



**codling**  
**wind park**



# Environmental Impact Assessment Report

## Volume 4

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### Appendix 14.1 Cumulative Effects Assessment



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## Abbreviations

Abbreviation	Term in Full
AEZs	Archaeological Exclusion Zones
CEA	Cumulative Effects Assessment
CWP	Codling Wind Park
CWPL	Codling Wind Park Limited
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EPA	Environment Protection Agency
EU	European Union
LoD	Limit of Deviation
MAC	Maritime Area Consent
MARA	Maritime Area Regulatory Authority
ORESS	Offshore Renewables Electricity Support Scheme
PAD	Protocol for Archaeological Discoveries
PINS	Planning Inspectorate
ROV	Remotely Operated Vehicle

## Definitions

Glossary	Meaning
the Applicant	The developer, Codling Wind Park Limited (CWPL).
Archaeological Exclusion Zone (AEZ)	An area around a heritage asset in which construction activities and anchoring are prohibited in order to avoid impacts to the asset.
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.
limit of deviation (LoD)	Locational flexibility of permanent and temporary infrastructure is described as a LoD from a specific point or alignment.
Maritime Area Consent (MAC)	<p>A Maritime Area Consent provides State authorisation for a prospective developer to undertake a maritime usage and occupy a specified part of the maritime area.</p> <p>A MAC is required to be in place before planning consent can be sought.</p>

## APPENDIX 14.1 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 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 Cumulative Effects Assessment (CEA) for marine archaeology and cultural heritage, which considers the residual effects presented in **Chapter 14 Marine Archaeology and Cultural Heritage** 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 14 Marine Archaeology and Cultural Heritage**. 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 of 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 that 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 Impacts as well as Impact Interactions (European Commission, 1999) have also been considered.

## 2.2 Consultation

11. No stakeholder or regulator feedback was received during the consultation process that is relevant to the CEA for marine archaeology and cultural heritage.

## 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 consider 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 1** 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	<ul style="list-style-type: none"> <li>Under construction;</li> <li>Permitted applications, but not yet implemented;</li> <li>Offshore applications submitted six months or more in advance of the CWP Project planning application, but not yet determined; and</li> <li>Onshore applications submitted six months or more in advance of the CWP Project planning application, but not yet determined.</li> </ul>
Tier 2a	<ul style="list-style-type: none"> <li>Offshore projects in receipt of a Maritime Area Consent (MAC) and an ORESS contract.</li> </ul>
Tier 2b	<ul style="list-style-type: none"> <li>Offshore projects in receipt of a Maritime Area Consent (MAC);</li> <li>Offshore Projects in the public domain where an EIA scoping report has been issued; and</li> <li>Onshore Projects in the public domain where an EIA scoping report has been issued.</li> </ul>
Tier 3	<ul style="list-style-type: none"> <li>Projects in the public domain where an EIA scoping report has not been issued; and</li> <li>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 proceed.</li> </ul>

### 3 CEA impact screening

17. The first step in the CEA for marine archaeology and cultural heritage is the identification of residual impacts assessed for the CWP Project alone that 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 14 Marine Archaeology and Cultural Heritage** as moderately significant or above are included in the CEA (i.e., those assessed as 'slight' or 'imperceptible' are not taken forward as there is no potential for them to meaningfully contribute to a cumulative effect).
19. In summary, **Table 2** shows that there is no potential for cumulative effects on marine archaeology and cultural heritage as a result of the implemented mitigation measures that will result in no significant residual effects.

Table 2 Impact screening

Impact	Potential for cumulative effect	Rationale
<b>Construction</b>		
Direct disturbance to seabed causing damage to receptors	No	<p>The application of mitigation measures will reduce the residual significance of effect to negligible. These mitigation measures include:</p> <ul style="list-style-type: none"> <li>Further investigation by means of geoarchaeological assessment of geotechnical samples, for any geotechnical survey campaigns;</li> </ul>

