codling wind park

Environmental Impact Assessment Report

Volume 4

Appendix 8.4 Marine Protected Areas Assessment Report

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Abbreviations

Abbreviation	Term in Full
AA	Appropriate Assessment
CIEEM	Chartered Institute of Ecology and Environmental Management
CPUE	Catch Per Unit Effort
CWP	Codling Wind Park
DATRAS	Database of Trawl Surveys
DHLGH	Department of Housing, Local Government and Heritage
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
MarESA	Marine Evidence based Sensitivity Assessment
MarLIN	Marine Life Information Network
MPA	Marine Protected Area
NMPF	National Marine Planning Framework
OECC	Offshore export cable corridor
ORE	Offshore Renewable Energy
SEA	Strategic Environmental Assessment
VERS	Valued Ecological Receptor
ZoI	Zone of Influence

APPENDIX 8.4 MARINE PROTECTED AREAS ASSESSMENT REPORT

1 Introduction

1. In December 2022, the Marine Protected Area (MPA) Advisory Group conducted ecological sensitivity analysis of the Irish Sea (MPA Advisory Group, 2023). Although this sensitivity analysis will not lead directly to the identification and designation of MPAs, its recommendations are intended to feed into that process. It is important to note that this report has been produced on a precautionary basis to address the relevant policies of the National Marine Planning Framework (NMPF), and to consider the features identified within the ecological sensitivity analysis of the Irish Sea report (MPA Advisory Group, 2023). The MPA Advisory Group report (*ibid*) did not seek to identify MPAs, and instead identified forty distinct features in order to achieve the principle 4 objectives of the analysis. The objectives of the analysis were as follows:

   Objective 1.

   To undertake a comprehensive scientific screening exercise for possible future MPAs in a defined marine region off the east and southeast of Ireland. This will be done through a process and using selection criteria and features that are as consistent as possible with the provisions set out in the forthcoming MPA legislation.

   Objective 2.

   To facilitate open and constructive engagement with key Government and non-Government stakeholders that have extensive maritime interests in the Irish Sea (e.g., culture/heritage, defence, fisheries, ORE, transport, recreation), to integrate their participation and consider their interests as part of the analysis and mapping processes within the project.

   Objective 3.

   To ensure that any rationales and recommendations for the potential designation of MPAs in the study area, as determined by the work of the reconstituted MPA Advisory Group, will be up to date and in time for active consideration by DHLGH when the MPA legislation comes into force.

   Objective 4.

   To facilitate potential future identification by the Government of viable "go-to-areas" for offshore energy projects in the Irish Sea, in view of any biodiversity/environmental/cultural/other sectoral constraints that are concluded via the project.

2. The report did not seek to identify or recommend MPAs and nor did it seek to imply the prevention of activity either within the identified area of search or future MPAs that may be identified. As such this report takes a highly precautionary approach in identifying the potential for the relevant features to be impacted and the potential therefore for future conservation objectives to be impeded.

3. This document should be read in conjunction with the **Planning Report** which details how the Project has complied with relevant plans and policies, including the NMPF which states under *Protected Marine Sites Policy 4*:

   'Until the ecological coherence of the network of protected marine sites is examined and understood, proposals should identify, by review of best available evidence (including consultation with the competent authority with responsibility for designating such areas as

required), the features, under consideration at the time the application is made, that may be required to develop and further establish the network. Based upon identified features that may be required to develop and further establish the network, proposals should demonstrate that they will, in order of preference, and in accordance with legal requirements:

a) avoid,

b) minimise, or

c) mitigate

significant impacts on features that may be required to develop and further establish the network, or

d) if it is not possible to mitigate significant impacts, proposals should set out the reasons for proceeding.'

4. This report considers the features of the aforementioned MPA Advisory Group report (2023) and details where in the CWP Project application suitable level of assessment can be provided to allow a decision to be reached that will, in order of preference, and in accordance with legal requirements, demonstrate that the CWP Project has avoided, minimised, or mitigated significant impacts on features that may be required to develop and further establish the network. As the project has avoided all significant effects, and introduced relevant mitigation measures to ensure the conclusions of no significant effects are beyond any reasonable scientific doubt this report does not provide consideration of the reasons for why the proposal should proceed.

2 Assessment Methodology

2.1 Assessment overlap with the CWP Project

5. Overlap is considered against the study area(s) and zone(s) of influence relevant to each technical assessment.

6. The study areas and zones of influence (ZoI) referred to within this report are detailed within the relevant chapters for fish ecology (**Volume 3, Chapter 9 Fish, Shellfish and Turtle Ecology**) and benthic and subtidal ecology (**Volume 3, Chapter 8 Subtidal and Intertidal Ecology**).

7. The ZoI for both receptor groups is based on a combination of the modelling presented in **Volume 4, Appendix 6.3 Modelling Report** and **Volume 4, Appendix 9.4 Underwater Noise Assessment**.

8. The modelling identified the greatest direction and distance of dispersion of disturbed material was 9 - 10 km to the east, although one scenario showed dispersion to the south east reaching 6 - 7 km and to the west reaching 3 - 4 km. The model underwent calibration and validation and was deemed fit-for-purpose; however it is a predictive model, and with a view to applying the precautionary principle, the study area for benthic ecology has been defined as a 20 km radius.

9. Underwater noise modelling for fish identified a behavioural effect at up to 34 km, which is taken to be the maximum ZoI for the project with regards features of interest for the MPA Advisory Group Report (2023).

10. This study area has been applied to the MPA sensitivity report to identify the potential interaction with the features identified within the MPA Advisory Group report (2023). Reference has been made to the

MPA Advisory Group report (2023) appendix which presents the spatial distribution of the habitats and species. See **Annex A** of this document.

2.2 Assessment of a features potential to be impacted by the CWP Project

11. This assessment is undertaken in advance of the creation of a defined network of MPA's and associated conservation objectives. As such, consideration of significant impacts in line with the EIA assessments undertaken for relevant features is considered appropriate to determine whether the CWP Project has avoided, minimised, or mitigated significant impacts on features that may be required to develop and further establish the network. In the absence of conservation of objectives, it is concluded that where there is no significant effect predicted on the receptor (species or habitat) it is similarly reasonable to conclude that there will be no impediment to the designation of an MPA for the relevant feature, or to the future conservation objective being achieved, as a result of the construction, operation and maintenance and decommissioning of the CWP Project.

12. Accordingly, the assessment presented below refers to and draws conclusions from the EIA technical assessments to reach a finding as to whether no significant adverse impacts can be concluded with respect to the feature described.

3 Consultation

13. It is relevant to note that the NMPF was subject to extensive consultation and environmental assessment, including Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA).

14. Consultation relevant to the features of the MPA sensitivity report is reported upon within the following chapters:

- **Chapter 9 Fish, Shellfish and Turtle Ecology**
- **Chapter 8 Subtidal and Intertidal Ecology**

4 Appraisal of potential effects on MPAs

15. Table 1 lists all features identified within the MPA Advisory Group report (2023), considers the potential overlap of the feature with the CWP Project (and its associated zones of influence), and presents an assessment as to the likelihood of significant adverse impacts arising on features that may be required to develop and further establish an MPA network. Specific reference is made to the supporting appendix to the MPA Advisory Group report, which notes the spatial distribution of the features which in turn has been used to identify the areas of search. It is noted that the MPA Advisory Group report, and more specifically the appendices that support it, rely entirely on publicly available datasets such as the Marine Institute Water Framework Directive data, Database of Trawl Surveys (DATRAS) data, and ICEAS reporting such as Catch Per Unit Effort (CPUE) data and the Marine Strategy Framework Directive data portals (Se Appendix 8 of the MPA Advisory Group report for full data sources). The CWP Project application has similarly relied on these datasets to characterise the receiving environment but complimented the broadscale regional datasets with site specific surveys. When considering the likely distribution of features the CWP Project assessment can therefore be taken as a robust and fit for purpose characterisation and subsequent assessment.

16. Specific reference has also been made to Table 3.4.1 of the MPA Advisory Group report (2023) when identifying the likely sensitivity of the identified features to the impact pathways associated with the CWP Project, alongside the broader scientific literature and the Marine Evidence based Sensitivity

Assessment (MarESA) / Marine Life Information Network (MarLIN) database for benthic habitats; this latter source being the recommended guidance for marine assessment (Chartered Institute of Ecology and Environmental Management (CIEEM), 2019). The sensitivity assessments provided by MarLIN / MarESA are incorporated into the EIAR for the CWP Project as an important component of the sensitivity alongside any more contemporary data and grey literature that may be available, such as industry specific monitoring, and also magnitude. Whilst the consideration of magnitude similarly links to MarLIN / MarESA with regards the sensitivity benchmarks it also considers the extent of the impact in the context of the available habitat. This therefore provides a complete assessment of the works associated with the CWP Project, using best available science and data to inform sensitivity and magnitude through reference to the relevant benchmarks for the proposed project. In this context it is not always obvious in the MPA Advisory Group report which benchmark is used for sensitivity, and over which timescale. For example the MPA Advisory Group report refers to ross worm (*Sabellaria spinulosa*) reefs, circalittoral coarse sediments, and circalittoral mixed sediments being highly sensitive to offshore windfarms, and loss of substrate as a result of ORE cables for example, however this does not reflect the temporary nature of cable installation, seabed recovery following installation, and the ability for aspects such as cable protection to become covered in mobile sediment following installation which in turn means the sediment retains its characteristics and ross worm (*Sabellaria spinulosa*) reefs to establish.

17. It is also important to note that the potential interaction between the CWP Project and the MPA areas of search is minimal, with direct overlap only present in an area of lowest selection frequency. As such the likelihood of any direct impacts that may impact the features of interest for MPAs is considered low. The likely interactions with identified features that may be required to develop and further establish an MPA network are therefore all temporary, secondary effects, which are not considered within the MPA Advisory Group report or the associated Appendices.

18. The MPA Advisory Group conducted ecological sensitivity analysis of the Celtic Sea was published at the end of June (MPA Advisory Group report, 2024), however the area it covers only extends as far north as the St George's Channel, which is beyond the ZoI of the CWP Project, and therefore there is no potential for the CWP Project to impact the zones within the report of any future MPA designated therein.

Table 1 Ecological Sensitivity Analysis of Western Irish Sea to Inform Future MPAs, selected features.

Selected feature		Overlap with CWP Project	Potential to be impacted by CWP Project
Common name	Latin name		
American plaice (long rough dab)	*Hippoglossoides platessoides*	Potential secondary overlap identified through reference to the spatial analysis presented in the MPA Advisory Group report and appendices.	Though American plaice is not considered individually, mobile fish species have been assessed, as per the Valued Ecological Receptor (VERS) approach as outlined in the CIEEM (2022) guidance and set out in **Chapter 9 Fish, Shellfish and Turtle Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance, and decommissioning of the CWP Project. Impact conclusions are considered to apply to all mobile fish species that may interact with the Project, with dab used as a recognised proxy for sensitivity to key pathways such as underwater noise. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Angel shark	*Squatina squatina*	Potential secondary overlap identified through reference to the spatial analysis presented in the MPA Advisory Group report and appendices.	Mobile fish and turtle species have been assessed in **Chapter 9 Fish, Shellfish and Turtle Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Basking shark	*Cetorhinus maximus*	Potential overlap identified through reference to the spatial analysis presented in the MPA Advisory Group report and appendices which notes a single record in the ZoI. However, no	Mobile fish and turtle species have been assessed in **Chapter 9 Fish, Shellfish and Turtle Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project.

Selected feature		Overlap with CWP Project	Potential to be impacted by CWP Project
Common name	Latin name		
		basking sharks were recorded during the CWP Project's site-specific surveys.	This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Blonde ray adults / juveniles	*Raja brachyura*	Potential secondary overlap identified through reference to the spatial analysis presented in the MPA Advisory Group report and appendices.	Mobile fish and turtle species have been assessed, as per the (VERS) approach as outlined in the CIEEM (2022) guidance and set out in **Chapter 9 Fish, Shellfish and Turtle Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Bull huss	*Scyliorhinus stellaris*	Potential secondary overlap identified through reference to the spatial analysis presented in the MPA Advisory Group report and appendices.	Though bull huss is not considered individually, mobile fish species have been assessed, as per the (VERS) approach as outlined in the CIEEM (2022) guidance and set out in **Chapter 9 Fish, Shellfish and Turtle Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance, and decommissioning of the CWP Project. Impact conclusions are considered to apply to all mobile fish species that may interact with the Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Cuckoo ray adults / juveniles	*Leucoraja naevus*	Potential secondary overlap identified through reference to the spatial analysis presented in the MPA Advisory Group report and appendices.	Mobile fish and turtle species have been assessed in **Chapter 9 Fish, Shellfish and Turtle Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project.

Selected feature		Overlap with CWP Project	Potential to be impacted by CWP Project
Common name	Latin name		
			This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Dog whelk	*Nucella lapillus*	Habitats that may support dog whelk (i.e. intertidal rocky substrate) assessed where relevant. However, no intertidal rocky reef predicted to be present within the offshore development area.	Littoral and shallow sublittoral habitats that have the potential to be affected have been assessed in **Chapter 8 Subtidal and Intertidal Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Edible sea urchin	*Echinus esculentus*	Habitats that may support this feature (i.e. subtidal rocky substrates) assessed where relevant. However, no rock substrate predicted to be present within the offshore development area.	Habitats that have the potential to be affected have been assessed in **Chapter 8 Subtidal and Intertidal Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
European eel	*Anguilla anguilla*	Potential secondary overlap identified through reference to the spatial analysis presented in the MPA Advisory Group report and appendices.	Mobile fish and turtle species have been assessed in **Chapter 9 Fish, Shellfish and Turtle Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.

Selected feature		Overlap with CWP Project	Potential to be impacted by CWP Project
Common name	Latin name		
Icelandic cyprine (ocean quahog)	*Arctica islandica*	Habitats that may support this feature (i.e. sediments) assessed. However, no rock substrate predicted to be present within the offshore development area.	Habitats that have the potential to be affected have been assessed in **Chapter 8 Subtidal and Intertidal Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Pink sea fan	*Eunicella verrucosa*	Species not recorded in the baseline site specific surveys and no evidence of presence in the study area.	No potential to be affected.
Short snouted seahorse	*Hippocampus hippocampus*	No evidence of species presence and lack of suitable habitat (e.g. subtidal seagrass beds) within CWP area.	Not applicable, however mobile fish and turtle species have been assessed in **Chapter 9 Fish, Shellfish and Turtle Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Spotted ray adults / juveniles	*Raja montagui*	Potential secondary overlap identified through reference to the spatial analysis presented in the MPA Advisory Group report and appendices.	Mobile fish and turtle species have been assessed in **Chapter 9 Fish, Shellfish and Turtle Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.

Selected feature		Overlap with CWP Project	Potential to be impacted by CWP Project
Common name	Latin name		
Starry smooth-hound	*Mustelus asterias*	Potential secondary overlap identified through reference to the spatial analysis presented in the MPA Advisory Group report and appendices.	Though starry smooth-hound is not considered individually, mobile fish species have been assessed, as per the (VERS) approach as outlined in the CIEEM (2022) guidance and set out in **Chapter 9 Fish, Shellfish and Turtle Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. . Impact conclusions are considered to apply to all mobile fish species that may interact with the Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Thornback ray adults / juveniles	*Raja clavata*	Potential secondary overlap identified through reference to the spatial analysis presented in the MPA Advisory Group report and appendices.	Mobile fish and turtle species have been assessed in **Chapter 9 Fish, Shellfish and Turtle Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Tope	*Galeorhinus galeus*	Potential secondary overlap identified through reference to the spatial analysis presented in the MPA Advisory Group report and appendices.	Mobile fish and turtle species have been assessed in **Chapter 9 Fish, Shellfish and Turtle Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.

Selected feature		Overlap with CWP Project	Potential to be impacted by CWP Project
Common name	Latin name		
Turbot	*Scophthalmus maximus*	Potential secondary overlap identified through reference to the spatial analysis presented in the MPA Advisory Group report and appendices.	Though turbot is not considered individually, mobile fish species have been assessed, as per the (VERS) approach as outlined in the CIEEM (2022) guidance and set out in **Chapter 9 Fish, Shellfish and Turtle Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. Impact conclusions are considered to apply to all mobile fish species that may interact with the Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Witch flounder	*Glyptocephalus cynoglossus*	Potential secondary overlap identified through reference to the spatial analysis presented in the MPA Advisory Group report and appendices.	Mobile fish and turtle species have been assessed in **Chapter 9 Fish, Shellfish and Turtle Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Ross worm reefs	*Sabellaria spinulosa*	No *Sabellaria spinulosa reefs* were found in the baseline assessment and *Sabellaria spinulosa* is not a characterising species of any of the biotopes identified in the baseline site specific surveys. Potentially present within the study area.	*Sabellaria spinulosa* has been assessed in **Chapter 8 Subtidal and Intertidal Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.

Selected feature		Overlap with CWP Project	Potential to be impacted by CWP Project
Common name	Latin name		
Sea-pen and burrowing megafauna communities	*Pennatula phosphorea, Funiculina quadrangulata, Virgularia mirabilis*	Not present in the subtidal and intertidal ecology study area.	No potential to be affected
Barrel jelly	*Rhizostoma octopus*	Barrel jellyfish only occur in very specific shallow bays, with only one known location identified in all Irish waters. As such the waters off Rosslare and north along the beaches of Curracloe provide a very unique habitat for this species. No overlap is therefore considered the CWP Project.	No potential to be affected
Herring spawning grounds / areas / beds	*Clupea harengus*	Potential secondary overlap identified through reference to the spatial analysis presented in the MPA Advisory Group report and appendices.	Mobile fish and turtle species have been assessed in **Chapter 9 Fish, Shellfish and Turtle Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Forage / juvenile fish • European sprat; • Juvenile cod; • Juvenile haddock; • Sandeel greater; • Sandeel lesser;	• *Sprattus sprattus;* • *Gadus morhua;* • *Melanogrammus aeglefinus;* • *Hyperoplus lanceolatus;*	Potential secondary overlap identified through reference to the spatial analysis presented in the MPA Advisory Group report and appendices.	

Selected feature		Overlap with CWP Project	Potential to be impacted by CWP Project
Common name	Latin name		
• Juvenile whiting; • Juvenile herring; • Norway pout	• *Ammodytes tobianus;* • *Merlangius merlangus;* • *Clupea harengus;* • *Trisopterus esmarkii*		
Sub-tidal mussel beds	*Mytilus edulis*	No *Mytilus edulis* beds were present in the baseline site specific surveys, and *Mytilus* beds are not reported as present in current publicly available data for the ZoI.	No potential to be affected
Circalittoral coarse sediments	*n/a*	Overlap with both the CWP array site and offshore export cable corridor (OECC) area.	Circalittoral coarse sediments have been assessed in **Chapter 8 Subtidal and Intertidal Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Circalittoral mixed sediments	*n/a*	Overlap with both the CWP array site and OECC area.	Circalittoral mixed sediments have been assessed in **Chapter 8 Subtidal and Intertidal Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.

