codling wind park

Environmental Impact Assessment Report

Volume 4

Appendix 12.1 Cumulative Effects Assessment


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wind park

Table of contents

List of tables

Abbreviations

Abbreviation	Term in full
ALARP	As Low as Reasonably Practicable
CEA	Cumulative Effects Assessment
CWP	Codling Wind Park
CWPL	Codling Wind Park Limited
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EPA	Environmental Protection Agency
EU	European Union
FLO	Fisheries Liaison Officer
FLOWW	Fisheries Liaison with Offshore Wind and Wet Renewables Group
MAC	Maritime Area Consent
MN	Marine notices
NISA	North Irish Sea Array
OECC	Offshore export cable corridor
O&M	Operation and maintenance
ORESS	Offshore Renewable Energy Support Scheme
OWF	Offshore wind farm
PINS	Planning Inspectorate
SID	Strategic Infrastructure Development

Definitions

Glossary	Meaning
the Applicant	The developer, Codling Wind Park Limited (CWPL).
Codling Wind Park (CWP) Project	The proposed development as a whole is referred to as the Codling Wind Park (CWP) Project, comprising of the offshore infrastructure, the onshore infrastructure and any associated temporary works.
Environmental Impact Assessment (EIA)	A systematic means of assessing the likely significant effects of a proposed project, undertaken in accordance with the EIA Directive and the relevant Irish legislation.
Environmental Impact Assessment Report (EIAR)	The report prepared by the Applicant to describe the findings of the EIA for the CWP Project.

APPENDIX 12.1 CUMULATIVE EFFECTS ASSESSMENT

1. Introduction

1. Codling Wind Park Limited (hereafter 'the Applicant') is proposing to develop the Codling Wind Park (CWP) Project, which is located in the Irish Sea approximately 13–22 km off the east coast of Ireland, at County Wicklow.

2. The Environmental Impact Assessment Report (EIAR) for the CWP Project provides the decision-maker, stakeholders and all interested parties with the environmental information required to develop an informed view of any likely significant effects resulting from the CWP Project, as required by the European Union (EU) Directive 2011/92/EU (as amended by Directive 2014/52/EU) (the EIA Directive). These provisions are transposed into Irish legislation in Part X of the Planning and Development Act 2000, as amended, and in Part 10 of the Planning and Development Regulations 2001, as amended.

3. A fundamental component of the Environmental Impact Assessment (EIA) is to consider and assess the potential for cumulative effects of the project with other projects, plans and activities (hereafter referred to as 'other development').

4. The Environmental Protection Agency (EPA) Guidelines on the information to be contained in EIARs (EPA, 2022) defines cumulative effects as:

> *"The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects.*
>
> *While a single activity may itself result in a minor impact, it may, when combined with other impacts (minor or insignificant), result in a cumulative impact that is collectively significant. For example, effects on traffic due to an individual industrial project may be acceptable; however, it may be necessary to assess the cumulative effects taking account of traffic generated by other permitted or planned projects."*

5. This appendix presents the findings of the Cumulative Effects Assessment (CEA) for Commercial Fisheries, which considers the residual effects presented in **Chapter 12 Commercial Fisheries** alongside the potential effects of other proposed and reasonably foreseeable development. Cumulative effects are considered in this document across the construction and operation and maintenance phases of the CWP Project.

6. The detail and scope of the decommissioning works for the CWP Project will be determined by the relevant legislation and guidance at the time of decommissioning. Project-alone impacts during the decommissioning phase of the CWP Project are assessed in **Chapter 12 Commercial Fisheries**. It is anticipated that the impacts will be no greater than those identified for the construction phase, and therefore no separate assessment of cumulative impacts during the decommissioning phase is presented within this CEA.

2. CEA methodology

2.1. Guidance

7. This section summarises the approach to the assessment of cumulative effects for the CWP Project. Further details on the approach to the CEA are provided in **Appendix 5.1 Cumulative Effects Assessment Methodology**.

8. The principal guidance document that has informed the approach to the CEA is the Planning Inspectorate (PINS) for England 'Advice Note 17: Cumulative Effects Assessment' (PINS, 2019), which provides a four-stage process for the assessment of cumulative effects, which has been applied here.

9. This guidance has been applied for a number of both offshore wind farm (OWF) and non-OWF projects in the UK, and is considered to provide developers with a structured approach to assessing cumulative effects. The guidance is also regularly applied in Ireland for large-scale projects, noting that there is no single, industry standard approach to CEA in Ireland, which often varies between projects.

