



APPENDIX 4-1

**OFFSHORE CUMULATIVE
EFFECTS ASSESSMENT
METHODOLOGY AND
LONG LIST**

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1.

INTRODUCTION

The EIA Directive includes a requirement to consider ‘a cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources.’

The methodology for the cumulative effects assessment has been informed by the relevant Guidance documents and by the nature and scale of the Project. The Guidance documents which have informed the methodology of the cumulative effects assessment are as follows:

- The EPA Guidelines on the Information to be contained in Environmental Impact Assessment Reports (EPA, 2022);
- Guidance on Environmental Impact Statement (EIS) and Natura Impact Statement (NIS) Preparation for Offshore Renewable Energy Projects (Department of Communications, Climate Action and Environment, 2017);
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of Housing, Planning and Local Government, 2018);
- Environmental Impact Assessment of Projects – Guidance on the preparation of the Environmental Impact Assessment Report (European Commission, 2022);
- Guidelines on the Assessment of Indirect and Cumulative Impacts as well as Impact interactions (European Commission, 1999);
- Planning Inspectorate (PINS) (2019) Advice Note 17: cumulative effects assessment relevant to nationally significant infrastructure projects.

The potential cumulative effect of the Project combined with the potential effect of other projects or plans has been carried out with the purpose of identifying what influence the Project will have on the surrounding environment when considered collectively with draft and existing plans, approved and existing projects, projects pending a decision from the planning authority, and land-uses in the vicinity of the Project site location.

The Cumulative Effects Assessment (CEA) of projects has three principle aims:

- To establish the range and nature of proposed and existing plans and projects within the cumulative impact study area of the Project.
- To summarise the relevant plans and projects which have a potential to create cumulative impacts.
- To identify the plans and projects that hold the potential for cumulative interaction within the context of the Project and discard projects that will neither directly or indirectly contribute to cumulative impacts.

Assessment material for the CEA was compiled on the relevant plans and projects within the vicinity of or relevant to the Project. The material was gathered through a search of relevant online Planning Registers, reviews of relevant EIAR (or historical EIS) documents, planning application details and planning drawings, and served to identify past and future projects, their activities and their environmental impacts.

For the purposes of the cumulative assessment, the process was divided into onshore and offshore, the offshore CEA methodology is set out below, the onshore Cumulative Impact Assessment (CIA) is provided as Appendix 4-1 of the EIAR.

2.

METHODOLOGY

The methodology for the CEA was based on the relevant Irish, EU and UK guidance set out above. Specifically, the CEA methodology follows the guidance provided in Advice Note 17 by the Planning Inspectorate (PINS) in the UK. PINS Advice Note 17 sets out an approach to the compilation and screening of other projects in the CEA process.

The Advice Note suggests a 4-stage process to CEA:

- Stage 1: Establishing the long list
- Stage 2: Establishing the short list
- Stage 3: Information gathering
- Stage 4: Assessment

The following sections provide a description of each stage of the process and the methods employed.

2.1

Step 1: Establishing the Offshore Long List

To establish a long list of existing, permitted and proposed projects to be included in the CEA, cumulative study areas were established for each EIAR topic area in the EIAR. Following consultation with the EIAR team on each individual topic, the maximum geographical extent of each cumulative study area and justification for this extent was established and is presented in Table 2-1 below. Each cumulative study area was established with regard for the potential environmental receptors, potential impact pathways, topic specific guidance, best practice and professional judgement.

Table 2-1: Topic Specific Cumulative Study Area and Justification

Individual Topic	Maximum Extent of Cumulative Study Area	Justification
	The Climate assessment has been considered on a national basis and not confined to a specific study area.	The Climate assessment has considered the cumulative effects of the Project with other developments on a national basis under the relevant national Sectoral Emissions Ceilings.
	The Major Accidents and Natural Disasters assessment has been considered on a regional basis, due to the spatial extent of the Project, and not confined to a specific study area.	<p>The MADS Cumulative Study Buffer is based on the MADS Zone Of Influence (ZOI), defined based on the spatial location of the Offshore and Onshore sites and their proximity to the nearest county and their associated Major Emergency Plan. The closest county to the Offshore site is Galway and therefore all elements of the Galway County Council Major Emergency Plan are fully considered. The Onshore Site is fully contained within Co. Clare and therefore all those elements within the Clare County Council Major Emergency Plan are fully considered. An overlapping and extended ZOI is defined for SEVESO sites. All SEVESO sites in counties Clare, Galway, Kerry and Limerick are considered as a precautionary measure.</p> <p>The ZOI is extended in this case due to the proximity of several SEVESO sites in counties</p>

