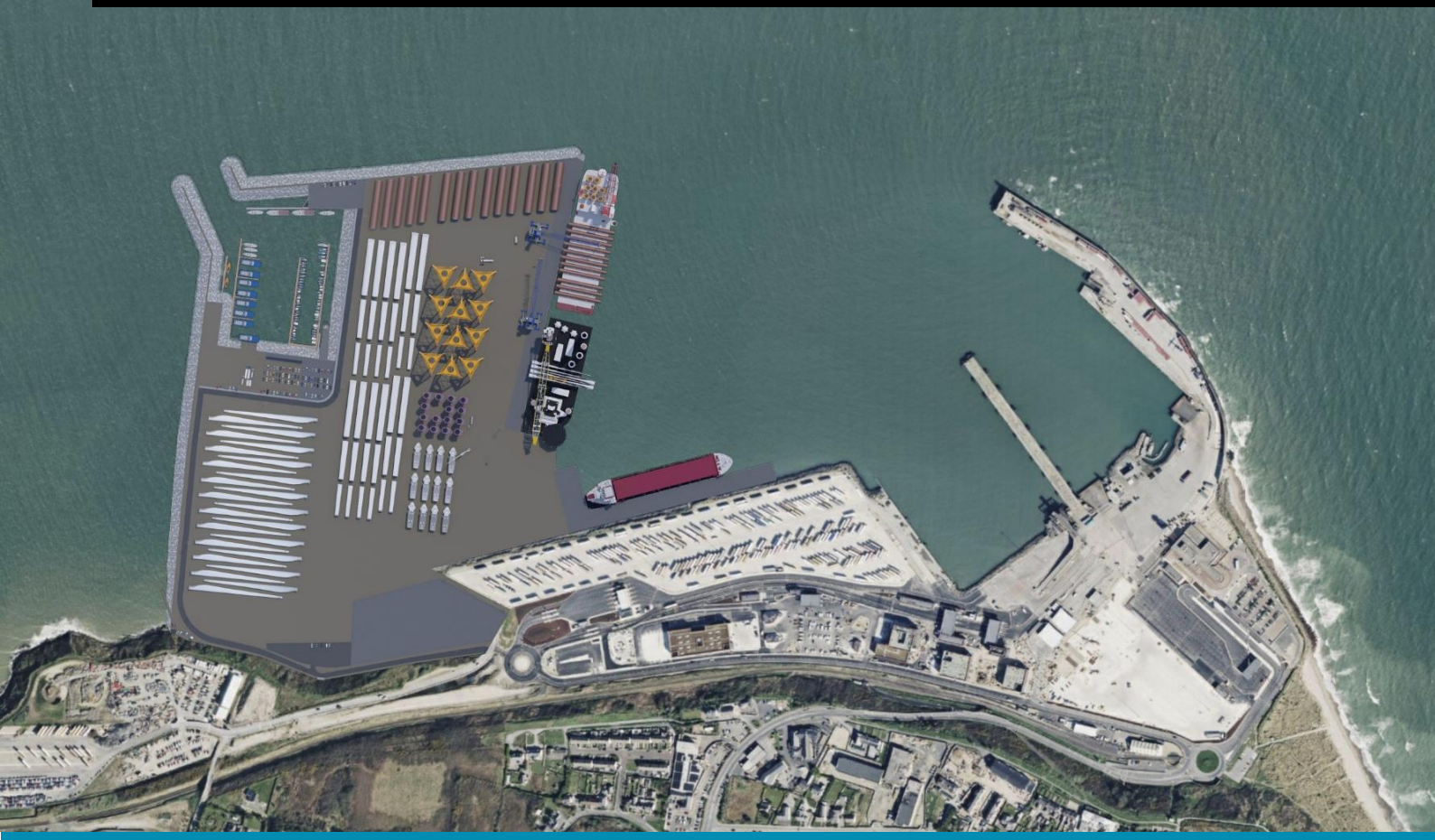
Iarnród Éireann
Irish Rail

Rosslare ORE Hub

Report for Appropriate Assessment Screening

Part 3 – Appropriate Assessment Reporting



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LIST OF ABBREVIATIONS

AA	Appropriate Assessment
ARC	Activities Requiring Consent
BCP	Border Control Post
BSc	Bachelor of Science
BSI	British Standards Institution
BSF	Below Seafloor
CD	Chart Datum
CESS	Cumulative Effects Spatial Scope
CETS	Cumulative Effects Temporal Scope
CIEEM	Chartered Institute of Ecology and Environmental Management
CPOD	Continuous Porpoise Detectors
CO	Conservation Objective
COMREG	Commission for Communications Regulation
CSD	Cutter Suction Dredger
cSPA	Candidate Special Protected Area
CTV	Crew Transfer Vessel
CWP	Codling Wind Park
DAFM	Department of Agriculture, Food, and the Marine
DAHG	Department of Arts, Heritage and the Gaeltacht
DCCAE	Department of Communications, Climate Action & Environment
DEHLG	Department of Environment, Heritage and Local Government
DHPLG	Department of Housing, Planning and Local Government
DHLGH	Department of Housing, Local Government and Heritage
DMAP	Designated Maritime Area Plan
DTTAS	Department of Transport, Tourism and Sport
EC	European Commission
EDR	Effective Deterrence Range
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EMODnet	The European Marine Observation and Data Network
EPA	Environmental Protection Agency
EPS	European Protected Species
EU	European Union
FCS	Favourable Conservation Status
FLO	Fisheries Liaison Officer
F-POD	Frequency- Porpoise Detector
GDG	Gavin and Doherty Geosolutions Ltd.
GSI	Geological Survey of Ireland
HNS	Hazardous and Noxious Substances
HWM	High Water Mark
IAQM	Institute of Air Quality Management

IEMA	Institute of Environmental Management & Assessment
IMO	International Maritime Organization
INNS	Invasive Non-Native Species
INFOMAR	Integrated Mapping for the Sustainable Development of Ireland's Marine Resource
INPN	Inventaire National du Patrimoine Naturel
IROPI	Imperative Reasons of Overriding Public Interest
ISO	International Organization for Standardization
ISPS	International Ship and Port Facility Security ISPS
ITM	Irish Transverse Mercator
IWDDS	Interactive Web Data Delivery System
I-WeBS	Irish-Wetland Bird Survey
JNCC	Joint Nature Conservation Committee
LSE	Likely Significant Effects
MAP	Maritime Area Planning
MARPOL	The International Convention for the Prevention of Pollution from Ships
MI	Marine Institute
MAP	Maritime Area Planning Act 2021
MARA	Maritime Area Regulatory Authority
MarLIN	The Marine Life Information Network
MarESA	Marine Evidence-based Sensitivity Assessment
MHW	Mean High Water
MMO	Marine Mammal Observer
MU	Management Unit
NBDC	National Biodiversity Data Centre
NIS	Natura Impact Statement
NM	Nautical Mile
NMS	National Monuments Database
NPWS	National Parks and Wildlife Service
NRA	National Roads Authority
NRW	Natural Resources Wales
OPR	Office for Planning Regulation
ORE	Offshore Renewable Energy
OWF	Offshore Wind Farm
O&M	Operations & Maintenance
PRA	Preliminary Roost Assessment
PCW	Phocid Carnivores in Water
PTS	Permanent Threshold Shift
QI	Qualifying Interests
REAR	Rosslare Europort Access Road
RNLI	Royal National Lifeboat Institution
RoRo	Roll On Roll Off
SAC	Special Area of Conservation
SAM	Static Acoustic Monitoring
SCI	Special Conservation Interest

SPA	Special Protection Area
SPL	Sound Pressure Level
SPR	Source - Pathway - Receptor
SSC	Suspended Sediment Concentration
SSCO	Site-Specific Conservation Objectives
TSHD	Trailing Suction Hopper Dredger
TTS	Temporary Threshold Shift
UAV	Unmanned Aerial Vehicle
UK	United Kingdom
URL	Uniform Resource Locator
USBL	Ultra -Short Baseline
WCC	Wexford County Council
WFD	Water Framework Directive
WWTP	Wastewater Treatment Plant
ZOI	Zone of Influence

GLOSSARY OF TERMS

Appropriate Assessment (AA)	An Appropriate Assessment (AA) is an assessment of the potential adverse effects of a plan or project (in combination with other plans or projects) on Special Areas of Conservation and Special Protection Areas. These Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are protected by both National and European Law.
Aquaculture Sites	Aquaculture sites include shellfish, finfish and seaweed production areas as monitored for licensing purposes.
Benthic Ecology	Benthic ecology is the study of organisms that make up bottom communities (sediments, seagrass communities and rock outcrops) in lakes, streams, estuaries and oceans, to determine environmental health and conduct environmental appraisals.
Coastal Lagoons	Lagoons are expanses of coastal salt water, of varying salinity, which are wholly or partially separated from the sea by sand banks or shingle, or less frequently, by rocks.
Candidate Special Protected Area	Candidate SPA yet to be designated by Statutory instrument under the Birds Directive, though afforded the same legal protection as a designated SPA
Designated Shellfish Waters	Designated Shellfish Waters under the European Union Shellfish Waters Directive are sites designed to protect the aquatic habitat of bivalve and gastropod molluscs, including oysters, mussels, cockles, scallops and clams.
Ecology	Ecology is a branch of biology concerning the spatial and temporal patterns of the distribution and abundance of organisms, including the causes and consequences.
Environmental Receptors	Environmental receptors are any organism, habitat or natural resource which could be adversely affected by an activity.
Estuaries	Estuaries are coastal inlets with a significant freshwater influence. They are diverse, dynamic habitats that help maintain the health of coastal ecosystems. They are a significant resource for bird and mammal species for feeding, breeding, and resting, and depending on their geomorphology and hydrology support a mosaic of other habitats, including Annex I habitats such as mudflats.
Favourable Conservation Status	The European Union Habitats Directive requires EU Member States to achieve Favourable Conservation Status of natural habitats and species, defined with respect to species by Article 1 (i) of the Directive as below: "conservation status will be taken as 'favourable' when: population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis."
Fish Nursery Grounds	Nursery grounds are habitats that enhance the growth and survival of juvenile fish.
Fish Spawning Grounds	Spawning grounds are areas where fish congregate to lay and fertilise their eggs.
Habitats Directive	Adopted in 1992, the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora aims to promote the maintenance of biodiversity, taking account of economic,

	social, cultural and regional requirements. It forms the cornerstone of Europe's nature conservation policy with the Birds Directive and establishes the EU wide Natura 2000 ecological network of protected areas, safeguarded against potentially damaging developments.
In-combination effects	Some projects are unlikely to have significant effects on their own. However, the effects in- combination with other plans or projects could be significant. The in-combination assessment should concentrate on projects/plans that could in fact act in-combination with the current project to affect Site-Specific conservation objectives.
Kleptoparasitism	Kleptoparasitism in birds is a foraging behaviour where one bird steals food that has been caught, collected, or prepared by another bird or animal. This can occur within the same species (intraspecific kleptoparasitism) or between different species (interspecific kleptoparasitism).
MARPOL	MARPOL is the main international convention aimed at the prevention of pollution from ships caused by operational or accidental causes. It was adopted at the International Maritime Organization (IMO) in 1973. The Protocol of 1978 was adopted in response to a number of tanker accidents in 1976–1977.
Mudflats	Tidal mudflat habitat is comprised of the intertidal section of the coastline where muds dominate.
Natura Impact Statement	A Natura Impact Statement (NIS) is the statement prepared following Appropriate Assessment (AA) of Natura 2000 sites as required under the EU Habitats Directive which presents information on the assessment and the process of collating data on a project and its potential significant impacts on Natura 2000 site(s).
Pollution Event	A 'pollution incident' includes a leak, spill or escape of a substance, or circumstances in which this is likely to occur.
Precautionary Principle	The precautionary principle means that where the most reliable information available leaves obvious doubt as to the absence of significant effects, the project cannot be screened out and an appropriate assessment must be carried out.
Receiving Environment	The receiving environment is the environment upon which a proposed activity might have effects.
Reefs	Reefs are marine features with hard substrate available for colonisation by plants and animals. In Irish waters they range from the intertidal to depths of 4,500m and more than 400km from the coast.
Sandbanks	Sandbanks are distinct banks that arise from horizontal or sloping plains of sediment that range from gravel to fine sand. They are primarily composed of sandy sediments permanently covered by water, at depths of less than 20m below chart datum.
Sandflats	Tidal sandflat habitat is comprised of the intertidal section of the coastline where sands dominate.
Source-Pathway-Receptor	The Source-Pathway-Receptor model is the universally accepted method of determining if a link (pathway) exists between the source of an impact and the environmental receptor that may result in an effect (positive or negative) on the environmental receptor
Special Areas of Conservation (SAC)	These are prime wildlife conservation areas considered to be important on a European as well as national level. The EU Habitats Directive lists certain habitats and species that must be protected within SACs.

Special Protection Areas (SPA)	Ireland is required under the terms of the EU Birds Directive (2009/147/EC) to designate Special Protection Areas (SPAs) for the protection of: Listed rare and vulnerable species; regularly occurring migratory species and wetlands, especially those of international importance.
Weir box	Damlike structure used to control the drainage of water from a lagoon.

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1 INTRODUCTION

1.1 GENERAL

This report is the Screening for Appropriate Assessment (AA) for the construction and operation of an Offshore Renewable Energy (ORE) Hub at Rosslare Europort (hereafter the 'Proposed Development'). Iarnród Éireann – Irish Rail intends to develop port infrastructure within a maritime area adjacent to and immediately to the north of Rosslare Europort, in County Wexford on the south-east coast of Ireland, which will be reclaimed to support the development of offshore wind farms in the Celtic and Irish Seas. The existing small boat harbour at Rosslare Europort will be incorporated through infilling into the newly reclaimed port area and a new small boat harbour created with permanent access to deeper water.

This AA Screening Report presents an assessment of whether the Proposed Development, alone or in combination with other plans and projects, is likely to have significant effects on a European Site(s) in view of best scientific knowledge and the site-specific conservation objectives (SSCOs) of the site(s). European Sites, also known as Natura 2000 sites, are those identified as sites of European Community importance designated as Special Areas of Conservation (SAC) under the Habitats Directive or as Special Protection Areas (SPA) under the Birds Directive.

This report has been prepared by Nicholas O'Dwyer Ltd. (NOD) and Gavin and Doherty Geosolutions (GDG) on behalf of Iarnród Éireann - Irish Rail to inform Stage 1 of the AA process to be undertaken by An Coimisiún Pleanála (hereafter 'the Commission'), as the competent authority, in considering the application for planning permission for the Proposed Development.

1.2 AIM OF THIS REPORT

This report includes information to support Stage 1 of the AA process (Screening for AA), as required under the Habitats Directive (92/43/EEC) which as transposed in Ireland under Part XAB of the Planning and Development Act 2000, as amended ('the Planning Acts').

The report also supports the development consent application process and provides the necessary information to the Commission to assist them in making an informed decision on the likely significant effects of this project on Natura 2000 sites, and their designated Annex I habitats and Annex II species Qualifying Interests (QIs), and their designated Special Conservation Interest (SCI) species.

An overview of the AA Stages is included in section 2.3. Where it has been concluded that significant effects are likely, these effects are examined further in Stage 2 AA (i.e., the Natura Impact Statement or NIS) which accompanies the application for planning permission for the Proposed Development.

1.3 REPORT STRUCTURE

This report is structured into the following sections, which include information relating to the AA process, proposed development activities and potential impacts and the receiving environment including relevant Natura 2000 sites and features. Specifically, the sections of this report are as follows:

- Section 1: Introduction
- Section 2: Appropriate Assessment Background and Methodology
- Section 3: Proposed Development
- Section 4: Environmental Setting
- Section 5: Stage 1 Screening for Appropriate Assessment
- Section 6: Screening Outcome

1.4 STATEMENT OF AUTHORITY

This report has been prepared by Charlotte Manwaring (BSc. Hons Geological Science, MSc. Geochemistry). Charlotte is a Senior Environmental Scientist at GDG with 25 years' experience and an IEMA Practitioner. She has worked in environmental, compliance, planning and monitoring for both the public and private sector. She has experience in AA screening for Foreshore Licence Applications and Maritime Usage Licences along with environmental impact assessment of port expansion, onshore windfarms, energy from waste projects, and marine licencing.

This report has been reviewed by Joey O'Connor (BSc. Hons Marine Science, MSc. Engineering in the Coastal Environment) and Nick Marchant (BSc. Environmental Science, MSc in Ecosystem Conservation and Landscape Management, MCIEEM).

Joey is an environmental impact assessment practitioner and marine ecologist with coastal engineering expertise and extensive experience of environmental assessment for both the public and private sectors. Joey is the Environmental Lead and EIA coordinator for the Rosslare ORE Hub project.

Nick has coordinated ecological assessments for over 500 projects throughout the island of Ireland, including wind farms, infrastructure projects (power lines, water pipelines), and a range of residential and commercial developments. He previously worked as project manager, senior scientist, and ecological consultant with the Borneo Nature Foundation in Indonesia, and as a biodiversity officer with Galway County Council.

Table 1.1 lists the qualifications and expertise of other key members of the project team whose contributions have informed this AA Screening Report.

Table 1.1: List of specialists that have contributed to the AA Screening Report

Specialist Contributor	Qualifications	Company	Topic	Experience	Years experience
Colin Barton	BSc (Hons) Biology (Ecology)	Cork Ecology	Ornithology	Cork Ecology is an independent environmental consultancy run by Colin Barton and based in Clonakilty in south-west Ireland. Colin has been working on offshore wind projects and terrestrial projects since 2001, specialising in all aspects of ornithology. He has provided ornithological support for several offshore wind projects in Irish and in UK waters, with key inputs including baseline and impact assessment chapters as well as HRA/NIS documents on birds. Colin provided ornithological input to the AA screening report.	23
Louise Scally	MSc (Botany) PhD (Botany)	MERC Environmental	Benthic Ecology	Louise is a Principal Marine Ecologist with MERC. She has over 20 years of experience across marine survey, and monitoring. She was the lead marine ecologist for the national programme of surveillance monitoring of the conservation status of all marine Annex I habitats in Ireland for the period 2016 to 2020 as required under Article 11 of the EU Habitats Directive. She is currently fulfilling the same role for the 2021 to 2025 reporting period. Louise is the marine benthic ecology lead for the Rosslare ORE Hub Project. Louise provided benthic ecology input for the AA Screening Report	
Maggie Starr	BSc (Hons) (Marine Science)	GDG	Terrestrial Ecology, Fish Ecology, Marine Mammal	Maggie is an Ecologist and Ornithologist with experience in both onshore and offshore ecological consultancy and surveying. Her expertise spans a wide range of ecological assessments, including Appropriate Assessment screenings and specialised freshwater, mammal, bird and habitat	3

Specialist Contributor	Qualifications	Company	Topic	Experience	Years experience
			Ecology, Ornithology	surveys and identification of seabird species during offshore digital aerial surveys. Maggie is a certified Marine Mammal Observer (MMO, JNCC accredited), and holds additional certifications for conducting freshwater ecological surveys, including Freshwater Pearl Mussels, Freshwater White-clawed Crayfish and riverine Q-values. Maggie provided terrestrial ecology input for the AA Screening Report	

2 APPROPRIATE ASSESSMENT BACKGROUND AND METHODOLOGY

The purpose of this report is to inform the AA process as required under the Habitats Directive (92/43/EEC). The AA Screening contained in section 5 of this report concludes on whether the proposed construction activities and operation activities, both alone and in combination with other plans or projects, are likely to have a significant effect on any Natura 2000 site or its qualifying interests.

2.1 LEGISLATIVE BACKGROUND

In Ireland, the legislative framework for AA is based on the European Union's Habitats Directive (92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna) and Birds Directive (2009/147/EC), both of which have been transposed into Irish law through the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477/2011), as amended and under Part XAB of the Planning Acts. These laws establish a network of protected areas known as Natura 2000 sites[1], which include Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), which are safeguarded against potentially damaging developments.

Under Article 6(3) of the Habitats Directive, as implemented in Ireland:

> *"Any plan or project not directly connected with or necessary to the management of the site (Natura 2000 site) but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to Appropriate Assessment of its implications for the site in view of the site's conservation objectives".*

This requirement has been integrated in Ireland planning and development legislation by a requirement to screen developments for AA and to conduct an AA where a plan or project is likely to have a significant effect on a Natura 2000 site. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of Article 6(4), the competent national authorities shall agree to the plan or project only having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

2.2 GUIDANCE DOCUMENTS

Preparation of this report has been informed with due consideration of the following guidance documents:

- Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (Department of Environment, Heritage and Local Government, 2010 revision).
- European Commission Notice C (2021) 6913 'Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the

[1] Also referred to as European Protected Sites

Habitats Directive 92/43/EEC', Office for Official Publications of the European Communities, Luxembourg (EC,2021).

- Managing Natura 2000 Sites - The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (European Commission 2019).
- Office of the Planning Regulator (2021). Appropriate Assessment Screening for Development Management. OPR Practice Note 01 – PN01.
- European Commission (2007). Clarification of the Concepts of: Alternative Solution, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence, Opinion of the Commission.
- Chartered Institute of Ecology and Environmental Management (CIEEM) Version 1.1 (September 2019), Guidelines for Ecological Impact Assessment in the UK and Ireland.
- Communication from the Commission on the precautionary principle (European Commission, 2000).

2.3 OVERVIEW OF THE AA STAGES

The European Commission's methodological guidance (EC, 2021) promotes a three-stage process to complete an AA and outlines the issues and tests at each stage. **An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.** The steps and procedures involved in completing each stage, as described in the guidance, are shown in Figure 2.1.

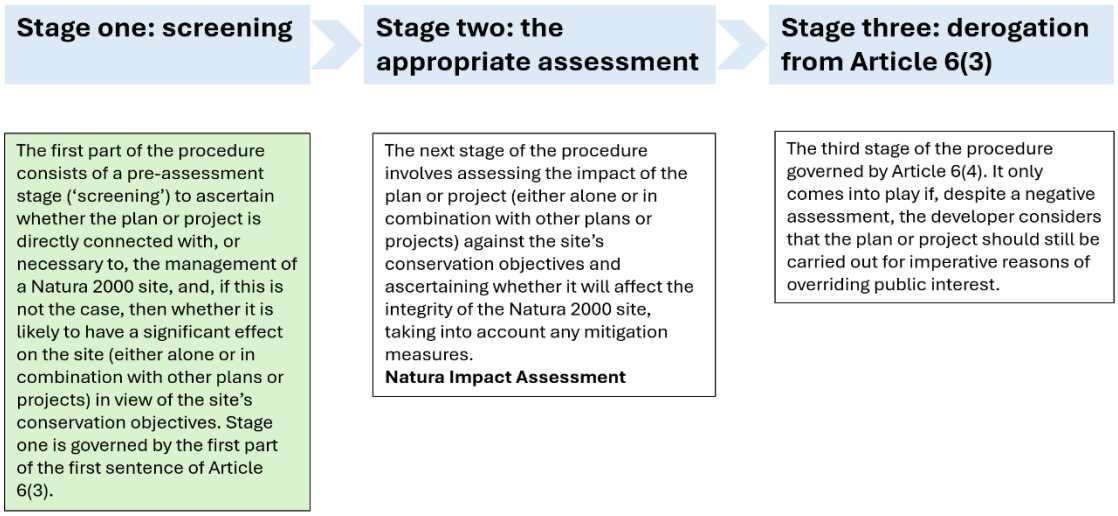

Figure 2.1: Stages in the AA process (EC, 2021)

2.3.1 STAGE 1. SCREENING FOR APPROPRIATE ASSESSMENT

Screening is the process that considers the first two tests of Article 6(3):

- whether a plan or project is directly connected to or necessary for the management of the site and,
- whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a Natura 2000 site in view of its site-specific conservation objectives.

If the effects are deemed likely to be significant or potentially significant or they are uncertain, then the process must proceed to Stage 2. Screening should be undertaken without the inclusion of mitigation, unless potential impacts clearly can be avoided through the modification or redesign of the plan or project, in which case the screening process is repeated on the altered plan. The greatest level of evidence and justification will be needed in circumstances when the process ends at screening stage on grounds of no impact.

2.3.2 STAGE 2. APPROPRIATE ASSESSMENT

This stage considers whether the plan or project, alone or in combination with other projects or plans, will have adverse effects on the integrity of a Natura 2000 site, and includes any mitigation measures necessary to avoid, reduce or minimise negative effects. The proponent of the plan or project is required to submit a NIS, which is a report of a targeted, professional, scientific examination of the plan or project and the relevant Natura 2000 sites, to identify and characterise any possible implications for the site in view of the site's conservation objectives, taking account of in-combination effects. This provides information to enable the competent authority to carry out Stage 2 of the AA process. If the assessment is negative (i.e., if adverse effects on the integrity of a site cannot be excluded) then the process must proceed to Stage 3, or the plan or project should not proceed.

2.3.3 STAGE 3. IMPERATIVE REASONS OF OVERRIDING PUBLIC INTEREST (IROPI)/DEROGATION

Stage 3 is the main derogation process of Article 6(4), which examines whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project that will have adverse effects on the integrity of a Natura 2000 site to proceed in cases where it has been established that no less damaging alternative solution exists. Extra protection measures for Annex I priority habitats come into effect when making an IROPI case. Compensatory measures must be proposed and assessed. The European Commission must be informed of the compensatory measures. Compensatory measures must be practical, implementable, likely to succeed, proportionate and enforceable, and they must be approved by the Minister for Housing, Planning and Local Government.

2.4 METHODOLOGY

This document includes information to support Stage 1 of the AA and has been prepared with due consideration of the guidance documents described in section 2.2 of this report.

As the proposed works are not directly connected to or necessary for the management of a Natura 2000 site, this document focuses on assessing whether the works, alone or in combination with other plans and projects, are likely to have significant effects on any Natura 2000 site in view of their site-specific conservation objectives.

This report has been informed by a combination of project-specific surveys, as described in section 4 and publicly available datasets and available scientific literature that has informed the characterisation of the receiving environment and supported the identification and assessment of potential impacts and their significance. The sources of the information used are cited throughout this report and listed in the References section.

The examination, analysis and evaluation of the relevant information that has supported the AA process conducted and documented in this report has followed the precautionary principle throughout. The precautionary principle is derived from the EU Treaty and developed in case law (European Commission, 2000). It applies to AA where the most reliable information available leaves obvious doubt as to the absence of significant effects (OPR, 2021). The assessment must be robust and based on the best up-to-date scientific knowledge and able to rule out all reasonable scientific doubt that the proposal would not have an adverse effect on the integrity of the site (Department of Environment, Heritage and Local Government, 2010 revision).

A description of the location, scale and nature of the Proposed Development, and a summary of the proposed construction and operational activities is included in section 3 of this report.

Since 1 January 2021, nature conservation areas including SACs and SPAs in the UK (including Northern Ireland) are no longer part of the Natura 2000 network (Office of the Planning Regulator, 2021) and as such these sites are not considered for AA screening in this report.

2.4.1 SOURCE-PATHWAY-RECEPTOR

In determining the connectivity of the impacts of the Proposed Development activities to relevant features and sites, guidance issued by the Office of the Planning Regulator (OPR, 2021) was used to inform application of the Source-Pathway-Receptor (S-P-R) model.

> *"A European site will only be at risk from likely significant effects where the Source-Pathway-Receptor link exists between the proposed development and the European site." (OPR, 2021).*

For an effect to be established, all three elements of Source-Pathway-Receptor model must be in place. The absence or removal of one of the elements of the mechanism is sufficient to conclude that a potential effect is not of any relevance or significance.

- Source(s) – Identifies the activities associated with the Proposed Development and types of impacts (e.g., noise generated by dredging activities).

- Pathway(s) – Route that a hazard/impact takes to reach the receptor (e.g., water as a pathway for underwater noise propagation); and,
- Receptor(s) – A Qualifying Interest (QI), Special Conservation Interest (SCI) or ecological feature utilised by the QIs or SCIs of a Natura 2000 site (e.g., qualifying habitats and species of Natura 2000 sites). This includes consideration of the site-specific conservation objectives specified to maintain or restore favourable conservation status of SACs and SPAs, which are intrinsically linked to the QIs and SCIs for which these sites are designated.

2.4.2 LIKELY SIGNIFICANT EFFECTS

The likely significant effect test establishes whether any likelihood of significant effects on Natura 2000 sites can be ruled out.

Likely – means a risk or possibility of effects occurring that cannot be ruled out based on objective information.

Significant effects include those which may undermine the site-specific conservation objectives of the Natura 2000 site. The significance of ecological effects depends on:

- the ecological characteristics of the species or habitat, including their structure, function, conservation status and sensitivity to change, and/or
- the character, magnitude, duration, consequences and probability of the impacts occurring.

The Natura 2000 site information used in this report is based on the most up-to-date data available from the National Parks and Wildlife Service (NPWS) www.npws.ie and the European Commission https://ec.europa.eu/environment/nature/natura2000/index_en.htm.

Note, candidate Natura 2000 Sites including cSPAs have also been considered, as have existing SACs with recently added QIs at the time of writing. For example, Harbour porpoise was added as a qualifying interest for the Carnsore Point SAC in March 2024.

No cSACs have been identified for consideration.

2.4.3 CONSERVATION OBJECTIVES

Conservation Objectives for Irish Natura 2000 sites are prepared by NPWS.

In 2021, Ireland was found to be in breach of the Birds and Habitats Directive for not having prepared Site-Specific Conservation Objectives (SSCOs) for all Irish Natura 2000 sites (European Commission v Ireland 2021/03933, known as the Measures Case). Since this judgement, NPWS have accelerated publication of SSCOs and have stated that all sites are now covered by SSCOs (DHLGH, 2025).

The published NPWS SSCO documents note that an AA based on the most up-to-date Conservation Objectives will remain valid even if the targets are subsequently updated, providing they were the most recent objectives available when the assessment was carried out.

The most up-to-date, publicly available information regarding SSCOs has been used for the Natura 2000 sites considered in this assessment, and details in relation to the Qualifying Interests and Special Conservation Interests and associated conservation measures and targets of these Natura

2000 sites are based on data for these sites sourced from the NPWS website in May 2025. The publication date, version, date of access and URL for each SSCO document reviewed to inform this assessment are included in Appendix C of this report.

2.4.4 CONSULTATION

OPR (2021) states that AA screening exercises that should be referred by the competent authority include:

- Development proposals located within or immediately adjacent to a European site.
- Applications accompanied by a NIS (i.e., where AA is required).

Note AA screening does not apply to pre-application consultation per section 247 of the Planning Acts as this consultation does not represent a decision to allow a project within the meaning of the Directives. However, the Planning Acts indicate that in any consultations, a planning authority must advise of the procedures involved in considering a planning application and the matter should be discussed to inform the applicant generally of AA considerations.

As detailed in EIAR Chapter 4: Scoping and Consultation which accompanies the application for planning permission, the Project Team have undertaken an extensive consultation process with relevant stakeholders in relation to the Proposed Development. This includes section 247 pre-application consultation with the competent authority (the Commission) and consultation with Wexford County Council, NPWS, other relevant stakeholders and the public in general, consistent with the principle of early public participation under the Aarhus Convention.

3 PROPOSED DEVELOPMENT

3.1 OVERVIEW

Iarnród Éireann – Irish Rail is applying for development permission for the Rosslare Offshore Renewable Energy Hub (hereafter the 'Proposed Development'), located immediately adjacent and to the northwest of the existing Rosslare Europort at Rosslare Harbour in County Wexford, which is operated by Iarnród Éireann. The Proposed Development includes capital dredging to achieve navigable depths for vessels delivering ORE components; land reclamation to create a storage area for these components; and construction of two new berths to facilitate loading and unloading of ORE components. The land reclamation works include infilling the existing small boat harbour, after the construction of a new small boat harbour. The Proposed Development also includes the installation of a new slipway and facility for local clubs, such as the Sea Scouts.

The purpose of the Proposed Development is to provide a facility for the efficient handling and storage, marshalling, staging and integration of ORE components to facilitate installation of offshore wind energy projects by ORE developers and operators. The Proposed Development is designed to provide facilities that accommodate a wide range of infrastructure uses, both for current requirements and anticipated future needs. For instance, the Proposed Development could be used for traditional port activities if required, including during periods of reduced ORE-related activity. Refer to EIAR Chapter 6: Project Description for further detail.

The EIAR considers a project design life for the quay structures and marine works of 50 years from completion of construction. All port facilities developed for the ORE Hub will be retained and required by Iarnród Éireann – Irish Rail for traditional port activities[2] beyond this time period (with ongoing maintenance and repairs undertaken) and therefore it is not considered necessary to plan for decommissioning and reinstatement works or for closure of the quays, storage areas, new Small Boat Harbour or parts of the ORE Hub once they are in-place.

The site location and Proposed Development Boundary are shown on Figure 3.1. The Proposed Development Boundary (i.e., the area where planning permission is sought to construct and operate the Proposed Development) encompasses a total area of 80.3 hectares (ha), lying mostly within the marine area, and includes the areas proposed for dredging and land reclamation.

The Proposed Development Boundary includes an area for capital dredging of 48.4ha and 27.7ha of reclamation from the sea providing operational areas for the storage, marshalling, staging and integration of ORE components, traditional Ro-Ro port activities and a new replacement 'Small Boat' harbour (Figure 3.2). The new Small Boat Harbour will be securely separated from the much larger vessels and operations in the main ORE facility.

Proposals for the new Small Boat Harbour include marine enabling works and installation of services for potential future developments which may include Operations & Maintenance (O&M) facilities

[2] Traditional port activities as defined in the Rosslare Europort Masterplan (March 2020) are roll-on/roll-off (RoRo) and passenger ferry services (RoPAX); storage and movement of trade cars and trailers; freight and passenger check-in operations; Customs and Immigration processing; marine services such as berthing, mooring and vessel turnaround; and some bulk cargo handling.

required by the ORE industry for major repairs and replacement of turbine components and a new RNLI base. Undertaking these advance works as part of the Proposed Development ensures construction and environmental efficiencies while marine plant is readily available. The buildings and facilities required for these potential future uses are not included in the Proposed Development.

The key elements of the Proposed Development are listed in Table 3.1.

Table 3.1: Summary of the Proposed Development

Development / Activity	Description
Site preparation and mobilisation	• Site clearance involving removal of the existing small storage sheds, pontoons, gangways, timber mooring posts and timber structures at the small boat harbour; and establishment of a temporary site compound.
Capital dredging	• The navigation channel will be dredged to a depth of -10 metres Chart Datum (m CD). The berth pocket for ORE Berth 1 will be dredged to a depth of -12m CD. The total area to be dredged is 48.4 hectares (ha).
Land reclamation	• Land reclamation including infilling of the small boat harbour, using the marine dredged material and imported rockfill to create 27.7ha of land for the Proposed Development. • Installation of rock armour revetments around the perimeter of the reclamation area
ORE Storage Area	• Creation of an ORE Storage Area of 19.7ha, within the reclaimed lands, for the handling and storage, marshalling, staging and integration of ORE components.
ORE Berth 1	• Construction of ORE Berth 1, a heavy lift berth with a continuous open piled quay length of 330 metres (m).
ORE Berth 2	• Construction of ORE Berth 2, with a continuous open piled quay length of 240m.
ORE Compound	• A compound area of 0.2ha for installation of temporary modular buildings for site offices, welfare, logistics, and parking to service ORE developers.
New Small Boat Harbour	• Construction of a new Small Boat Harbour consisting of: ○ a 50m long fixed quayside berth and an 80m long floating pontoon ○ a 2.4m wide pontoon to provide 64 berths ○ a 127m long floating pontoon with 10 no. berths ○ 1 no. fixed berth for emergency service vessels ○ 10 single storey storage sheds ○ a slipway for launching and recovery activities ○ marine enabling works and installation of services to provide for potential future uses.
Sea Scouts Facility	• Construction of a slipway to the western flank of the newly reclaimed lands with a new storage shed and parking to accommodate local clubs, such as the Sea Scouts.
Ancillary works	• Site access to the Proposed Development and a new access road and footpath/cycle track to the proposed new Small Boat Harbour.

