement.

8.12.2 Impact of Offshore Wind Farms: Impact on Whelk Fishing Grounds

8.12.2.1 Summary of matters raised

1641. The observations highlight the potential negative impacts of OWF construction and operation on traditional whelk fishing grounds. It is noted that the CWP Project area is one of the most valuable whelk fishing grounds in Ireland, and the development could disrupt the sensitive lifecycles of these species.

1642. Specific matters raised in this regard:

- The impact on the whelk fishery has been downplayed; and
- Observers stated that permission for the CWP Project should not be granted until the impact of the works on the sensitive shellfisheries and eco-systems has been evaluated by the Department of Agriculture, Food and Marine and the fishermen are advised of these assessments by the Government scientits.

8.12.2.2 Applicant's response

The impact on the whelk fishery has been downplayed

1643. The Applicant does not agree that the impact on the whelk fishery has been downplayed.

1644. **Volume 3**, **Chapter 12 Commercial Fisheries** of the EIAR expressly identifies the whelk potting fleet as the principal sensitive receptor within the CWP Project offshore area. The baseline characterisation confirms that whelk is the principal species targeted in the local study area, that a significant local whelk fishery is landed into nearby ports, and that whelk fishing grounds occur throughout the array site and most of the OECC.

1645. **Volume 3**, **Chapter 12 Commercial Fisheries** also records that scouting surveys and fisher-supplied information show notable overlap between the array site and established whelk activity. Against that baseline, the construction phase, project alone impact assessment finds that temporary loss of, or restricted access to, whelk fishing grounds gives rise to a Moderate adverse effect on the whelk potting fleet, which is significant in EIA terms prior to mitigation. It goes on to explain that the FMMS has been developed specifically to mitigate potential effects on the whelk and crab/lobster fisheries during construction; including measures to promote co-existence, minimise disruption to normal fishing practices, and, where relocation of static gear is necessary, provide for reasonable, justifiable and evidence-based co-operation agreements with affected fishermen who can demonstrate legitimate economic dependency on the offshore development area.

1646. With the commitment of the **FMMS**, including co-operation agreements and associated payments for the Irish whelk potting fleet, the residual effect for whelk is reduced to Minor adverse, which is not significant in EIA terms. The assessment therefore does not understate the construction effect on whelk; rather, it identifies it clearly and explains how mitigation reduces that effect.

1647. For completeness, **Volume 3**, **Chapter 12 Commercial Fisheries** also recognises operational-phase sensitivity for whelk. It states that, based on stakeholder concerns and uncertainty regarding the extent to which fishing may resume within the array site, the operational assessment for whelk is precautionary. On that basis, the project-alone operational effect for loss of grounds or restricted access within the array site is assessed as Moderate adverse, which is significant in EIA terms prior to additional mitigation.

1648. To mitigate this effect the Applicant will promote co-existence and minimise potential disruption to normal commercial fishing practices through implementation of the updated **FMMS**. In addition, the Applicant notes that available evidence indicates that static gear fisheries can resume within operational offshore wind farms, such that there is no reason to conclude that co-existence would not be possible at the CWP Project. The EIAR already records that the CWP Project is fully committed to co-existence with the fishing industry within the array site and supports the resumption of fishing during the operational and maintenance phase. It also notes the understanding that whelk fishermen off north Wales and in the North Sea operate within operational wind farms, and on that basis expects that potting activity can resume within the array site during operation and maintenance, albeit not necessarily to the full extent of pre-project conditions and therefore assessed on a precautionary basis. Since submission of the EIAR, the Applicant has also commissioned a technical note reviewing AIS

data for operational UK offshore wind farms, which identifies fishing vessel activity within a number of operational arrays, including Gwynt y Môr, Westermost Rough and Hornsea One (see **Appendix 12-A Evidence of fishing within OWF array areas** of the **EIAR Addendum**). While that note does not seek to prove that fishing will be possible in every future project, it does provide further practical evidence that fishing activity has been observed within operational OWFs. This is of particular relevance in the case of Gwynt y Môr, given its Irish Sea location and the existing understanding that it supports a whelk-related potting fishery. Taking account of this evidence, together with the **FMMS** commitments to liaison, mitigation, monitoring and adaptive management, the Applicant remains satisfied that the residual effect is not significant in EIA terms.

Observers stated that permission for the CWP Project should not be granted until the impact of the works on the sensitive shellfisheries and eco-systems has been evaluated by the Department of Agriculture, Food and Marine and the fishermen are advised of these assessments by the Government scientits.

1649. Observations received from the Department of Agriculture, Food and the Marine on the CWP Project planning application are summarised and responded to in **Section 5.3** of this document.

8.12.3 Impact of Offshore Wind Farms: Habitat Loss and Degradation

8.12.3.1 Summary of matters raised

1650. The observations highlight the potential for habitat loss and degradation due to construction activities. It is noted that this includes the physical alteration of the seabed and the potential smothering of important fish habitats.

8.12.3.2 Applicant's response

1651. The Applicant directs the observers to the relevant thematic responses for subtidal and intertidal ecology (**Section 8.8** of the document) and fish and shellfish ecology (**Section 8.9** of this document), including responses to address concerns regarding the impact of the CWP Project on spawning and nursery grounds for fish and shellfish.

8.12.4 Impact of Offshore Wind Farms: Effects on Commercially Exploited Species

8.12.4.1 Summary of matters raised

1652. The observations highlight the need to consider the impacts of construction activities, such as pile-driving and dredging. It is noted that these activities can disrupt spawning and nursery grounds, leading to declines in commercially exploited species such as whelk, cod and horse mackerel.

8.12.4.2 Applicant's response

1653. The Applicant directs the observers to the relevant thematic responses in **Section 8.9** of this document. As noted, the assessment in **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR, supported by the **EIAR Addendum (Part 1)**, considers all potential impacts that may arise

from the CWP Project on fish and shellfish species, including those that are of commercial importance. This includes:

- Temporary habitat loss / disturbance due to construction activities;
- Increased SSC and associated sediment deposition due to foundation and cable installation;
- Injury and / or disturbance to fish and shellfish from underwater noise and vibration during pile driving; and
- Accidental pollution.

1654. The conclusions of this assessment have informed **Volume 3**, **Chapter 12 Commercial Fisheries** of the EIAR which concludes no likely significant effects on commercial fishing fleets because of the impact pathways described above (see Impact 7: Effects on commercially exploited species).

8.12.5 Impact of Offshore Wind Farms: Interference with Communication Systems

8.12.5.1 Summary of matters raised

1655. The observations highlight the potential for impacts on communication systems such as radar and VHF due to the presence of the structures and electromagnetic interference.

8.12.5.2 Applicant's response

1656. The Applicant directs the observers to the relevant thematic responses for matters relating to shipping and navigation in **Section 8.16** of this document.

8.12.6 Impact of Offshore Wind Farms: Trawling Risk for Fishing Vessels

1657. The observations note that subsea cables connecting wind farms to the shore may pose trawling risks for fishing vessels, with dangers of gear entanglement with cables or protective rock berms, potentially damaging equipment and endangering crew members

8.12.6.1 Applicant's response

1658. The Applicant directs the observers to the relevant thematic responses for matters relating to shipping and navigation in **Section 8.16** of this document.

8.12.7 Cumulative Effects

8.12.7.1 Summary of matters raised

1659. The observations highlight the importance of considering cumulative effects of multiple OWF projects on commercial fisheries. It is stated that the combined impact of several projects can have significant adverse effects on fish populations and fishing activities.

1660. Specific matters raised in this regard:

- The Applicant has not adequately considered all relevant plans and projects in the cumulative assessment.

- It is noted that the CEA failed to assess and account for the cumulative effects of all east coast Phase 1 OWF Projects on the environment particularly whelk, lobster, scallop and crab fisheries.

8.12.7.2 Applicant's response

1661. Impacts on the whelk potting fishery were assessed directly as part of the CEA for commercial fisheries (**Volume 4, Appendix 12.1 Cumulative Effects Assessment** of the EIAR), alongside other relevant commercial fisheries receptors, with specific consideration of the potential for cumulative effects arising from multiple offshore wind developments and other competing marine uses. Other projects / activities assessed in the CEA included offshore wind farm projects, aggregate dredging activity, oil and gas activity and the implementation of restrictions to fishing in marine protected areas.

1662. At the request of the Commission (item 5 of the FIR) an update to the CEA for commercial fisheries has been provided in **Section 10** of the **CEA Report (Part 2)**. This assessment supersedes EIAR **Volume 4**, **Appendix 12.1 Cumulative Effects Assessment**.

1663. The CEA recognises that the Phase 1 OWF Projects with the potential to interact with potting fleets have incorporated project-specific mitigation to address loss of access effects for whelk potting and crab and lobster potting; this includes, for example, Dublin Array (array area and export cable corridor) and Arklow (export cable corridor). Mitigation cannot be applied to implementation of restrictions to fishing in marine protected areas, including Special Areas of Conservation (SACs) and Special Protected Areas (SPAs).

1664. **Section 10** of the **CEA Report (Part 2)** concludes that there is the potential for a significant cumulative effect on pot fisheries related to displacement during the construction phase. This is due to the difficulty in attributing displacement occurring across multiple projects to one specific project. Mitigation at an individual project level is recognised as effective for mitigating the impact of loss of fishing grounds; however, displaced vessels may seek alternative grounds, leading to increased competition and potential secondary effects on catch rates and profitability.

1665. In response to these cumulative concerns and the Commission's FIR, the Applicant has updated the **FMMS**, which commits to collaborative displacement monitoring by the Phase 1 Project developers, focused on pot fisheries, including whelk, crab and lobster. This will include monitoring of changes in the spatial distribution of potting activity (where data availability allows, including consideration of iVMS-enabled approaches in collaboration with the Marine Institute and industry) and monitoring of fishery performance indicators for the whelk fishery, including CPUE/LPUE trends pre- and post-construction, to help identify any material changes consistent with displacement or increased competition at an Irish Sea scale. The outcomes of this monitoring will be used to inform ongoing liaison and, where necessary, adaptive management and cumulative mitigation discussions via the Seafood / ORE Working Group.

1666. Recognising that cumulative mitigation cannot be unilaterally defined or delivered by a single project, the Applicant's project-specific mitigation and monitoring commitments shall be in place irrespective of this wider process. On that basis, taking account of the embedded mitigation and updated **FMMS** commitments, the residual cumulative effect on pot fisheries is assessed as not significant in EIA terms.

1667. The Applicant does not anticipate significant operational-phase impacts, as there is currently no legislation in Ireland that restricts or prohibits fishing activity within operational OWF sites. the Applicant notes that available evidence indicates that static gear fisheries can resume within operational OWF, such that there is no reason to conclude that co-existence would not be possible at the CWP Project. The EIAR already records that the CWP Project is fully committed to co-existence with the fishing industry within the array site and supports the resumption of fishing during the operational and maintenance phase. It also notes the understanding that whelk fishermen off north

Wales and in the North Sea operate within operational wind farms, and on that basis expects that potting activity can resume within the array site during operation and maintenance, albeit not necessarily to the full extent of pre-project conditions and therefore assessed on a precautionary basis. Since submission of the EIAR, the Applicant has also commissioned a technical note reviewing AIS data for operational UK offshore wind farms, which identifies fishing vessel activity within a number of operational arrays, including Gwynt y Môr, Westermost Rough and Hornsea One (see **Appendix 12-A Evidence of fishing within OWF array areas** of the **EIAR Addendum**). While that note does not seek to prove that fishing will be possible in every future project, it does provide further practical evidence that fishing activity has been observed within operational OWFs. This is of particular relevance in the case of Gwynt y Môr, given its Irish Sea location and the existing understanding that it supports a whelk-related potting fishery. Taking account of this evidence, together with the **FMMS** commitments to liaison, mitigation, monitoring and adaptive management, the Applicant remains satisfied that the residual effect is not significant in EIA terms.

8.12.8 Mitigation Measures

8.12.8.1 Summary of matters raised

1668. The observations raise concerns regarding the adequacy of the FMMS and the mitigation measures that are included within it.

1669. Specific matters raised in this regard:

- The FMMS is based on incomplete NMPF;
- Lack of operational phase mitigation;
- The FMMS is based on cooperation agreements rather than measures reasonably called mitigation;
- No mitigation for unknown impacts;
- Seafood processors are omitted from FMMS; and
- Proposed Fisheries Fund is inadequate.

8.12.8.2 Applicant's response

FMMS based on incomplete NMPF

1670. The Applicant does not agree that the FMMS is based on an incomplete policy footing. **Volume 3**, **Chapter 12 Commercial Fisheries** of the EIAR states that the **FMMS** has been prepared to provide an overview of the Applicant's approach to fisheries liaison and mitigation, including measures proposed to facilitate co-existence with the commercial fishing industry with the aim of minimising potential impacts to fisheries stakeholders as far as possible.

1671. It also makes clear that the **FMMS** will be a live document, secured through the project consent, and updated prior to construction to reflect the most up-to-date policy and legislation relevant to co-existence. This is important because it demonstrates that the **FMMS** is not intended to be static or frozen to an earlier policy position, but to evolve alongside the applicable Irish policy and legislative framework.

1672. In addition, **Volume 3**, **Chapter 12 Commercial Fisheries** expressly identifies the NMPF within the policy context and refers to the Seafood/ORE guidance as setting out key principles for co-existence, co-operation, early engagement, and minimisation or mitigation of adverse effects on seafood activity.

The Applicant therefore does not accept that the FMMS is founded on an incomplete or inappropriate policy basis.

Lack of operational phase mitigation

1673. The Applicant does not agree that there is a lack of operational-phase mitigation. **Volume 3**, **Chapter** expressly addresses operation and maintenance effects. It states that the Applicant is committed to co-existence with the fishing industry during the operational phase to support the resumption of fishing where practicable.

1674. The Applicant further confirms that the primary mechanisms for addressing and managing fisheries impacts during operation are (i) the embedded and additional mitigation measures set out in **Volume 3**, **Chapter 12 Commercial Fisheries** of the EIAR (as updated by **Section 12** of the **EIAR Addendum (Part 1)**), and (ii) the fisheries management measures and monitoring commitments included within the updated **FMMS**. These measures are intended to avoid, reduce and manage impacts, and (where required) to enable adaptive responses informed by monitoring and engagement throughout the project lifecycle. The commitment to monitoring is secured through the updated **FMMS**, and is also provided within the updated IPPEMP.

1675. Overall, the response to operational uncertainty is not simply to assume co-existence, but to combine co-existence measures with monitoring, liaison and operational review.

FMMS based on co-operation agreements rather than measures reasonably called mitigation

1676. The Applicant does not agree that the **FMMS** relies only, or primarily, on co-operation agreements. **Volume 3**, **Chapter 12 Commercial Fisheries** of the EIAR (as updated by **Section 12** of the **EIAR Addendum (Part 1)**) shows that the mitigation framework is broader than that. The chapter identifies primary mitigation measures including fisheries liaison, marine notices, advisory safe passing distances, guard vessels, implementation of a **Navigational Safety Plan**, and burial of cables where practicable. It also states that there shall be a loss or damage to fishing gear claim procedure specified within the **FMMS**, and that communication with fishers will continue throughout construction and operation.

1677. Co-operation agreements are therefore one element of a wider mitigation package. They are included because the Applicant recognises that there may be circumstances where relocation of static gear is necessary and where evidence-based arrangements with directly affected fishers are an appropriate part of mitigation.

No mitigation for unknown impacts

1678. The Applicant does not agree that there is no mitigation for unknown or uncertain impacts. **Volume 3**, **Chapter 12 Commercial Fisheries** of the EIAR (as updated by **Section 12** of the **EIAR Addendum (Part 1)**) expressly recognises uncertainty, particularly in relation to the extent to which fishing, and especially whelk potting, may resume within the array site during operation and maintenance. That is why the operational assessment for whelk is described as precautionary. The response to that uncertainty is to put in place monitoring, liaison and adaptive management through the F**MMS**, including operational monitoring in relation to whelk catch rates and gear trials; all monitoring having been described in the updated **IPPEMP**.

Seafood processors omitted from FMMS

1679. The Applicant notes this point. The commercial fisheries chapter is principally concerned with impacts on commercial fisheries receptors, namely fishing activity, access to fishing grounds, fishing operations and the fish and shellfish resource. **Volume 3**, **Chapter 12 Commercial Fisheries** of the EIAR defines commercial fishing for the purposes of the assessment as fishing activity undertaken with catch sold for taxable profit and undertakes the assessment on a fleet-by-fleet basis. On that basis, the principal receptors assessed are fishing fleets and related marine users, rather than downstream businesses such as seafood processors. Potential impacts on downstream businesses, such as processers, are being reviewed via the benchmarking subgroup of the Seafood ORE working group.

The Proposed Fisheries Fund is inadequate. It is also unclear how the Fisheries Fund will be allocated and if a portion will be given to seafood processors.

1680. The Applicant wishes to clarify that the Fisheries Fund is not relied upon as a mitigation measure and is not intended to offset the assessed impacts of the project on the fishing industry. Individual fishers who can demonstrate that they are economically dependent on the project area will be compensated, as highlighted in the updated **FMMS**. The Fisheries Fund is not a mitigation measure but rather a good will gesture from the Applicant for the fishing industry, including seafood processors.

1681. The mitigation relied upon in the environmental assessment is the mitigation described in **Volume 3**, **Chapter 12 Commercial Fisheries** of the EIAR and secured through the updated FMMS. This includes the fisheries liaison, communication measures, co-existence procedures, cable burial where practicable, operational notifications, gear-loss procedures, monitoring, gear trials, and, where relevant, evidence-based co-operation agreements and associated payments for directly affected fishers.

1682. Accordingly, the adequacy of mitigation should be judged by reference to those assessed measures, rather than by reference to the Fisheries Fund. The Fisheries Fund sits separately from that framework as an additional measure over and above the mitigation assessed in **Volume 3**, **Chapter 12 Commercial Fisheries** of the EIAR.

Observers stated that proper provision is made for compensating fishermen for any damage to spawning beds as a result of site investigations. This compensation should be agreed in advance of the commencement of site investigations.

1683. The Applicant directs the observers to the relevant thematic responses in **Section 8.8** and **Section 88.9** of this document. As noted, the assessment in **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR, supported by the **EIAR Addendum (Part 1)**, considers all potential impacts that may arise from the CWP Project on fish and shellfish receptors, including spawning and nursery grounds.

1684. In summary, no significant effects are predicted to occur to fish and shellfish species, spawning habitats or the substrate on which certain species are reliant. This is principally because the CWP Project is not located within any key spawning grounds for commercial species or species of conservation importance. Notwithstanding this the Applicant has committed to a **IPPEMP** and **FMMS** which provide inter alia for monitoring of sensitive and important habitats and commercially important species.

8.13 Offshore Bats

1685. The following section provides thematic responses to matters raised by third parties in relation to offshore bats. The matters raised have been responded to under the following sub themes:

- Baseline Characterisation
- Impact of Offshore Wind Farms: Collision Risk

8.13.1 Baseline Characterisation

8.13.1.1 Summary of matters raised

1686. The observations highlighted knowledge gaps regarding migratory bats, specifically the scale of the presence of bats and migration routes.

8.13.1.2 Applicant's response

1687. To assess the potential for bat activity within the array site targeted surveys of the area were undertaken using a chartered vessel in 2025, the results of which are provided in **Appendix 13-A Offshore Bat Survey Report** of the **EIAR Addendum**. In addition, a repeat of the 2022 headlands surveys was undertaken in 2025, the results and comparison of the 2022 and 2025 headland surveys is provided in **Appendix 13-A** of the **EIAR Addendum**. These survey results validate the findings of the 2022 baseline surveys, as described in **Appendix C - Data validation statements** of the **FIR Response Document**.

1688. No bats were recorded within the array site vessel surveys, however offshore bat migration between countries continues to be the topic of scientific research, with studies underway across Europe including ongoing research by Bat Conservation Ireland targeted at Nathusius' pipistrelle and Leisler's bats. This data gap is acknowledged throughout **Volume 3, Chapter 13 Offshore Bats** of the EIAR. This is also supported by the All-Ireland report (Department of Housing, Local Government and Heritage, 2025) which concludes that there is no evidence of bat migration to/from Ireland but that there is potential.

1689. The potential for migration between Ireland and Great Britain, and therefore the potential for bats to cross the CWP Project offshore development area therefore forms the basis of the impact assessment in **Volume 3, Chapter 13 Offshore Bats** of the EIAR. A precautionary approach to identifying bat passes recorded during the baseline headlands surveys as 'potentially migratory' was used to underpin the assessment. This is considered sufficient to assess the potential impact of the CWP Project on any potential migratory routes through the offshore development area.