		Limerick and Kerry to the Shannon estuary and its proposed utilisation during the construction and decommissioning of the Project.
Ch 7 Marine Physical and Coastal Processes	30 km buffer around Array Area and Export Cable Corridor plus the Shannon estuary	<p>The MPCP study area is defined as a 15 km buffer around the Offshore Site, in consideration of the estimated tidal excursion distance and flow speeds around the Offshore Site (including the pathways for tidal advection, net drift and dispersion of sediment plumes from activities taking place within the Offshore Site).</p> <p>The cumulative study area for MPCP is defined as twice the MPCP study area (a buffer of 15 km around the Offshore Site), the cumulative study area considers a buffer of 30 km. It is considered that this cumulative study area provides a local (i.e. within the Offshore Site) and regional context for MPCP receptors.</p> <p>It is considered that this cumulative study area will encompass all cumulative projects and developments which have the potential for connectivity with the Offshore Site and associated construction, operation and maintenance and decommissioning activities occurring within the offshore site and adjacent waters.</p> <p>The Shannon Estuary has also been considered as part of the cumulative effects study area due to the potential for Project vessels moving between the estuary and the Offshore Site during the construction, operation and maintenance and decommissioning phases.</p>
Ch 8 Water and Sediment Quality	30 km buffer around Array Area and Export Cable Corridor plus the Shannon Estuary	<p>The WSQ study area is defined as a 15 km buffer around the Offshore Site, aligned with the MPCP study area.</p> <p>The cumulative study area for WSQ is defined as twice the buffer size for the WSQ study area. Where the study area accounted for a buffer of 15 km around the Offshore Site, the cumulative study area considers a buffer of 30 km. It is considered that this cumulative study area provides a local (i.e. within the Offshore Site) and regional context for WSQ. This 30 km buffer has informed the screening exercise for the WSQ CEA. The 30 km cumulative buffer has also followed the Marine and Physical Processes CEA due to the interlinked nature between marine process and WSQ</p> <p>The Shannon Estuary has also been considered as part of the cumulative effects study area due to the potential for Project vessels moving between the estuary and the Offshore Site during the</p>

		construction, operation and maintenance and decommissioning phases.
Ch 9 Benthic Ecology	15 km buffer around Array Area and Export Cable Corridor plus the Shannon estuary	<p>The cumulative study area for benthic ecology is defined as a 15 km buffer around the OAA and OECC plus the Shannon Estuary. The 15 km buffer has been defined in consideration of the estimated tidal excursion distance and flow speeds around the Offshore Site (as detailed above in line with Chapter 7: Marine Physical and Coastal Processes) which could have potential effects on benthic habitats and species e.g. smothering of benthic habitats with suspended sediment.</p> <p>It is considered that this cumulative study area will encompass all cumulative projects and developments which have the potential for connectivity with the Offshore Site and associated construction, operation and maintenance and decommissioning activities occurring within the offshore site and adjacent waters.</p> <p>The Shannon Estuary has also been considered as part of the cumulative effects study area due to the potential for Project vessels moving between the estuary and the Offshore Site during the construction, operation and maintenance and decommissioning phases.</p>
Ch 10 Fish and Shellfish Ecology	International Council for the Exploration of the Sea (ICES) Rectangles 35D9, 35E0, 34E0 and 34D9 plus the Shannon estuary	<p>The cumulative study area for fish and shellfish ecology is defined as the International Council for the Exploration of the Sea (ICES) Rectangles within which the OAA and OEC are located (35D9, 35E0 and 34E0), with Rectangle 34D9 also included due to its proximity to the Offshore Site.</p> <p>It is considered that this cumulative study area is sufficient to provide a regional context for the wide degree of spatial and temporary variation in abundance and distribution of key fish and shellfish species (i.e., migratory fish species and the availability and distribution of spawning and nursery grounds). It is considered that this study area will encompass all cumulative projects and developments which have the potential for connectivity with the Offshore Site and associated construction, operation and maintenance and decommissioning activities occurring within the offshore site and adjacent waters.</p> <p>The Shannon Estuary has also been considered as part of the cumulative effects study area due to the potential for Project vessels moving between the estuary and the Offshore Site during the construction, operation and maintenance and decommissioning phases.</p>

<p>Ch 11 Marine Ornithology</p>	<p>509.4 km (extent of the foraging range for gannet (one of the key species), distance round the coast, rather than straight-line distance, as seabirds typically don't go over land.</p>	<p>For Offshore Ornithology it was concluded that as there are no operational, consented or submitted OWF projects within 509.4 km of the Project. It is considered that there will be no in combination effects on offshore ornithology arising in the breeding season (see Chapter 11 Marine Ornithology Section 12.3 Cumulative Effects of the EIAR). The 509.4 km distance is the breeding season mean maximum (+1S.D.) foraging range for gannet, and this is considered appropriate to use here as gannet is considered a key species in terms of potential collision and displacement impacts. Although other species such as Manx shearwater and fulmar have larger foraging ranges during the breeding season, these species are not considered to be at risk of potential displacement or collision effects, based on reviews of evidence from operational OWFs (e.g. Dierschke et al., 2016).</p> <p>In the non-breeding season, a similar cumulative study area was considered, with all operational, consented or submitted OWF projects within Irish waters and west coast of the UK included in the CEA.</p>
<p>Ch 12 Marine Mammals and Other Megafauna</p>	<p>50 km buffer around Array Area and Export Cable Corridor</p> <p>plus the Shannon estuary</p>	<p>The cumulative study area for marine mammals and megafauna is defined as the marine mammals and megafauna study area of the Sceirde Rocks OAA and OECC plus a 50 km buffer zone. The 50 km buffer has been defined in consideration of the spatial distribution of marine mammal and other megafauna populations, both within the Offshore Site and in wider regional waters around the west of Ireland. Marine mammals and other megafauna are mobile species, and it is considered that this 50 km buffer will capture projects which have the potential to result in direct effects on marine megafauna species (e.g. injury and/or disturbance to marine mammals due to the influence of any anthropogenic underwater sound) and which have the potential to result in indirect impacts to marine mammals and other megafauna (i.e., through impacts to prey species). It is considered that this study area will encompass all cumulative projects and developments which have the potential for connectivity with the Offshore Site and associated construction, operation and maintenance and decommissioning activities occurring within the offshore site and adjacent waters.</p> <p>The Shannon Estuary has also been considered as part of the cumulative effects study area due to the potential for Project vessels moving between the estuary and the Offshore Site during the</p>