Development / Activity	Description
	• A medium voltage single storey electrical substation and switch room • Lighting • Fencing and security measures • Parking • Waste management facilities • Fire water network and storage • Landscaping • Foul water network and pumping infrastructure • Water mains network • Surfacing and drainage • Environmental enhancements

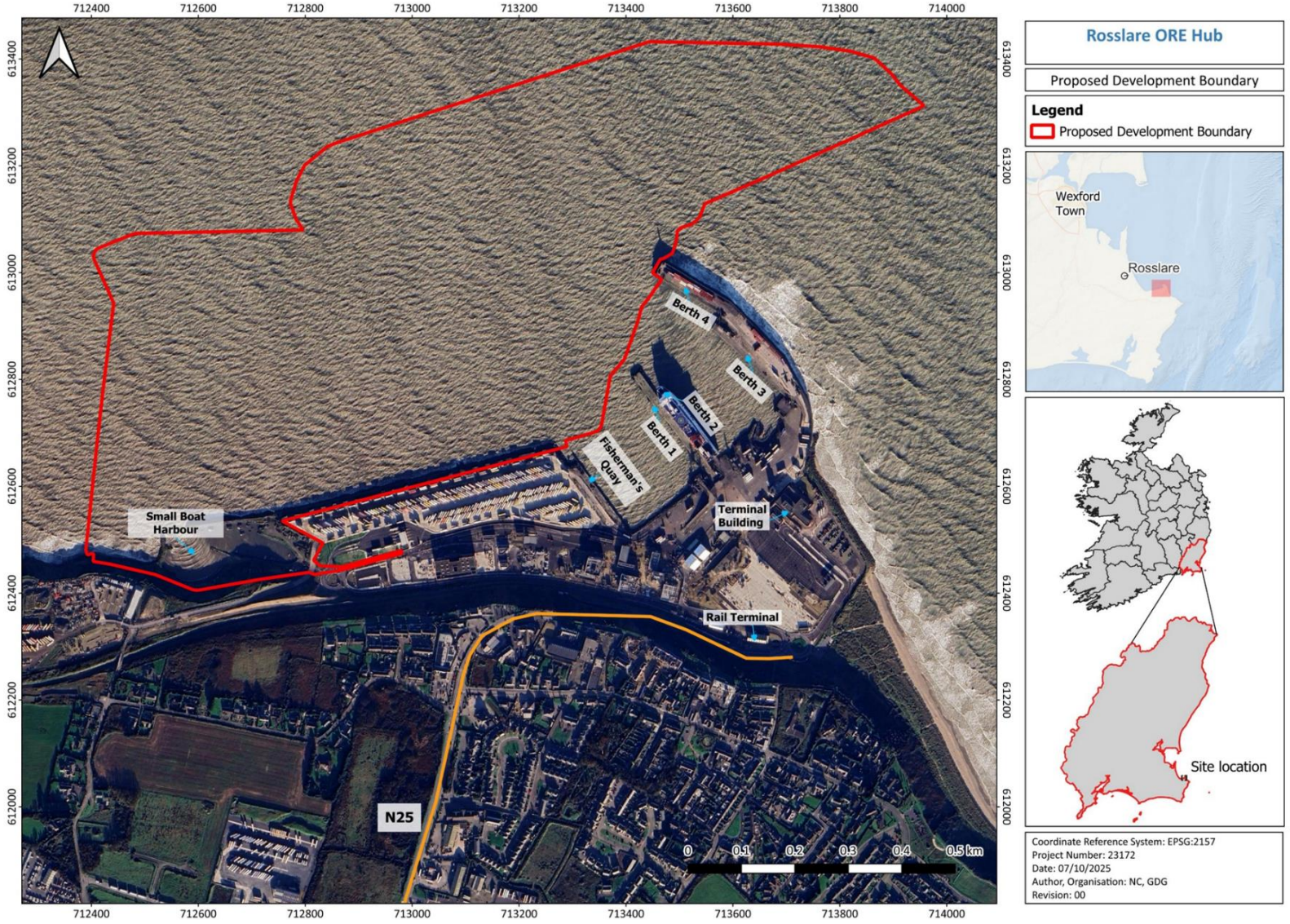

Figure 3.1 Site Location and Proposed Development Boundary

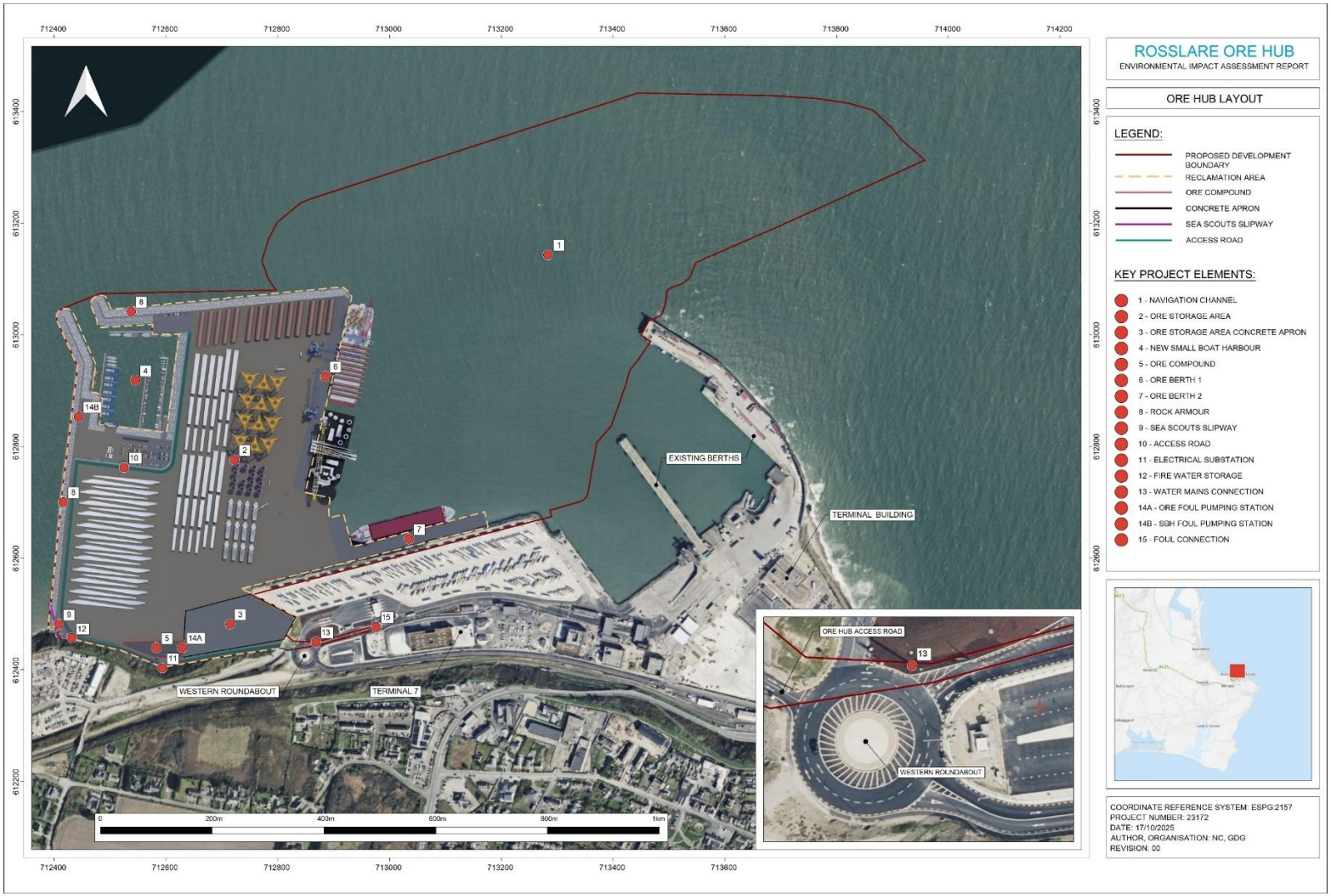

Figure 3.2: General layout of the Proposed Development

Table 3.2 provides a breakdown of areas for the Proposed Development.

Table 3.2. Table of Areas for works in Proposed Development

Boundary	Elements	Area (ha)
Proposed Development Boundary	**All**	**80.3**
	Dredging area (includes side slopes and berth pockets)	48.4
	Marine reclamation area (includes enclosed water in new Small Boat Harbour)	27.7
	Terrestrial reclamation and existing land area	4.2
Proposed Development Operational Area	**All** (excludes rock armoured revetments, perimeter landscaping, pontoons, berths and enclosed water in new Small Boat Harbour)	**24.5**
	ORE Storage Area (includes concrete apron area of 1.6ha)	19.7
	ORE office and parking compound	0.2
	ORE quays	2.0
	Access roads, new Small Boat Harbour and Sea Scouts Facility	2.6
New Small Boat Harbour Enclosed Water	Enclosed water in New Small Boat Harbour (includes area taken by pontoons and navigable berths)	2.2

3.2 CONSTRUCTION ACTIVITIES

The principal construction works are listed below.

- Mobilisation and Establishing the Temporary Site Compound
- Dredging and Reclamation Works
- Piling Works
- Construction of Rock Armour Revetments
- Concrete Works
- Ancillary Works

Construction works (excluding dredging and reclamation) will be undertaken between 7am to 7pm Monday to Saturday. Work outside of these hours may be required on an infrequent basis. If, in exceptional circumstances, works are required outside of these hours, the relevant statutory authorities will be notified in advance.

Dredging activities are expected to be ongoing for up to 24 hours per day, 7 days per week (24/7). The dredged material needs to be continually transported to the reclamation area to enable continuous dredging activities. For this reason, the reclamation activities will also need to be carried out on the same schedule.

It is expected that the construction phase will span 24 months from commencement to completion.

3.3 OPERATIONAL ACTIVITIES

The Rosslare Europort ORE Hub, once operational, will allow for efficient handling and storage, marshalling, staging and integration of ORE components to facilitate installation of ORE projects.

The heavy-lift quayside will be used for the temporary assembly of towers and preparation for installation of components of wind turbines prior to out-loading onto installation vessels. Partially erected towers and components such as blades and turbines being transited from the ORE Storage Area awaiting out-loading to the installation vessels will be temporarily stored on the ORE Berth 1 quay during this time.

Both ORE Berth 1 and ORE Berth 2 will be used so that incoming components can be delivered from a vessel without hindering the integration and out-loading of components onto an installation vessel. Heavy equipment will move the components in the ORE Storage Area.

The anticipated number of project vessels using the main berths is relatively low, with peak traffic numbers during an Offshore Wind Farm lifecycle of up to one large vessel every two days to ORE Berth 1. In off-peak periods this could be as low as one large vessel every two weeks. On average it is expected that installation vessels will call to the ORE Hub every 4 to 8 days depending upon size, distance to the wind farm, and weather conditions. ORE installation vessels which will use ORE Berth 1 will convey 4 to 7 sets of components in any trip depending on component size and vessel capacity. Vessels will range from 160m to 250m in length and will either rely on steel legs that are lowered into the seabed for stability or be dynamically positioned to hold station in the water.

Vessels which will use ORE Berth 2 will be 160m to 180m in length and will either deliver components by Load-on Load-off (LoLo) method (i.e., blades and tower sections) or RoRo (i.e., nacelle and tower sections). Deliveries arising from traditional port activities will be accepted at the ORE Berths on an ad hoc basis (i.e., if ORE Berths are available and the existing berths within Rosslare Europort are occupied).

The new Small Boat Harbour will have pontoons for 64 local boats and a 50m long fixed berth and 80m length of floating pontoon for local fishermen. The fishing pontoon allows for easy docking and manual loading at low tide whilst the solid quay allows for loading/unloading of heavier goods from a davit or mobile crane on the solid quayside.

The number of staff at the ORE Hub at any one time will fluctuate depending on installation activity and weather, and there will be fluctuations over time depending on the logistics for the construction of each wind farm. At any one time there will typically be between 40 to 60 personnel at the ORE Hub, with an anticipated peak of 150 personnel depending on the activity (i.e., when the installation vessel is in port there would a short-term peak with incoming and outgoing crew, and vessel replenishment and possibly service technicians coming to do maintenance on the vessel).

3.4 SUMMARY

The construction activities in Table 3.3 and operation activities in Table 3.4 have been identified as potential sources of environmental and ecological impacts for consideration in this AA Screening Report.

Table 3.3: Overview of Construction Activities and Potential Sources of Impact

Construction Element	Typical Activities & Potential Sources of Ecological Impacts Descriptions	Potential Impacts Summary
Temporary Site Establishment	Activity: • Land based plant such as excavators & cranes Associated Impacts: • Operation of, and lighting associated with, land-based construction plant has the potential for airborne noise impact and visual impact creating ecological disturbance • Potential for water pollution from oil / fuel spills and polluted surface water run-off	• Displacement and/or disturbance from airborne noise • Visual disturbance • Reduction in water quality
Dredging	Activity: • Removal of material from the seabed by Dredgers Associated Impacts: • Potential for direct sediment disturbance of the seabed • Potential for increase in the concentration of suspended solids within the water column • Potential for underwater noise from the pumps and noise from the drag heads of the TSHD and excavator to create disturbance • Potential to lead to an indirect impact on birds / marine mammals due to impact on prey availability and prey acquisition Activity: • Vessel operation including barges moving dredged material to the reclamation area and the imported rockfill, deployed by a construction barge. Associated Impacts: • Propagation of noise through the water column causing disturbance	• Habitat loss (temporary) • Increased suspended sediment concentration • Mortality, injury, displacement and/or disturbance from underwater noise • Mortality or injury from vessel collision • Reduction in prey availability • Visual disturbance • Displacement and/or disturbance from airborne noise • Reduction in water quality

Construction Element	Typical Activities & Potential Sources of Ecological Impacts Descriptions	Potential Impacts Summary
	• Collision risk to ecological receptors. Activity: • Operation of land-based plant and dredgers for perimeter wall construction Associated Impacts: • Operation of dredgers and land-based construction plant has the potential for airborne noise impact and visual impact creating ecological disturbance • Potential for water pollution from oil / fuel spills	
Reclamation	Activities: • Pumping of sediment from barges into the reclamation area • Movement of soft dredge material by bulldozers and wide tracked excavators to form a drained & consolidated platform • Drainage of dredged material through creation of mounds behind the rock bund • Compaction of dredged and imported fill material in the reclamation area Associated Impacts: • Potential for airborne noise impact and visual impact, including from lighting in hours of darkness, from land-based construction plant creating ecological disturbance • Potential for water pollution from oil / fuel spills and polluted surface water run-off • Potential to create increases in suspended sediment from drainage operations if it is discharged to the open water column	• Habitat loss (permanent) • Visual disturbance • Displacement and/or disturbance from airborne noise • Reduction in water quality • Increased suspended sediment concentration

Construction Element	Typical Activities & Potential Sources of Ecological Impacts Descriptions	Potential Impacts Summary
Piling (through rock bund) (Construction of ORE 1 & ORE 2 and new Small Boat harbour)	Activity: • Bearing piles such as rotary bore piling rigs situated on a perimeter rock bund which is essentially "land-based" as situated on the perimeter rock bund Associated Impact: • Potential that noise and vibrations can propagate through the rock into the adjacent water column creating an underwater noise and disturbance impact Activity: • Infill piling including for potential pre-blasting prior to driving sheet piles Associated Impact: • Potential for noise from any blasting and sheet piling to propagate through the rock into the adjacent water column creating an underwater noise and disturbance impact Activity: • Piling for pontoons in small boat harbour installed by small barge using impact driving hammer in the water column Associated Impact: • Potential for noise from piling in the water column creating and underwater noise and disturbance impact • Potential for indirect impact on birds / marine mammals due to impact on prey availability and prey acquisition Activity:	• Mortality, injury, displacement and/or disturbance from underwater noise • Reduction in prey availability • Displacement and/or disturbance from airborne noise and vibration • Visual disturbance • Reduction in water quality

Construction Element	Typical Activities & Potential Sources of Ecological Impacts Descriptions	Potential Impacts Summary
	• Operation of land-based construction plant and piling rigs Associated Impacts: • Potential for airborne noise impact and visual impact creating ecological disturbance • Potential for water pollution from oil / fuel spills and polluted surface water run-off	
Site Clearance of buildings & existing small boat harbour	Activity: • Land based plant such as diggers & cranes Associated Impacts: • Operation of land-based construction plant has the potential for airborne noise impact and visual impact creating ecological disturbance • Potential for water pollution from oil / fuel spills and polluted surface water run-off	• Displacement and/or disturbance from airborne noise • Visual disturbance • Reduction in water quality
Road surfacing for access to new small boat harbour Construction of a slipway and relocation of storage shed and parking Construction of electricity substation	Activity: • Land based plant such as diggers & cranes Associated Impacts: • Operation of land-based construction plant has the potential for airborne noise impact and visual impact, including from lighting in hours of darkness, creating ecological disturbance • Potential for water pollution from oil / fuel spills and polluted surface water run-off	• Displacement and/or disturbance from airborne noise • Visual disturbance • Habitat loss (permanent) • Reduction in water quality

Construction Element	Typical Activities & Potential Sources of Ecological Impacts Descriptions	Potential Impacts Summary
Ancillary development works	Activity: • Excavation and Earthworks including operation of land-based excavators and other construction plant Associated Impacts: • Potential for airborne noise impact and visual impact, including from lighting in hours of darkness, creating ecological disturbance • Potential to create airborne dust in dry and windy conditions • Potential for water pollution from oil / fuel spills and polluted surface water run-off	• Displacement and/or disturbance from airborne noise • Visual disturbance • Displacement and/or disturbance from airborne dust • Reduction in water quality
Surfacing of Port Storage Yard (ORE Operations Compound)	Activity: • Operation of land-based excavators and other construction plant Associated Impacts: • Potential for airborne noise impact and visual impact, including from lighting in hours of darkness, creating ecological disturbance • Potential to create airborne dust in dry and windy conditions • Potential for water pollution from oil / fuel spills and polluted surface water run-off	• Displacement and/or disturbance from airborne noise • Displacement and/or disturbance from airborne dust • Visual disturbance • Reduction in water quality
Construction of Rock Armour revetment	Activity: • Construction of rock armour revetment using land-based excavators and other construction plant Associated Impacts:	• Displacement and/or disturbance from airborne noise • Displacement and/or disturbance from airborne dust • Visual disturbance • Reduction in water quality

Construction Element	Typical Activities & Potential Sources of Ecological Impacts Descriptions	Potential Impacts Summary
	• Potential to create airborne dust in dry and windy conditions • Potential for airborne noise impact and visual impact, including from lighting in hours of darkness, creating ecological disturbance • Potential for water pollution from oil / fuel spills and polluted surface water run-off	
Concrete works	Activity: • Mixing or spreading of concrete using land-based plant Associated Impacts: • Potential to create airborne dust in dry and windy conditions. • Potential for airborne noise impact and visual impact creating ecological disturbance. • Potential for water pollution from oil / fuel spills and polluted surface water run-off.	• Displacement and/or disturbance from airborne dust • Displacement and/or disturbance from airborne noise • Visual disturbance • Reduction in water quality

Table 3.4: Overview of Operation Activities and Potential Sources of Impact

Operation Element	Typical Activities & Potential Sources of Ecological Impacts Descriptions	Potential Impacts Summary
Unloading and loading of ORE components	Activity: • Unloading and loading of ORE components at ORE berths using land-based plant & cranes • Handling, marshalling, staging, assembly and integration of ORE components using land-based plant & cranes Associated impacts:	• Displacement and/or disturbance from airborne noise • Visual disturbance • Reduction in water quality

Operation Element	Typical Activities & Potential Sources of Ecological Impacts Descriptions	Potential Impacts Summary
	• Potential for airborne noise impact and visual impact, including from lighting in hours of darkness, creating ecological disturbance • Potential for water pollution from oil / fuel spills and polluted surface water run-off	
Traditional Port Activities	Activity: • Roll-on Roll-off traffic: Parking of bulk cargo containers and onward transit of goods Associated impacts: • Potential for airborne noise impact and visual impact, including from lighting in hours of darkness, creating ecological disturbance • Potential for water pollution from oil / fuel spills and polluted surface water run-off	• Displacement and/or disturbance from airborne noise • Visual disturbance • Reduction in water quality
Vessel movements	Activity: • Vessel Operation including supply boats, anchor handling vessels, renewable energy service vessels or other large vessels in Rosslare harbour bounds and Small Boat Harbout vessel movements Associated Impacts: • Underwater noise and disturbance • Collision risk to ecological receptors • Potential for airborne noise impact and visual impact creating ecological disturbance • Potential for water pollution from oil / fuel spills	• Injury, displacement and/or disturbance from underwater noise • Mortality or injury from vessel collision • Displacement and/or disturbance from airborne noise • Visual disturbance • Reduction in water quality

4 ENVIRONMENTAL SETTING

This section gives an overview of the environmental setting of the Proposed Development. More detailed information is included in the following chapters of Volumes 2 of the EIAR, and their accompanying Technical Appendices (Volume 3) which accompanies the planning application:

- Chapter 10: Terrestrial Ecology
- Chapter 11: Benthic Ecology
- Chapter 12: Fish, Shellfish and Turtle Ecology
- Chapter 13: Marine Mammals
- Chapter 14: Ornithology
- Chapter 15: Commercial Fisheries and Aquaculture

4.1 ROSSLARE EUROPORT

The immediate receiving environment of the Proposed Development at Rosslare Europort consists of a variety of industrial infrastructure, marine and terrestrial habitats. Situated on Ireland's southeastern coast in County Wexford, Rosslare Europort is a major commercial port with robust connections to Ireland, the UK, and mainland Europe. This area is highly developed, with existing port facilities including ferry berths, cargo handling areas, and a small boat harbour, all protected by substantial rock armour revetment and breakwater armour units designed to shield the harbour from coastal conditions. The N25 road provides access to the port, and the Irish Rail line runs parallel to the site, reinforcing its industrial character.

The surrounding landscape is predominantly industrial, with minimal green space and natural features. The coastline is largely artificial, with hardstanding, paved areas, and structures linked to port operations. The small strip of scrub and grassland adjacent to the port is also strongly influenced by human activity.

Wastewater from Rosslare Europort is pumped to Rosslare Harbour Wastewater Treatment Plant (WWTP), Reg. No. D0165-01, located approximately 500m southwest of the Proposed Development. Rosslare Harbour WWTP is operated by Uisce Éireann, for Rosslare Harbour. The foul sewer main discharges at the existing Europort Terminal facility (as described in Chapter 6: Project Description and Chapter 22: Material Assets). Surface water from Rosslare Europort is collected and discharged via oil interceptors. Within Rosslare Europort the following existing control measures / management measures are in place:

- Port Emergency Plan -The Emergency Plan provides guidance for all staff that may be involved in dealing with a marine or terminal incident that occurs within the Port of Rosslare Europort, its approaches, or on passage to or from the port (Rosslare Europort, 2022).
- Oil Spill Response Plan - The Oil Spill Response Plan is designed to guide response personnel at Rosslare Europort through the process required to manage an Oil or Hazardous and

Noxious Substances (HNS) spill originating from operations within the Harbour Limits (Rosslare Europort, 2018).

The port itself lacks major ecological corridors like rivers, treelines, or forests; instead, its primary connection is through the marine environment. More diverse habitats, such as dunes and tidal sandflats to the southeast of the Port and dunes, estuaries, and wetlands that exist in the wider region around Wexford Harbour and the Slaney River Valley, offering richer foraging and shelter for wildlife.

In summary, Rosslare Europort is heavily influenced by man-made infrastructure, with much of the immediate coastline shaped by industrial and port facilities that limit natural habitats. Within the Proposed Development Boundary, the coastline is dominated by artificial structures, reflecting long-standing anthropogenic disturbances that have been in place for many years.

4.2 EUROPEAN NATURA 2000 SITES

The Proposed Development Boundary overlaps with the Seas off Wexford cSPA (Figure 4.1). Figure 4.1 and Figure 4.2 provide an overview of nearby SACs and SPAs, respectively.

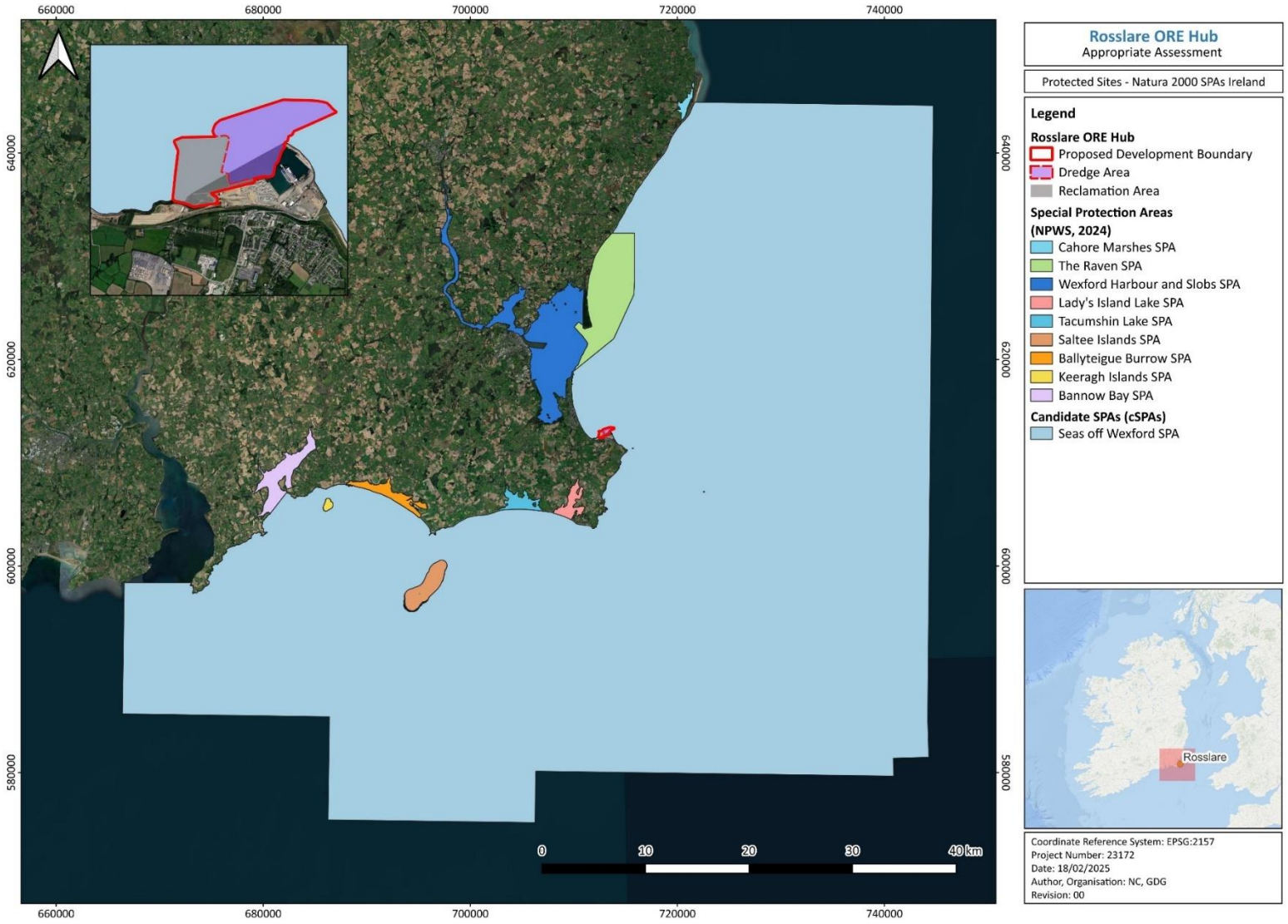

Figure 4.1: SPAs (including cSPA) within vicinity of Proposed Development Boundary

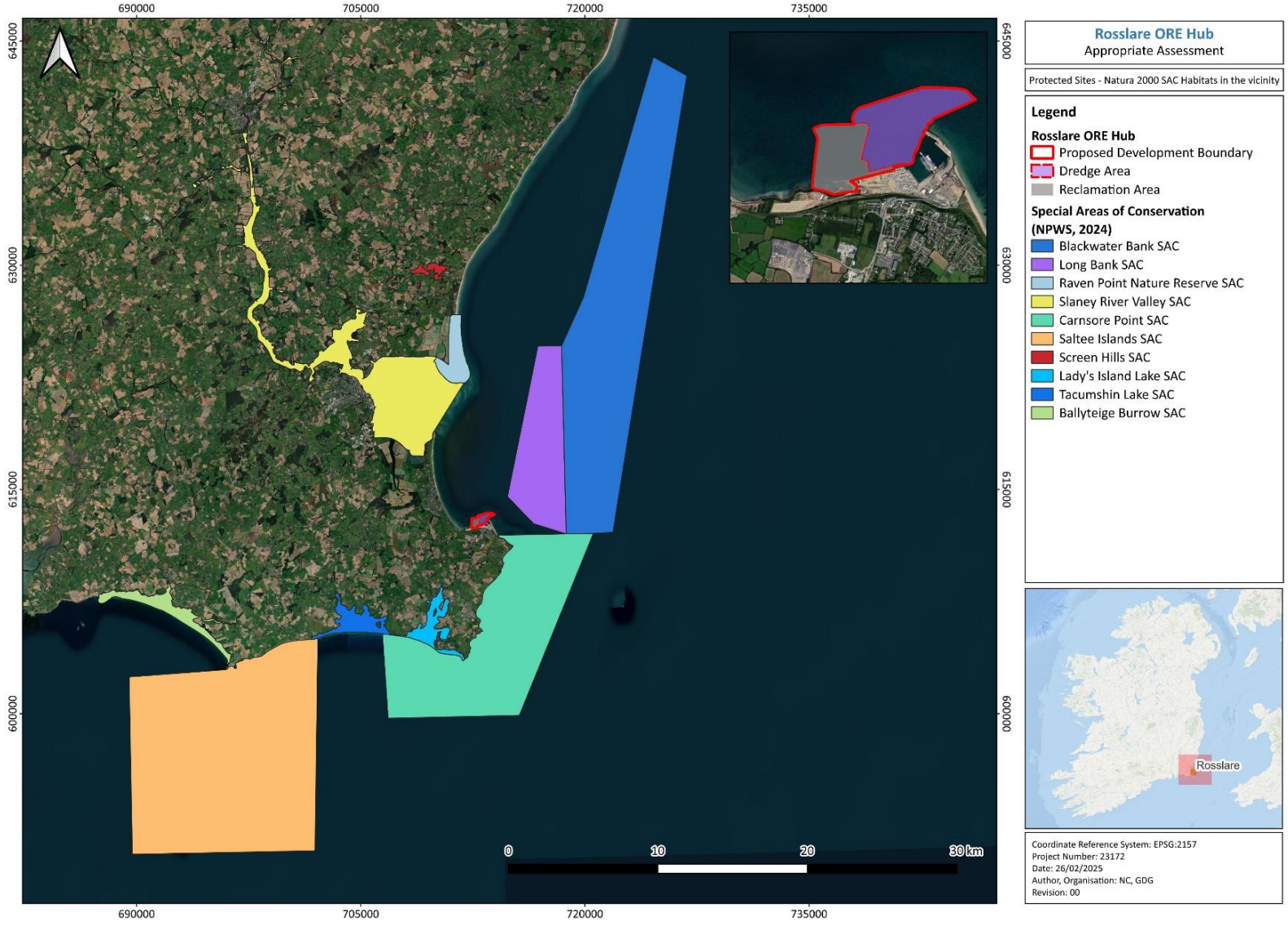

Figure 4.2: SACs in the vicinity of the Proposed Development Boundary

4.3 COASTAL PROCESSES AND WATER QUALITY

Chapter 8: Coastal Processes and Chapter 9: Water Quality and Flood Risk describe the coastal and water environment. A summary of the information presented in these chapters is outlined below.

The coastal environment of Rosslare is dynamic with a strong influence from both tidal currents and the wind. The different seasons and natural events such as storms influence suspended sediment concentrations within the water column and vessel movements at Rosslare are also likely to increase sediment concentrations, particularly as they berth.

The Proposed Development is located within the Southwestern Irish Sea, Water Framework Directive (WFD) Coastal water bodies. This water body achieved 'Good' status for the most recently reported (at the time of writing) 2016-2021 assessment period.

4.3.1 COASTAL PROCESSES

The baseline coastal processes characteristics are described using a combination of sources including a desk study, publicly available data and site-specific surveys. The surveys included metocean measurements, geotechnical investigations and geophysical surveys. The baseline description within the EIAR chapter describes the following coastal process elements:

- Coastline and Bathymetry (i.e., water depths, seabed composition, and coastal erosion risks)
- Sediment Transport (i.e., sediment dynamics, including mobilisation and disturbance indices)
- Tidal Currents and Water Levels (i.e., tidal regimes, current velocities, and storm surge projections)
- Waves (i.e., wave conditions, including average and extreme scenarios)
- Wind (i.e., wind speed and direction data)

Numerical modelling was undertaken, and the Dredging Dispersion Assessment completed as part of the numerical modelling is described below.

4.3.1.1 DREDGING DISPERSION ASSESSMENT

Project specific Dredging Dispersion Modelling was undertaken in 2024 and is described in Technical Appendix 8 of the EIAR submitted as part of this application.

Three stages of dredging and disposal operations were modelled, comprising the construction of the outer boundary of the reclamation area, the dredging of the navigation channel, and the disposal of the dredged material into the reclamation area.

The modelled stages are:

- Stage 1: The reclamation bund will be constructed within 4 months using imported rockfill, deployed by a construction barge.
- Stage 2: Two months dredging and reclamation by suction dredger.
- Stage 3: Eight months dredging and reclamation by backhoe dredger.

- Model set-up allowed for dredging sediment dispersion to be modelled at two locations within the outermost and innermost areas of the dredge area. As the material will not be dumped at sea and instead will be reused to provide infill within the boundary of the reclamation area, disposal sediment dispersion was modelled at the seaward boundary of the northern part of the reclamation area, where the weir box will be located (see Chapter 6: Project Description for map showing location of weir box).
- The model results reveal distinct trends in suspended sediment concentrations (SSC) and bed thickness changes across the three stages of dredging and deposition for the Proposed Development.
- In ecological terms, SSC and increased bed thickness changes represent pressures. Pressures are defined as 'the mechanism by which a human activity or natural event affects the ecosystem' (MarESA, 2023).
- The MarLIN website (MarLIN, 2025) hosts sensitivity assessments for species and habitats found around the coasts and seas of the British Isles based on the Marine Evidence-based Sensitivity Assessment (MarESA) approach (Tillin *et al*., 2010; Tillin, Tyler-Walters *et al*., 2014; Tyler-Walters *et al*., 2018). The MarESA approach applies pressure definitions developed by the OSPAR Intercessional Correspondence Group on Cumulative Effects (ICG-C) (OSPAR, 2011) and pressure benchmarks based on Tillin *et al*. (2010) (subsequently revised by Tillin & Tyler-Walters, 2015; 2014a&b) in liaison with UK Statutory Nature Conservation Bodies (SNCBs).
- Pressure benchmarks are defined by Tyler-Walters *et al*. (2001) as a standard descriptor of the pressure defined in terms of the magnitude, extent, duration, and frequency of the effect.
- Modelled parameters and the associated Marine Evidence-based Sensitivity Assessment (MarESA) pressures and benchmarks are provided in Table 4.1 and the UK TAG (2014) turbidity/suspended solids concentrations are provided in Table 4.2. For context, Cole *et al*. (1999) report average mean levels of turbidity of 1-110 mg/l around the English and Welsh coasts while Devlin *et al*. (2008) suggest that coastal waters are typically 3-24.1 mg/l, estuarine (or transitional) waters, 8.2-73.8 mg/l and offshore waters 9.3 mg/l. It is therefore assumed that turbidity in the dredge and reclamation areas is typically 'intermediate' (i.e., in the 10-100 mg/l category).

Table 4.1: Modelled parameters and the associated Marine Evidence-based Sensitivity Assessment (MarESA) pressures and benchmarks

Modelled Parameter	Pressure	Benchmark	Description
Suspended sediment concentration	Changes in suspended solids (water clarity)	A change in one rank on the WFD (Water Framework Directive) water clarity scale (Table 4 2) e.g. from clear to intermediate for one year.	Suspended sediment concentration

Modelled Parameter	Pressure	Benchmark	Description
Bed thickness	Changes in water clarity (or turbidity) due to changes in sediment & organic particulate matter and chemical concentrations. It is related to activities disturbing sediment and/or organic particulate matter and mobilizing it into the water column. It could be 'natural' land run-off and riverine discharges or from anthropogenic activities such as all forms of dredging, disposal at sea, cable and pipeline burial, and secondary effects of construction works, e.g. breakwaters. Particle size, hydrological energy (current speed & direction) and tidal excursion are all influencing factors on the spatial extent and temporal duration.		

Table 4.2: UK TAG (2014) turbidity/suspended solids table

Water Turbidity	Definition
>300 mg/l	Very turbid
100-300 mg/l	Medium turbidity
10-100 mg/l	Intermediate turbidity
<10 mg/l	Clear

- Stage 3 of the dredging and reclamation takes place over the longest period and as a result the modelling predicted the highest SSC and bed thickness changes. Therefore, the results from Stage 3, the potential worst-case scenario are described.
- Figure 4.3 illustrates the modelled spatial extent of increased SSC from dredging and disposal activities, which is predicted to extend westerly towards Rosehill Bay Beach for up to 1.5km, and eastward around the harbour wall, continuing in a south easterly direction towards Greenore Point for up to 2.5km.