Selected feature		Overlap with CWP Project	Potential to be impacted by CWP Project
Common name	Latin name		
Circalittoral mud	*n/a*	Overlap with both the CWP array site and OECC area.	Circalittoral mud has been assessed in **Chapter 8 Subtidal and Intertidal Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Circalittoral sand	*n/a*	Overlap with both the CWP array site and OECC area.	Circalittoral sand has been assessed in **Chapter 8 Subtidal and Intertidal Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Infralittoral coarse sediments	*n/a*	Overlap with both the CWP array site and OECC area.	Infralittoral coarse sediments have been assessed in **Chapter 8 Subtidal and Intertidal Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Infralittoral mixed sediments	*n/a*	Overlap with both the CWP array site and OECC area.	Infralittoral mixed sediments have been assessed in **Chapter 8 Subtidal and Intertidal Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project.

Selected feature		Overlap with CWP Project	Potential to be impacted by CWP Project
Common name	Latin name		
			This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Infralittoral mud	*n/a*	Overlap with both the CWP array site and OECC area.	Infralittoral mud has been assessed in **Chapter 8 Subtidal and Intertidal Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Infralittoral sand	*n/a*	Overlap with both the CWP array site and OECC area.	Infralittoral sand has been assessed in **Chapter 8 Subtidal and Intertidal Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Offshore circalittoral coarse sediments	*n/a*	Overlap with both the CWP array site and OECC area.	Offshore circalittoral coarse sediments have been assessed in **Chapter 8 Subtidal and Intertidal Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Offshore circalittoral mixed sediments	*n/a*	Overlap with both the CWP array site and OECC area.	Offshore circalittoral mixed sediments have been assessed in **Chapter 8 Subtidal and Intertidal Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the

Selected feature		Overlap with CWP Project	Potential to be impacted by CWP Project
Common name	Latin name		
			construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Offshore circalittoral mud	*n/a*	Overlap with both the CWP array site and OECC area.	Offshore circalittoral mud has been assessed in **Chapter 8 Subtidal and Intertidal Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Offshore circalittoral sand	*n/a*	Overlap with both the CWP array site and OECC area.	Offshore circalittoral sand has been assessed in **Chapter 8 Subtidal and Intertidal Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Offshore circalittoral rock and biogenic reef	*n/a*	Overlap with both the CWP array site and OECC area.	Offshore circalittoral rock and biogenic reef have been assessed in **Chapter 8 Subtidal and Intertidal Ecology** for potential impacts from the CWP Project and all impacts were assessed as not significant during the construction, operation and maintenance and decommissioning, of the CWP Project. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.

Selected feature		Overlap with CWP Project	Potential to be impacted by CWP Project
Common name	Latin name		
Carbon sequestration	*n/a*	No spatial information on this feature provided.	It is considered that the installation and operation of the CWP Project will not hinder the marine environment in the provision of ecosystem services such as carbon sequestration. Indeed, it is considered by **Chapter 28 Climate- Carbon Balance Assessment** that the CWP Project will have a positive, long-term and significant impact in terms of lifetime carbon balance. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network.
Western Irish Sea Front	*n/a*	No overlap of the Western Irish Sea Front with the offshore development area.	No potential to be affected.
European flat oyster	*Ostrea edulis*	European flat oyster beds not present in the CWP Project study area.	No potential to be affected.

5 Conclusion

19. This report has considered the potential interaction with identified features that may be required to develop and further establish an MPA network, through reference to the EIAR and the reports produced by the MPA Advisory Group (2023).

20. Benthic habitats, communities and invertebrates identified within the report, alongside mobile fish and turtle species have been assessed through reference to the data and conclusions presented within the relevant chapters of the CWP Project EIAR. Potential impacts from the CWP Project were assessed as not significant, for all relevant pathways, during the construction, operation and decommissioning, of the CWP Project.

21. This conclusion therefore means beyond reasonable scientific doubt that there will be no adverse effect on identified features that may be required to develop and further establish an MPA network, and the presence of the CWP Project will not result in an impediment to the designation of an MPA with the areas of search identified by the MPA Advisory Group.

6 References

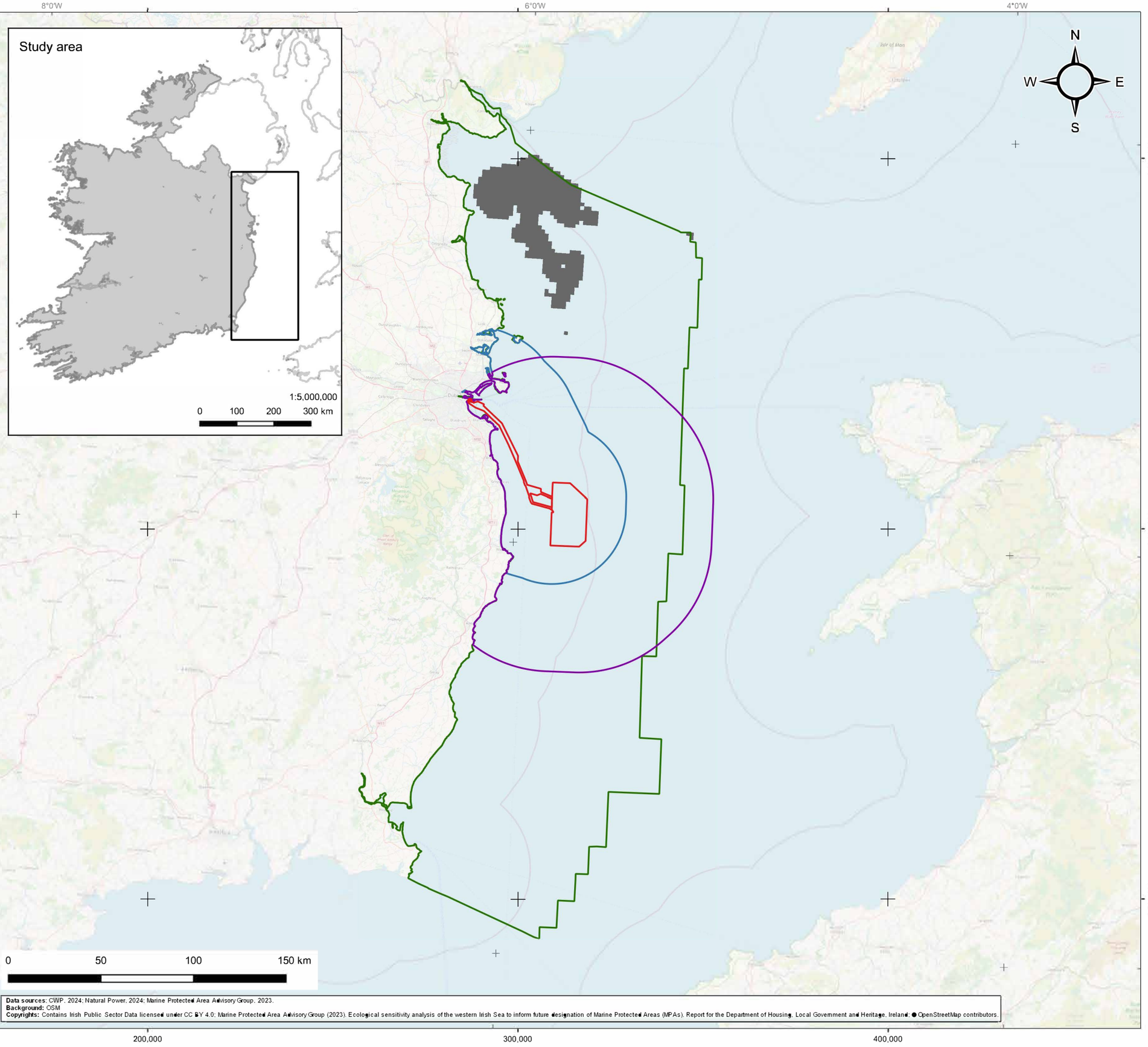
22. CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester

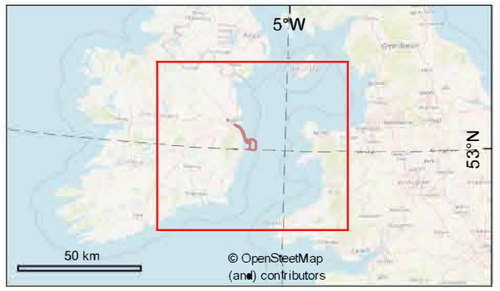
23. MPA Advisory Group for the Department of Housing, Local Government and Heritage. May 2023. Ecological sensitivity analysis of the western Irish Sea to inform future designation of Marie Protected Areas (MPAs).

24. MPA Advisory Group for the Department of Housing, Local Government and Heritage. May 2023. Ecological sensitivity analysis of the western Irish Sea to inform future designation of Marie Protected Areas (MPAs). Appendices.

25. MPA Advisory Group for the Department of Housing, Local Government and Heritage. June 2024. Ecological sensitivity analysis of the Celtic Sea to inform future designation of Marie Protected Areas (MPAs).

ANNEX A





Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of American plaice

codling wind park

Project: Codling Wind Park

Contractor: www.naturalpower.com natural power

Figure 1
Spatial distribution of American plaice

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1714

Internal descriptive code: IS - PAB, WF RLB, BUFFs 34km, OECC PB,RLB, BUFF 20KM - MPSA, SENS AMER.PLAICE - (EIAR:Vol.04.Ap.08.4.FIG.01)

Size: A3

Scale: 1:1,000,000

CRS: EPSG 25830

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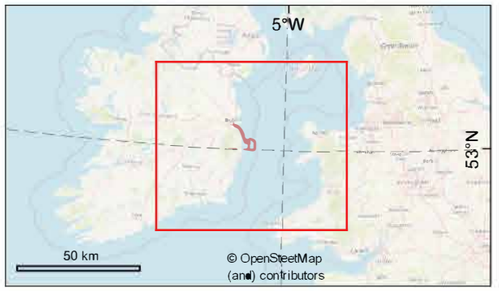

Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of angel shark

8°0'W 6°0'W 4°0'W
54°0'N 53°0'N 52°0'N
5,980,000 5,880,000 5,780,000
200,000 300,000 400,000
N W E S
0 50 100 150 km

Data sources: CWP, 2024; Natural Power, 2024; Marine Protected Area Advisory Group, 2023.
Background: OSM
Copyrights: Contains Irish Public Sector Data licensed under CC BY 4.0; Marine Protected Area Advisory Group (2023). Ecological sensitivity analysis of the western Irish Sea to inform future designation of Marine Protected Areas (MPAs). Report for the Department of Housing, Local Government and Heritage, Ireland. © OpenStreetMap contributors.

codling wind park

Project: Codling Wind Park

Contractor: www.naturalpower.com natural power

Figure 2
Spatial distribution of angel shark

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1715

Internal descriptive code: IS - PAB, WF RLB, BUFFs 34km, OECC PB,RLB, BUFF 20KM - MPSA, SENS ANGEL SHARK - (EIAR,Vol.04,Ap.08.4,FIG.02)

Size: A3

Scale: 1:1,000,000

CRS: EPSG 25830

Rev.	Updates	Date	By	Chk'd	App'd
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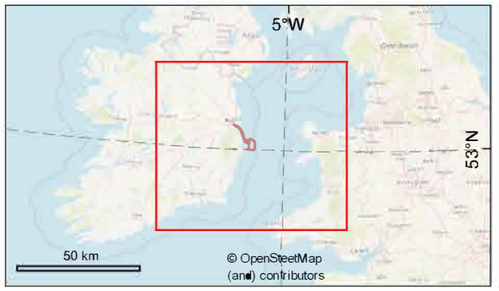


Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of basking shark

8°0'W 6°0'W 4°0'W
54°0'N 53°0'N 52°0'N
5,980,000 5,880,000 5,780,000
200,000 300,000 400,000
N W E S
0 50 100 150 km

Data sources: CWP. 2024; Natural Power, 2024; Marine Protected Area Advisory Group, 2023.
Background: OSM
Copyrights: Contains Irish Public Sector Data licensed under CC BY 4.0; Marine Protected Area Advisory Group (2023). Ecological sensitivity analysis of the western Irish Sea to inform future designation of Marine Protected Areas (MPAs). Report for the Department of Housing, Local Government and Heritage, Ireland; © OpenStreetMap contributors.

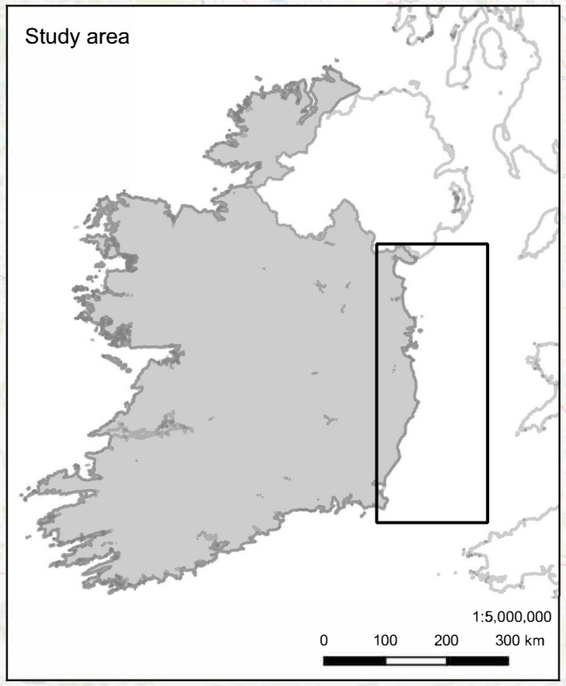
codling wind park	*Project:* Codling Wind Park	*Contractor:* natural power www.naturalpower.com

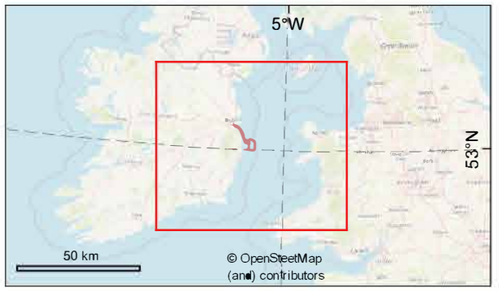
Figure 3
Spatial distribution of basking shark

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1716

Internal descriptive code:	*Size:*	*CRS:*
iS - PAB, WF RLB, BUFFs 34km, OECC PB RLB, BUFF 20KM - MPSA_SENS BASK SHARK - (EIAR Vol 04 Ap 08.4 FIG 03)	*Scale:* 1:1,000,000	EPSG 25830

Rev.	*Updates*	*Date*	*By*	*Chk'd*	*App'd*
00	Final for issue	2024/08/16	AC	ME/EA	SM





Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of blonde ray adults and juveniles

8°0'W 6°0'W 4°0'W
54°0'N 53°0'N 52°0'N
5,980,000 5,880,000 5,780,000
200,000 300,000 400,000
N W E S
0 50 100 150 km

Data sources: CWP, 2024; Natural Power, 2024; Marine Protected Area Advisory Group, 2023.
Background: OSM
Copyrights: Contains Irish Public Sector Data licensed under CC BY 4.0; Marine Protected Area Advisory Group (2023). Ecological sensitivity analysis of the western Irish Sea to inform future designation of Marine Protected Areas (MPAs). Report for the Department of Housing, Local Government and Heritage, Ireland; © OpenStreetMap contributors.

codling wind park

Project: Codling Wind Park

Contractor: natural power www.naturalpower.com

Figure 4
Spatial distribution of blonde ray adults and juveniles

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1717

Internal descriptive code: IS - PAB, WF RLB, BUFFs 34km, OECC PB RLB, BUFF 20KM - MPSA_SENS BLONDE RAY - (EIAR Vol 04 Ap 08 4 FIG 04)

Size: A3

Scale: 1:1,000,000

CRS: EPSG 25830

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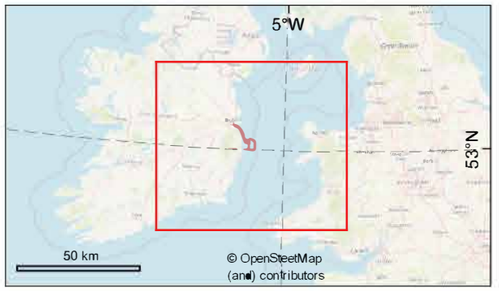

Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of bull huss

8°0'W
6°0'W
4°0'W
54°0'N
53°0'N
52°0'N
5,980,000
5,880,000
5,780,000
200,000
300,000
400,000
N
W
E
S
0 50 100 150 km

Data sources: CWP. 2024; Natural Power. 2024; Marine Protected Area Advisory Group. 2023.
Background: OSM
Copyrights: Contains Irish Public Sector Data licensed under CC BY 4.0; Marine Protected Area Advisory Group (2023). Ecological sensitivity analysis of the western Irish Sea to inform future designation of Marine Protected Areas (MPAs). Report for the Department of Housing, Local Government and Heritage, Ireland. © OpenStreetMap contributors.

codling wind park	*Project:* Codling Wind Park	*Contractor:* natural power www.naturalpower.com

Figure 5
Spatial distribution of bull huss

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1718

Internal descriptive code:	*Size:*	*CRS:*
IS - PAB, WF,RLB, BUFFs 34km, OECC,PB,RLB, BUFF 20KM - MPSA, SENS,BULL HUSS - (EIAR,Vol.04 Ap 08.4.FIG.05)	*Scale:* 1:1,000,000	EPSG 25830