		construction, operation and maintenance and decommissioning phases.
Ch 13 Commercial Fisheries	ICES Rectangles 35D9, 35E0, 34E0 and 34D9 plus the Shannon estuary	<p>The cumulative study area for fish and shellfish ecology is defined as the ICES Rectangles within which the Offshore Array Area and Offshore Export Cable are located, with Rectangle 34D9 also included due to its proximity to the Offshore Site. It is considered that this cumulative study area provides a local (i.e., within the Offshore Site) and regional context for certain fisheries and fishing activities.</p> <p>The Shannon Estuary has been considered as part of the cumulative effects study area due to the potential for Project vessels moving between the estuary and the Offshore Site during the construction, operation and maintenance and decommissioning phases.</p>
Ch 14 Shipping and Navigation	50 NM buffer around Array Area and Export Cable Corridor. plus the Shannon estuary	<p>This study area is considered to be best practice and allows consideration of vessels as they approach and depart the Offshore Site to identify where there may be multiple deviations associated with cumulative developments. It is considered that any deviations associated with cumulative developments outside of the 50 NM will be mitigated by the length of the transit/journey.</p> <p>The Shannon Estuary has been considered as part of the cumulative effects study area due to the potential for Project vessels moving between the estuary and the Offshore Site during the construction, operation and maintenance and decommissioning phases.</p>
Ch 15 Civil and Military Aviation	Case-by-case consideration	<p>In terms of assessing aviation and radar cumulative effects, the impact on any aviation receptor is generally treated as a standalone, Project specific impact. Whilst other WTG developments may be located in close proximity, the impact on each receptor is considered on a case-by-case basis.</p> <p>The predicted effects from the Project on Civil and Military Aviation receptors are considered to be localised to within the footprint of the Offshore Site.</p> <p>The approach to the aviation and radar assessment examines the cumulative effects of the Project alongside the following projects:</p> <ul style="list-style-type: none"> ➤ Other projects with consent but not yet constructed/construction not completed; ➤ Other projects in the planning process; ➤ Other projects currently operational that were not operational when baseline data were

		<p>collected, and/or those that are operational but have an ongoing impact; and</p> <p>Offshore projects, which satisfy the definition of ‘relevant maritime usage’ under the Maritime Area Planning Act (2021) (i.e. wind farm projects designated as ‘Relevant Projects’ or ‘Phase one Projects’).</p>
Ch 16 SLVIA	60km from Offshore Site proposed turbines for visual and landscape effects.	The SLVIA Study was chosen as 60km to produce a cumulative ZTV to illustrate any intervisibility between the OWF and other turbines.
Ch 17 Marine Archaeology and Cultural Heritage	50 km buffer around the Offshore Site	<p>For the purposes of the marine archaeological assessment a Marine Archaeology Study Area has been used which comprises a 1 km buffer around the OAA and OECC, up to mean high water springs (MHWS, and has been applied to ensure an overlap with the onshore archaeological works and is considered to be industry best practice. For Historic Environment, cumulative impacts may occur with other planned projects and developments within the Marine Archaeology Study Area.</p> <p>A 50 km cumulative buffer has been applied for the cumulative effects assessment to ensure direct and indirect cumulative effects can be appropriately identified and assessed. The 50km cumulative buffer follows best practice as seen by other recent offshore developments.</p>
Ch 18 Other Users of the Marine Environment	<p>20 km buffer around Array Area and Export Cable Corridor</p> <p>plus the Shannon estuary</p>	<p>The 20 km buffer has been defined in consideration of the potential for effects on other sea users, e.g. aquaculture sites, other renewable energy developments and recreational organisations.</p> <p>It is considered that this study area will encompass all cumulative projects and developments which have the potential for connectivity with the Offshore Site and associated construction, operation and maintenance and decommissioning activities.</p> <p>The Shannon Estuary has been considered as part of the cumulative effects study area due to the potential for Project vessels moving between the estuary and the Offshore Site during the construction, operation and maintenance and decommissioning phases.</p>
Ch 19 Offshore Air Quality and Airborne Noise	<p>15 km buffer around Array Area and Export Cable Corridor</p> <p>plus the Shannon estuary</p>	The 15 km buffer has been defined in consideration of the maximum plausible range of effect on air quality and airborne noise from the Offshore Site. It is considered that this study area will encompass all cumulative projects and developments which have the potential for connectivity with the Offshore Site

		<p>and associated construction, operation and maintenance and decommissioning activities.</p> <p>The Shannon Estuary has been considered as part of the cumulative effects study area due to the potential for Project vessels moving between the estuary and the Offshore Site during the construction, operation and maintenance and decommissioning phases.</p>
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Once the cumulative study areas were identified and justified, a search was conducted across various platforms and databases in order to compile a list of projects and ongoing activities in the area. The sources used to establish the CEA long list are provided in Table 2-2 below. The data was first compiled spatially through a Geographic Information System (GIS). The spatialised data was then exported into a list for further scrutiny and review. This formed the basis of the CEA long list provided in Section 2 below.