10. In developing the CEA methodology, EPA Guidelines on the information to be contained in EIARs (EPA, 2022) and Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions (European Commission, 1999) have also been considered.

2.2. Consultation

11. **Table 1** provides a summary of stakeholder and regulator feedback received during the consultation process that is relevant to the CEA for commercial fisheries.

Table 1 Consultation responses relevant to the CEA for commercial fisheries

Consultee	Comment	How issues have been addressed
Scoping responses		
SFPA 18 May 2021	List of data sources and the approach to the scope and impacts, Cumulative Impact Assessment (CIA) and Appropriate Assessment (AA) approved.	
Topic-specific meetings		
Solicitors representing fishermen 8 December 2022	The fishers are of the view that site investigation surveys undertaken by a number of offshore wind farms have resulted in a reduction of catch and consider the baseline should pre-date such damage.	CWP Project acknowledges the fisher's view that the regional surveys undertaken have negatively affected whelk stocks. However, CWP Project disputes this based on the available evidence from the fisheries assessment and the literature review carried out after the fisher's objection. The baseline data presented in **Section 12.6 Existing Environment** provide data over a 5-year period from 2016 / 17–2021 / 22 (where 2022 data are available) and consider fluctuations in inter alia whelk stocks during this period, which predates some of the surveys referred to. Impacts on the whelk fishery are assessed in **Section 12.10 Impact Assessment**, in **Chapter 12 Commercial Fisheries.**

2.3. Identification of 'other development'

12. Stage 1 of the process involved establishing a long list of other development with the potential to result in cumulative effects with the CWP Project. This included all projects that result in a comparative effect that is not intrinsically considered as part of the existing environment and is not limited to other OWF projects.

13. The long list of other development (presented in **Appendix 5.1 Cumulative Effects Assessment Methodology**) was then subject to additional screening criteria to establish a short list of other development for each topic. It should be noted that the approach to the CEA attempts to incorporate an appropriate level of pragmatism. Only projects which are well described and sufficiently advanced, with sufficient detail available with which to undertake a meaningful and robust assessment, have been screened into the CEA.

14. In accordance with PINS Advice Note 17, each development considered alongside the CWP Project as part of the CEA has been assigned to a tier, reflecting their current status in the planning and development process.

15. The purpose of the tiered approach is to give consideration to the level of certainty that a cumulative project will be built and therefore contribute to cumulative effects. For example, there can be greater certainty that other development approved and under construction is likely to contribute to cumulative effects, whereas other development at early phases of development (i.e., pre-planning) is less likely to proceed to construction and contribute to cumulative effects. Furthermore, sufficient detail about these projects is unlikely to be available with which to undertake a detailed cumulative assessment.

16. The proposed tiering structure is presented in **Table 2** and described in more detail in **Appendix 5.1 Cumulative Effects Assessment Methodology**. The tiers are listed in descending order of level of detail likely to be available (and, correspondingly, certainty of effects arising).

Table 2 Tiered structure for other development considered for CEA (modified from PINS Advice Note 17 (PINS, 2019))

Tier	Description
Tier 1	• Under construction; • Permitted applications, but not yet implemented; • Offshore applications submitted six months or more in advance of the CWP Project planning application, but not yet determined; and • Onshore applications submitted six months or more in advance of the CWP Project planning application, but not yet determined.
Tier 2a	• Offshore projects in receipt of a Maritime Area Consent (MAC) and an Offshore Renewable Energy Support Scheme (ORESS) contract.
Tier 2b	• Offshore projects in receipt of a MAC; • Offshore Projects in the public domain where an EIA scoping report has been issued; and • Onshore Projects in the public domain where an EIA scoping report has been issued.
Tier 3	• Projects in the public domain where an EIA scoping report has not been issued; and • Projects that have been identified in the relevant development plans and programmes, which set the framework for future development consents / approvals, where such development is reasonably likely to come forward.

3. CEA impact screening

17. The first step in the CEA for commercial fisheries is the identification of which residual impacts assessed for the CWP Project alone have the potential for a cumulative impact with other development (described as 'impact screening'). This screening exercise is set out in **Table 3** below.

18. Only potential impacts assessed in **Chapter 12 Commercial Fisheries** as minor or above are included in the CEA (i.e., those assessed as 'negligible' or 'imperceptible' are not taken forward as there is no potential for them to contribute to a cumulative effect).