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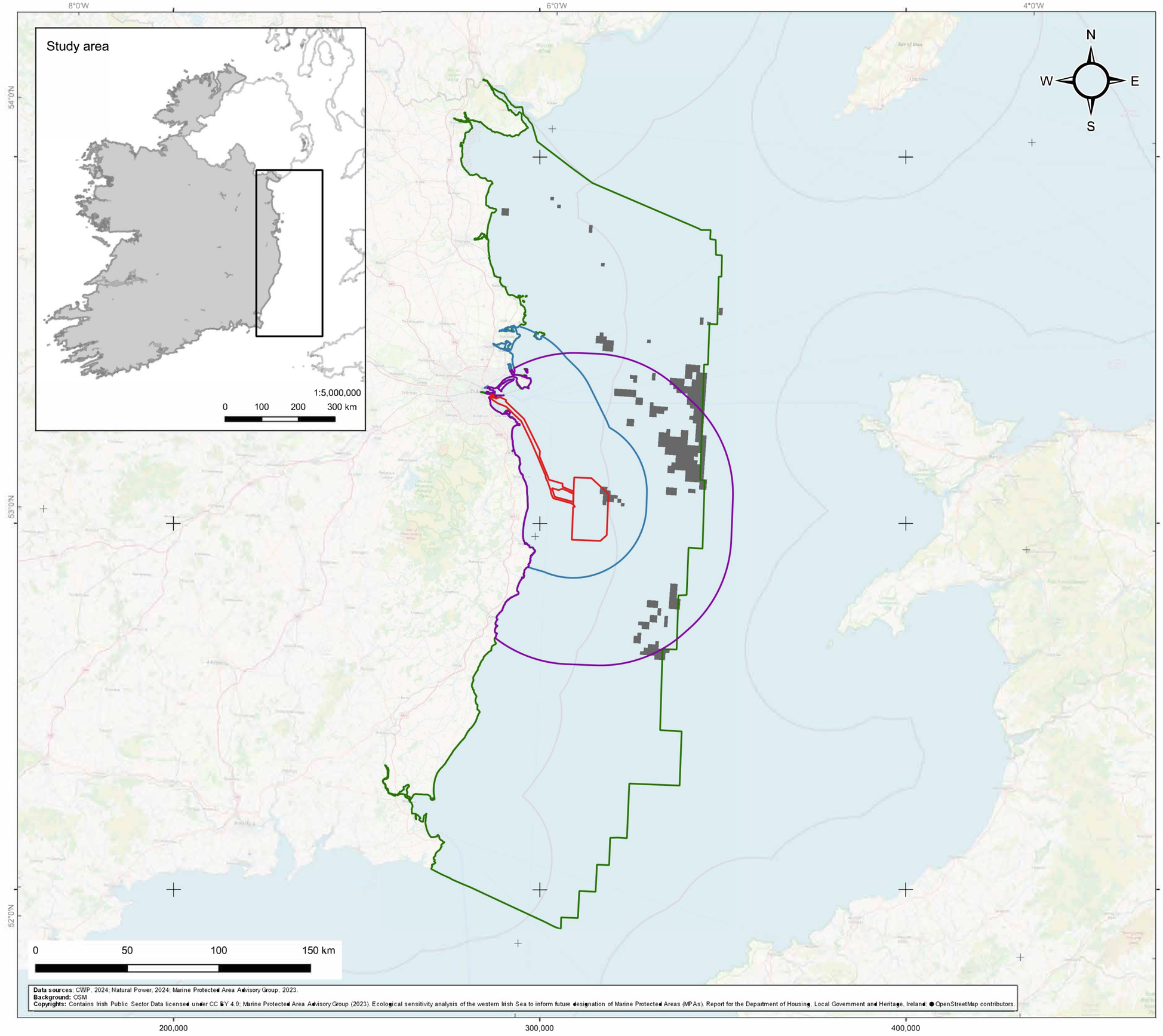
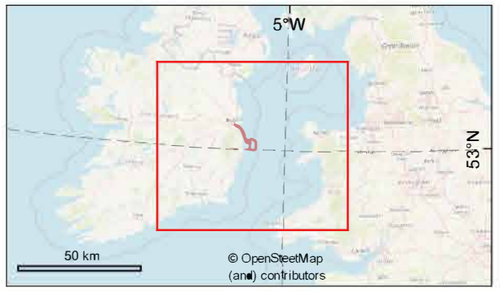
00	Final for issue	2024/08/16	AC	ME/EA	SM





Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of cuckoo ray adults and juveniles

codling wind park

Project: Codling Wind Park

Contractor: natural power www.naturalpower.com

Figure 6
Spatial distribution of cuckoo ray adults and juveniles

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1719

Internal descriptive code:	*Size:*	*CRS:*
IS - PAB, WFRLB, BUFFs 34km, OECC PB,RLB, BUFF 20KM - MPSA, SENS,CUCKOO RAY - (EIAR,Vol.04 Ap.08.4,FIG.06)	*Scale:* 1:1,000,000	EPSG 25830

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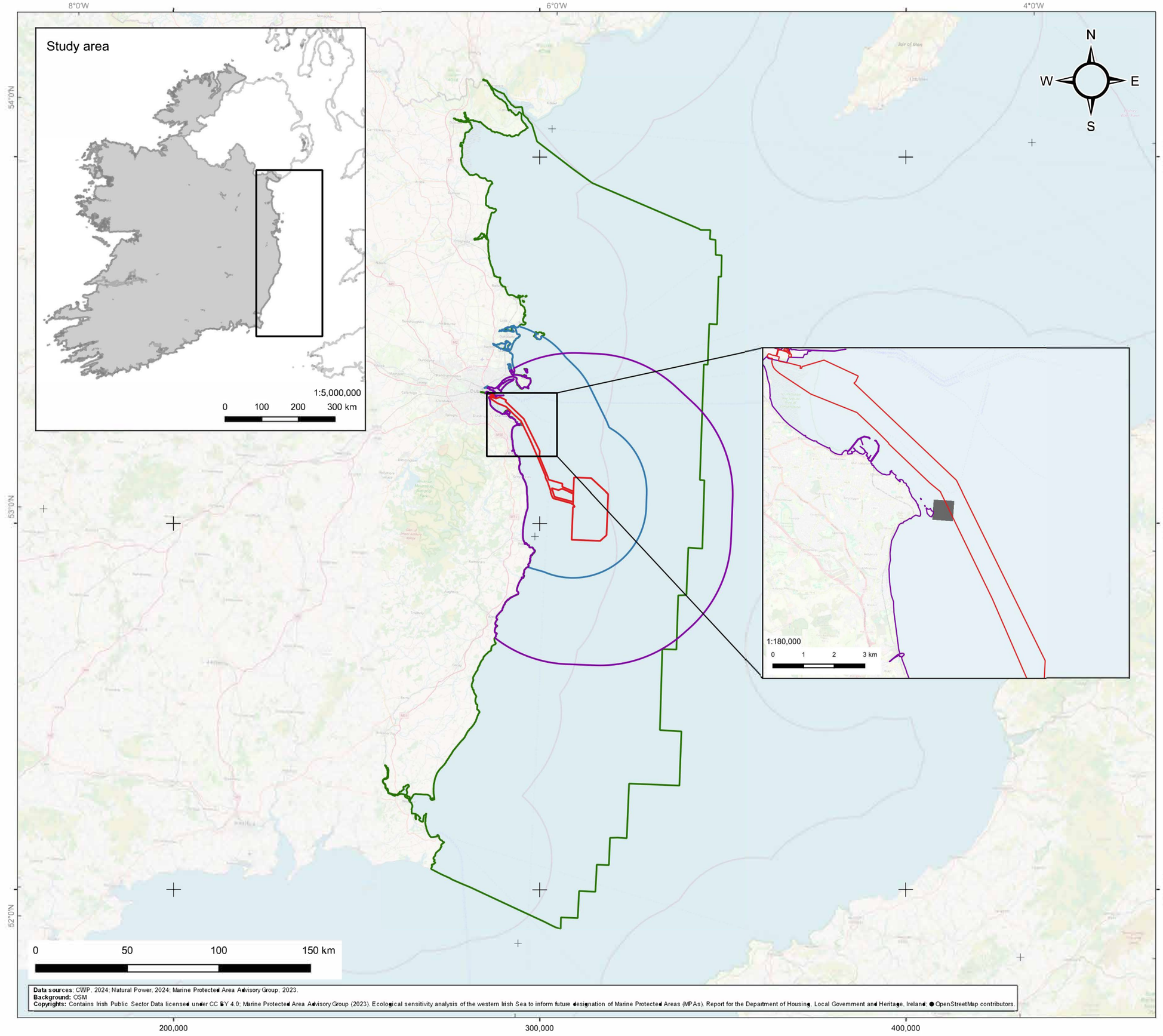
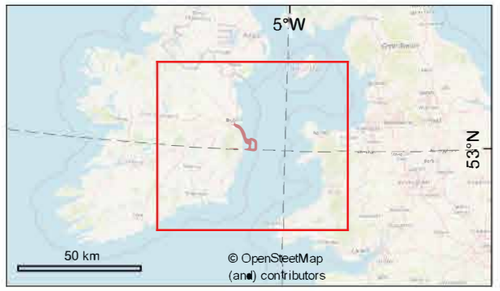




Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of edible sea urchin

codling wind park

Project: Codling Wind Park

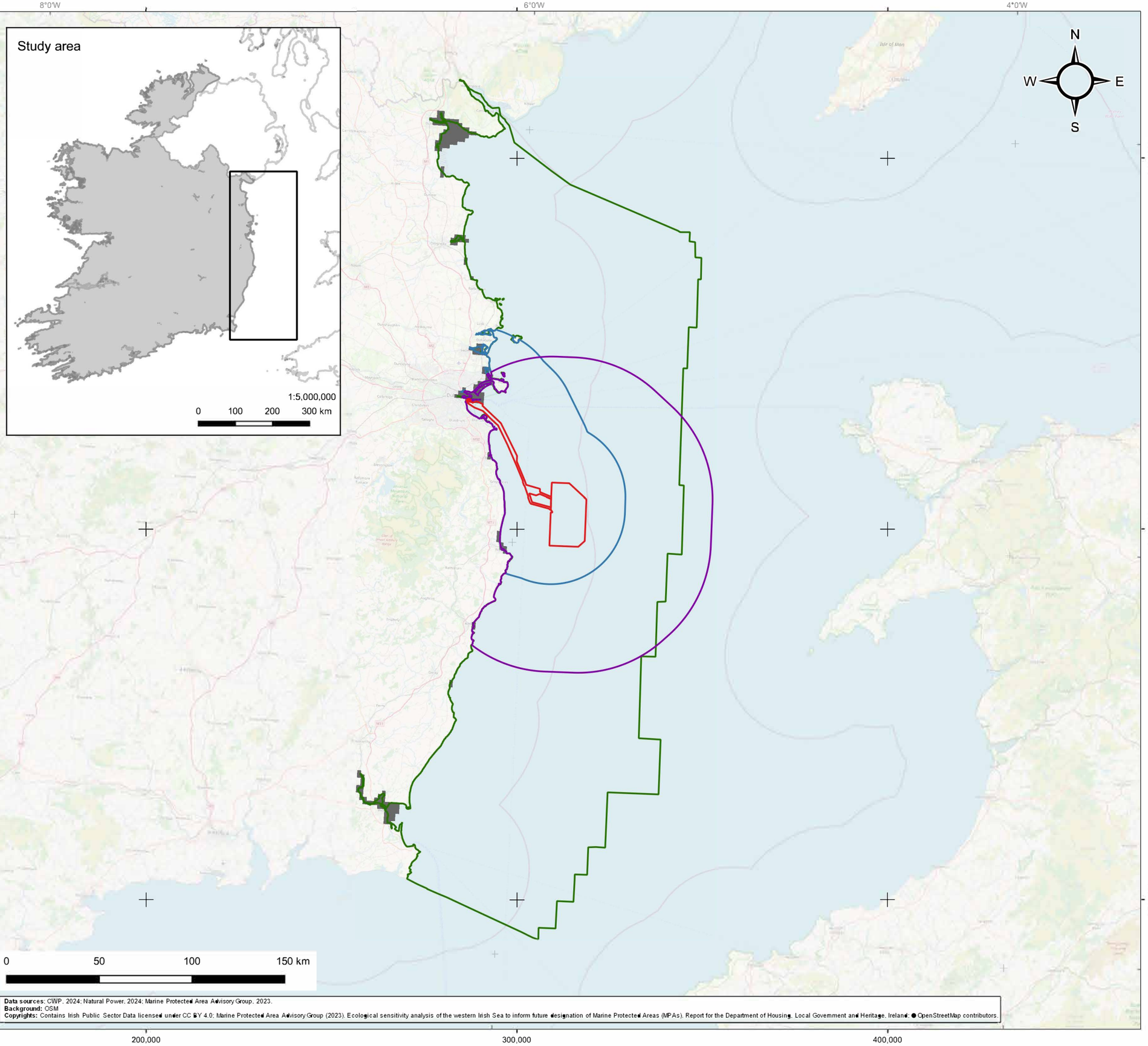
Contractor: natural power www.naturalpower.com

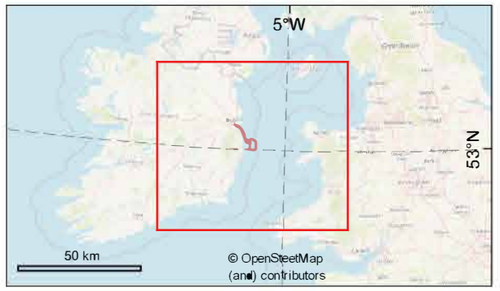
Figure 7
Spatial distribution of edible sea urchin

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1720

Internal descriptive code:	*Size:*	*CRS:*
IS - PAB, WTGS, BUFFs 34km, OECC PB RLB, BUFF 20KM - MPSA - SENS EDIBLE SEA URCHIN - (EIAR Vol 04 Ap 08.4 FIG 07)	*Scale:* 1:1,000,000	EPSG 25830

Rev.	*Updates*	*Date*	*By*	*Chk'd*	*App'd*
00	Final for issue	2024/08/16	AC	ME/EA	SM





Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of European eel

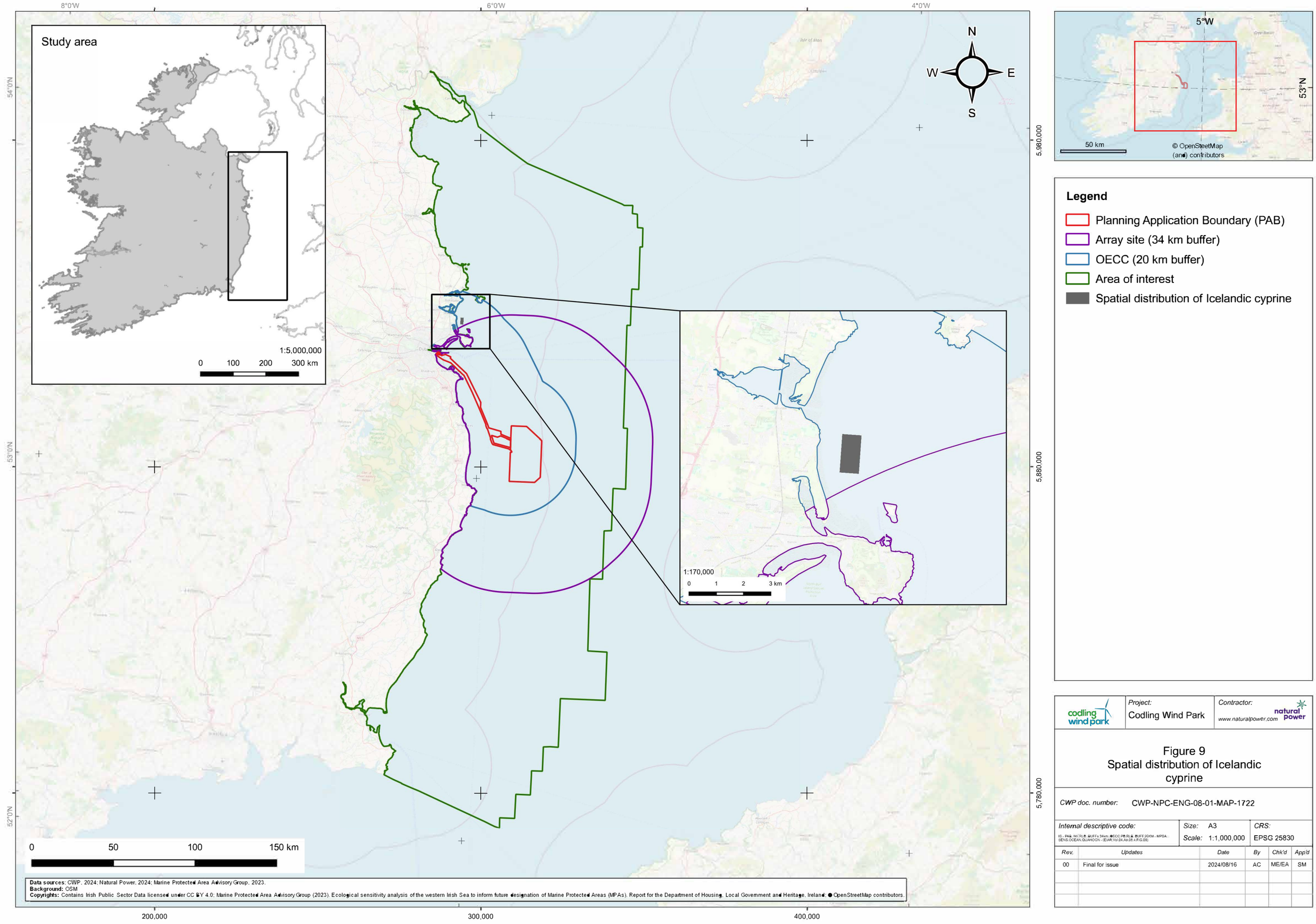
codling wind park	*Project:* Codling Wind Park	*Contractor:* www.naturalpower.com natural power

Figure 8
Spatial distribution of European eel

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1721

Internal descriptive code:	*Size:*	*CRS:*
IS - PAB, WFRLB, BUFFs 34km, OECC PB,RLB, BUFF 20KM - MPSA, SENS, EUR, EAL - (EIAR, Vol.04 Ap.08.4 FIG.08)	*Scale:* 1:1,000,000	EPSG 25830

Rev.	*Updates*	*Date*	*By*	*Chk'd*	*App'd*
00	Final for issue	2024/08/16	AC	ME/EA	SM



Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of Icelandic cyprine

Data sources: CWP, 2024; Natural Power, 2024; Marine Protected Area Advisory Group, 2023.
Background: OSM
Copyrights: Contains Irish Public Sector Data licensed under CC BY 4.0; Marine Protected Area Advisory Group (2023). Ecological sensitivity analysis of the western Irish Sea to inform future designation of Marine Protected Areas (MPAs). Report for the Department of Housing, Local Government and Heritage, Ireland. © OpenStreetMap contributors.

codling wind park

Project: Codling Wind Park

Contractor: natural power www.naturalpower.com

Figure 9
Spatial distribution of Icelandic cyprine

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1722

Internal descriptive code: IS - PAB, WTRs, BUFFs 34km, OECC PB RLB, BUFF 20KM - MPSA - SENS OCEAN QUAHOGN - (EIAR Vol 04 Ap 08.4 FIG 09)