Impact	Potential for cumulative effect	Rationale
		<ul style="list-style-type: none"> <li>Implementation of Archaeological Exclusion Zones (AEZs) to A1 receptors;</li> <li>Implementation of Limit of Deviation (LoD) and further investigation through potential opportunities where possible, for diver and Remotely Operated Vehicle (ROV) survey, and archaeological watching briefs for A2 geophysical anomalies; and</li> <li>Implementation of a Written Scheme of Investigation (WSI) and any supporting activity-specific Method Statements, including a Protocol for Archaeological Discoveries (PAD).</li> </ul>
Indirect disturbance to receptors caused by changes to the hydrodynamic and SSC due to spoil removal and suspended sediment redistribution	No	Impacts were assessed to be minor/negligible adverse as impacts were short term and highly localised. Therefore, residual effects were predicted to be not significant in EIA terms.
<b>Operation and Maintenance</b>		
Direct disturbance to previously not impacted seabed causing damage to receptors	No	With the adoption of the additional mitigation measures, the magnitude of effect will be reduced to negligible. The significance of the residual effect is therefore predicted to be not significant in EIA terms.
Indirect disturbance to receptors caused by changes SSC and scour associated with installation structures	No	Impacts were assessed to be minor/negligible adverse as impacts were short term and highly localised. Therefore, residual effects were predicted to be not significant in EIA terms.
<b>Decommissioning</b>		
<p>Potential effect of decommissioning would be the same as Construction phase if CWP Project was to be removed.</p> <p>This would include:</p> <ul style="list-style-type: none"> <li>Direct disturbance to seabed causing damage to receptors; and</li> <li>Indirect disturbance to receptors caused by changes to SSC and scour associated with</li> </ul>	No	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 <b>Chapter 14 Marine Archaeology and Cultural Heritage</b> . 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	Potential for cumulative effect	Rationale
decommissioning activities.		

## 4 CEA 'other development' screening

20. The second step in the CEA for marine archaeology and cultural heritage is the identification of the other development that may result in cumulative effects for inclusion in the CEA (described as 'project screening'). This information is set out in **Table 3** below, together with a consideration of the relevant details of each development, including the tier (see **Table 1**), proximity to the CWP Project development area and a rationale for including or excluding from the assessment.
21. The other development included in the table below is taken from the long list of other development (presented in **Appendix 5.1 Cumulative Effects Assessment Methodology**). Information gathering for the other development screened 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.
22. In summary, the following other development will be assessed for potential cumulative effects with the CWP Project in relation to marine archaeology and cultural heritage.
  - Dublin Port Company - Maintenance Dredging in Dublin Port (CEA-0191 & CEA-0192)
  - Dublin Port Company - Dublin Port Company Site Investigations (CEA-0199)
  - Dublin Port Company - Alexandra Basin Re-development (CEA-0203)
  - Dublin Port Company - Dredge disposal (CEA-0206, CEA- 0207, CEA-0208, CEA-0209 and CEA-0210)
  - Dublin Port Company - 3FM Project (CEA-1348)
  - Dublin Port Company - MP2 Project (CEA-1323 & CEA-1328)
  - Kish and Bray Offshore Wind Limited - ORE O&M Base (CEA-2979)
  - Iarnród Éireann - Site investigation survey (CEA-2993)
  - Dublin City Council - Environmental survey and ground investigation (CEA-2996)
  - Codling Wind Park Ltd - Site investigation (CEA-2748 & CEA-2734)
  - RWE Renewables - Dublin Array OWF (CEA-0037)
  - Wicklow Sea Wind Limited – Site Investigations (CEA-2747)
  - Sunrise Wind Limited – Site Investigations (CEA-2744)
  - Banba Wind Limited – Site Investigations (CEA-2746)
  - Dun Laoghaire Rathdown County Council - Mooring Maintenance (CEA-0198)
  - Microsoft Ireland Operations – Site Investigations (CEA-2991)

Table 3 Summary of other development screened into the CEA for marine archaeology and cultural heritage

Development	Distance from the array site (km)	Distance from the export cable corridor	Tier	Included in the CEA (Yes/No)	Rationale
Dublin Port Company Maintenance Dredging in Dublin Port CEA-0191 Planning Ref: FS007132	31.6	0.35	1	No	<p><b>Direct Impacts</b></p> <p>As there will be no spatial interaction between the two developments there will be no direct disturbance or damage to marine archaeology. As a result, no cumulative effects are anticipated.</p> <p><b>Indirect Impacts</b></p> <p>Changes in local sediment patterns may lead to increased exposure or burial of marine archaeology receptors but this potential impact has been assessed to be negligible, which is not significant. Therefore, no adverse cumulative effect would occur as a result of additive effects from CWP Project and maintenance dredging in Dublin Port.</p>
Dublin Port Company Dublin Port Capital Dredging Project CEA-0192 Planning Ref: FS007164	31.5	0.5	1	No	<p><b>Direct Impacts</b></p> <p>As there will be no spatial interaction between the two developments there will be no direct disturbance or damage to marine archaeology. As a result, no cumulative effects are anticipated.</p> <p><b>Indirect Impacts</b></p> <p>Changes in local sediment patterns may lead to increased exposure or burial of marine archaeology receptors but this potential impact has been assessed to be negligible, which is not significant. Therefore, no adverse cumulative effect would occur as</p>