19. In summary, **Table 3** shows that there is the potential for cumulative effects on commercial fisheries as a result of loss of grounds or restricted access to fishing grounds, displacement of fishing activity to other areas and effects on commercially exploited fish and shellfish resources. All other impacts are considered to be highly localised to the CWP Project with negligible additive effects.

Table 3 Potential impacts scoped into the assessment

Impact	Potential for cumulative effect	Rationale
Construction		
Loss of grounds or restricted access to fishing grounds	Yes	Other developments in the Irish Sea have the potential to reduce access to fishing grounds.
Displacement of fishing activity into other areas	Yes	Incremental displacement effects across the region can lead to cumulative effects.
Interference with fishing activities	No	Highly localised nature of the impact. Given the scale of CWP Project-alone effects, there would be no interaction of effects; additive effects across the study area would be negligible across projects.
Potential for snagging of gear	No	
Increased steaming times to fishing grounds	No	
Effects on commercially exploited species	Yes	Incremental disruption to largely sedentary shellfish species may have wider stock effects.
Operation and maintenance		
Impact screening as per construction above.		
Decommissioning		
		The detail and scope of the decommissioning works for the CWP Project will be determined by the relevant legislation and guidance at the time of decommissioning. Project-alone impacts during the decommissioning phase of the CWP Project are assessed in **Chapter 12 Commercial Fisheries**. It is anticipated that the impacts will be no greater than those identified for the construction phase,

	and therefore no separate assessment of cumulative impacts during the decommissioning phase is presented within this CEA.

4. CEA 'other development' screening

22. The second step in the CEA for commercial fisheries is the identification of other development that may result in cumulative effects for inclusion in the CEA (described as 'project screening'). This information is set out in **Table 4** below, together with a consideration of the relevant details of each development, including the tier (see **Table 2**), proximity to the CWP Project development area and a rationale for including or excluding from the assessment.

23. The other development below is taken from the long list of other development (presented in **Appendix 5.1**). Information gathering for the other development screened in at Stage 2 of the CEA, along with a greater understanding of the potential effects of the CWP Project, has enabled further refinement of the short list.

24. In summary, the following other development will be assessed for potential cumulative effects with the CWP Project in relation to commercial fisheries.

- Arklow Bank OWF Phase 1 (CEA-0003)
- Arklow Bank OWF Phase 2 (CEA-0004 & CEA-2736 & CEA-2752 & CEA-2753)
- Awel y Môr OWF (Gwynt y Môr Extension) (CEA-0007)
- Burbo Bank OWF & Extension (CEA-0014 & CEA-0015)
- Dublin Array OWF (CEA-0037)
- Erebus OWF (CEA-0044)
- Gwynt y Môr OWF (CEA-0048)
- Llŷr OWF 1 & 2 (CEA-0071 & CEA-0072)
- North Hoyle OWF (CEA-0093)
- North Irish Sea Array OWF (CEA-0094 & CEA-2738)
- Oriel OWF (CEA-0096)
- Ormonde OWF (CEA-0097)
- Outer Dowsing OWF (CEA-0098)
- Rhyl Flats OWF (CEA-0105)
- Sceirde (Skerd) Rocks OWF (CEA-0107)
- Walney Extension OWF (CEA-0128)
- Walney Phase 1 & 2 OWF (CEA-0129 & CEA-0130)
- West of Duddon Sands OWF (CEA-0132)
- Malahide Marina Village Ltd Dredge disposal (CEA-0138)
- BP - Sedco 700 Exploration well (CEA-0162)
- Esso - Sedco 704 Exploration well (CEA-0184)
- Marathon - Western Pacesetter IV Exploration well (CEA-0158)
- Marine aggregate deposit in Irish Sea – Sand deposits (CEA-0214)
- Eirgrid – East West Interconnector (CEA-0216)
- Morlais Tidal Demonstrator (CEA-0231)
- Holyhead Deep Tidal (CEA-0233)
- Holyhead Deep - 0.5 MW Tidal Demonstrator Site (Minesto) (CEA-0234)
- SeaGen - Strangford Lough Tidal (CEA-0242)
- Ramsey Sound Tidal (CEA-0247)
- Interconnector 2 Scotland to Ireland IC2 (CEA-0393)
- RHYL Gas field (CEA-0394)