Size: A3

Scale: 1:1,000,000

CRS: EPSG 25830

Rev.	Updates	Date	By	Chk'd	App'd
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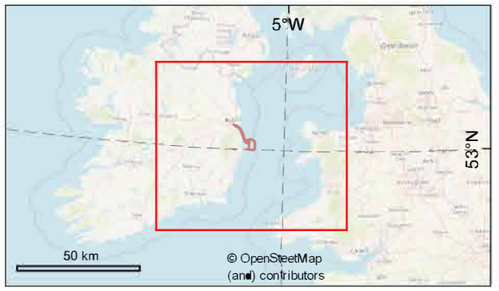

Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of spotted ray adults and juveniles

8°0'W 6°0'W 4°0'W
54°0'N 53°0'N 52°0'N
5,980,000 5,880,000 5,780,000
200,000 300,000 400,000
N W E S
0 50 100 150 km

Data sources: CWP, 2024; Natural Power, 2024; Marine Protected Area Advisory Group, 2023.
Background: OSM
Copyrights: Contains Irish Public Sector Data licensed under CC BY 4.0; Marine Protected Area Advisory Group (2023). Ecological sensitivity analysis of the western Irish Sea to inform future designation of Marine Protected Areas (MPAs). Report for the Department of Housing, Local Government and Heritage, Ireland; © OpenStreetMap contributors.

codling wind park

Project: Codling Wind Park

Contractor: www.naturalpower.com natural power

Figure 10
Spatial distribution of spotted ray adults and juveniles

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1723

Internal descriptive code: IS - PAB, WF:RLB, BUFFs:34km, OECC:PB:RLB, BUFF:20KM - MPSA, SENS:SPOTTRAY - (EIAR:Vol:04:Ap:08.4:FIG:10)

Size: A3

Scale: 1:1,000,000

CRS: EPSG 25830

Rev.	Updates	Date	By	Chk'd	App'd
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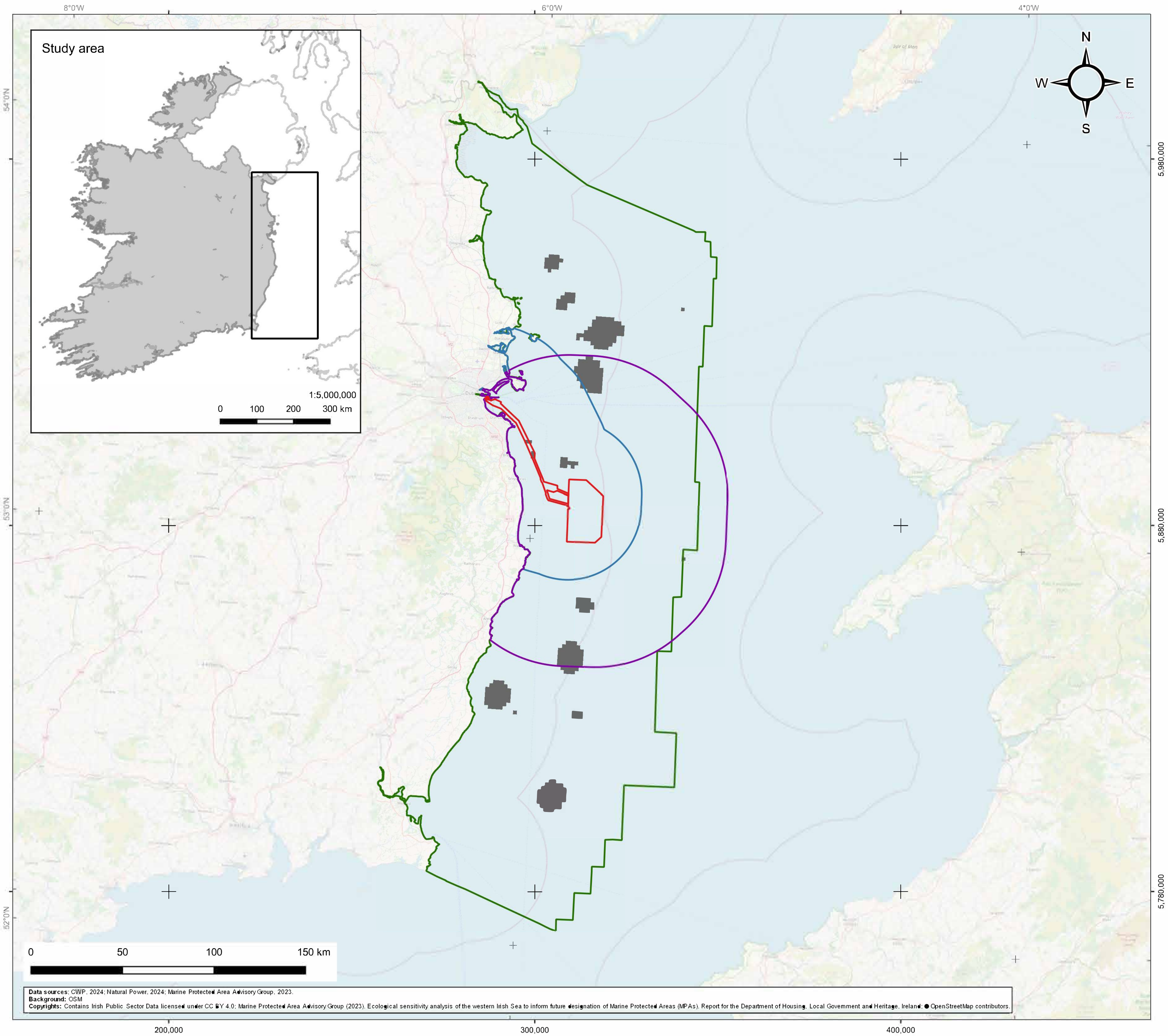

Data sources: CWP, 2024; Natural Power, 2024; Marine Protected Area Advisory Group, 2023.
Background: OSM
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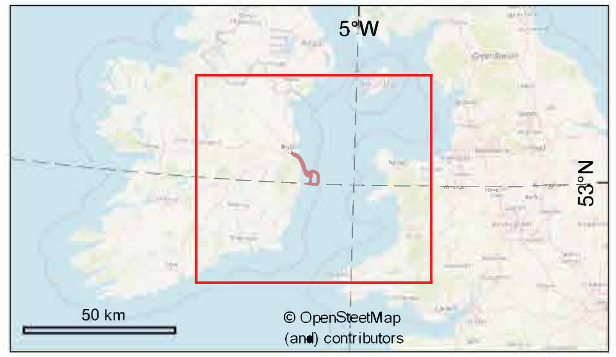

Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of starry smooth-hound

Project: Codling Wind Park

Contractor: www.naturalpower.com natural power

Figure 11
Spatial distribution of starry smooth-hound

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1724

Internal descriptive code: IS - PAB..WF.RLB .BUFFs 34km .OECC PB RLB. BUFF.20KM - MPSA SENS.STARRY SMOOTH HOUND - (EIAR.Vol.04.Ap.08.4.FIG.11)

Size: A3
Scale: 1:1,000,000
CRS: EPSG 25830

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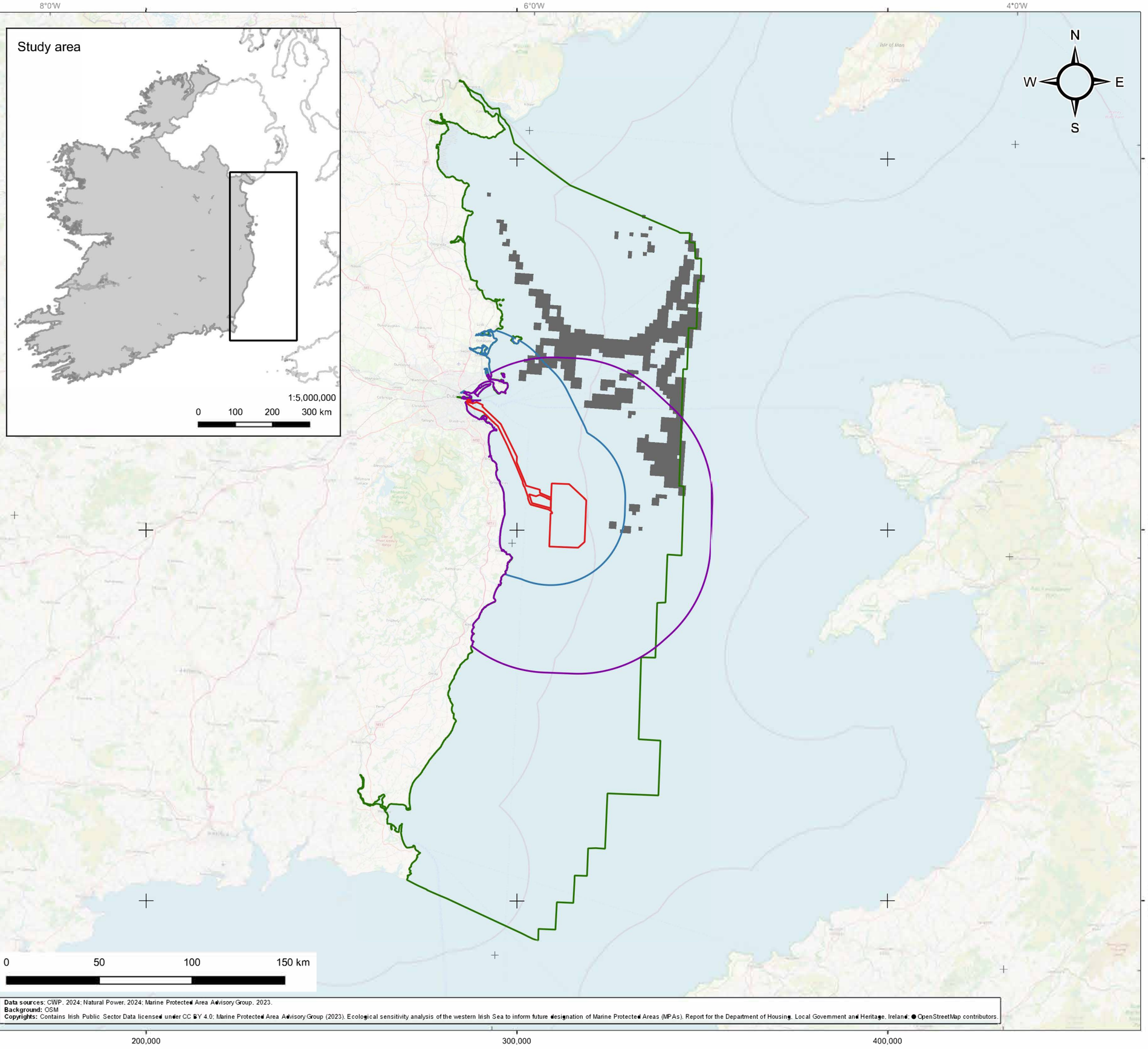

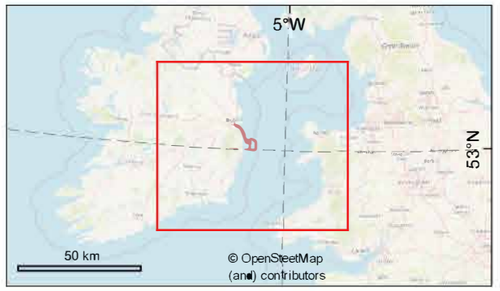

Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of thornback ray adults and juveniles

codling wind park

Project: Codling Wind Park

Contractor: natural power www.naturalpower.com

Figure 12
Spatial distribution of thornback ray adults and juveniles

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1725

Internal descriptive code:	*Size:*	*CRS:*
IS - PAB, WIND, BUFFs 34km, OECC PB RLB, BUFF 20KM - MPSA - SENS THORNBACK RAY - (EIAR Vol II Ch 08.4 FIG 12)	A3	EPSG 25830
	Scale: 1:1,000,000	

Rev.	*Updates*	*Date*	*By*	*Chk'd*	*App'd*
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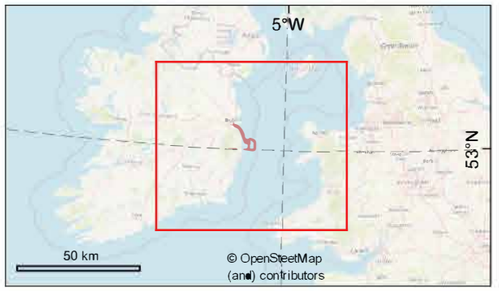

Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of tope shark

8°0'W 6°0'W 4°0'W
54°0'N 53°0'N 52°0'N
5,980,000 5,880,000 5,780,000
200,000 300,000 400,000
N W E S
0 50 100 150 km

Data sources: CWP, 2024; Natural Power, 2024; Marine Protected Area Advisory Group, 2023.
Background: OSM
Copyrights: Contains Irish Public Sector Data licensed under CC BY 4.0; Marine Protected Area Advisory Group (2023). Ecological sensitivity analysis of the western Irish Sea to inform future designation of Marine Protected Areas (MPAs). Report for the Department of Housing, Local Government and Heritage, Ireland. © OpenStreetMap contributors.

codling wind park

Project: Codling Wind Park

Contractor: natural power www.naturalpower.com

Figure 13
Spatial distribution of tope shark

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1726

Internal descriptive code: IS - PAB, WF RLB, BUFFs 34km, OECC PB RLB, BUFF 20KM + MPSA, SENS TOPE SHARK - (EIAR Vol 4 Ap 8 8.4 FIG.13)

Size: A3

Scale: 1:1,000,000

CRS: EPSG 25830

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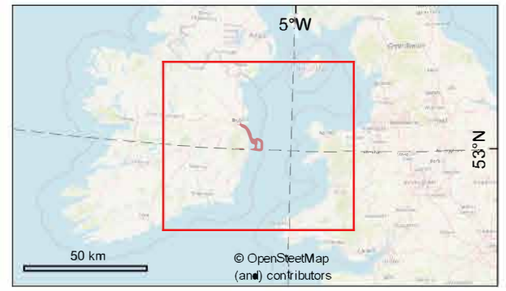


8°0'W
6°0'W
4°0'W
54°0'N
53°0'N
52°0'N
5,980,000
5,880,000
5,780,000
200,000
300,000
400,000
N
W
E
S
0 50 100 150 km

Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of turbot

Data sources: CWP, 2024; Natural Power, 2024; Marine Protected Area Advisory Group, 2023.
Background: OSM
Copyrights: Contains Irish Public Sector Data licensed under CC BY 4.0; Marine Protected Area Advisory Group (2023). Ecological sensitivity analysis of the western Irish Sea to inform future designation of Marine Protected Areas (MPAs). Report for the Department of Housing, Local Government and Heritage, Ireland. © OpenStreetMap contributors.

codling wind park

Project: Codling Wind Park

Contractor: www.naturalpower.com natural power

Figure 14 Spatial distribution of turbot

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1727

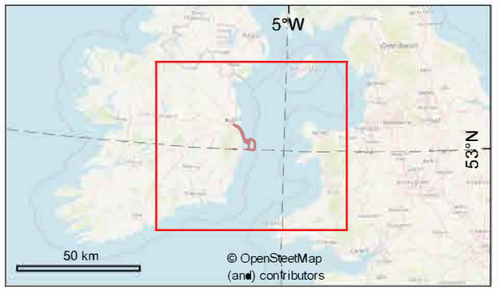
Internal descriptive code: iS - PAB, WF.RLB, BUFFs.34km, OECC.PB.RLB, BUFF.20KM - MPSA, SENS.TURBOT - (EIAR.Vol.04.Ap.08.4.FIG.14)

Size: A3

Scale: 1:1,000,000

CRS: EPSG 25830

Rev.	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/16	AC	ME/EA	SM



8°0'W
6°0'W
4°0'W
54°0'N
53°0'N
52°0'N
5,980,000
5,880,000
5,780,000
200,000
300,000
400,000
N
W
E
S
0 50 100 150 km

Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of witch flounder

Data sources: CWP, 2024; Natural Power, 2024; Marine Protected Area Advisory Group, 2023.
Background: OSM
Copyrights: Contains Irish Public Sector Data licensed under CC BY 4.0; Marine Protected Area Advisory Group (2023). Ecological sensitivity analysis of the western Irish Sea to inform future designation of Marine Protected Areas (MPAs). Report for the Department of Housing, Local Government and Heritage, Ireland. © OpenStreetMap contributors.

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Project: Codling Wind Park

Contractor: www.naturalpower.com natural power

Figure 15
Spatial distribution of witch flounder

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1728

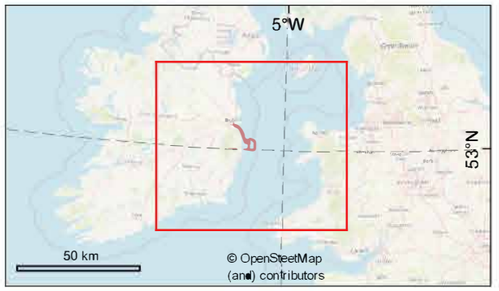
Internal descriptive code: IS - PAB, WITCH, BUFFs 34km, OECC PB, RLB, BUFF 20KM - MPSA - SENS WITCH FLOUNDER - (EIAR Vol II Ap 09.4 FIG 15)

Size: A3

Scale: 1:1,000,000

CRS: EPSG 25830

Rev.	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/16	AC	ME/EA	SM



Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of Ross worm

8°0'W
6°0'W
4°0'W
54°0'N
53°0'N
52°0'N
5,980,000
5,880,000
5,780,000
200,000
300,000
400,000
N
W
E
S
0 50 100 150 km

Data sources: CWP. 2024; Natural Power, 2024; Marine Protected Area Advisory Group, 2023.
Background: OSM
Copyrights: Contains Irish Public Sector Data licensed under CC BY 4.0; Marine Protected Area Advisory Group (2023). Ecological sensitivity analysis of the western Irish Sea to inform future designation of Marine Protected Areas (MPAs). Report for the Department of Housing, Local Government and Heritage, Ireland; © OpenStreetMap contributors.