1690. There are no internationally designated sites for Nathusius' pipistrelle bats shown on the European Environment Agency (EEA) Natura 2000 Viewer online map tool for designated sites across the European Union. Therefore, impacts on sites designated for Nathusius' pipistrelle are not possible.

1691. The assessment in **Volume 3, Chapter 13 Offshore Bats** of the EIAR is sufficiently detailed, adequately assesses the likely environmental impacts and outlines proposed mitigation measures.

8.13.2 Impact of Offshore Wind Farms: Collision Risk

8.13.2.1 Summary of matters raised

1692. The observations note that the planning application does not provide sufficient detail regarding the impacts on bats, leaving many details to be determined at a later stage. Observers commented that the statistical power to determine impacts of bat collision risks is insufficient.

8.13.2.2 Applicant's response

1693. Identification of migratory bats is an area of research across Europe and many different approaches are being studied. The approach taken for the assessment in **Volume 3, Chapter 13 Offshore Bats** of the EIAR, mentioned above, allows for a worst-case estimation of the number of bats potentially using the CWP Project offshore development area therefore a precautionary impact assessment.

1694. While research into the numbers of bats potentially present in the marine environment and the detection of collisions offshore remains underway, the potential to statistically determine the numbers of individual bats likely to collide with offshore turbines in any given area is challenging, and likely to remain difficult due to the very low numbers of bats identified at OWFs in the North Sea and English Channel. Instead, a precautionary approach is adopted which also allows for the potential changes in bat distribution associated with the changing climate.

1695. In addition, as identified in **Volume 3, Chapter 13 Offshore Bats** the Applicant is committed to operational phase monitoring. The proposed monitoring is further described in the updated **IPPEMP**.

8.14 Marine Archaeology & Cultural Heritage

1696. The following section provides thematic responses to matters raised by third parties in relation to marine archaeology. The matters raised have been responded to under the following sub themes:

- Impacts of Offshore Wind Farms: Marine Archaeology
- Impacts of Offshore Wind Farms: Marine Heritage

8.14.1 Marine Archaeology

8.14.1.1 Summary of matter raised

1697. The observation notes the presence of shipwrecks close to grid lines.

8.14.1.2 Applicant's response

1698. Observers submitted comments noting that aspects of the CWP Project infrastructure lie very close to shipwrecks.

1699. **Volume 3, Chapter 14 Marine Archaeology and Cultural Heritage** of the EIAR and supporting **Volume 4, Appendix 14.3 Marine Archaeology Technical Report** adequately identify the archaeological baseline characteristics, the potential for marine archaeology and cultural heritage (including shipwrecks) within the study area, and assesses the potential impacts from the CWP Project on this resource.

1700. **Volume 3, Chapter 14 Marine Archaeology and Cultural Heritage** of the EIAR details the proposed mitigation measures considered appropriate and deliverable in relation to underwater cultural heritage. This should be read in conjunction with the updates provided in **Section 14** of the **EIAR Addendum**

(Part 1). Known features of archaeological interest have been avoided by means of AEZs, whilst seabed features of likely/possible archaeological interest (unknown date and / or character) have been avoided where possible. Where this has not been possible, further appraisal is proposed prior to construction. Therefore, where relevant, survey data collected to refine and confirm the final design for CWP Project will be subject to archaeological assessment. The results will be reported on for review and approval by the DHLGH.

1701. Considering the above, the Applicant is of the opinion that **Volume 3, Chapter 14 Marine Archaeology and Cultural Heritage** of the EIAR (as updated by **Section 14** of the **EIAR Addendum (Part 1)**) is suitable and appropriately supported with regards shipwrecks and other marine archaeology and cultural heritage for an informed decision to be made by the regulators, and appropriately concludes no significant effects with regards the EIA.

8.14.2 Marine Heritage

8.14.2.1 Summary of matter raised

1702. The observations highlight the potential for OWFs to contribute to the ongoing destruction of Irelands marine heritage

8.14.2.2 Applicant's response

1703. **Volume 3, Chapter 14 Marine Archaeology and Cultural Heritage** of the EIAR and supporting **Volume 4, Appendix 14.3 Marine Archaeology Technical Report** adequately identify the archaeological baseline characteristics, and the potential for marine archaeology and cultural heritage within the study area. This includes seabed prehistory (for example, palaeochannels and other features that contain prehistoric sediment, and derived artefacts), seabed features, including shipwrecks and aircraft crash sites, and intertidal heritage assets. The baseline has been established using several data sources, including an archaeological assessment of marine geophysics survey datasets to identify underwater cultural heritage.

1704. **Volume 3, Chapter 14 Marine Archaeology and Cultural Heritage** of the EIAR details the proposed mitigation measures considered appropriate and deliverable in relation to underwater cultural heritage. This should be read in conjunction with the updates provided in **Section 14** of the **EIAR Addendum (Part 1)**. Known features of archaeological interest have been avoided by means of AEZs, whilst seabed features of likely/possible archaeological interest (unknown date and / or character) have been avoided where possible. Where this has not been possible, further appraisal is proposed prior to construction. A bespoke Protocol for Archaeological Discoveries (PAD) will be implemented throughout the duration of CWP Project providing a system for reporting and investigating unexpected archaeological discoveries.

8.15 Seascape Landscape Visual Impact Assessment

1705. The following section provides thematic responses to matters raised by third parties in relation to SLVIA. The matters raised have been responded to under the following sub themes:

- Non-compliance with policies
- Critique of methodology
- Recommendations for rejection
- Significant adverse effects

- Long-term and legacy concerns
- Cumulative effects
- Requests for further information
- Monitoring and mitigation measures
- Tourism effects as a result of visual impacts

8.15.1 Non-compliance with policies

Summary of matters raised

1706. Observers criticised the CWP Project and its Environmental Impact Assessment Report (EIAR) for being non-compliant with relevant European, national, regional and local policies and guidelines albeit recognising that there is a lack of adequate wind farm-related legislation in Ireland.

1707. Specific matters raised in this regard:

- Compliance with relevant policies; and
- Adequacy of relevant legislation.

Applicant's response

Compliance with relevant polices

1708. The Applicant disagrees with the observers who commented that the CWP Project is non-compliant with relevant European, national, regional, and local policies such as: Seascape and Landscape Policy 1 of the NMPF (Government of Ireland, 2021); the National Landscape Strategy for Ireland 2015-2025, Policy NPO 41a of the National Planning Framework (NPF) (Government of Ireland, 2018); specific policies and objectives of the Wicklow County Development Plan, 2022 to 2028 (Wicklow County Council, 2022); and the European Landscape Convention (Council of Europe, 2000).

1709. A full review of European, national, regional and local policies was undertaken by the Applicant during the assessment process. This is detailed in **Section 15.3** of **Volume 3**, **Chapter 15 SLVIA** of the EIAR, in **Volume 2**, **Chapter 2 Policy and Legislative Context** of the EIAR, and in a compliance summary addressing legislation and policy concerns in **Section 4** and **Section 5.2.1** of the **Planning Report**.

1710. The assessment of the planning balance referred to in the **Planning Report** (as updated by the **Planning Report Addendum**) considers all the impacts identified in **Volume 3, Chapter 15 SLVIA** and other chapters of the EIAR, both significant and non-significant, and balances these impacts in the context of the wider benefits of CWP Project planning application in terms of renewable energy generation and tackling climate change.

1711. As noted within the **Planning Report**, whilst an effect may be significant, that does not necessarily mean that such an impact would be unacceptable or should necessarily be regarded as an 'undue consequence' (GLVIA3 (Landscape Institute and IEMA, 2013) para 5.40). Visual receptors perceived experience of the surrounding environment would not fundamentally change. Having regard to the policy reference to 'span and scope', expansive views would remain out across a large-scale seascape with, due to location, a greater focus on immediate coastal and landscape features.

1712. Maps showing a summary of residual effects from the SLVIA for the CWP Project are provided in **Appendix O - SLVIA additional maps** to the **FIR Response Document**. These maps have been prepared in response to the Commission's FIR. They do not present changes to the SLVIA assessment within the submitted EIAR and should be read in conjunction with **Volume 4**, **Appendix 15.6**

Viewpoint Assessment of the EIAR for the detailed assessment and associated narrative regarding the residual effects.

Adequacy of relevant legislation

1713. Observers' comments regarding the perceived lack of adequate wind farm related legislation are noted. Element Power v An Bord Pleanála ([2017] IEHC 550) makes clear that the Commission's function is to apply the legal and policy framework in place at the time of determination and the Commission is not entitled to reject a development on the basis that it would be premature pending the adoption of future policy. The Applicant confirms that, all available and relevant legislation, best practice and guidelines have been adhered to in the SLVIA.

8.15.2 Critique of methodology

Summary of matters raised

1714. Observers criticised the methodology used in the SLVIA for not fully adhering to best practices and for downplaying the project's visual impact. This included departures with independent research /MSc and UK Planning Guidelines and a lack of a comprehensive cumulative assessment. Observers raised concerns over the shortcomings associated with the Regional Seascape Character Assessment (Marine Institute 2020) and the over reliance on incomplete data, the underestimation of effects as well as inconsistencies in the definitions used for the amended seascape boundary extensions eastward.

1715. Observers also expressed concern over the quality of the photomontages and their "disproportionate scale" and "forced perspective," and requested a quantitative analysis of the ZTVs to provide statistical information on a percentage or proportion of a study area which is theoretically visible. Observers noted that there are some discrepancies in references to receptors in the Non-Technical Summary and that the effects appear to be downplayed. Observers also raised concerns that receptors were omitted from the SLVIA including views from Sorrento Point to Bray Head, the lack of a local seascape unit and the conclusions reached over sensitivity and significance.

1716. Specific matters raised in this regard:

- SLVIA does not adhere to best practice and departs with independent research /MSc and UK Planning Guidelines;
- Shortcomings associated with the Regional Seascape Character Assessment (Marine Institute 2020) and the over reliance on incomplete data, the underestimation of effects as well as inconsistencies in the definitions used for the amended seascape boundary extensions eastward;
- Concerns over the quality of the photomontages and their "disproportionate scale" and "forced perspective". Observers also requested a quantitative analysis of the ZTVs to provide statistical information on a percentage or proportion of a study area which is theoretically visible;
- Observers noted that there are some discrepancies in references to receptors in the Non-Technical Summary (NTS) and that the effects appear to be downplayed; and
- Receptors were omitted from the SLVIA including views from Sorrento Point to Bray Head, the lack of a local seascape unit and the conclusions reached over sensitivity and significance.

Applicant's response

SLVIA does not adhere to best practice and departs with independent research /MSc and UK Planning Guidelines

1717. V**olume 3, Chapter 15 SLVIA** of the EIAR was prepared by a topic specialist on behalf of the Applicant with significant experience of undertaking assessments of this nature. The methodology and thresholds for defining effect significance are robust and appropriate for the purpose of determining the CWP Project planning application. They have been tried and tested for other national planning applications and considered acceptable at numerous other examinations and planning appeals.

1718. The SLVIA was prepared in accordance with principles set out in Guidelines for Landscape and Visual Impact Assessment, Edition 3 (GLVIA3) (Landscape Institute and IEMA, (2013). GLVIA3 was adopted by the Irish Landscape Institute and is recognised as the leading reference for LVIA in Ireland as well as England, Wales, Scotland and Northern Ireland. This is detailed further in **Section 15.3** and **Section 15.4** of **Volume 3**, **Chapter 15 SLVIA** and **Volume 4, Appendix 15.03 SLVIA Methodology**. The SLVIA is also supported by figures and visualisations to aid the reader.

1719. In terms of the MSc and UK Planning Guidelines, the MSc is not consistent with or recognised by the Landscape Institute, does not accord with GLVIA3 and therefore carries limited weight. The UK Planning Guidelines, whilst noted are based on planning judgement informed by the different constraints and opportunities in the UK's maritime area. The **Planning Report** (as updated by the **Planning Report Addendum**) sets out the planning analysis based on the applicable framework in the Republic of Ireland.

Shortcomings associated with the Regional Seascape Character Assessment (RSCA) (Marine Institute, 2020) and the over reliance on incomplete data, the underestimation of effects as well as inconsistencies in the definitions used for the amended seascape boundary extensions eastward

1720. As mentioned above, **Volume 3**, **Chapter 15 SLVIA** of the EIAR was prepared by a topic specialist on behalf of the Applicant with significant experience in seascape / landscape character assessments and SLVIAs. It has been undertaken to relevant standards and adheres to best practice guidance referred to above.

1721. For assessment purposes the RSCAs extensions seawards were necessary to accurately characterise the seascape's aesthetic and perceptual qualities beyond the 12 nm limit defined by the RSCA (Marine Institute, 2020). To increase confidence in the assessment process, the SLVIA baseline was informed by a comprehensive review of data, plans and documents and supplemented where necessary to a level appropriate to inform the assessment (see **Section 15.5** (Assumptions and Limitations) of **Volume 3, Chapter 15 SLVIA** and **Volume 4**, **Appendix 15.4 Seascape Character Assessment** of the EIAR.

1722. There were no shortcomings in the Applicant's approach. No "*unofficially amended definitions*" to the existing text were introduced, but rather text was supplemented with further detail. Paragraph 17 of **Volume 4**, **Appendix 15.4 Seascape Character Assessment** of the EIAR clearly states that "*where changes have been made these are reflected by emboldened text*". The Applicant clarifies that "changes" were not made to the text per se, but rather key characteristics were added relating to shipping lanes to reflect activity within each RSCA, considering routes beyond the 12nm limits of the each RSCA. The Applicant considers that the approach was appropriate and proportionate to the CPW Project planning application.

Concerns over the quality of the photomontages and their "disproportionate scale" and "forced perspective". Observers also requested a quantitative analysis of the ZTVs to provide statistical information on a percentage or proportion of a study area which is theoretically visible

1723. In terms of the quality of the photomontages and their "disproportionate scale" and "forced perspective", **Section 8.3** of EIAR **Volume 4, Appendix 15.3 SLVIA Methodology** explains that the visualisations (wireframes and photomontages) were prepared in full accordance with good practice requirements of the Landscape Institute Technical Guidance Note 06/19 Visual Representation of Development Proposals (Landscape Institute, 2019).

1724. In terms of ZTVs and a quantitative analysis of the data produced, bare earth and obstructed ZTV studies have limitations, as described in **Volume 3**, **Chapter 15 SLVIA** and **Volume 4**, **Appendix 15.3 SLVIA Methodology** of the EIAR. Therefore, the ZTVs were used as tools to inform professional judgements made in the SLVIA. They assisted in defining the extent of theoretical visibility of the CWP Project's offshore infrastructure and the proposed study area, the identification of representative viewpoints as well as informing receptors scoped in and out of the assessment and supported desk studies and field visits. The ZTV studies were, in accordance with best practice, modelled on the maximum parameters available for the CWP Project but did not consider small scale, local screening features such as hedgerows, individual trees or micro topography (such as dunes and floodbanks) below 25 m; as described in further detail in EIAR **Volume 3**, **Chapter 15 SLVIA** and **Volume 4, Appendix 15.3 SLVIA Methodology**. An analysis of the bare earth and obstructed ZTV studies is presented in **Section 2** of EIAR **Volume 4**, **Appendix 15.6 Viewpoint Assessment**.

Observers noted that there are some discrepancies in references to receptors in the Non-Technical Summary (NTS) and that the effects appear to be downplayed.

1725. As discussed under the Applicant's response to the sub theme for 'Significant adverse effects', EIAR **Volume 1**, **Non-Technical Summary** and **Volume 5**, **Chapter 34 Summary of Residual Effects** do not "downplay" or differentiate the nature of significant effects. They are in intended to provide a summary of residual effects, with further detail provided in **Volume 3**, **Chapter 15 SLVIA** and the supporting appendices.

1726. In terms of the exclusion of visual receptor groups in **Volume 1**, **Non-Technical Summary** of the EIAR, the observation is noted but is incorrect. Paragraph 250 in **Volume 1**, **Non-Technical Summary** of the EIAR states that there would be significant adverse effects during operation / maintenance on *"Visual Receptor Groups: Group 3 Bray Head to Cliff Manor, Group 4 Cliff Manor, Greystones, Kilcoole to Five Mile Point Group 5 Wicklow to Wicklow Head, Group 6 Dublin and Bray Mountains, Group 8 Wicklow Head to Brittas Bay and Group 9 Marine Recreational Receptors during operation / maintenance".*

1727. Reference to the omission of Northern Coastal Area (Wicklow) LCA and Southern Coastal Area (Wicklow) LCA is also incorrect. Landscape Category 2 Coastal Area AONB comprises two sub areas; LA 2a The Northern Coastal Area; and LA 2b The Southern Coastal Area. The Applicant directs the observer to **Section 15.15.12** of **Volume 3**, **Chapter 15 SLVIA** for further details.

Receptors were omitted from the SLVIA including views from Sorrento Point to Bray Head and the "Sorrento Point to Bray Head" seascape unit encompassing Killiney Bay. Observers also disagreed with the SLVIA sensitivity and significance conclusions in relation to viewpoint 5 (Killiney Obelisk).

1728. Regarding the observation on viewpoint 5, the Applicant notes that the selection of representative viewpoints (and therefore viewpoint 5 Killiney Obelisk) was discussed with LPAs and stakeholders to reach agreement. Representative viewpoints were informed by ZTVs, desktop and field visits as

explained in **Volume 3, Chapter 15 SLVIA** and the supporting appendices of the EIAR. Viewpoint 5 Killiney Obelisk reflects a similar angle of view as a view from Sorrento Point across to Bray Head, though elevated and worst case based on the popularity of the location for residents and visitors. Representative viewpoint 5 is also a designated prospect in Dun Laoghaire Rathdown County Development Plan, 2022-2028, (Dun Laoghaire-Rathdown County Council, 2022) (see Table 1 of **Volume 4, Appendix 15.6 Viewpoint Assessment** of the EIAR).

1729. No landscape character areas were defined covering the coastline associated with Dun-Laoghaire and Rathdown County (see Appendix 7: Landscape Character Areas of the Dun Laoghaire-Rathdown County Development Plan, 2022-2028, Dun Laoghaire-Rathdown County Council, 2022). As such the Applicant completed the "missing" character areas through a landscape/ townscape character assessment and defined a townscape character unit covering Killiney Bay (TCA 6) referred to in **Volume 4, Appendix 15.10 SLVIA Figures** of the EIAR.

1730. In terms of the SLVIA, and as described in **Volume 4, Appendix 15.5 Landscape Character Assessment** of the EIAR, both the value and susceptibility to change are considered for TCA 6 Killiney Bay resulting in a High-Medium sensitivity which is also applicable to Visual Receptor Group 2 Killiney to Bray. **Volume 4, Appendix 15.3 SLVIA Methodology** of the EIAR explains the criteria for evaluating sensitivity and concludes that whilst TCA6 has a strong relationship with the wider coastline, "*the TCA is not designated from a landscape perspective but does include several important features related to architecture and history, and greenspace that is popular recreationally."* Unlike Bray Head SAA which is a national landscape designation, TCA 6 has no national / international landscape designation.

1731. Observers reference to the Section 19.6.2 list of local seascapes units based on the CWP Project Offshore Scoping Report (CWP, November 2020) was superseded by the RSCA (Marine Institute, 2020) and associated RSCAs, with the more recent RSCAs used to inform the seascape assessment.

1732. The Applicant considers that the use of visual receptor groups and the grouping of marine recreational receptors is appropriate. Regarding Visual Receptor Groups and more specifically Visual Receptor Group 9 Marine Recreational Receptors, **Volume 3**, **Chapter 15 SLVIA** describes how Visual Receptor Groups were determined. For Visual Receptor Group 9, the extent of the group covered a discrete geographic area, and receptors were grouped based on the potential to experience significant visual effects. Receptors are located *"within 15 km of the nearest WTG for either Option A or B close to the shoreline between Greystones and Wicklow*" and include recreational boaters, workers on fishing vessels and shipping/ferry passengers/crew.

Observers considered that the material provided by the Applicant does not offer adequate information on the intrusiveness of the proposals on visual receptors.

1733. The intrusiveness of CWP Project is a subjective judgement and based on the Applicant's professional judgement it is not the purpose of the SLVIA (and therefore EIA) to assess. The SLVIA was prepared in accordance with GLVIA3 (Landscape Institute and IEMA, 2013) and there is no reference to intrusiveness in this document.

8.15.3 Recommendations for rejection

Summary of matters raised

1734. Observers recommend that the Commission refuse the CWP Project planning application based on its noncompliance with planning frameworks. The EIAR does not present a balanced evaluation of visual impacts or seascape and landscape character.