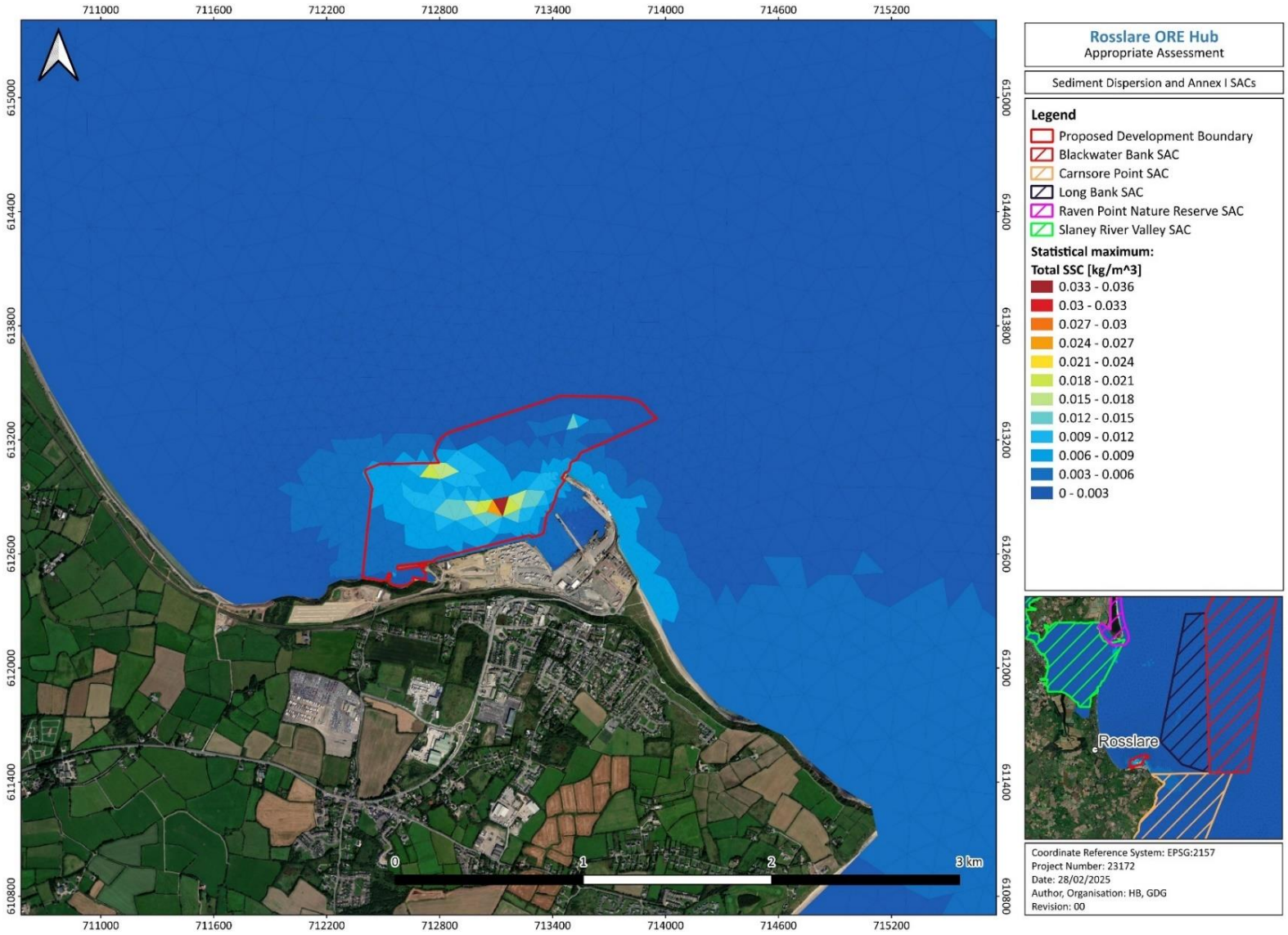

Figure 4.3: Stage 3 Sediment Dispersion Modelling Results and nearby SACs

- The highest SSC levels are predicted to be within the harbour area, where the dredging activities will be undertaken, and adjacent to the outflow of the weir box, both of which overlap with the Seas off Wexford cSPA, with maximum predicted increased SSC levels of 15 to 20 mg/l, above the benchmark (Table 4.3).

Table 4.3: Sediment Dispersion Modelling Results: Maximum Predicted Increased Suspended Sediment Concentration at Natura 2000 Sites

Location	Maximum SSC (mg/l)	Above benchmark?	Comments
Dredge area / weir box outflow and Seas off Wexford cSPA	15-20	No	Note 0.026% of the area of the cSPA overlaps with the Proposed Development Boundary, where highest SSC levels are predicted to occur
Seas off Wexford cSPA (adjacent to Proposed Development Boundary)	3	No	Maximum SSC of 3 mg/l predicted for 99.98% of the area of the cSPA
Carnsore Point SAC	6-9	No	Maximum SSC of 9 mg/l predicted for NW of Carnsore Point SAC
Long Bank SAC	3	No	Maximum SSC of 3 mg/l predicted for Long Bank SAC
Blackwater Bank SAC	3	No	Maximum SSC of 3 mg/l predicted for Blackwater Bank SAC
Slaney River Valley SAC & Wexford Harbour and Slobs SPA	3	No	Maximum SSC of 3 mg/l predicted for Slaney River Valley SAC & Wexford Harbour and Slobs SPA

- Note: SSC levels were predicted to reach a maximum of 0.23 mg/L for Stage 1 dredging at the weir box location on the outer boundary of the reclamation area. SSC levels were predicted to reach a maximum of 15 mg/L for Stage 2 at the same location.

The modelling also considered changes in sediment bed thickness levels during the three stages of dredging and disposal.

During Stage 1 the maximum predicted bed thickness change is 8cm at the weir box at the outer boundary of the reclamation area with a maximum total bed thickness change of 0.008cm (0.08mm) predicted to occur in the northwest of Carnsore Point SAC (Table 4.4).

Stage 2 modelling predicts a maximum bed thickness change of 6cm adjacent to the weir box, with sediment deposition confined around the outer boundary of the reclamation area with a maximum total bed thickness change of 0.03cm (0.3mm) predicted to occur in the northwest of Carnsore Point SAC.

Stage 3 modelling predicts a maximum total bed thickness change of 0.02cm will occur adjacent to the weir box with a maximum total bed thickness change of 0.04cm (0.4mm) predicted to occur in the northwest of Carnsore Point SAC.

Negligible bed thickness changes are predicted for all other Natura 2000 sites.

Table 4.4: Summary of Bed thickness changes

Stage	Maximum Bed Level Change (cm)	
	Dredge area / weir box outflow and Seas off Wexford cSPA	Carnsore Point SAC
1	8 (heavy smothering)	0.008 (light smothering)
2	6 (heavy smothering)	0.03 (light smothering)
3	0.02 (light smothering)	0.04 (light smothering)

4.4 ORNITHOLOGY

4.4.1 SPAS IN VICINITY OF PROPOSED DEVELOPMENT

SPAs designated to protect birds are found along the coastline and estuarine areas close to the Proposed Development. The SPAs described in the table below include those in the vicinity and are included to provide an overview of SPAs in this region. A full list of qualifying species for individual SPAs considered is included in tables within section 5.3 and the full list of SPAs considered in this AA screening are included in Appendix B of this report. A brief description of the closest sites is presented in the Table 4.5.

Table 4.5: SPA Information

Site Code	Special Conservation Interests (SCIs)	Site-Specific Conservation Objective (SSCO)	Other information
Seas off Wexford SPA (Overlap)	Candidate SPA under the E.U. Birds Directive, of special conservation interest for 20 bird species	The Site-Specific Conservation Objective for this site is to maintain or restore the favourable conservation conditions of the bird species as listed as SCIs for this SPA (NPWS 2024)	Many of these species breed at coastal SPA colonies that border the SPA, while other species use the SPA in the non-breeding season
004076 Wexford Harbour and Slobs SPA 4.4km by land	Designated for wintering seabirds/ divers & Grebes/ ducks & wader species (NPWS 2012)	The Site-Specific Conservation Objective for this site is to maintain or restore the favourable conservation conditions of the bird species as listed as SCIs for this SPA (NPWS 2012)	It is noted that this SPA is adjacent to the Raven SPA and both partially overlap with Raven Point Nature Reserve SAC and Slaney River Valley SAC
004019 The Raven SPA 6.5km	Designed for wintering seabirds, dabbling and wader species	The Site-Specific Conservation Objective for this site is to maintain or restore the favourable conservation conditions of the bird species as listed as	The Raven SPA is one of the two most important sites in the world for Greenland White-fronted Goose (NPWS 2012a)

Site Code	Special Conservation Interests (SCIs)	Site-Specific Conservation Objective (SSCO)	Other information
		SCIs for this SPA (NPWS 2012a)	
004009 Lady's Island Lake SPA 8.6km by sea 4.4km by land	Designated for breeding and wintering wildfowl Tern colony	The Site-Specific Conservation Objective for this site is to maintain or restore the favourable conservation conditions of the bird species as listed as SCIs for this SPA (NPWS 2022a).	Lady's Island Lake comprises a shallow brackish coastal lagoon separated from the sea by a sand and shingle barrier. The site is noted for its tern colony and breeding wildfowl species. It also supports wintering wildfowl including nationally important population of Gadwall (NPWS 2022a).
004092 Tacumshin Lake SPA 16.6km by sea, 8.2km by land	Wildfowl	The Site-Specific Conservation Objective for this site is to maintain or restore the favourable conservation conditions of the bird species as listed as SCIs for this SPA. (NPWS 2025)	The waterfowl population is diverse and supports large numbers of birds throughout the year. In winter it supports internationally important populations of bird species including Whooper Swan and Black-tailed Godwit (NPWS 2025).
004002 Saltee Islands SPA 25.8km	Breeding seabirds (including fulmar, gannet, shag etc.)	The Site-Specific Conservation Objective for this site is to maintain or restore the favourable conservation conditions of the bird species as listed as SCIs for this SPA (NPWS 2011).	Saltee Islands SPA overlaps with Saltee Islands SAC.

4.4.2 BASELINE INFORMATION

Consultations with Birdwatch Ireland and NPWS, published survey data and site-specific baseline bird surveys were used to inform the baseline.

Published survey data used to inform the baseline included:

- Irish-Wetland Bird Survey (I-WeBS), which includes recent non-breeding season monthly count data of waders, wildfowl and gulls for estuaries and water bodies at coastal sites in County Wexford between 2018/19 and 2023/24.
- ObSERVE 2016 and ObSERVE II 2021 & 2022 fine-scale aerial surveys conducted in summer, autumn and winter 2016, in summer and autumn 2021 and summer, autumn and winter 2022 to assess the occurrence and distribution of seabird species in inshore coastal waters off the south-east, south and south-west coasts of Ireland.
- Burnell *et al.* (2023) Seabirds Count national colony census data. Published data from a census of breeding seabirds in Ireland and UK between 2015 and 2021.

- Cummins *et al.* (2019) The Status of Ireland's Breeding Seabirds: Birds Directive Article 12 Reporting 2013 – 2018. NPWS published report.
- Seabird Monitoring Programme. Online seabird colony counts https://app.bto.org/seabirds/public/index.jsp Online database of seabird colony counts in Ireland and UK – most recent data from Seabirds Count national census 2015-2021.
- Balmer *et al.* (2013) Bird Atlas 2007-11: The Breeding and Wintering Birds of Britain and Ireland. Online database of historic and recent bird records from national atlases and other datasets.

Project-specific ornithology surveys were conducted between April 2022 and September 2024 inclusively to gather data informing the impact assessment of ornithological receptors for the Proposed Development. The ornithology survey area covered a 1.5km buffer from shore, which included the Proposed Development Boundary and surrounding areas in the vicinity. A diverse range of seabirds, waterfowl, waders, and terrestrial species—including passerines, grassland birds, and raptors—were recorded throughout the survey period.

Some species were only present during the breeding season (e.g. terns), while others were present throughout the year, although they were more abundant during summer or winter months (e.g. gannet, gull species). The majority of wader species were recorded in low numbers during winter months.

17 kittiwake Apparently Occupied Nests (AON) and at least 1 breeding pair of black guillemots were recorded on the outer wall of Rosslare Harbour, outside the Proposed Development Boundary, in June 2025 during buoy recovery operations

For more detail regarding these surveys please see the accompanying EIAR Technical Appendix 14: Ornithology.

4.5 BENTHIC ECOLOGY

4.5.1 DESIGNATED SITES

SACs with marine Annex I habitats as QIs and their respective SSCOs are shown in Table 4.6.

Table 4.6: SACs with subtidal and intertidal Annex I habitats as QIs

Site Code	SAC	Distance from Proposed Development	Relevant Qualifying Interests (Annex I Marine Habitat) and SSCO
002269	Carnsore Point SAC	1.4km	Qualifying Interest: Mudflats and sandflats not covered by seawater at low tide [1140] Reefs [1170] SSCO: To maintain the favourable conservation condition of 'Mudflats and sandflats not covered by seawater at low tide' and 'Reefs'. (NPWS 2011, 2024)
002161	Long Bank SAC	1.5km	Qualifying Interest: Sandbanks which are slightly covered by sea water all the time [1110].

Site Code	SAC	Distance from Proposed Development	Relevant Qualifying Interests (Annex I Marine Habitat) and SSCO
			SSCO: To maintain the favourable conservation condition of 'Sandbanks which are slightly covered by sea water all the time' (NPWS 2013)
002953	Blackwater Bank SAC	4.9km	Qualifying Interest: Sandbanks which are slightly covered by sea water all the time [1110] SSCO: To maintain the favourable conservation condition of 'Sandbanks which are slightly covered by sea water all the time' (NPWS 2023, 2024).
000781	Slaney River Valley SAC	6.6km	Qualifying Interests: Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] SSCO: To maintain the favourable conservation condition of 'Estuaries' and 'Mudflats & sandflats which are slightly covered by sea water all the time' (NPWS 2011c)
000704	Lady's Island Lake SAC	11.1km	Qualifying Interests: Coastal lagoons [1150] Reefs [1170] SSCO: To maintain the favourable conservation conditions of 'Coastal Lagoons' and 'Reefs' (NPWS 2019)
000709	Tacumshin Lake SAC	15.9km	Qualifying Interests: Coastal lagoons [1150] SSCO: To maintain the favourable conservation conditions of the 'Coastal Lagoons' (NPWS 2018)

4.5.2 SURVEY AND DESK STUDY

A project-specific benthic ecology desk study, intertidal and subtidal surveys were undertaken as described in EIAR Technical Appendix 11: Benthic Ecology.

The results of the desk study indicate that the majority of the Project Development Boundary is comprised of shallow sublittoral sand and shallow sublittoral coarse sediment with pockets of shallow sublittoral rock and sublittoral mud. Shallow sublittoral sand and shallow sublittoral coarse sediment habitats are widespread in the surrounding area.

Benthic ecology surveys were undertaken, comprising of a subtidal survey including sediment grab sampling (13th to 15th February 2024) and a dropdown video survey (18th & 19th May 2024), with samples and data collected subsequently analysed to extract habitat and species information. A

walkover survey of the intertidal area was carried out on 10th of October 2023 and a resurvey was carried out on 27th of May 2024. The results of both surveys were combined.

The resultant subtidal benthic habitat map is presented in Figure 4.4.

The map shows that the subtidal area surveyed is dominated by a sediment biotope with characteristics of the biotope *Mediomastus fragilis and cirratulids* in infralittoral mixed sediment (SS.SMx.IMx.MedCirr) with smaller areas of the sediment biotope *Abra alba and Nucula nitidosa* in circalittoral muddy sand or slightly mixed sediment (SS.SSa.CMuSa.AalbNuc) towards the east of the site. Cobble reef corresponding to the biotope *Polyides rotundus, Ahnfeltia plicata and Chondrus crispus* on sand-covered infralittoral rock (IR. HIR.KSed.ProtAhn) is present in areas adjacent to the southern shore and also on the northern and western perimeters. Areas corresponding to the biotope Sparse fauna on highly mobile sublittoral shingle (cobbles and pebbles) (SS.SCS.ICS.SSh) are present to the east of the site close to the existing quays.

The intertidal area is characterised by cobble and small boulders habitat dominated by fucoids. Four separate fucoid biotopes were recorded, all of which are common in Ireland and representative of a relatively sheltered intertidal location (Figure 4.5). The area is heavily impacted due to the creation of boulder defences and the creation of makeshift jetties.

No rare or unusual species were found in either the intertidal or subtidal areas sampled. No obvious Invasive Alien Species (IAS) were recorded.

A key with each biotope code shown in Figure 4.4 and Figure 4.5 is provided in Table 4.7.

Table 4.7: Subtidal and Intertidal Biotope Key

Subtidal Biotope Code	Description
IR. HIR.KSed.ProtAhn	*Polyides rotundus*, *Ahnfeltia plicata* and *Chondrus crispus* on sand-covered infralittoral rock
SS.SCS.ICS.SSh	Sparse fauna on highly mobile sublittoral shingle (cobbles and pebbles
SS.SMu.SMuVS.CapTubi	*Capitella capitata* and *Tubificoides* spp. in reduced salinity infralittoral muddy sediment
SS.SMx.IMx.MedCirr	*Mediomastus fragilis* and cirratulids in infralittoral mixed sediment
SS.SSa	Sublittoral Sand
SS.SSa.CMuSa.AalbNuc	*Abra alba* and *Nucula nitidosa* in circalittoral muddy sand or slightly mixed sediment
Toe of Rock Armour	
Intertidal biotope Code	**Description**
LR.LLR.F.Fves	*Fucus vesiculosus* on moderately exposed to sheltered mid eulittoral rock
LR.LLR.FVS.Fcer	*Fucus ceranoides* on reduced salinity eulittoral rock
LR.MLR.BF.FspiB	*Fucus spiralis* on exposed to moderately exposed upper eulittoral rock
LR.MLR.BF.Fser	*Fucus serratus* on moderately exposed lower eulittoral rock
LS.LCS.Sh	Shingle (pebble) and gravel shores
LS.LSa	Littoral Sand

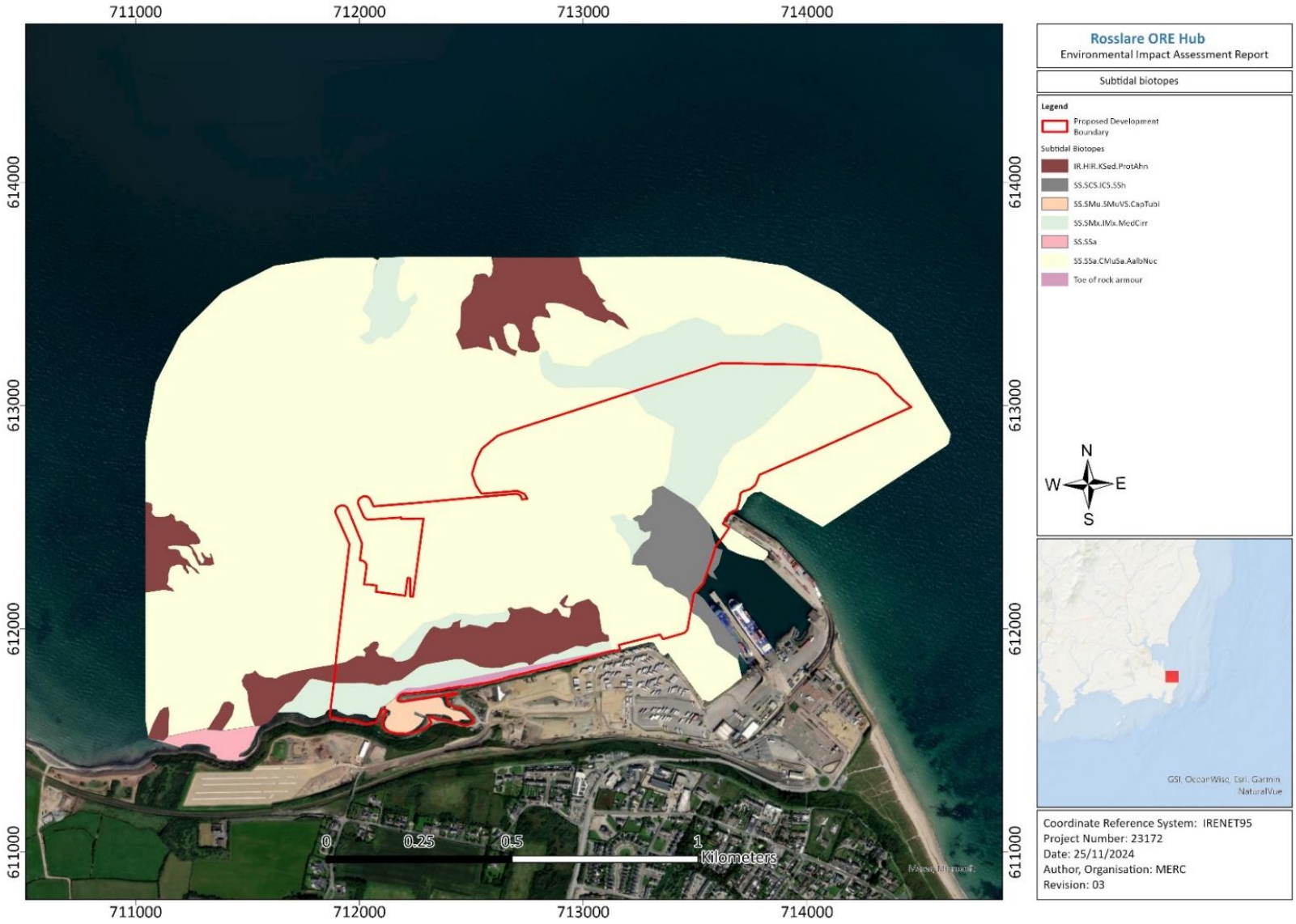

Figure 4.4: Subtidal biotope map. From EIAR Chapter 11: Benthic Ecology

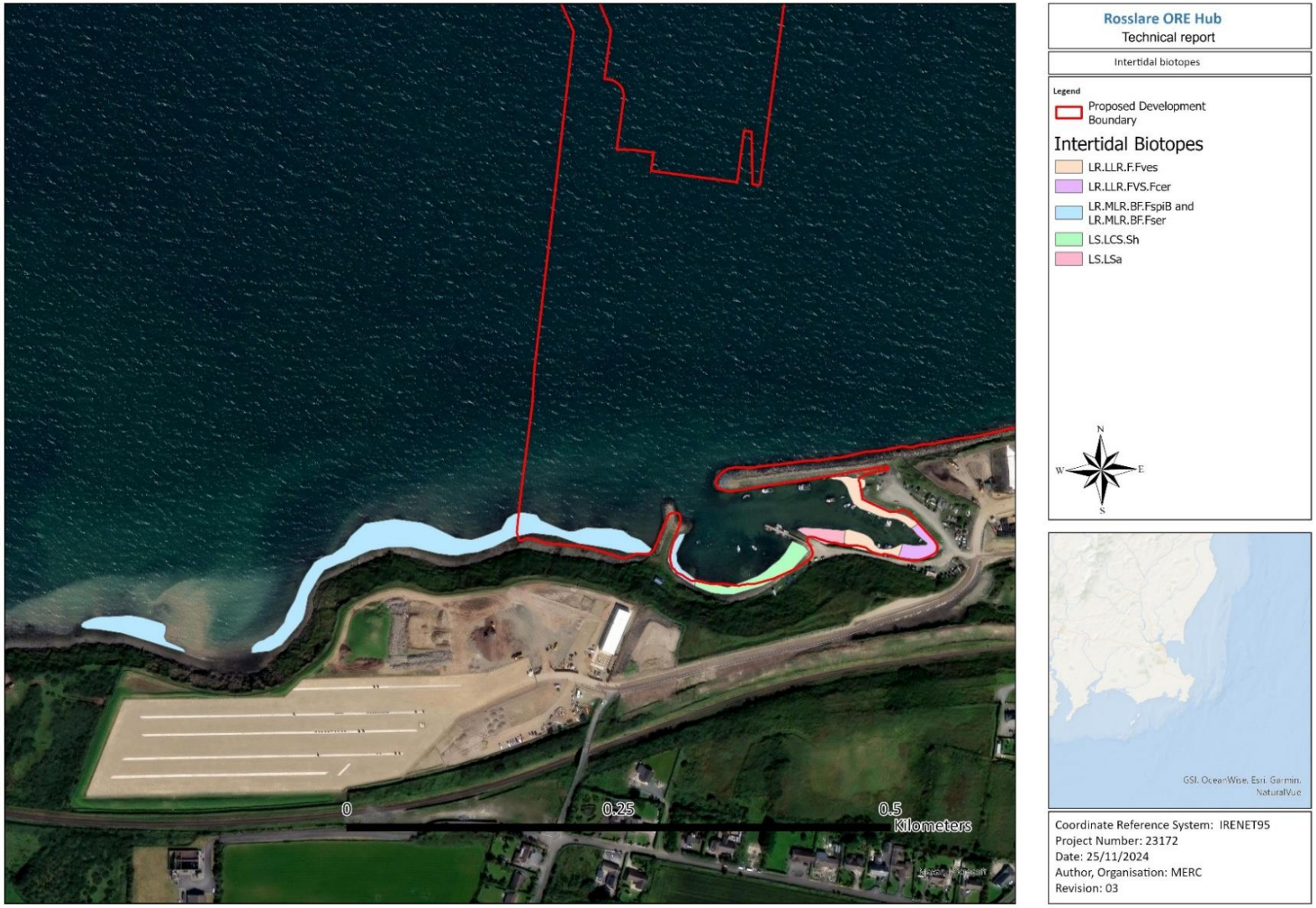

Figure 4.5: Intertidal biotope map. From EIAR Chapter 11: Benthic Ecology

Chapter 11: Benthic Ecology describes the benthic community within Long Bank SAC and Carnsore Point SAC as follows:

"Within Long Bank SAC a single community type is recorded; namely Sand with *Nephtys cirrosa* and *Bathyporeia elegans* community complex. The sediment is largely that of medium to fine sand with an area of mixed sediment in the northern reaches of the site. Distinguishing species of Sand with *Nephtys cirrosa* and *Bathyporeia elega*ns community complex include *Bathyporeia elegans, Spio filicornis, Nephtys cirrose*, *Gastrosaccus spinifer* and *Urothoe brevicornis*. For the most part, this complex is that of a low species number and density community. However, in the northern reaches of the site where the sediment is more mixed, a small area of increased numbers of species and individuals occurs".

Carnsore Point SAC is designated for two Annex I Habitats: mudflats and sandflats not covered by seawater at low tide [1140] and Reefs [1170]. The mudflats and sandflats not covered by seawater at low tide habitat contains a single community complex, namely, Intertidal sand dominated by polychaetes and crustacea community complex. This complex is dominated by the spionid polychaetes *Scolelepis squamata* and *Malacoceros fuliginosus*, the polychaete *Capitella* spp. and the intertidal amphipod *Haustorius arenarius*. Faunal distributions within this community complex are patchy, high abundances of *Malacoceros fuliginosus* and *Capitella* spp. are found at St. Helens Harbour and the western boundary of the SAC. On the beach between Carnsore Point and Crossfintan Point there are increased incidences of the amphipod *Bathyporeia pilosa*. The fauna recorded here are typical of intertidal clean sands.

The Reef habitat includes three community complexes, namely Sheltered to moderately exposed intertidal reef community complex, Exposed subtidal reef dominated by a faunal community complex and *Laminaria*-dominated community complex.

The Sheltered to moderately exposed intertidal reef community complex occurs as boulders and sloping bedrock. The reef biota is largely composed of a variety of lichen species on the upper shore and combinations of fucoids elsewhere on the shore. In sheltered areas, the red algae *Porphyra purpurea* and the freshwater tolerant genus *Ulva* sp. occur, while on moderately exposed reef, encrusting barnacles are found.

The exposed subtidal reef dominated by a faunal community complex is dominated by faunal communities with the most conspicuous species generally consisting of sponges, echinoderms, anemones and erect bryozoans. In depths of between 11 m to 30 m, the reef is occasionally dominated by ascidians.

The *Laminaria* dominated community complex is recorded from south of Carnsore Point between the lower shore and approximately 10 m water depth. Two species of kelp have been identified from this habitat, *Laminaria digitata* and *Laminaria hyperborea*. Other algal species associated with the community complex includes *Saccharina latissima*, *Chorda filum*, *Halidrys siliquosa*, *Dilsea carnosa* and the INIS *Sargassum muticum*. The fauna generally associated with this reef type include hydroids, sponges and bryozoans as well as the anemone *Anemonia viridis*, the crab *Necora puber* and the Ballan Wrasse *Labrus bergytta.*

4.6 MARINE MAMMALS

4.6.1 DESIGNATED SITES

SACs with Annex II marine mammals of the Habitats Directive (Council Directive 92/43/EEC) that are present in the Irish Sea include cetaceans; Bottlenosed dolphin (*Tursiops truncatus*), Harbour porpoise (*Phocoena phocoena*) and Pinnipeds; Grey seal (*Halichoerus grypus*) and Common (Harbour) seal (*Phoca vitulina*).

There are a number of SACs designated for Annex II species in close proximity to the Proposed Development. Carnsore Point SAC and Blackwater Bank SAC are the closest sites where Harbour porpoise was added as a QI in March 2024 (NPWS 2024a & NPWS 2024b).

Slaney River Valley SAC includes Harbour seal as a marine mammal QI. The SSCO for Harbour seal QI are outlined in Table 4.8.

Table 4.8: SACs for Annex II Species Information

Site Code, Name & distance	Qualifying Interests	Site-Specific Conservation Objects	Other information
002269 Carnsore Point SAC 1.4km	Harbour porpoise (*Phocoena phocoena*) [1351]	SSCO To maintain the favourable conservation condition of Harbour Porpoise. (NPWS 2024a).	Harbour porpoise was recently added as a QI.
002953 Blackwater Bank SAC 4.9km	Harbour porpoise (*Phocoena phocoena*) [1351]	SSCO To maintain the favourable conservation condition of Harbour Porpoise (NPWS 2024b).	Harbour porpoise was recently added as a QI
000781 Slaney River Valley SAC 6.6km	*Phoca vitulina* (Harbour Seal) [1365]	SSCO To maintain the favourable conservation condition of Harbour Seal in the Slaney River Valley SAC (NPWS 2011c).	
000707 Saltee Islands SAC 21km	*Halichoerus grypus* (Grey Seal) [1364]	SSCO To maintain the favourable conservation condition of Grey Seal in the Saltee Islands SAC (NPWS 2011b).	
000764 Hook Head SAC 40.2km	*Tursiops truncatus* (Common Bottlenose Dolphin) [1349] *Phocoena phocoena* (Harbour Porpoise) [1351]	SSCO To maintain the Favourable conservation condition of Bottlenose Dolphin and Harbour Porpoise in Hook Head SAC (NPWS 2025).	Harbour porpoise and Bottlenose Dolphin were recently added as a QIs. NPWS (2025)

4.6.2 DESK STUDY AND SURVEY

A project-specific marine mammal ecology desk study, visual and acoustic surveys and underwater noise modelling were undertaken as described in the accompanying EIAR Technical Appendix 13: Marine Mammals.

The review of published studies undertaken indicates that the waters off the south-east coast of Ireland, where the Proposed Development is located, are used by harbour porpoise, bottlenose dolphin, grey seal and harbour seal.

Sightings during ObSERVE Aerial Surveys carried out in summer and winter 2015 and 2016 (from Rogan *et al.*, 2018) were reviewed, with Harbour porpoise the most abundant cetacean in the vicinity of the Proposed Development.

A moderately diverse community has been recorded over the course of the site-specific vantage point marine mammal surveys undertaken twice per month between July 2022 and June 2023 ('Year 1') and between September 2023 and August 2024 ('Year 2'), with Harbour Porpoise frequently occurring and Common and Bottlenose Dolphin infrequent. Grey Seal were frequently recorded, and Harbour Seal were also recorded. Harbour Porpoise and Grey Seal occurred throughout the year.

Bottlenose dolphin and harbour porpoise have been observed within the proposed dredge area, while grey seal has been observed in and near to the proposed reclamation area and dredge area. Bottlenose dolphin and harbour porpoise sightings in the proposed dredge area are all > 500 m to the northeast of the proposed reclamation area and > 100 m to the north of the existing harbour breakwater. No other marine mammal species have been recorded within the Proposed Development Boundary.

Static Acoustic Monitoring (SAM) using Frequency- Porpoise Detectors (F-POD)s and a Sound Trap was also carried out, with data collected from two F-PODs for 12 months from December 2023 to December 2024 and Soundtrap data collected for 3 months. SAM data showed the area is used almost daily by dolphin species and porpoises, with the FPOD located furthest offshore recording more dolphin and porpoise vocalisations. Both harbour and grey seal were acoustically detected by the Soundtrap, with more grey seal vocalisations recorded than harbour seal vocalisations.

4.6.3 UNDERWATER NOISE MODELLING

To estimate the underwater noise levels that may result from the construction and operation of the Proposed Development, predictive underwater noise modelling was conducted. Two different models have been used to estimate the potential impacts from these activities. An acoustic propagation model has been used to estimate noise levels received by marine mammals during the piling and dredging activities, whilst an explosive blasting model has been used to estimate noise levels received by marine mammals during the rock blasting, which was an estimation for the pre-blasting as part of infill piling.

Potential impacts to marine mammals were estimated by comparing predicted noise levels with the Southall *et al.* (2019) thresholds for Permanent Threshold Shift (PTS) and Temporary Threshold Shift (TTS), whilst potential impacts to fish species were estimated by comparing predicted noise levels with the Popper *et al.* (2014) thresholds for injury.

The results of the modelling are described in EIAR Technical Appendix 13: Marine Mammals. In summary:

Piling noise generation levels depend on many factors, such as hammer energy and other properties of the hammer, dimensions and material properties of the pile, water depth, and seabed properties. The piling at the Proposed Development was modelled for a worst-case scenario (i.e., location furthest offshore). The risk of PTS to marine mammals was considered low. TTS to marine mammals belonging to the Low Frequency (LF) hearing group (e.g., minke whales) and Very High Frequency (VHF) hearing group (e.g., harbour porpoise) from piling may occur over larger distances (predicted up to 2.6km) if they slowly move away from the piling location. It was estimated that displacement of marine mammals could occur out to a maximum distance of 4.6km from the piling location.

Dredging noise generation is considered to be highly variable and can depend on numerous factors such as the type of dredger undertaking the work (e.g., trailing suction hopper dredger (TSHD), cutter suction dredger, backhoe dredger etc.), operational conditions of the dredger, the type of sediment being dredged, water depth and other environmental conditions (Jones *et al.,* 2015). Similar to the piling, the dredging location was modelled at the furthest offshore dredge location and an assumption of continuous dredging over a 24-hour period. Dredging activities are not expected to result in PTS to marine mammals. The modelling results also indicate that the risk of TTS to any marine mammals will be low and can be effectively mitigated against in the EIAR using standard mitigation measures. The modelling results suggest that displacement to marine mammals during dredging could potentially occur out to 1.3km.

Rock blasting may be required at the Proposed Development to fracture underlying rock to allow driving of sheet piles along the face of the quay. Each blasting event will involve 50 kg of explosive placed in pre-drilled holes and detonated sequentially with a small time -delay between individual detonations. It is expected that only one blasting event will be conducted on any given day and there will be 2 – 3 weeks between successive blasting events. Only auditory injury was modelled. The modelling results suggest that PTS to marine mammals belonging to the LF hearing group (e.g., minke whales), High Frequency HF hearing group (e.g., dolphins), and phocid carnivores in water PCW hearing group (e.g., seals) will be limited to within a maximum distance of 525 m. The modelling suggests that PTS and TTS to marine mammals belonging to the VHF hearing group (e.g., harbour porpoise) could occur over larger distances with estimated distances to PTS threshold exceedance ranging from 490 – 2,670 m and estimated distances to TTS threshold exceedance ranging from 900 – 4,920 m.

4.7 FISH ECOLOGY

4.7.1 DESIGNATED SITES

The River Slaney (Slaney River Valley SAC) is a designated SAC for a number of fish species (Table 4.9). All of these fish species, except for brook lamprey, migrate to sea for part of their life cycle.

Table 4.9: SACs for Annex II Species Information

Site Code, Name & distance	Qualifying Interests	Site-Specific Conservation Objects
000781 Slaney River Valley SAC 6.6km	Freshwater Pearl Mussel (*Margaritifera margaritifera*) [1029] Sea Lamprey (*Petromyzon marinus*) [1095] Brook Lamprey (*Lampetra planeri*) [1096] River Lamprey (*Lampetra fluviatilis*) [1099] Twaite Shad (*Alosa fallax*) [1103] Salmon (*Salmo salar*) [1106] (NPWS 2011c)	SSCO To restore favourable conservation condition of all QIs
002162 River Barrow and River Nore SAC 40km	Freshwater Pearl Mussel (*Margaritifera margaritifera*) [1029] Sea Lamprey (*Petromyzon marinus*) [1095] Brook Lamprey (*Lampetra planeri*) [1096] River Lamprey (*Lampetra fluviatilis*) [1099] Twaite Shad (*Alosa fallax*) [1103] Salmon (*Salmo salar*) [1106] NPWS (2011e)	SSCO To restore favourable conservation condition of all QIs

4.7.2 DESK-STUDY AND SURVEY

Chapter 12: Fish, Shellfish and Turtle Ecology includes information regarding the Slaney River Valley in general as well as the Slaney River Valley SAC specifically.