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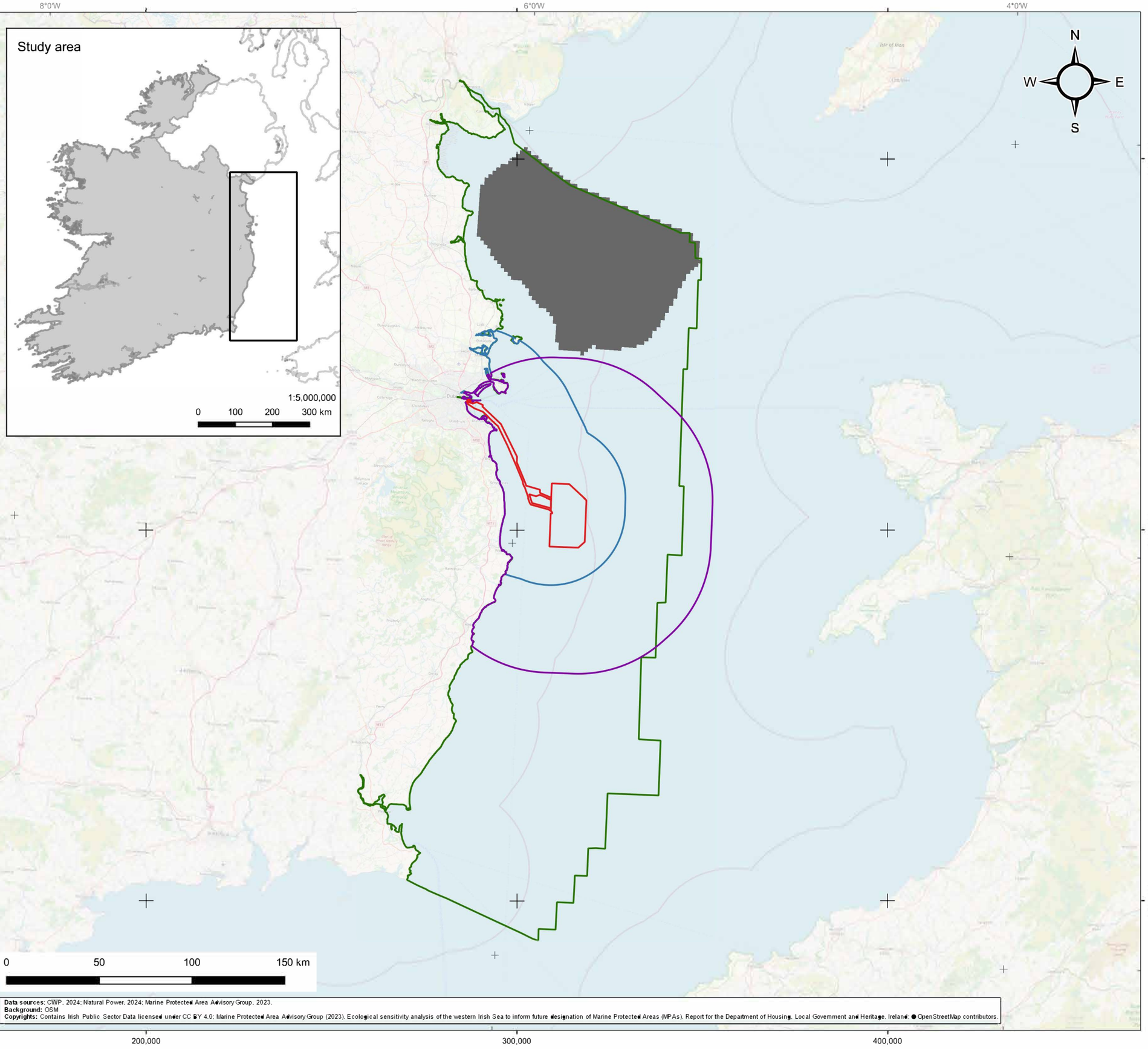
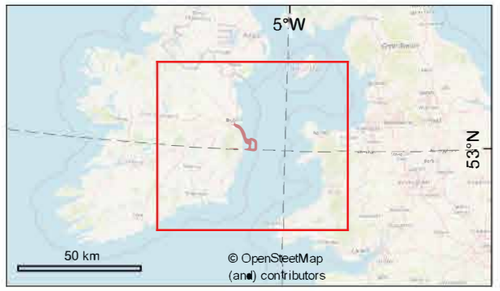
Figure 16
Spatial distribution of Ross worm

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1729

Internal descriptive code:	*Size:*	*CRS:*
IS - PAB, WF RLB, BUFFs 34km, OECC PB RLB, BUFF 20KM - MPSA_SENS ROSS WORM - (EIAR Vol 04 Ap 08.4 FIG.16)	*Scale:* 1:1,000,000	EPSG 25830

Rev.	*Updates*	*Date*	*By*	*Chk'd*	*App'd*
00	Final for issue	2024/08/16	AC	ME/EA	SM





Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of sea-pen and burrowing megafauna communities

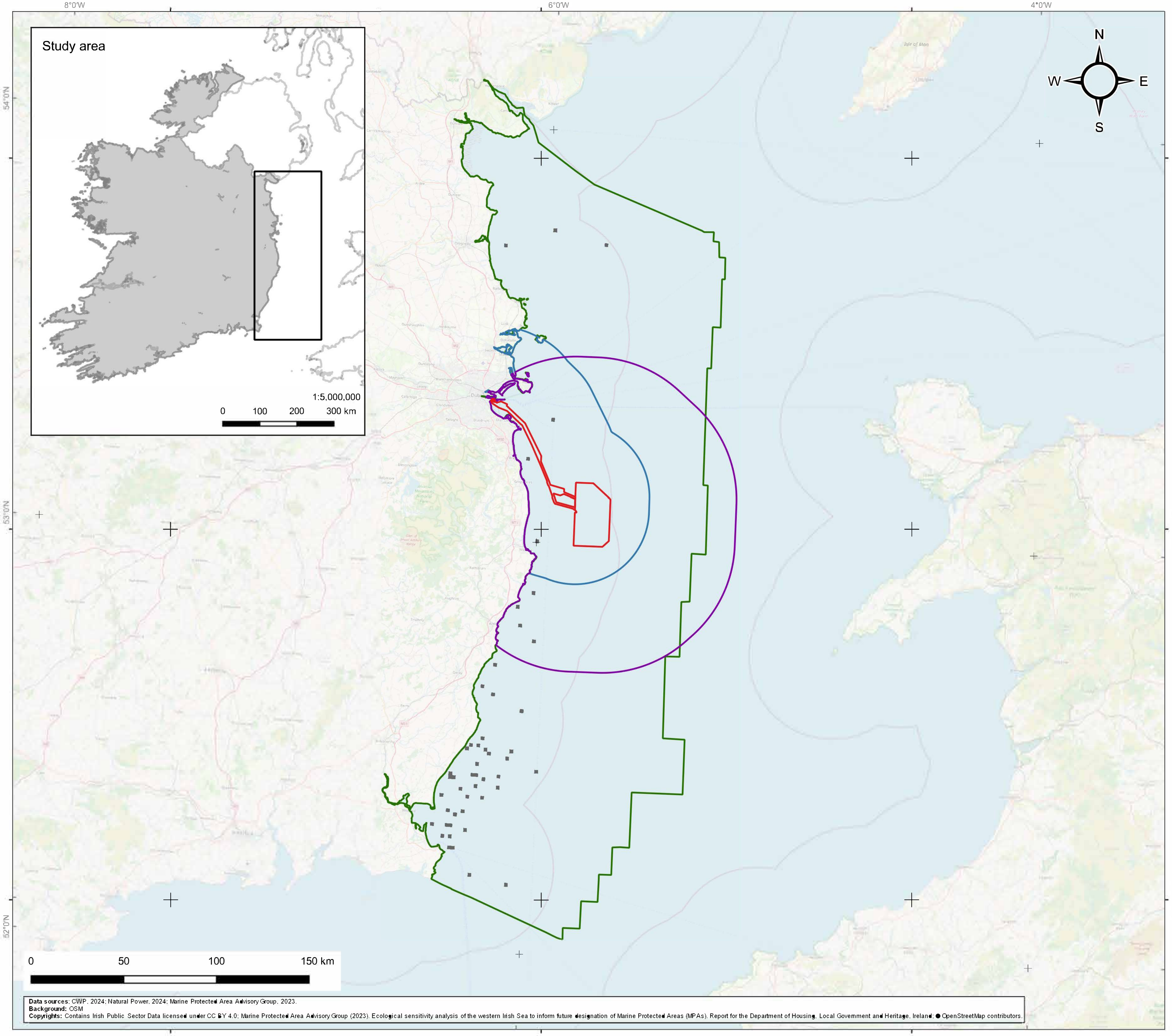
codling wind park	*Project:* Codling Wind Park	*Contractor:* www.naturalpower.com natural power

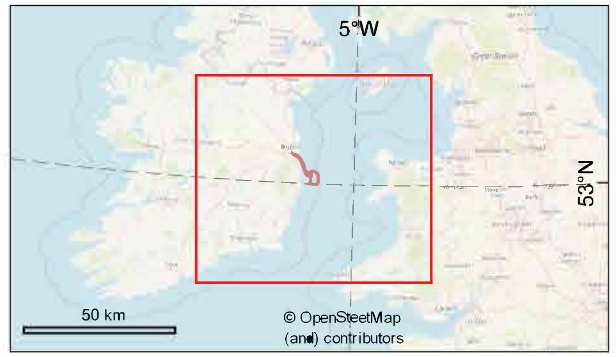
Figure 17
Spatial distribution of sea-pen and burrowing megafauna communities

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1730

Internal descriptive code:	*Size:*	*CRS:*
IS - PAB, WTRLB, BUFFs 34km, OECC PB RLB, BUFF 20KM - MPSA - SENS,SEA PEN,BURR,MEGAF,COMM - (EIAR,Vol.04,Ab,08.4 FIG.17)	*Scale:* 1:1,000,000	EPSG 25830

Rev.	*Updates*	*Date*	*By*	*Chk'd*	*App'd*
00	Final for issue	2024/08/16	AC	ME/EA	SM





Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of barrel jellyfish

Project: Codling Wind Park

Contractor: www.naturalpower.com natural power

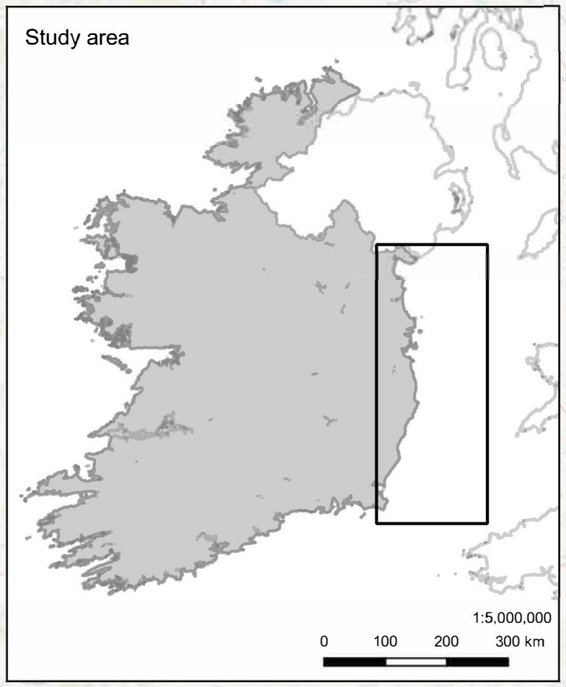
Figure 18
Spatial distribution of barrel jellyfish

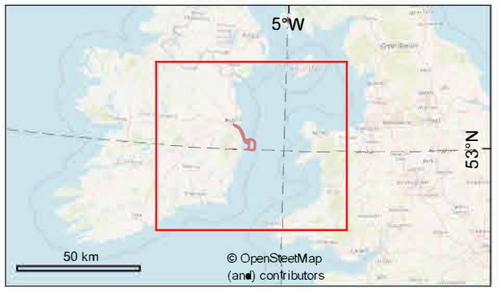
CWP doc. number: CWP-NPC-ENG-08-01-MAP-1731

Internal descriptive code: IS - PAB..WF.RLB .BUFFs 34km .OECC PB RLB. BUFF.20KM - MPSA SENS.BARREL.JELLY - (EIAR.Vol.04.Ap.08.4.FIG.18)

Size: A3
Scale: 1:1,000,000
CRS: EPSG 25830

Rev	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/16	AC	ME/EA	SM





Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of herring spawning areas

8°0'W
6°0'W
4°0'W
54°0'N
53°0'N
52°0'N
5,980,000
5,880,000
5,780,000
200,000
300,000
400,000
N
W
E
S
0 50 100 150 km

Data sources: CWP, 2024; Natural Power, 2024; Marine Protected Area Advisory Group, 2023.
Background: OSM
Copyrights: Contains Irish Public Sector Data licensed under CC BY 4.0; Marine Protected Area Advisory Group (2023). Ecological sensitivity analysis of the western Irish Sea to inform future designation of Marine Protected Areas (MPAs). Report for the Department of Housing, Local Government and Heritage, Ireland. © OpenStreetMap contributors.

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Project: Codling Wind Park

Contractor: www.naturalpower.com natural power

Figure 19
Spatial distribution of herring spawning areas

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1732

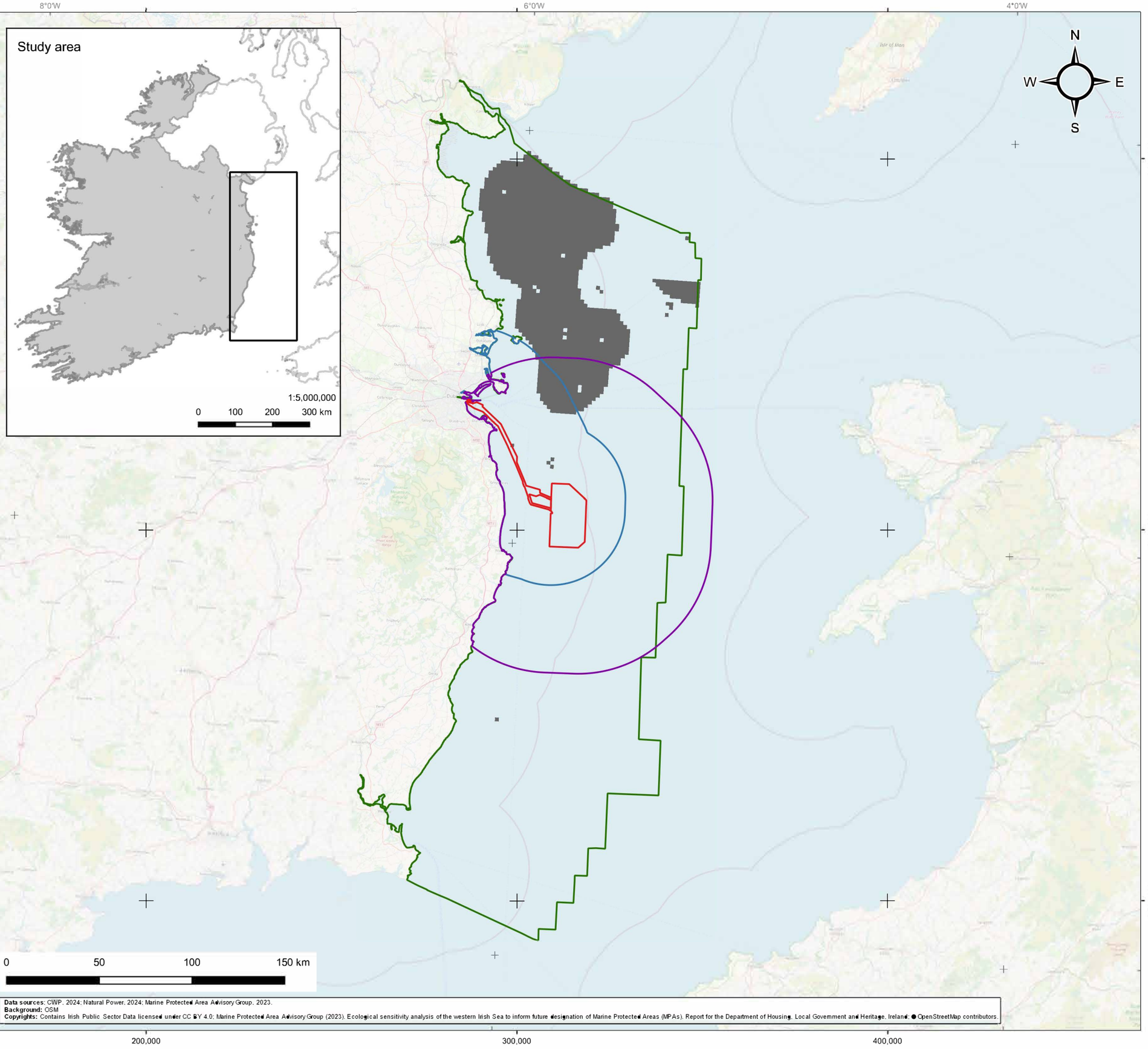
Internal descriptive code: IS - PAB, WI RLB, BUFFs 34km, BECC PB RLB, BUFF 20KM - MPSA - SENS, HERRING SPWN AREAS - TEIAR Vol 04 Ap 08 4 FIG 18)