Development	Distance from the array site (km)	Distance from the export cable corridor	Tier	Included in the CEA (Yes/No)	Rationale
					a result of additive effects from CWP Project and capital dredging project.
Dublin Port Company Dublin Port Company Site Investigations CEA-0199 Planning Ref: FS006497	31	0.5	1	No	No spatial interaction between the two projects.
Dublin Port Company Dublin Port Company - Alexandra Basin Re-development CEA-0203 Planning Ref: FS006980	34	0	1	No	<p><b>Direct Impacts</b></p> <p>Direct cumulative effects on marine archaeology receptors have the potential to occur where CWP Project and Alexandra Basin Re-development overlap.</p> <p>As part of the foreshore licence conditions for Alexandra Basin Re-development, archaeological mitigation measures, including archaeological monitoring and implementation of a protocol, are required to ensure archaeological risk is managed.</p> <p>Similarly, as part of the CWP Project, archaeological mitigation measures will avoid impact on known and unknown sites. As a result, no cumulative effects are anticipated.</p> <p><b>Indirect Impacts</b></p> <p>Changes in local sediment patterns may lead to increased exposure or burial of marine archaeology receptors but this potential impact has been assessed to be negligible, which is not significant. Therefore, no adverse cumulative effect would occur as</p>

Development	Distance from the array site (km)	Distance from the export cable corridor	Tier	Included in the CEA (Yes/No)	Rationale
					a result of additive effects from CWP Project and Alexandra-Basin Re-development.
Dublin Port Company Dredge disposal CEA-0206, CEA-0207, CEA-0208, CEA-0209 and CEA-0210 Planning Ref: S0004-02, S0004-03, S0033-01, S0004-01 and S0024-02	30	0.5	1	No	<p><b>Direct Impacts</b></p> <p>As there will be no spatial interaction between the two developments there will be no direct disturbance or damage to marine archaeology. As a result, no cumulative effects are anticipated.</p> <p><b>Indirect Impacts</b></p> <p>Changes in local sediment patterns may lead to increased exposure or burial of marine archaeology receptors but this potential impact has been assessed to be negligible, which is not significant. Therefore, no adverse cumulative effect would occur as a result of additive effects from CWP Project and dredge disposal.</p>
Dublin Port Company 3FM Project CEA-1348	32.6	0	1	No	<p><b>Direct Impacts</b></p> <p>Direct cumulative effects on marine archaeology receptors have the potential to occur where CWP Project and 3FM Project overlap.</p> <p>As part of the CWP Project, archaeological mitigation measures will avoid impact on known and unknown sites. Similarly, 3FM Project will likely undergo EIAR process, requiring the implementation of archaeological mitigation measures to avoid impact on marine archaeology. As a result, no cumulative effects are anticipated.</p> <p><b>Indirect Impacts</b></p>

Development	Distance from the array site (km)	Distance from the export cable corridor	Tier	Included in the CEA (Yes/No)	Rationale
					Changes in local sediment patterns may lead to increased exposure or burial of marine archaeology receptors but this potential impact has been assessed to be negligible, which is not significant. Therefore, no adverse cumulative effect would occur as a result of additive effects from CWP Project and 3FM Project.
Dublin Port Company MP2 Project CEA-1323 & CEA-1328 Planning Ref: FS 006893 & ABP-304888-19	31.6	0	1	No	<p><b>Direct Impacts</b></p> <p>Direct cumulative effects on marine archaeology receptors have the potential to occur where CWP Project and MP2 Project overlap.</p> <p>As part of the foreshore licence conditions for MP2 Project, archaeological mitigation measures, including archaeological monitoring and implementation of protocol, are required to ensure archaeological risk is managed.</p> <p>Similar, as part of the CWP Project, archaeological mitigation measures will avoid impact on known and unknown sites. As a result, no cumulative effects are anticipated.</p> <p><b>Indirect Impacts</b></p> <p>Changes in local sediment patterns may lead to increased exposure or burial of marine archaeology receptors but this potential impact has been assessed to be negligible, which is not significant. Therefore, no adverse cumulative effect would occur as a result of additive effects from CWP Project and MP2 Project.</p>
Kish and Bray Offshore Wind Limited ORE O&M Base	23	1	3	No	<p><b>Direct Impacts</b></p> <p>As there will be no spatial interaction between the two developments there will be no direct disturbance or damage to</p>