Applicant's response

1735. The Applicant disagrees with observations regarding recommendations for refusal and considers that **Volume 3**, **Chapter 15 SLVIA** of the EIAR assessment provides a balanced assessment of impacts to seascape, landscape/ townscape, national landscape designations and visual receptors.

1736. The assessment of the planning balance referred to in the **Planning Report** (as updated by the **Planning Report Addendum**) considers all the impacts identified in **Volume 3, Chapter 15 SLVIA** and other chapters of the EIAR, both significant and non-significant, and balances these impacts in the context of the wider benefits of CWP Project planning application in terms of renewable energy generation and tackling climate change.

1737. **Volume 3, Chapter 15 SLVIA** and the supporting appendices in **Volume 4** of the EIAR were prepared in full accordance with relevant standards and guidance as referred to in the main chapter and **Volume 4**, **Appendix 15.03 SLVIA Methodology**. The SLVIA provides an objective and balanced evaluation of all seascape, landscape/townscape, national landscape designations and visual receptors.

1738. Maps showing a summary of residual effects from the SLVIA for the CWP Project are provided in **Appendix O - SLVIA additional maps** to the **FIR Response Document**. These maps have been prepared in response to the Commission's FIR. They do not present changes to the SLVIA assessment within the submitted EIAR and should be read in conjunction with **Volume 4**, **Appendix 15.6 Viewpoint Assessment** of the EIAR for the detailed assessment and associated narrative regarding the residual effects.

8.15.4 Significant adverse effects

Summary of matters raised

1739. Observers commented that the CWP Project will have significant adverse residual effects on seascape, landscape, and visual receptors. The mitigation of landscape/ seascape effects is almost non-existent following site selection and measures are not compatible with best practice and international acceptable thresholds. Observers noted that there would be a significant adverse effect on Regional Seascape Character Area (RSCA) 14 and all RSCAs would experience a significant adverse effect; the project's impact on a RSCA amounts to a rare and unique extent.

1740. There are also discrepancies noted between Volume 3, Chapter 15 SLVIA and Volume 5, Chapter 34 Summary of Residual Effects of the EIAR, with Volume 5, Chapter 34 Summary of Residual Effects of the EIAR downplaying the relevance of significant adverse residual effects. Observers criticised the scale of the proposals and suggested the need for scheme reduction and a Condition securing a 10 km gap between the CWP Project array site and the adjacent Dublin Array OWF as well as noting that Volume 3, Chapter 15 SLVIA of the EIAR contradicts GLVIA3's intent in stating why there may be exceptions to findings of Significance that are not in fact significant.

1741. Specific matters raised in this regard:

- Significant adverse effects on seascape, landscape and visual receptors;
- Significant effects on Regional Seascape Character Areas; and
- Document discrepancies and downplaying significance.

Applicant's response

Significant adverse effects on seascape, landscape and visual receptors

1742. **Volume 3**, **Chapter 15 SLVIA** of the EIAR determined that the CWP Project has the potential to generate significant adverse effects on its own and cumulatively with other developments on certain receptors and these would relate to seascape, landscape/townscape, national landscape designations and visual receptors. The conclusions drawn within the SLVIA are that a limited subset of the landscape and visual receptors assessed are subject to significant impacts.

1743. Maps showing a summary of residual effects from the SLVIA for the CWP Project are provided in **Appendix O - SLVIA additional maps** to the **FIR Response Document**. These maps have been prepared in response to the Commission's FIR. They do not present changes to the SLVIA assessment within the submitted EIAR and should be read in conjunction with **Volume 4**, **Appendix 15.6 Viewpoint Assessment** of the EIAR for the detailed assessment and associated narrative regarding the residual effects.

1744. It should be noted that whilst a residual effect may be significant in EIA terms, that does not necessarily mean that such an impact would be unacceptable or should be regarded as an "undue consequence" (GLVIA3 (Landscape Institute and IEMA, 2013) para 5.40). Visual receptors perceived experience of the surrounding environment would not fundamentally change. Having regard to the policy reference to 'span and scope', expansive views would remain out across a large-scale seascape with, due to location, a greater focus on immediate coastal and landscape features.

Significant effects on Regional Seascape Character Areas

1745. The Applicant disagrees with the observations that all RSCAs should be significant including the "host" and adjacent RSCAs and is unclear as to the evidence to support the reference to the impact as "rare and unique in its extent."

1746. **Volume 4, Appendix 15.4 Seascape Character Assessment** of the EIAR explains that the magnitude of impact was determined based on the relative proximity of the RSCA to the CWP Project's offshore infrastructure, the nature of the seascape, the level of activity / complexity of the seascape, as well as the overall extent of the RSCA. The assessment concluded that there would be variations in the magnitude of impact for the RSCAs generating varying effects on the RSCAs.

1747. This is reflected maps in **Appendix O - SLVIA additional maps** to the **FIR Response Document** showing a summary of residual effects for each receptor from the SLVIA for the CWP Project alone. These maps have been prepared in response to the Commission's FIR.

Document discrepancies and downplaying significance

1748. The Applicant disagrees with the observation that the relevance of significance adverse effects is downplayed. **Volume 3**, **Chapter 15 SLVIA** of the EIAR concludes that the CWP Project has the potential to generate significant adverse effects for a limited subset of the landscape and visual receptors assessed; both from the project alone and cumulatively with other developments on certain receptors. These relate to seascape, landscape/townscape, national landscape designations and visual receptors.

1749. **Volume 5**, **Chapter 34 Summary of Residual Effects** of the EIAR is intended to provide a summary of the residual effects as assessed with further detail provided in **Volume 3**, **Chapter 15 SLVIA** and supporting appendices.

1750. Maps showing a summary of residual effects from the SLVIA for the CWP Project are provided in **Appendix O - SLVIA additional maps** to the **FIR Response Document**. These maps have been prepared in response to the Commission's FIR. They do not present changes to the SLVIA assessment within the submitted EIAR and should be read in conjunction with **Volume 4**, **Appendix 15.6 Viewpoint Assessment** of the EIAR for the detailed assessment and associated narrative regarding the residual effects.

8.15.5 Tourism effects because of visual impacts

8.15.5.1 Summary of matters raised

1751. Observers expressed concerns that the visual effects of the WTGs will negatively impact the tourism industry in coastal areas.

Applicant's response

1752. The Applicant directs the observers to the relevant thematic responses for the Population sub theme (see **Section 8.18.3** of this document).

8.15.6 Long-term and legacy concerns

Summary of matters raised

1753. Observers questioned the plausibility of describing the CWP Project as a temporary development especially when the proposed construction period spans 10 years with a similar timescale attributed to the decommissioning phase. Residual impacts on seascape and landscape character would be permanent due to the long lifespan of the wind farm infrastructure.

1754. Observers also noted that existing wind farms are frequently repowered at the end of their approved life, potentially remaining in place with an increase in effect for more than 70 years; resulting in a permanent development.

Applicant's response

1755. The Applicant disagrees with the observation that the proposed construction and decommissioning period spans 10 years. As set out in **Section 4.4** of **Volume 2, Chapter 4 Project Description**, the total construction period for the CWP Project is expected to take place over a period of four years, with offshore construction taking place over a shorter period that this. With regards to decommissioning, as stated in **Section 7** of the **Rehabilitation Schedule**, the full programme of rehabilitation will take approximately 24 months to complete.

1756. **Section 15.4** of **Volume 3, Chapter 15 SLVIA**, outlines the impact assessment methodology and the criteria used to inform the significance of effect on receptors including the sensitivity of the seascape, landscape/townscape, national landscape designations and visual receptors (value and susceptibility)

and magnitude of impact, considering scale/size, geographic extent and duration and reversibility. The duration of effects from the CWP Project are defined as 'long-term' for the purpose of the impact assessment, given that the CWP Project is likely to be removed after 25 years in operation, in accordance with the binding rehabilitation schedule. Effects would therefore no longer occur beyond this timeframe. This reflects the approach to describing duration of effects within the EIAR Guidelines (EPA, 2022) which define permanent effects as 'effects lasting over sixty years'.

1757. Based on the points raised above the Applicant disagrees that significant residual impacts on seascape and landscape character would be permanent due to the long lifespan of the wind farm.

1758. **Volume 3, Chapter 15 SLVIA** of the EIAR did not assess the CWP Project based on an extended timescale to include repowering. The Applicant refers the observers to **Section 4.12** of **Volume 2, Chapter 4 Project Description** which states that the operational lifetime [of the CWP Project] is expected to be 25 years, commencing on full commercial operation of the project. At the end of this 25 year period, the CWP Project could be repowered or decommissioned. If repowered during the period of the MAC, this would be subject to a new consent application supported by an EIAR. Any renewal will require further assessment and hence it is appropriate that the assessment is aligned with the operational life sought.

8.15.7 Cumulative effects

Summary of matters raised

1759. Observers highlighted the significant cumulative impact of the CWP Project with other Phase 1 OWF Projects, including Dublin Array OWF and Arklow Bank II OWF stating that the cumulative effects assessment was inadequate and the effects underestimated.

1760. Specific matters raised in this regard:

- The significant cumulative impact of the CWP Project with other Phase 1 OWF Projects, including Dublin Array OWF and Arklow Bank II OWF;
- Cumulative effects on Bray Special Amenity Area (SAA) and Cliff Walk;
- Adverse cumulative effects with Dublin Array OWF are not covered in Volume 1, Non-Technical Summary or Volume 5, Chapter 34 Summary of Residual Effects of the EIAR; and
- Cumulative effects of viewpoint 5 by comparison with Visual Receptor Group 9.

Applicant's response

The significant cumulative impact of the CWP Project with other Phase 1 OWF Projects, including Dublin Array OWF and Arklow Bank II OWF

1761. Observations regarding the cumulative impact of the Phase 1 OWF Projects are noted. The Applicant has undertaken a cumulative effects assessment based on a scenario where the seascape, landscape / townscape, national designated landscapes and visual effects of CWP Project's offshore infrastructure are added to the marine environment, which already includes other Phase 1 OWF Projects (including Dublin Array OWF), as well as the existing presence of Arklow Bank OWF Phase 1.

1762. **Volume 4, Appendix 15.10 SLVIA Figures** of the EIAR shows the extent of the cumulative sites (Figure 15.15) and cumulative Zone of Theoretical Visibility (ZTV)s (Figures 15.16a to l), whilst Volume **4, Appendix 15.11 Visualisations** of the EIAR demonstrate the relative extent of the other Phase 1

OWF Projects to the CWP Project through a set of visualisations. Potential cumulative effects were assessed for specific landscape / townscape receptors, national designated landscapes, visual receptor groups, main named settlements and key routes.

1763. **Volume 4, Appendix 15.1 Cumulative Effects Assessment** of the EIAR concluded that significant adverse cumulative effects on certain receptors would be experienced where the effects of the CWP Project's offshore infrastructure were added to other Phase 1 Projects. At the request of the Commission (item 5 of the FIR) an update to the CEA for SLVIA has been provided in **Section 13** of the **CEA Report (Part 2)**. This assessment supersedes EIAR **Volume 4, Appendix 15.1 Cumulative Effects Assessment**, however the CEA conclusions have remained the same.

Cumulative effects on Bray Special Amenity Area (SAA) and Cliff Walk

1764. With respect to Bray SAA, **Volume 3**, **Chapter 15 SLVIA** of the EIAR concluded that the effects of the CWP Project's offshore infrastructure on Bray Head SAA alone and cumulatively were 'Significant' adverse, informed by a review of the ZTVs and field work. Based on the methodology described in **Volume 3**, **Chapter 15 SLVIA** of the EIAR, with further detail provided in **Volume 4, Appendix 15.3 SLVIA Methodology**, the assessment concluded that Bray Head SAA has a High-Medium magnitude of impact when assessed against the CWP Project alone based on not just the scale or size of the CWP Project's offshore infrastructure but also on duration and reversibility and geographical extent.

1765. The Applicant notes that Bray Head SAA covers a wider area than just the coastline (see **Volume 4**, **Appendix 15.10 SLVIA Figures**) and the geographical extent of the receptor area where a view of the CWP Project's offshore infrastructure would be experienced, would be intermediate (around half of the receptor area); as referred to in **Section 15.4** of **Volume 3**, **Chapter 15 SLVIA**.

1766. In terms of the cumulative effects assessment, whilst the cumulative significant effect would be 'Significant' adverse (i.e. significant in EIA terms), Bray Head SAA was assessed to experience a Medium magnitude of impact, rather than a High to Medium magnitude of impact, as the CWP Project's offshore infrastructure would have a reduced effect on Bray Head SAA due to the closer proximity of Dublin Array OWF and on the basis that the effects of CWP Project were added to other Phase 1 Projects.

1767. Comments on the Cliff Walk are noted. The assessment focused on key promoted routes considering Bray -Greystones Cliff Walk (then closed) and Greystones to Wicklow Trail as referred to in **Volume 4**, **Appendix 15.8 Sequential Route Assessment** of the EIAR.

Adverse cumulative effects with Dublin Array OWF are not covered in Volume 1, Non-Technical Summary or Volume 5, Chapter 34 Summary of Residual Effects of the EIAR

1768. **Section 2.3.2** of the **Planning Report** explains that Bray Bank and Kish Bank together form Dublin Array, and that Dublin Array forms part of the Phase 1 OWF Projects as referred to in **Volume 1, Non-Technical Summary** of the EIAR. With regards to presentation of cumulative effects refer to the updated CEA in response to the Commission's FIR (**CEA Report (Part 2)**) which includes a summary of the cumulative effects of the CWP Project with other Phase 1 Projects.

1769. As referred to under the Applicant's response under "Significant Adverse Effects" the Applicant acknowledges that **Volume 1**, **Non Technical Summary**, Section 6.10 and Annex A SLVIA Assessment Summary of **Volume 5**, **Chapter 34 Summary of Residual Effect**s of the EIAR are inconsistent in terms of referring to adverse effects. EIAR **Volume 3**, **Chapter 15 SLVIA**, **Section 15.10**, and the **Non Technical Summary**, make it clear that the SLVIA effects resulting from CWP Project are adverse. The inconsistency within Chapter 34 wherein significant effects within the SLVIA

are not referred to as adverse, is not considered to meaningfully or materially alter the conclusions or the understanding of the project.

Cumulative effects of viewpoint 5 by comparison with Visual Receptor Group 9

1770. The Applicant disagrees with observations suggesting that the cumulative level of effect from representative viewpoint 5 (Killiney Hill Obelisk) should be greater than the level of significance attributed to it and the comparison with Visual Receptor Group 9 Marine Recreational Receptors. As demonstrated in **Figure 15.05A** of **Volume 4**, **Appendix 15.11 Visualisations** of the EIAR, the CWP Project in conjunction with Dublin Array OWF does not "encompass the entire Killiney Bay vista". The CWP Project would appear less prominent in the view and sit behind Dublin Array with, to the far right of the view, Arklow Bank II OWF and to the far left of the view, NISA OWF.

1771. Regarding the comparison with Visual Receptor Group 9, representative viewpoint 5 is located beyond 20 km from the CWP Project and lies within Visual Receptor Group 2 Killiney to Bray. As explained in **Table 15-16** of EIAR **Volume 3**, **Chapter 15 SLVIA**, Visual Receptor Group 9 Marine Recreational Receptors are located within 15 km to the nearest WTG for either Option A or B close to shore between Greystones and Wicklow. Representative viewpoint 5, and indeed Visual Receptor Group 2, lie beyond the location of Visual Receptor Group 9, the receptors of which would experience extensive views from a variety of different orientations which would be immediate, full and open.

8.15.8 Monitoring and mitigation measures

Summary of matters raised

1772. Observers stated that the proposed mitigation measures are inadequate for reducing adverse effects and are not reflected in the submitted photomontages with specific reference to angle of view and screening. Observers noted the lack of a strategic approach to minimising visual intrusion with reference UK planning policy and greater setbacks offshore. Other Observations recommended a greater degree of separation between the proposed Dublin Array OWF and the CWP Project as well as the provision of an interpretation centre and interpretation boards. Observers also noted the lack of information regarding decommissioning the scheme and funding.

1773. Specific matters raised in this regard:

- Lack of mitigation through site selection and lack of adherence to best practice / thresholds;
- Lack of mitigation in photomontages;
- Intrusiveness of proposals and UK Planning Guidelines;
- Limited information on decommissioning and associated funding.

Applicant's response

Lack of mitigation through site selection and lack of adherence to best practice / thresholds

1774. Observations relating to **Volume 3**, **Chapter 3 Site Selection and Consideration of Alternatives**, of the EIAR, including SLVIA considerations, are addressed in **Section 8.2** of this document.

1775. Comments regarding the application of relevant guidance and best practice are responded to above.

Lack of mitigation in photomontages

1776. With regards to the implication that mitigation from screening is not reflected in the photomontages and should not be considered in the assessment. No mitigation measures in terms of planting / built form have been introduced to provide further screening of the CWP Project' offshore infrastructure and consequently this has not been reflected in the photomontages. Representative viewpoints used to prepare the photomontages were selected as worst case and based on clear views without obstructions. As noted in **Volume 3, Chapter 15 SLVIA** of the EIAR the nature of the view would change inland and along the coastline depending on proximity, angle of view and elevation as well as screening from intervening vegetation and built form. Further information on mitigation measures through policy direction, site selection and an iterative design process is provided under the Applicant's responses to Observations under "Significant Adverse Effects."

Intrusiveness of proposals and application of UK Planning Guidelines

1777. The intrusiveness of the CWP Project is a subjective judgement and based on the Applicant's professional judgement and it is not the purposes of the SLVIA (and therefore EIAR) to assess. The SLVIA was prepared in accordance with GLVIA3 (Landscape Institute and IEMA, 2013) and there is no reference to intrusiveness in this document.

1778. References to Planning Guidelines for England and Wales which seek to reduce visual impact through buffer zones for different heights of WTGs based on their magnitude of impact are noted. National Planning Statement for Renewable Energy Infrastructure (EN-3)(Department for Energy Security & Net Zero, 2023) refers specifically to the relationship of the shoreline to the setting of a nationally designated landscape in relation to the Seascape and Visual Buffer study for Offshore Wind Farms (White Consultants, 2020). . The **Planning Report** (as updated by the **Planning Report Addendum**) sets out the planning analysis based on the applicable framework in this jurisdiction.

Scheme reduction and proposed condition

1779. The Applicant notes the observation requesting a greater degree of separation between the CWP Project array site and that of the proposed Dublin Array OWF, alongside the suggested condition of a 10 km gap between the two wind farms.

1780. The Applicant notes that whilst a greater degree of separation may reduce the impacts for some specific visual receptors in relation to the CWP Project alone, the level of cumulative impact on visual receptors would remain unchanged (see **Section 13** of the **CEA Report (Part 2)** which supersedes **Volume 4**, **Appendix 15.1 Cumulative Effects Assessment** of the EIAR.

1781. With regards further mitigation, in the form of an interpretation centre and interpretation boards, the Applicant does not consider these to be mitigation measures able to avoid, reduce or prevent significant effects.

Limited information on decommissioning and associated funding.

1782. **Volume 3, Chapter 15 SLVIA** of the EIAR has assessed effects resulting from decommissioning with specific reference given in EIAR **Volume 3, Chapter 15 SLVIA, Section 15.10**. As stated therein, impacts experienced during construction and decommissioning were combined for both daytime and night-time, due to the similar nature of effects. Further detail is provided in the supporting Appendices; V**olume 4, Appendix 15.5 to 15.9** of the EIAR. With regards to the requirement for decommissioning,

Volume 3, Chapter 4 Project Description, Section 4.12 of the EIAR stated that the rehabilitation of the marine area is a requirement of the Maritime Area Consent. The **Rehabilitation Schedule** in the supporting documents of the EIAR presented an indicative schedule for the rehabilitation programme, costs and post rehabilitation monitoring and maintenance, the programme of rehabilitation taking approximately 24 months to complete.

8.16 Shipping and Navigation

1783. The following section provides thematic responses to matters raised by third parties in relation to shipping and navigation. The matters raised have been responded to under the following sub themes:

- Impacts of Offshore Wind Farms: Increased Vessel Traffic
- Impacts of Offshore Wind Farms: Radar and communication interference
- Impacts of Offshore Wind Farms: Trawling risk for fishing vessels
- Impacts of Offshore Wind Farms: Safety zones

8.16.1 Increased Vessel Traffic

8.16.1.1 Summary of matters raised

1784. The observations highlight that the construction and operation of the CWP Project may lead to increased vessel traffic.

1785. Specific matters raised in this regard:

- Navigational concerns; and
- Risks to static fishing gear.

8.16.1.2 Applicant's response

1786. The observers comments on navigational concerns and risks to static fishing gear are noted. Impacts on navigational safety to vessels in transit have been fully assessed in **Volume 3, Chapter 16 Shipping and Navigation** of the EIAR and in **Volume 4 Appendix 16.3 Navigation Risk Assessment**.