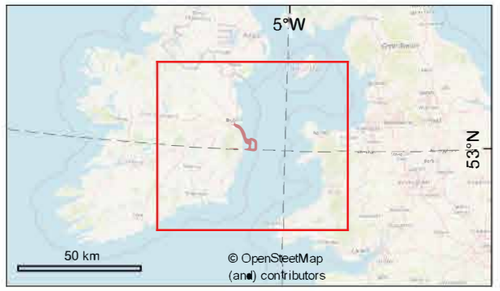
Size: A3

Scale: 1:1,000,000

CRS: EPSG 25830

Rev.	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/16	AC	ME/EA	SM





Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of forage fish

codling wind park

Project: Codling Wind Park

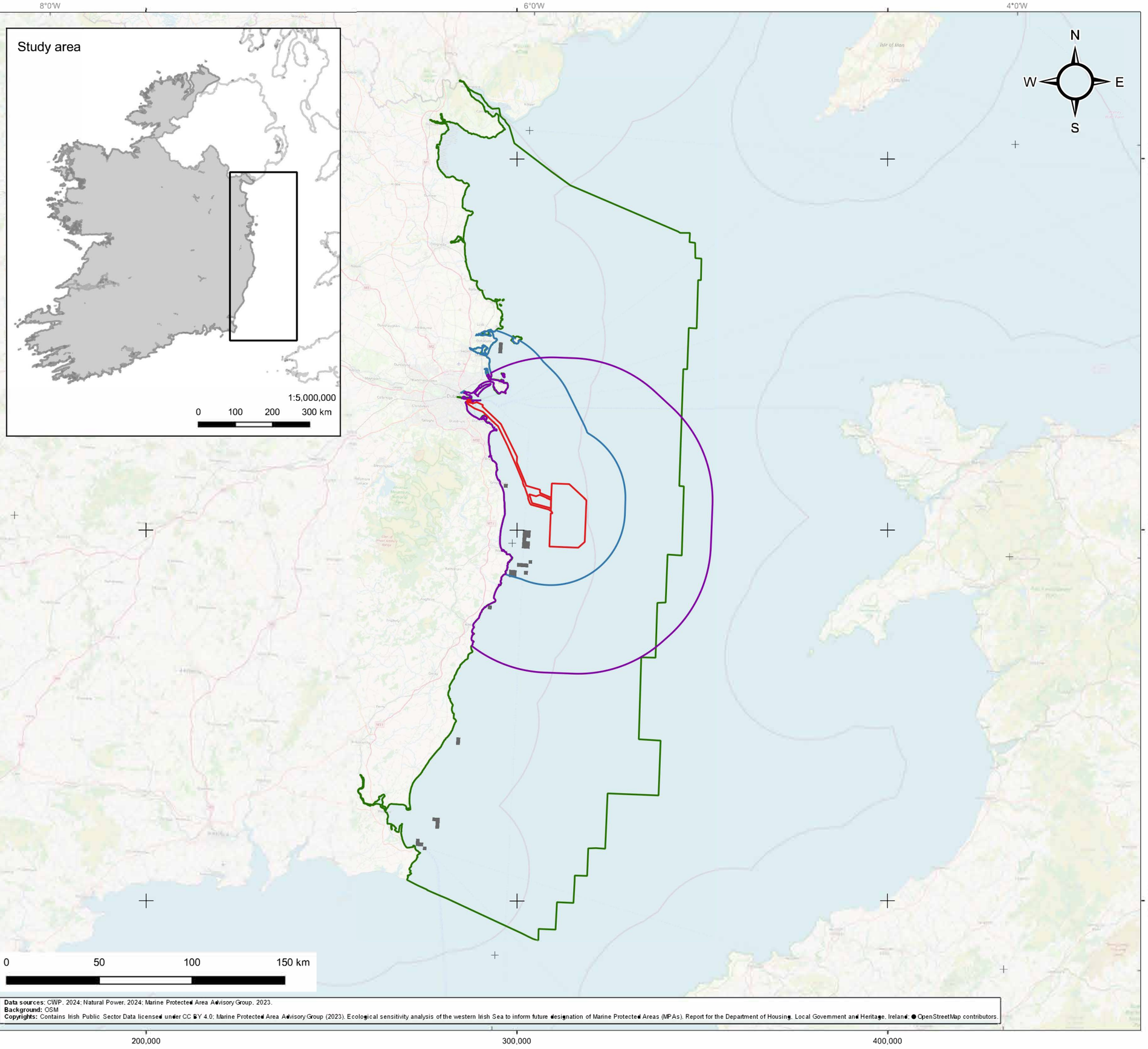
Contractor: www.naturalpower.com natural power

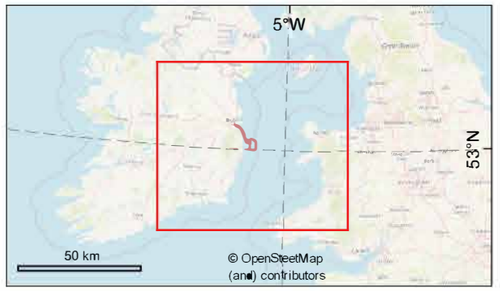
Figure 20
Spatial distribution of forage fish

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1733

Internal descriptive code:	*Size:*	*CRS:*
IS - PAB_WI RLB_BUFFs 34km_OECC PB RLB_BUFF 20KM - MPSA_SENS FORAGE - (DIAR Vol 04 Ap 08 4 FIG 20)	A3	EPSG 25830
	Scale: 1:1,000,000	

Rev.	*Updates*	*Date*	*By*	*Chk'd*	*App'd*
00	Final for issue	2024/08/16	AC	ME/EA	SM





Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of subtidal mussel beds

codling wind park

Project: Codling Wind Park

Contractor: www.naturalpower.com natural power

Figure 21
Spatial distribution of subtidal mussel beds

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1734

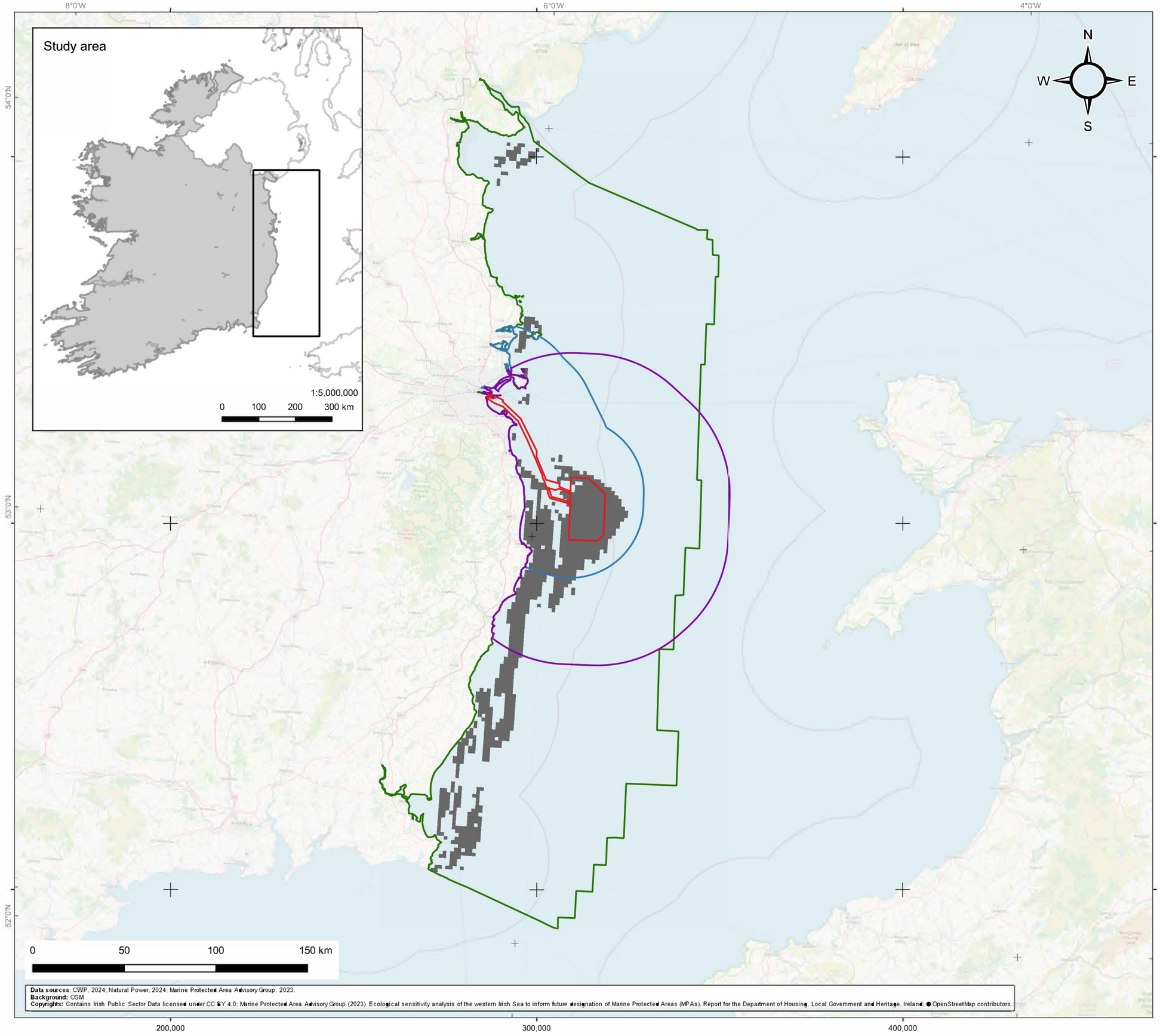
Internal descriptive code: IS - PAB, WTRLB, BUFFs 34km, OECC PB RLB, BUFF 20KM - MPSA - SENS SUB TIDAL MUSSEL BEDS - (EIAR Vol 04 Ap 08.4 FIG 21)

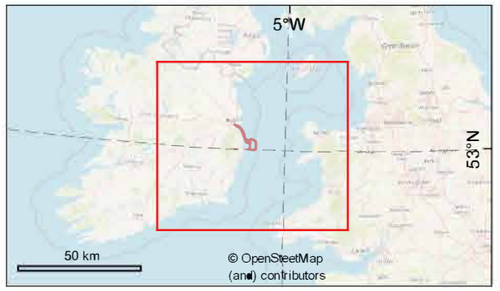
Size: A3

Scale: 1:1,000,000

CRS: EPSG 25830

Rev.	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/16	AC	ME/EA	SM





Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of circalittoral coarse sediment

codling wind park

Project: Codling Wind Park

Contractor: natural power www.naturalpower.com

Figure 22
Spatial distribution of circalittoral coarse sediment

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1735

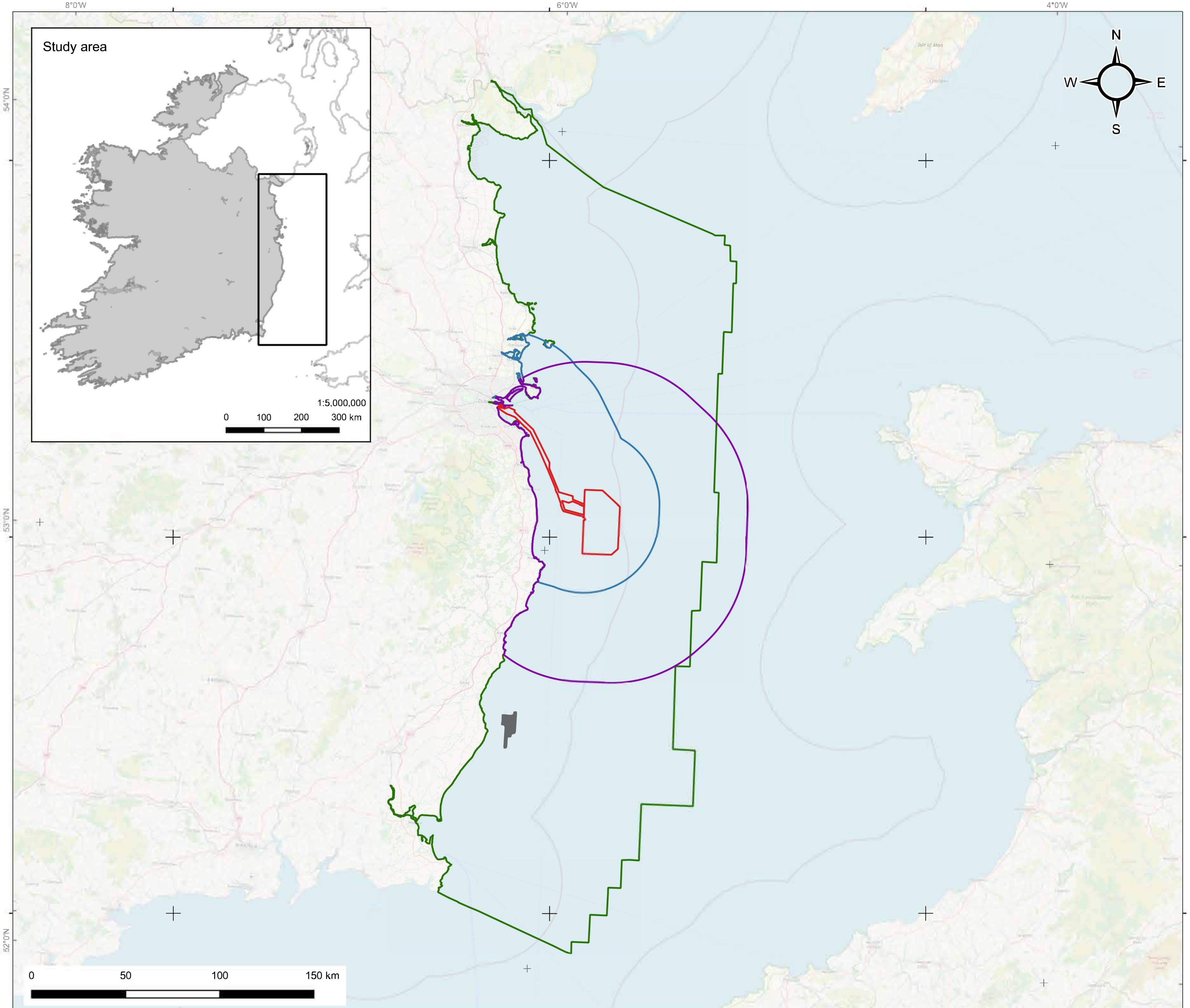
Internal descriptive code: IS - PAB_WI RLB_BUFFs 34km_@OCC PB BLB_BUFF 20KM - MPSA - SENS CIRC COARSE SEDIMENT - (EIAR Vol III Ao #8.4 FIG 22)

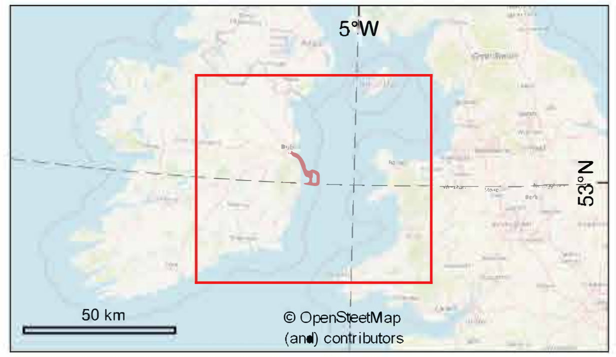
Size: A3

Scale: 1:1,000,000

CRS: EPSG 25830

Rev.	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/16	AC	ME/EA	SM





Data sources: CWP. 2024; Natural Power. 2024; Marine Protected Area Advisory Group. 2023.
Background: OSM

Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of circalittoral mixed sediment

Project: Codling Wind Park

Contractor: www.naturalpower.com

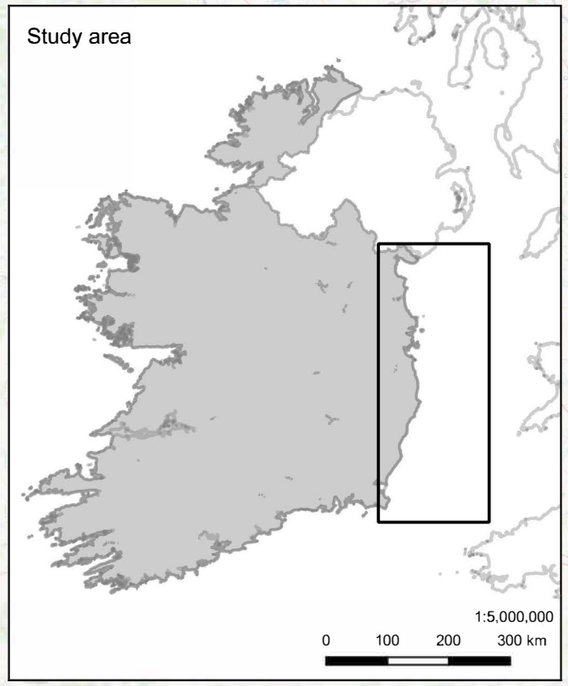
Figure 23
Spatial distribution of circalittoral mixed sediment

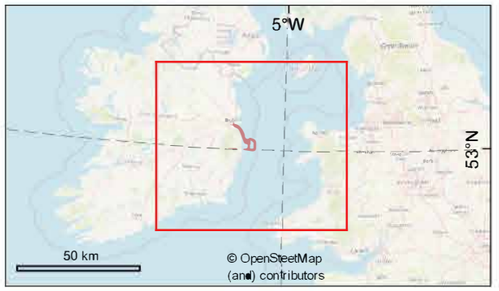
CWP doc. number: CWP-NPC-ENG-08-01-MAP-1736

Internal descriptive code: IS - PAB..WF.RLB .BUFFs 34km .OECC PB RLB. BUFF.20KM - MPSA SENS.CIRC.MIX.SEDIMENT - (EIAR.Vol.04.Ap.08.4.FIG.23)

Size: A3
Scale: 1:1,000,000
CRS: EPSG 25830

Rev.	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/16	AC	ME/EA	SM





Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of circalittoral mud

8°0'W
6°0'W
4°0'W
54°0'N
53°0'N
52°0'N
5,980,000
5,880,000
5,780,000
200,000
300,000
400,000
N
W
E
S
0 50 100 150 km

Data sources: CWP, 2024; Natural Power, 2024; Marine Protected Area Advisory Group, 2023.
Background: OSM
Copyrights: Contains Irish Public Sector Data licensed under CC BY 4.0; Marine Protected Area Advisory Group (2023). Ecological sensitivity analysis of the western Irish Sea to inform future designation of Marine Protected Areas (MPAs). Report for the Department of Housing, Local Government and Heritage, Ireland. © OpenStreetMap contributors.