- MILLOM Gas field (CEA-0395)
- NORTH MORECAMBE Gas field (CEA-0396)
- DALTON Gas field (CEA-0397)
- SOUTH MORECAMBE Gas field (CEA-0398)
- CALDER Gas field (CEA-0399)
- BAINS Gas field (CEA-0400)
- HAMILTON NORTH Gas field (CEA-0401)
- LENNOX Gas field (CEA-0402)
- HAMILTON EAST Gas field (CEA-0404)
- HAMILTON Gas field (CEA-0405)
- DOUGLAS WEST Gas field (CEA-0406)
- DOUGLAS WEST Oil field (CEA-0407)
- CONWY Oil Field (CEA-0408)

Table 4 Summary of other development screened into the CEA for commercial fisheries

Development	Distance from the array site (km)	Distance from the export cable corridor (km)	Tier	Included in the CEA (Yes / No)	Rationale
Arklow Bank OWF Phase 1 CEA-0003	21	31	1	No	Part of existing baseline. No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
Arklow Bank OWF Phase 2 CEA-0004	10	10	2b	Yes	Overlap with the receptors whelks and crab & lobster fisheries (pots), seed mussel fisheries (dredges) and recreational fishing (angling).
Arklow Bank OWF Phase 2 Site Investigations CEA-2736, CEA-2752 & CEA-2753	9	17	1	Yes	Overlap with the receptors whelks and crab & lobster fisheries (pots), seed mussel fisheries (dredges) and recreational fishing (angling).
Awel y Môr (Gwynt y Môr Extension) CEA-0007	121	129	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
Burbo Bank OWF CEA-0014	172	180	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.

Development	Distance from the array site (km)	Distance from the export cable corridor (km)	Tier	Included in the CEA (Yes / No)	Rationale
Burbo Bank Extension CEA-0015	162	170	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
Dublin Array OWF CEA-0037	3	2	2a	Yes	Overlap with the receptors whelks and crab & lobster fisheries (pots) and recreational fishing (angling). No potential to lead to significant cumulative effects.
Erebus OWF CEA-0044	168	179	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
Gwynt y Môr OWF CEA-0048	140	148	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
Llŷr OWF 1 CEA-0071	184	180	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
Llŷr OWF 2	185	179	1	No	No interaction with this project by receptors that may be

Development	Distance from the array site (km)	Distance from the export cable corridor (km)	Tier	Included in the CEA (Yes / No)	Rationale
CEA-0072					affected by the CWP Project at a level that could lead to significant effects.
North Hoyle CEA-0093	153	161	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
North Irish Sea Array OFW CEA-0094	41	23	2a	Yes	Overlap with the receptors crab & lobster fisheries (pots), recreational fishing (angling).
North Irish Sea Array OWF Site Investigations CEA-2738	41	23	1	Yes	Overlap with the receptors crab & lobster fisheries (pots), recreational fishing (angling).
Oriel OWF CEA-0096	84	62	2b	Yes	Overlap with the receptors whelks and crab & lobster fisheries (pots), mixed demersal (net fishing) and seed mussel fisheries (dredges).
Ormonde OWF CEA-0097	184	190	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
Outer Dowsing OWF	450	458	2a	No	No interaction with this project by receptors that may be

Development	Distance from the array site (km)	Distance from the export cable corridor (km)	Tier	Included in the CEA (Yes / No)	Rationale
CEA-0098					affected by the CWP Project at a level that could lead to significant effects.
Rhyl Flats OWF CEA-0105	138	146	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
Sceirde (Skerd) Rocks OWF CEA-0107	273	247	2a	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
Walney Extension OWF CEA-0128	163	169	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
Walney Phase 1 OWF CEA-0129	176	183	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
Walney Phase 2 OWF CEA-0130	173	180	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.

Development	Distance from the array site (km)	Distance from the export cable corridor (km)	Tier	Included in the CEA (Yes / No)	Rationale
West of Duddon Sands OWF CEA-0132	174	180	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
Malahide Marina Village Ltd. Dredge disposal CEA-0138	12	12	1	Yes	Part of existing baseline; overlap with the receptor recreational fishing. No potential to lead to significant cumulative effects.
BP - Sedco 700 Exploration well CEA-0162	182	187	3	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
Esso - Sedco 704 Exploration well CEA-0184	183	189	3	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
Marathon - Western Pacesetter IV Exploration well CEA-0158	185	190	3	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
Marine aggregate deposit in Irish Sea		61	3	Yes	Part of existing baseline; overlap with the receptors whelks and crab & lobster