Surveys undertaken by Inland Fisheries Ireland in September 2009 for the Upper Slaney Estuary recorded seven species including salmon (2No.) and river/brook lamprey (1No.). Within the Lower Slaney Estuary 15 species were recorded, these did not include any of the five Annex II species designated as part of the SAC. The River Slaney has a reasonable run of spring salmon that varies each year, and fishing is controlled by local Angling Associations. The Wild Salmon & Sea trout Statistics report 2022 recorded 187no. Salmon (rod & line catch & release) in total over the spring and winter salmon season.

The accompanying Chapter 11: Benthic Ecology describes the benthic habitats within and adjacent to the Proposed Development Boundary and concluded that the community complexes found are common in Ireland and no rare or unusual fish or shellfish species were recorded.

Atlantic Salmon

Acoustic telemetry on Atlantic salmon smolts in the Irish Sea and their migratory trajectory indicates that Atlantic salmon smolts leaving rivers along the northeast coast of Ireland undertake a northerly migration out of the Irish Sea through the North Channel into deeper offshore waters further north (Barry *et al.*, 2020). Atlantic salmon from SACs in Wales are considered to migrate along prevailing currents north (Cefas, 2024) and the migratory route is unlikely to pass directly through Irish coastal waters. Salmon, migrating from southeast Ireland, and northwest Spain, have been tagged migrating westward towards oceanographic fronts, out to the shelf edge, before crossing the North Atlantic onto East Greenland for feeding (Rikardsen, *et al.,* 2021) – see Figure 4.6.

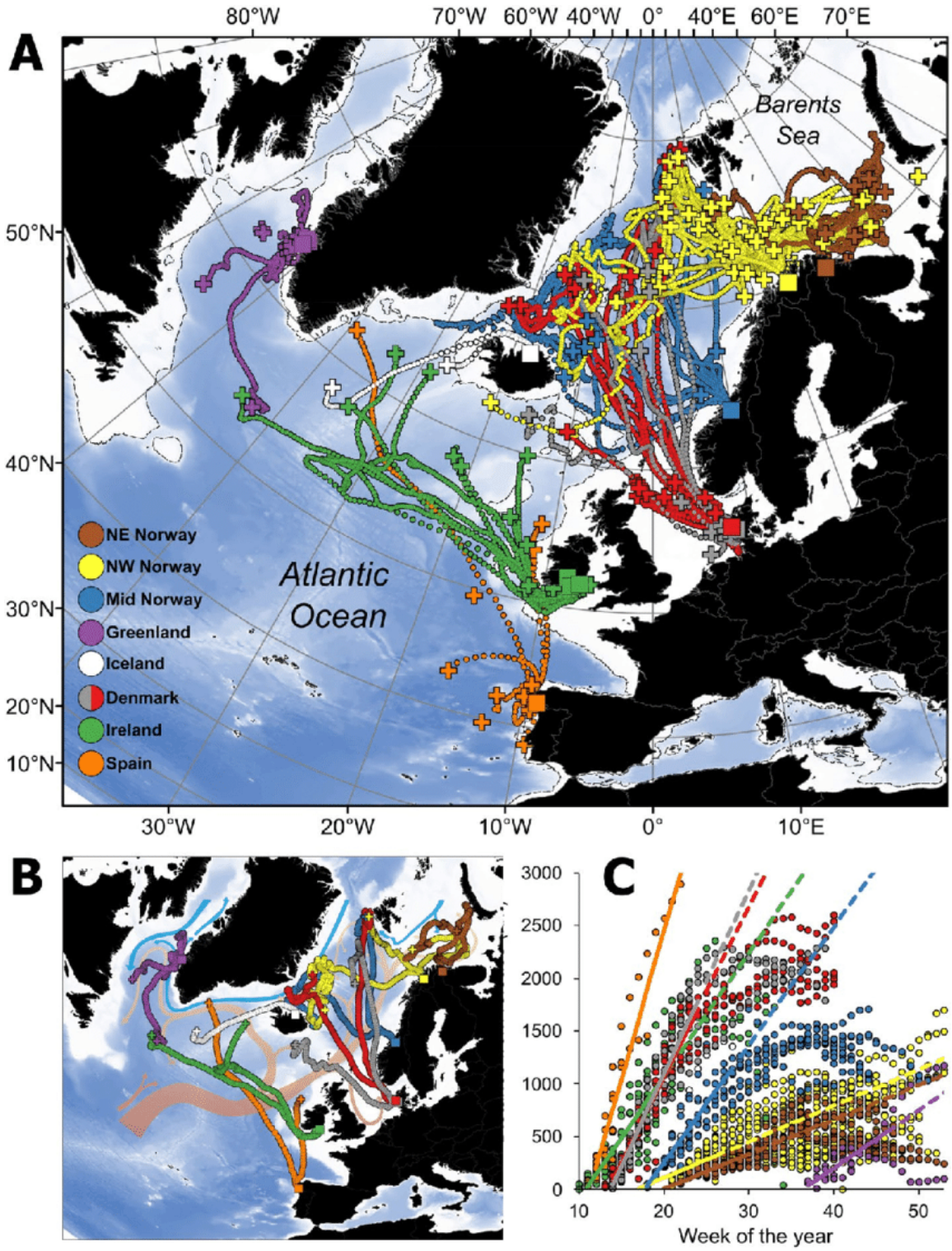

Figure 4.6: Migrations of Atlantic salmon tagged in eight different geographic areas (Rikardsen, *et al.*, 2021).

Freshwater Pearl Mussel

The freshwater pearl mussel (FWPM) is a long-lived freshwater bivalve with a complex life cycle that requires an obligate host fish species for successful reproduction, particularly Atlantic salmon and

brown trout (*Salmo trutta*). During summer, adult female mussels release thousands to millions of microscopic larvae, known as glochidia, into the water column. These free-floating larvae must attach to the gills of a suitable host fish within hours to survive. Once attached, the glochidia encyst within the gill tissue, forming a temporary parasitic relationship with the fish.

In early spring, fully developed juvenile mussels detach from the fish gills and settle into suitable riverbed substrate, such as clean, well-oxygenated gravel and sand. At this stage, survival rates are extremely low, with only a tiny fraction of juveniles reaching adulthood. Once settled, juveniles burrow into the riverbed, where they remain partially buried, filtering water for nutrients. Freshwater pearl mussels play a crucial role in maintaining water quality, as a single adult mussel can filter several litres of water per hour, helping to remove fine sediments and organic material and enhancing riverbed conditions, creating optimal spawning and rearing conditions for salmon. It takes 15–20 years for a freshwater pearl mussel to reach reproductive maturity, making population recovery slow and highly vulnerable to environmental pressures.

This interdependence means that pressures on Atlantic salmon in the marine environment could indirectly impact FWPM populations, as the decline of host fish could disrupt the mussel's life cycle. Additionally, degraded river conditions, sedimentation, and pollution negatively impact juveniles, which require clean, stable riverbeds to survive. This highlights the importance of protecting both freshwater and marine ecosystems, ensuring that anadromous fish species remain abundant to support the FWPM life cycle.

Lamprey Species

River and Sea lamprey rely on their parasitic relationship with Atlantic salmon and shad species. River lampreys are known to generally remain in the transitional waters of major estuaries with some near coastal habitats also being utilised. They migrate from their coastal feeding grounds into freshwater to spawn.

As adults, metamorphosed Sea and River lamprey are parasitic, hematophagous (external) feeders that can parasitize upon an extensively broad range of fish which means their distribution is largely dictated by their host. Parasitic lamprey does not display homing behaviour, relying on their host to return to a freshwater course to spawn. Sea and River lamprey are parasitic to fish such as trout, elasmobranchs (skates and sharks) and cephalopod species, and have been reported to occasionally occur as parasites on marine mammals, however, in particular, Atlantic salmon and adult shad are their preferred hosts. Therefore, it is considered that any impact from the survey activities that affects their hosts, Atlantic salmon and adult shad species (twaite and allis), may have significant effects on Sea and River lamprey by reducing the host availability to complete their life cycle.

As freshwater brook lamprey (*Lampetra planeri*) lives exclusively in freshwater, remaining in both large and small river channels (typically in smaller rivers), this species, unlike the other lamprey species, is not an anadromous fish and do not reside in brackish waters found within estuaries. Freshwater white-clawed crayfish (*Austropotamobius pallipes*) (FWCC) are freshwater relatives of marine lobsters and are found in rivers, streams and lakes particularly in those with a calcareous influence. Their distribution is restricted to freshwater systems and this species have no dependency (no connection) on the marine environment to complete their life cycle.

Shad Species

Twaite shad are iteroparous (multiannual spawners) and possibly philopatric (homing to natal rivers to spawn) (King and Roche, 2008). Very little is known about the distribution and movements of shad during their marine life-phase. There are no recent records of spawning populations in Ireland (IFI, species information, accessed online 2024). In a recent study, the movement of 58 acoustic-tagged Twaite shad emigrating from the River Severn (western England) were recorded. One of the tagged Twaite shad was detected in the Munster Blackwater Estuary (Ireland) and then in the River Severn, indicating a minimum movement distance of 950km (Davies, *et al.,* 2020).

4.7.3 UNDERWATER NOISE

Popper et al. (2014) have defined criteria for injury to fish species based on a review of publications related to impacts on fish, fish eggs and larvae from various sources including piling and explosives. Popper et al. (2014) is the most comprehensive review available for potential impacts of underwater noise on fish species.

The hearing capability and sensitivity of fish to underwater noise largely depends on the presence or absence of a swim bladder (Popper *et al.,* 2014; Nedelec *et al*., 2016). Popper *et al*. (2014) derived different injury thresholds for the following groups of fish:

- Fishes with no swim bladder or other gas chamber
- Fishes with swim bladders in which hearing involves the swim bladder or other gas volume
- Fishes with swim bladders but hearing does not involve the swim bladder or other gas volume
- Fish eggs and larvae

Underwater noise modelling is described in detail in section 4.6.3 of this report, and in EIAR Technical Appendix 13: Marine Mammals. For fish species the results are summarised as follows:

- Piling: Potential injury to fish species during piling is predicted to be very limited and confined to within 50 m of the piling location.
- Dredging: It is predicted that the dredging will not result in injury to any fish species.
- Blasting: The modelling results suggest that injury to fish species will be limited to a range of less than 170m from the blasting location.

4.8 TERRESTRIAL ECOLOGY

4.8.1 DESIGNATED SITES

SACs with terrestrial Annex I habitats are described in Table 4.10. SACs designated for otter are included in Table 4.11. Note intertidal habitat QIs of SACs considered in section 4.5.1 are not included in this section as they are described in section 4.5.

Table 4.10: SACs with Terrestrial Annex I Habitats as QIs

Site Code	SAC	Distance from Proposed Development	Qualifying Interests Annex I and Site-Specific Conservation Objective
000704	Lady's Island Lake SAC	4.4km directly 11.1km via the marine environment	Qualifying Interests (NPWS 2019) Perennial vegetation of stony banks [1220] SSCO To maintain the favourable conservation conditions of Perennial vegetation of stony banks
000781	Slaney River Valley SAC	6.6km	Qualifying Interests (NPWS 2011c) Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Mediterranean salt meadows (*Juncetalia maritimi*) [1410] SSCO None described Qualifying Interests Water courses of plain to montane levels with the *Ranunculion fluitantis and Callitricho-Batrachion* vegetation [3260] Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Alluvial forests with *Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae*) [91E0] SSCO To maintain the favourable conservation condition of QIs
000709	Tacumshin Lake SAC	8.2km directly 15.9km via the marine environment	Qualifying Interests (NPWS 2019) Annual vegetation of drift lines [1210] Perennial vegetation of stony banks [1220] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] SSCO To maintain the favourable conservation conditions of the QIs
000710	Raven Point SAC	8.9km	Qualifying Interests (NPWS 2011d) Annual vegetation of drift lines [1210] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] Dunes with *Salix repens ssp. argentea (Salicion arenariae*) [2170] Humid dune slacks [2190] SSCO To maintain the favourable conservation conditions of the QIs

Site Code	SAC	Distance from Proposed Development	Qualifying Interests Annex I and Site-Specific Conservation Objective
000707	Saltee Islands SAC	12.7km directly 21km via the marine environment	Qualifying Interest (NPWS 2011b) Vegetated Sea Cliffs of the Atlantic and Baltic coasts [1230] SSCO To maintain the favourable conservation conditions of the QIs

Table 4.11: SAC designated for Otter

Site Code	Distance from Proposed Development	Qualifying Interests	Site-Specific Conservation Objectives
000781 - Slaney River Valley SAC (NPWS 2011c)	6.6km	Otter (*Lutra lutra*) [1355]	SSCO To restore the favourable condition of otter in the Slaney River Valley SAC

4.8.2 SURVEY INFORMATION

A project-specific terrestrial ecology desk study has been completed. Field surveys for species were undertaken in 2023 on 04th September 2025 a walkover ecology and drone (Unmanned Aerial Vehicle - UAV) survey were undertaken to check for otter signs and invasive non-native flora and produce an updated terrestrial ecology habitat map (Figure 4.7) within the terrestrial footprint of the Proposed Development (methods per CIEEM, 2022; NRA, 2008a; 2009a).

The following Fossitt (2000) habitat types have been recorded within the Proposed Development Boundary: Scrub (WS1), Sedimentary Sea Cliffs (CS3), Reed and Large Sedge Swamps (FS1), Buildings and Artificial Surfaces (BL3), Seawalls, Piers and Jetties (CC1), Mixed Sediment Shores (LS5), Shingle and Gravel Banks (CB1), Dry Meadows and Grassy Verges (GS2), and Recolonising Bare Ground (ED3). Above the high-water mark, no Annex I-quality habitats were identified within the boundary. Small, localised shoreline fragments corresponding to Annual Vegetation of Drift Lines [1210] and Perennial Vegetation of Stony Banks [1220] were noted but do not represent Annex I-quality examples (limited extent/condition). The mapped Tidal Mudflats and Sandflats [1140] occur below the High Water Mark (HWM) and are assessed under Chapter 11: Benthic Ecology.

No flora protected under the Flora (Protection) Order 2022 or listed as threatened on the Irish Red List were recorded within the Proposed Development Boundary. Winter heliotrope (*Petasites fragrans*), a medium-impact non-native species, was recorded along the stony bank behind fishermen's sheds on the east side of the Small Boat Harbour. No Third Schedule (S.I. 477/2011) species were recorded within or immediately adjacent to the boundary. Although Hairy Bird's-foot-trefoil (*Lotus subbiflorus*), a Flora Protection Order species, was recorded in the wider search area (National Biodiversity Data Centre (NBDC), 2km2 grid T11G), it was not identified within the site. Other red-listed vascular plant species were recorded in the broader 2km² grid, but none were found within the Proposed Development Boundary.

Multiple otter spraints, couches, prey remains and well-defined trails through horsetail/scrub along the sedimentary sea cliffs and hard breakwater were recorded on the 2025 survey. Survey coverage followed NRA (2008a) extents along the Small Boat Harbour. NBDC holds a single historical otter record (2012) within grid T11G; other records in the wider area relate to freshwater systems. Additional otter records were present in the wider 5km study area, but these were associated with freshwater rivers and streams, rather than the coastal environment. No evidence of otter was recorded during the surveys undertaken in 2023.

No evidence of other non-volant mammal species such as Badger (*Meles meles*), Irish Hare (*Lepus timidus hibernicus*), Pygmy Shrew (*Sorex minutus*), West European hedgehog (*Erinaceus europaeus*) or Irish Stoat (*Mustela erminea hibernica*), were recorded during the Field Surveys.

Bat surveys within the Proposed Development included Preliminary Roost Assessments (PRA), emergence/re-entry surveys, transect surveys, and static detector surveys. The PRA identified no structures or trees with high or moderate suitability for roosting bats, with all three (3) trees classified as negligible suitability and twenty-one (21) buildings of the thirty (30) buildings within the Proposed Development as low suitability. Emergence surveys confirmed no bat roosts, though commuting activity was recorded, with common pipistrelle and Leisler's bat being the most frequently detected species. Transect surveys recorded (visual observation) only one bat across three (3) sessions, but species identification was not possible. Static detector surveys showed seasonal variation in bat activity, with high common pipistrelle activity in spring and summer, while autumn activity was lower, with only Leisler's and Nathusius' pipistrelle recorded. No bat activity was recorded at one of the two static detector locations during summer and autumn. The 2025 PRA confirmed no potential roosting features (PRFs), and no further surveys were required.

No NBDC records of herpetofauna were documented within the 2km2 grid T11G. No evidence of amphibian species, common frog (*Rana temporaria*) and smooth newt (*Lissotriton vulgaris*), or suitable habitat were identified during the surveys. Reptile surveys were conducted to assess habitat suitability for reptiles within the Proposed Development Boundary. In 2023, artificial refugia were deployed at five locations identified as potentially suitable for common lizards (*Lacerta (Zootoca) vivipara*), and a single individual was recorded basking in the southwest of the Proposed Development Boundary.

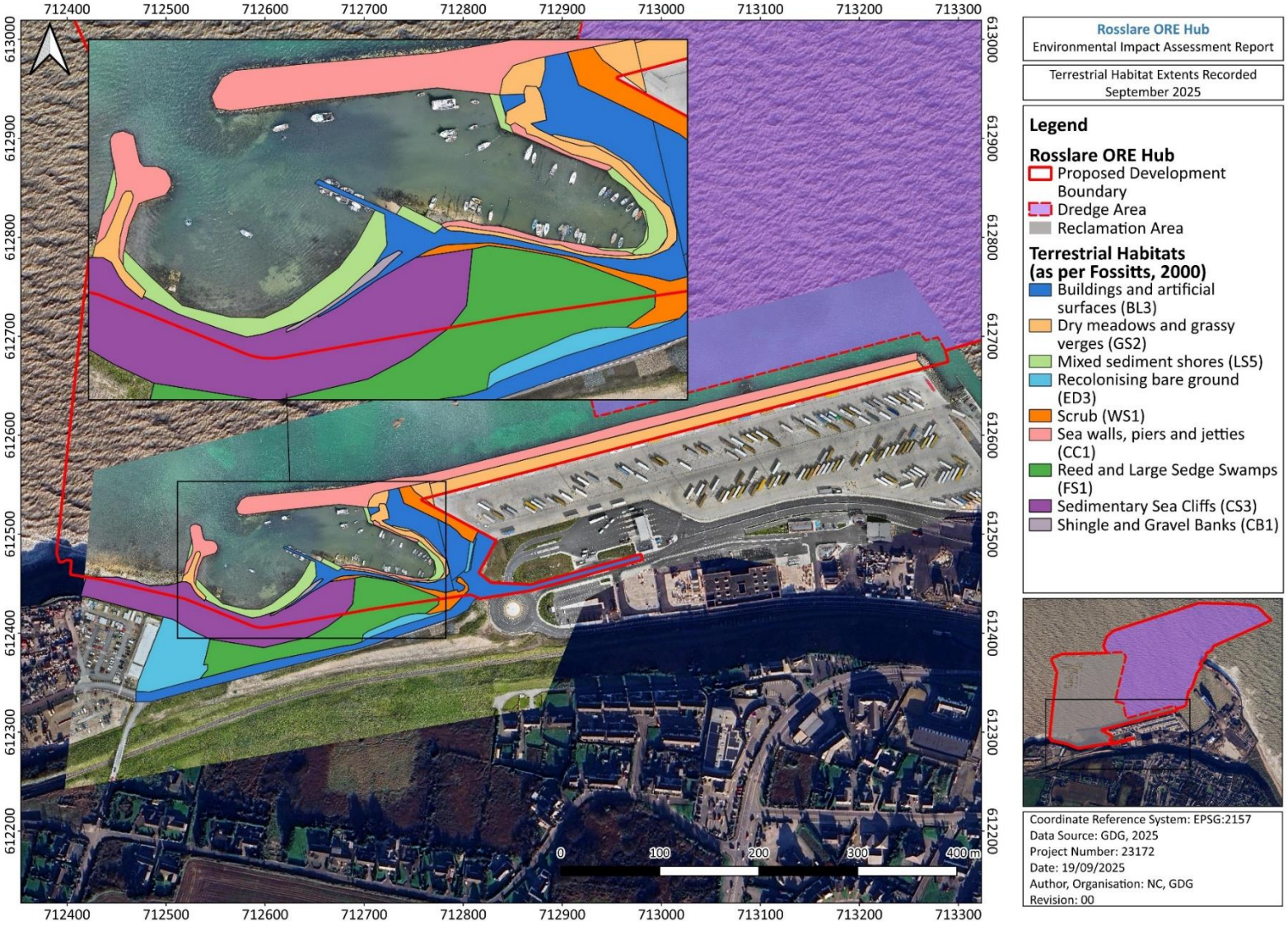

Figure 4.7: Terrestrial Habitat Map (Accompanying EIAR Technical Appendix 10: Terrestrial Ecology)

5 STAGE 1 SCREENING FOR APPROPRIATE ASSESSMENT

5.1 INTRODUCTION

This section describes the Natura 2000 sites which have been identified as having the potential to be affected by the Proposed Development.

Relevant Natura 2000 sites have been identified using the Source-Pathway-Receptor model as outlined in Practice Note PN01: Appropriate Assessment for Development Management published by the OPR (OPR 2021).

The assessment considers connectivity between the Proposed Development and Natura 2000 sites within Ireland as well as further afield (i.e., transboundary effects). Potential connectivity includes direct effects (i.e., overlap with the development area and a Natura 2000 site), and indirect effects (i.e., if the Natura 2000 site is within range of the effects of the proposed activities) and *in-situ* (within Natura 2000 site boundary) and, where relevant (i.e., for mobile species), *ex-situ* (outside Natura 2000 site boundary) connectivity.

Natura 2000 site and feature background information has not been reproduced in full from the source material (e.g. from the NPWS website) as PN01 states “short paraphrasing and/or cross reference to NPWS is acceptable – it is not necessary to reproduce the full text on the QI/SCI”; instead, the relevant information has been paraphrased with relevant resources referenced as appropriate.

This section follows a step-by-step process:

1. Source-Pathway-Receptor identification
2. Describing the Zone of Impact for SPAs and SACs (noting impact footprint for some activities may be larger than the Proposed Development Boundary) of the Proposed Development.
3. Understanding the Zone of Influence
4. Identifying Natura 2000 sites with the potential for a S-P-R connection that need to be considered for Likely Significant Effects
5. Screening Assessment of Likely Significant Effects
6. Screening for In-combination Effects

The terms Zone of Impact and Zone of Influence are defined below for clarity.

Zone of Impact

The zone of impact is the specific area where measurable environmental impacts are expected to occur due to the project.

Zone of Influence

The zone of influence of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a Natura 2000 site.

5.2 SOURCE-PATHWAY-RECEPTOR

The Source-Pathway-Receptor (SPR) model has been used to identify which Natura 2000 sites have connectivity to the Proposed Development, and their qualifying interests to the proposed activities, as outlined in OPR Practice Note 01: PN01 (OPR, 2021).

Under the S-P-R approach, the three comprising elements must be present to identify a likely significant effect.

As outlined in OPR (2021) *"The zone of influence of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. This should be established on a case-by-case basis using the Source-Pathway-Receptor framework and not by arbitrary distances (such as 15km)."*

The selection of Natura 2000 sites to be included in the AA screening for the Proposed Development is therefore underpinned by the Source-Pathway-Receptor (S-P-R) model, as recommended by the OPR 2021 guidance. This approach ensures that the focus is maintained on the relevant Natura 2000 sites that have a realistic potential to be affected by the Proposed Development, avoiding unnecessary descriptions or screening of SACs that are unlikely to experience significant effects.

The zone of influence (ZoI) of the Proposed Development in simple terms will be the footprint of an effect where there is a direct pathway to a receptor, for example direct loss of benthic habitat. However, the S-P-R is not usually a simple relationship, and effects may extend outside the Proposed Development Boundary, for example increase sediment concentrations from dredging or reclamation activities where dispersal via coastal processes extends beyond the Proposed Development Boundary. This area which is often different/larger and sometimes non-linear depending on the effect is referred to as the Zone of Impact.

The mobility of a species also needs to be considered. These species include marine mammals, migrating fish and ornithological receptors. Some of these receptors can migrate over large areas and/or have large ranges of movement. However, the Conservation Objectives for these Qualifying Interests are related to the Natura 2000 site. For example, harbour porpoise may be a Qualifying Interest for a Natura 2000 site which may have a Conservation Objective (CO) to "*maintain the favourable condition".* The attribute to achieve this CO would be "*access to suitable habitat"* with a target "*species range within the site should not be restricted by artificial barriers to the site use".* For a S-P-R connectivity to exist the Natura 2000 site in question would have to be close enough to the source that an artificial barrier would be formed which would restrict species range within the site.

Section 3 of this report describes the Proposed Development and the planned construction and operational activities. These are the potential **sources,** and their associated impacts are outlined in Table 3.3 and Table 3.4.

The potential **receptors** have been categorised for AA screening as follows:

- **SPAs – Designated to Protect SCIs** (i.e., includes birds generally and diving birds more specifically)
- **SACs – Designated to Protect Annex I habitat QIs** (includes subtidal benthic habitats and intertidal coastal habitats)
- **SACs – Designated to Protect Annex II mobile species QIs** (includes migratory fish, marine mammals, otter)

This approach allows the screening assessment to focus on the impacts that could potentially have likely significant effects on the relevant SCIs and QIs of the receiving Natura 2000 Sites.

Table 5.1 summarises the S-P-R parameters considered.

Table 5.1: Source Pathway Receptor

Source	Pathway	Receptor
Construction		
Dredging & reclamation, construction of small boat harbour: *Habitat loss (temporary and permanent)*	Sediment	SAC - with Annex I habitat QIs (benthic habitats) SPA – with SCIs (diving birds)
Dredging & reclamation: *Increased suspended sediment concentrations* *Reduction in prey availability (in-direct)*	Water column	SAC - with Annex I habitat QIs (benthic habitats SAC – with Annex II mobile species QIs (migratory fish, marine mammals, otter) SPA – with SCIs (diving birds)
Dredging & reclamation, piling: *Mortality, injury, displacement and/or disturbance from underwater noise*	Water column	SAC – with Annex II mobile species QIs (includes migratory fish, marine mammals, otter) SPA – with SCIs (diving birds)
Dredging & reclamation, vessel movements: *Mortality or injury from vessel collision*	Water column	SAC – with Annex II mobile species QIs (includes marine mammals, otter)
Dredging & reclamation, piling, Excavation and Earthworks (includes limited demolition), Construction of buildings, road surfacing and other surfacing works, Construction traffic (land based): *Displacement and/or disturbance from airborne noise*	Air	SPA – with SCIs (birds)
Dredging & reclamation, piling, Excavation and Earthworks (includes limited demolition), Construction of buildings, road surfacing and other surfacing works, concrete works, Construction traffic (land based):	Water column	SAC- with Annex I habitat QIs (benthic habitats SAC- with Annex II species QIs (includes migratory fish, marine mammals, otter)

Source	Pathway	Receptor
Reduction in water quality		SPA – with SCIs (birds)
Dredging & reclamation, piling, Excavation and Earthworks (includes limited demolition), Construction of buildings, road surfacing and other surfacing works, Construction traffic (land based): *Visual disturbance*	Air	SPA – with SCIs (birds)
Earthworks (includes limited demolition), Construction of buildings, road surfacing and other surfacing works, concrete works, Construction traffic (land based): *Displacement and/or disturbance from airborne dust*	Air	SAC- with Annex I habitat QIs (coastal habitats)
Operation		
Operational Activities: *Mortality, injury, displacement and/or disturbance from underwater noise*	Water Column	SAC- with Annex II species QIs (includes migratory fish, marine mammals, otter) SPA – with SCIs (diving birds)
Operational Activities: *Mortality or injury from vessel collision*	Water Column	SAC- with Annex II species QIs (marine mammals & otter)
Operational Activities: *Displacement and/or disturbance from airborne noise*	Air	SPA – with SCIs (birds)
Operational Activities: *Reduction in water quality*	Water column	SAC- with Annex II species QIs (includes migratory fish, marine mammals, otter) SPA – with SCIs (birds)

5.2.1.1 ZONE OF IMPACT

The Zone of Impact is the specific area where measurable environmental impacts are expected to occur due to the project. This zone is usually more confined than the Zone of Influence and directly overlaps with areas that will experience tangible changes, such as habitat loss, pollution, or noise disturbance.

Desk study information, field surveys and site-specific modelling (particularly Sediment Dispersion Modelling and Underwater Noise Modelling) have been used to inform the Zone of Impact. This is based on evidence based predicted changes and does not include areas where impacts are unlikely or too minimal to be significant. It is important to understand the Zone of Impact when applying the

S-P-R model and the connectivity between the conservation objectives (attributes and targets) of a Natura 2000 site and the Proposed Development activities.

The Zone of Impact has been considered for potential impacts described in Table 5.1, and takes into account the area where habitats and species are likely to experience noticeable changes due to the Proposed Development's activities.

The Zone of Impact is described in the following sections and Table 5.2, Table 5.3 and Table 5.4.

5.2.1.2 ESTABLISHING THE ZONE OF IMPACT FOR SPAS – DESIGNATED TO PROTECT SCIS

The following section considers the zone of impact during construction (C) and operation (O) for SPAs designated to protect SCIs and summarised in Table 5.2.

Table 5.2: Zone of Impact for SPAs

Potential impact	C	O	Zone of Impact	Rationale
Loss of habitat (temporary & permanent)	✓		Dredge area – temporary habitat loss Reclamation area – permanent habitat loss	Temporary loss of habitat is limited to the dredging areas during construction dredging activities. Permanent loss of habitat describes the 25.5 ha reclamation area (excluding the open-water area in the Small Boat Harbour).
Increased suspended sediment concentrations	✓		Proposed Development Boundary and based on sediment dispersion modelling results, 1.5km west of and 2.5km southeast along the shoreline from the Proposed Development Boundary	Increased suspended sediment concentrations may affect foraging seabirds, particularly those that are visual underwater feeders. The indirect effects for birds that feed on fish are described in this table; see 'Indirect effects through impacts on prey availability and prey acquisition'.
Mortality, injury, displacement and/or disturbance from underwater noise caused by *piling* / dredging / blasting activities	✓		Proposed Development Boundary It is noted airborne noise also associated with these activities is likely to increase the zone of impact range therefore an additional distance of approximately 300m is added.	Each bird species has a unique foraging strategy that determines how long they remain submerged, which is crucial for assessing their exposure to potential underwater noise. Birds that shallow dive, dip dive or surface feeders are unlikely to be vulnerable to underwater noise due to the short time spent underwater e.g. tern species. Species that are known to engage in pursuit diving or benthic feeding in marine, coastal and estuarine waters, at least during part of the year may be vulnerable to underwater noise. There is little understanding of the underwater hearing for diving birds, and they may not hear well underwater (Dooling & Therrien 2012). There is some evidence (auks) that potential impacts and associated effects

Potential impact	C	O	Zone of Impact	Rationale
				are limited temporally and spatially (Mooney 2020).
Displacement and/or disturbance from airborne noise	✓	✓	Proposed Development Boundary and approximately 300m (BSI 2008)	Seabird species exhibit varying species-specific sensitivities to anthropogenic noise and behavioral responses can vary between seasons (i.e., inside and outside the breeding season), time of day, flock size and whether the seabird species is foraging or roosting (Cutts 2013., Goss-Custard *et al*., 2019). Many species are sensitive to loud construction noise. For birds, the Zone of Impact from piling, dredging and construction activities could reach approximately 300 meters from the Proposed Development.
Visual disturbance	✓	✓	Proposed Development Boundary The Proposed Development is located adjacent to the operational Rosslare Port and to some extent sensitive birds are already habituated to visual disturbances from the port. The Proposed Development Boundary including the dredging area is considered to be approximate to the zone of impact.	The proposed construction activities may have adverse effects on wintering and breeding birds as a result of additional anthropogenic visual impacts in the marine and intertidal environment. Sea and shore birds vary in their responses and susceptibilities to visual disturbances and displacement (Fliessbach *et al.,* 2019).
Impacts on prey availability and prey acquisition	✓	✓	Proposed Development Boundary and predicted noise modelling fish injury distance (maximum distance 170m) Increased SSC may extend the Zone of Impact 1.5km west of and 2.5km southeast along the shoreline from the Proposed Development Boundary	SCI may vary in their susceptibilities to indirect effects through impacts upon prey species, potentially affecting their availability for diving and non-diving SCI birds. There is a potential that fish present within the Proposed Development Boundary will be temporarily displaced by noise, thus also displacing the food resource for seabirds. Potential injury to fish species during construction activities is predicted to be very limited and confined to within 50 m of each piling locations and 170 m from blasting activities. Increased suspended sediment concentrations (SSC) may deter fish and other mobile invertebrates from the area

Potential impact	C	O	Zone of Impact	Rationale
				disturbed by the dredging activities. (see description above for Increased SSC).
Reduction in water quality	✓	✓	Proposed Development Boundary	Seabirds are considered vulnerable to oil pollution, in particular diving birds given the time they spend resting on the water surface and diving through the water in search of food. As relatively small volumes of oil will be used during construction and operational phases, any accidental spills or leaks from vessels or construction activities are anticipated to be of low volume and as such a zone of impact including the dredging area is considered appropriate.

5.2.1.3 ESTABLISHING THE ZONE OF IMPACT SAC – DESIGNATED TO PROTECTED ANNEX I HABITATS

Annex I habitat QIs occur below Mean High Water (MHW), above MHW and intertidally.

For direct physical effects to habitats, the potential for connectivity between the Proposed Development and SACs where Annex I habitats are QIs was assessed based on whether the Proposed Development Boundary or relevant impacts from proposed activities overlapped spatially with the SAC boundary. These are summarised for construction (C) and operation (O) is in Table 5.3.

Table 5.3: Zone of Impact for SACs designated to protect Annex I habitats

Potential impact	C	O	Zone of Impact	Rationale
Temporary habitat loss	✓		Proposed Development - dredging area	Temporary loss of habitat is limited to the dredging area during construction dredging activities.
Permanent habitat loss		✓	Proposed Development - reclamation area	Permanent habitat loss is limited to the reclamation area that forms the quaysides and storage of the Rosslare ORE Hub and the proposed small boat harbour. Reclamation activities include construction of the rock perimeter bund and subsequent infilling with dredged material.
Reduction in water quality	✓	✓	Proposed Development Boundary	Pollution from both construction and operational activities such as accidental oil spills. Zone of Impact is considered to be within the Proposed Development Boundary. As relatively small volumes of oil will be used during construction and operational phases, any accidental spills or leaks from vessels or construction activities are anticipated to be of low volume and as such a zone of impact including the dredging area is considered appropriate.

Potential impact	C	O	Zone of Impact	Rationale
Increased suspended sediments concentrations	✓		Proposed Development Boundary and based on sediment dispersion modelling results, 1.5km west of and 2.5km southeast along the shoreline from the Proposed Development Boundary	Construction activities, reclamation and dredging that physically disturb the seabed can cause an increase in SSCs. Increases in suspended sediment may induce smothering of certain species, especially filter feeding species by blocking their feeding apparatus, smothering sessile species or interfering with respiratory function. Sediment dispersal modelling (GDG 2024) considered the construction of the reclamation area, dredging and disposal of dredged sediment. Worst-case scenarios where the highest volume to be dredged and disposed is being undertaken were modelled. The modelling results found: • The maximum and average SSC values are concentrated near the area between the west and east of Rosslare Harbour, indicating that the sediment remains confined within the port's area of influence. • Stage 3 of the dredging (i.e., the longest continuous dredging period) produced the highest SSC values.
In- air dust	✓		Proposed Development – reclamation area and area up to 50m from the land side Proposed Development Boundary.	On land construction activities have the potential to create airborne dust resulting in local smothering of sensitive receptor QIs within SAC terrestrial habitats. Larger particle size dust settles close to the source. Ecological receptors within 50m of the Proposed Development Boundary are considered at risk (IAQM 2014).

5.2.1.4 ESTABLISHING THE ZONE OF IMPACT FOR SACS – DESIGNATED FOR THE PROTECTION OF ANNEX II MOBILE SPECIES

The following section includes the identification of the Zone of Impact for SACs with Annex II marine mobile species: marine mammals, anadromous fishes, and otters.