1787. It is concluded that all impacts are at most tolerable and As Low As Reasonably Practicable (ALARP). This includes assessment of the impact of additional vessels associated with the CWP Project, noting that the planning application included a **Navigational Safety Plan** as a supporting document which outlines the procedures and mitigations that will be in place to manage project vessel movements.

8.16.2 Interference with Communication Systems

8.16.2.1 Summary of matters raised

1788. The observations highlight that the construction and operation of the CWP Project may lead to interference with radar and communication.

1789. Specific matters raised in this regard:

- Radar interference – clutter, false echoes, shadow; and

- EMF Interference.

8.16.2.2 Applicant's response

1790. The observers comments on radar interference and EMF interference are noted. Impacts on vessel navigation, communication and position fixing equipment have been assessed in **Section 13** of **Volume 4 Appendix 16.3 Navigation Risk Assessment** of the EIAR.

1791. It was concluded that the resulting significance of risk for all impacts were broadly acceptable which is not significant in EIA terms. This includes impacts on vessel radar from the structures, and EMF impacts from the subsea cables.

1792. The Applicant notes that an update to the Navigation Risk Assessment (NRA) has been made in response to the Commission's FIR. The update is provided in **Appendix 16-B Navigational Risk Assessment** of the **EIAR Addendum**. The conclusions of the NRA remain unchanged.

8.16.3 Trawling risk for fishing vessels

8.16.3.1 Summary of matters raised

1793. The observations note that subsea cables connecting wind farms to the shore may pose trawling risks for fishing vessels, with dangers of gear entanglement with cables or protective rock berms, potentially damaging equipment and endangering crew members.

8.16.3.2 Applicant's response

1794. The observers comments on trawling risk to vessels are noted. Impacts on navigational safety to fishing vessels in transit have been assessed in **Volume 3, Chapter 16 Shipping and Navigation** of the EIAR and in **Volume 4 Appendix 16.3 Navigation Risk Assessment**.

1795. It was concluded that the significance of risk for all potential impacts is broadly acceptable or tolerable and ALARP, which is not significant in EIA terms (assuming implementation of additional mitigation where necessary under the Formal Safety Assessment (FSA)).

1796. The FSA is a requirement under MGN 654 and is a structured and systematic methodology-based risk analysis to reduce risks to ALARP. Details of the FSA assessment process are available in **Volume 4 Appendix 16.3 Navigation Risk Assessment – Section 3.3.**

1797. Other observations relating to commercial fishing have been responded to in **Section 8.12** of this document.

8.16.4 Safety Zones

8.16.4.1 Summary of matters raised

1798. The observations note that safety zones of 500m have not been applied to assessment of displacement of vessels, in particular commercial fishing vessels.

8.16.4.2 Applicant's response

1799. Observer's comments on safety zones are noted. Navigational safety impacts from vessel displacement (including fishing vessels in transit) have been fully assessed in **Volume 3, Chapter 16 Shipping and Navigation** of the EIAR and in **Volume 4 Appendix 16.3 Navigation Risk Assessment**.

1800. It was concluded that the significance of risk for all potential impacts is broadly acceptable or tolerable and ALARP which is not significant in EIA terms (assuming implementation of additional mitigation where necessary under the FSA).

1801. The assessment included consideration of use of advisory safe passing distances around structures and works noting that statutory safety zones cannot be implemented under current legislation. Advisory safe passing distances would be in place around any sensitive operations to ensure passing vessels are aware of the activity to reduce risk to both the associated project vessels and third party vessels.

8.17 Aviation, Military and Radar

1802. The following section provides thematic responses to matters raised by third parties in relation to aviation, military and radar. The matters raised have been responded to under the following sub themes:

- Impacts of Offshore Wind Farms: Aviation and Radar

8.17.1 Aviation and Radar

8.17.1.1 Summary of matters raised

1803. The observations identify concerns regarding interference with radar, VOR signals, GPS signal issues, and visual pollution from lighting.

1804. Specific matter raised in this regard:

- Radar Interference: Offshore wind turbines can create radar clutter, false echoes, and radar shadows, leading to navigational hazards.
- VOR Signal Disruption: Wind turbines can interfere with VOR signals, causing multipath interference and inaccurate bearings.
- GPS Signal Issues: Wind turbines can cause multipath effects and signal blockages, leading to inaccurate positioning and signal loss.

8.17.1.2 Applicant's response

Radar Interference: Offshore wind turbines can create radar clutter, false echoes, and radar shadows, leading to navigational hazards.

1805. EIAR **Volume 3**, **Chapter 17 Aviation, Military and Radar** has assessed the potential environmental impacts on radar from the construction, operation and maintenance, and decommissioning phases of the CWP Project. The assessment of impacts on radar as a result of the construction, O&M, and decommissioning phases of the CWP Project are predicted to be not significant in EIA terms. In addition, and in accordance with the observation received from IAA, the Applicant has since engaged with Air Nav Ireland and DAA Dublin Airport to confirm any potential impacts on instrument flight procedures and communication, navigation and surveillance equipment at Dublin Airport.

1806. Following consultation in October 2025, AirNav Ireland and DAA have confirmed that they have no concerns regarding potential impact on instrument flight procedures, obstacle limitation surfaces or communication, navigation and surveillance facilities at Dublin Airport (see **Appendix N - Letter from AirNav Ireland r.e. Dublin Airport** of the **FIR Response Document**)

VOR Signal Disruption: Wind turbines can interfere with VOR signals, causing multipath interference and inaccurate bearings.

1807. The Applicant commissioned an Instrument Flight Procedure (IFP) assessment from an IAA Approved Procedure Design Organisation which confirmed that none of Dublin Airport's IFPs, including those based on VOR, will be affected by the proposed development's wind turbines. For more detail please refer to **Volume 4**, **Appendix 17.3 Codling Wind Park Dublin Airport Special Aeronautical Study** of the EIAR.

1808. This study was reviewed and approved by AirNav Ireland and DAA (see **Appendix N - Letter from AirNav Ireland r.e. Dublin Airport** of the **FIR Response Document**).

GPS Signal Issues: Wind turbines can cause multipath effects and signal blockages, leading to inaccurate positioning and signal loss.

1809. The Applicant commissioned an IFP assessment from an IAA Approved Procedure Design Organisation which confirmed that none of Dublin Airport's IFPs, including those based on GPS, will be affected by the proposed development's wind turbines. For more detail please refer to **Volume 4**, **Appendix 17.3 Codling Wind Park Dublin Airport Special Aeronautical Study** of the EIAR.

1810. This study was reviewed and approved by AirNav Ireland and DAA (see **Appendix N - Letter from AirNav Ireland r.e. Dublin Airport** of the **FIR Response Document**)

Summary

1811. The assessment of impacts on aviation, military and radar as a result of the construction, O&M, and decommissioning phases of the CWP Project are predicted to be not significant in EIA terms.

8.18 Onshore and Project Wide

1812. The following section provides thematic responses to matters raised by third parties in relation to onshore and project wide matters. The matters raised have been responded to under the following sub themes:

- Airborne noise
- Carbon balance assessment
- Population
- Human health
- Risk of accidents and major accidents

8.18.1 Airborne Noise

8.18.1.1 Summary of the matter raised

1813. Observers commented that the potential effect of airborne noise from WTGs on the coastal population has not been considered in the EIA.

8.18.1.2 Applicant's response

1814. **Volume 3**, **Chapter 24 Noise and Vibration** of the EIAR addresses the assessment of noise and vibration for the offshore and onshore components of the project. The assessment addresses airborne noise from WTGs on onshore noise sensitive locations in accordance with the guidance contained in the Institute of Acoustics: A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise (the IOA GPG).

1815. The predicted noise levels from the WTGs were below the relevant 35 dB L_{A90} threshold and no further detailed assessment was required. The assessment in **Volume 3**, **Chapter 24 Noise and Vibration** also details that the predicted levels were considered conservative as did they did not take account of any screening close to noise sensitive locations. The assessment is sufficiently detailed and adequately assesses the potential for noise impacts on onshore noise sensitive locations. There are no significant effects predicted from the operation of the WTGs at onshore noise sensitive locations.

8.18.2 Carbon Balance Assessment

8.18.2.1 Summary of the matter raised

1816. Observers commented that the amount of carbon emissions released during the construction of the project is expected to be significant. Observers state that the project will result in the release of 375,000 tonnes of CO2 from the WTGs alone.

8.18.2.2 Applicant's response

1817. **Volume 3, Chapter 28 Climate – Carbon Balance Assessment** of the EIAR addressed the potential impacts of the offshore and onshore components of the CWP Project on climate during the construction, operation and maintenance and decommissioning phases. The assessment included a greenhouse gas emissions (GHG) assessment which quantified the GHG emissions from the CWP Project over its lifetime. The GHG assessment was completed referencing national guidelines, in addition to international standards and was presented as tonnes of carbon dioxide equivalent (CO2eq).

1818. An update to **Volume 3, Chapter 28 Climate - Carbon Balance Assessment** has been provided in response to item 17a of the Commission's FIR. This update is presented in **Section 28** of the **EIAR Addendum (Part 2)**, which should be read in conjunction with **Volume 3**, **Chapter 28 Climate - Carbon Balance Assessment** of the EIAR.

1819. **Table 28-A** of **Section 28.10** of the **EIAR Addendum (Part 2)** details that the GHG emissions associated with offshore construction will generate 90,634 tonnes of CO2eq. An overall total of 425,476 tonnes of CO2eq is generated from the construction, operation and maintenance and decommissioning of the Project.

1820. **Section 28.10** of the **EIAR Addendum (Part 2)** concludes that the CWP Project will generate a total GHG emission saving of 42,534,180 tonnes of CO2eq, over the Project lifetime (25 years). When the GHG emissions from the construction, operation and maintenance, and decommissioning phases are removed, the emission savings total over the Project lifetime is 42,108,704 tonnes of CO2eq.

1821. The assessment details that this saving when annualised is equivalent to 2% of Ireland's total GHG emissions in 2022, 4% of Ireland's non-emissions trading sector 2030 emissions target, and 42.5% of the total carbon budget for the electricity sector in 2030. The CWP Project has the potential to reduce Ireland's CO2eq emissions by these percentages.

1822. In summary, the assessment is sufficiently detailed and adequately assesses the potential impacts of the CWP Project in relation to carbon emissions.

8.18.2.3 Summary of the matter raised

1823. Observers state that the release of carbon as result of seabed disturbance has not been considered in the EIAR.

8.18.2.4 Applicant's response

1824. EIAR **Volume 3**, **Chapter 28 Climate - Carbon Balance Assessment** addresses the potential impacts of the offshore and onshore components of the CWP Project on climate during the construction, operation and maintenance and decommissioning phases. The assessment includes a greenhouse gas emissions (GHG) assessment which quantifies the GHG emissions from the CWP Project over its lifetime.

1825. The GHG assessment was completed referencing national guidelines, in addition to international standards and is presented as tonnes of carbon dioxide equivalent (CO2eq). These guidelines do not require consideration of seabed disturbance, and it did not therefore consider the potential impacts on any carbon sequestration ecosystem services offshore.

1826. However, in response to item 17a of the Commission's FIR, changes in carbon sequestration as a result of the CWP Project have been quantified, and the impact on climate assessed. This information is presented in **Section 28** of the **EIAR Addendum (Part 2)**, which should be read in conjunction with **Volume 3**, **Chapter 28 Climate - Carbon Balance Assessment** of the EIAR.

1827. In summary, a total of 12,088,840 m^2 of temporary seabed habitat disturbance at the array site and along the OECC is expected (as described in EIAR **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology**), as well as a total of 157,000 m^2 of disturbed sediment for the landfall construction activities.

1828. The tonnes of carbon dioxide equivalent (tCO_2e) released by these disturbed areas has been calculated based on the amount of organic carbon (OC) (kg/m^2) (then converted to tCO_2e, assuming 1 tonne of organic carbon is equal to 3.97 tCO_2e) presented in the 2024 report *The United Kingdom's Blue Carbon Inventory: Assessment of Marine Carbon Storage and Sequestration Potential In UK Seas (Including Within Marine Protected Areas,* which is part of *The Blue Carbon Mapping Project*, completed by the Scottish Association for Marine Science (SAMS) on behalf of World Wildlife Fund UK (WWF-UK), The Wildlife Trusts and The Royal Society for the Protection of Birds (RSPB). With this project, the UK is the first nation to map and estimate the amount of carbon stored in its seabed habitats, including within Marine Protected Areas (MPAs). A maximum organic carbon factor of 0.8 kg/m^2 has been assumed for the carbon sequestration calculation, based on Figure 2 of the aforementioned report.

1829. Based on this information, the total seabed disturbance by the CWP Project is predicted to result in 35,493 tCO_2e. The total GHG emissions associated with the CWP Project is therefore 17,019 tCO_2e

annualised, and the total annual GHG savings (over 25-year lifespan, minus CWP Project emissions) are 1,275,891 tCO_2e. The conclusion reached by EIAR **Volume 3**, **Chapter 28 Climate - Carbon Balance Assessment**) is that the CWP project will have *direct, positive, long-term* and *significant* effect on climate, due to the GHG savings associated with the renewable energy generated by the CWP Project, is therefore unchanged.

8.18.3 Population

8.18.3.1 Summary of the matter raised

1830. Observers expressed concerns that the visual effects of the WTGs will negatively impact the tourism industry in coastal areas.

8.18.3.2 Applicant's response

1831. Since the submission of the CWP Project planning application additional desk-top surveys have been undertaken which consider the relationship between OWFs and tourism and which also incorporate an updated survey of the popular tourist and recreational attractions potentially impacted by the CWP Project. A revised tourism and recreational impact assessment has been completed to account for this additional data. The data and revised impact assessment that support **Volume 3**, **Chapter 29 Population** of the EIAR are presented in **Section 29 Population** of the **EIAR Addendum (Part 2)**. The inclusion of this information within the **EIAR Addendum** is in response to item 1c of the FIR (see **FIR Response Document**)

1832. Taking account of the Fáilte Ireland 2017 study and the reference to Glasson et al., 2022, the revised tourism assessment considers the relationship between wind developments (both onshore and offshore) and tourism activity. A number of studies within the UK and Ireland were considered. It was concluded that there is no general relationship between the development of wind energy projects and the performance of the tourism economy. On this basis, the assessment of the impact on the tourism economy and tourism and recreation assets considers the specific environmental impacts that receptors will experience as a result of the CWP Project such as visual impact, traffic and air quality. The assessment considers how these impacts may result in changes to visitor and user behaviour.

1833. The assessment concludes that there would be no significant effects on tourism and recreational assets during the construction, operational and maintenance or decommissioning phases of the CWP Project. This updated assessment is sufficiently detailed and adequately assesses the potential impacts of the CWP Project in relation to tourism and recreation.

8.18.3.3 Summary of matter raised

1834. Observers noted that positive economic impacts described within the EIAR should not be considered in any planning assessment, as any such employment is unlikely to positively impact the local community. It is noted that offshore employment will also be affected (fishing, chartering companies, sailing activities).

8.18.3.4 Applicant's response

1835. EIAR **Volume 4**, **Appendix 29.3** E**conomic Impact Analysis** quantified the local economic impacts. It would be expected that the local area will benefit from expenditure on local content, as these

companies are likely to in turn spend in the local supply chain, and their employees spend a proportion of their salaries in the local area. In addition, it is expected there would be a positive economic impact in the local area as a result of transient workers spending while staying locally during the construction and operation periods.

1836. EIAR **Volume 3, Chapter 12 Commercial Fisheries** assessed potential impacts on commercial fisheries and found no significant effects following the implementation of mitigation. It is therefore not expected that there would be negative effects on employment associated with fishing.

1837. Similarly EIAR **Volume 3, Chapter 16 Shipping and Navigation** assessed potential impacts on shipping and navigation, including recreational vessels, and found no significant effects. It is therefore not expected that there would be negative effects on employment associated with chartering or sailing activities

8.18.4 Human Health

8.18.4.1 Summary of the matter raised

1838. Observers raised concerns about the potential human health impacts from an intensive construction programme.

8.18.4.2 Applicant's response

1839. EIAR **Volume 3, Chapter 30 Human Health** of the EIAR assesses the effects on human health. The assessment considers the construction, O&M and decommissioning phases of the Project. **Section 30.1** identifies that the main interaction for human health during the construction phase is associated with the onshore transmission infrastructure and the works at landfall and presents the potential effects during the construction phase. It is supported by other assessments including air quality, noise and vibration, water, soils and traffic and concludes that there will be no significant effects on human health receptors.

1840. The Applicant is satisfied that these details are sufficiently detailed and that the assessment adequately assesses the potential impacts on human health during the construction phase.

8.18.4.3 Summary of the matter raised

1841. Observers raised concerns about the lack of an assessment by the Health and Safety Executive (HSE) in relation to potential noise impacts from the operational WTGs.

8.18.4.4 Applicant's response

1842. EIAR **Volume 3**, **Chapter 24 Noise and Vibration** of the EIAR addresses the airborne noise from WTGs on onshore noise sensitive locations (see **Section 24.9**, Impact 14). The assessment is undertaken in accordance with relevant guidance contained in the Institute of Acoustics: A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise (the IOA GPG). The Project is satisfied that the details presented in **Section 24.9** of the chapter are correct and that the assessment adequately assesses the potential impacts on onshore noise sensitive locations.

1843. The Project has actively informed and engaged with a range of stakeholders including the CPAs, prescribed bodies and other non prescribed bodies and organisations. This has included the issuing of the Offshore EIA Scoping Report to an extended list of stakeholders in April 2020, which included the Health and Safety Executive (HSE). No response was received from the HSE in relation to the Offshore EIA Scoping Report.

8.18.5 Risk of Accidents and Major Accidents

8.18.5.1 Summary of the matter raised

1844. Observers commented that no consideration of potential damage to WTG blades has been provided, including the potential impact that a separated blade may have on the marine environment habitats and species.

1845. It was also noted that a fire response plan / risk assessment for the WTGs should be provided.

8.18.5.2 Applicant's response

1846. **Volume 3, Chapter 32 Risk of Major Accidents and Disasters** is undertaken in accordance with relevant guidance included in Major Accidents and Disaster in EIA (A Primer), Institute of Environmental Management (IEMA) (2020). This document provides a definition for both:

- ***Major Accident***: Events that threaten the immediate or delayed serious environmental effects to human health, welfare and / or the environment and require the use of resources beyond those of the client or its appointed representatives to manage. Whilst malicious intent is not accidental, the outcome (e.g., train derailment) may be the same and therefore many mitigation measures will apply to both deliberate and accidental events; and
- ***Disaster***: May be a natural hazard (e.g., earthquake) or a man-made / external hazard (e.g.,act of terrorism) with the potential to cause an event or situation that meets the definition of a major accident

1847. The potential damage to WTG blades and from separated blades on the marine environment were not considered as a major accident or disaster and therefore did not require consideration in this assessment.

1848. **Volume 3, Chapter 32 Risk of Major Accidents and Disasters** did consider the risk of fire at WTGs during the construction and operational and maintenance phases. The assessment details the implementation of appropriate mitigation to address this risk at the WTGs.

1849. The Applicant is satisfied that these details are sufficiently detailed and that the assessment adequately assesses the potential risk of fire at WTGs.

8.18.6 Community Benefit

8.18.6.1 Summary of the matter raised

1850. Observers indicated that the power generated by the CWP Project may be supplied to an unsustainable data centre network. This should be acknowledged in the environmental assessments.

8.18.6.2 Applicant's response

1851. The CWP Project will use subsea cables to transmit electricity to the Irish National Grid via an onshore substation. Electricity is then distributed to homes and businesses via a transmission network that is operated by EirGrid; the electricity Transmission System Operator (TSO) for Ireland.

1852. EirGrid is responsible for balancing the grid, taking actions where required to ensure a reliable supply of electricity for all users. How EirGrid performs its function as the TSO for Ireland is not a matter for consideration in the determination of this planning application.

8.18.6.3 Summary of the matter raised

1853. Observers noted concerns regarding the inappropriate nature of inducements offered by the Applicant in the form of a community fund, which seems to be a state-sponsored plan to smooth the path in planning, interfering with the planning process. It seems highly inappropriate, that the developer is able to offer community funds which are dependent on the receipt of Government funding, effectively to induce the local population not to object to a proposal as has been well documented in the national and local media (where it has been noted that objectors have been reluctant to make negative comments for fear of their community missing out on these funds).

8.18.6.4 Applicant's response

1854. Establishing a Community Benefit Fund (CBF) is a legal requirement set by Government under the Terms and Conditions for the first Offshore Renewable Electricity Support Scheme (ORESS1) auction. Each Generator for an ORESS 1 Project is required to establish a CBF.

