codling wind park

Environmental Impact Assessment Report

Volume 4

Appendix 20.1 Cumulative Effects Assessment


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Abbreviations

Abbreviation	Term in Full
ABP	An Bord Pleanála
BESS	Battery Energy Storage Systems
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
MAC	Maritime Area Planning
PINS	Planning Inspectorate
OSS	Offshore substation structure
OTI	Onshore transmission infrastructure
OWF	Offshore Wind farm
SID	Strategic Infrastructure Development
TJB	Transition joint bay
WTG	Wind turbine generator

Definitions

Glossary	Meaning
The Applicant	The developer, Codling Wind Park Limited (CWPL).
Brackish	Groundwater or surface water that is more saline than fresh water. It may result from mixing of seawater with fresh water
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.
Codling Wind Park Limited (CWPL)	A joint venture between Fred. Olsen Seawind (FOS) and Électricité de France (EDF) Renewables, established to develop the CWP Project.
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.
Maritime Area Consent (MAC)	A Maritime Area Consent (MAC) provides State authorisation for a prospective developer to undertake a maritime usage and occupy a specified part of the maritime area. A MAC is required to be in place before planning consent can be sought.
Offshore infrastructure	The offshore infrastructure, comprising of the WTGs, IACs, OSSs, Interconnector cables, offshore export cables and other associated infrastructure such as cable and scour protection.
Onshore transmission infrastructure (OTI)	The onshore transmission assets comprising the TJBs, onshore export cables and the onshore substation. The EIAR considers both permanent and temporary works associated with the OTI.
Onshore substation	Site containing electrical equipment to enable connection to the national grid.
Planning application boundary	The area subject to the application for development consent, including all permanent and temporary works for the CWP Project.
Transition joint bay (TJB)	This is required as part of the OTI and is located at the landfall. It is an underground bay housing a joint which connects the offshore and onshore export cables.

APPENDIX 20.1 CUMULATIVE EFFECTS ASSESSMENT

1 Introduction

1. Codling Wind Park Limited (hereafter 'the Applicant') is proposing to develop the Codling Wind Park (CWP) Project, a proposed offshore wind farm (OWF) 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 cumulative 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 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 Environmental Impact Assessment Reports (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 CEA for Hydrology and Hydrogeology, which considers the residual effects presented in **Chapter 20 Hydrology and Hydrogeology** 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 effects during the decommissioning phase of the CWP Project are assessed in **Chapter 20 Hydrology and Hydrogeology**. It is anticipated that the effects will be no greater than those identified for the construction phase, and therefore no separate assessment of cumulative effects 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 is 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 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 Environmental Impact Assessment Reports (EPA, 2022) and Guidelines for the Assessment of Indirect and Cumulative Effects as well as Impact Interactions (European Commission, 1999) has also been considered.

2.2 Consultation

11. Stakeholder and regulator feedback received during the consultation process that is relevant to the Hydrology and Hydrogeology assessment is provided in Chapter 20 Hydrology and Hydrogeology. No feedback specific to the CEA for Hydrology and Hydrogeology has been received.

2.3 Identification of 'other development'

12. Stage 1 of the process involved establishing the 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 **Chapter 5**, **Appendix 5.1**) 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 screed 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 developments approved and under construction, are likely to contribute to cumulative effects, whereas other development at early phases of development (i.e. pre-planning) are 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 Error! Reference source not found., 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 1 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 Electricity Support Scheme (ORESS) contract.
Tier 2b	• Offshore projects in receipt of a Maritime Area Consent (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 Hydrology and Hydrogeology, is the identification of which residual effects 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 2** below.

18. Only potential impacts assessed in **Chapter 20 Hydrology and Hydrogeology** as 'not significant' or above are included in the CEA (i.e. those assessed as 'imperceptible' are not taken forward as there is no potential for them to contribute to a cumulative effect).

19. In summary, **Table 2** shows that there are no potential effects associated with **Chapter 20 Hydrology and Hydrogeology** that have been screened into the CEA.

20. All residual impacts associated with the assessment were rated as Imperceptible.

Table 2 Cumulative impact screening

Impact	Potential for cumulative effect	Rationale
Construction		
Impact 1: Risk of leaks or spills impacting on groundwater quality.	No	The residual impact was assessed as 'Imperceptible' and therefore not taken forward, as there is no potential to contribute to a cumulative effect.
Impact 2: Mobilisation of historical contamination, resulting in impacts to groundwater quality	No	The residual impact was assessed as 'Imperceptible' and therefore not taken forward, as there is no potential to contribute to a cumulative effect
Impact 3: Discharge of water generated during the construction phase, resulting in impacts to groundwater quality	No	The residual impact was assessed as 'Imperceptible' and therefore not taken forward, as there is no potential to contribute to a cumulative effect
Operation and Maintenance		
Impact 1: Alteration of groundwater flow regime as a result of the presence of installed structures	No	The residual impact was assessed as 'Imperceptible' and therefore not taken forward, as there is no potential to contribute to a cumulative effect
Decommissioning		
Impact 1: Accidental spillage or release of hydrocarbons or chemicals resulting in impacts to groundwater quality.	No	Decommissioning impacts are expected to be of similar type and magnitude to those anticipated during the construction phase, but generally of a shorter duration and scale. The cumulative effect of potential disruption from other projects could increase the magnitude of the effect within the receiving environment at the time of decommissioning. 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
Impact 2: Mobilisation of historical contamination, resulting in impacts to groundwater quality.	No	

4 CEA summary

21. This CEA, which supports **Chapter 20 Hydrology and Hydrogeology** has considered the potential for cumulative effects on the groundwater environment from the CWP Project alongside other developments.

22. With the adoption of the mitigation measures outlined within **Chapter 20 Hydrology and Hydrogeology,** it is predicted that the significance of the residual effects for all phases will be '**Imperceptible**', which is not significant in EIA terms.

23. These impacts were not taken forward as there is no potential for them to contribute to a significant cumulative effect.

5 References

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

25. RKA Consulting Engineers (2018). Hammond Lane, Pigeon House Road Upgrade Works, Planning application including Appropriate Assessment. (Unpublished Report).

26. RPS (2018a). Dublin Port Company. Berth 47A Access Bridge & Storage Area. Environmental Report. (Unpublished Report).

27. RPS (2018b). MP2 Project, Environmental Impact Assessment Report Main Document (Part 1). IBE1429/EIAR. (Unpublished Report).

28. TPA (2022) Former Irish Glass Bottle (IGB) & Fabrizia Sites, Poolbeg West, Sean Moore Road, S outh Bank Road, Dublin 4.