Marine Mammals

Annex II marine mammal QIs designated for protection in SACs that are present in the Irish Sea include cetaceans; Harbour Porpoise (*Phocoena phocoena*) and Bottle-nosed dolphin (*Tursiops truncatus*), and Pinnipeds; Grey Seal (*Halichoerus grypus*) and Common (Harbour) Seal (*Phoca vitulina*).

There is potential for connectivity between the Proposed Development and SACs for which marine mammals are a QI due to their mobile nature. Marine mammals have the potential to swim through or search for prey within the Proposed Development Boundary.

- Indirect effects include impacts on prey availability for these QIs. The QIs have a wide variety of prey species that vary geographically and seasonally, reflecting availability of food resources. Marine mammals such as the harbour porpoise and bottle-nosed dolphin have high daily energy requirements, and as a result need to capture enough prey to meet these demands.

The zone of impact during construction (C) and operation (O) is described in Table 5.4. The table details the predicted PTS, TTS and displacement distances for harbour porpoise, as well as the impact zones for PTS, TTS, and displacement for the marine mammal species expected to experience these effects at the shortest distance from the underwater sound source (piling, dredging and blasting).

Table 5.4: Zone of Impact for SACs designated to protect Annex II Marine Mammals

Potential impact	C	O	Zone of Impact	Rationale
Mortality, injury, disturbance and/or displacement from underwater noise - *Piling*	✓		Predictive noise modelling indicates the following distances from the piling noise source (depending on species): <u>Harbour porpoise:</u> - PTS - up to 110 m - TTS - up to 2.6km - Displacement - up to 4.6km <u>Bottlenose dolphin</u>: - PTS – up to 2 m - TTS – up to 4 m - Displacement – up to 4.6km	Marine mammals use their auditory ability to locate food, for communication and aid in navigation (Richardson *et al*., 1995). Exposure to noise can induce a range of effects on marine mammals: physical effects may include a temporary reduction in hearing sensitivity (Temporary Threshold Shift (TTS)) which is reversible over time; or following intense noise exposure, Permanent Threshold Shift (PTS). Other effects include masking of biologically important noises (or cues) by anthropogenic noise (perceptual effects); behavioral changes such as displacement from feeding, resting, or breeding grounds; and stress (Southall et al., 2007, Southall et al., 2019; DAHG, 2014). TTS to marine mammals belonging to the very high frequency category (e.g. Harbour porpoise) from piling may occur over larger distances (predicted up to 2.6km) if they slowly move away from the piling location. It was estimated that displacement of marine mammals could occur out to a maximum distance of 4.6km from the piling location. A precautionary approach has been used to describe the Zone of Impact.
Mortality, injury, disturbance and/or displacement from underwater noise - *Dredging*	✓		Predictive noise modelling indicates the following distance from noise source (depending on species):	Dredging at the Proposed Development is not expected to result in PTS to any marine mammals due to the relatively low levels of noise that are generated. The modelling results also indicate that the risk of TTS to any marine mammals will be low. The modelling results indicate that

Potential impact	C	O	Zone of Impact	Rationale
			Harbour porpoise: - PTS - threshold not exceeded - TTS – up to 410 m - Displacement - up to 1.3km For bottlenose dolphin and grey and harbour seals, PTS and TTS are not exceeded. Displacement of up to 1.3km is predicted for these species	displacement to marine mammals during dredging could potentially occur out to 1.3km.
Mortality, injury disturbance and/or displacement from underwater noise - *Blasting*	✓		Predictive noise modelling indicates the following distance from noise source (depending on species). For blasting activities displacement ranges were not modelled. Harbour porpoise: - PTS – up to 1,630 m - TTS – Up to 3,000 m Bottlenose dolphin: - PTS – Up to 95 m - TTS – Up to 170 m Grey and Harbour seals: - PTS – Up to 320 m - TTS – Up to 590 m	Rock blasting within the Proposed Development Boundary could potentially result in the highest noise levels and could therefore potentially have the greatest impact in terms of auditory injury to marine mammals. However, the modelling results suggest that PTS to marine mammals belonging to bottlenose dolphin and seal hearing groups will be limited to within a maximum distance of 525 m. The modelling indicates that PTS and TTS to harbour porpoise could occur over larger distances with estimated distances to PTS threshold exceedance ranging from 490 – 2,670 m and estimated distances to TTS threshold exceedance ranging from 0.9-5km. If rock blasting is required, only a single blasting event will be conducted on any given day at the Proposed Development. Furthermore, it is expected that there will be at least 2 – 3 weeks between each blasting event. A short-term startle response is considered more likely than any long-term displacement.
Displacement and/or disturbance from underwater noise - *Vessels*	✓	✓	Proposed Development Boundary	Man-made underwater noise particularly from vessel movements make up the environmental background setting in the vicinity of the Proposed Development. Marine mammals to a certain extent are tolerant of shipping noise. Vessel noise tends to be within the lower frequences and will be from construction vessels and those associated with the operation of the Rosslare ORE Hub.

Potential impact	C	O	Zone of Impact	Rationale
				Zone of impact is therefore restricted to the Proposed Development Boundary.
Mortality or injury from vessel collision	✓	✓	Proposed Development Boundary.	There is a risk of collision between marine mammals and construction and operational vessels which may cause injury and may result in individuals becoming vulnerable to secondary infections. Injuries to marine mammals from vessel strikes are species-dependent but generally are more severe at higher impact speeds (Wang et al., 2007). However, while the risk of fatality is greatly reduced if vessels are moving slowly, slower vessels following a consistent trajectory (such is the case for construction activities) afford marine mammals the opportunity to avoid such collisions). As described in EIAR Chapter 6: Project Description, the presence of construction vessels and their activities will increase vessel traffic in the approaches to the port and in the main harbour during the construction phase. The anticipated number of project vessels using the ORE berths in the operational phase is relatively low, with peak traffic numbers during an Offshore Wind Farm lifecycle of up to one large vessel every two days to ORE Berth 1. These QIs are exposed to vessels of all sizes on a regular basis due to other activities in the area including fishing and shipping. Zone of Impact is therefore restricted to the Proposed Development Boundary.
Indirect effects through impacts on prey availability and prey acquisition. Increased Suspended Sediment Concentrations	✓		Predictive noise modelling shows the following: Disturbance to prey species - Up to 170 m from the noise source within the Proposed Development Boundary. Predictive dispersion modelling indicates the sediment may travel 1.5km west of and 2.5km southeast along the shoreline from the Proposed Development Boundary	Potential effects on prey species of these QIs include underwater noise, increased suspended sediment concentrations and sediment re-deposition, and physical disturbance to and temporary loss of seabed habitat (e.g. nursery and spawning grounds including reefs). These QIs have a wide variety of prey species that vary geographically and seasonally, reflecting availability of food resources. Marine mammals such as the harbour porpoise and bottle-nosed dolphin have high daily energy requirements, and as a result need to capture enough prey to meet these demands. Potential injury to fish species during piling is predicted to be very limited and confined to within 50 m of the piling location and 170 m of the blasting activities. Construction activities, reclamation and dredging that physically disturb the seabed can cause an

Potential impact	C	O	Zone of Impact	Rationale
				increase in suspended sediments concentrations (SSC). See text above Table 5.3 regarding sediment dispersion modelling. Increased SSC is unlikely to directly affect marine mammals that use echolocation, or pinnipeds since research indicates that vision is not essential to pinnipeds' survival or ability to forage (Todd *et al.,* 2015).
Reduction in water quality	✓	✓	Proposed Development Boundary	Marine mammals are considered vulnerable to oil pollution through inhalation, ingestion and dermal pathways due to the regular frequency at which marine mammals will surface to breathe and/or rest, and to breach. Pollution is possible from both construction and operational activities such as accidental oil spills. As relatively small volumes of oil will be used during construction and operational phases, any accidental spills or leaks from vessels or construction activities are anticipated to be of low volume and as such the zone of impact is considered to be the Proposed Development Boundary.

Fish

The Rosslare ORE Hub does not overlap and is not adjacent to a SAC designated for Annex II migratory or diadromous fish. Fish may migrate through or close to the Proposed Development Boundary. Annex II species include Atlantic salmon, Twaite shad & Lamprey species. Freshwater pearl mussels have a symbiotic relationship with Atlantic salmon, as larvae released in spring from adult female mussels attach themselves to the gills of suitable host fish (and brown trout). Lamprey species reply on their parasitic relationship with Atlantic salmon and shad species and therefore are considered within this assessment.

Like marine mammals, these mobile species may transit through the Proposed Development Boundary. Direct impacts from mortality, injury, displacement and/or disturbance from underwater noise from activities including piling, dredging, reclamation and vessels have the potential to affect these QIs.

Underwater noise modelling was carried out and the results are set out in EIAR Technical Appendix 13: Marine Mammals. Potential effects of underwater noise on fish species include auditory injury Permanent Threshold Shift (PTS) and Temporary Threshold Shift (TTS). The underwater noise modelling results were used to describe the zone of impact during the construction (C) and operation (O) of the Proposed Development with respect to noise (Table 5.5).

Sediment dispersion modelling undertaken for the Proposed Development (as described in EIAR Technical Appendix 8: Coastal Processes has been used to identify the zone of impact during the

construction (C) and operation (O) of the Proposed Development with respect to increase in suspended sediments (Table 5.5).

Table 5.5: Zone of Impact for SACs designated to protect Annex II Fish

Potential impact	C	O	Zone of Impact	Rationale
Increase in suspended sediments / smothering Indirect effects through impacts on prey availability and prey acquisition.	✓		Proposed Development Boundary and based on sediment dispersion modelling results, 1.5km west of and 2.5km southeast along the shoreline from the Proposed Development Boundary	Construction activities, reclamation and dredging that physically disturb the seabed can cause an increase in suspended sediments concentrations (SSC). Effects on fish from an increase in suspended sediments are described in a review by Wenger *et al*, (2017). Stress responses reported in the literature reviewed varied from no effect to behavioral changes, physical damage and mortality. Sediment dispersion modelling (GDG 2024) considered the construction of the reclamation area, dredging and disposal of dredged sediment. Worst-case scenarios where the highest volume to be dredged and disposed were modelled. See text above Table 5.3 regarding sediment dispersion modelling.
Mortality, injury, displacement and/or disturbance from underwater noise *piling / dredging /blasting activities*	✓		Up to 170m from the noise source within the Proposed Development Boundary	Underwater anthropogenic sound can cause physical, physiological and behavioral impacts on fishes. It can cause mortality, cause a wide range of physiological impacts, and result in behavioral changes affecting the fitness and survival of fishes (Popper *et al*., 2014). Fish vary in their abilities to detect sound as well as their susceptibility to damage by sound (Popper *et al*., 2014). Fish species are either hearing specialists (e.g. Twaite shad and Allis shad) or hearing generalists (Atlantic salmon and lamprey species) with only the former being directly susceptible to underwater noise. Atlantic Salmon has poor hearing sensitivity and is only capable of detecting low frequency tones (below 380 Hz) and particle motion rather than sound pressure (NOAA, 2016). Twaite shad may potentially affect host availability for the parasitic feeders, Sea and River lamprey, (indirect impact) if the operating frequencies of the sound emitted falls within their hearing range.

Potential impact	C	O	Zone of Impact	Rationale
Reduction in water quality	✓	✓	Proposed Development Boundary	Fish species can be affected by a reduction in water quality from a pollution or littering event such as an accidental oil spill during either construction or operation of the Proposed Development which could result in death or induce a reduction in health and fitness levels in populations (i.e., feeding and breeding success). Any accidental spill or leak from vessels or construction activities are anticipated to be small and the zone of impact that includes the dredging area is considered appropriate.

Otter

The Proposed Development does not overlap with and is not adjacent to an SAC designated for protection of otter. Connectivity is considered possible as otter from SACs not overlapping with or adjacent to the Proposed Development may migrate through or close to the Proposed Development.

The zone of impacts for otters during construction (C) and operation (O) of the Proposed Development are discussed further in Table 5.6.

Table 5.6: Zone of Impact for SACs designated to protect Annex II Otter

Potential impact	C	O	Zone of Impact	Rationale
Mortality, injury, displacement and/or disturbance from underwater noise *piling / dredging /blasting /vessel activities*	✓	✓	Predictive noise modelling shows a disturbance range of up to 525m from the noise source within the Proposed Development Boundary	Otters residing along coastlines have a broader niche than otters living in freshwater systems, encompassing a wide range of intertidal prey (NPWS, 2010/12). Coastal otters mostly feed close to the shore (c. 100m) with a diving depth limit of up to 10m (Liles, 2009). Otters are mobile species and there are potential direct impacts from displacement and/or disturbance from underwater noise from activities including piling, dredging, reclamation and vessels. Elevated underwater noise levels may limit otters' access to foraging areas and disrupt prey availability. Rock blasting within the Proposed Development Boundary could potentially result in the highest noise levels and could therefore potentially have the greatest impact in terms of auditory injury to marine mammals. However, the modelling results suggest that PTS to bottlenose dolphins and seals will be limited to within a maximum distance of 525 m.
Indirect effects through impacts on prey availability and prey acquisition	✓		Predictive underwater noise modelling shows: Piling - Up to 50m from the noise source within the Proposed Development Boundary Blasting - up to 170m from the noise source within the Proposed Development Boundary	Prey availability of otters may be affected by the proposed activities due to disturbance and displacement of certain mobile prey species such as fish. Increased SSC (as discussed in Table 5.4) may have an impact on prey species such as mobile fish and invertebrates avoiding the affected/disturbed area. Potential injury to fish species during piling is predicted to be very limited and confined to within 50 m of the piling location and 170 m from blasting activities.

Potential impact	C	O	Zone of Impact	Rationale
Reduction in water quality	✓	✓	Proposed Development Boundary	Otters can be affected by a reduction in water quality from a pollution or littering event such as an accidental oil spill during either construction or operation of the Proposed Development which could result in death or induce a reduction in health and fitness levels in populations (i.e., feeding and breeding success). Any accidental spill or leak from vessels or construction activities are anticipated to be small and the zone of impact that includes the dredging area is considered appropriate.
Displacement and/or disturbance from airborne noise	✓	✓	Landward of the Proposed Development Boundary to a maximum distance of 150m	Within their terrestrial environment otters may be subject to displacement and/or disturbance from airborne noise from construction or operation activities. Guidance from the National Roads Authority (NRA 2008) states that disturbance effects would not be expected to extend beyond 150m.

5.3 ZONE OF INFLUENCE

The Zone of Influence (ZoI), or the distance within which potentially significant effects may arise on the environment, varies across QIs / SCIs based on the predicted impacts and potential impact pathways, covering all direct, indirect, secondary, and in-combination impacts. It includes areas that could be affected by changes in air, water, noise, and ecological connectivity, and may extend beyond the immediate Zone of Influence.

For the Proposed Development there are a number of source/effect pathways that can arise due to the mobility of species. It is important to recognise distant Natura 2000 sites where there is the theoretical potential for connectivity and at the same time consider site-specific factors, such as existing anthropogenic impacts and species habituation.

The probability of a qualifying interest being affected by potential impacts decreases as the distance between the Proposed Development and the SPA/SAC increases. This inverse relationship reflects the reduced likelihood of environmental pathways, such as underwater noise, sediment dispersion, or vessel disturbance, extending over greater distances with sufficient magnitude to elicit a response in the receptor species, and therefore the less likely there was a pathway to that receptor entering the Proposed Development Site (i.e., the impacted area). This diminishing probability underscores the importance of focusing on realistic pathways where impacts could feasibly overlap with the species or their critical habitats.

In addition to the distance factor, other key considerations include the ecological characteristics and behaviour of qualifying interest species, the sensitivity of habitats (e.g. critical breeding grounds) to the identified impacts, and the spatial overlap of the Proposed Development Boundary with Natura 2000 site boundaries. This approach aligns with the OPR (2021) guidance, which highlights the importance of applying the S-P-R model to focus on relevant Natura 2000 sites rather than providing exhaustive descriptions of all SACs, regardless of their relevance.

The precautionary principle was applied to ensure that all plausible pathways were evaluated, particularly for life stages or habitats critical to a species fitness and survival. This included breeding sites, haul-out areas, and resting zones, which are often explicitly protected under SAC designations.

5.3.1 CONSIDERING THE ZONE OF INFLUENCE FOR SEABIRDS

As noted, the zone of influence has the potential to encompass a large area to include species with differing migration / movement ranges. AA Screening Reports for offshore wind farms (Ireland and UK) often use mean maximum foraging ranges for breeding seabirds (Woodward *et al*., 2019, replicated in Appendix A of this report) as a useful starting point to establish their zone of influence.

The Proposed Development Boundary is of a coastal nature (unlike offshore wind farms) and is likely to fall at the periphery of relevant foraging areas, particularly those SCIs with extensive foraging ranges (e.g. Manx shearwater). Furthermore, the mean maximum foraging ranges in Woodward et al*.,* 2019 primarily reflect breeding-season foraging distances, when seabirds engage in "central place foraging". This behaviour is typical during the breeding season, as birds must return frequently to a central location—their nest site—to feed their young and relieve their partner from incubation or guarding duties, limiting their foraging range. Because of these time and energy constraints, birds are less likely to travel far from their breeding colonies and are expected to forage closer to their breeding grounds and SPAs.

The Zone of Influence aims to include foraging seabirds which are SCIs of SPAs that are bird species known to be present within the Proposed Development Boundary and surrounding area based on existing data (Chapter 14: Ornithology). Any additional species connected to SPAs from distant sites will be assessed to determine if any effects to those identified are likely. Where this is the case, any additional connected SPAs will be included in the assessment. Pre-screening tables used to inform the assessment setting out mean maximum foraging distances are included in Appendix B of this report.

5.3.2 CONSIDERING THE ZONE OF INFLUENCE FOR MIGRATORY AND WINTERING SPECIES (ESTUARINE BIRDS)

Migratory and wintering seabirds, waders and waterfowl SCIs during non-breeding seasons are known to winter within estuarine SPAs. These species typically have smaller foraging ranges, remaining largely within the estuarine environment compared to breeding seabirds. However, in some cases, wintering estuarine SCIs may move between nearby estuaries in search of resources. A localised zone of influence has been considered, with the exception of Wexford Harbour and Slobs SPA, as there are no estuaries in the immediate vicinity of the Proposed Development that would facilitate frequent movement of wintering estuarine SCIs. The closest estuaries of note - Arklow and Bannow Bay - are located too far away to be relevant to the zone of influence.

In addition, Tacumshin Lake and Lady's Island Lake are designated SPAs for wintering SCIs and provide key habitat for these species. Tacumshin Lake SPA and Lady's Island Lake SPA are located too far away to be relevant to the Zone of Influence for estuarine birds.

5.3.3 CONSIDERING THE ZONE OF INFLUENCE FOR MARINE MAMMALS

Similar to seabirds, the broader Management Units (MUs) for marine mammals are employed when considering AA Screening for coastal and offshore developments. The MU for Harbour porpoise is the Celtic and Irish Sea MU and the MU for Bottlenose dolphin is the Irish Sea MU (IAMMWG, 2022).

Given the characteristics of the Proposed Development, which is positioned at a headland without obstructing migratory routes and in an already busy port, it is unlikely to interfere with sensitive habitats, such as breeding or calving grounds. Dolphins and porpoises may utilise sheltered waters near port structures, but they typically do not rely on ports for key life stages like breeding or calving. Similarly, seals may haul out on quieter structures within port zones, though sensitive activities like pupping and moulting occur in more secluded areas.

Pre-screening tables used to inform the assessment setting out the MUs for harbour porpoise and bottlenose dolphin and foraging ranges for harbour seals and grey seals (Carter *et al.*, 2022) are included in Appendix B for completeness.

5.3.4 CONSIDERING THE ZONE OF INFLUENCE FOR OTTER

In defining the potential ZoI for otter, their ecology in coastal environments has been considered. Otters are highly territorial, with home ranges varying widely depending on food availability and habitat type. In freshwater or upland systems, territories may exceed 20 km where prey is less abundant (Kruuk, 2006). In contrast, coastal otters generally occupy much smaller territories, reflecting the higher prey availability in marine and estuarine environments.

Multiple studies confirm that coastal otter foraging ranges can be as short as 2 km of coastline where prey resources are plentiful (Vincent Wildlife Trust, n.d.; Kruuk, 1995; O'Sullivan, 1993). On Shetland, for example, otters occur at an average density of one adult per kilometre of coastline, with individuals typically using several kilometres of shore (Kruuk, 1995).

Coastal otters forage primarily within 80–100 m of the shoreline, usually in shallow water less than 3 m deep, though dives of up to 10 m have been recorded (Kruuk & Moorhouse, 1991; Liles, 2009; Nolet et al., 1993). Despite their marine foraging behaviour, otters are heavily dependent on access to freshwater streams and rivers for drinking and grooming to remove salt and maintain the waterproof quality of their fur (DAFM, 2009; Kruuk, 2006; Chanin, 2013). Accordingly, coastal otter activity is often concentrated near the outflows of streams and rivers, which provide essential freshwater access points (Kruuk & Balharry, 1990). This relationship has been confirmed in several studies, including in Cork Harbour, where otter activity was strongly associated with the presence of freshwater inputs (Dalton, Healy & Murphy, 2021).

On this basis, a 2 km stretch of coastline is considered an appropriate ZoI for assessing potential effects on otter in relation to the Proposed Development.

5.3.5 CONSIDERING THE ZONE OF INFLUENCE FOR MIGRATORY FISH

The potential zone of influence for migratory fish considers the routes that fish may take when leaving the rivers that are designated as SAC for these Annex II species. Atlantic salmon from SACs in Wales are considered to migrate along prevailing currents north (Cefas, 2024) and the migratory route is unlikely to pass directly through Irish coastal waters. Salmon, migrating from southeast

Ireland and northwest Spain, have been shown to primarily migrate westward towards oceanographic fronts, out to the shelf edge before crossing the North Atlantic onto East Greenland for feeding (Rikardsen *et al.,* 2021; (Figure 4.5)).

Atlantic salmon smolts leaving rivers along the northeast coast of Ireland have been shown to undertake a northerly migration out of the Irish Sea through the North Channel into deeper offshore waters further north (Barry *et al*., 2020).

Migrating Atlantic salmon from the Slaney River Valley SAC are considered likely to migrate southeast around Rosslare Headland towards the Atlantic. Tagging by Rikardsen (2021) suggests that typical Atlantic salmon migration routes from the Slaney River Valley SAC are unlikely to pass close to the Proposed Development when migrating Figure 4.6.

5.4 IDENTIFYING NATURA 2000 SITES WITH THE POTENTIAL TO BE AFFECTED BY THE PROPOSED DEVELOPMENT

This section aims to identify Natura 2000 sites with the potential to be affected by the Proposed Development. A precautionary approach is used throughout to identify those Natura 2000 sites and qualifying features with S-P-R connectivity to the Proposed Development.

S-P-R connectivity has two elements: firstly, connectivity is defined as the presence of a species within the Proposed Development Zone of Impact. Mobile species have the potential to travel long distances that may create a connectivity with the Proposed Development. However, if it is considered that this connection is realised or if there is insubstantial connectivity, the qualifying species is not considered further. Secondly, where connectivity is established, the S-P-R approach takes into account if there is an effect pathway or functional pathway. For example, a seabird may have connectivity with the Proposed Development however depending on the feeding mechanism of the bird, a particular bird species may not have an effect pathway, for example a non-diving bird has no effect pathway to underwater noise. This species would not be considered further for likely significant effects.

Those sites which are considered not likely to interact with the Proposed Development are not considered for further assessment (i.e., where no S-P-R connectivity was identified which might lead to a likelihood of significant effect). SCIs or QIs where there is a potential pathway for connectivity are considered for assessment of likely significant effects.

The S-P-R connectivity assessment considered the closest Natura 2000 sites first, progressively moving further from the Proposed Development until the potential for S-P-R connectivity was no longer realised. For the Proposed Development, Natura 2000 sites within closer proximity, such as the Seas off Wexford cSPA (overlap), the Slaney River Valley SAC (6.6km away) and Carnsore Point SAC (1.4km), which support harbour seals, harbour porpoises, and other sensitive QIs, were considered first due to their direct pathway connections to the zone of impact. Each Natura 2000 site is meticulously assessed following the S-P-R model, moving further away from the Proposed Development until there is no rationale for a feasible S-P-R connectivity. This ensures a focused assessment on relevant Natura 2000 sites with a realistic potential to be affected, avoiding unnecessary descriptions of distant sites with limited pathways to impact.

Species connected to SACs or SPAs from more distant sites have been assessed, where relevant, to determine if any effects to those identified are likely. Table 5.8 describes the Natura 2000 sites with a potential for S-P-R connectivity. The SCI and QI habitats and species were reviewed along with their site-specific Conservation Objectives and, where available, the site-specific Conservation Objective attributes and targets. SPAs and SACs in the vicinity of the Proposed Development where there is a greater chance of them being impacted by the Proposed Development Activities based on the established zones of impact (see sections 5.2.1.1 to 5.2.1.4) are examined individually and sites further away from the Proposed Development are grouped by SCI/QI and country. For example, Carnsore Point SAC, which is only 1.4km from the Proposed Development Boundary, is examined to identify possible S-P-R connectivity between its Annex I and Annex II QIs and impacts identified for the Proposed Development whereas the French sites designated for Harbour Porpoise which lie between 250km and 575km from the Proposed Development Boundary are considered together.

Table 5.7: Assessment of SPAs and their SCIs for Connectivity

SPA & distance from Proposed Development	SCI	Site-Specific Conservation Objectives (SSCO)	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	S-P-R connection	S-P-R rationale
004237 Seas off Wexford cSPA (overlap)	Red-throated Diver (*Gavia stellata*) [A001] *	To maintain the favourable conservation condition *Attributes* Non-breeding population size * Breeding population size Spatial distribution Forage spatial distribution, extent, abundance and availability Disturbance across the site Barriers to connectivity	✓	✓	✓		✓	✓	✓		✓	**Yes**	This cSPA overlaps with the Proposed Development and therefore considered for LSE as there is S-P-R connectivity between these SCIs & construction and operation activities. Only diving birds have a connection with mortality, injury displacement and / or disturbance from underwater noise and increased SSC
	Fulmar (*Fulmarus glacialis*) [A009]		✓	✓	✓		✓	✓	✓		✓	**Yes**	
	Manx Shearwater *(Puffinus puffinus*) [A013]		✓	✓	✓		✓	✓	✓		✓	**Yes**	
	Gannet (*Morus bassanus*) [A016] *		✓	✓	✓		✓	✓	✓		✓	**Yes**	
	Cormorant (*Phalacrocorax carbo*) [A017]		✓	✓	✓		✓	✓	✓		✓	**Yes**	
	Shag (*Phalacrocorax aristotelis*) [A018]		✓	✓	✓		✓	✓	✓		✓	**Yes**	
	Common Scoter (*Melanitta nigra*) [A065] *		✓	✓	✓		✓	✓	✓		✓	**Yes**	
	Mediterranean Gull (*Larus melanocephalus*) [A176]		✓				✓	✓	✓		✓	**Yes**	
	Black-headed Gull (*Chroicocephalus ridibundus*) [A179]		✓				✓	✓	✓		✓	**Yes**	
	Lesser Black-backed Gull (*Larus fuscus*) [A183]		✓				✓	✓	✓		✓	**Yes**	
	Herring Gull (*Larus argentatus*) [A184]		✓				✓	✓	✓		✓	**Yes**	
	Kittiwake (*Rissa tridactyla*) [A188]		✓				✓	✓	✓		✓	**Yes**	
	Sandwich Tern (*Sterna sandvicensis*) [A191]		✓				✓	✓	✓		✓	**Yes**	
	Roseate Tern (*Sterna dougallii*) [A192]		✓				✓	✓	✓		✓	**Yes**	
	Common Tern (*Sterna hirundo*) [A193]		✓				✓	✓	✓		✓	**Yes**	
	Arctic Tern (*Sterna paradisaea*) [A194]		✓				✓	✓	✓		✓	**Yes**	
	Little Tern *(Sterna albifrons*) [A195]		✓				✓	✓	✓		✓	**Yes**	
	Guillemot (*Uria aalge*) [A199]		✓	✓	✓		✓	✓	✓		✓	**Yes**	
	Razorbill (*Alca torda*) [A200]		✓	✓	✓		✓	✓	✓		✓	**Yes**	
	Puffin (*Fratercula arctica*) [A204]		✓	✓	✓		✓	✓	✓		✓	**Yes**	

SPA & distance from Proposed Development	SCI	Site-Specific Conservation Objectives (SSCO)	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	S-P-R connection	S-P-R rationale
004019 The Raven SPA 6.5km	**Red-throated Diver (*Gavia stellata*) [A001]**	To maintain the favourable conservation condition for these wintering SCIs *Attributes* Population trend Distribution		✓	✓		✓	✓	✓		✓	**Yes**	There is S-P-R connectivity between this wintering SCI & construction and operation activities. This SCI (diver) has a S-P-R connection with mortality, injury displacement and / or disturbance from underwater noise, increased SSC and reduction in water quality during feeding. This SCI is reported to having a **high** sensitivity to disturbance per Chapter 14: Ornithology based on (Fliessback *et al.,* 2019 & Garthe & Huppop, 2004) and therefore there is S-P-R connectivity with effects from displacement and /or disturbance from in-air noise and visual disturbance.
	Cormorant (*Phalacrocorax carbo*) [A017]			✓	✓		✓	✓	✓		✓	**Yes**	There is S-P-R connectivity between this wintering SCI & construction and operation activities. This SCI (diver) has a connection with mortality, injury displacement and / or disturbance from underwater noise, increased SSC and reduction in water quality during feeding. This SCI is reported to having a **moderate** sensitivity to disturbance per Chapter 14: Ornithology based on (Fliessback *et al*., 2019 & Garthe & Huppop, 2004) and therefore there is S-P-R connectivity with effects from displacement and /or disturbance from in-air noise and visual disturbance.
	Common Scoter (*Melanitta nigra*) [A065]			✓	✓		✓	✓	✓		✓	**Yes**	There is S-P-R connectivity between this wintering SCI & construction and operation activities. This SCI (diving duck) has a connection with mortality, injury displacement and / or disturbance from underwater noise, increased SSC and reduction in water quality during feeding. This SCI is reported to having a **high** sensitivity to disturbance per Chapter 14: Ornithology based on (Fliessback *et al.,* 2019 & Garthe & Huppop. 2004) and therefore there is S-P-R connectivity with effects from displacement and /or disturbance from in-air noise and visual disturbance.
	Grey Plover (*Pluvialis squatarola*) [A141]											No	There is no S-P-R connectivity between this wintering SCI & construction and operation activities. This SCI (wading species) is found wintering along sandy coasts/ muddy estuaries/ dune grasslands. They are surface feeders and unlikely to overlap with the Proposed Development.
	Sanderling (*Calidris alba*) [A144]											No	
	Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]											No	There is no S-P-R connectivity between this wintering SCI & construction and operation activities. This SCI (dabbling species) is found wintering along sandy coasts/ muddy estuaries/ dune grasslands / grass (farm) land. They are grazers and unlikely to overlap with the Proposed Development.

SPA & distance from Proposed Development	SCI	Site-Specific Conservation Objectives (SSCO)	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	S-P-R connection	S-P-R rationale
	Wetland and Waterbirds [A999]											No	There is no S-P-R connectivity between these wintering SCIs & construction and operation activities. These SCI are found wintering along sandy coasts/ muddy estuaries/ dune grasslands.
004076 Wexford Harbour and Slobs SPA 4.4km by land 8.7km by sea	Little Grebe (*Tachybaptus ruficollis*) [A004]	To maintain the favourable conservation condition for these wintering SCIs, Breeding for Little Tern, post-breeding/roost Hen Harrier *Attributes* Population trend Distribution										No	There is no S-P-R connectivity between the wintering SCI & construction and operation activities. The SCIs (diver) is commonly found in shallow, sheltered freshwater & brackish environments rather than a modified port environment.
	Great Crested Grebe (*Podiceps cristatus*) [A005]			✓	✓		✓	✓	✓		✓	**Yes**	There is S-P-R connectivity between the wintering SCIs & construction and operation activities. The SCIs (diver) have a connection with mortality, injury displacement and / or disturbance from underwater noise, increased SSC and reduction in water quality during feeding. The SCIs are reported to have a moderate sensitivity to disturbance per Chapter 14: Ornithology based on (Fliessback *et al.*, 2019 & Garthe & Huppop, 2004) and therefore there is S-P-R connectivity with effects from displacement and /or disturbance from in-air noise and visual disturbance.
	Cormorant (*Phalacrocorax carbo*) [A017]			✓	✓		✓	✓	✓		✓	**Yes**	
	Grey Heron (*Ardea cinerea*) [A028]											No	There is no S-P-R connectivity between these wintering SCIs & construction and operation activities. These SCIs (wading species) are found wintering along sandy coasts/ muddy estuaries/ dune grasslands. They are surface feeders and unlikely to overlap with the zone of impact for the Proposed Development.
	Bewick's Swan (*Cygnus columbianus bewickii*) [A037]											No	
	Whooper Swan (*Cygnus cygnus*) [A038]											No	
	Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]											No	
	Shelduck (*Tadorna tadorna*) [A048]											No	There is no S-P-R connectivity between these wintering SCIs & construction and operation activities. These SCIs (dabbling) are found wintering along sandy coasts/ muddy
	Wigeon (*Anas penelope*) [A050]											No	
	Teal (*Anas crecca*) [A052]											No	

SPA & distance from Proposed Development	SCI	Site-Specific Conservation Objectives (SSCO)	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	S-P-R connection	S-P-R rationale
	Mallard (*Anas platyrhynchos*) [A053]											No	estuaries. They are surface feeders and unlikely to overlap with the Zone of Impact for the Proposed Development.
	Pintail (*Anas acuta*) [A054]											No	
	Scaup (*Aythya marila*) [A062]			✓	✓		✓	✓	✓		✓	**Yes**	There is S-P-R connectivity between the wintering SCIs & construction and operation activities. The SCIs (diving) have a connection with mortality, injury displacement and / or disturbance from underwater noise, increased SSC and reduction in water quality during feeding. There is S-P-R connectivity with effects from displacement and /or disturbance from in-air noise and visual disturbance.
	Goldeneye (*Bucephala clangula*) [A067]											No	There is no S-P-R connectivity between these wintering SCIs & construction and operation activities. The SCIs (diving) are found wintering along sandy coasts/ muddy estuaries. They are shallow diving feeders and unlikely to overlap with the zone of impact for the Proposed Development.
	Red-breasted Merganser (*Mergus serrator*) [A069]			✓	✓		✓	✓	✓		✓	**Yes**	There is S-P-R connectivity between the wintering SCIs & construction and operation activities. The SCI (diving) has a connection with mortality, injury displacement and / or disturbance from underwater noise, increased SSC and reduction in water quality during feeding. This SCI (Red-breasted Merganser) is reported to having a high sensitivity to disturbance per Chapter 14: Ornithology based on (Fliessback *et al*., 2019 & Garthe & Huppop, 2004) and therefore there is S-P-R connectivity with effects from displacement and /or disturbance from in-air noise and visual disturbance.
	Hen Harrier (*Circus cyaneus*) [A082]											No	There is no S-P-R connectivity between SCI & construction and operation activities. This SCI is concentrated in terrestrial habitats unlikely to overlap with the impact zone for the Proposed Development.
	Coot (*Fulica atra*) [A125]											No	There is no S-P-R connectivity between this wintering freshwater SCI & construction and operation activities.
	Oystercatcher (*Haematopus ostralegus*) [A130]											No	There is no S-P-R connectivity between these wintering SCI & construction and operation activities. These SCIs (wader) are found wintering along sandy coasts/ muddy estuaries. They are surface feeders and unlikely to overlap with the zone of influence for the Proposed Development. Shore birds (e.g. Oystercatcher) may forage along intertidal habitats at Rosslare Harbour and Ballygeary (harbour wall, exposed shore), however this is a modified and disturbed environment and as such these species are not assessed further.
	Golden Plover (*Pluvialis apricaria*) [A140]											No	
	Grey Plover (*Pluvialis squatarola*) [A141]											No	
	Lapwing (*Vanellus vanellus*) [A142]											No	
	Knot (*Calidris canutus*) [A143]											No	
	Sanderling (*Calidris alba*) [A144]											No	
	Dunlin (*Calidris alpina*) [A149]											No	

SPA & distance from Proposed Development	SCI	Site-Specific Conservation Objectives (SSCO)	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	S-P-R connection	S-P-R rationale
	Black-tailed Godwit (*Limosa limosa*) [A156]											No	
	Bar-tailed Godwit (*Limosa lapponica*) [A157]											No	
	Curlew (*Numenius arquata*) [A160]											No	
	Redshank (*Tringa totanus*) [A162]											No	
	Black-headed Gull (*Chroicocephalus ridibundus*) [A179]						✓		✓		✓	**Yes**	There is S-P-R connectivity for these SCIs & construction and operation activities. The SCIs are within the breeding foraging range for connectivity (mean max breeding foraging 18.5km Black headed Gull & 127km Lesser Black-backed Gull Woodward et al 2019). These SCIs (seabirds) are surface scavengers therefore no S-P-R connectivity with disturbance from underwater noise, increased SSC or reduction in water quality. These SCIs are reported as having a low sensitivity to disturbance per Chapter 14: Ornithology based on (Fliessback *et al*., 2019 & Garthe & Huppop, 2004) however there is potential S-P-R connectivity with effects from displacement and /or disturbance from in-air noise and visual disturbance, included to reflect precautionary approach.
	Lesser Black-backed Gull (*Larus fuscus*) [A183]						✓		✓		✓	**Yes**	
	Little Tern (*Sterna albifrons*) [A195]											No	There is no S-P-R connectivity for these SCIs & construction and operation activities. The SCIs are outwith the breeding foraging range for connectivity, (mean max breeding foraging 5km Little tern Woodward et al 2019). These SCIs (seabirds) are surface plungers therefore no connectivity with disturbance from underwater noise, increased SSC or reduction in water quality. This SCI is reported as having a low sensitivity to disturbance per Chapter 14: Ornithology based on (Fliessback *et al.,* 2019 & Garthe & Huppop, 2004) and therefore no S-P-R connectivity with effects from displacement and /or disturbance from in-air noise and visual disturbance.
	Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]											No	There is no S-P-R connectivity between this wintering SCI & construction and operation activities. This SCI (dabbling species) is found wintering along sandy coasts/ muddy estuaries/ dune grasslands / grass (farm) land. They are grazers and unlikely to overlap with the zone of impact for the Proposed Development.
	Wetland and Water birds [A999]											No	There is no S-P-R connectivity between the wetlands within this SPA and the Proposed Development.
004009 Lady's Island Lake SPA 8.6km by sea 4.4km by land	Gadwall (*Anas strepera*) [A051]	To maintain the favourable conservation condition for these SCIs,										No	There is no S-P-R connectivity between this wintering SCI & construction and operation activities. This SCI (dabbling) is found wintering along sandy coasts/ muddy estuaries. A surface feeder is unlikely to overlap with the zone of impact for the Proposed Development.