1855. The CBF is not Government funding, or dependent on Government funding. The ORESS 1 CBF Rulebook for Generators and Fund Administrators (DECC, 2023) states that the purpose of the CBF is not to act as compensation or mitigation and it is not a reason to grant planning permission. Rather its purpose is to ensure that onshore host communities will share the benefits of offshore renewable energy. The fund will be administered by an independent Fund Administrator who is responsible for the formation of a committee of local representatives who will determine how the fund is used in the community. The Applicant will have no voting power rights or decision-making powers in relation to funding applications when the fund is live.

1856. The CBF has real potential to enhance the local environment and biodiversity, social capital, economic activity, coastal/marine fisheries activities, facilities and support community-led actions for the betterment of all people living along the coastal catchment.

1857. The Applicant considers that, the CBF is, in itself, a form of substantial community gain and contribution to the community as envisaged under Sections 293(7)(n) and (o) of the Planning and Development Act (PDA). The Applicant has committed to making contributions to the CBF and encourages the Board to not in addition impose Section 293(7)(n) and Section 293(7)(o) conditions under the PDA. Apart from that the Applicant understands that the CBF is not a relevant consideration in the decision-making process.

8.18.6.5 Summary of the matter raised

1858. Observers commented that the proposed community fund is insufficient given no rates are payable to local councils. The Commission should condition this so that Codling pays pro rata the same as an onshore windfarm pays in rates and community benefit fund contributions.

8.18.6.6 Applicant's response

1859. The CBF of up to €200 million, offers unique opportunities to the communities connected to the project, unlike any scale seen in Ireland before. The fund has the potential to provide significant benefits and support legacy projects decided by the community.

8.18.6.7 Summary of the matter raised

1860. Observers noted the importance of community benefit for Greystones during the O&M phase of the CWP project. For example, by providing a location for a visitor centre and subsidised boat trips.

8.18.6.8 Applicant's response

1861. The Applicant has acknowledged that there is a desire to have a visitor centre in an existing building in Greystones harbour. The merits of this proposal, if funding is requested from the CWP Community Benefit Fund (CBF), will be decided by the CBF Committee which will be representative of the local community.

8.18.6.9 Summary of the matter raised

1862. Observers stated that the community benefit fund should provide a very worthwhile benefit to the whole community , however specific support for the fishing community should be earmarked as they are a group most likely to encounter the greatest disruption to their services.

8.18.6.10 Applicant's response

1863. The management and distribution of the CBF is not the Applicant's responsibility. All applicants have equal access to CBF funding and all funding applications will be considered and evaluated on their own merits. The Fund Administrator is responsible for the formation of the CBF Committee, who ultimately decide on funding allocation, making every effort to ensure the CBF Committee is representative of the local community in respect to the ORESS 1 project. The community aspect of the ORESS 1 terms and conditions states that "due and careful consideration is given to funding opportunities for all stakeholders in the CBF Target Local Community, including, but not limited to, local fishers, seafood culture, tourism, the wider blue economy, and maritime heritage communities."

1864. In addition, Codling Wind Park launched a €500,000 fisheries fund in May 2023. This fund is dedicated solely to support and benefit the local fishing industry, operating within and around the Codling Bank area of the Irish Sea. The fisheries fund is available to support opportunities for both inshore and offshore fishing by fishermen associated with CWP. This point is provided for information only – it is accepted that the fisheries fund is not a relevant factor in the Commission's decision-making.

8.19 Natura Impact Statement

1865. The following section provides thematic responses to matters raised by third parties in relation to the NIS. The matters raised have been responded to under the following sub themes:

- AA Screening

- Impact of Offshore Wind Farms: Impact on Designated Benthic Communities - Habitat Degradation and Loss
- Impact of Offshore Wind Farms: Impacts on Marine Mammals - Noise and Vibration
- Impact of Offshore Wind Farms: Impact on Designated Benthic Communities - Sediment Disturbance and Deposition
- Impact of Offshore Wind Farms: Impacts on Marine Mammals - Collision and behavioural disturbance from vessels
- Impact of Offshore Wind Farms: Impacts on seabirds
- Impact of Offshore Wind Farms: Hydrodynamic Changes
- Impact of Offshore Wind Farms: Impacts on Fish and Invertebrates
- Impact of Offshore Wind Farms: Decommissioning
- Mitigation
- In-Combination Effects
- Legal and Regulatory Compliance
- Conservation Status and Future Prospects
- Recommendations for Rejection

8.19.1 AA Screening

8.19.1.1 Summary of matters raised

1866. Observers commented that the screening process excludes certain impact pathways based on assumed effectiveness of mitigation measures, contrary to guidelines.

1867. Specific matters in this regard:

- The screening process excludes certain impact pathways based on assumed effectiveness of mitigation measures, contrary to guidelines;
- Designated sites incorrectly screened out, screening did not consider certain potential impact pathways and screening rationale insufficiently evidenced;
- OMB interaction with designated sites not considered; and
- The NIS does not assess impacts to the North West Irish Sea Gyre.
- Arctic tern associated with the Dublin Bay and River Tolka SPA and Dolphin should not have been screened out for disturbance and displacement

8.19.1.2 Applicant's response

The screening process excludes certain impact pathways based on assumed effectiveness of mitigation measures, contrary to guidelines.

1868. The Applicant can confirm that the assessment of Likely Significant Effects (LSE) has not relied upon mitigation where that mitigation is directly applied to reduce effects on the designated site. It should however be noted that pollution prevention measures are incorporated in the design of the project not with the aim of reducing the negative effects of that project on a given site, but as standard features required by legislation or best practice guidelines for all projects of the same type. Therefore, it is considered that pollution prevention controls are suitably built into the design of the project in order to meet existing legislative obligations or best practice guidelines, and accordingly, risk of pollution events is reduced as far as is reasonably practical. Potential for LSE is thus screened out accordingly for all European sites alone and in-combination with other plans and projects (see **Section 2** of **Volume 3 - Screening** of the NIS and the associated **NIS Addendum (Part 1)** that accompanies the Applicant's

FIR response). This is in line with the judgement of the Court of Justice of the European Union (CJEU); *Eco Advocacy CLG v An Bord Pleanála and Keegan Land Holdings Limited (2021).*

Designated sites incorrectly screened out, screening did not consider certain potential impact pathways and screening rationale insufficiently evidenced

1869. As stated in **Volume 3 - Screening** of the NIS, the screening methodology is in line with the Office of the Planning Regulator's practice note (2021), and the European Commission's (EC's) Methodological Guidance on Articles 6(3) and (4) of the Habitats Directive (EC 2019). For all receptors, a precautionary approach to screening was adopted. Where there was considered to be connectivity with a QI or SCI of a European Site as defined by the criteria within the screening methodology, and there was considered to be a route to potential impact on the QI or SCI, it has been determined that a LSE cannot be ruled out in that instance, and the European Site has been screened in for inclusion in the NIS and Stage 2 Appropriate Assessment. As such all relevant sites and impact pathways have been screened correctly and in line with guidance. This is further supported by reference to the observations received from Irish and transboundary Statutory Nature Conservation Bodies (SNCBs) in response to the CWP Project planning application, which do not identify any additional sites or pathways that should be brought into the Stage 2 assessment. Notwithstanding this the Applicant has updated the NIS in response to the request from the Commission to consider Roseate tern and further sites, on a precautionary basis (see **NIS Addendum (Part 1)**).

1870. **Volume 2 - Introduction** of the NIS sets out the stakeholder engagement undertaken with statutory and non-statutory organisations prior to the submission of the CWP Project planning application; undertaken to inform the approach to, and scope of, the assessment. Through this process the approach to the NIS was agreed with NPWS and other stakeholders including several topic specific meetings to agree the scope of the NIS and AA.

1871. In summary, the NIS provides a comprehensive and robust assessment of any potential impacts on all designated sites with the potential to be impacted by the CWP Project alone or in combination with other Plans or Projects.

OMB interaction with designated sites not considered

1872. Activities associated with O&M of the CWP Project have been robustly assessed within the NIS. For example, interactions with The Murrough SPA during the O&M phase are assessed in NIS **Volume 5 - Assessment of Implications for Special Protection Areas - Part 1**, with mitigation introduced to minimise interaction with the SCIs (e.g. red throated diver). Activities associated with a potential OMB are not considered as this does not form part of the CWP Project (see **Section 8.4.3** of this document for more detail).

The NIS does not assess impacts to the North West Irish Sea Gyre

1873. The North Irish Sea Gyre is not an SAC feature and as such does not require assessment within **Volume 4 – Assessment of Implications for Special Areas of Conservation** of the NIS. Nevertheless, the most relevant designated site, the North Irish Sea SPA, is considered in **Volume 5 - Assessment of Implications for Special Protection Areas - Part 1** where it is concluded that there would be no adverse effects on the site integrity from the CWP Project, and no impediment to the Conservation Objectives being met.

Arctic tern associated with the Dublin Bay and River Tolka SPA and Dolphin should not have been screened out for disturbance and displacement

1874. The Arctic tern breeding colony on the CDL Dolphin is not a part of the South Dublin Bay and River Tolka SPA and does not form a feature of the SPA. On this basis, the colony which was considered in **Table 3-10 Project alone screening of Natura 2000 sites designated for breeding seabird SCIs** in **Volume 3**, **Screening** of the **Natura Impact Statement (NIS)** was not screened through for further assessment.

1875. Within the South Dublin Bay and River Tolka Estuary SPA, Arctic terns are designated for their post-breeding aggregations. These aggregations were also considered in **Volume 3**, **Screening** of the **NIS**. The potential for likely significant effects could not be ruled out for disturbance and displacement impacts associated with the:

- Construction, operation and maintenance and decommissioning phases at the intertidal cable route and landfall; and
- Construction phase of the onshore infrastructure.

1876. These impacts were screened in for project alone assessment within **Volume 5**, **Assessment of Implications for SPAs – Part 1** and for in combination assessment in **Volume 6 – In combination Assessment Part 2.** These assessments concluded that there is no potential for adverse effects on the site integrity (AESI) in relation to this SPA feature.

1877. The Applicant notes that the breeding colony of Arctic terns on the CDL Dolphin are identified as an Important Ecological Receptor (IEF) of high sensitivity in the EIAR **Volume 3**, **Chapter 10 Ornithology** and **Section 10** of the **EIAR Addendum (Part 1**). A detailed assessment is described in relation to the potential for disturbance and displacement impacts. This includes consideration of noise, vibration and visual impacts.

1878. A schedule of mitigation will be implemented during the construction phase at the onshore substation site which includes restricted periods for certain works such as piling, visual screening, noise and lighting limits and monitoring requirements.

1879. The operational and maintenance phase assessment considers disturbance and displacement impacts associated with human presence and noise from the onshore substation and also assesses impacts associated with avian predation and potential shadow effects from the onshore substation buildings relative to the CDL Dolphin.

1880. With primary and additional mitigation in place, the significance of any residual effects during these phases were concluded to be **Not Significant**.

8.19.2 Impact of Offshore Wind Farms: Impact on Designated Benthic Communities - Habitat Degradation and Loss

8.19.2.1 Summary of matters raised

1881. The observations note the potential degradation of sandbanks, reefs, and other marine SAC habitats due to construction activities such as pile driving, dredging, and bed-levelling. Observers highlight physical removal and disturbance of habitats, including Modiolus modiolus (horse mussel) beds and Sabellaria alveolata reefs.

1882. Specific matters raised in this regard:

- Long term damage of sandbank habitat not adequately assessed, including rock armour protection implications on sandbank degradation;

- Genetic link between Wicklow Reef SAC, Pen Llyn a'r Sarnau SAC and Strangford Lough SAC for Modiolus modiolus;
- Overall sensitivity of Sabellaria alveolata and implications for Wicklow Reef SAC inadequately considered; and
- The project will negatively impact Irish and UK SACs.

8.19.2.2 Applicant's response

Long term damage of sandbank habitat not adequately assessed, including rock armour protection implications on sandbank degradation

1883. Impacts to sandbanks are considered where relevant within the assessment, however it is important to note that the CWP Project array site does not interact with any designated sandbanks, or Annex I sandbank habitats, and as such there is not a pathway for long term damage of designated sandbanks from any aspect of the project, including rock armour. The Codling Bank is characterised throughout the EIAR, through reference to site specific and regional data, as stable mixed sediments with gravels and cobbles, and it does not represent the qualifying criteria of an Annex I sandbank. While Annex I Sandbanks (1110) are predicted to occur along the OECC by JNCC (Gridded distribution map for Annex I sandbanks as reported by EU member states for 2018 Habitats Directive Article 17 reporting) and in a small section on the nearshore side of the array site, site specific habitat mapping recorded no occurrences of sandbanks in the CWP Project area and as such no direct impacts will arise on any subtidal sandbank feature (see **Volume 4**, **Appendix 8.3 Benthic Baseline Report** of the EIAR). This characterisation has since been validated through additional surveys undertaken in 2025 in response to the Commission's FIR (see **Appendix 8-A**, **Appendix 8-B**, and **Appendix 8-C** of the **EIAR Addendum**). However, as there is potential for sandbanks to occur in the wider study area, potential impacts from the CWP Project have been assessed in **Section 8.10** of **Volume 3, Chapter 8 Subtidal and Intertidal Ecology** of the EIAR as not significant.

Genetic link between Wicklow Reef SAC, Pen Llyn a'r Sarnau SAC and Strangford Lough SAC for Modiolus modiolus; and
Overall sensitivity of Sabellaria alveolata and implications for Wicklow Reef SAC inadequately considered

1884. **Volume 4**, **Appendix 8.3 Benthic Baseline Report** of the EIAR reports that *Sabellaria spinulosa* reefs were not identified during the EIAR characterisation surveys and the Applicant notes that abundances of *Sabellaria spinulosa* were relatively low during the 2025 characterisation validation surveys (see **Appendix 8-A, 8-B**, and **8-C** of the **EIAR Addendum**), and no stations were classified as reef habitat. Similarly no *Sabellaria alveolata* reefs or *Modiolus modiolus* beds were found during the EIAR characterisation surveys or 2025 characterisation validation surveys.

1885. Given the absence of *Modiolus modiolus* beds within the CWP Project area it is not likely that CWP Project construction activities will have a significant impact on the genetically linked *Modiolus modiolus* beds of Wicklow Reef SAC, Pen Llyn a'r Sarnau SAC and Strangford Lough SAC.

1886. The Wicklow Reef SAC is the only site which is designated for subtidal *Sabellaria alveollata* reef habitat in Ireland. This site is considered in **Volume 3 - Screening** of the NIS. Based upon predictive sediment plume modelling and subtidal survey conducted for the CWP Project, there will be no connectivity between effects associated with the CWP Project and the habitats of the Wicklow Reef SAC (see **Volume 4**, **Appendix 6.3 Modelling Report** of the EIAR; **Appendix 6-A Modelling Report Addendum** of the **EIAR Addendum**; and **Appendix 8-A Benthic Subtidal Survey Report 2025** and

Appendix 8-C DDV Wicklow Reef Survey Report 2025 of the **EIAR Addendum**). For more detail please refer to the relevant responses to An Taisce provided in **Section 5.1.6** of this document.

The project will negatively impact Irish and UK SACs

1887. **Volume 4 – Assessment of Implications for Special Areas of Conservation** of the NIS (as updated by the **NIS Addendum (Part 1)**) provides a robust assessment of all impacts where LSE could not be ruled out with respect to adverse effects on the site integrity SACs and their QI's.

1888. For benthic habitats these SACs are South Dublin Bay, Rockabill to Dalkey Island, and North Dublin Bay SAC. All other (benthic QI) SACs including Wicklow Reef, Murrough Wetlands, Lambay Island and Codling Fault Zone were screened out based upon the hydrodynamic conditions present in and around the offshore development area which confirmed there is no potential for any connectivity with the CWP Project (see **Volume 3 - Screening** of the NIS (as updated by the **NIS Addendum (Part 1)**). This is supported through reference to the detailed numerical modelling undertaken to support the assessment (see **Volume 4**, **Appendix 6.3 Modelling Report** of the EIAR; **Appendix 6-A Modelling Report Addendum** of the **EIAR Addendum**).

1889. **Volume 4** of the NIS and the **NIS Addendum (Part 1)** conclude that following application of suitable mitigation where required, the CWP Project alone would not have an adverse effect on the integrity of any European site as a result of *ex situ* or *in situ* effects. This conclusion extends to the assessment of CWP Project in-combination with other plans and projects (see **Volume 6 – In-combination Assessment – Part 1** of the NIS (as updated by **NIS Addendum (Part 2)**).

8.19.3 Impact of Offshore Wind Farms: Impact on Designated Benthic Communities - Sediment Disturbance and Deposition

8.19.3.1 Summary of matters raised

1890. Observers highlight that increased suspended sediment and sediment deposition from construction activities can smother benthic habitats and affect species such as *Sabellaria alveolata* and *Modiolus modiolus*. The observations highlight the potential impacts on water quality and light penetration, affecting primary production and the broader marine ecosystem.

1891. Specific matters raised in this regard:

- The impact of elevated concentrations of suspended sediment on Wicklow Reef SAC was not identified, and the conservation objectives of Wicklow Reef SAC have not been considered; and
- Incorrect screening out of sediment re-suspension impacts on SACs due to assumed mitigation measures, in particular the subtidal and intertidal habitats associated with Rockabill to Dalkey SAC.

8.19.3.2 Applicant's response

The impact of elevated concentrations of suspended sediment on Wicklow Reef SAC was not identified, and the conservation objectives of Wicklow Reef SAC have not been considered.

1892. **Volume 4 – Assessment of Implications for Special Areas of Conservation** of the **NIS** (as updated by the **NIS Addendum (Part 1)**) provides a robust assessment of all impacts where LSE could not be ruled out with respect to adverse effects on the site integrity SACs and their QI's. For benthic habitats

these SACs are South Dublin Bay, Rockabill to Dalkey Island and North Dublin Bay SAC, all of which were screened in for the impact of elevated SSC and deposition.

1893. Wicklow Reef SAC is screened out based upon the hydrodynamic conditions present in and around the offshore development area which prevent connectivity with the CWP Project (see **Volume 3 - Screening** of the NIS (as updated by **NIS Addendum (Part 1)**). Updated sediment plume modelling undertaken in response to FIR item 6i (see **FIR Response Document**) predicts that plumes of suspended sediment generated during dredge disposal and cable installation activities (trenching) will travel in a north-south / slight east direction. Although plumes generated at the array site may travel up to 7 km they will not reach the Wicklow Reef SAC due to their direction of travel – the SAC lies to the south west of the array site. Although the Wicklow Reef SAC lies to the south of the OECC, plumes generated (which may travel up to 6 km) will not reach the Wicklow Reef SAC which is greater than 11 km from the OECC at its closest point. As such, there is no potential for the QIs of this SAC to be within the ZoI of these potential effects. Therefore, the potential for LSE can be ruled out.

1894. The impacts of any suspended sediment arisings from the CWP Project on the habitats of Wicklow Reef SAC are considered within **Volume 3, Chapter 8 Subtidal and Intertidal Ecology** of the EIAR (as updated by **Section 8** of the **EIAR Addendum (Part 1)**), however it is noted that based upon predictive sediment plume modelling and subtidal survey conducted for the CWP Project, there will be no connectivity between effects associated with the CWP Project and the habitats of the Wicklow Reef SAC (including Sabellaria alveolata reef habitat). For more detail please refer to the Applicant's response to observations made by An Taisce (see **Section 5.1** of this document).

Incorrect screening out of sediment re-suspension impacts on SACs due to assumed mitigation measures, in particular the subtidal and intertidal habitats associated with Rockabill to Dalkey SAC.

1895. Rockabill to Dalkey Island SAC was screened in for a number of potential impact pathways for reefs (see **Volume 3 - Screening** of the NIS)**,** including increases in SSC and deposition.

1896. Rockabill to Dalkey Island SAC is designated for rocky reefs. Biogenic reef forming species *Sabellaria spinulosa* and *Sabellaria aveolata* are not species associated with the intertidal or subtidal reefs of the SAC.

1897. **Volume 4 – Assessment of Implications for Special Areas of Conservation** of the NIS states that the closest area of reef habitat within Rockabill to Dalkey Island SAC are located to the north and west of the offshore development area and are c. 6 km from the OECC at their nearest point.