Table 2-2: Data sources used for offshore long list compilation

Title	Description	Author
Marine Institute Open Access Repository and Ireland's Marine Atlas	https://www.marine.ie/site-area/data-services/interactive-maps/irelands-marine-atlas	Marine Institute
European Marine Observation and Data Network (EMODnet)	https://www.emodnet-humanactivities.eu/view-data.php	EMODnet
Kingfisher Information Services (KISORCA)	https://kis-orca.org/map/	KISORCA
National Marine Planning Framework SEA Environmental Report	https://www.gov.ie/en/publication/a4a9a-national-marine-planning-framework/	DHLGH
Department for Environment, Climate and Communications (DECC) – Current Applications for Statutory Consents	https://www.gov.ie/en/organisation/department-of-the-environment-climate-and-communications/	DECC
Department of Housing, Local Government and Heritage Foreshore Unit Applications	https://www.gov.ie/en/collection/f2196-foreshore-applications-and-determinations/	DHLGH
Department of Agriculture, Food and the Marine (DAFM) Aquaculture Licence Applications	https://www.gov.ie/en/collection/d8ea9-aquacultureforeshore-licence-applications/	DAFM
Environmental Reports for the Galway Bay Marine and Renewable Energy Test Site	https://tethys.pnnl.gov/project-sites/galway-bay-test-site	Tethys
Maritime Area Regulatory Authority	https://www.maritimeregulator.ie/licensing-of-maritime-usages/	MARA

Ireland's Marine Renewable Energy Atlas	https://atlas.marine.ie/OceanEnergy.html#?c=53.2981:-8.7808:8	The Marine Institute
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A total of 13 searches (referred to as cumulative search buffers) were run using GIS software to capture the relevant plans and projects within each EIAR chapter's cumulative study area. The maximum extent of each cumulative search buffer was specific to one or multiple offshore EIAR chapters, as shown in Table 2-3 below. All chapters did not use the maximum extent of the relevant buffer. In instances where a specific chapter's cumulative study area was smaller than the cumulative search buffer's maximum extent, the cumulative search buffer's associated list of plans and projects was filtered by distance to infrastructure, creating a chapter specific long list unique to each cumulative study area set out in Table 2-1 above.

Some EIAR chapters cumulative study areas included plans and projects onshore and offshore, these are referred to as Project buffers and relate to the CEA undertaken for the EIAR's wider project chapters (Ch. 30, 31). The maximum extent cumulative search buffers relevant to the Offshore CEA are outlined in Table 2-3 below and are mapped in Figure 2-1.

Table 2-3 Offshore Buffers used for Cumulative Assessment

Buffer	Elements Assessed	Buffer Name and Maximum Extent	Individual Chapters within Maximum Extent of Buffer
Buffer 1	Offshore	50km from OAA & OEC	Ch 7, 8, 12, 17
Buffer 2	Project	Shannon Estuary	Ch 7, 8, 9, 10, 12, 13, 14, 18, 19
Buffer 4	Offshore	60km SLVIA from WTG	Ch 16
Buffer 5	Offshore	509.4km from OAA for Birds	Ch 11
Buffer 10	Project	20km from OAA & OEC	Ch 9, 18, 19,
Buffer 11	Offshore	50NM from OAA & OEC	Ch 14
Buffer 12	Offshore	ICES Rectangles	Ch 10, 13