codling wind park

Project: Codling Wind Park

Contractor: www.naturalpower.com natural power

Figure 24
Spatial distribution of circalittoral mud

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1737

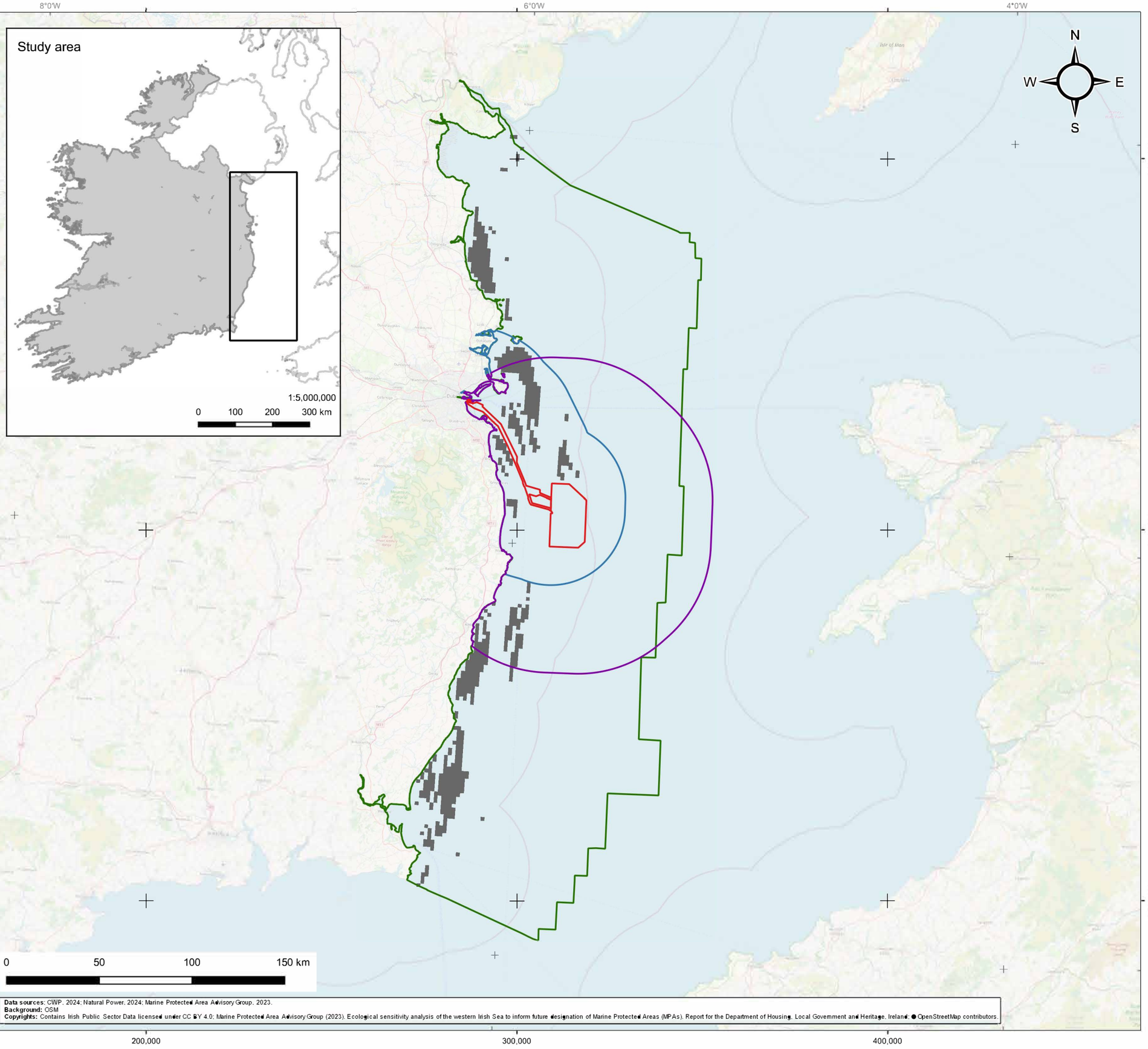
Internal descriptive code: IS - PAB, WTRLB, BUFFs 34km, OECC PB RLB, BUFF 20KM - MPSA - SENS.CIRC.MUD - (EIAR Vol.04 Ap.08.4.FIG.24)

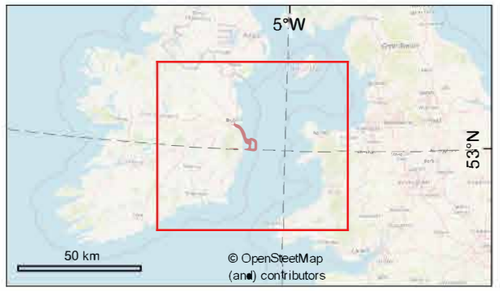
Size: A3

Scale: 1:1,000,000

CRS: EPSG 25830

Rev.	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/16	AC	ME/EA	SM





Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of circalittoral sand

codling wind park

Project: Codling Wind Park

Contractor: natural power www.naturalpower.com

Figure 25
Spatial distribution of circalittoral sand

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1738

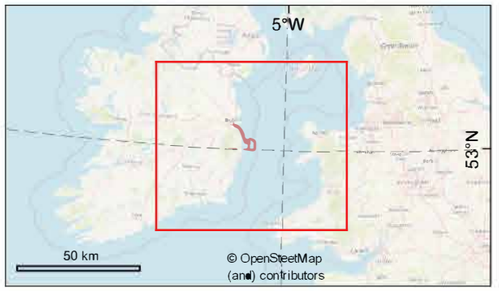
Internal descriptive code: IS - PAB, WI RLB, BUFFs 34km, OECC PB RLB, BUFF 20KM - MPSA - SENS CIRC SAND - (EIA Vol 04 Ap 08.4 FIG 25)

Size: A3

Scale: 1:1,000,000

CRS: EPSG 25830

Rev.	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/16	AC	ME/EA	SM



Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of infralittoral coarse sediment

8°0'W 6°0'W 4°0'W
54°0'N 53°0'N 52°0'N
5,980,000 5,880,000 5,780,000
200,000 300,000 400,000
N W E S
0 50 100 150 km

Data sources: CWP, 2024; Natural Power, 2024; Marine Protected Area Advisory Group, 2023.
Background: OSM
Copyrights: Contains Irish Public Sector Data licensed under CC BY 4.0; Marine Protected Area Advisory Group (2023). Ecological sensitivity analysis of the western Irish Sea to inform future designation of Marine Protected Areas (MPAs). Report for the Department of Housing, Local Government and Heritage, Ireland. © OpenStreetMap contributors.

codling wind park

Project: Codling Wind Park

Contractor: www.naturalpower.com natural power

Figure 26
Spatial distribution of infralittoral coarse sediment

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1739

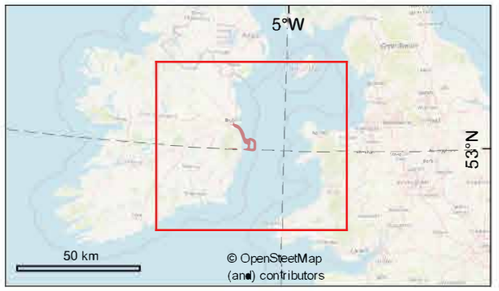
Internal descriptive code: IS - PAB, WF, RLB, BUFFs 34km, @ECC PB RLB, BUFF 20KM - MPSA - SENS INFRALIT COARSE SEDIMENT - (EIAR Vol 04 Ap 08.4 FIG 26)

Size: A3

Scale: 1:1,000,000

CRS: EPSG 25830

Rev.	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/16	AC	ME/EA	SM



Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of infralittoral mixed sediment

8°0'W 6°0'W 4°0'W
54°0'N 53°0'N 52°0'N
5,980,000 5,880,000 5,780,000
200,000 300,000 400,000
N W E S
0 50 100 150 km

Data sources: CWP, 2024; Natural Power, 2024; Marine Protected Area Advisory Group, 2023.
Background: OSM
Copyrights: Contains Irish Public Sector Data licensed under CC BY 4.0; Marine Protected Area Advisory Group (2023). Ecological sensitivity analysis of the western Irish Sea to inform future designation of Marine Protected Areas (MPAs). Report for the Department of Housing, Local Government and Heritage, Ireland. © OpenStreetMap contributors.

codling wind park

Project: Codling Wind Park

Contractor: www.naturalpower.com natural power

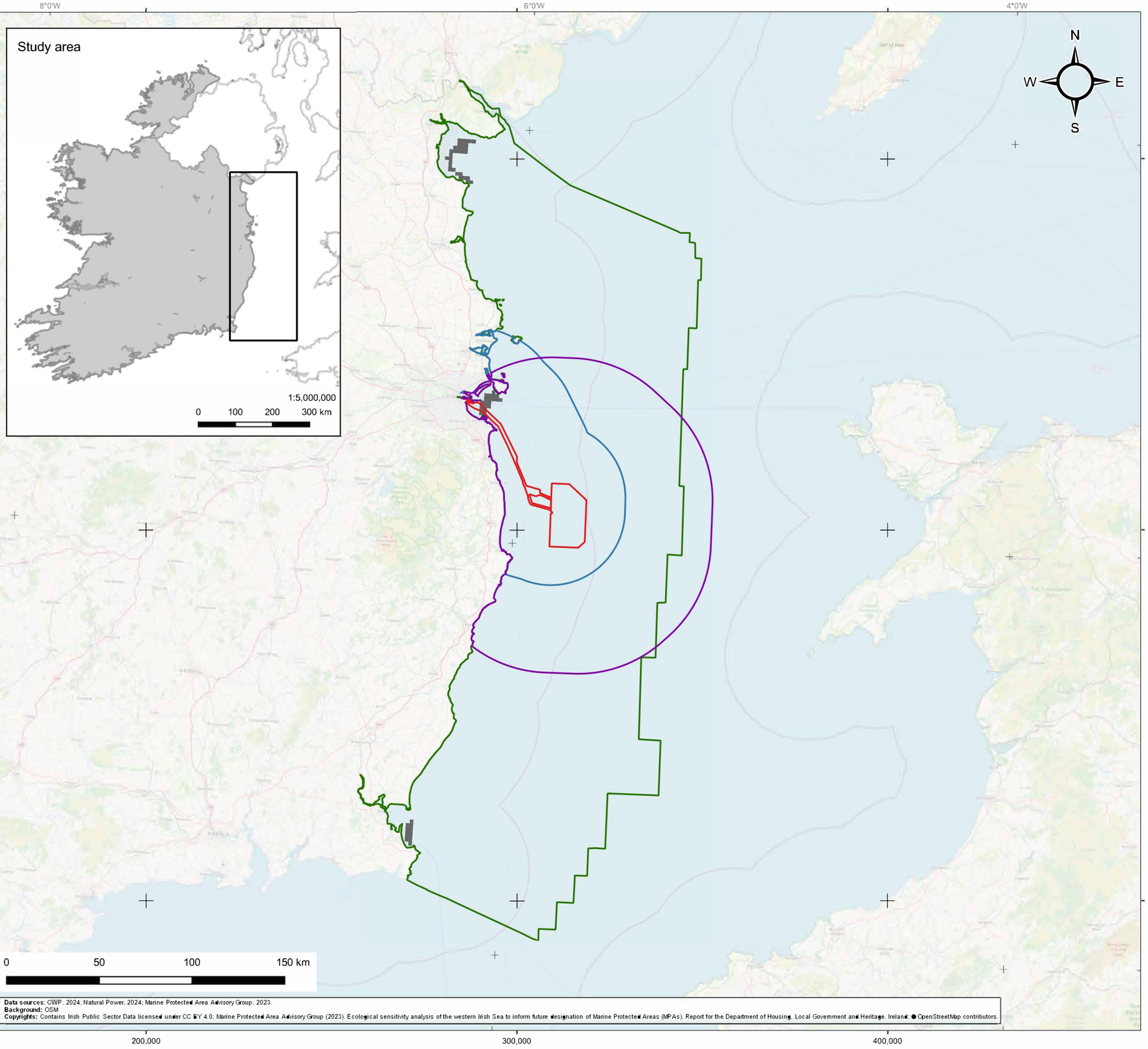
Figure 27
Spatial distribution of infralittoral mixed sediment

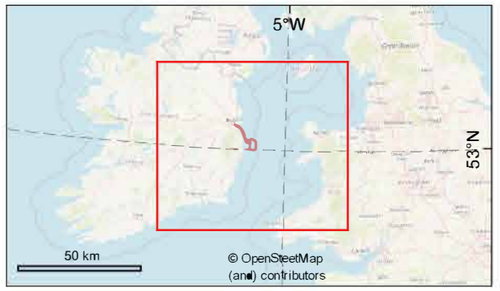
CWP doc. number: CWP-NPC-ENG-08-01-MAP-1740

Internal descriptive code: IS - PAB, WIRLB, BUFFs 34km, BECC PB RLB, BUFF 20KM - MPSA - SENS INFRALITMIX SEDIMENT - (EIAR Vol 04 Ap 08 4 FIG 27)

Size: A3 *Scale:* 1:1,000,000 *CRS:* EPSG 25830

Rev.	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/16	AC	ME/EA	SM





Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of infralittoral mud

codling wind park

Project: Codling Wind Park

Contractor: www.naturalpower.com natural power

Figure 28
Spatial distribution of infralittoral mud

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1741

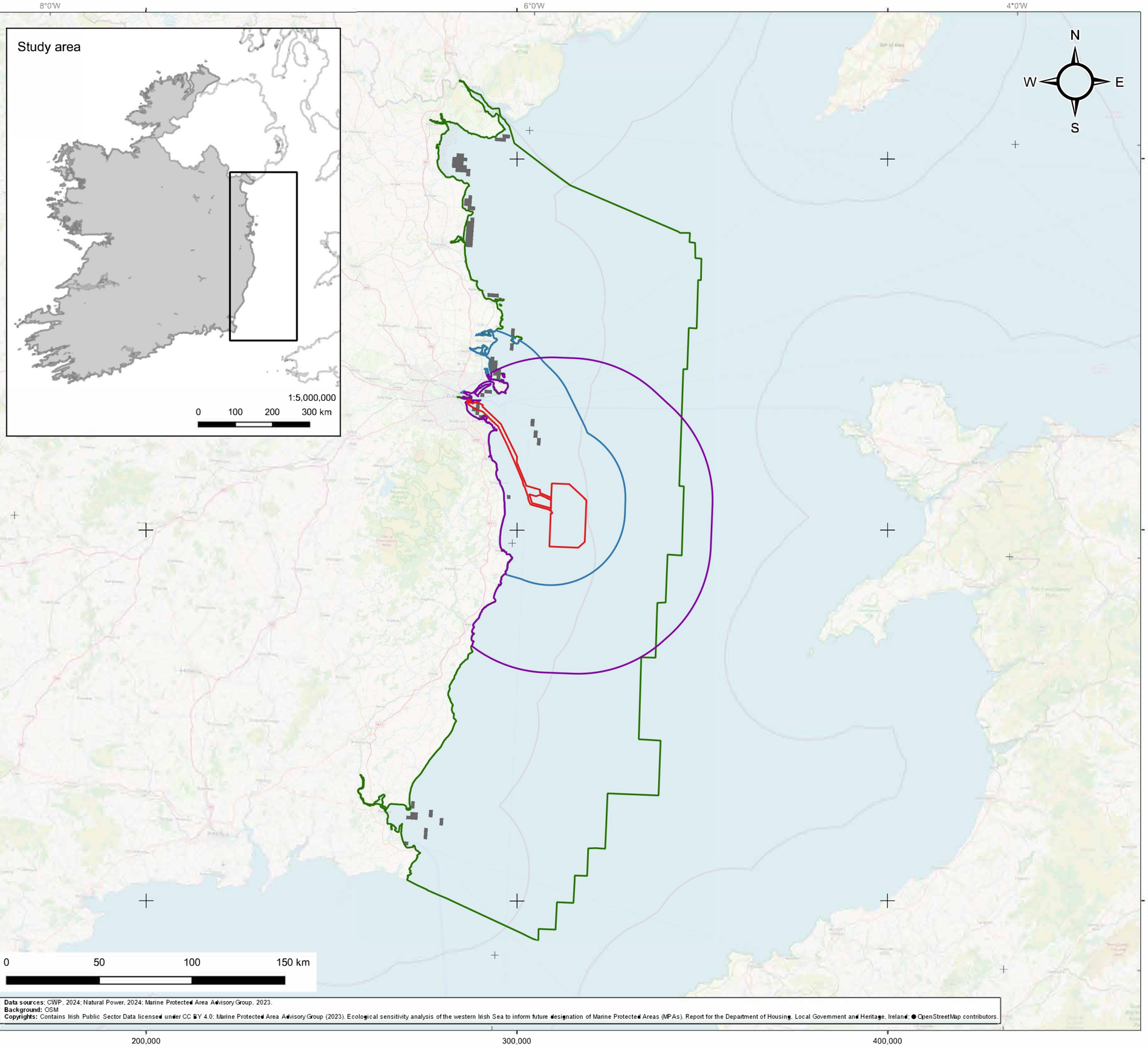
Internal descriptive code: IS - PAB, WTRLB, BUFFs 34km, OECC PB RLB, BUFF 20KM - MPSA - SENS INFRALITMUD - (EIAR Vol 04 Ass 08 FIG 28)

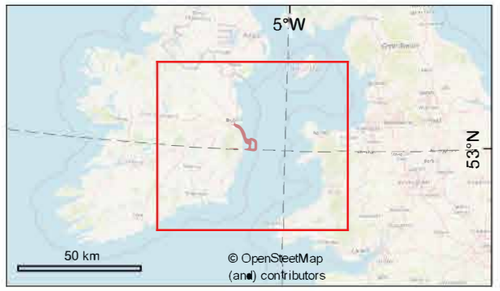
Size: A3

Scale: 1:1,000,000

CRS: EPSG 25830

Rev.	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/16	AC	ME/EA	SM





Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of infralittoral sand

codling wind park

Project: Codling Wind Park

Contractor: natural power www.naturalpower.com

Figure 29
Spatial distribution of infralittoral sand

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1742

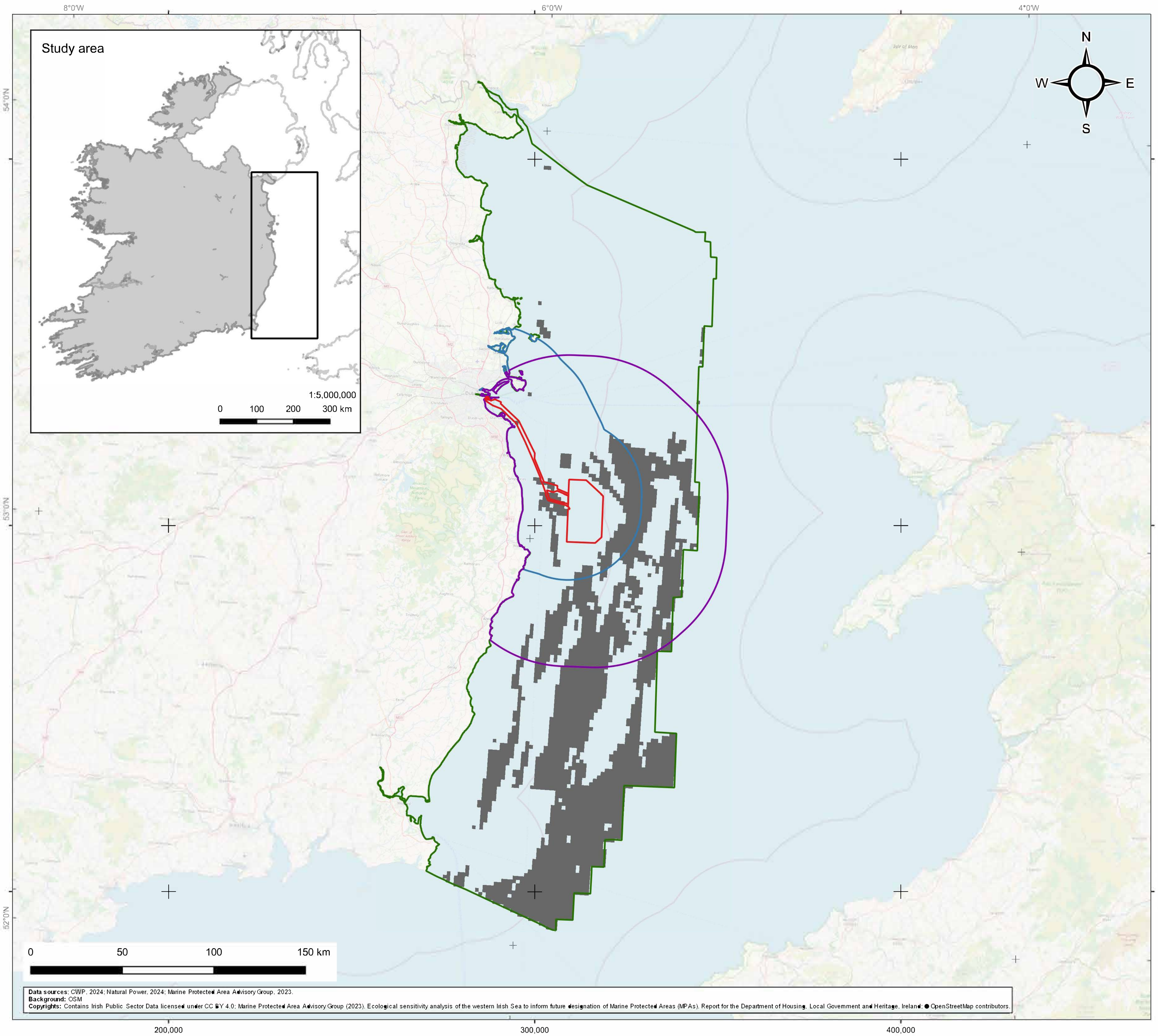
Internal descriptive code: IS - PAB, WI, RLB, BUFFs 34km, OECC PB RLB BUFF 20KM - MPSA - SENS INFRALIT SAND - (EIAR Vol.04.Ab.08.4 FIG.29)