1898. Based upon the modelling of sediment transport arising from the CWP Project activities, there is no potential for increases in SSC to affect the protected habitats within the Rockabill to Dalkey SAC. Nevertheless, should negligible levels of increased SSC and associated deposition interact with the reef habitats present, it is considered that rocky reef habitats, such as those around the islands and on the south coast of Howth, have a high a tolerance and recoverability to increased SSC and sediment deposition rates up to 5 cm, and the high energy environment in which this habitat occurs means that any sediment deposition is likely to be removed quickly (Stamp, T.E. et al., 2023). As such there will be no adverse effects on the site integrity of the Rockabill to Dalkey Island SAC from increased SSC and associated deposition, and no impediment to the Conservation Objectives being met.

8.19.4 Impact of Offshore Wind Farms: Impacts on Marine Mammals - Noise and Vibration

8.19.4.1 Summary of matters raised

1899. The observations highlight the potential for significant noise impacts from pile driving, geophysical surveys, and UXO clearance, which can cause Permanent Threshold Shift (PTS) and Temporary Threshold Shift (TTS) in marine mammals, particularly harbour porpoises and associated SACs. Observers highlight disturbance to marine mammals and fish species due to underwater noise, potentially leading to displacement from SACs and changes in behaviour.

1900. Specific matters raised in this regard:

- Noise impact assessment is insufficiently particularised and out-of-date science used (findings from Finneran et al., 2023 were not included);
- Risks from noise pollution, habitat destruction, and increased vessel traffic affecting harbour porpoises associated with the Rockabill to Dalkey Island SAC;
- Volume 3, Chapter 11 Marine Mammals incorrectly identifies the Celtic and Irish MU as the relevant MU for the Rockabill to Dalkey Island SAC and provides incorrect reference population and density of harbour porpoises associated Codling Fault Zone SAC. The NIS underestimates the risk to SACs by assessing impacts on a biogeographic population basis;
- There will be a 10% decline in the Rockabill to Dalkey SAC harbour porpoise population;
- Calculations for PTS impacts are flawed and do not accurately calculate impacts on harbour porpois; and
- Assessment methodology for marine mammal designated sites is inappropriate.

8.19.4.2 Applicant's response

Noise impact assessment is insufficiently particularised and out-of-date science used (findings from Finneran et al., 2023 were not included)

1901. The Applicant is aware of the Finneran et al., 2023 paper. The purpose of the Finneran et al., 2023 study was to *"measure TTS in bottlenose dolphins at a number of different exposure frequencies, to increase the available data for developing an auditory weighting function for predicting TTS onset"*. There is no apparent intention that the findings should be directly applicable to impact assessments. Instead, the authors indicate that the findings should be used in combination with other studies to develop an updated HF auditory weighting function. As such, updated auditory weighting function was not provided by Finneran et al., 2023 and is not available to inform the impact assessment for the CWP Project. Additionally, for the reasons below, an update based on Finneran et al., 2023 is not recommended:

- While the study does suggest that a revision to TTS thresholds may be necessary, it does not propose a revised threshold or discuss application in a wider context.
- The study was limited to two captive animals. The results were not consistent between the two subjects, and only one of them was tested with sounds <1 kHz. This would not suggest that the results should lead to revised criteria.
- The findings at 8 kHz are not consistent with previous work, nor was there a clear relationship between the behavioural results and the ABR results, so they should be viewed with caution until they can be validated by further studies.
- All tests were conducted using steady state, narrowband pure tones which are not representative of pile driving noise. Therefore, it cannot be assumed that the same results would be found using broadband impulsive noise (like pile driving).

1902. In the absence of an updated HF auditory weighting function and criteria, although the study contributes to the overall knowledge of effects of noise on bottlenose dolphins, the impact assessment (EIA and NIS) for the CWP Project could not and should not have incorporated the findings of Finneran et al., 2023.

Risks from noise pollution, habitat destruction, and increased vessel traffic affecting harbour porpoises associated with the Rockabill to Dalkey Island SAC

1903. Observers commented that construction activities (noise pollution, habitat destruction, and increased vessel traffic) risk irreparable damage to the Rockabill to Dalkey Island SAC (home to harbour porpoises). Potential impacts to the Rockabill to Dalkey Island SAC have been assessed in detail in **Section 2.2.2** of **Volume 4 – Assessment of Implications for Special Areas of Conservation** of the NIS (as updated by the **NIS Addendum (Part 1)**), including impacts from underwater noise (PTS and disturbance from geophysical surveys, UXO clearance, pile driving, other construction activities, operational noise and vessel presence).

1904. The assessment within the **NIS Addendum (Part 1)** presents a range of disturbance thresholds (dose-response, 145 dB SELss and 26 km EDR) for pile driving, alongside population modelling, to complement the information within the NIS which included novel DEB modelling to conclude there is expected to be no significant impact to the Rockabill to Dalkey Island SAC.

1905. The Applicant has, to mitigate potential impacts from underwater noise during the construction of the project, committed to a limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events, and the implementation of noise abatement in the event high order UXO clearance is required. The Applicant has also committed to implementing UXO-specific and piling-specific **MMMP**, an update of which accompanies the FIR response. The updated **MMMP** captures the underwater noise mitigation which reduce the risk of auditory injury (PTS) for marine mammals to negligible levels. Additionally, the project has committed to the adoption of an **EVMP to** minimise the risk of disturbance to marine mammals. An updated **EVMP** has been also been submitted in response to the Commission's FIR.

Volume 3, Chapter 11 Marine Mammals incorrectly identifies the Celtic and Irish MU as the relevant MU for the Rockabill to Dalkey Island SAC and provides incorrect reference population and density of harbour porpoises associated Codling Fault Zone SAC. The NIS underestimates the risk to SACs by assessing impacts on a biogeographic population basis;a biogeographic population basis

1906. Observers commented that the population size / density taken forward to the assessment for some SACs are incorrect. The population size of the Rockabill to Dalkey Island SAC (224 individuals) based on Berrow et al., 2021 surveys is discussed in **Volume 4 – Assessment of Implications for Special Areas of Conservation** of the NIS (as updated by the **NIS Addendum (Part 1)**). The results for behavioural disturbance from piling are presented based on the percentage overlap with the SAC and subsequent number of animals disturbed, and the population modelling was presented using number of animals and SAC population of 227, rather than the size of the Celtic and Irish MU. As such, although potential effects *ex situ* are assessed in the NIS based on the MU size, the Applicant is content that the assessment of potential impacts to the Rockabill and Dalkey Island SAC were assessed appropriately in the *in situ* section (see paragraph 177 et seq. of NIS **Volume 4** as updated by the **NIS Addendum (Part 1)**).

1907. For Codling Fault Zone SAC, the Site Synopsis did not provide information on the presence of porpoise within the site and the CO supporting document published in November 2024 acknowledges that "*The size, community structure and distribution or habitat use of Harbour Porpoise inhabiting Codling Fault Zone SAC are not fully understood*". Therefore, in absence of SAC-specific data for Codling Fault Zone SAC and other SACs, the publicly available data (e.g. SCANS IV density; Celtic and Irish Sea MU) was used to support the assessment in the NIS. The Applicant has revisited the assessment within the **NIS Addendum (Part 1)**, including consideration of the underwater noise mitigation, and is content that the assessment of potential impacts to the Codling Fault SAC at the point of submission, and following review against subsequently updated documentation remains robust without relevant omission.

There will be a 10% decline in the Rockabill to Dalkey SAC harbour porpoise population.

1908. The observer is incorrect when they state that "*that there will be a 10% decline in the Rockabill to Dalkey SAC harbour porpoise population*". At no point in the NIS does it state that the SAC population will decline by 10%. Both the iPCoD population modelling and the DEB modelling predict there will be no significant impacts from pile driving associated with the CWP Project, with the modelling being based on best available science, best practice, and empirical evidence. Notwithstanding this the **NIS Addendum (Part 1)** provides contemporary consideration, including the introduction of underwater noise mitigation.

Calculations for PTS impacts are flawed and do not accurately calculate impacts on harbour porpoise

1909. Potential impacts to the Rockabill to Dalkey Island SAC have been assessed in detail in **Section 2.2.2** of **Volume 4 – Assessment of Implications for Special Areas of Conservation** of the NIS (as updated by the **NIS Addendum (Part 1)**), including impacts from PTS in line with the metrics as per Southall et al., 2019 which was standard practice at the time of the assessment, and based on best available scientific data.

1910. The assessment has since been updated to consider contemporary thresholds, and the introduction of underwater noise mitigation (see **NIS Addendum (Part 1)**). The Applicant has also committed to implementing UXO-specific and piling-specific **MMMP**, an update of which accompanies the FIR response. The updated **MMMP** captures the underwater noise mitigation which reduce the risk of auditory injury (PTS) for marine mammals to negligible levels. The conclusions of no AESI from the project alone or in-combination with other plans and projects remains valid and robust.

Assessment methodology for marine mammal designated sites is inappropriate. NIS under assesses behavioural disturbance, particularly cumulative displacement effects from overlapping OWF projects

1911. In NIS **Volume 4 – Assessment of Implications for Special Areas of Conservation** and in **Volume 3**, **Chapter 11 Marine Mammals,** the Applicant has used the best and most up-to-date assessment methodologies to assess potential impacts on marine mammals. This includes a range of disturbance thresholds (dose-response, 145 dB SELss and 26 km EDR) for pile driving, alongside population modelling and novel DEB modelling to conclude there is expected to be no adverse effect on the Rockabill to Dalkey Island SAC, and no impediment to the Conservation Objectives being met.

1912. A detailed assessment of in-combination effects for each SAC, including overlap of disturbance contours and EDRs during piling at CWP and other wind farms is provided in **NIS Volume 6** and updated within the **NIS Addendum (Part 2)**; similarly, there is not an adverse effect anticipated from in-combination effects

8.19.5 Impact of Offshore Wind Farms: Impacts on Marine Mammals - Collision and behavioural disturbance from vessels

8.19.5.1 Summary of matters raised

1913. The observations submit that there will be significant behavioural disturbance to harbour porpoises within designated sites, in particular the Rockabill to Dalkey Island SAC and Codling Fault Zone SAC, due to construction and operational activities. Observers highlight potential exclusion of marine mammals from critical habitats and increased risk of vessel collisions.

1914. Specific matters raised in this regards:

- The assessment does not consider disturbance from vessels working within OECC or transiting and uses incorrect disturbance range; and
- Vessel traffic risks irreparable damage to Rockabill to Dalkey Island SAC.

8.19.5.2 Applicant's response

1915. It is stated by the observers that vessel collision risk is assessed, but the assessment does not take account of disturbance from vessels working on the OECC or transiting. It goes on to state it is incorrect to assume a disturbance range of 2 km. The observers recommend that a 4km disturbance range is used for vessel disturbance (which would result in an impact area of 50.27km2, equating to 18.4% of the Rockabill to Dalkey Island SAC area).

1916. The NIS assumes that all porpoise within 2 km are disturbed by construction vessel activity (resulting in disturbance to 12.57km^2, which equates to 4.6% of the Rockabill to Dalkey Island SAC area). It is noted that not all animals within 2 km of a vessel respond (at a mean vessel distance of 2 km, porpoise occurrence decreased by up to 35.2% - Benhemma le Gall et al., 2021). A study on vessel traffic in Swansea Bay found that the proximity of the vessel was an important factor, with the greatest reaction occurring just 200 m from the vessel (Oakley et al., 2017). Assuming that porpoise within 200 m are disturbed by construction vessel activity, this results in disturbance to 0.05% of the Rockabill to Dalkey Island SAC area. Additionally, during a study conducted at seven OWFs in the German Bight, Brandt et al., 2018 observed a decline in harbour porpoise detections within 2 km of the construction site, attributed in part to the increased vessel activity and traffic associated with construction related activities.

1917. Irrespective of whether the disturbance range is 4 km or 2 km, in order to minimise the risk of disturbance to marine mammals from vessel activity, the project has committed to the adoption of an **EVMP**, an updated version of which accompanies the Applicant's FIR response. Considering the mitigation measures applied, the assessment concluded disturbance effects are anticipated to be below levels that may adversely affect the harbour porpoise community at the site. Therefore, there is expected to be no potential for AESI to the Rockabill to Dalkey Island SAC, and any other SAC, from the CWP Project alone.

8.19.6 Impact of Offshore Wind Farms: Impacts on seabirds

8.19.6.1 Summary of matters raised

1918. The observations highlight displacement and collision risks for seabirds, due to the presence of wind turbines. The observations also note the potential reduction in foraging success and breeding productivity due to habitat loss and disturbance.

1919. Specific matters raised in this regard:

- NIS conclusions are incorrect
- Assessment of collision risk and displacement in the NIS is inadequate;
- The assessment methodology and approach to apportioning is inappropriate; and
- The Project will undermine the Conservation Objectives of SPAs.

8.19.6.2 Applicant's response

1920. **Volume 5 - Assessment of Implications for Special Protection Areas - Part 1** of the NIS (as updated by **NIS Addendum (Part 1)**), provides a robust assessment of collision impacts, displacement effects and potential changes in prey availability for seabird species of SPAs where LSE could not be ruled out (see **Volume 3 - Screening** of the NIS, as updated by **NIS Addendum (Part 1)**). An outline of the updates made to the site specific conservation objectives of the Irish SPAs included in the **NIS Addendum** since the submission of the NIS can be found in **Appendix A - SPAs Site Specific Conservation Objectives** of the **NIS Addendum**. The NIS conclusions in relation to potential adverse effects on SPA integrity align with best practice, and relevant guidance, including the CIEEM Guidelines (CIEEM, 2024), and are sufficiently robust to adequately inform the consenting authority.

1921. Assessment methodologies in relation to collision and displacement impacts and the process used to apportion such impacts to relevant SPAs are considered to be appropriate, conservative, to align with best practice and relevant precedence. The approach was also provided to the relevant statutory nature conservation authority in advance of submission. Conclusions based upon the outcomes of these assessment methodologies are considered to be correct and sufficient to inform the decision making process of the consenting authority. Further to this the Applicant has provided additional outputs as an Appendix to the **FIR Response Document (Appendix I - Alternative Outputs Referencing NatureScot Higher Displacement and Mortality Rates)**, which although considered to be unrealistically conservative for assessment purposes, still demonstrate the impacts to be acceptable and not resulting in an adverse effect on the integrity of designated sites.

1922. In summary, where LSE could not be ruled, the NIS and **NIS Addendum** demonstrates that by following appropriate and conservative impact assessment methodologies, the CWP Project (either alone, or in combination with other relevant projects) will not compromise the achievement of Conservation Objective attribute targets of any SCIs of any SPAs. As such, the CWP Project will not undermine the Conservation Objectives of SPAs.

8.19.7 Impact of Offshore Wind Farms: Hydrodynamic Changes

8.19.7.1 Summary of matters raised

1923. Observations submit that alterations in local hydrodynamic conditions due to the presence of wind turbines and associated infrastructure, potentially affecting sediment transport and coastal processes, may impact designated sites.

8.19.7.2 Applicant's response

1924. **Volume 3**, **Chapter 6 Maritime Geology, Sediments and Coastal Processes** of the EIAR and **Section 6** of the **EIAR Addendum (Part 1)** considers the impact on sediment transport regime and coastal processes from the CWP Project. It acknowledges that foundations act as a barrier to existing sediment transport pathways impacting the natural distribution of sediments within the sediment cell. This may lead to effects at the coastline if the offshore sediment budget is altered and less sediment is available for delivery to the nearshore.

1925. The embedded mitigation, which includes suitable spacing between turbines as part of the WTG layout and carefully designed scour protection, sloped to limit sediment accumulation proximal to the turbine, results in the WTG foundations having a negligible impact on regional sediment transport pathways. Alteration to these regimes will be highly localised and form a new dynamic equilibrium. During the operational phase, the installation of monopiles is predicted to have a negligible effect on the local

wave regime and only a very small effect on the direction and magnitude of tidal currents. With respect to coastal processes, it is the potential changes to the highest current speeds and directions that are of most importance due to the consequential effects on patterns of sediment transport. As currents and waves drive sediment transport, and there are no anticipated changes to sediment composition and sediment supply due to the construction of the CWP Project, there can be no corresponding difference in the potential rates and directions of sediment transport through the site. Similarly, cable protection measures on the seabed have the potential to alter the sediment transport direction and magnitude, but the footprint of the proposed measures is very small compared to the CWP Project area (<2% of the total array site) limiting the potential for such changes. Consequently, apart from localised effects on seabed morphology, Codling Bank as a whole is anticipated to remain broadly in its existing state of dynamic equilibrium. Given this, there is no potential for LSE on any SACs within the ZoI of the CWP Project from changes to sediment transport and coastal processes.

8.19.8 Impact of Offshore Wind Farms: Impacts on Fish and Invertebrates

8.19.8.1 Summary of matters raised

1926. The observations note the potential impacts on spawning and nursery grounds for fish species, including cod, herring, and sandeels, due to habitat disturbance and noise. Observers highlight disruption to benthic communities and prey availability for higher trophic levels.

1927. Specific matters raised in this regard:

- Migratory effects on salmon SACs inadequately assessed; and
- Prey species inadequately assessed;

8.19.8.2 Applicant's response

1928. **Volume 3 - Screening** of the NIS screens in impacts on fish species including direct impacts on habitats and increases in underwater noise for SACs where there is potential for connectivity with CWP Project activities and a potential route to impact. **Volume 4 – Assessment of Implications for Special Areas of Conservation** of the NIS (as updated by the **NIS Addendum (Part 1)**) then provides a robust assessment for these impacts in the SACs where LSE could not be ruled out.

1929. **Volume 4** of the NIS (as updated by the **NIS Addendum (Part 1)**) assesses impacts on all migratory fish SAC's where LSE could not be ruled out, including SACs for migratory salmon. As such all likely effects on migratory salmon have been adequately assessed. The assessment within the NIS aligns with and draws data from the assessment presented within the EIAR (and **EIAR Addendum**). Specifically, in **Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR (and **Section 9** of the **EIAR Addendum (Part 1)**) the national study area was defined for the purpose of capturing transboundary diadromous fish migration routes in response to consultee concerns in relation to migrating salmonids, which in turn allows assessment of potential pathways of effect on SACs. In **Section 9.6** of **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** of the EIAR **(**and **Section 9.6** of the **EIAR Addendum (Part 1))** migratory species are categorised under the VERS approach and assessed for effects of all potential impacts during all project phases. This provides a comprehensive and robust assessment of impacts on protected migratory species, such as migratory salmon, all of which are assessed to be not significant, with mitigation where required.

1930. The abovementioned impacts are also considered on all fish species within the relevant study areas. **Section 9.4** of **Volume 3**, **Chapter 9 Fish, Shellfish and Turtle Ecology** of the **EIAR** (and **Section 9.4** of the **EIAR Addendum (Part 1)**) presents all data sources used to characterise the existing environment for fish, shellfish and turtle ecology. These data sources were agreed with NPWS at

Scoping in 2021 and include all available information on spawning and nursery grounds, and are validated and complimented by site specific eDNA surveys undertaken in the spring and autumn of 2025.

1931. Comprehensive information on spawning and nursery grounds presents the local, regional and Irish Sea study areas, including those of cod, herring and sandeel, are provided in **Section 9.6** of **Chapter 9 Fish, Shellfish and Turtle Ecology** and **Section 9.6** of the **EIAR Addendum (Part 1).** The impacts assessed include temporary habitat disturbance and noise and vibration. The assessment of all impacts is provided in **Section 9.10** of **Chapter 9 Fish, Shellfish and Turtle Ecology** and **Section 9.10** of the **EIAR Addendum (Part 1)**, all of which are assessed as not significant. In the absence of significant effects it can be concluded that there will not be any likely significant trophic level impacts.

1932. The conclusion for the NIS is that there will be no adverse effects on site integrity arising from impacts to fish species, including indirect effects on prey species, direct impacts on habitats, and increases in underwater noise, for SACs where there is potential for connectivity with the CWP Project.

8.19.9 Impact of Offshore Wind Farms: Decommissioning

8.19.9.1 Summary of matters raised

1933. The NIS lacks a detailed assessment of environmental impacts during decommissioning, particularly on marine and benthic habitats.

8.19.9.2 Applicant's response

1934. Impacts arising from CWP Project decommissioning activities are considered in **Volume 3 - Screening** and **Volume 4 – Assessment of Implications for Special Areas of Conservation** of the NIS. Decommissioning impacts are screened in where there is potential for connectivity with CWP Project activities, a potential route to impact, including impacts on benthic habitats, on European sites.

1935. **Volume 4** of the NIS concludes that following application of suitable mitigation where required, decommissioning impacts from the CWP Project alone would not have an adverse effect on the integrity of any European site as a result of ex situ or in situ effects.

1936. The EIAR has also assessed any possible impacts from CWP Project decommissioning on marine and benthic habitats and concluded that (as for construction and O&M activities), following mitigation where required, there were no significant impacts on any benthic and intertidal ecology receptors. Whilst the EIAR meets different legislative requirements to the NIS, the conclusions are consistent and utilise the best available scientific evidence to support them across both the NIS and EIAR.