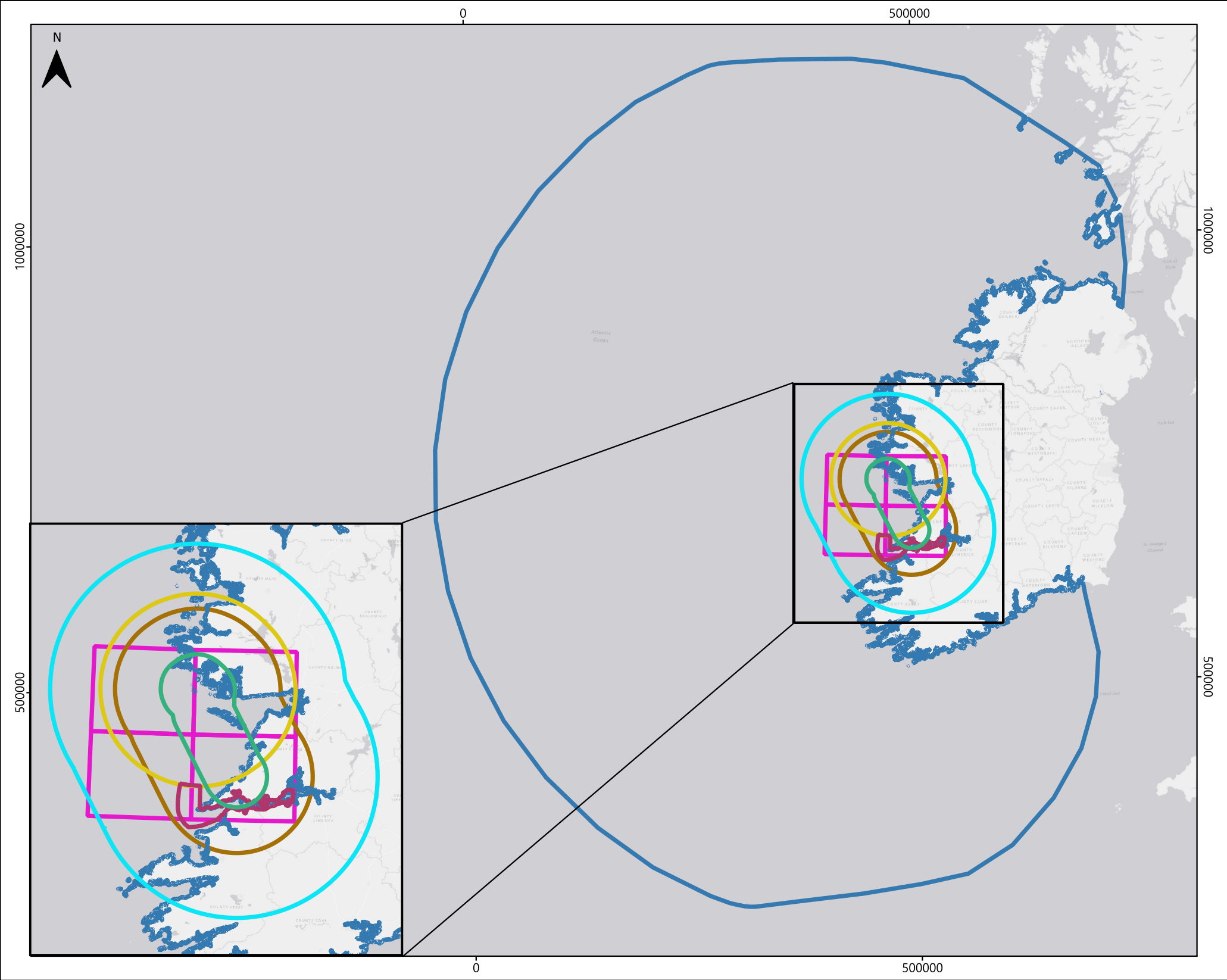
After compiling a list of proposed and existing plans and projects, additional desk research was conducted to gather more detailed information. This involved a review of publicly available information on each plan or project. The type of information sought for each project is outlined below. The search was not limited to the list below and any publicly available information on the plan or project deemed relevant for the CEA was considered. This included documents from planning/ licence applications.

- Project/ Plan timeframe
- Physical footprint
- Distance to the Proposed Sceirde Rocks infrastructure
- Associated activities
- Intensity of associated activities

The Project is the only Relevant Project / Phase 1 offshore renewable development in the region with a MAC, the only offshore wind development in the region which was successful in Offshore Renewable Electricity Support Scheme (ORESS) 1 and the only offshore renewable energy development in the region, which is permitted to make a planning application.

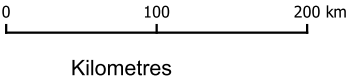
There were a number of planned offshore renewable developments (at various levels of inception) proposed to be developed off the western coast of Ireland before the State's policy changed to a planned regime.

Current policy is such that none of these projects are permitted to seek a MAC or make a planning application. However, whether any of them may progress in the future is entirely dependent on future policy decisions. Several foreshore licence applications have been made, primarily in relation to environmental surveys in support of these offshore renewable energy developments. In this context, there is insufficient information to consider these renewables developments, or associated foreshore licences for survey works any further. To allow sufficient time for the CEA to be undertaken for each topic, the compilation of the cumulative plans and projects list was carried out in May 2024. Therefore, plans and projects that were applied for after May of 2024 are not considered in the CEA.



LEGEND

- Buffer 1 - 50km OAA & OEC
- Buffer 2 Shannon Estuary
- Buffer 4 - 60km SLVIA from WTG
- Buffer 5- 509.4km from OAA for Birds
- Buffer 10 - 20km from OAA and OEC
- Buffer 11 - 50NM from OAA and OEC
- Buffer 12 - ICES Statistical Rectangles



Data Source
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PROJECT TITLE
Sceilde Rocks

Onshore
Offshore Cumulative Buffers

VER	REMARKS	DATE	Drawn	Approved
V1		2024-12-05	CF	OM

DRAWING NO
Figure 1

SCALE 1:5,040,000	PAPER SIZE A4	DATUM WGS 84	PROJECTION UTM 29N
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2.2 Step 2: Long List Screening

2.2.1 Offshore Long List Screening

With the CEA long list compiled, the next step undertaken was to screen the long list based on the information gathered in Step 1. The screening criteria outlined in Table 2-4 below allowed for the offshore long list to be shortened to focus the CEA on the plans and projects that have the potential to give rise to a cumulative effect. The screening of the long list is topic specific and was carried out by the relevant expert in each case (author of the EIAR chapter). The plans and projects screened into the offshore CEA are assessed in further detail in the cumulative section of each relevant chapter of the EIAR.

The screening of the offshore long list was undertaken using the screening matrix below. Further detail on the screening criteria is outlined in the following sections along with an example to further clarify the process.

Table 2-4: CEA Long List Screening Process

1	Potential impact – Screened in
2	Part of the topic baseline and potential ongoing impact – Screened in
3	Part of the topic baseline and no potential ongoing impact – Screened out
4	No temporal overlap – Screened out
5	No effect-receptor pathway - Screened out
6	No data/ insufficient information - Screened out

2.2.2 Potential Impact

All plans and projects deemed to have a potential cumulative impact. There are various factors that may give rise to a cumulative impact, such as a temporal or spatial overlap, distance to the Project, and/or an identified effect – receptor pathway. The plans and projects identified as having a potential cumulative effect are marked with a ‘1’ in the long list in Section 3 below.