Development	Distance from the array site (km)	Distance from the export cable corridor (km)	Tier	Included in the CEA (Yes / No)	Rationale
Sand deposits CEA-0214					fisheries (pots), seed mussel fisheries (dredges) and recreational fishing (angling). No potential to lead to significant cumulative effects.
Eirgrid East West Interconnector CEA-0216	53	31	1	Yes	Part of existing baseline; overlap with the receptors whelks and crab & lobster fisheries (pots), mixed demersal (net fishing), seed mussel fisheries (dredges) and recreational fishing (angling). No potential to lead to significant cumulative effects.
Morlais Tidal Demonstrator CEA-0231	64	75	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
Holyhead Deep Tidal CEA-0233	64	75	2a	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
Holyhead Deep - 0.5 MW Tidal Demonstrator Site (Minesto)	64	75	1	No	No interaction with this project by receptors that may be affected by the CWP Project

Development	Distance from the array site (km)	Distance from the export cable corridor (km)	Tier	Included in the CEA (Yes / No)	Rationale
CEA-0234					at a level that could lead to significant effects.
SeaGen Strangford Lough Tidal CEA-0242	136	121	3	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
Ramsey Sound Tidal CEA-0247	127	138	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
Interconnector 2 Scotland to Ireland IC2 CEA-0393	62	43	1	Yes	Part of existing baseline; with the receptors whelks and crab & lobster fisheries (pots), mixed demersal (net fishing) and seed mussel fisheries (dredges). No potential to lead to significant cumulative effects.
RHYL Gas field CEA-0394	168	175	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
MILLOM Gas field CEA-0395	159	165	1	No	No interaction with this project by receptors that may be affected by the CWP Project

Development	Distance from the array site (km)	Distance from the export cable corridor (km)	Tier	Included in the CEA (Yes / No)	Rationale
					at a level that could lead to significant effects.
NORTH MORECAMBE Gas field CEA-0396	163	170	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
DALTON Gas field CEA-0397	157	165	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
SOUTH MORECAMBE Gas field CEA-0398	160	167	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
CALDER Gas field CEA-0399	156	164	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
BAINS Gas field CEA-0400	171	179	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.

Development	Distance from the array site (km)	Distance from the export cable corridor (km)	Tier	Included in the CEA (Yes / No)	Rationale
HAMILTON NORTH Gas field CEA-0401	160	167	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
LENNOX Gas field CEA-0402	178	186	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
HAMILTON EAST Gas field CEA-0404	162	170	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
HAMILTON Gas field CEA-0405	158	166	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
DOUGLAS WEST Gas field CEA-0406	149	157	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.
DOUGLAS WEST Oil field CEA-0407	149	157	1	No	No interaction with this project by receptors that may be affected by the CWP Project

Development	Distance from the array site (km)	Distance from the export cable corridor (km)	Tier	Included in the CEA (Yes / No)	Rationale
					at a level that could lead to significant effects.
CONWY Oil Field CEA-0408	147	15	1	No	No interaction with this project by receptors that may be affected by the CWP Project at a level that could lead to significant effects.

5. Assessment of cumulative effects

5.1. Construction phase

5.1.1. Cumulative Impact 1: Loss or restricted access to established fishing grounds

25. This impact relates to the temporary loss or restricted access to established fishing grounds from the implementation of advisory safe passing zones during the construction of the array site, associated infrastructure, and cabling. When this impact was assessed for the CWP Project alone, it was concluded to be minor to negligible significance for all types of fisheries.

26. For Tier 1 projects, there is an overlap of the projects East West Interconnector and Interconnector 2 Scotland to Ireland IC2 with the CWP Project for all types of fisheries (pots, nets, dredges) and for recreational fishing just with the East West Interconnector. For the project Marine aggregate deposit in the Irish Sea, there is an overlap for pots, dredges and recreational fishing, whereas there is no overlap with any type of fisheries that have been identified as receptors, apart from recreational fishing with the Malahide Marina Village Ltd non-wind farm project. The impact arising from site investigation activities from other OWF projects assessed will be of a short duration and any restrictions of access will be limited to the boundaries of each project.

27. For Tier 2a and Tier 2b projects, due to the proximity of Dublin Array and Arklow Bank Phase 2 projects, these offshore wind farms have the potential to result in a cumulative impact on pot fishing / whelk and crab and lobster due to the grounds targeted by these fishers overlapping with the whole or part of these projects.