SPA & distance from Proposed Development	SCI	Site-Specific Conservation Objectives (SSCO)	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	S-P-R connection	S-P-R rationale
	Black-headed Gull (*Chroicocephalus ridibundus*) [A179]						✓		✓		✓	**Yes**	There is S-P-R connectivity for this SCI & construction and operation activities. The SCI is within the breeding foraging range for connectivity, (mean max breeding foraging 18.5km Woodward et al 2019). This SCI (seabirds) are surface scavenger therefore no S-P-R connectivity with disturbance from underwater noise, increased SSC or reduction in water quality. This SCI is reported to have a low sensitivity to disturbance per Chapter 14: Ornithology based on (Fliessback *et al.,* 2019 & Garthe & Huppop, 2004) and therefore there is potential S-P-R connectivity with effects from displacement and /or disturbance from in-air noise and visual disturbance included to reflect precautionary approach.
	Sandwich Tern (*Sterna sandvicensis*) [A191]						✓		✓		✓	**Yes**	There is potential S-P-R connectivity between these tern SCIs & construction and operation activities. The SCIs are within the breeding foraging range for connectivity, (mean max breeding foraging Sandwich tern 34.3km, Roseate 12.6km, Common 18.0km & Artic 25.7km Woodward et al 2019). It is also noted that Sandwich terns are observed flying north potentially towards Rosslare (Birdwatch Ireland verbal communication 2024). These tern species use rapid surface plunging / briefly submerging to catch fish therefore no S-P-R connectivity with mortality, injury, displacement from underwater noise, increased SSC or reduction in water quality. These SCIs are reported to having a low sensitivity to disturbance per Chapter 14: Ornithology based on (Fliessback et al., 2019 & Garthe & Huppop 2004) and therefore there is potential connectivity with effects from displacement and /or disturbance from in-air noise and visual disturbance, included to reflect precautionary approach.
	Roseate Tern (*Sterna dougallii*) [A192]						✓		✓		✓	**Yes**	
	Common Tern (*Sterna hirundo*) [A193]						✓		✓		✓	**Yes**	
	Arctic Tern (*Sterna paradisaea*) [A194]						✓		✓		✓	**Yes**	
	Wetland and Waterbirds [A999]											No	There is no S-P-R connectivity between the wetlands within this SPA and the Proposed Development.
004092 Tacumshin Lake SPA 16.6km by sea, 8.2km by land	Little Grebe (*Tachybaptus ruficollis*) [A004]	To maintain the favourable conservation condition for these SCIs.										No	There is no S-P-R connectivity between the wintering SCI & construction and operation activities. The SCIs (diver) is commonly found in shallow, sheltered freshwater & brackish environments rather than a modified port environment.
	Bewick's Swan (*Cygnus columbianus bewickii*) [A037]											No	There is no S-P-R connectivity between these wintering SCIs & construction and operation activities. These SCIs (dabbling / wading species) are found wintering along sandy coasts/ muddy estuaries/ dune grasslands. They are surface feeders and unlikely to overlap with the zone of impact for the Proposed Development.
	Whooper Swan (*Cygnus cygnus*) [A038]											No	
	Wigeon (*Anas penelope*) [A050]											No	
	Gadwall (*Anas strepera*) [A051]											No	
	Teal (*Anas crecca*) [A052]											No	
	Pintail (*Anas acuta*) [A054]											No	
	Shoveler (*Anas clypeata*) [A056]											No	

SPA & distance from Proposed Development	SCI	Site-Specific Conservation Objectives (SSCO)	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	S-P-R connection	S-P-R rationale
	Tufted Duck (*Aythya fuligula*) [A061]											No	There is no S-P-R connectivity between this SCI. The SCI (diver) is commonly found in shallow, sheltered freshwater & brackish environments rather than a modified port environment.
	Coot (*Fulica atra*) [A125]											No	There is no S-P-R connectivity between this wintering freshwater SCI & construction and operation activities.
	Golden Plover (*Pluvialis apricaria*) [A140]											No	There is no S-P-R connectivity between these wintering SCIs & construction and operation activities. These SCIs (wading species) are found wintering along sandy coasts/ muddy estuaries/ dune grasslands. They are surface feeders and unlikely to overlap with the zone of impact for the Proposed Development.
	Grey Plover (*Pluvialis squatarola*) [A141]											No	
	Lapwing (*Vanellus vanellus*) [A142]											No	
	Black-tailed Godwit (*Limosa limosa*) [A156]											No	
	Wetland and Waterbirds [A999]											No	There is no S-P-R connectivity between the wetlands within this SPA and the Proposed Development.
SPAs (e.g. Ballyteigue Burrow SPA, Barrow Bay SPA, Cahore Marshes SPA & River Nore SPA)	SCI all associated with estuarine, lagoon and terrestrial habitats											No	There is no S-P-R connectivity between the wintering SCIs & construction and operation activities. The SCIs designated for these SPAs are found within the estuarine environment and therefore no overlap with the zone of impact of the Proposed Development which is also a busy port.
004002 Saltee Islands SPA 25.8km	**Fulmar (*Fulmarus glacialis*) [A009]**	To maintain the favourable conservation condition for these breeding SCIs.					✓		✓		✓	**Yes**	There is S-P-R connectivity for this SCI & construction and operation activities. The SCI is within the breeding foraging range for connectivity, (mean max breeding foraging range 542km Woodward et al 2019). This SCI (seabirds) are surface scavenger therefore no connectivity with disturbance from underwater noise, increased SSC or reduction in water quality. This SCI is reported to having a low sensitivity to disturbance per Chapter 14: Ornithology based on (Fliessback *et al.,* 2019 & Garthe & Huppop, 2004) and therefore there is potential S-P-R connectivity with effects from displacement and /or disturbance from in-air noise and visual disturbance, included to reflect precautionary approach.
	Gannet (Morus bassanus) [A016]			✓	✓		✓	✓	✓		✓	**Yes**	There is connectivity between this wintering SCI & construction and operation activities. These QI (diving) have a connection with mortality, injury displacement and / or disturbance from underwater noise, increased SSC and reduction in water quality during feeding (mean max breeding foraging range 542km Woodward et al 2019). This QI is reported to having a moderate sensitivity to disturbance in Chapter 14: Ornithology based on (Fliessback *et al.,* 2019 & Garthe & Huppop, 2004) and therefore there is connectivity with effects from displacement and /or disturbance from in-air noise and visual disturbance.
	Cormorant (*Phalacrocorax carbo*) [A017]			✓	✓		✓	✓	✓		✓	**Yes**	

SPA & distance from Proposed Development	SCI	Site-Specific Conservation Objectives (SSCO)	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	S-P-R connection	S-P-R rationale
	Shag (*Phalacrocorax aristotelis*) [A018]												There is no S-P-R connectivity for this SCI & construction and operation activities. The SCI is out with the breeding foraging range for connectivity, (13.2km, Woodward et al 2019).
	Lesser Black-backed Gull (*Larus fuscus*) [A183]						✓		✓		✓	**Yes**	There is S-P-R connectivity for these SCI & construction and operation activities. The SCI are within the mean max breeding foraging range for connectivity, (127km, Woodward et al 2019). These SCI (seabirds) are surface scavenger therefore no connectivity with disturbance from underwater noise, increased SSC & reduction in water quality. This SCI is reported to having a low sensitivity to disturbance (Appendix A) and therefore there is potential S-P-R connectivity with effects from displacement and /or disturbance from in-air noise and visual disturbance, included to reflect precautionary approach.
	Herring Gull (Larus argentatus) [A184]						✓		✓		✓	**Yes**	
	Kittiwake (Rissa tridactyla) [A188]						✓		✓		✓	**Yes**	There is S-P-R potential connectivity between this SCI & construction and operation activities. The SCI is within the mean max breeding foraging range for connectivity, (156km Woodward et al 2019). This species uses surface feeding to catch fish therefore no S-P-R connectivity with mortality, injury, displacement from underwater noise, increased SSC or reduction in water quality. These SCIs are reported to having a low sensitivity to disturbance Chapter 14: Ornithology based on (Fliessback *et al.,* 2019 & Garthe & Huppop 2004) and therefore there is potential S-P-R connectivity with effects from displacement and /or disturbance from in-air noise and visual disturbance, included to reflect precautionary approach.
	Guillemot (Uria aalge) [A199]			✓	✓		✓	✓	✓		✓	**Yes**	There is S-P-R connectivity between these SCI & construction and operation activities. These SCIs are within the mean max breeding foraging range for connectivity (Guillemot 73.2, Razorbill 88.7km & Puffin 137km Woodward et al 2019). These SCIs (diving) have a S-P-R connection with mortality, injury displacement and / or disturbance from underwater noise, increased SSC and reduction in water quality during feeding. This QI is reported to having a moderate sensitivity to disturbance Chapter 14: Ornithology based on (Fliessback *et al.,* 2019 & Garthe & Huppop, 2004) and therefore there is S-P-R connectivity with effects from displacement and /or disturbance from in-air noise and visual disturbance.
	Razorbill (Alca torda) [A200]			✓	✓		✓	✓	✓		✓	**Yes**	
	Puffin (Fratercula arctica) [A204]			✓	✓		✓	✓	✓		✓	**Yes**	
004118 Keeragh Islands SPA 36.9km	Cormorant (Phalacrocorax carbo) [A017]	To maintain the favourable conservation condition for these breeding SCIs.										No	There is no S-P-R connectivity for this SCI & construction and operation activities. The SCI is out with the mean max breeding foraging range for connectivity, (25.6km, Woodward et al 2019).
004193 Mid-Waterford Coast SPA 70.2km	Cormorant (Phalacrocorax carbo) [A017] Peregrine (Falco peregrinus) [A103] Herring Gull (*Larus argentatus*) [A184] Chough (*Pyrrhocorax pyrrhocorax*) [A346]	To maintain the favourable conservation condition for these breeding SCIs.										No	There is no S-P-R connectivity for these SCIs & construction and operation activities. These SCIs are out with the breeding foraging range for connectivity, (Cormorant 25.6km, H. Gull 58.8km Woodward *et al.,* 2019).

SPA & distance from Proposed Development	SCI	Site-Specific Conservation Objectives (SSCO)	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	S-P-R connection	S-P-R rationale
004127 Wicklow Head SPA 80.6km	All SPAs Kittiwake (*Rissa tridactyla*) [A188] Lambay Islands SPA Fulmar (Fulmarus glacialis) [A009]	To restore the favourable conservation condition for these breeding SCIs.					✓		✓		✓	Yes	There is low potential S-P-R connectivity between this SCI & construction and operation activities. The SCI is within the breeding foraging range for connectivity, (156km Woodward et al 2019). However, during the breeding season it is unlikely that the SCI would have connectivity with a busy port environment. Although these birds may travel along the coastline for foraging, it is unlikely they would commute as far as Rosslare Harbour's construction area. Kittiwakes are surface feeders therefore no S-P-R connectivity with mortality, injury, displacement from underwater noise, increased SSC or reduction in water quality. These SCIs are reported to having a low sensitivity to disturbance Chapter 14: Ornithology based on (Fliessback *et al.*, 2019 & Garthe & Huppop, 2004) and therefore there is S-P-R potential connectivity with effects from displacement and /or disturbance from in-air noise and visual disturbance. To follow a precautionary approach this SCI is included for LSE assessment.
004192 Helvick Head SPA 91.9km							✓		✓		✓	Yes	
004113 Howth Head Coast SPA 126km							✓		✓		✓	Yes	
004117 Irelands Eye SPA 130km							✓		✓		✓	Yes	
004069 Lambay Islands SPA 139km							✓		✓		✓	Yes	
cSPA North-West Irish Sea 125km							✓		✓		✓	Yes	
004023 Ballymacoda Bay SPA 118km	Lesser Black-backed Gull (Larus fuscus) [A183]						✓		✓		✓	Yes	There is low potential S-P-R connectivity between this SCI & construction and operation activities. The SCI is within the breeding foraging range for connectivity, (127km Woodward et al 2019). However, during the breeding season it is unlikely that the SCI would have connectivity with a busy port environment. Although these birds may travel along the coastline for foraging, it is unlikely they would commute as far as Rosslare Harbour's construction area. This surface feeder has no S-P-R connectivity with mortality, injury, displacement from underwater noise, increased SSC or reduction in water quality. These SCIs are reported to having a low sensitivity to disturbance Chapter 14: Ornithology based on (Fliessback *et al.*, 2019 & Garthe & Huppop, 2004) and therefore there are only S-P-R potential connectivity with effects from displacement and /or disturbance from in-air noise and visual disturbance. To follow a precautionary approach this SCI is included for LSE assessment.
Irish SPA ranging from 004155 Beara Penninsula SPA 287km to 4073 Tory Island SPA 484km (ref Appendix B for full list)	Includes SCIs European Storm Petrel Gannet, Fulmar & Manx Shearwater	To restore the favourable conservation condition for these breeding SCIs.										**No**	There is a theoretical S-P-R connection between these SCIs & construction and operation activities. The SCIs are within the breeding foraging range (Woodward et al 2019). However, during the breeding season, it is unlikely that the SCI would have connectivity with a busy port environment. Although these birds may travel along the coastline for foraging, it is unlikely they would move around the south coast of Ireland as far as the Proposed Development Boundary.
French SPAs ranging from Mers Celtiques 351km to Cap Sizan 482km	Includes Great Skua, Fulmar, Manx Shearwater	French sites										**No**	There is a theoretical S-P-R connection between these SCIs & construction and operation activities. The SCIs are within the breeding foraging range (Woodward et al 2019). However, during the breeding season, it is unlikely that the SCI would have connectivity with a busy port environment. Although these birds may travel along the coastline for foraging, it is unlikely they would move around the south coast of Ireland as far as Proposed Development Boundary.

Table 5.8: Assessment of SACs and their QIs for Connectivity

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	S-P-R connection	S-P-R rationale
002269 Carnsore Point SAC 1.4km	Mudflats and sandflats not covered by seawater at low tide [1140]	To maintain favourable conditions of the QI not covered by seawater at low tide		✓				✓				**Yes**	There is a S-P-R connection between construction (dredging, reclamation) activities & increased SSC & reduction in water quality. Dispersion modelling predicts the migration of suspended sediment approximately 2.5km to the southeast, therefore direct overlap with these QIs.
	Reefs [1170]	To maintain favourable conditions of the QI		✓				✓				**Yes**	
	Harbour porpoise (*Phocoena phocoena) [1351]*	To maintain favourable conditions of the QI			✓	✓		✓			✓	**Yes**	There is a S-P-R connection between construction activities & mortality, injury, displacement and/or disturbance from underwater noise, mortality or injury from vessel collision, reduction in water quality & indirect effects through impacts on prey availability and prey acquisition. Underwater noise modelling (blasting reflects worst case scenario) suggests that PTS and TTS to marine mammals belonging to the VHF hearing group (e.g. harbour porpoise) could occur over larger distances with estimated distances to PTS threshold exceedance of 1,630m (lower range 490m to upper range 2,670 m), and estimated distances to TTS threshold exceedance 3km (lower range 0.9 to upper range 5km). There is overlap with the zone of impact and this QI.
002161 Long Bank SAC 1.5km	Sandbanks which are slightly covered by sea water all the time [1110]	To maintain favourable conditions of the QI		✓				✓				**Yes**	There is a potential S-P-R connection between construction (dredging, reclamation) activities & increased SSC & reduction in water quality. Dispersion modelling predicts the migration of suspended sediment approximately 2.5km to the SE (the zone of impact), therefore direct overlap with the zone of impact and this QI.
002953 Blackwater Bank SAC 4.9km	Sandbanks which are slightly covered by sea water all the time [1110]	To maintain favourable conditions of the QI										**No**	There is no connectivity between construction (dredging, reclamation) activities and increased SSC & reduction in water quality for this SAC. Dispersion modelling predicts the migration of suspended sediment approximately 2.5km to the SE (the zone of impact). The SAC is located beyond the extent of the predicted sediment dispersion (zone of impact) and there is no S-P-R connection.
	Harbour porpoise (*Phocoena phocoena) [1351]*	To maintain the favourable conservation condition.			✓	✓		✓			✓	**Yes**	There is S-P-R connectivity between construction activities & mortality, injury, displacement and/or disturbance from underwater noise, mortality or injury from

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	S-P-R connection	S-P-R rationale
													vessel collision, reduction in water quality & indirect effects through impacts on prey availability and prey acquisition. Underwater noise modelling (blasting reflects worst case scenario) suggests that PTS and TTS to marine mammals belonging to the VHF hearing group (e.g., harbour porpoise) could occur over larger distances with estimated distances to PTS threshold exceedance 1,630m (lower range 490m to upper range 2,670 m) and estimated distances to TTS threshold exceedance 3km (lower range 0.9km to upper range 5km). There is overlap with the upper range of the modelled TTS and this QI.
000781 Slaney River Valley SAC 6.6km	Estuaries [1130]	To maintain favourable conditions of the QI										**No**	No S-P-R connection between construction and operation activities and increased SSC. Dispersion modelling predicts the migration of suspended sediment approximately 1.5km to the west (zone of impact). QI is located at a distance >1.5km. The SAC is located beyond the extent of the predicted sediment dispersion zone of impact and there is no S-P-R connection.
	Mudflats and sandflats not covered by seawater at low tide [1140]											**No**	
	Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]											**No**	No S-P-R connection. QIs are coastal habitats and too far away from the Proposed Development to be considered at risk of any terrestrial impacts (i.e., dust).
	Mediterranean salt meadows (Juncetalia maritimi) [1410]											**No**	
	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]											**No**	
	Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]											**No**	

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	S-P-R connection	S-P-R rationale
	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]											**No**	
	Margaritifera margaritifera (Freshwater Pearl Mussel) [1029]	Under review										**No**	Although FWPM has a symbiotic relationship with Atlantic salmon this is within the freshwater environment therefore no S-P-R link.
	Petromyzon marinus (Sea Lamprey) [1095]			✓	✓			✓				**Yes**	See description for Atlantic salmon & Shad species due to parasitic relationship with lamprey species.
	Lampetra planeri (Brook Lamprey) [1096]			✓	✓			✓				**Yes**	
	Lampetra fluviatilis (River Lamprey) [1099]			✓	✓			✓				**Yes**	
	Alosa fallax (Twaite Shad) [1103]	To restore favourable conservation condition		✓	✓			✓				**Yes**	There is potential S-P-R connection between construction activities and increased SSC and mortality, injury, displacement and/or disturbance from underwater noise and reduction in water quality during the marine phase of their life cycle. This mobile QI has an ability to detect and respond to underwater noise.
	Salmo salar (Salmon) [1106]			✓				✓				**Yes**	There is potential S-P-R connection between activities and increased SSC and reduction in water quality. Migratory routes for this QI from southeast Ireland are westward & out to the N. Atlantic (Rikardsen, et al., 2021). Atlantic salmon have poor hearing sensitivity therefore there is no S-P-R connection to mortality, injury, displacement and/or disturbance from underwater noise.
	Lutra lutra (Otter) [1355]	To restore favourable conservation condition.		✓	✓			✓			✓	**Yes**	There is potential S-P-R connectivity between construction & operation activities and mortality, injury, displacement and/or disturbance from underwater noise, increased SSC and reduction in water quality and indirect effects through impacts on prey availability and prey acquisition. Coastal otters, exhibit a broader niche than their freshwater counterparts, feeding on a wide range of intertidal prey. Coastal otters tend to feed

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	S-P-R connection	S-P-R rationale
													close to the shore (c. 100m), typically diving to depths of up to 10 meters (Liles, 2009). Otters are highly territorial animals, with home ranges that vary significantly depending on food availability and habitat type. Studies indicate that the territories of Eurasian otters (Lutra lutra) can extend for several kilometres, with the specific range size being strongly influenced by local environmental conditions. In coastal areas where food resources like fish and crustaceans, are more abundant, otters may occupy smaller territories, sometimes as short as 2km.
	Phoca vitulina (Harbour Seal) [1365]	To maintain favourable conservation condition.			✓	✓		✓			✓	**Yes**	There is no overlap between the SAC and the underwater noise impact (PTS and TTS) zone for the Proposed Development. However, due to the proximity of the SAC to the Proposed Development and the highly mobile nature of the species there is potential for S-P-R connectivity for this QI with mortality, injury, displacement and/or disturbance from underwater noise, mortality or injury from vessel collision, reduction in water quality & indirect effects through impacts on prey availability and prey acquisition. Underwater noise modelling (blasting reflects worst case scenario) suggests that PTS and TTS could occur with estimated distances to PTS threshold exceedance 320m (lower range 95 to upper range 525 m) and estimated distances to TTS threshold exceedance 590m (lower range 175m to upper range 965m).
000710 Raven Point Nature Reserve SAC 8.9km	Mudflats and sandflats not covered by seawater at low tide [1140]	To maintain favourable conditions										**No**	No S-P-R connection between construction and operation activities and increased SSC. Dispersion modelling predicts the migration of suspended sediment approximately 1.5km to the west. Mudflats and sandflats QI is located at a distance of over 1.5km to the north. The SAC is located beyond the extent of the predicted sediment zone of impact and there is no S-P-R connection. Remaining QIs are coastal habitats and out with zone of impact (50m) from any land-based impacts (i.e., dust).
	Annual vegetation of drift lines [1210]												
	Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]												
	Embryonic shifting dunes [2110]												
	Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120]												

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	S-P-R connection	S-P-R rationale
	Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]												
	Dunes with Salix repens ssp. argentea (Salicion arenariae) [2170]												
	Humid dune slacks [2190]												
Lady's Island Lake SAC, Tacumshin Lake SAC, Ballyteige Burrow SAC & those further away (15km)	https://www.npws.ie/protected-sites/sac											**No**	No S-P-R connection between Annex I species of these SACs and construction and operation activities with the potential to increase SSC. Dispersion modelling predicts the migration of a sediment approximately 1.5km to the west and approximately 2.5km to the southeast (zone of impact). These SAC with Annex I QIs are located beyond the extent of the predicted sediment zone of impact and there is no S-P-R connection.
000707 Saltee Islands SAC 21km	*Halichoerus grypus* (Grey Seal) [1364]	To maintain the favourable conservation condition.			✓	✓		✓			✓	**Yes**	There is no overlap between the SAC and the underwater noise impact zone for the Proposed Development. However, this mobile QI has described foraging ranges of 448km (Carter *et al* 2022). This mobile QI has the potential to transit between SAC sites, particularly closer ones. There is therefore potential S-P-R connectivity between this QI and mortality, injury, displacement and/or disturbance from underwater noise and mortality or injury from vessel collision. There is also low potential S-P-R connectivity between this QI and reduction in water quality and reduction in prey availability therefore this QI is included for screening under the precautionary approach.
002162 River Barrow and River Nore SAC 57.1km	Freshwater Pearl Mussel (*Margaritifera margaritifera*) [1029] Sea Lamprey (Petromyzon marinus) [1095] Brook Lamprey (Lampetra planeri) [1096] River Lamprey (Lampetra fluviatilis) [1099] Twaite Shad (Alosa fallax) [1103]	To restore favourable conservation condition										**No**	There is no S-P-R connectivity between construction activities and these QIs. FWPM & Lamprey species have a symbiotic / parasitic relationship with Salmon and Shad species however Salmon exiting from this SAC located between counties Wexford and Waterford on the south coast of Ireland follow migratory routes westward & out to the N. Atlantic (Rikardsen, et al., 2021) away from the Proposed Development. There is no S-P-R connection for Twaite Shad as it is out with a 35km precautionary distance applied as per JNCC 2019 (JNCC, 2019)

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	S-P-R connection	S-P-R rationale
	Salmon (*Salmo salar*) [1106]											**No**	There is no S-P-R connectivity between construction activities, increased SSC and reduction in water quality. Migratory routes for this QI from SE Ireland are westward & out to the N. Atlantic (Rikardsen *et al.,* 2021) away from the Proposed Development.
Lower River Suir SAC 69.2km	Migrating Fish Otter											**No**	Migratory Fish Salmon: Migratory routes for this QI from SE Ireland are westward & out to the N. Atlantic (Rikardsen *et al.*, 2021) away from the Proposed Development. There is no S-P-R connectivity between construction activities, increased SSC and reduction in water quality. Migratory Fish Other: These QIs are not considered for AA Screening as there is no S-P-R connectivity due to the distance between the SACs and the Proposed Development. Otter: There is no S-P-R connection for Otter from these SACs as they are too far away from the Proposed Development.
000764 Hook Head SAC 40.2km	*Tursiops truncatus* (Common Bottlenose Dolphin) [1349]	To maintain the Favourable conservation condition of Bottlenose Dolphin and Harbour Porpoise in Hook Head SAC.			✓	✓		✓			✓	**Yes**	There is no overlap between the SAC and underwater noise impact zone for the Proposed Development. However, these mobile QIs have the potential to transit between SAC sites, particularly closer ones. There is a potential S-P-R connectivity between these QIs and mortality, injury, displacement and/or disturbance from underwater noise and mortality or injury from vessel collision. There is also low potential S-P-R connectivity between these QIs and reduction in water quality and reduction in prey availability therefore these QIs are included for AA Screening.
	Phocoena phocoena (Harbour Porpoise) [1351]				✓	✓		✓			✓	**Yes**	
003000 Rockabill to Dalkey Island SAC 112km 003015 Codling Fault Zone SAC 124km 000204 Lambay Island SAC 140km 000101 Roaringwater Bay and Islands SAC 234.5km 002158 Kenmare Bay SAC 293.6km	Harbour porpoise *(Phocoena Phocoena)* [1351]	**SSCO:** To maintain the Favourable conservation condition of Harbour Porpoise in these SACs. **Attributes and Targets:** Access to suitable habitat with a target of species range within the site should not be restricted by artificial barriers to site use.			✓	✓		✓			✓	**Yes**	There is no overlap between the SAC and the underwater noise impact zone for the Proposed Development. However, this mobile QI is known to have a large foraging range with the potential to transit between SAC sites, particularly closer ones. There is therefore a potential S-P-R connectivity between this QI and mortality, injury, displacement and/or disturbance from underwater noise and mortality or injury from vessel collision. There is also low potential S-P-R connectivity between this QI and reduction in water quality and reduction in prey availability

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	S-P-R connection	S-P-R rationale
002172 Blasket Islands SAC 349.9km 000213 Inishmore Island SAC 481km 002111 Kilkieran Bay and Islands SAC 492km 000625 Bunduff Lough and Machair / Trawalua / Mullaghmore SAC 587.8km 002998 West Connacht Coast SAC 596.5km		Disturbance with a target of human activities should occur at levels that do not adversely affect the species population at the site.											therefore this QI is included for screening under the precautionary approach.
000204 Lambay Island SAC 140km	*Harbour Seal (Phoca vitulina*) [1365]	To maintain the favourable conservation condition			✓	✓		✓			✓	**Yes**	There is no overlap between the SAC and the underwater noise impact zone for the Proposed Development. However, this mobile QI has described foraging ranges of 273km (Carter *et al.,* 2022). This mobile QI has the potential to transit between SAC sites, particularly closer ones. There is therefore potential S-P-R connectivity between this QI and mortality, injury, displacement and/or disturbance from underwater noise and mortality or injury from vessel collision. There is also low potential S-P-R connectivity between this QI and reduction in water quality and reduction in prey availability therefore this QI is included for AA screening under the precautionary approach.
000204 Lambay Island SAC 140km 000101 Roaringwater Bay and Islands SAC 234.5km 002172 Blasket Islands SAC 349.9km	Grey seal *(Halichoerus grypus)* [1364]	To maintain the favourable conservation condition.			✓	✓		✓			✓	**Yes**	There is no overlap between the SAC and the underwater noise impact zone for the Proposed Development. However, this mobile QI has described foraging ranges of 448km (Carter *et al.,* 2022). This mobile QI has the potential to transit between SAC sites, particularly closer ones. There is therefore potential S-P-R connectivity between this QI and mortality, injury, displacement and/or disturbance from underwater noise and mortality or injury from vessel collision. There is also low potential S-P-R connectivity between this QI and reduction in water quality and reduction in prey availability therefore this QI is included for screening under the precautionary approach.
French SACs Mers Celtiques 250km to Baie du Mont Saint-Michel 575km (ref Appendix B for full list)	Harbour porpoise (*Phocoena Phocoena*) [1351]	To maintain or restore species of Community Interest and their functional habitats to a favourable			✓	✓		✓			✓	**Yes**	There is no overlap between the SAC and the underwater noise impact zone for the Proposed Development.

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	S-P-R connection	S-P-R rationale
		conservation status. This objective is a commitment of the Habitats Directive. The aim is to monitor the evolution of the population of these species, limit their disturbance and maintain their functional habitat in a state of conservation favourable to their ecological requirements (INPN 2024)											However, this mobile QI is known to have a large foraging range with the potential to transit between SAC sites, particularly closer ones. There is therefore a potential S-P-R connectivity between this QI and mortality, injury, displacement and/or disturbance from underwater noise and mortality or injury from vessel collision. There is also low potential S-P-R connectivity between this QI and reduction in water quality and reduction in prey availability therefore this QI is included for screening under the precautionary approach.

5.5 SCREENING ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS (LSE)

The Proposed Development activities (section 3) have informed an understanding of the activities and potential effects. The environmental setting of the Proposed Development (section 4) describes the ecological characteristic of the species or habitat including their structure, function, conservation status and sensitivity to change.

The Zone of Impact based on Site-Specific information and modelling data (section 5.2) has informed an understanding of the potential for connectivity between Natura 2000 sites and the impacts associated with the Proposed Development activities to identify the Natura 2000 sites and associated QIs and SCIs to be assessed for likely significant effects (LSE). The following sections discuss the likelihood of significant effects for each of the impacts identified relevant to specific species (SCI and QI). The Screening for Likely Significant Effects relevant to each Natura 2000 site is presented in Table 5.15 for SPAs and their SCIs and Table 5.16 for SACs and their QIs for which S-P-R connectivity has been identified. These tables include the Site-Specific Conservation Objectives, and related attributes and targets for each SCI or QI and their associated Natura 2000 site.

5.5.1 SPAS - DESIGNATED TO PROTECT SCI (MARINE ORNITHOLOGY)

This section considers the potential for LSE on marine ornithology features of the SPAs identified in section 5.3. SPAs are proposed to be considered for Stage 2 AA (NIS) where LSE cannot be ruled out for one or more SCIs, for one or more routes to impact. SPAs are screened out where LSE can be ruled out for all routes of impact to all SCIs. A rationale is given for each SPA and their associated SCI(s) and route to impact to explain the screening decision.

An asterisk (*) in the column labelled “Connectivity with potential LSE” signifies that only those species with a corresponding asterisk (*) under column labelled “SCIs” should be considered relevant for that impact pathway. SCI species with an asterisk (*) denote species that dive (see Appendix A) and therefore have a connectivity with potential water column based LSE. SCI species without an asterisk are in general surface feeders and therefore have no connectivity with water column based LSE (e.g., underwater noise).

A summary of SPA sites considered for LSE are set out in Table 5.9.

Table 5.9: SPAs to be considered for LSE

SPA to include in LSE Screening	SCIs	Connectivity with potential LSE
Seas off Wexford cSPA	Red-throated Diver* Fulmar* Manx Shearwater* Gannet* Cormorant*	Habitat loss (temporary and permanent) Increased SSC * Mortality, injury, displacement and/or disturbance from underwater noise * Displacement and/or disturbance from airborne noise

SPA to include in LSE Screening	SCIs	Connectivity with potential LSE
	Shag* Common Scoter * Mediterranean Gull Black-headed Gull Lesser Black-backed Gull Herring Gull Kittiwake Sandwich Tern Roseate Tern Common Tern Arctic Tern Little Tern Guillemot* Razorbill* Puffin *	Reduction in water quality * Visual disturbance Reduction in prey availability (in-direct)
The Raven SPA	Red-throated diver* Cormorant * Common Scoter *	Increased SSC * Mortality, injury, displacement and/or disturbance from underwater noise * Displacement and/or disturbance from airborne noise Reduction in water quality * Visual disturbance Reduction in prey availability (in-direct)
Wexford Harbour & Slobs SPA	Great Crested Grebe* Cormorant* Scaup* Red-breasted Merganser*	Increased SSC * Mortality, injury, displacement and/or disturbance from underwater noise * Displacement and/or disturbance from airborne noise

SPA to include in LSE Screening	SCIs	Connectivity with potential LSE
	Black-headed gull Lesser Black-backed gull	Reduction in water quality * Visual disturbance Reduction in prey availability (in-direct)
Lady's Island Lake SPA	Black-headed Gull Sandwich Tern Roseate Tern Common Tern Arctic Tern	Displacement and/or disturbance from airborne noise Visual disturbance Reduction in prey availability (in-direct)
Saltee Islands SPA	Fulmar Gannet * Cormorant * Lesser Black-backed Gull Herring Gull Kittiwake Guillemot* Razorbill * Puffin *	Increased SSC * Mortality, injury, displacement and/or disturbance from underwater noise * Displacement and/or disturbance from airborne noise. Reduction in water quality * Visual disturbance Reduction in prey availability (in-direct)
Wicklow Head SPA 80.6km Helvick Head SPA 91.9km Howth Head Coast SPA 126km Irelands Eye SPA 130km Lambay Islands SPA 139km	All SPAs for Kittiwake Lambay Islands SPA Fulmar	Displacement and/or disturbance from airborne noise. Visual disturbance Reduction in prey availability (in-direct)

SPA to include in LSE Screening	SCIs	Connectivity with potential LSE
cSPA North-West Irish Sea 125km	cSPA (NPWS 2024) for full list of SCIs	Displacement and/or disturbance from airborne noise. Visual disturbance Reduction in prey availability (in-direct) Increased SSC * Mortality, injury, displacement and/or disturbance from underwater noise * Reduction in water quality *
Ballymacoda Bay SPA	Lesser Black-backed Gull	Displacement and/or disturbance from airborne noise. Visual disturbance Reduction in prey availability (in-direct)

* Diving SCIs and associated connectivity

5.5.1.1 SPA SITE-SPECIFIC CONSERVATION OBJECTIVES

The SPAs identified for consideration for LSE assessment have SCI species which are selected as either:

- Wintering waterbirds
  - Divers - Red-throated diver
  - Diving duck – Common Scoter, Scaup, Goldeneye, Red breasted merganser
  - Grebes – Great crested grebe
  - Seabirds
- Breeding seabirds
  - Fulmar, Gannet, Cormorant, Lesser Black-backed Gull, Herring Gull, Kittiwake, Guillemot, Razorbill, and Puffin

The Seas off Wexford cSPA and North-west Irish Sea cSPA are designated for foraging areas for seabirds.

Site-Specific Conservation objectives for the Special Protection Areas (SPA) and their relevant associated Special Conservation Interests (SCI) are included in Table 5.15.

5.5.1.2 IMPACTS FOR WHICH S-P-R CONNECTIVITY HAS BEEN IDENTIFIED

Reduction in water quality

Diving birds in particular are considered vulnerable to a reduction in water quality from a pollution event.