2.2.3 Part of Topic Baseline and potential ongoing impact

Some plans and projects give rise to ongoing impacts that extend beyond the construction phase. The plans and projects screened in under this category are existing projects and therefore are considered part of the baseline. However, activities associated with these plans or projects may give rise to a cumulative impact when assessed alongside the Project. The plans and projects identified as having a potential ongoing cumulative effect are marked with a ‘2’ in the long list in Section 3 below.

2.2.4 Part of the topic baseline and no potential ongoing impact

Existing plans or projects where the construction phase is complete and where no further ongoing impact is identified are screened out as they do not have potential to give rise to any cumulative impact. The plans and projects identified as being part of the baseline and have no potential ongoing cumulative effect are marked with a ‘3’ in the long list in Section 3 below.

2.2.5

Temporal Overlap

For cumulative impacts from multiple projects to arise, their impacts must overlap in time. To understand the temporal relationship between plans and projects in the long list and the Project, a temporal column is included in the long list. This indicates whether or not the listed plan or project overlaps with the Project. The overlap may be expected to occur at any stage of the Project (construction, operation and/ or decommissioning). If no temporal overlap exists, the plan or project was screened out of the assessment. In this case, it is considered that these Projects are constructed, and their impacts have already been considered in the site surveys and desk research that were conducted as part of the baseline assessment.

While the best available information was used, it is acknowledged that the construction timelines for plans and projects are subject to varying degrees of change, depending on the current position of the plan or project in the development process. The plans and projects identified as having no temporal overlap are marked with a '4' in the long list in Section 3 below.

2.2.6

Effect – Receptor Pathway

Cumulative impacts can only exist where there is a pathway, either directly or indirectly, between the source of the effect and the receptor. If no such pathway exists, there is no potential for a cumulative impact to arise and therefore, the plan or project can be screened out of the assessment. The plans and projects identified as having no effect-receptor pathway are marked with a '5' in the long list in Section 3 below.

2.2.7

No Data / Insufficient Data

In order to undertake a cumulative assessment, a certain level of information is required regarding the plan or project to determine the potential impacts that may arise. The level of information required is dependent on the requirements of each specific topic. The decision to screen out plans or projects due to a lack of information is therefore carried out on a case-by-case basis by the relevant expert, based on the degree of information available, and other aspects of the specific plan or project. In general, projects that are screened out due to no data/ insufficient information are at the early/feasibility stage of development and therefore there is limited information available regarding their location, scale and development timeline. The plans and projects identified as not having sufficient available data to enable a cumulative assessment are marked with a '6' in the long list in Section 3 below.

2.3

Step 3: Assessment

2.3.1

Offshore Assessment Methodology

The list of relevant developments for inclusion within the cumulative effects assessment has been informed by a screening exercise, undertaken to identify relevant developments for consideration within the cumulative effects assessments for each EIA topic. The cumulative study area for each chapter is defined and detailed in Table 2-1 above. It is considered that the cumulative study area for each discipline provides local and regional context for the respective receptors within each chapter or which have the potential for connectivity with the Offshore Site and associated construction, operation and maintenance and decommissioning activities occurring within. Each cumulative study area has informed the screening exercise for the respective chapter of this EIAR.

Relevant projects which have been considered within the cumulative assessment are summarised in each chapter, and description of the potential for cumulative effects to occur are also detailed.

3. **OFFSHORE CUMULATIVE LONG LIST**

Cumulative Effect Matrices

Offshore Renewable Energy (ORE) Developments

1	Potential impact -Screened in
2	Part of the topic baseline and potential ongoing impact -Screened in
3	Part of the topic baseline and no potential ongoing impact -Screened out
4	No temporal overlap -Screened out
5	No effect-receptor pathway -Screened out
6	No data/insufficient information -Screened out

[illegible]

Cumulative Effect Matrices

Offshore Renewable Energy (ORE) Developments

1	Potential impact -Screened in
2	Part of the topic baseline and potential ongoing impact -Screened in
3	Part of the topic baseline and no potential ongoing impact -Screened out
4	No temporal overlap -Screened out
5	No effect-receptor pathway -Screened out
6	No data/insufficient information -Screened out

[illegible]

Cumulative Effect Matrices

Offshore Renewable Energy (ORE) Developments

1	Potential impact -Screened in
2	Part of the topic baseline and potential ongoing impact -Screened in
3	Part of the topic baseline and no potential ongoing impact -Screened out
4	No temporal overlap -Screened out
5	No effect-receptor pathway -Screened out
6	No data/insufficient information -Screened out

[illegible]

Cumulative Effect Matrices

Offshore Renewable Energy (ORE) Developments

1	Potential impact -Screened in
2	Part of the topic baseline and potential ongoing impact -Screened in
3	Part of the topic baseline and no potential ongoing impact -Screened out
4	No temporal overlap -Screened out
5	No effect-receptor pathway -Screened out
6	No data/insufficient information -Screened out