Size: A3

Scale: 1:1,000,000

CRS: EPSG 25830

Rev.	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/16	AC	ME/EA	SM



Data sources: CWP. 2024; Natural Power. 2024; Marine Protected Area Advisory Group. 2023.
Background: OSM
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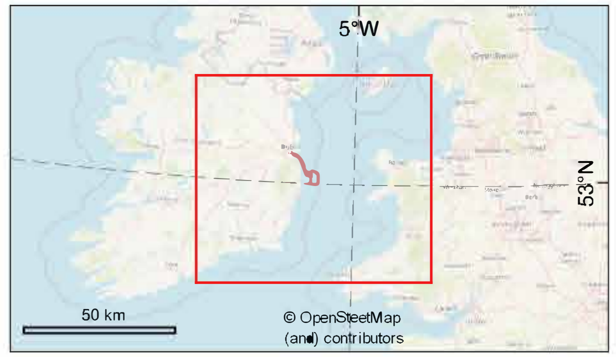


Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of offshore circalittoral coarse sediment

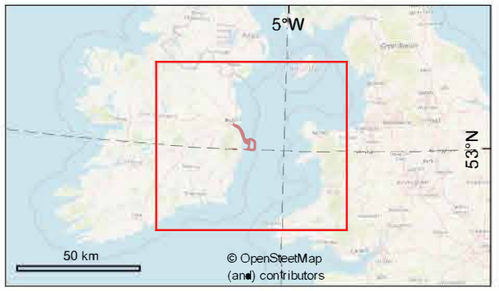
codling wind park	*Project:* Codling Wind Park	*Contractor:* www.naturalpower.com natural power

Figure 30
Spatial distribution of offshore circalittoral coarse sediment

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1743

Internal descriptive code:	*Size:* A3	*CRS:*
IS - PAB..WF.RLB .BUFFs 34km .OECC PB RLB. BUFF.20KM - MPSA SENS.OFFSH.CIRC.COARSE.SEDIMENT - (EIAR.Vol.04.Ap.08.4.FIG.30)	*Scale:* 1:1,000,000	EPSG 25830

Rev.	*Updates*	*Date*	*By*	*Chk'd*	*App'd*
00	Final for issue	2024/08/16	AC	ME/EA	SM



Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of offshore circalittoral mixed sediment

codling wind park	*Project:* Codling Wind Park	*Contractor:* www.naturalpower.com natural power

Figure 31
Spatial distribution of offshore circalittoral mixed sediment

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1744

Internal descriptive code:	*Size:*	*CRS:*
IE-PAB_WI-RLB_BUFFs 34km_@ECC PB RLB_BUFF 20OM - MPSA - SENS OFFSH CIRC MIX SEDIMENT - (EIAR Vol.04 Ap 08.4 PAG 31)	*Scale:* 1:1,000,000	EPSG 25830

Rev.	*Updates*	*Date*	*By*	*Chk'd*	*App'd*
00	Final for issue	2024/08/16	AC	ME/EA	SM

Data sources: CWP, 2024; Natural Power, 2024; Marine Protected Area Advisory Group, 2023.
Background: OSM
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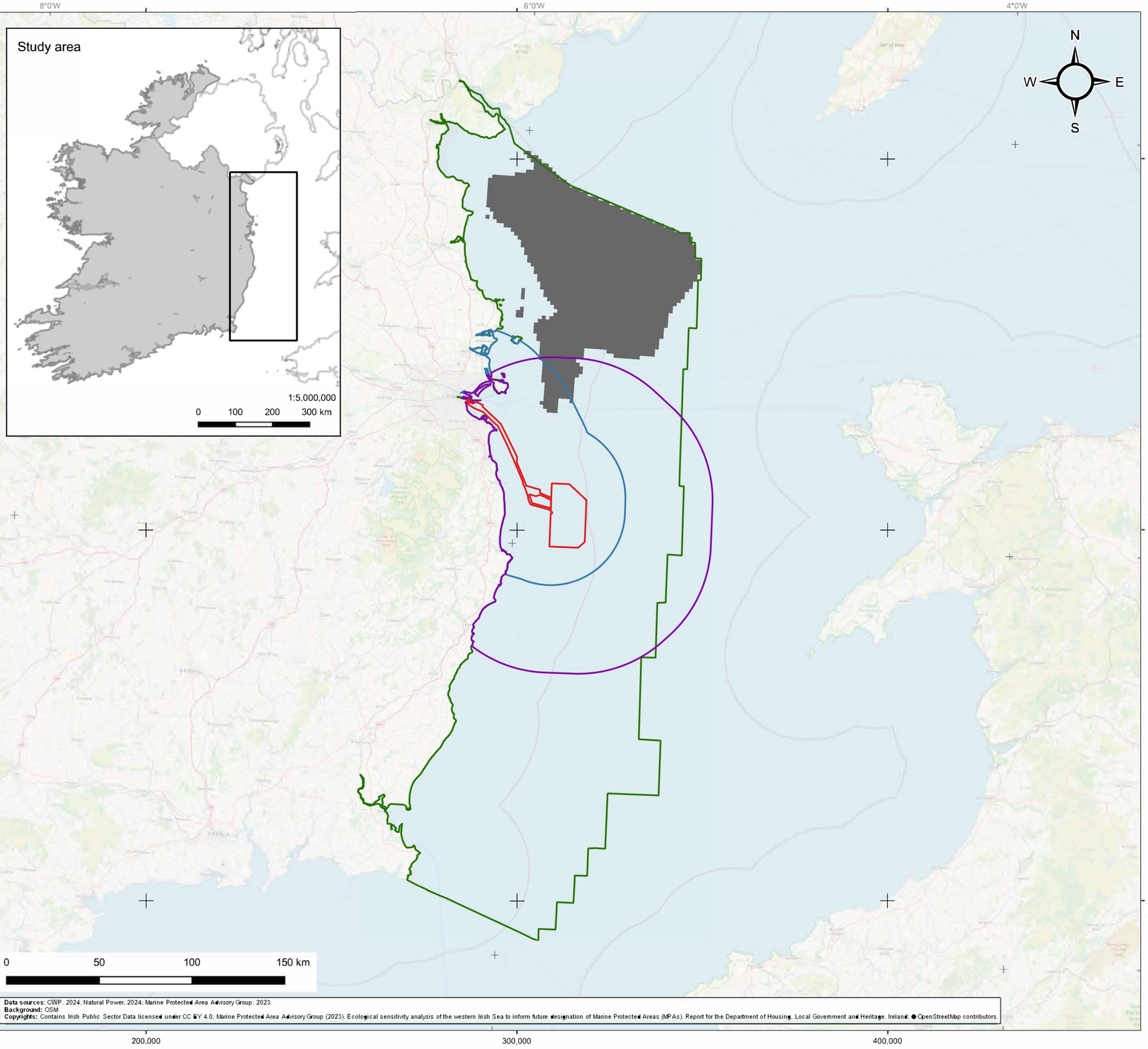
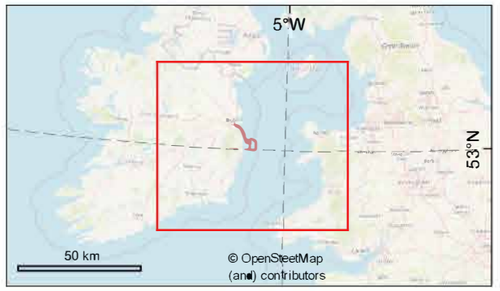




Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of offshore circalittoral mud

codling wind park

Project: Codling Wind Park

Contractor: www.naturalpower.com natural power

Figure 32
Spatial distribution of offshore circalittoral mud

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1745

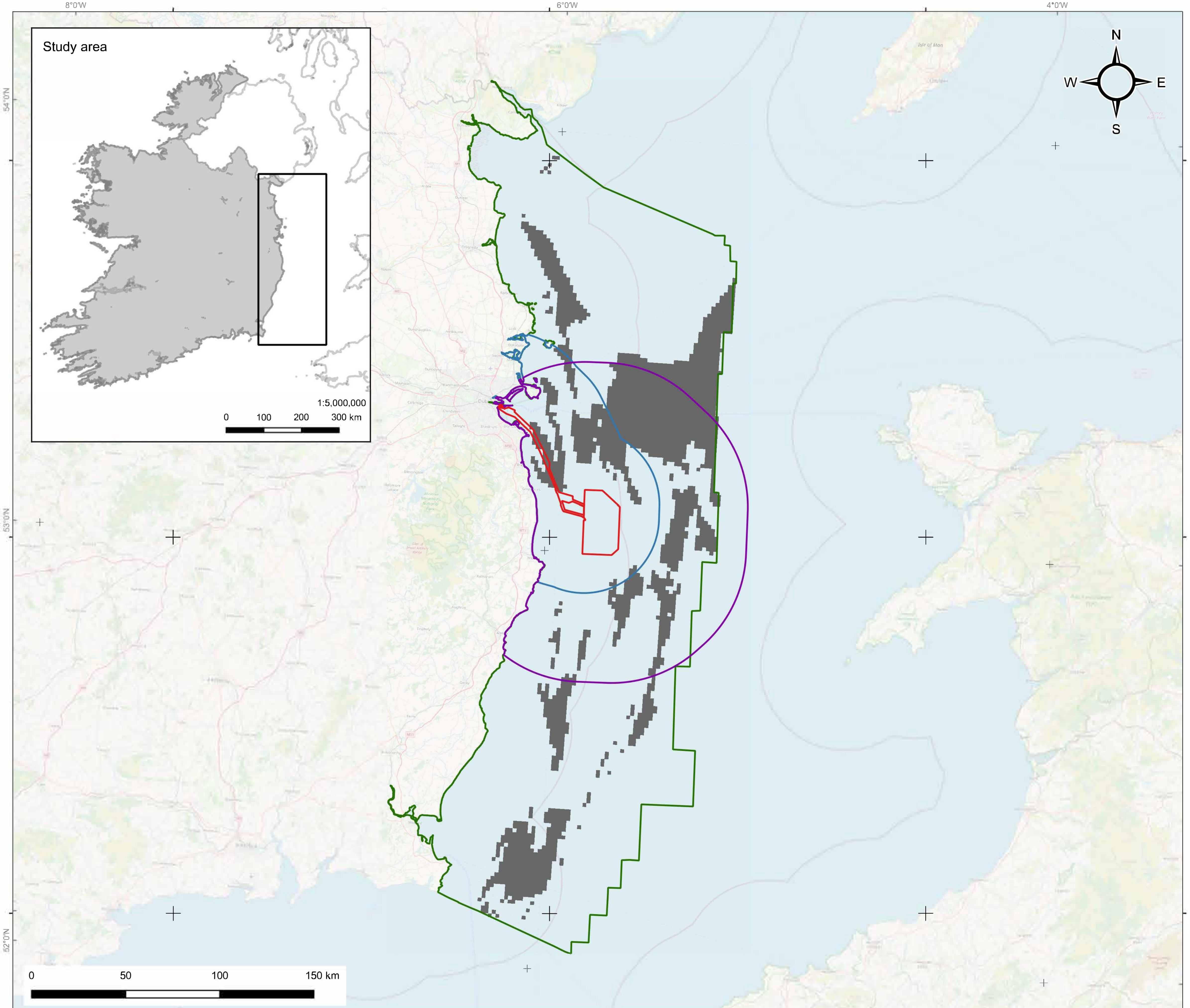
Internal descriptive code: IS - PAB, WTRLB, BUFFs 34km, OECC PB RLB, BUFF 20KM - MPSA - SENS OFFSH CIRC MUD - (EIAR Vol.04.Ao.08.4 FIG.32)

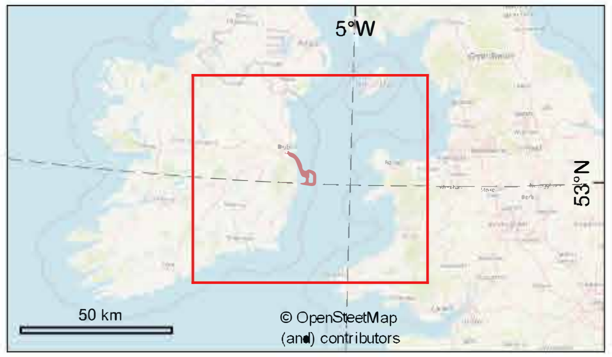
Size: A3

Scale: 1:1,000,000

CRS: EPSG 25830

Rev.	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/16	AC	ME/EA	SM





Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of offshore circalittoral sand

Data sources: CWP. 2024; Natural Power. 2024; Marine Protected Area Advisory Group. 2023.
Background: OSM

Project: Codling Wind Park

Contractor: www.naturalpower.com

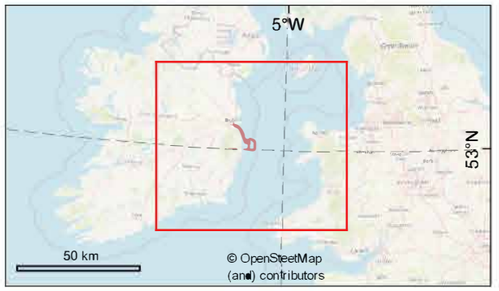
Figure 33
Spatial distribution of offshore circalittoral sand

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1746

Internal descriptive code: IS - PAB..WF.RLB .BUFFs 34km .OECC PB RLB. BUFF.20KM - MPSA SENS.OFFSH.CIRC.SAND - (EIAR.Vol.04.Ap.08.4.FIG.33)

Size: A3
Scale: 1:1,000,000
CRS: EPSG 25830

Rev	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/16	AC	ME/EA	SM



8°0'W 6°0'W 4°0'W
54°0'N 53°0'N 52°0'N
5,980,000 5,880,000 5,780,000
200,000 300,000 400,000
N W E S
0 50 100 150 km

Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of offshore circalittoral rock and biogenic reef

Data sources: CWP, 2024; Natural Power, 2024; Marine Protected Area Advisory Group, 2023.
Background: OSM
Copyrights: Contains Irish Public Sector Data licensed under CC BY 4.0; Marine Protected Area Advisory Group (2023). Ecological sensitivity analysis of the western Irish Sea to inform future designation of Marine Protected Areas (MPAs). Report for the Department of Housing, Local Government and Heritage, Ireland; © OpenStreetMap contributors.

codling wind park

Project: Codling Wind Park

Contractor: natural power www.naturalpower.com

Figure 34
Spatial distribution of offshore circalittoral rock and biogenic reef

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1747

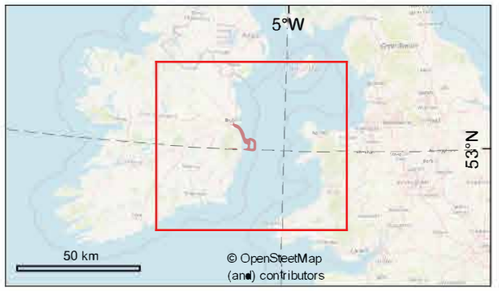
Internal descriptive code: IS - PAB, WFLB, BUFFs 34km, OECC PB RLB, BUFF 20KM, MPSA - SENS OFFSH CIRC ROCK BIO REEF - (EIAR Vol 04 Ap 08.4.PNG 34)

Size: A3

Scale: 1:1,000,000

CRS: EPSG 25830

Rev.	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/16	AC	ME/EA	SM



Legend

- Planning Application Boundary (PAB)
- Array site (34 km buffer)
- OECC (20 km buffer)
- Area of interest
- Spatial distribution of carbon sequestration

8°0'W 6°0'W 4°0'W
54°0'N 53°0'N 52°0'N
5,980,000 5,880,000 5,780,000
200,000 300,000 400,000
N W E S
0 50 100 150 km

Data sources: CWP, 2024; Natural Power, 2024; Marine Protected Area Advisory Group, 2023.
Background: OSM
Copyrights: Contains Irish Public Sector Data licensed under CC BY 4.0; Marine Protected Area Advisory Group (2023). Ecological sensitivity analysis of the western Irish Sea to inform future designation of Marine Protected Areas (MPAs). Report for the Department of Housing, Local Government and Heritage, Ireland. © OpenStreetMap contributors.

codling wind park

Project: Codling Wind Park

Contractor: www.naturalpower.com natural power

Figure 35
Spatial distribution of carbon sequestration

CWP doc. number: CWP-NPC-ENG-08-01-MAP-1748

Internal descriptive code: IS - PAB, WI RLB, BUFFs 34km, OECC PB RLB, BUFF 20KM - MPSA - SENS.CARBON.SEQUE - (EIAR Vol II Ap 08.4.FIG.35)

Size: A3

Scale: 1:1,000,000

CRS: EPSG 25830

Rev.	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/16	AC	ME/EA	SM