The International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/785), is an international marine environmental convention which aims to prevent both operational and accidental discharge into the marine from sea going vessels. Ireland ratified the various elements of the MARPOL Convention through the Sea Pollution Act 1991, the Sea Pollution (Amendment) Act 1999 and the Sea Pollution (Miscellaneous Provisions) Act 2006. MARPOL 73/78 was given further legal effect through Statutory Instruments introduced under these Acts. The Acts place a legal obligation upon operators of vessels to implement measures to prevent both operational and accidental discharges from ships of substances, which may damage the marine environment as well as human health.

The construction and operational activities will result in an increase in vessels and therefore a potential risk of accidental spills however an incidence of pollution whether from an accidental occurrence or operational activities is not considered likely considering the legal obligations to comply with MARPOL 73/78 with the increased risk of a pollution event occurring due to these activities considered minimal and not to be over and above existing background risk.

All vessels used as required by law, will be MARPOL Compliant and fully certified by the Maritime Safety Office. Therefore, it is considered unlikely that there would be any occurrence of a pollution event either accidental or otherwise that could directly or indirectly cause a significant effect to a Natura 2000 site.

An assessment of likely significant effects on the Special Protection Areas and their associated Special Protection Interests from reduction in water quality is presented in Table 5.15.

Habitat loss (temporary and permanent)

The Seas off Wexford cSPA partially overlaps with the Proposed Development and is discussed with respect to habitat loss below.

The Proposed Development will result in the permanent loss of 0.245km^2 of potential seabed foraging habitat from the Seas off Wexford cSPA, which represents less than 0.01% of the total area of the cSPA. Table 5.10 summarises the most recently published NPWS cSPA abundance data and project-specific baseline survey results for the SCIs of this cSPA. Throughout the project-specific surveys, the majority of the SCIs were recorded in low numbers all year round. Black headed gull, Herring gull and Common Scoter were the only SCIs where more than 50 no. birds were recorded during surveys.

Table 5.10: Summary of NPWS Abundance data and Project-Specific Bird Survey Results for SCI species of Seas off Wexford cSPA

SCIs	Seas off Wexford cSPA Abundance (NPWS 2024)	Project-Specific Bird Survey Results
Red-throated Diver	499 birds	Recorded in very low numbers between September and March, with a peak count of six birds recorded in January 2023.
Fulmar	Not provided	One bird was recorded in the Ornithology Study Area in May 2022.
Manx Shearwater	8,269 birds	Recorded in the Ornithology Study Area in June 2022 (seven birds) and July 2022 (25 birds).
Gannet	772 birds	Recorded in the Ornithology Study Area in summer months, with fewer birds recorded in winter. The peak counts were seven birds in May 2022, 12 birds in January 2023 and eight birds in July 2022
Cormorant	108 birds	Recorded in the Ornithology Study Area in low numbers in all months, with a peak count of 14 birds in January 2023.
Shag	Not provided	Recorded in the Ornithology Study Area in low numbers in all months, with peak counts of nine birds in May 2022 and seven birds in June 2022.

SCIs	Seas off Wexford cSPA Abundance (NPWS 2024)	Project-Specific Bird Survey Results
Common Scoter	1078 birds	Recorded between August and March, with peak counts of 53 birds in October 2022 and 36 birds in December 2022.
Mediterranean Gull	Not provided	Recorded in the Ornithology Study Area in all months except June 2022. Numbers were low in most months, apart from peak counts of 38 birds in July 2022 and 34 birds in August 2022
Black-headed Gull	Not provided	Recorded in the Ornithology Study Area in all months, with higher numbers in the non-breeding season. Peak counts involved 85 birds in October 2022, 86 birds in December 2022 and 49 birds in February 2023.
Lesser Black-backed Gull	Not provided	Recorded in the Ornithology Study Area in very low numbers between March and October, with a peak of four birds in August and September 2022.
Herring Gull	572 birds	Recorded in the Ornithology Study Area in all months, with peak counts of 51 birds in August 2022 and 47 birds in January 2023.
Kittiwake	944 birds	Recorded in the Ornithology Study Area in most months,

SCIs	Seas off Wexford cSPA Abundance (NPWS 2024)	Project-Specific Bird Survey Results
		with peak counts of 31 birds in May 2022 and 22 birds in December 2022.
Sandwich Tern	887 birds	Recorded in the Ornithology Study Area in low numbers between March and August, with a peak of 26 birds in July 2022. A peak of 17 Sandwich terns was recorded on Rosslare Harbour wall during the evening tern roost survey in August 2022. Four roosting Sandwich terns were recorded on the September 2022 survey
Roseate Tern	Not provided	Two birds were recorded in the Ornithology Study Area in May 2022.
Common Tern	515 birds	Recorded in the Ornithology Study Area in low numbers between April and August, with a peak of 23 birds in April 2023. A peak of four common terns was recorded on Rosslare Harbour wall during the evening tern roost survey in August 2022.
Arctic Tern	401 birds	Recorded in the Ornithology Study Area in very low numbers in May 2022 (one bird) and July 2022 (two birds).

SCIs	Seas off Wexford cSPA Abundance (NPWS 2024)	Project-Specific Bird Survey Results
		A peak of five Arctic terns was recorded on Rosslare Harbour wall during the evening tern roost survey in August 2022
Little Tern	Not provided	Not recorded in Ornithology Study Area
Guillemot	13,504 birds	Recorded infrequently in the Ornithology Study Area in low numbers over the study period, with a peak of 15 birds in September 2022.
Razorbill	2747 birds	Recorded infrequently in the Ornithology Study Area in very low numbers over the study period, with a peak of two birds in August 2022.
Puffin	Not provided	Not recorded in Ornithology Study Area

The proposed loss of habitat is in an area dominated by *Abra alba* and *Nucula nitidosa* in circalittoral muddy sand or slightly mixed sediment (SS.SSa.CMuSa.AalbNuc). This habitat, which is characterised by non-cohesive muddy sands or slightly shelly/gravelly muddy sand, is extensive along the southeast coast of Ireland.

While baseline data suggest the area encompassing the Seas off Wexford cSPA surrounding the Proposed Development Boundary is used by foraging species, the Proposed Development Boundary is not a significant foraging and roosting area, as is evident in the low numbers of birds present and presence of other more suitable areas within the cSPA (i.e., further offshore), where survey evidence shows several of the SCI species are present in much greater concentrations.

Baseline data therefore suggest the 0.245km^2 of seabed habitat which will be lost will not result in an insufficient number of locations, area, and availability of suitable habitat to support the SCI species of the Seas off Wexford cSPA population or an insufficient number of locations, area, and/or availability of forage biomass to support the population targets.

An assessment of likely significant effects on the Special Protection Areas and their associated Special Protection Interests from habitat loss is presented in Table 5.15.

Increased SSC

Potential effects from increased SSC for diving birds are considered. These are birds that utilise underwater pursuit to capture prey, which involves significant submersion and active swimming below the water's surface (denoted with * in Table 5.9). This may affect birds that feed by sight.

Diving birds that are SCIs for the following SPAs are considered here: Seas off Wexford cSPA, The Raven SPA, Wexford Harbour & Slobs SPA and Saltee Islands SPA.

The Dispersion Modelling (Chapter 8: Coastal Processes) described in section 4.3 predicted the extent and distribution of sediment dispersal from dredging and reclamation works in terms of increased SSC levels and bed thickness changes. Three scenarios were modelled that represent the different stages of these activities (more detail in Chapter 6: Project Description); Stage 1, Stage 2 and Stage 3.

- The highest SSC levels are predicted to be within the harbour area during Stage 3, where the dredging activities will be undertaken, and adjacent to the outflow of the weir box, both of which overlap with the Seas off Wexford cSPA, with maximum predicted increased SSC levels of 15 to 20 mg/l in this localised area. SSC levels are predicted to reach a maximum of 0.23 mg/L for Stage 1 dredging with peak concentrations of 15 mg/L at the weir box location on the outer boundary of the reclamation area during Stage 2 at the same location.
- Coastal water SSC levels typically range from 3-24.1 mg/l (Devlin et al., 2008) therefore seabirds that forage in these coastal waters are accustomed to this scale of increased SSC. Most seabird species have a variety of target prey species and have large foraging ranges, meaning that they are able to forage for alternative prey species or to forage in other areas if prey becomes temporarily unavailable due to increased suspended sediments resulting from dredging/reclamation activities (Woodward et al, 2019).

While the predicted maximum level of increase would be above the MarESA pressure benchmark for SSC (i.e., change in WFD clarity rank of a year) if the predicted maximum level of increase above 10 mg/l was to persist for a year, these increased levels will not persist for a year as Stages 2 and 3 of the dredging and disposal activities will last for up to 10 months.

- It is therefore not considered likely that this short-term increase in SSC in a highly localised part of the cSPA will significantly affect foraging birds.

An assessment of likely significant effects on the Special Protection Areas and their associated Special Protection Interests from increased SSC is presented in Table 5.15.

Mortality, injury, displacement and/or disturbance from underwater noise

Potential effects from mortality, injury, displacement and/or disturbance from underwater noise is considered for diving birds. These are birds that utilise underwater pursuit to capture prey, which involves significant submersion and active swimming below the water's surface (denoted with * in Table 5.9). The impacts of underwater noise on diving seabirds are poorly understood (Dooling & Therrien 2012).

Underwater noise is likely to cause disturbance to diving seabirds, either directly as a deterrence causing displacement from habitat or evoking an escape flight response or indirectly affecting prey acquisition. Special Conservation Interests (SCIs) designated for SPAs whose predominant foraging method is shallow diving, dip diving or surface/skim feeding, are considered unlikely to be impacted by underwater noise due to the brevity of exposure time and low disturbance sensitivity.
Note, there is no route to impact between non-diving SCIs and underwater noise, as these species are not fully immersed in the water column when foraging. Likewise, diving seabirds whose predominant method of foraging is surface feeding, shallow diving and dip diving are considered unlikely to be affected by underwater noise as there is no route to impact or due to the brevity of exposure time and sensitivity to disturbance (Fleissbach et al., 2019).

Diving birds that are SCIs for the following SPAs are considered here: cSPA Seas off Wexford, The Raven SPA, Wexford Harbour & Slobs SPA, Saltee Islands SPA.

Table 5.11: Summary of Baseline Survey Results for Diving SCIs of Seas off Wexford cSPA, The Raven SPA, Wexford Harbour & Slobs SPA, Saltee Islands SPA

SCIs	Recent count (NPWS 2024)	Summary of Baseline Survey Results
Red-throated Diver	499 birds	Low numbers regularly recorded in winter months
Fulmar	Not provided	One bird was recorded in the Ornithology Study Area in May 2022.
Manx Shearwater	8,269 birds	A summer visitor to Irish waters. Recorded in the Ornithology Study Area in June 2022 (seven birds) and July 2022 (25 birds).
Gannet	772 birds	Mainly recorded in the Ornithology Study Area in summer months, with fewer birds recorded in winter. The peak counts were seven birds in May 2022, 12 birds in January 2023 and eight birds in July 2022
Cormorant	108 birds	Recorded in the Ornithology Study Area in low numbers in all months, with a peak count of 14 birds in January 2023.
Shag	Not provided	Recorded in the Ornithology Study Area in low numbers in all months, with peak counts of nine birds in May 2022 and seven birds in June 2022.

SCIs	Recent count (NPWS 2024)	Summary of Baseline Survey Results
Common Scoter	1078 birds	Recorded between August and March, with peak counts of 53 birds in October 2022 and 36 birds in December 2022.
Guillemot	13, 504 birds	Recorded infrequently in the Ornithology Study Area in low numbers over the study period, with a peak of 15 birds in September 2022.
Razorbill	2747 birds	Recorded infrequently in the Ornithology Study Area in very low numbers over the study period, with a peak of two birds in August 2022.
Puffin	Not provided	Not recorded
Great Crested Grebe	Not provided	Recorded in very low numbers between September and March, with a peak count of four birds recorded in October and December 2022.
Scaup	Not provided	Not recorded
Red breasted Merganser	Not provided	Recorded in very low numbers between August and April, with a peak count of two birds recorded in the majority of months.

Common Scoter is a diving species foraging in waters less than 20m deep with sandy substrate, with a winter diet of predominately benthic bivalve molluscs. In the winter it is almost entirely marine. Common Scoter were recorded on baseline vantage point surveys undertaken between April 2022 and February 2024, with almost all sightings involving birds between 1km and 1.5km from shore (Figure 5.1). The peak number of Common Scoter recorded on baseline surveys was 53 birds, with a mean number of 23 birds recorded per month between August and March. All recorded counts were considerably below the All-Ireland 1% threshold for national importance (110 birds) (Lewis et al., 2019).

Red-throated Diver has a diet of sprat, sandeels, codling and flatfish in shallow sandy bays. It is a wintering species arriving in September with peak numbers in January and February. Red-throated Diver was recorded during baseline vantage point surveys between September 2022 and August

2024 and were distributed widely in small numbers throughout the survey area, with birds recorded in all distance bands between the shore and 1.5km offshore (Figure 5.2). The peak number of Red-throated Divers recorded on baseline surveys was six birds, with a mean number of three birds recorded per month. All recorded counts were considerably below the All-Ireland 1% threshold for national importance (20 birds) (Lewis *et al.*, 2019).

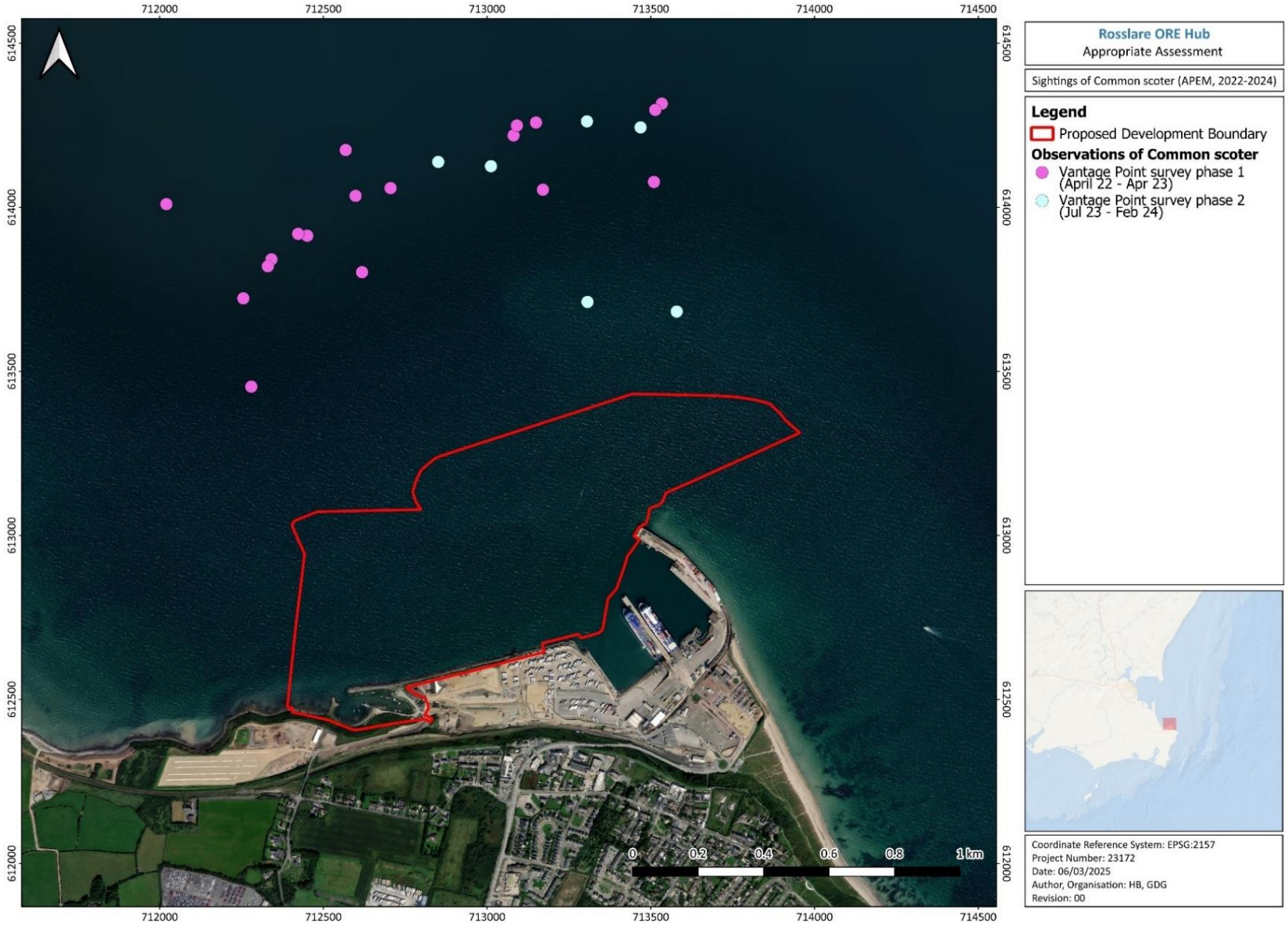

Figure 5.1: Distribution of Common Scoter recorded during baseline vantage point bird surveys (EIAR Technical Appendix 14: Ornithology)

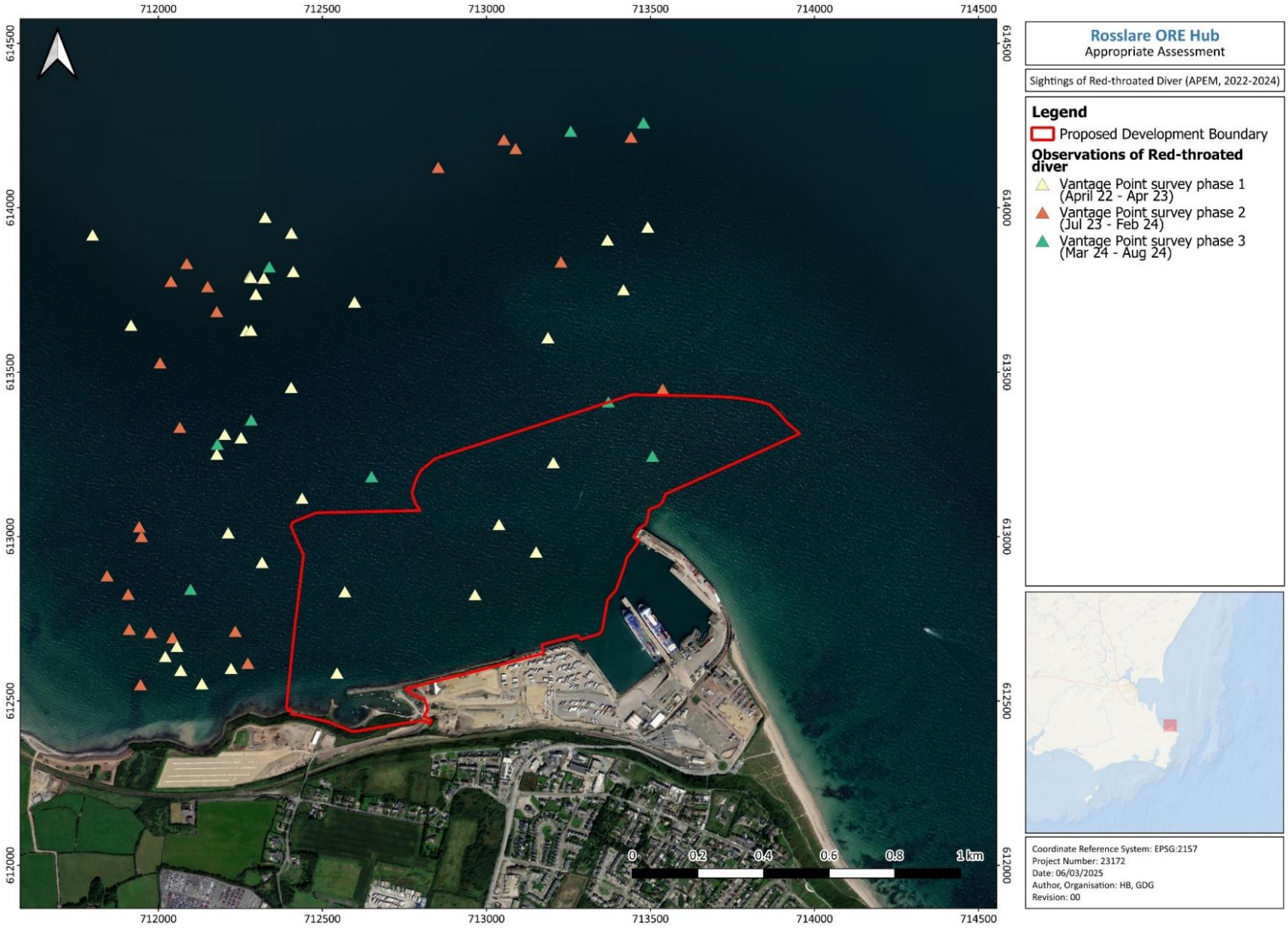

Figure 5.2: Distribution of Red-throated Diver recorded during baseline vantage point bird surveys (EIAR Technical Appendix 14: Ornithology)

While Red-throated Diver and Common Scoter are considered sensitive to disturbance, including from underwater noise as diving birds, as outlined above baseline data show Common Scoter have not been found in the Proposed Development Area and that Red-throated Diver are not commonly found in the Proposed Development Area.

Great Crested Grebe, Scaup and Red-breasted Merganser are all wintering SCIs for Wexford Harbour & Slobs SPA. Great Crested Grebe has a diet of fish and are coastal during the winter. Scaup diet is principally crustaceans and molluscs and they are found around coastal estuaries and brackish lagoons. Red-breasted Merganser has a diet of fish and in winter are exclusively found in brackish and marine waters. All were recorded in low numbers from August to April during site surveys except for Scaup which was not recorded at all.

These diving species feed opportunistically wherever its prey species occur however, they are likely to stay under water for only short periods of time and as such are not considered susceptible to disturbance effects from elevated levels of underwater noise. In addition, these SCIs are likely to avoid the construction activities within the Proposed Development Boundary.

Seabirds (Diving); Wintering diving seabirds (i.e., Cormorant - SCI The Raven SPA, & Wexford Harbour & Slobs SPA; Diving SCIs for Seas off Wexford SPA; and Breeding seabirds at Saltee Islands SPA).

These SCIs are considered less sensitive to disturbance however they are likely to avoid the construction activities.

SCIs designated from Saltee Island SPA are likely to forage close and within the rich seas around the islands including deeper seas. They are unlikely to forage around the coast as far as Rosslare. Additionally, seabirds that are found in and around the port are used to anthropogenic noise from the busy port activities as these areas are already disturbed by constant vessel movement and support heavily modified habitats.

An assessment of likely significant effects on the Special Protection Areas and their associated Special Protection Interests from mortality, injury, displacement and/or disturbance from underwater noise is presented in Table 5.15.

Displacement and/or disturbance from airborne noise and visual disturbance

Displacement and/or disturbance from airborne noise and visual disturbance has been considered for all wintering and breeding SCIs identified for the LSE assessment. As described above some SCIs are more susceptible to disturbance than others. Species such as divers and scoters have been recorded avoiding shipping by several kilometres (Garthe and Hüppop, 2004; Schwemmer *et al*., 2011) and Red-throated diver are likely to take flight in the 200-300m distance from a passing ferry (Fliessbach *et al*., 2019, while gulls are not considered susceptible to disturbance, as they are often attracted to fishing boats as a potential food source (e.g. Camphuysen, 1995; Hüppop and Wurm, 2000).

While Red-throated Diver and Common Scoter are considered highly sensitive to disturbance, including from airborne noise and visual disturbance, airborne noise and visual disturbance impacts from the proposed activities will not be greater than existing activities and, as outlined above,

baseline data show Common Scoter have not been found within the Proposed Development Boundary and Red-throated Diver are not commonly found in the Proposed Development Boundary.

An assessment of likely significant effects on the Special Protection Areas and their associated Special Protection Interests due to displacement and/or disturbance from airborne noise and visual disturbance is presented in Table 5.15.

Reduction in prey availability (indirect)

There is the potential for temporary seabed disturbance resulting from dredging/reclamation activities which may release sediment into the water column, potentially causing fish and mobile invertebrates to temporarily avoid the area. Most seabird species have a variety of target prey species and have large foraging ranges, meaning that they are able to forage for alternative prey species or to forage in other areas if prey becomes temporarily unavailable due to increased suspended sediments resulting from dredging/reclamation activities (Woodward *et al.*, 2019). In addition, Chapter 11: Benthic Ecology describes the benthic environment, and the community complexes found within the Proposed Development Boundary which are common in Ireland.

SSC effects are discussed in section 5.5.1.2 and an assessment of the likely significant effects on the Special Protection Areas and their associated Special Conservation Interests as a result of increased SSC is presented in Table 5.15.

5.5.2 SACS - DESIGNATED TO PROTECT ANNEX I HABITAT QIS

This section discusses the potential for LSE on Annex I Habitat features of the SACs identified in section 5.3. An assessment of likely significant effects on the Special Areas of Conservation and their associated Qualifying Interests is presented in Table 5.16.

SACs are proposed to be considered for NIS where LSE cannot be ruled out for one or more QIs, for one or more routes to impact. SACs are screened out where LSE can be ruled out for all routes of impact to all QIs. A rationale is given for each SAC and their associated QI(s) and route to impact to explain the screening decision.

SAC sites considered for LSE are set out in Table 5.12.

Table 5.12: SACs to be considered for LSE

SAC to include in LSE Screening	QIs	Connectivity with potential LSE
Carnsore Point SAC	Mudflats and sandflats not covered by seawater at low tide Reefs	Increased SSC Reduction in water quality

SAC to include in LSE Screening	QIs	Connectivity with potential LSE
	Harbour porpoise	Mortality, injury, displacement and/or disturbance from underwater noise Mortality or injury from vessel collision Reduction in water quality Reduction in prey availability (in-direct)
Long Bank SAC	Sandbanks which are slightly covered by sea water all the time	Increased SSC Reduction in water quality
Blackwater Bank SAC	Harbour porpoise	Mortality, injury, displacement and/or disturbance from underwater noise Mortality or injury from vessel collision Reduction in water quality Reduction in prey availability (in-direct)
Slaney River Valley SAC	Sea Lamprey Brook Lamprey River Lamprey Salmon	Increased SSC Reduction in water quality Mortality, injury, displacement and/or disturbance from underwater noise (as a result of parasitic relationship with Shad) (Lamprey Species only)
	Twaite Shad	Increased SSC Reduction in water quality Mortality, injury, displacement and/or disturbance from underwater noise
	Otter	Increased SSC Reduction in water quality Mortality, injury, displacement and/or disturbance from underwater noise Reduction in prey availability (in-direct)

SAC to include in LSE Screening	QIs	Connectivity with potential LSE
	Harbour Seal	Mortality, injury, displacement and/or disturbance from underwater noise Mortality or injury from vessel collision Reduction in water quality Reduction in prey availability (in-direct)
Saltee Islands SAC	Grey seal Included for CO Access to suitable habitat	Mortality, injury, displacement and/or disturbance from underwater noise Mortality or injury from vessel collision Reduction in water quality Reduction in prey availability (in-direct)
Hook Head SAC	Bottlenose dolphin Harbour porpoise	Mortality, injury, displacement and/or disturbance from underwater noise Mortality or injury from vessel collision
Rockabill to Dalkey Island SAC 112km	Harbour porpoise	Mortality, injury, displacement and/or disturbance from underwater noise Mortality or injury from vessel collision
Codling Fault Zone SAC 124km	Harbour porpoise	Mortality, injury, displacement and/or disturbance from underwater noise Mortality or injury from vessel collision
Lambay Island SAC 140km	Harbour porpoise Grey seal Harbour seal	Mortality, injury, displacement and/or disturbance from underwater noise Mortality or injury from vessel collision

5.5.2.1 IMPACTS FOR WHICH S-P-R CONNECTIVITY HAS BEEN IDENTIFIED

Reduction in Water Quality

The International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/785), is an international marine environmental convention which aims to prevent both operational and accidental discharge into the marine from sea going vessels. Ireland

ratified the various elements of the MARPOL Convention through the Sea Pollution Act 1991, the Sea Pollution (Amendment) Act 1999 and the Sea Pollution (Miscellaneous Provisions) Act 2006. MARPOL 73/78 was given further legal effect through Statutory Instruments introduced under these Acts. The Acts place a legal obligation upon operators of vessels to implement measures to prevent both operational and accidental discharges from ships of substances, which may damage the marine environment as well as human health.

The construction and operational activities will result in an increase in vessels and therefore a potential risk of accidental spills however an incidence pollution whether from an accidental occurrence or operational activities is not considered likely considering the legal obligations to comply with MARPOL 73/78 with the increased risk of a pollution event occurring due to these activities considered minimal and not to be over and above existing background risk.

All vessels used as required by law, be MARPOL Compliant and fully certified by the Maritime Safety Office. Therefore, it is considered unlikely that there would be any occurrence of a pollution event either accidental or otherwise that could directly or indirectly cause a significant effect to a Natura 2000 site.

An assessment of likely significant effects on the Special Areas of Conservation and their associated Qualifying Interests from reduction in water quality is presented in Table 5.16.

Increased Suspended Sediment Concentrations (SSC)

The Dispersion Modelling (GDG 2024) assessed the sediment dispersal from dredging and disposal works within the Proposed Development Boundary. Three scenarios were modelled that represent the different stages of these activities (see Chapter 6: Project Description, Chapter 8: Coastal Processes and EIAR Technical Appendix 8: Coastal Processes). Taking a precautionary approach, the results from Stage 3 are used to illustrate the predicted extent of the sediment dispersion and maximum predicted sediment concentrations. Stage 3 is the longest duration of dredging and predicts the highest SSC values, as shown in Figure 5.3.

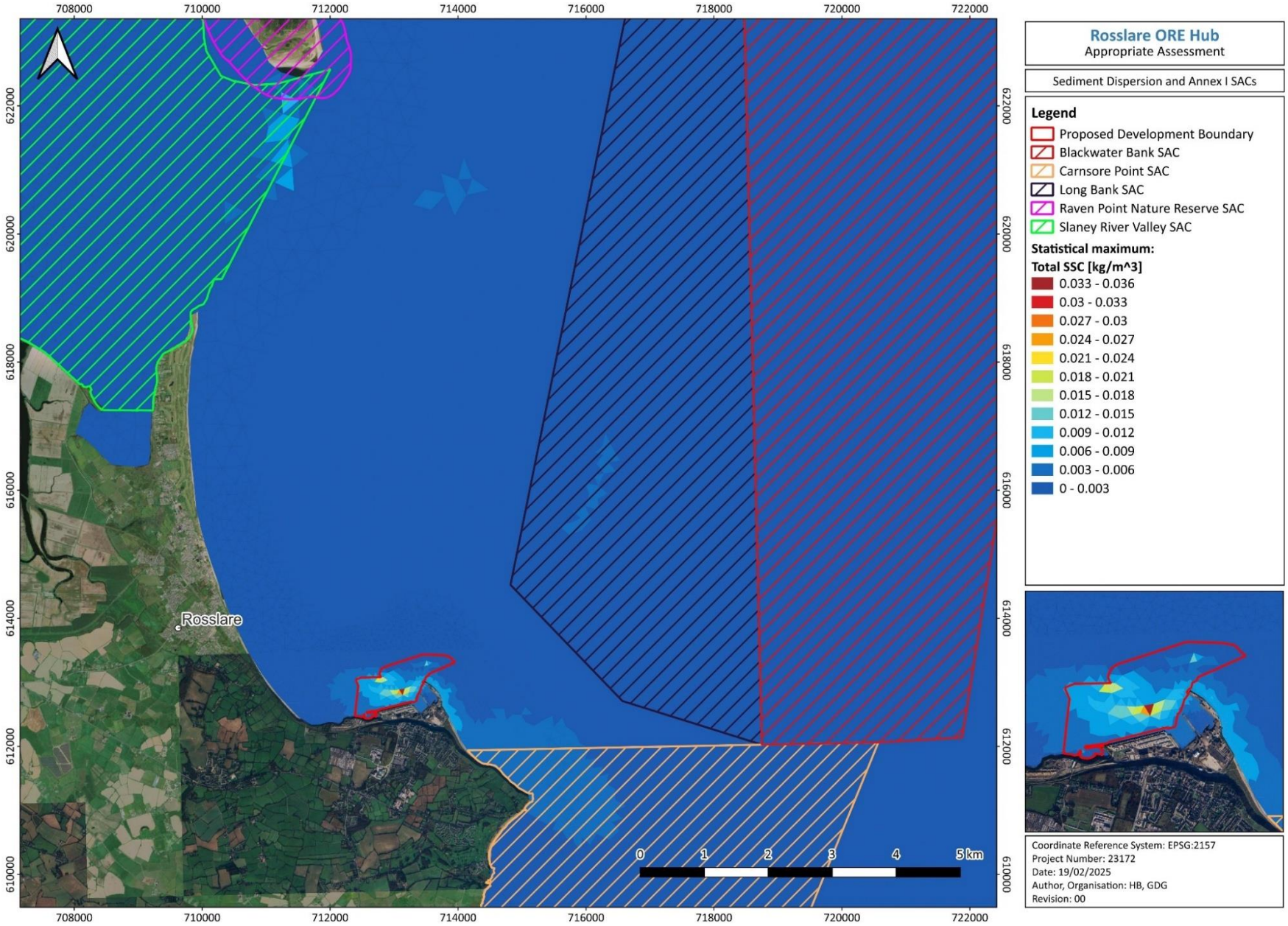

Figure 5.3: Stage 3 Sediment Dispersion Modelling Results and nearby SACs

Increased SSC levels are predicted to remain concentrated in the area around Rosslare Harbour with levels predicted to decrease substantially quite quickly away from Rosslare Harbour. The highest SSC level predicted to occur in an SAC (9.96 mg/L) was predicted to occur in Carnsore Point SAC. Note this is below the MarESA pressure benchmark for SSC for benthic habitats and species.

During Stage 1 the maximum predicted bed thickness change is 0.008cm (0.08mm) in the northwest of Carnsore Point SAC. Stage 2 modelling predicts a maximum bed thickness change of 0.03cm (0.3mm) in the northwest of Carnsore Point SAC and Stage 3 modelling predicts a maximum total bed thickness change of 0.04cm (0.4mm) will occur in the northwest of Carnsore Point SAC. Negligible bed thickness changes are also predicted for all other Natura 2000 sites. Most benthic biota can adapt to 'light' smothering, which is up to 5cm of material added to the habitat in a single, discrete event by vertically migrating through the deposited sediment (MarESA, 2025).

The benthic habitats in Carnsore Point SAC are highly dynamic, and sediments being deposited on the seabed will disperse naturally through the area. Sediment-dwelling organisms are mobile and adapted to a dynamic environment. The increase in suspended sediment concentrations is not expected to affect the community distribution of the Annex I mudflats and sandflats, the community structure, community extent or community structure for Annex I reefs or the habitat or community distribution for the Annex I sandbanks.

An assessment of likely significant effects on the Special Areas of Conservation and their associated Qualifying Interests from increased Suspended Sediment Concentrations (SSC) is presented in Table 5.16.

5.5.3 SAC – DESIGNATED TO PROTECT ANNEX II MOBILE SPECIES – MARINE MAMMALS

This section discusses the potential for LSE on Annex II Marine Mammal Species that are Qualifying Interests of the SACs identified in section 5.3 for which an S-P-R has been identified.

An assessment of likely significant effects on the Special Areas of Conservation and their associated Qualifying Interests is presented in Table 5.16.

SACs are proposed to be considered for NIS where LSE cannot be ruled out for one or more QIs, for one or more routes to impact. SACs are screened out where LSE can be ruled out for all routes of impact to all QIs. A rationale is given for each SAC and their associated QI(s) and route to impact to explain the screening decision.

The Annex II marine mammal features with connectivity to the Proposed Development for the following species and their associated SACs listed below.

- Harbour Porpoise (Carnsore Point SAC, Blackwater Bank SAC, Hook Head SAC and West Wales Marine SAC, Rockabill to Dalkey Islands SAC, Codling Fault Zone SAC and Lambay Island SAC) and all French SACs within the Management Unit from Mers Celtiques to Baie du Mont Saint-Michel (see Appendix B for full list).
- Bottlenose Dolphin (Hook Head SAC).
- Harbour Seal (Slaney River Valley SAC, Lambay Island SAC, Strangford Lough SAC, The Murlough SAC)).

- Grey seal (Saltee Islands SAC, Lambay Island SAC, The Maidens SAC,).
- Otter (Slaney River Valley SAC)

Harbour porpoise

Harbour porpoise is a recently added QI to a number of Irish SACs including Carnsore Point SAC, Blackwater Bank SAC, Hook Head SAC, Rockabill to Dalkey Island SAC, Lambay Island SAC & Codling Fault Zone).