1937. The Applicant's proposed approach to rehabilitation (i.e. decommissioning) is described in the **Rehabilitation Schedule** which accompanies the CWP Project planning application. For WTG and OSS foundations, including scour protection, a summary of the Applicant's proposed approach to rehabilitation is provided in **Section 4.4.3**.

1938. It is recognised that, should development permission be granted, this **Rehabilitation Schedule** will form a binding commitment on the Applicant. It is anticipated that the **Rehabilitation Schedule** will need to be updated throughout the lifecycle of the CWP Project to reflect changes to regulatory requirements and to incorporate any new guidance and improvements in knowledge and understanding of the rehabilitation process and impacts on the marine environment.

8.19.10 Mitigation

8.19.10.1 Summary of matters raised

1939. Observers criticise the NIS for not providing complete, precise, and definitive findings capable of removing all reasonable scientific doubt about the effects of the proposed works.

1940. Specific matters in this regard:

- The focus on managing vessel activity during construction and operation does not address the displacement and collision risks resulting from the presence of the wind farm itself; and
- For marine mammals the observers highlight that mitigation is qualitative and should be updated with quantitative support from recent TTS thresholds or cumulative modelling;

8.19.10.2 Applicant's response

1941. The NIS has provided a synthesis of the best available scientific evidence, is compliant with relevant topic and receptor specific guidance, fully details the relevant aspects of the proposed project that may result in an effect pathway for designated sites, and provides complete and precise conclusions. Whilst uncertainty is inherent within the marine environment, uncertainty is clearly identified and a precautionary approach is taken within the assessment. This is evidenced throughout the NIS in aspects such as precautionary assumptions for bird collision risk, and precautionary assumptions for underwater noise modelling and the associated thresholds for impact assessment. Beyond the precautionary assessment, where uncertainty or risk of adverse effects remain, CWP have brought forward appropriate mitigation, the efficacy of which is demonstrated through reference to existing precedent. As such the conclusions presented can be considered to be beyond reasonable scientific doubt.

1942. The observer commented that mitigation is qualitative and should be updated with quantitative support from cumulative modelling. As per the updated **MMMP**, the CWP Project, in order to mitigate potential impacts from underwater noise during the construction of the project, commits to a limit on underwater noise of 169 dB $L_{E,p,ss,05}$ at 750m at WTG and OSS piling events, and the implementation of noise abatement in the event high order UXO clearance is required.. The observer also noted that TTS thresholds should also be considered when designing mitigation. **Volume 3 Chapter 11 Marine Mammals** (para 36), and **Appendix 11-B** of the **EIAR Addendum** outlines why the current TTS-onset thresholds are inappropriate to determine a biologically significant level of TTS and thus, why only PTS is used in the impact assessment for auditory injury from piling (project alone and cumulative). This is detailed further in the TTS position statement. Currently, the only threshold available is for the onset of TTS, which is described by Southall et al (2019) as: "*the minimum threshold shift clearly larger than any day-to-day or session-to-session variation in a subject's normal hearing ability*", and which "*is typically the minimum amount of threshold shift that can be differentiated in most experimental conditions.*" The time hearing recovers back to normal (the recovery time) for such small threshold shifts is expected to be less than an hour (e.g. Kastelein et al., 2016), and therefore unlikely to cause any major consequences for an animal. While TTS is a temporary impairment of an animal's hearing ability, the current TTS-onset threshold level is not biologically meaningful and will overestimate the potential for an ecologically significant effect if it is assumed as injury. It has been agreed in English, Welsh and Scottish waters that until such time that there is sufficient information to indicate a level and duration of TTS that may have a significant ecological effect on individuals, impact assessments should focus on the impacts that can be more justifiably assessed, namely PTS, to indicate a level of ecologically significant auditory injury, and on the potential behavioural effects of noise such as disturbance leading to disruption in natural behaviour (e.g. reduction in foraging efficiency). The Applicant notes the finding from Houser (2021), and re-emphasises that TTS at low levels (e.g. at the

TTS-onset threshold level, which is the minimum amount of threshold shift derived and which is the level assessed) is fully recoverable. While extreme levels of TTS may lead to tissue damage, this has not been tested experimentally due to ethical concerns, and as such there is no threshold set for a level of TTS that may lead to tissue damage, and thus it is not possible to assess. The TTS-onset is the lowest measurable response, it is not a threshold for a biologically meaningful impact. Verfuss et al. (2024) outlines that not all noise exposures that generate TTS lead to tissue damage, and therefore not all noise exposures that generate TTS lead to injury.

8.19.11 Legal and Regulatory Compliance

8.19.11.1 Summary of matters raised

1943. The observations state that combined impacts of the proposed development with other existing and planned OWF projects have not been considered, leading to significant in-combination effects on marine habitats and species. Observers state that the in-combination assessment within the NIS is inadequate.

1944. Specific matters raised in this regard:

- Marine mammal in-combination assessment is inadequate; and
- Ornithology in-combination assessment is inadequate.
- In-combination assessment fails to account for design flexibility.

8.19.11.2 Applicant's response

1945. Observers state that the NIS fails to take account of the in-combination effect of other development on marine mammals.

1946. The Applicant notes that a detailed assessment of in-combination effects for each SAC, including overlap of disturbance contours and EDRs during offshore piling at the CWP Project and other wind farm sites is provided in NIS **Volume 6 – In-combination Assessment – Part 1** (as updated by the **NIS Addendum (Part 2)**). For example, the Rockabill to Dalkey Island SAC in-combination assessment for harbour porpoise (see **Section 3.2.2** of NIS **Volume 6 – Part 1** and the **NIS Addendum (Part 2)**) assesses the potential impacts from the CWP Project in addition to seven other OWFs in the Celtic and Irish Sea MU that may be constructing at the same time, as well as tidal projects, coastal projects and cable projects.

1947. Observers also state that in-combination assessment of other development on ornithology is inadequate.

1948. As above the Applicant notes that a detailed assessment of in-combination effects for each SPA is provided in NIS **Volume 6 - In-combination Assessment - Part 2** (as updated by the **NIS Addendum (Part 3)**). The applicant highlights that assessment of impacts to European Protected Sites includes detailed assessments of relevant in-combination effects for each relevant SPA where there is potential connectivity to the CWP Project. This in-combination assessment incorporates consideration of the impacts of all other relevant plans and projects which may affect the relevant SPA populations. The Applicant's approach to in-combination assessment is in accordance with best practice and makes due consideration of consultation with other Irish Phase 1 projects. It concludes that in-combination effects are not expected to result in AESI for any SPA.

1949. **Section 5.10** of EIAR **Volume 2, Chapter 5 EIA Methodology** describes the approach taken by the Applicant to address design flexibility in the EIA / AA, whereby a representative scenario is adopted for the impact assessment.

1950. The flexibility afforded to other development (including other OWF projects) is assessed within the in-combination assessment (and CEA) using a similar methodology to that of the project alone assessment, whereby the 'representative scenario' for the other development (variously referred to across other projects as *maximum design scenario*, or *worst case scenario* or *representative scenario*) is considered to allow an assessment to be undertaken using the principle of "if all projects were to build out using the likely most impactful design, what would the implications be for a given receptor or European designated site".

1951. This approach is in accordance with relevant Guidance, including the EIAR Guidelines (EPA, 2022) and CIEEM Guidelines (CIEEM, 2024), and is in accordance with standard practice across multiple EU and non-EU jurisdiction. Whilst standard practice would not in and off itself be a reason for adopting a methodology, it does allow a comparative approach to be adopted whereby the outcomes of cumulative and in-combination effects can be compared and reviewed consistently.

8.19.12 Conservation Status and Future Prospects

8.19.12.1 Summary of matters raised

1952. References various assessments of the conservation status of sandbanks and other habitats, indicating that future prospects are deemed unfavourable due to threats from wind farm development and other activities.

8.19.12.2 Applicant's response

1953. **Volume 4, Appendix 8.3 Benthic Baseline Report** of the **EIAR** was conducted to identify sensitive habitats or species within the CWP Project and found no evidence of sandbank habitats within the CWP Project area. **Section 8.6** of **Volume 3, Chapter 8 Subtidal and Intertidal Ecology** of the **EIAR** describes the existing environment, as sandbanks are present in the wider study area any impacts are assessed in **Section 8.10**. of **Volume 3, Chapter 8 Subtidal and Intertidal Ecology** as not significant. Additionally, **Appendix 8.4 Marine Protected Areas Assessment Report**, considers future prospective marine protected areas and concludes that beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network, and the presence of the CWP Project will not result in an impediment to the designation of an MPA with the areas of search identified by the MPA Advisory Group.

1954. **Volume 2, Chapter 3 Site Selection and Consideration of Alternatives** of the EIAR also sets out the site selection process and consideration of alternatives carried out by the Applicant to determine the most appropriate location and design for the CWP Project.

8.19.13 Recommendations for Rejection

8.19.13.1 Summary of matters raised

1955. Observations conclude with a recommendation to reject the proposed development based on its potential significant adverse effects on European designated sites and non-compliance with relevant environmental legislation and best practices.

8.19.13.2 Applicant's response

1956. The NIS and **NIS Addendum** includes a detailed assessment of potential effects on European designated sites, based on the best available data and standard methodologies. All sites with potential connectivity were considered, and where LSE could not be ruled out, further assessment was undertaken in accordance with the requirements of the Habitats Directive.

1957. The assessment concludes that, following the application of mitigation where required, the project will not have an adverse effect on the integrity of any European site, either alone or in combination with other plans or projects. The Applicant is satisfied that the NIS meets the necessary legal and technical requirements to inform the competent authority's AA.

1958. As such there is no impediment to granting consent for the CWP Project, as all relevant impact pathways have been considered, all relevant mitigation measures have been introduced and secured, and there are no residual adverse effects on the integrity of any European designated sites.

9 PLANNING CONDITIONS

1959. Several submissions raise various points in relation to conditions that may form part of a planning permission. It is requested that those submissions, as a whole, are considered in the broader context of key project planning conditions that the Commission may be minded to append to any grant of permission. The Commission may attach conditions relating to a range of matters, as detailed under Section 293 of the Planning and Development Act. The Applicant would however like to emphasise several conditions that are critical to the project.

9.1.1 Duration of Consent

1960. The MAC issued for the project (MAC 2022-MAC-006) is for a 45 year period, expiring on 22nd December 2067. The application is for an operational period of 25 years and the EIAR and NIS has been prepared on this basis. This excludes the construction period and the decommissioning period. The 10 year permission applied for allows for the construction of the development.

1961. Mindful that the Commission may attach a condition relating to the overall duration of the consent, including construction, operational and decommissioning phases, we request that in the event that such a condition is appended, that the permission is for a period of **35 years from the date of final commissioning** of the development, and in any case **shall not extend beyond 22nd December 2067** or any other date to which MAC 2022-MAC-006 may be extended. Written confirmation of the date of final commissioning should be provided by the applicant to the Commission no later than one calendar month after this date.

9.1.2 Commencement of Development

1962. As the application is for a 10 year permission any condition may state that the period during which the development permitted may be carried out shall be **10 years** from the date of the Order.

9.1.3 Implementation in Accordance with Approved Plans

1963. The Commission may consider it appropriate to attach a condition which requires the agreement on the WTG layout option that is to be constructed and that the development should be constructed in accordance with those details, save where otherwise required to comply with other conditions. We would request that where other conditions require the agreement of details with the Commission or the coastal planning authority prior to the commencement of development, that agreement of those details should relate to the commencement of the relevant phase of the development.

1964. Details of inter array cable and export cable and associate design flexibility associated with them can be subject of separate conditions.

9.1.4 Phasing of Development

1965. A condition relating to the Construction Programme and Phase Plan would be welcomed by the applicant to confirm the timing and programming of construction. However, as this is a multi-phase development which will be delivered over a long period, requiring all details prior to the commencement of any development will inevitably give rise to significant delays and would not allow the development to proceed in an orderly sequential manner.

1966. We suggest that any Construction Programme and Phasing Plan would set out:

a) The proposed zones of the development to include the phasing for onshore, intertidal and offshore elements of the development.
b) The proposed sequencing of each phase of development;
c) The proposed sequencing and expected duration of construction work within the each of the zones; and
d) Final date for Commissioning of the development.

1967. Any other conditions requiring agreement should be submitted and agreed prior to the commencement of development of the phase to which they relate.

9.1.5 EIA and NIS Mitigation Measures

1968. The applicant commits to the mitigation measures proposed in the EIAR and NIS and their addenda, and other documents as relevant. Monitoring will be dealt with separately under the provisions of a Project Environmental Monitoring Plan (PEMP).

9.1.6 Project Environmental Monitoring Plan

1969. An updated In Principle Project Environmental Management Plan (IPPEMP) is submitted with the Further Information Response. Any condition requiring the submission of a final PEMP can specify that the PEMP is submitted for agreement no later than 6 months prior to the commencement of the offshore element of the development. The PEMP can set out the measures which the applicant must monitor throughout the lifespan of the construction, operational and decommissioning phases. Post decommissioning monitoring is more appropriately dealt with under the Rehabilitation Schedule and Decommissioning Plan (see below). Methodologies can be approved in stages to allow timely commencement of pre-construction monitoring, and in relation to the key receptors which the Commission may deem appropriate to specify. Such receptors may include:

1.Birds;

2.Marine Mammals;

3.Fish and shellfish;

4. Subtidal and intertidal communities; and

5.Seabed scour and local seabed sediment deposition

1970. The PEMP will be a live document which will be regularly reviewed by the Commission, at timescales to be determined by it to identify the appropriateness of on-going monitoring. Following such reviews, the Commission may, in consultation with the relevant bodies, require the applicant to amend the PEMP and submit such an amended PEMP, in writing, for their written approval.

1971. Subject to any legal restrictions regarding the treatment of the information, the results are to be made publicly available by the Commission, or by such other party appointed at their discretion. The Commission may agree, in writing, that monitoring may be reduced or ceased before the end of the lifespan of the Development.

9.1.7 Decommissioning

1972. Decommissioning is an important stage of the project and is addressed under both the Planning and Development Act and the MAP Act. Any condition attached to a permission can indicate that a

Rehabilitation Schedule (to be in accordance with the section 95 of the Maritime Area Planning Act 2021) should be submitted to the Maritime Area Regulatory Authority not later than 3 months before undertaking the offshore development.

1973. A Decommissioning Plan outlining both onshore and offshore decommissioning works can be submitted to the Commission prior to the commencement of development. The Development would be decommissioned in accordance with the submitted Decommissioning Plan, unless otherwise agreed in writing with the Commission in advance of commencement of the decommissioning works.

10 REFERENCES

1974. APEM. (2017). Mainstream Kittiwake and Auk Displacement Report. APEM Scientific Report P000001836. Neart na Gaoithe Offshore Wind Limited. 04/12/17. v2.0 Final. 55

1975. Berrow, S., E. Farrell, B. Price, J. Woodlock, and C. Russell. (2024). Use of haul-out sites by grey and harbour seals in Dublin Bay and adjacent coastal waters. Biology and Environment: Proceedings of the Royal Irish Academy 124B (2/3).

1976. Berrow, S., O'Brien, J., Groth, L., Foley, A. and Whooley, P. (2021). Trends in harbour porpoise density within the Rockabill to Dalkey Island SAC, Ireland. Irish Wildlife Manuals No. 123. Dublin: National Parks and Wildlife Service.

1977. Berrow, S.D. and Heardman, C. (1994). The basking shark Cetorhinus maximus (Gunnerus) in Irish waters – patterns of distribution and abundance. Biology and Environment: Proceedings of the Royal Irish Academy, 94B(2), pp. 101–107.

1978. Booth, C.G., Sinclair, R.R., Harwood, J., Thompson, P.M., Lonergan, M., Embling, C.B. and Gordon, J.C.D. (2019). Potential impacts of offshore wind farm development on grey seal (Halichoerus grypus) populations: an expert elicitation approach. Marine Environmental Research, 147, pp. 113–125.

1979. Botterell, Z.L.R., Penrose, R., Witt, M.J. and Godley, B.J. (2020). Long-term insights into marine turtle sightings, strandings and bycatch in the UK and Irish waters. Marine Biology, 167, 1–15.

1980. Burke, B., Lewis, L.J., Fitzgerald, N., Frost, T., Austin, G. and Tierney, T.D. (2019). Estimates of waterbird numbers wintering in Ireland, 2011/12–2015/16. Irish Birds, 41, p.12.

1981. Burnell D., Perkins A.J., Newton S.F., Bolton M., Tierney T.D. and Dunn T.E. 2023. Seabirds Count: A census of breeding seabirds in Britain and Ireland (2015 - 2021). Lynx Nature Books

1982. Carter, M.I.D., Russell, D.J.F., Embling, C.B. and Blight, C.J. (2020). Estimates of harbour seal (Phoca vitulina) and grey seal (Halichoerus grypus) at-sea density in UK waters. Sea Mammal Research Unit (SMRU), University of St Andrews.

1983. Carter, M.I.D., Russell, D.J.F., Embling, C.B., Blight, C.J. and Thompson, D. (2022). Updated estimates of seal usage and at-sea density in UK waters to inform offshore development assessments. Sea Mammal Research Unit (SMRU), University of St Andrews.

1984. CIEEM. (2018). Guidelines for ecological impact assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. September 2018 Version 1.1 - updated September 2019. Chartered Institute of Ecology and Environmental Management, Winchester.

1985. CIEEM. (2024). Guidelines for Ecological Impact Assessment in the UK and Ireland: terrestrial, freshwater, coastal and marine. Winchester: CIEEM.

1986. Cook, A. (2026), Review of Aberdeen Bay Collision Monitoring Data. The Biodiversity Consultancy. A report for Spoor.

1987. Coughlan, M., Van Landeghem, K.J.J., Davison, W., O'Carroll, A.G., O'Connor, B. and Bell, P.S. (2021). Cumulative impact of offshore wind farm development on sediment dynamics in the Irish Sea: a hydrodynamic modelling approach. Marine Environmental Research, 169, 105320.

1988. Coull, K.A., Johnstone, R., & Rogers. S.I. (1998). Fisheries Sensitivity Maps in British Waters. Published and distributed by UKOOA Ltd.

1989. DAHG. (2014) Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters. Dublin: Department of Arts, Heritage and the Gaeltacht. Available at: https://www.npws.ie/sites/default/files/general/Underwater%20sound%20guidance_Jan%202014.pdf

1990. Davies, Jacob & Boersch-Supan, Philipp & Clewley, Gary & Humphreys, Liz & O'Hanlon, Nina & Shamoun-Baranes, Judy & Thaxter, Chris & Weston, Ewan & Cook, Aonghais. (2024). Influence of wind on kittiwake Rissa tridactyla flight and offshore wind turbine collision risk. Marine Biology. 171.

1991. DECC. (2018). Offshore renewable energy development plan: guidelines for environmental assessment and coastal processes. Dublin: Department of Communications, Climate Action and Environment.

1992. DHPLG. (2018). Guidance on marine baseline ecological assessments and monitoring activities for offshore renewable energy projects. Part 1. Dublin: Department of Housing, Planning and Local Government.

1993. Doherty, P.D., Baxter, J.M., Gell, F.R., Godley, B.J., Graham, R.T., Hall, G., Hall, J., Hawkes, L.A., Henderson, S.M., Johnson, L., Speedie, C.D. and Witt, M.J. (2017). Long-term satellite tracking reveals variable seasonal migration strategies of basking sharks in the north-east Atlantic. Scientific Reports, 7, 42837.

1994. Dolton, H.R., Houghton, J.D.R. and Witt, M.J. (2019). Basking shark distribution and abundance in the northeast Atlantic: a review of sightings data. Journal of Fish Biology, 95(1), pp. 1–19.

1995. DoT. (2025a). Guidance on Safety of Navigation & Emergency Response: Offshore Renewable Energy Installations (OREI). Dublin: Department of Transport.

1996. DoT. (2025b). Offshore Renewable Energy Installations (OREI): Guidance and operational considerations for search and rescue (SAR) and emergency response (Standard Operating Procedure 07-2025). Dublin: Department of Transport.

1997. Doyle, T.K., Houghton, J.D.R., McDevitt, R., Davenport, J. and Hays, G.C. (2007). The distribution of leatherback turtles (Dermochelys coriacea) in the northeast Atlantic. Journal of the Marine Biological Association of the United Kingdom, 87(2), pp. 417–422.