28. Of particular note, the Dublin Array project overlaps with the pot fishery ground. The Dublin Array Site is located 2.8 km from the CWP array site, whereas the export cable is located 2 km from the CWP offshore export cable corridor (OECC) and both are likely to impact the same potting fleet. There is expected to be two years during which both projects will be under construction simultaneously, with Dublin Array starting the operation phase two years earlier than the CWP Project. This short duration, and temporal difference in construction programmes, is expected to limit the scale of cumulative impact on the potting fleet. There is also an overlap with recreational fishing; however, given the wide area the activity takes place across, and that the activity will occur infrequently, it is considered that there will be a negligible proportion of the area available to this activity.

29. The Arklow Bank Phase 2 project is at a greater distance from the CWP Project than Dublin Array, with the array site being 9.8 km from the CWP array site, and the export cable 10 km from the CWP OECC. There is a very small part to the north of the Arklow Bank Phase 2 project that overlaps with the pot fishing ground. Also, there is some overlap with the dredge fishery / seed mussel grounds but to a very small extent, and an overlap with recreational fishing.

30. There is no overlap of the types of fisheries along the CWP Project that have been identified as receptors with the North Irish Sea Array (NISA) project, apart from recreational fishing, whereas a large part of the Oriel project overlaps with all the types of fisheries identified as receptors but not recreational fishing. However, the Oriel project is at a great distance from the CWP Project with the array site being located 84.3 km from the CWP array site and the export cable 62 km from the CWP OECC.

31. Although there is overlap between the projects referred above and pot fishing / whelk and crab and lobster grounds, the impacts are assessed as minor during the construction phase on account of the opportunity for the co-existence of potting fisheries within array sites and the localised advisory safe

passing distances surrounding construction activities. In addition, the areas affected within the dredge fishery / seed mussel grounds will be small cumulatively.

32. In addition, it is considered that individual Project impacts of loss of access will be appropriately mitigated at a Project level.

33. The magnitude of impact is therefore low for pot fishing / whelk and crab & lobster and very low for dredge fishery / seed mussel, nets / mixed demersal fishery and recreational fishing (angling).

34. Overall, the cumulative effect of loss or restricted access to fishing grounds for potters is minor and for the seed mussel dredging vessels, nets / mixed demersal fishery and recreational fishing (angling) it is negligible, and therefore are not significant for Tier 1, Tier 2a, and Tier 2b combined.

35. There are no Tier 3 project of relevance, or for which there is adequate information to undertake a meaningful assessment. As such there are anticipated to be no significant cumulative effects with CWP cumulatively with Tier 3 projects; the same conclusion being drawn for Tier 1, Tier 2a, Tier 2b, and Tier 3 combined.

5.1.2. Cumulative Impact 2: Displacement of fishing activity into other areas

36. As described in the impact assessment for the CWP Project alone, the effect of temporary displacement of fishing activity into other areas is directly linked to the effect of temporary loss or restricted access to established fishing grounds. When the advisory safety zones are in place, vessels will be unable to fish within these zones and will need to fish in alternative fishing grounds until the safety zones are re-opened. This residual effect was assessed as minor to negligible significance for the CWP Project alone.

37. The cumulative displacement of fishing vessels from all these projects may increase conflict between inshore vessels competing for the same grounds or between different fishing methods. In addition, vessels that were not affected by loss of access may experience an increase in competition within the grounds they normally target, thereby experiencing the effects of displacement, while not having been directly displaced themselves.

38. When assessed cumulatively with the projects set out in **Table 2**, the impact of the magnitude is considered to increase to Medium for the potting fishery. The Tier 2 (a & b) projects are considered to have a similar individual, but additive contribution to cumulative magnitude impacts related to displacement. These vessels will be displaced into areas already targeted for whelk, leading to increased competition for space and increased pressure on the whelk resources. Displacement occurring across multiple projects is difficult to attribute to a specific project. Mitigation at an individual project level is recognised as effective for mitigating the impact of loss of fishing grounds; however, these displaced vessels are likely to seek alternative grounds, leading to increased competition. It is noted that the CWP Project-alone impacts were not significant; however, notwithstanding this, an overall cumulative medium impact is assessed due to multiple Tier 2 construction impacts within the defined whelk fishing grounds which could lead to displacement into areas with existing high effort.