Development	Status	Region	Temporal Overlap	Distance to the Offshore Array Area (OAA) (km)	Distance to the Offshore Export Cable (OEC) (km)	Distance by Coast to OAA (km)	Within ICES Rectan gle	Within Shannon Estuary	Population and Human Health	Climate	Marine Physical Processes	Water and Sediment Quality	Benthic Ecology	Marine Ornithology	Marine Mammals and Other Megafauna	Commercial Fisheries	Shipping and Navigation	Civil and Military Aviation	SL VIA	Marine Archaeology and Cultural Heritage	Other Users of the Marine Environment	Offshore Air Quality and Airborne Noise	Major Accidents and Natural Disasters
Islay Demo Zone	Consented	UK	Yes	346.87	448.89	349.44	No	No	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Whitecross	Consent application submitted	UK	Yes	400.25	600.97	351.11	No	No	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
	Machair Wind	UK	Yes	370.08	464.20	372.92	No	No	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Wave Hub	Shelved	UK	No	N/A	N/A	N/A	No	No	5	5	6	6	6	6	6	6	6	6	6	6	6	6	
TwinHub	Consented	UK	Yes	437.15	589.41	382.228	No	No	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Oran na Mara	Planning	UK	Yes	380.10	510.65	382.572	No	No	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
R4 Project 4 (Mona)	Consent application submitted	UK	Yes	400.26	723.93	391.635	No	No	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Awel y Môr	Consented	UK	Yes	406.83	753.49	393.856	No	No	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Kinsale	Phase 2 / Future Framework	Ireland	N/A	227.24	168.95	394.75	No	No	5	5	6	6	6	6	6	6	6	6	6	6	6	6	
R4 Project 6 (Morgan)	Consent application submitted	UK	Yes	399.51	716.84	395.55	No	No	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Emerald - Commercial	Phase 2 / Future Framework	Ireland	N/A	244.12	185.97	400.61	No	No	5	5	6	6	6	6	6	6	6	6	6	6	6	6	
Emerald - Demonstration	Phase 2 / Future Framework	Ireland	N/A	244.12	185.97	400.61	No	No	5	5	6	6	6	6	6	6	6	6	6	6	6	6	
Emerald Project - Simply Blue Energy	Phase 2 / Future Framework	Ireland	N/A	214.62	156.90	401.58	No	No	5	5	6	6	6	6	6	6	6	6	6	6	6	6	
Rhyl Flats	Operational	UK	Yes	417.18	766.21	402.71	No	No	5	5	3	3	3	5	3	3	3	3	3	3	3	5	
Haven Offshore Array	Phase 2 / Future Framework	Ireland	N/A	313.27	316.50	404.95	No	No	5	5	6	6	6	6	6	6	6	6	6	6	6	6	
Gwynt y Mor	Operational	UK	Yes	421.31	760.73	408.05	No	No	5	5	3	3	3	5	3	3	3	3	3	3	3	5	
Malin Wind	Phase 2 / Future Framework	Ireland	N/A	320.59	323.83	411.12	No	No	5	5	6	6	6	6	6	6	6	6	6	6	6	6	
R4 Project 5 (Morecambe)	Consent application submitted	UK	Yes	421.87	740.90	414.00	No	No	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Walney Extension	Operational	UK	Yes	417.81	708.50	414.69	No	No	5	5	3	3	3	5	3	3	3	3	3	3	3	5	

Cumulative Effect Matrices

Offshore Renewable Energy (ORE) Developments

1	Potential impact -Screened in
2	Part of the topic baseline and potential ongoing impact -Screened in
3	Part of the topic baseline and no potential ongoing impact -Screened out
4	No temporal overlap -Screened out
5	No effect-receptor pathway -Screened out
6	No data/insufficient information -Screened out

[illegible]

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[illegible]

Cumulative Effect Matrices

Offshore Renewable Energy (ORE) Developments

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[illegible]

Cumulative Effect Matrices

Offshore Renewable Energy (ORE) Developments

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[illegible]

Non-ORE Foreshore Applications

1	Potential impact -Screened in
2	Part of the topic baseline and potential ongoing impact -Screened in
3	Part of the topic baseline and no potential ongoing impact -Screened out
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[illegible]

Non-ORE Foreshore Applications

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Site ID	Licence Holder	Status	Product	Temporal Overlap	Distance to the Offshore Array Area (OAA) (km)	Distance to the Offshore Export Cable (OEC) (km)	Within ICES Rectangle	Within Shannon Estuary	Population and Human Health	Climate	Marine Physical Processes	Water and Sediment Quality	Benthic Ecology	Marine Ornithology	Marine Mammals and Other Megafauna	Commercial Fisheries	Shipping and Navigation	Civil and Military Aviation	SLVIA	Marine Archaeology and Cultural Heritage	Other Users of the Marine Environment	Offshore Air Quality and Airborne Noise	Major Accidents and Natural Disasters
FS007041	Fenit Harbour Maintenance Dredging and Disposal at Sea	Determination - operational	Dredging	Yes	101.85	53.95	No	No	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
FS007117	Tralee Golf Club Coastal Protection	Applied	Coastal Protection	Yes	103.03	53.55	Yes	Yes	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
FS006474	Tralee Bay	Determination - operational	Dredging	Yes	106.70	57.19	No	No	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
FS007427	Gkinetic Energy, Hydrokinetic Demonstrator Project, Thomond Weir, Limerick	Applied	Tidal	Yes	107.12	63.96	No	No	5	5	6	6	6	5	6	6	6	6	6	6	6	5	
FS007130	ESB Networks - Achill Island Submarine Cables Installation	Determination (issued 12/04/2024)	Subsea Cable	Yes	FS1 - 74.58 FS2 - 72.01 FS3 - 64.39	FS1 - 79.58 FS2 - 76.95 FS3 - 69.41	No	No	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
FS005751	Galway Bay Marine Test Site Cable Project	Determination - Cable operational	Cable	Yes	39.624	39.879	Yes	No	6	5	6	6	6	5	6	6	6	6	6	6	6	6	