1998. Dublin Port Company. (2025). 3FM Project: Environmental Impact Assessment Report, Chapter 7, Biodiversity.

1999. Ellis, J.R., Milligan, S.P., Readdy, L., Taylor, N., & Brown, M.J. (2012). Spawning and nursery grounds of selected fish species in UK waters. Sci. Ser. Tech. Rep., Cefas Lowestoft, 147, 56 pp.

2000. Finneran, J. J., C. E. Schlundt, and J. Mulsow. (2023). Temporary threshold shift in bottlenose dolphins exposed to steady-state, 1/6-octave noise centered at 0.5 to 80 kHza). The Journal of the Acoustical Society of America 154:1324-1338.

2001. Fitkov-Norris, E.D., Gray, T.S. and Stead, S.M. (2025). Fishing effort displacement and adaptation in response to offshore wind farm development across European waters. Marine Policy, 161, 105902.

2002. Gilles, A., M. Authier, N. Ramirez-Martinez, H. Araújo, A. Blanchard, J. Carlström, C. Eira, G. Dorémus, C. Fernández-Maldonado, S. Geelhoed, L. Kyhn, S. Laran, D. Nachtsheim, S. Panigada, R. Pigeault, M. Sequeira, S. Sveegaard, N. Taylor, K. Owen, C. Saavedra, J. Vázquez-Bonales, B. Unger, and P. Hammond. (2023). Estimates of cetacean abundance in European Atlantic waters in summer 2022 from the SCANS-IV aerial and shipboard surveys. Final report published 29 September 2023.

2003. Gilles, A., M. Authier, R. Pigeault, N. Ramirez-Martinez, V. Benoit, J. Carlström, C. Eira, S. Geelhoed, S. Laran, M. Sequeira, S. Sveegaard, N. Taylor, C. Saavedra, J. Vázquez-Bonales, and P. Hammond. (2025). Spatial models of cetacean density in European Atlantic waters based on SCANS-IV summer 2022 survey data.

2004. Gilles, A., Viquerat, S., Lacey, C., and others (2023). Small cetacean abundance in European Atlantic waters: results from SCANS IV aerial and shipboard surveys. Wageningen Marine Research.

2005. Giralt Paradell, O., A. Canadas, A. Bennison, N. Todd, M. Jessopp, and E. Rogan. (2024a). Aerial surveys of cetaceans and seabirds in Irish waters: Occurrence, distribution and abundance in 2021-

2023. Department of the Environment, Climate & Communications and Department of Housing, Local Government & Heritage, Ireland.

2006. Glasson, J., Baxter, D. and Fernandes, M. (2022). Impacts of offshore wind farms on local tourism and recreation: a research study. Tourism Management, 89, 104444.

2007. Graham, I.M., Merchant, N.D., Farcas, A., Barton, T.R., Cheney, B., Bono, S., Thompson, P.M. and Cordes, L.S. (2017). Harbour porpoise responses to pile-driving diminish over time. Royal Society Open Science, 4(7), 170110.

2008. Hammond, P.S., Lacey, C., Gilles, A., Viquerat, S., Börjesson, P., Herr, H., Macleod, K., Ridoux, V., Santos, M.B., Scheidat, M., Teilmann, J., Vingada, J. and Øien, N. (2021). Estimates of cetacean abundance in European Atlantic waters in summer 2016 from the SCANS-III aerial and shipboard surveys. Wageningen Marine Research.

2009. Hastie, G.D., Merchant, N.D., Götz, T., Russell, D.J.F., Thompson, D. and Janik, V.M. (2021). Effects of impulsive noise on marine mammals: captive seal responses to pile-driving sound playbacks. Journal of Applied Ecology, 58(10), pp. 1–12.

2010. IEMA. (2020). Major accidents and disasters in environmental impact assessment: a primer. Lincoln: IEMA.

2011. IMO. (2004). International convention for the control and management of ships' ballast water and sediments. London: International Maritime Organisation.

2012. IMO. (2024). Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species. London: International Maritime Organisation.

2013. IoA. (2013). A good practice guide to the application of ETSU-R-97 for the assessment and rating of wind turbine noise. St Albans: Institute of Acoustics.

2014. Jessop, M.J., Smout, S.C., and others (2018). Spatial distribution and habitat use of marine megafauna in the western Irish Sea. Marine Ecology Progress Series, 602, pp. 1–16.

2015. JNCC (2022) Guidance for assessing the significance of noise disturbance against Conservation Objectives of harbour porpoise SACs. Peterborough: JNCC.

2016. JNCC (2025). Guidance for the use of effective deterrent ranges (EDRs) in offshore geophysical surveys and unexploded ordnance (UXO) clearance. Peterborough: JNCC.

2017. JNCC. (2020). Guidance for assessing the significance of noise disturbance against Conservation Objectives of harbour porpoise SACs (England, Wales & Northern Ireland). Report No. 654, JNCC, Peterborough.

2018. Johnston, A., Cook, A.S.C.P., Wright, L.J., Humphreys, E.M. and Burton, N.H.K. (2014). Modelling flight heights of marine birds to more accurately assess collision risk with offshore wind turbines. Journal of Applied Ecology, 51(1), pp. 31–41.

2019. Kempf, A., Stelzenmüller, V., Floeter, J. and Temming, A. (2022). Consequences of offshore wind farm development for fish and fisheries in the North Sea. Marine Policy, 135, 104873.

2020. Lacey, C., Gilles, A., Viquerat, S. and Hammond, P.S. (2022). SCANS-III and ObSERVE survey data: density surface modelling of harbour porpoise in north-west European waters. Wageningen Marine Research.

2021. Lagerveld, S., Lensink, R., Jonge Poerink, B., de Vries, P., Scholl, M. and Aarts, G. (2024). Offshore movements of bats across the North Sea: evidence for long-distance sea crossings and coastal route selection. Ecology and Evolution, 14, e10923.

2022. Landscape Institute and Institute of Environmental Management and Assessment (IEMA) (2013). Guidelines for Landscape and Visual Impact Assessment. 3rd edn. Abingdon: Routledge.

2023. Lawson, J.D., Baerwald, E.F. and Barclay, R.M.R. (2020). Do bats suffer from barotrauma at wind turbines? A re-evaluation of the evidence. Journal of Mammalogy, 101(6), pp. 1–9.

2024. Lieber, L., Nimmo-Smith, W.A.M., Waggitt, J.J. and Kregting, L. (2020). Localised oceanographic conditions influence the distribution of basking sharks (Cetorhinus maximus). Scientific Reports, 10, 14326.

2025. Marine Institute (2020). Regional seascape character assessment for Ireland. Galway: Marine Institute.

2026. Masden, E.A., Haydon, D.T., Fox, A.D., Furness, R.W., Bullman, R. and Desholm, M. (2009). Barriers to movement: impacts of wind farms on migrating birds. ICES Journal of Marine Science, 66(4), pp. 746–753.

2027. MCA. (2021). Marine Guidance Note (MGN) 654 (M+F): Offshore renewable energy installations (OREIs) – UK navigational practice, safety and emergency response. London: Department for Transport.

2028. McBreen, F. and Wilson, J.G. (2003) Sediment quality in Dublin Bay: an assessment of trace metals and contaminants. Dublin: University College Dublin.

2029. Morris, C. D., N. G. Riddoch, C. D. Duck, S. A. Waitland, and D. J. F. Russell. (2025). Aerial thermal-imaging survey of seals in Ireland in August 2024. 158, National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland.

2030. Natural England (2022). Highly pathogenic avian influenza (HPAI): advice for assessing the impacts on seabird populations in offshore wind farm assessments. York: Natural England.

2031. NatureScot. (2023). Guidance Note: Use of avoidance rates in the assessment of collision risk of seabirds at offshore wind farms. Inverness: NatureScot.

2032. NatureScot. (2025). Guidance Note 7: Guidance to support offshore wind applications: marine ornithology – advice for assessing collision risk of marine birds. Version 3 (April 2025). Available at: NatureScot.

2033. NMFS. (2024). Update to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 3.0): Underwater and InAir Criteria for Onset of Auditory Injury and Temporary Threshold Shifts. U.S. Dept. of Commer., NOAA. NOAA Technical Memorandum NMFS-OPR-71, 182 p.

2034. NPWS (2024). Conservation Objectives: Wicklow Head SPA 004127. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

2035. O'Hanlon, N.J., Thaxter, C.B., Clewley, G.D., Davies, J.G., Humphreys, E.M., Miller, P.I., Pollock, C.J., Shamoun-Baranes, J., Weston, E. and Cook, A.S.C.P. (2024). 'Challenges in quantifying the responses of Black-legged Kittiwakes Rissa tridactyla to habitat variables and local stressors due to individual variation'. Bird Study, 1-17

2036. Percival, S. and Ford, J. (2017). 'Westermost Rough Offshore Wind Farm Post-construction Phase Year 2: Ornithological Survey Report, May 2016–April 2017

2037. Perrow, M.R., Skeate, E.R. and Gilroy, J.J. (2011). Effects of disturbance from offshore wind farm construction on little tern Sternula albifrons breeding success and prey availability. Marine Pollution Bulletin, 62(10), pp. 2070–2079.

2038. Peschko, V., Mendel, B., Mercker, M. and Garthe, S. (2020). Northern gannet and black-legged kittiwake spatial responses to offshore wind farms in the German North Sea. Marine Ecology Progress Series, 639, pp. 157–173.

2039. Phillips, B., Roberts, A., Buckland, L., Canning, S., Goulding, A., Mendes, S., Prior, A., De Silva, R., Stephenson, S. and McGarry, T. (2025). Evidence base for application of Acoustic Deterrent Devices (ADDs) as marine mammal mitigation. Version 5. JNCC Report No. 615. Peterborough: Joint Nature Conservation Committee (JNCC). ISSN 0963-8091.

2040. Pirotta, E., B. E. Laesser, A. Hardaker, N. Riddoch, M. Marcoux, and D. Lusseau. (2013). Dredging displaces bottlenose dolphins from an urbanised foraging patch. Marine Pollution Bulletin 74:396-402.

2041. Pirotta, E., Merchant, N.D., Thompson, P.M., Barton, T.R. and Lusseau, D. (2013). Quantifying the effect of boat disturbance on bottlenose dolphin foraging activity. Biological Conservation, 181, pp. 82–89.

2042. Rogan, E., Cañadas, A., Scheidat, M., Brereton, T., Hammond, P.S. and others (2018) Delphinus delphis (short-beaked common dolphin) and other cetaceans in Irish waters: results from the ObSERVE programme. Dublin: Department of Communications, Climate Action and Environment.

2043. Rogan, E., P. Breen, M. Mackey, A. Cañadas, M. Scheidat, S. Geelhoed, and M. Jessopp. (2018). Aerial surveys of cetaceans and seabirds in Irish waters: Occurrence, distribution and abundance in 2015-2017. Department of Communications, Climate Action & Environment and National Parks and Wildlife Service (NPWS), Department of Culture, Heritage and the Gaeltacht, Dublin, Ireland. 297pp.

2044. Rollins, K.E., Meyerholz, D.K., Johnson, G.D., Capparella, A.P. and Loew, S.S. (2012). A forensic investigation into the etiology of bat mortality at a wind farm: barotrauma or collision? PLoS ONE, 7(12), e52162.

2045. Searle KR, Mobbs D C, Butler A, Furness R W, Trinder M N, Daunt F. (2018). Finding out the fate of displaced birds. Scottish Marine and Freshwater Science. 9(8):149.

2046. Sigray, P., Andersson, M., Folegot, T., Tougaard, J. and others (2023). Guidance for underwater noise assessment under the Marine Strategy Framework Directive (MSFD). Luxembourg: Publications Office of the European Union.

2047. Sims, D.W. (2008). Sieving a living: a review of the biology, ecology and conservation status of the plankton-feeding basking shark Cetorhinus maximus. Advances in Marine Biology, 54, pp. 171–220.

2048. Skov, H., Tjørnløv, R.S., Armitage, M., Barker, M., Jørgensen, J.B., Mortensen, L.O. & Uhrenholdt, T. (2025). High-resolution multi-sensor technology reveals low collision risk to seabirds in offshore wind farms. Journal of Applied Ecology n/a: e70239.

2049. Southall, B., J. J. Finneran, C. Reichmuth, P. E. Nachtigall, D. R. Ketten, A. E. Bowles, W. T. Ellison, D. Nowacek, and P. Tyack. (2019). Marine Mammal Noise Exposure Criteria: Updated Scientific Recommendations for Residual Hearing Effects. Aquatic Mammals 45:125-232.

2050. Southall, E.J., Sims, D.W., Metcalfe, J.D. and Doyle, J.I. (2005). Seasonal space-use estimates of basking sharks in relation to protection and political-economic zones in the north-east Atlantic. Biological Conservation, 124(3), pp. 381–393.

2051. Speedie, C.D., Johnson, L.A. and Witt, M.J. (2009) Basking shark hotspot areas in the UK: a review of current knowledge. Journal of the Marine Biological Association of the United Kingdom, 89(8), pp. 1–12.

2052. Stamp, T.E., Wilson, J.G., O'Connor, I. and Guinan, J. (2023). Sensitivity and recoverability of marine benthic habitats to increases in suspended sediment concentration and sediment deposition in high-energy environments. Marine Environmental Research, 188, 105979.

2053. Trinder, M., O'Brien, S.H. and Deimel, J. (2024). 'A new method for quantifying redistribution of seabirds within operational offshore wind farms finds no evidence of within-wind farm displacement'. Frontiers in Marine Science 11: 1235061

2054. Tyler-Walters, H. (2005). Zostera marina eelgrass beds. Marine Life Information Network (MarLIN). Plymouth: Marine Biological Association of the United Kingdom.

2055. Tyler-Walters, H. (2008). Zostera noltii dwarf eelgrass beds. Marine Life Information Network (MarLIN). Plymouth: Marine Biological Association of the United Kingdom.

2056. Welcker, J. and Nehls, G. (2016). 'Displacement of seabirds by an offshore wind farm in the North Sea', Marine Ecology Progress Series, 554, pp. 173–182. doi: 10.3354/meps11812.

2057. Wilson, L.J., Humphreys, E.M., Austin, G.E., and others (2021) Movements and connectivity of little tern Sternula albifrons between breeding colonies in Britain and Ireland. Seabird, 33, pp. 45–60.

2058. Wisniewska, D.M., Johnson, M., Teilmann, J., Rojano-Doñate, L., Shearer, J., Sveegaard, S., Miller, L.A., Siebert, U. and Madsen, P.T. (2016). Ultra-high foraging rates of harbour porpoises make them vulnerable to anthropogenic disturbance. Current Biology, 26(11), pp. 1441–1446.

2059. Witt, M.J., Hardy, T., Johnson, L., McClellan, C.M., Pikesley, S.K., Ranger, S., Richardson, P.B., Solandt, J.-L. and Speedie, C.D. (2012) Basking sharks in the northeast Atlantic: spatio-temporal trends from long-term sightings data. Journal of the Marine Biological Association of the United Kingdom, 92(6), pp. 1–10.

2060. Woodward, I., Thaxter, C.B., Owen, E., and Cook, A.S.C.P. (2019). Desk-based revision of seabird foraging ranges used for HRA screening. BTO Research Report No. 724. Thetford: British Trust for Ornithology.

APPENDIX A SCHEDULE OF TRANSBOUNDARY CONSULTATIONS

1. This schedule provides an overview of the pre-application consultation undertaken with transboundary organisations.

Organisation	Request	Date	Response
United Kingdom			
Centre for Environment, Fisheries and Aquaculture Science (Cefas)	CWP Offshore Scoping Report provided for comment.	Dec 2020	No response received.
	CWP Offshore Scoping Report reissued for comment alongside Public Consultation Documents.	Nov 2023	No response received.
Marine Management Organisation (MMO)	CWP Offshore Scoping Report provided for comment.	Dec 2020	Scoping Report acknowledged but no specific feedback provided or concerns raised.
	CWP Offshore Scoping Report reissued for comment alongside Public Consultation Documents.	Nov 2023	No response received.
Marine Scotland	CWP Offshore Scoping Report provided for comment.	Dec 2020	Marine Scotland advised reviewing the Marine Scotland Information website for the cumulative and in-combination assessment. No other concerns were raised.
	CWP Offshore Scoping Report reissued for comment alongside Public Consultation Documents.	Nov 2023	No response received.
Maritime and Coastguard Agency	CWP Offshore Scoping Report provided for comment.	Dec 2020	No concerns regarding cross-boundary traffic and there are no new installations or navigational features in UK waters that we feel would impact on traffic because of construction of this wind farm. It was also noted that the MGN 543 guidance is due to be updated.

Organisation	Request	Date	Response
	CWP Offshore Scoping Report reissued for comment alongside Public Consultation Documents.	Nov 2023	There are no major shipping routes to and from the UK that will be significantly impacted by the array area and there is little concern on the transboundary impacts from a shipping and navigation perspective. The traffic is mostly coastal between Irish ports and smaller vessels approaching Dublin after exiting the Off Smalls TSS. The smaller traffic making a direct approach from the Off Smalls TSS is heading to the west of the Codling Bank to Dublin and keeping east, all within Irish waters. It is unlikely the traffic to Anglesey and Liverpool areas will be effected. As such we do not have any concerns to raise and I can confirm we are content for you to omit us from your stakeholder engagement for this project.
Ministry of Defence (MoD)	CWP Offshore Scoping Report provided for comment.	Dec 2020	No objections to, or concerns about the impacts of the proposed development assuming that IAA guidance for lighting and marking is adhered to.
	Email correspondence re-introducing CWP Project to MoD and requesting assessment of potential transboundary impact on MoD operations.	Aug 2022	MoD responded on 15 November referring the Applicant to their scoping response (see above).
Natural Resources Wales (NRW)	CWP Offshore Scoping Report provided for comment.	Dec 2020	No response received.
	CWP Offshore Scoping Report reissued for comment alongside Public Consultation Documents.	Nov 2023	No response received.
Agri-Food and Biosciences Institute	CWP Offshore Scoping Report and Public Consultation Documents provided for comment.	Nov 2023	No response received.

Organisation	Request	Date	Response
Department for Infrastructure	CWP Offshore Scoping Report and Public Consultation Documents provided for comment.	Nov 2023	No response received.
The Environment Agency	CWP Offshore Scoping Report and Public Consultation Documents provided for comment.	Nov 2023	No response received.
Scottish Environmental Protection Agency (SEPA)	CWP Offshore Scoping Report and Public Consultation Documents provided for comment.	Nov 2023	No response received.
Northern Ireland			
Department for Infrastructure	CWP Offshore Scoping Report provided for comment.	Dec 2020	No response received.
	CWP Offshore Scoping Report reissued for comment alongside Public Consultation Documents.	Nov 2023	Response received confirming that DfI do not intend to engage.
Department of Agriculture, Environment and Rural Affairs (DAERA)	CWP Offshore Scoping Report provided for comment.	Jan 2021	Inland Fisheries requested consideration of migratory fish species including seatrout and Atlantic salmon. Biodiversity and Conservation Science (BCS) Ornithology Team requested consideration of mortality from WTG collision risk both from the project alone and in-combination with other relevant projects. This should include Kiitwake, Lesser Black-backed Gull and terns.
Northern Ireland Environment Agency (NIEA)	CWP Offshore Scoping Report and Public Consultation Documents provided for comment.	Nov 2023	No response received.
Isle of Man			
Department of Environment, Food and Agriculture	CWP Offshore Scoping Report provided for comment.	Dec 2020	No response received.
Department of Infrastructure	CWP Offshore Scoping Report provided for comment.	Dec 2020	No response received.

Organisation	Request	Date	Response
Isle of Man (Ronaldsway) Airport	Email correspondence introducing CWP Project to Isle of Man (Ronaldsway) Airport and requesting assessment of potential impact (including transboundary) on Air Traffic Control (ATC) radar operations.	Oct 2023	No response received.
France			
Armateurs de France	CWP Offshore Scoping Report and Public Consultation Documents provided for comment.	Nov 2023	No response received.
Préfecture Maritime de la Manche et de la Mer du Nord	CWP Offshore Scoping Report and Public Consultation Documents provided for comment.	Nov 2023	Jan 2024
Secrétariat Général de la Mer	CWP Offshore Scoping Report and Public Consultation Documents provided for comment.	Nov 2023	Jan 2024
CRPMEM Nord	CWP Offshore Scoping Report and Public Consultation Documents provided for comment.	Nov 2023	Jan 2024
Fédération Nationale de la Pêche	CWP Offshore Scoping Report and Public Consultation Documents provided for comment.	Nov 2023	Jan 2024
FROM Nord	CWP Offshore Scoping Report and Public Consultation Documents provided for comment.	Jan 2024	Jan 2024
CME Organisation de Producteur	CWP Offshore Scoping Report and Public Consultation Documents provided for comment.	Jan 2024	Jan 2024