39. For the other fisheries, the impact of the magnitude is considered to be no more than the CWP Project-alone impacts which are Negligible for mussel seed and all other fisheries.

40. As described in the impact assessment section of the CWP Project, primary mitigation measures will apply to avoid or otherwise reduce adverse impacts on the environment. Thus, consultation will be undertaken with relevant stakeholders to ensure effective implementation and management of safety zones. In addition, timely and efficient Marine Notices (MN), and other navigational warnings will be issued to the fishing community. Both measures will minimise this impact.

41. Overall, for potters targeting whelk, the cumulative magnitude of the impact is deemed to be medium and the sensitivity of the receptor was deemed to be medium. The cumulative effect of displacement

will therefore be moderate adverse for potting fishery targeting whelk, which is significant for Tier 1, Tier 2a, and Tier 2b combined.

42. Overall, for all other fisheries, the cumulative magnitude of the impact is deemed to be low and the sensitivity of the receptor was deemed to be medium to low. The effect will therefore be no more than the CWP Project-alone residual effects which are minor adverse for all fisheries for Tier 1, Tier 2a, and Tier 2b combined.

43. The Applicant is committed to involvement with the Seafood / ORE Working Group as an approach to mitigating displacement effects developed within this Working Group.

44. There are no Tier 3 projects of relevance, or for which there is adequate information to undertake a meaningful assessment. As such there are anticipated to be no significant cumulative effects with CWP cumulatively with Tier 3 projects; the same conclusion being drawn for Tier 1, Tier 2a, Tier 2b, and Tier 3 combined for all fisheries, excluding potters targeting whelk, for which there is a significant cumulative effect for Tier 1, Tier 2a, Tier 2b, and Tier 3 combined.

5.1.3. Cumulative Impact 3: Effects on commercially exploited species

45. The cumulative effects for fish, shellfish and turtle ecology have been assessed in **Chapter 9** covering the following effects during the construction phase:

- Temporary habitat loss;
- Increased suspended sediment concentrations and associated sediment deposition;
- Injury and / or disturbance to fish and shellfish from underwater noise and vibration; and
- Accidental pollution.

46. When assessed cumulatively with the Tier 1 and Tier 2 projects set out in **Table 2**, the impact on fish and shellfish ecology during construction is assessed to be of imperceptible to slight adverse significance. Therefore, the magnitude of effect on commercial fisheries resources is assessed as low for all commercial fishery fleets.

47. Overall, the cumulative magnitude of the impact is deemed low, and the sensitivity of the receptor was deemed to be medium to low. The effect will therefore be no more than the Proposed Development alone residual effects which are minor adverse for all fisheries.

48. There are no Tier 3 projects of relevance or for which there is adequate information to undertake a meaningful assessment. As such, there are anticipated to be no significant cumulative effects with CWP cumulatively with Tier 3 projects; the same conclusion being drawn for Tier 1, Tier 2a, Tier 2b, and Tier 3 combined.

5.2. Operation and maintenance

5.2.1. Cumulative Impact 1: Loss of grounds or restricted access to established fishing grounds

49. For the CWP Project, loss or restricted access to established fishing grounds during the operation and maintenance phase relates to areas that are no longer accessible due to physical presence of infrastructure including WTGs and areas of cable protection for the OECC and inter-array cables where appropriate cable burial depths cannot be attained, together with restricted temporary advisory safety zones during maintenance and / or repair activities. This residual effect for the CWP Project alone was

assessed as minor significance for whelk fisheries and crab and lobster fisheries receptors and negligible / minor for the seed mussel fisheries, mixed demersal fisheries and recreational fishing receptors.

50. The cumulative effect during operation and maintenance of the Tier 1 and Tier 2 projects in the vicinity of the CWP Project on this impact is expected to be lower than that presented during construction due to the effects of reduced access which are lower during the operation and maintenance phase, as many fishing practices can resume access across the OECC, array site and other constructed offshore wind farms (to an extent limited by the physical presence of infrastructure).

51. The CWP Project supports the co-existence and resumption of fishing within the operational wind farm, together with commitment to follow Fisheries Liaison with Offshore Wind and Wet Renewables Group (FLOWW) guidance (2008 and 2014).