Development	Distance from the array site (km)	Distance from the export cable corridor	Tier	Included in the CEA (Yes/No)	Rationale
CEA-2979 Planning Ref: MAC20230012					marine archaeology. As a result, no cumulative effects are anticipated.  Indirect Impacts Changes in local sediment patterns may lead to increased exposure or burial of marine archaeology receptors but this potential impact has been assessed to be negligible, which is not significant. Therefore, no adverse cumulative effect would occur as a result of additive effects from CWP Project and installation of harbour facilities.
Iarnród Éireann Site investigation survey CEA-2993 Planning Ref: LIC230028	2	28	1	No	Direct Impacts As there will be no spatial interaction between the two developments there will be no direct disturbance or damage to marine archaeology. As a result, no cumulative effects are anticipated.  Indirect Impacts Changes in local sediment patterns may lead to increased exposure or burial of marine archaeology receptors but this potential impact has been assessed to be negligible, which is not significant. Therefore, no adverse cumulative effect would occur as a result of additive effects from CWP Project and geotechnical and geophysical site investigations as part of Iarnród Éireann.
Dublin City Council Environmental survey	1.5	34	1	No	Direct Impacts As there will be no spatial interaction between the two developments there will be no direct disturbance or damage to



Development	Distance from the array site (km)	Distance from the export cable corridor	Tier	Included in the CEA (Yes/No)	Rationale
and ground investigation CEA-2996 Planning Ref: LIC230007					marine archaeology. As a result, no cumulative effects are anticipated.  Indirect Impacts Changes in local sediment patterns may lead to increased exposure or burial of marine archaeology receptors but this potential impact has been assessed to be negligible, which is not significant. Therefore, no adverse cumulative effect would occur as a result of additive effects from CWP Project and environmental survey and ground investigations as part of Point Bridge and Tom Clarkey Widening Project.
Codling Wind Park Ltd Site investigation CEA-2748 &CEA-2734 Planning Ref: FS007045 & FS007546	0	0	1	No	Direct Impacts Direct cumulative effects on marine archaeology receptors have the potential to occur where CWP Project and activities as part of the Foreshore Licence occur. As part of the CWP Project, archaeological mitigation measures will avoid impact on known and unknown sites. Similarly, as part of the Foreshore Investigation Licence conditions for Codling Wind Park, archaeological mitigation measures, including archaeological monitoring and implementation of Archaeological Exclusion Zones (AEZs) and a Protocol for Archaeological Discoveries (PAD), are required to ensure archaeological risk is managed. As a result, no cumulative effects are anticipated.  Indirect Impacts Changes in local sediment patterns may lead to increased exposure or burial of marine archaeology receptors but this

Development	Distance from the array site (km)	Distance from the export cable corridor	Tier	Included in the CEA (Yes/No)	Rationale
					potential impact has been assessed to be negligible, which is not significant. Therefore, no adverse cumulative effect would occur as a result of additive effects from CWP Project and foreshore licence activities for Codling Wind Park.
RWE Renewables Dublin Array OWF CEA-0037 Planning Ref: FS007188	2.781	2 (from Dublin Array array)  0 export cable crossing of the two projects.	2a	No	<p><b>Direct Impacts</b> Direct cumulative effects on marine archaeology receptors have the potential to occur where the OECC of CWP Project and the export cable of Dublin Array overlap.</p> <p>As part of CWP Project, archaeological mitigation measures will avoid impact on known and unknown sites. Similarly, as part of the foreshore licence conditions for Dublin Array (Schedule 31.24–31.26), archaeological mitigation measures, including archaeological monitoring and implementation of a protocol, are required to ensure archaeological risk is managed. As a result, no cumulative effects are anticipated.</p> <p><b>Indirect Impacts</b> Changes in local sediment patterns may lead to increased exposure or burial of marine archaeology receptors but this potential impact has been assessed to be negligible, which is not significant. Therefore, no adverse cumulative effect would occur as a result of additive effects from CWP Project and Dublin Array.</p>
Wicklow Sea Wind Limited – Site Investigations	2	11.9	1	No	<p><b>Direct Impacts</b> As there will be no spatial interaction between the two developments there will be no direct disturbance or damage to</p>