Cumulative Effect Matrices

Aquaculture

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[illegible]

Cumulative Effect Matrices

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Cumulative Effect Matrices

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Cumulative Effect Matrices

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[illegible]

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5	No effect-receptor pathway -Screened out
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[illegible]

Cumulative Effect Matrices

Dumping at Sea

1	Potential impact -Screened in
2	Part of the topic baseline and potential ongoing impact -Screened in
3	Part of the topic baseline and no potential ongoing impact -Screened out
4	No temporal overlap -Screened out
5	No effect-receptor pathway -Screened out
6	No data/insufficient information -Screened out

[illegible]

Urban Wastewater Treatment

1	Potential impact -Screened in
2	Part of the topic baseline and potential ongoing impact -Screened in
3	Part of the topic baseline and no potential ongoing impact -Screened out
4	No temporal overlap -Screened out
5	No effect-receptor pathway -Screened out
6	No data/insufficient information -Screened out

[illegible]

Cumulative Effect Matrices

Urban Wastewater Treatment

1

Potential impact -Screened in

--	--

Part of the topic baseline and potential ongoing impact -Screened in

--	--

Part of the topic baseline and no potential ongoing impact -Screened **out**

3

No temporal overlap -Screened **out**

3
4

No effect-receptor pathway -Screened **out**

1
5

No data/insufficient information -Screened **out**

[illegible]

Cumulative Effect Matrices

Urban Wastewater Treatment

1	Potential impact -Screened in
2	Part of the topic baseline and potential ongoing impact -Screened in
3	Part of the topic baseline and no potential ongoing impact -Screened out
4	No temporal overlap -Screened out
5	No effect-receptor pathway -Screened out
6	No data/insufficient information -Screened out

[illegible]

[illegible]

[illegible]

Cumulative Effect Matrices

Urban Wastewater Treatment

1	Potential impact -Screened in
2	Part of the topic baseline and potential ongoing impact -Screened in
3	Part of the topic baseline and no potential ongoing impact -Screened out
4	No temporal overlap -Screened out
5	No effect-receptor pathway -Screened out
6	No data/insufficient information -Screened out

[illegible]

Cumulative Effect Matrices

Urban Wastewater Treatment

1	Potential impact -Screened in
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3	Part of the topic baseline and no potential ongoing impact -Screened out
4	No temporal overlap -Screened out
5	No effect-receptor pathway -Screened out
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[illegible]

Cumulative Effect Matrices

Urban Wastewater Treatment

1	Potential impact -Screened in
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3	Part of the topic baseline and no potential ongoing impact -Screened out
4	No temporal overlap -Screened out
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[illegible]

Cumulative Effect Matrices

Urban Wastewater Treatment

1	Potential impact -Screened in
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[illegible]

Cumulative Effect Matrices

Urban Wastewater Treatment

1	Potential impact -Screened in
2	Part of the topic baseline and potential ongoing impact -Screened in
3	Part of the topic baseline and no potential ongoing impact -Screened out
4	No temporal overlap -Screened out
5	No effect-receptor pathway -Screened out
6	No data/insufficient information -Screened out

[illegible]

Cumulative Effect Matrices

Oil and Gas

1	Potential impact -Screened in
2	Part of the topic baseline and potential ongoing impact -Screened in
3	Part of the topic baseline and no potential ongoing impact -Screened out
4	No temporal overlap -Screened out
5	No effect-receptor pathway - Screened out
6	No data/insufficient information -Screened out

[illegible]

Cumulative Effect Matrices

Galway Bay Wave Test Sites

1	Potential impact -Screened in
2	Part of the topic baseline and potential ongoing impact -Screened in
3	Part of the topic baseline and no potential ongoing impact -Screened out
4	No temporal overlap -Screened out
5	No effect-receptor pathway -Screened out
6	No data/insufficient information -Screened out

[illegible]

Cumulative Effect Matrices

Licensed Waste Facility

1	Potential impact -Screened in
2	Part of the topic baseline and potential ongoing impact -Screened in
3	Part of the topic baseline and no potential ongoing impact -Screened out
4	No temporal overlap -Screened out
5	No effect-receptor pathway -Screened out
6	No data/insufficient information -Screened out

[illegible]

[illegible]

[illegible]

1	Potential impact -Screened in
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5	No effect-receptor pathway -Screened out
6	No data/insufficient information -Screened out

[illegible]

Cumulative Effect Matrices

Future Leasing Round or Plan

1

Potential impact -Screened in

Part of the topic baseline and potential ongoing impact -Screened in

Part of the topic baseline and no potential ongoing impact -Screened **out**

3

No temporal overlap -Screened **out**

4

No effect-receptor pathway -Screened out

5

No data/insufficient information -Screened **out**

[illegible]