52. The sensitivity of receptors is considered to be consistent with that assessed during construction and is medium for the whelk fisheries and the crab and lobster fisheries' receptors, and low for the dredge fishery, net fishing and recreational fishing receptors. The maximum sensitivity of receptors in the area is medium and the magnitude has been assessed as low. Therefore, the significance of effect from the reduced access, or exclusion from established grounds from the operation of the CWP Project cumulatively with the other Tier 1 and Tier 2 projects combined in the vicinity is minor and negligible / minor for the respective receptors, which is not significant.

53. There are no Tier 3 projects of relevance or for which there is adequate information to undertake a meaningful assessment. As such, there are anticipated to be no significant cumulative effects with CWP cumulatively with Tier 3 projects; the same conclusion being drawn for Tier 1, Tier 2a, Tier 2b, and Tier 3 combined.

5.2.2. Cumulative Impact 2: Displacement of fishing activity into other areas

54. For the CWP Project, this impact may occur due to the installation of non-burial cable protection and advisory safety zones around any maintenance / repair vessels, which will displace fishing activity into other surrounding areas. This effect was assessed as minor to negligible / minor significance for the CWP Project alone.

55. During the operational phase, fishing is expected to resume within the array site and therefore displacement will be minimised. The significance of effects is predicted to remain minor to negligible / minor, which is not significant.

56. There are no Tier 3 projects of relevance or for which there is adequate information to undertake a meaningful assessment. As such, there are anticipated to be no significant cumulative effects with CWP cumulatively with Tier 3 projects; the same conclusion being drawn for Tier 1, Tier 2a, Tier 2b, and Tier 3 combined.

5.2.3. Cumulative Impact 3: Effects on commercially exploited species

57. The CWP Project alone was predicted to have a Low magnitude for all fisheries based on both Project Design Options due to effects on commercially exploited species.

58. The cumulative effects for fish, shellfish and turtle ecology have been assessed in **Chapter 9** covering the following effects during the construction phase:

- Temporary and long-term habitat loss;
- Increased suspended sediment concentrations and associated sediment deposition;

- Injury and / or disturbance to fish and shellfish from underwater noise and vibration;
- Accidental pollution;
- Alterations of seabed habitats arising from changes in physical processes; and
- Temporary Changes in Electromagnetic Fields (EMF) from subsea electrical cabling.

59. When assessed cumulatively with the Tier 1 and Tier 2 projects set out in **Table 2**, the impact on fish and shellfish ecology during construction is assessed to be of imperceptible to slight adverse significance. Therefore, the magnitude of effect on commercial fisheries resources is assessed as low for all commercial fishery fleets.

60. Overall, the cumulative magnitude of the impact is deemed to be low, and the sensitivity of the receptor is deemed to be medium to low. The effect will therefore be no more than the CWP Project-alone residual effects, which are minor adverse for all fisheries.

61. There are no Tier 3 projects of relevance or for which there is adequate information to undertake a meaningful assessment. As such, there are anticipated to be no significant cumulative effects with CWP cumulatively with Tier 3 projects; the same conclusion being drawn for Tier 1, Tier 2a, Tier 2b, and Tier 3 combined.

6. CEA summary

62. This CEA, which supports **Chapter 12 Commercial Fisheries** has assessed the potential cumulative effects on commercial fisheries from the construction and operation and maintenance phases of the CWP Project alongside other developments.

63. In summary, the CEA for Commercial Fisheries identifies a moderate significance for displacement during the construction phase for potters targeting whelk; specifically, the cumulative magnitude of the impact is deemed to be medium and the sensitivity of the receptor is deemed to be medium. The cumulative effect of displacement will therefore be moderate adverse for the potting fishery targeting whelk, which is significant.

64. For all other impacts and phases, the CEA for commercial fisheries does not identify any significant cumulative effects resulting from the CWP Project alongside other developments.

65. The Applicant is committed to involvement with the Seafood / ORE Working Group as an approach to mitigating displacement effects developed within this Working Group.

7. References

66. EPA (2022). Guidelines on the information to be contained in Environmental Impact Assessment Reports.

67. European Commission (1999). Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions.

68. FLOWW (2014). Best Practice Guidance for Offshore Renewables Development: Recommendation for Fisheries Liaison. Available from: https://www.thecrownestate.co.uk/media/1775/ei-km-in-pc-fishing-012014-floww-best-practice-guidance-for-offshore-renewables-developments-recommendations-for-fisheries-liaison.pdf.

69. Planning Inspectorate (PINS) (2019). Advice Note 17: Cumulative effects assessment relevant to nationally significant infrastructure projects. Available at: https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-17/ [Accessed: 09/11/23].