Development	Distance from the array site (km)	Distance from the export cable corridor	Tier	Included in the CEA (Yes/No)	Rationale
CEA-2747 Planning Ref: FS007163					marine archaeology. As a result, no cumulative effects are anticipated.  Indirect Impacts Changes in local sediment patterns may lead to increased exposure or burial of marine archaeology receptors but this potential impact has been assessed to be negligible, which is not significant. Therefore, no adverse cumulative effect would occur as a result of additive effects from CWP Project and geotechnical and geophysical site investigations as part of Wicklow Project.
Sunrise Wind Limited – Site Investigations CEA-2744 Planning Ref: FS007151	0	2	3	No	Direct Impacts Direct cumulative effects on marine archaeology receptors have the potential to occur where CWP Project and activities as part of the Foreshore Licence occur. As part of the CWP Project, archaeological mitigation measures will avoid impact on known and unknown sites. Similarly, as part of the Foreshore Investigation Licence conditions for Sunrise Wind Ltd., archaeological mitigation measures including archaeological assessment of sampling locations to ensure archaeological risk is managed. As a result, no cumulative effects are anticipated.  Indirect Impacts Changes in local sediment patterns may lead to increased exposure or burial of marine archaeology receptors but this potential impact has been assessed to be negligible, which is not significant. Therefore, no adverse cumulative effect would occur as

Development	Distance from the array site (km)	Distance from the export cable corridor	Tier	Included in the CEA (Yes/No)	Rationale
					a result of additive effects from CWP Project and foreshore licence activities for Sunrise Wind Ltd.
Banba Wind Limited – Site Investigations CEA-2746 Planning Ref: FS007283	0	0	3	No	<p><b>Direct Impacts</b></p> <p>Direct cumulative effects on marine archaeology receptors have the potential to occur where CWP Project and activities as part of the Foreshore Licence occur.</p> <p>As part of the CWP Project, archaeological mitigation measures will avoid impact on known and unknown sites. Similarly, as part of the Foreshore Investigation Licence conditions for Banba Wind Ltd., archaeological mitigation measures including archaeological assessment of sampling locations to ensure archaeological risk is managed.</p> <p>As a result, no cumulative effects are anticipated.</p> <p><b>Indirect Impacts</b></p> <p>Changes in local sediment patterns may lead to increased exposure or burial of marine archaeology receptors but this potential impact has been assessed to be negligible, which is not significant. Therefore, no adverse cumulative effect would occur as a result of additive effects from CWP Project and foreshore licence activities for Banba Wind Ltd.</p>
Dun Laoghaire Rathdown County Council - Mooring Maintenance CEA-0198	25.5	0.35	1	No	No spatial interaction between the two projects.

Development	Distance from the array site (km)	Distance from the export cable corridor	Tier	Included in the CEA (Yes/No)	Rationale
Planning Ref: FS006713					
Microsoft Ireland Operations – Site Investigations CEA-2991 Planning Ref: LIC230016	30	0	1	No	<p><b>Direct Impacts</b> Direct cumulative effects on marine archaeology receptors have the potential to occur where CWP Project and activities as part of the Licence activities occur.</p> <p>As part of the CWP Project, archaeological mitigation measures will avoid impact on known and unknown sites. Similarly, as part of the Investigation Licence conditions for Microsoft Ireland Operations Ltd. project, geophysical and geotechnical survey work is to be undertaken under licence from the National Monuments Service and data captured to be interpreted by an experienced archaeologist in order to recommend further mitigation measures.</p> <p>As a result, no cumulative effects are anticipated.</p> <p><b>Indirect Impacts</b> Changes in local sediment patterns may lead to increased exposure or burial of marine archaeology receptors but this potential impact has been assessed to be negligible, which is not significant. Therefore, no adverse cumulative effect would occur as a result of additive effects from CWP Project and licence activities for Microsoft Ireland Operations Ltd. project.</p>

## 5 CEA summary

23. This CEA, which supports **Chapter 14: Marine Archaeology and Cultural Heritage**, has assessed the potential cumulative effects on marine cultural heritage from the construction and operation and maintenance phases of the CWP Project alongside other development.
24. In summary, the CEA for marine archaeology and cultural heritage does not identify any potential for significant cumulative effects resulting from the CWP Project alongside other development.