Bottlenose Dolphin

Bottlenose dolphin is a recently added QI to a number of Irish SACs including Hook Head SAC.

5.5.3.1 IMPACTS FOR WHICH S-P-R CONNECTIVITY HAS BEEN IDENTIFIED

Mortality, injury, displacement and/or disturbance from underwater noise

Table 5.13 summarises the noise modelling outputs for underwater noise from piling, blasting and dredging activities. The Phocid Carnivores in Water (PCW) hearing group (i.e., seals) was used as a proxy for Otter for underwater hearing sensitivity.

Table 5.13: Summary of predicted distances of auditory injury, auditory impairment and displacement from underwater noise modelling

Potential Impact	Species	Initial Distance for PTS from Activity	Initial TTS Distance for TTS from Activity	Displacement
Auditory injury (PTS), auditory impairment (TTS) and displacement from Piling	Harbour Porpoise	110 m	2,600 m (@ swim speed of 1.5 m/s)	4.6km
	Bottlenose Dolphin	2 m	4 m	Displacement of harbour porpoise (4.6km) as proxy for bottlenose dolphin
	Grey Seal/ Harbour Seal/ Otter	8 m	80 m (@ swim speed of 1.5 m/s)	4.6km
Auditory injury (PTS), auditory impairment (TTS)	Harbour Porpoise	**1,630** m (490 – 2,670 m)	**3,000** m (900 – 4,920 m)	N/A

Potential Impact	Species	Initial Distance for PTS from Activity	Initial TTS Distance for TTS from Activity	Displacement
and displacement from Blasting Bold highlighted numbers indicate the average estimated distances to threshold exceedances	Bottlenose Dolphin	**95** m (30 – 155 m)	**170** m (50 – 285 m)	N/A
	Grey Seal/ Harbour Seal/ Otter	**320** m (95 – 525 m)	**590** m (175 – 965 m)	N/A
Auditory injury (PTS), auditory impairment (TTS) and displacement from Dredging	Harbour Porpoise	Not exceeded	410 m @1.5 m/s	1.3km
	Bottlenose Dolphin	Not exceeded	Not exceeded	Displacement of harbour porpoise (1.3km) as proxy for bottlenose dolphin
	Grey Seal/ Harbour Seal/ Otter	Not exceeded	Not exceeded	Displacement of harbour porpoise (1.3km) as proxy for seals

The underwater noise modelling predicts that distances for PTS do not overlap with any of the nearby SACs (Carnsore Point or Blackwater Bank) and their associated QIs.

TTS predicted distances for piling and blasting for Harbour porpoise overlaps with only Carnsore Point SAC (1.4km at the closest).

Displacement distances predicted from piling for Harbour porpoise overlaps with Carnsore Point SAC.

An assessment of likely significant effects on the Special Areas of Conservation and their associated Qualifying Interests from mortality, injury, displacement and/or disturbance from underwater noise is presented in Table 5.16.

Mortality or injury from vessel collision

The key factors contributing to collision between marine mammals and vessels are the presence of both in the same area and vessel speed (see Schoeman et al., 2020 for review). Injuries to marine mammals from vessel strikes are species-dependent but generally are more severe at higher impact speeds (Wang *et al*., 2007).

Cetaceans and pinnipeds in the area are exposed to vessels of all sizes on a regular basis within the busy Rosslare Port environment. Observations during marine mammal surveys recorded Grey seals on every watch, Harbour seals only recorded on a quarter of the watches, Harbour porpoise throughout the year and Bottlenose dolphins in spring and September.

Vessel activity included as part of construction and operational phases of the Proposed Development includes barges, TSHD and other ORE component delivery vessels, all of which will be slow moving within the port limits with the risk of mortality or injury considered to be low.

The number of vessel movements for the proposed small boat harbour is estimated to remain consistent with those that used the existing small boat harbour.

An assessment of likely significant effects on the Special Areas of Conservation and their associated Qualifying Interests from mortality or injury from vessel collision is presented in Table 5.16.

Reduction in water quality

Reduction in water quality could be caused by an increase in suspended sediment concentrations or a pollution event. Dredging Dispersion Modelling was undertaken as described in Chapter 8: Coastal Processes and its accompanying Technical Appendix. An overview is given in section 4.3.1.1 of this report. The modelling shows that the largest increase in SSC will be mostly contained within the Rosslare Harbour area itself with the highest SSC occurring at the weir box at the edge of the reclamation area within the Proposed Development Boundary (refer Figure 4.3). The modelling shows that the sediment can be expected to travel 2.5km to the southeast along the coast towards Carnsore Point and 1.5km to the west to Rosehill Bay Beach. Outside the Proposed Development Boundary increases in SSC are expected to be minimal (generally in the region of maximum 3 mg/l) which is below the level to cause a change in water quality classification.

Water quality can also be impacted by a pollution event. The construction and operational activities will result in an increase in vessels and therefore a potential risk of accidental spills. However, an incidence of pollution whether from an accidental occurrence or operational activities is not considered likely considering the legal obligations to comply with MARPOL 73/78 (see section 5.5.4.1 for further discussion on MARPOL) with the increased risk of a pollution event occurring due to

these activities considered minimal and not to be over and above existing background risk. All vessels used as required by law, will be MARPOL compliant and fully certified by the Marine Survey Office. Therefore, it is considered unlikely that there would be any occurrence of a pollution event either accidental or otherwise that could directly or indirectly impact on the receiving environment.

The Proposed Development has been designed to incorporate a pollution separation drainage system using interceptors (see Chapter 6: Project Description) which will separate out oils to prevent them discharging to the marine environment during operation of the Proposed Development therefore a pollution incidence is considered unlikely during operation.

On behalf of Iarnród Éireann, the project team received a response to pre-connection enquiry for the proposed Rosslare ORE Hub from Uisce Éireann. The letter dated 3rd September 2025 confirms that, subject to a connection agreement which must be applied for and granted, a water and wastewater connection are feasible without infrastructure upgrade by Uisce Éireann.

An assessment of likely significant effects on the Special Areas of Conservation and their associated Qualifying Interests from a reduction in water quality is presented in Table 5.16.

Reduction in prey availability (in-direct)

The Proposed Development could cause indirect effects to marine mammals due to underwater noise and/or increased suspended sediment concentrations displacing the prey species of marine mammals, namely fish. As described in Table 5.4 the Zone of Impact is limited to very close to the reclamation and dredging areas and predicted dispersion model results that indicate the movement of sediment that travels approximately 2.5km southeast along the shore and westward by 1.5km. However, the predicted SSC values are minimal outside the harbour area therefore the potential effect on prey availability is very low.

In addition, cetaceans and pinnipeds, have a wide variety of prey species that vary geographically and seasonally, reflecting availability of food resources.

An assessment of likely significant effects on the Special Areas of Conservation and their associated Qualifying Interests from Reduction in prey availability (in-direct) is presented in Table 5.16.

5.5.4 SAC – DESIGNATED TO PROTECT ANNEX II MOBILE SPECIES – FISH

This section discusses the potential for LSE on Annex II Fish Species that are Qualifying Interests of the SACs identified in section 5.3 for which an S-P-R has been identified.

An assessment of likely significant effects on the Special Areas of Conservation and their associated Qualifying Interests is presented in Table 5.16. SACs are proposed to be considered for NIS where LSE cannot be ruled out for one or more QIs, for one or more routes to impact. SACs are screened out where LSE can be ruled out for all routes of impact to all QIs. A rationale is given for each SAC and their associated QI(s) and route to impact to explain the screening decision.

There is only one SAC designated to protect fish for which an S-P-R connection has been identified. The Slaney River Valley SAC is designated for Sea Lamprey, Brook Lamprey, River Lamprey, Salmon and Twaite Shad.

Site-Specific Conservation Objectives are presented in Table 5.16. The conservation objectives, attributes and targets for the SAC relate to the freshwater phase of their life cycle. It is noted that the Proposed Development has the potential to affect these species ex-situ during the marine phase of their life cycle.

5.5.4.1 IMPACTS FOR WHICH S-P-R CONNECTIVITY HAS BEEN IDENTIFIED

Increased SSC

Elevated levels of suspended sediment concentrations (SSC) can directly impact fish by physically damaging tissues and organs. Various factors can increase the severity of the impact such as sediment concentration, particle size and shape, species, associated pollutants, duration/frequency of exposure, and life stage at time of exposure.

The Dispersion Modelling (GDG 2024) assessed the sediment dispersal from dredging and disposal works within the reclamation area. The predicted sediment movement has the most concentrated values in the area around Rosslare Harbour (20mg/L at the weir box) and extends up to 1.5km west to Rosehill Bay Beach and 2.5km southeast to Greenore Point within Carnsore Point SAC. Nevertheless, the SSC values remain minimal beyond these points. Maximum predicted SSC levels within SACs are 9.96 mg/L at Carnsore Point SAC and 1.4mg/L at Slaney River Valley SAC, both below the threshold for a change in one rank on the WFD water clarity scale (e.g. from clear to intermediate) and therefore unlikely to cause an impact to Annex II fish species.

An assessment of likely significant effects on the Special Areas of Conservation and their associated Qualifying Interests is presented in Table 5.16.

Mortality, injury, displacement and/or disturbance from underwater noise

Fish use either particle motion or sound pressure for detecting sound. While all fish detect and use particle motion hearing it is the presence of ancillary hearing structures that determines their sensitivity to sound pressure.

In general, fish species without a swim bladder (i.e., lamprey, sharks, some flatfish and tunas), or those that have small or reduced swim bladders (i.e., typically, benthic species, including some flatfish), tend to have relatively poor auditory sensitivity and generally cannot hear sounds at frequencies above 1 kHz. Hearing for these fish involves particle motion, not sound pressure (NOAA, 2016).

Fish species with anatomical specializations between the swim bladder and the ear generally have lower thresholds and wider hearing bandwidths than species without such specializations and may have greater ability to detect, and therefore respond to, sound pressure. This is the case of fish belonging to clupeiform species (e.g., shad, herring, sardines, and alewives). Clupeids of the shad family (Alosinae) in particular, have shown sensitivity to a range of frequencies that can extend to >100 kHz. (Popper et al 2014).

Fish that possess swim bladders but with no special adaptations typically do not show a comparable degree of hearing sensitivity to shad. For example, Atlantic Salmon (*Salmo salar*) have poor hearing sensitivity and are only capable of detecting low frequency tones (below 380 Hz) and particle motion rather than sound pressure (NOAA, 2016).

Popper *et al.* (2014) have defined criteria for injury to fish species based on a review of publications related to impacts on fish, fish eggs and larvae from various underwater noise sources including piling and explosives.

The hearing capability and sensitivity of fish to underwater noise largely depends on the presence or absence of a swim bladder (Popper et al., 2014; Nedelec et al., 2016). Popper et al. (2014) derived different injury thresholds for the following groups of fish:

- Fishes with no swim bladder or other gas chamber.
- Fishes with swim bladders in which hearing involves the swim bladder or other gas volume.
- Fishes with swim bladders but hearing does not involve the swim bladder or other gas volume.
- Fish eggs and larvae.

Sea and River lamprey, which are both anadromous fish species with a migratory phase in the sea, are capable of hearing underwater noise associated with the Proposed Development activities (Mickle et al., 2009). However, they are not considered to be hearing specialists and are not sensitive to sound pressure therefore are not vulnerable to the sounds emitted by the proposed activities. Atlantic salmon, while capable of hearing noise in the lower frequency range below 380 Hz, is also not sensitive to sound pressure (Hawkins & Johnstone, 1978). Twaite Shad are hearing specialists whereas Salmon and Lamprey species are hearing non specialists.

The predicted distances to the zero-to-peak SPL thresholds for potential mortal injury, recoverable injury, and TTS are summarised in Table 5.13.

Table 5.14: Maximum predicted distances to zero-to-peak SPL thresholds for potential mortal injury or recoverable injury to fish from piling, blasting and dredging.

Potential Impact	Qualifying Interest	Fish group	Zero-to-peak SPL threshold (dB re 1 µPa^2)	Maximum distance to threshold (m)
Auditory injury, recoverable injury & TTS from Piling	Twaite Shad	Fishes with swim bladder involved in hearing	207	Not exceeded for Injury and recoverable injury 10 (TTS)
	Salmon, Lamprey	Fishes with swim bladder not involved in hearing	207	Not exceeded for Injury and recoverable injury 10 (TTS)
Auditory injury, recoverable injury & TTS from Blasting Bold highlighted numbers indicate the average estimated distances to	Twaite Shad	Fishes with swim bladder involved in hearing	229	105 (30-170)
	Salmon, Lamprey	Fishes with swim bladder not involved in hearing	229	105 (30-170)

threshold exceedances				
Auditory injury, recoverable injury & TTS from Dredging	Twaite Shad	Fishes with swim bladder involved in hearing	207	Not exceeded
	Salmon, Lamprey	Fishes with swim bladder not involved in hearing	207	Not exceeded

There is a potential that Annex II fish present within the Proposed Development Boundary will be temporarily displaced by noise. Potential injury to fish species during construction activities is predicted to be very limited and confined to within 170 m from blasting activities. The threshold will not be exceeded for piling or dredging activities.

An assessment of likely significant effects on the Special Areas of Conservation and their associated Qualifying Interests from mortality, injury, displacement and/or disturbance from underwater noise is presented in Table 5.15.

Table 5.15: Screening for Likely Significant effects for SPAs and their QIs for which S-P-R Connectivity has been identified

SPA & distance from Proposed Development	SCI	Conservation Objectives, Attributes and Targets	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	AA Screening Assessment for Likely Significant Effects (LSE)	Screened In/Out
004237 Seas off Wexford cSPA (overlaps)	Red-throated Diver (*Gavia stellata*) [A001] *	**Conservation Objective:** To maintain the favourable conservation condition **Attributes and Targets:** Non-breeding population size* with the long-term SPA population trend stable or increasing (Red-throated Diver, Common Scoter) Breeding population size with the long-term SPA population trend stable or increasing (all other species) Spatial distribution with sufficient number of locations, area, and availability (in terms of timing and intensity of use) of suitable habitat to support the population Forage spatial distribution with sufficient number of locations, area of suitable habitat and available forage biomass to support the population target Disturbance across the site with the intensity, frequency,	✓	✓	✓		✓	✓	✓		✓	**Habitat Loss (temporary and permanent)** The Proposed Development Boundary overlaps with the Seas Off Wexford cSPA however the area of permanent habitat loss represents 25.5 ha which is less than 0.01% of the cSPA and is deemed to be negligible. The total area of permanent and temporary habitat loss is 73.9ha which is 0.024% of the cSPA. The loss of potential foraging habitat for waterbirds that would occur as a result of the reclamation of the existing small boat harbour is not considered likely to adversely affect the cSPAs Conservation Objectives, with small numbers of foraging birds permanently displaced. Over time the proposed rock armouring around the reclaimed area will provide similar intertidal foraging habitats, both in terms of function and area. The loss of marine foraging habitat will be permanent but only forms a very small percentage of the cSPA (see above), and recorded usage of this area by species of divers, grebes and auks was periodic and only involved very low numbers of birds by Site-Specific and regional surveys. The recorded numbers did not exceed the 1% national threshold of importance (as defined by Lewis *et al.,* 2019), for any species. The species were observed in no to low numbers within the Proposed Development Boundary and generally low numbers in the wider Ornithological Study Area during Project Specific Surveys undertaken between April 2022 and September 2024 (some surveys were seasonal) (refer Table 5.11). Benthic grab sampling shows that the area is not particularly biologically diverse with substrate and benthic communities typical of those found in the surrounding area (refer to Chapter 11: Benthic Ecology, section 4.5.2 of this report). There will be no barrier to the cSPA or other areas of ecological importance caused by the loss of habitat. Therefore, due to the very small area concerned and the low numbers of birds using the area **there will be no likely significant effects on the Conservation Objectives of the cSPA from habitat loss due to the Proposed Development relating to these SCIs and it can be screened out at the screening stage.** **Increased Suspended Sediment Concentrations** Dredging Dispersion Modelling was undertaken as described in Chapter 8: Coastal Processes and its accompanying Technical Appendix. An overview is given in section 4.3.1.1 of this report. The modelling shows that the largest increase in SSC will be mostly contained within the Rosslare harbour area itself with the highest SSC occurring where the dredging activities will be undertaken and adjacent to the outflow of the weir box at the edge of the reclamation area within the Proposed Development Boundary (refer Figure 4.3). The highest increase in SSC corresponds with the area of permanent and temporary habitat lost with very low levels (3mg/l) in the area of the cSPA immediately adjacent to the Proposed Development Boundary. Under 10mg/l SSC is categorised as clear (UK TAG (2014)) and Devlin *et al.* (2008) suggest that coastal waters are typically 3-24.1 mg/l. The increase in SSC is not likely to impact the turbidity or quality of the water within the cSPA and therefore **there will be no likely significant effects on the conservation objectives of the cSPA relating to these SCI and it can be screened out at the screening stage.**	**Out**
	Fulmar (*Fulmarus glacialis*) [A009]		✓	✓	✓		✓	✓	✓		✓		**Out**
	Manx Shearwater (*Puffinus puffinus*) [A013]		✓	✓	✓		✓	✓	✓		✓		**Out**

SPA & distance from Proposed Development	SCI	Conservation Objectives, Attributes and Targets	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	AA Screening Assessment for Likely Significant Effects (LSE)	Screened In/Out
	Gannet (*Morus bassanus*) [A016]	timing and duration of disturbance occurring at levels that do not significantly impact the achievement of targets for population size and spatial distribution Barriers to connectivity with the number, location, shape and area of barriers not significantly impacting the site population's access to the SPA or other ecologically important sites outside the SPA	✓	✓	✓		✓	✓	✓		✓	**Mortality, injury, displacement and / or disturbance from underwater noise** While Red-throated Diver and Common Scoter are considered sensitive to disturbance diving species feed opportunistically wherever its prey species occur and are likely to stay under water for only short periods of time and as such are not considered susceptible to disturbance effects from elevated levels of underwater noise. Special Conservation Interests (SCIs) designated for SPAs whose predominant foraging method is shallow diving, dip diving or surface/skim feeding, are considered unlikely to be impacted by underwater noise due to the relatively short exposure time. These species are also likely to temporarily avoid the area due to sensitivity to disturbance from the construction activities. Due to the very low numbers of birds observed within the Proposed Development Boundary that are considered to be sensitive to underwater noise, the short period during which they could be exposed to elevated noise levels under water and the localised temporary displacement of these species due to construction activities **there will be no likely significant effects on the conservation objectives of the cSPA relating to these SCI and it can be screened out at the screening stage.** **Displacement and/or disturbance from in-air noise** There is the potential for disturbance to birds arising from noise emissions from machinery on site. Of the SCI observed within the Ornithology Study Area, Red-throated Diver and Common Scoter are classified as having a high sensitivity to disturbance. Cormorant and Shag are classified as having a moderate sensitivity to disturbance with the remaining species occurring within the Ornithology Study Area classified as low or very low. It should be noted that Common Scoter was not observed within the Proposed Development Boundary at all, only occurring in the wider Ornithology Study Area at distances of approximately 600m to 1km away from the Proposed Development Boundary. Red-throated Diver was only observed in low numbers (peak count of six birds in January 2023) throughout the Ornithology Study Area. Cormorant and Shag (both moderate sensitivity) were observed in low numbers throughout the survey period. Therefore, due to low numbers of birds observed for species considered to be of high or moderately sensitive to displacement and/or disturbance from in-air noise **there will be no likely significant effects on the conservation objectives of the cSPA relating to these SCI and it can be screened out at the screening stage.** **Reduction in water quality** See above for discussion relating to impacts to water quality from increased suspended sediment concentrations which determined that there would be no likely significant effects on the conservation objectives of the SPA relating to these SCIs. Water quality can also be impacted by a pollution event with diving birds in particular considered vulnerable to a reduction in water quality from a pollution event. The construction and operational activities will result in an increase in vessels and therefore a potential risk of accidental spills however an incidence of pollution whether from an accidental occurrence or operational activities is not considered likely considering the legal obligations to comply with MARPOL 73/78 (see section 5.5.1.2 for further discussion on MARPOL) with the increased risk of a pollution event occurring due to these activities considered minimal and not to be over and above existing background risk. All vessels used as required by law, will be MARPOL Compliant and fully certified by the Marine Survey Office. Therefore, it is considered unlikely that there would be any occurrence of a pollution event either accidental or otherwise that could directly or indirectly cause a significant effect to a Natura 2000 site.	**Out**
	Cormorant (*Phalacrocorax carbo*) [A017]		✓	✓	✓		✓	✓	✓		✓		**Out**
	Shag (*Phalacrocorax aristotelis*) [A018]		✓	✓	✓		✓	✓	✓		✓		**Out**

SPA & distance from Proposed Development	SCI	Conservation Objectives, Attributes and Targets	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	AA Screening Assessment for Likely Significant Effects (LSE)	Screened In/Out
	Common Scoter (*Melanitta nigra*) [A065] *		✓	✓	✓		✓	✓	✓		✓	The Proposed Development has been designed to incorporate a pollution separation drainage system using interceptors (see Chapter 6: Project Description of Volume 2 of the EIAR) which will separate out oils to prevent them discharging to the marine environment during operation of the Proposed Development therefore a pollution incidence is considered unlikely during operation. Due to the requirement to comply with the MARPOL Convention and associated National Law and the pollution control measures built into the design of the project **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Visual disturbance** There is the potential for disturbance to roosting birds arising from visual disturbance from workers, plant and machinery on site. In addition, lighting of the works area during hours of darkness may cause additional disturbance to roosting or feeding areas used by waders and waterbirds. However, the environs surrounding the Proposed Development Boundary present numerous alternative roosting locations for birds during the construction phase of the Proposed Development, and numbers of waders and waterbirds in the vicinity of the Proposed Development Boundary during baseline surveys were low. As the Proposed Development Boundary adjoins the existing Rosslare Europort and encompasses the existing small boat harbour, it is considered that the local birdlife will be used to regular noise, lights and vehicular activity associated with a busy 24-hour port as well as fishing and leisure activities. Therefore, due to the small numbers of birds observed within the Proposed Development Boundary and the existing activity adjacent to the Proposed development, to which birds could be expected to be habituated **there will be no likely significant effects on the conservation objectives of the cSPA relating to these SCI and it can be screened out at the screening stage.** **Reduction in prey availability (in-direct effect)** Reduction in prey availability may occur due to habitat loss and reduction in water quality. There is the potential for temporary seabed disturbance resulting from dredging/reclamation activities which may release sediment into the water column, potentially causing fish and mobile invertebrates to temporarily avoid the area. Most seabird species have a variety of target prey species and have large foraging ranges, meaning that they are able to forage for alternative prey species or to forage in other areas if prey becomes temporarily unavailable due to increased suspended sediments resulting from dredging/reclamation activities (Woodward et al, 2019). With respect to habitat loss only a very small percentage of the cSPA will be subject to permanent habitat loss (less than 0.01%) and is not likely to impact prey species for these SCIs. In addition, Chapter 11: Benthic Ecology describes the benthic environment and the community complexes found within the Proposed Development Boundary which are common in Ireland and homogenous with the surrounding area. Therefore, there is not likely to be any impact on prey species. There is not likely to be any impact to prey species for these SCIs therefore **there will be no likely significant effects on the conservation objectives of the cSPA relating to these SCI and it can be screened out at the screening stage.**	**Out**

SPA & distance from Proposed Development	SCI	Conservation Objectives, Attributes and Targets	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	AA Screening Assessment for Likely Significant Effects (LSE)	Screened In/Out
	Mediterranean Gull (*Larus melanocephalus*) [A176]		✓				✓	✓	✓		✓	**Habitat Loss (temporary and permanent)** The Proposed Development Boundary overlaps with the Seas Off Wexford cSPA however the area of permanent habitat loss represents 24.5 ha which is less than 0.01% of the cSPA which is deemed to be negligible. The total area of permanent and temporary habitat loss is 79.4ha which is 0.026% of the cSPA. The loss of potential foraging habitat for waterbirds that would occur as a result of the reclamation of the existing small boat harbour, is considered to be of local significance, with small numbers of foraging birds permanently displaced. Over time the proposed rock armouring around the reclaimed area will provide similar intertidal foraging habitats, both in terms of function and area. The loss of open water will be permanent but only forms a very small percentage of the cSPA (see above). The species were generally observed in low numbers within the Ornithological Study Area during Project Specific Surveys undertaken between April 2022 and September 2024 (some surveys were seasonal) (refer Table 5.11). Benthic grab sampling shows also that the area is not particularly biologically diverse with substrate and benthic communities typical of those found in the surrounding area (refer to Chapter 11: Benthic Ecology, section 4.5.2 of this report). There will be no barrier to the cSPA or other areas of ecological importance caused by the loss of habitat. Therefore, due to the very small area concerned and the numbers of birds using the area **there will be no likely significant effects on the conservation objectives of the cSPA relating to these SCI and it can be screened out at the screening stage.** **Displacement and/or disturbance from in-air noise** These SCI are considered less sensitive to disturbance. In addition, the footprint of the Proposed Development is very small compared to the overall marine environment and any SCIs avoiding the area during construction are not likely to affect the conservation objectives of the SPA. Therefore, due to the lower sensitivity of these SCI to displacement and/or disturbance from in-air noise **there will be no likely significant effects on the conservation objectives of the cSPA relating to these SCI and it can be screened out at the screening stage.** **Reduction in water quality** Dredging Dispersion Modelling was undertaken as described in Chapter 8: Coastal Processes and its accompanying Technical Appendix. An overview is given in section 4.3.1.1 of this report. The modelling showed that increased SSC will be largely confined to Rosslare Harbour with only minor (3mg/l) increases within the cSPA in the immediate vicinity of the Proposed Development Boundary. The outcome of this modelling therefore determined that there would be no impact to water quality as a result of increased SSC that would cause a likely significant effect on the conservation objectives of the SPA relating to these SCIs. Water quality can also be impacted by a pollution event. The construction and operational activities will result in an increase in vessels and therefore a potential risk of accidental spills however an incidence of pollution whether from an accidental occurrence or operational activities is not considered likely considering the legal obligations to comply with MARPOL 73/78 (see section 5.5.1.2 for further discussion on MARPOL) with the increased risk of a pollution event occurring due to these activities considered minimal and not to be over and above existing background risk. All vessels used as required by law, will be MARPOL Compliant and fully certified by the Marine Survey Office. Therefore, it is considered unlikely that there would be	**Out**
	Black-headed Gull (*Chroicocephalus ridibundus*) [A179]		✓				✓	✓	✓		✓		**Out**
	Lesser Black-backed Gull (*Larus fuscus*) [A183]		✓				✓	✓	✓		✓		**Out**
	Herring Gull (*Larus argentatus*) [A184]		✓				✓	✓	✓		✓		**Out**
	Kittiwake (*Rissa tridactyla*) [A188]		✓				✓	✓	✓		✓		**Out**
	Sandwich Tern (*Sterna sandvicensis*) [A191]		✓				✓	✓	✓		✓		**Out**
	Roseate Tern (*Sterna dougallii*) [A192]		✓				✓	✓	✓		✓		**Out**

SPA & distance from Proposed Development	SCI	Conservation Objectives, Attributes and Targets	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	AA Screening Assessment for Likely Significant Effects (LSE)	Screened In/Out
	Common Tern (*Sterna hirundo*) [A193]		✓				✓	✓	✓		✓	any occurrence of a pollution event either accidental or otherwise that could directly or indirectly cause a significant effect to a Natura 2000 site. The Proposed Development has been designed to incorporate a pollution separation drainage system using interceptors (see Chapter 6: Project Description) which will separate out oils to prevent them discharging to the marine environment during operation of the Proposed Development therefore a pollution incidence is considered unlikely during operation. Due to the requirement to comply with the MARPOL Convention and associated National Law and the pollution control measures built into the design of the project **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Visual disturbance** There is the potential for disturbance to roosting birds arising from visual disturbance from workers, plant and machinery on site. The SCI considered here are less sensitive to disturbance with a number of tern species observed within the busy environs of Rosslare Europort on the existing harbour wall during tern roost surveys. As the Proposed Development Boundary adjoins the existing Rosslare Europort and encompasses the existing small boat harbour, it is considered that the local birdlife will be used to regular noise, lights and vehicular activity associated with a busy 24-hour port as well as fishing and leisure activities. Therefore, due to the small numbers of birds observed within the Proposed Development Boundary and the existing activity adjacent to the Proposed development, to which birds could be expected to be habituated **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Reduction in prey availability (in-direct effect)** Reduction in prey availability may occur due to habitat loss and reduction in water quality. There is the potential for temporary seabed disturbance resulting from dredging/reclamation activities which may release sediment into the water column, potentially causing fish and mobile invertebrates to temporarily avoid the area. Most seabird species have a variety of target prey species and have large foraging ranges, meaning that they are able to forage for alternative prey species or to forage in other areas if prey becomes temporarily unavailable due to increased suspended sediments resulting from dredging/reclamation activities (Woodward *et al.*, 2019). With respect to habitat loss only a very small percentage of the cSPA will be subject to permanent habitat loss (less than 0.01%) and is not likely to impact prey species for these SCIs. In addition, Chapter 11: Benthic Ecology describes the benthic environment and the community complexes found within the Proposed Development Boundary which are common in Ireland and homogenous with the surrounding area. Therefore, there is not likely to be any impact on prey species. There is not likely to be any impact to prey species for these SCIs therefore **there will be no likely significant effects on the conservation objectives of the cSPA relating to these SCI and it can be screened out at the screening stage.**	**Out**
	Arctic Tern (*Sterna paradisaea*) [A194]		✓				✓	✓	✓		✓		**Out**
	Little Tern *(Sterna albifrons*) [A195]		✓				✓	✓	✓		✓		**Out**

SPA & distance from Proposed Development	SCI	Conservation Objectives, Attributes and Targets	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	AA Screening Assessment for Likely Significant Effects (LSE)	Screened In/Out
	Guillemot (*Uria aalge*) [A199]		✓	✓	✓		✓	✓	✓		✓	During project specific surveys Puffin was not recorded at all. These species were recorded infrequently in very small numbers as follows: Guillemot was recorded infrequently in the Ornithology Study Area in low numbers over the study period, with a peak of 15 birds in September 2022 against an estimated population of 13,504 birds within the SPA (NPWs 2024). Razorbill was recorded infrequently in the Ornithology Study Area in very low numbers over the study period, with a peak of two birds in August 2022. (NPWS 2024). **Habitat Loss (temporary and permanent)** The Proposed Development Boundary overlaps with the Seas Off Wexford cSPA however the area of permanent habitat loss represents 24.5 ha which is less than 0.01% of the cSPA which is deemed to be negligible. The total area of permanent and temporary habitat loss is 79.4ha which is 0.026% of the cSPA. The loss of open water will be permanent but only forms a very small percentage of the cSPA and recorded usage of this area by species of these species periodic and only involved none to very low numbers of birds of these species. Therefore, due to the very small area concerned and the low numbers of birds using the area **there will be no likely significant effects on the conservation objectives of the cSPA relating to these SCI and it can be screened out at the screening stage.** **Increased Suspended Sediment Concentrations** Dredging Dispersion Modelling was undertaken as described in Chapter 8: Coastal Processes and its accompanying Technical Appendix. An overview is given in section 4.3.1.1 of this report. The modelling shows very low levels (3mg/l) in the area of the cSPA immediately adjacent to the Proposed Development Boundary. The increase in SSC is not likely to impact the turbidity or quality of the water within the cSPA and therefore **there will be no likely significant effects on the conservation objectives of the cSPA relating to these SCI and it can be screened out at the screening stage.** **Mortality, injury, displacement and / or disturbance from underwater noise** While Red-throated Diver and Common Scoter are considered sensitive to disturbance diving species feed opportunistically wherever its prey species occur and are likely to stay under water for only short periods of time and as such are not considered susceptible to disturbance effects from elevated levels of underwater noise. Special Conservation Interests (SCIs) designated for SPAs whose predominant foraging method is shallow diving, dip diving or surface/skim feeding, are considered unlikely to be impacted by underwater noise due to the relatively short exposure time. These species are also likely to temporarily avoid the area due to sensitivity to disturbance from the construction activities. Due to the very low numbers of birds observed within the Proposed Development Boundary that are considered to be sensitive to underwater noise, the short period during which they could be exposed to elevated noise levels under water and the localised temporary displacement of these species due to construction activities **there will be no likely significant effects on the conservation objectives of the cSPA relating to these SCI and it can be screened out at the screening stage.**	**Out**
	Razorbill (*Alca torda*) [A200]		✓	✓	✓		✓	✓	✓		✓		**Out**
	Puffin (*Fratercula arctica*) [A204]		✓	✓	✓		✓	✓	✓		✓		**Out**

SPA & distance from Proposed Development	SCI	Conservation Objectives, Attributes and Targets	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	AA Screening Assessment for Likely Significant Effects (LSE)	Screened In/Out
												Displacement and/or disturbance from in-air noise These species have a moderate sensitivity to disturbance however considering the infrequently recorded very low numbers (none for Puffin) **there will be no likely significant effects on the conservation objectives of the cSPA relating to these SCI and it can be screened out at the screening stage.** **Reduction in water quality** See above for discussion relating to impacts to water quality from increased suspended sediment concentrations which determined that there would be no likely significant effects on the conservation objectives of the SPA relating to these SCIs. Water quality can also be impacted by a pollution event with diving birds in particular considered vulnerable to a reduction in water quality from a pollution event. However considering the very low numbers of these species recorded (none for Puffin) (see above) within the Ornithology Study Area, the requirement to comply with the MARPOL Convention and associated National Law (see section 5.5.1.2) and the pollution control measures built into the design of the project (see Chapter 6: Project Description) **there will be no likely significant effects on the conservation objectives of the cSPA relating to these SCI and it can be screened out at the screening stage.** **Visual disturbance** These species have a moderate sensitivity to disturbance however considering the infrequently recorded very low numbers (none for Puffin) **there will be no likely significant effects on the conservation objectives of the cSPA relating to these SCI and it can be screened out at the screening stage.** **Reduction in prey availability (in-direct effect)** Considering the infrequently recorded very low numbers (none for Puffin) **there will be no likely significant effects on the conservation objectives of the cSPA relating to these SCI and it can be screened out at the screening stage.**	
004019 The Raven SPA 6.5km	Red-throated Diver (*Gavia stellata*) [A001]	**Conservation Objective:** To maintain the favourable conservation condition for these wintering SCIs **Attributes and Targets:** Population trend with long term population trend st able or increasing		✓	✓		✓	✓	✓		✓	**Increased Suspended Sediment Concentrations** Dredging Dispersion Modelling was undertaken as described in Chapter 8: Coastal Processes and its accompanying Technical Appendix. An overview is given in section 4.3.1.1 of this report. The modelling shows that there will be no impact on The Raven SPA from increased SSC therefore **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Mortality, injury, displacement and / or disturbance from underwater noise** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. Red-throated Diver, Common Scoter and Cormorant are considered sensitive to disturbance including potentially from underwater noise. However, diving species feed opportunistically wherever its prey species occur and are likely to stay under water for	**Out**

SPA & distance from Proposed Development	SCI	Conservation Objectives, Attributes and Targets	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	AA Screening Assessment for Likely Significant Effects (LSE)	Screened In/Out
	Cormorant (*Phalacrocorax carbo*) [A017]	Distribution There should be no significant decrease in the numbers or range of areas used by waterbird species, otherthan that occurring from natural patterns of variation		✓	✓		✓	✓	✓		✓	only short periods of time and as such are not considered susceptible to disturbance effects from elevated levels of underwater noise. Special Conservation Interests (SCIs) designated for SPAs whose predominant foraging method is shallow diving, dip diving or surface/skim feeding, are considered unlikely to be impacted by underwater noise due to the relatively short exposure time. Being highly (Red-throated Diver, Common Scoter) and moderately (Cormorant) sensitive to disturbance these species are also likely to temporarily avoid the area due to sensitivity to disturbance from the construction activities. All three species were recorded in low to very low numbers within the Ornithology Study Area. Considering the low numbers recorded together with the short period during which they could be exposed to elevated noise levels under water and the localised temporary displacement of these species due to construction activities **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Displacement and/or disturbance from in-air noise** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. There is the potential for disturbance to birds arising from noise emissions from machinery on site if birds from this SPA visit the site. Red-throated Diver and Common Scoter are classified as having a high sensitivity to disturbance. Cormorant is classified as having a moderate sensitivity to disturbance. It should be noted that Common Scoter was not observed within the Proposed Development Boundary at all, only occurring in the wider Ornithology Study Area at distances of approximately 600m to 1km away from the Proposed Development Boundary. Red-throated Diver was only observed in low numbers (peak count of six birds in January 2023) throughout the Ornithology Study Area. Cormorant was observed in low numbers throughout the survey period. Therefore, due to low numbers of birds observed **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.**	**Out**
	Common Scoter (*Melanitta nigra*) [A065]			✓	✓		✓	✓	✓		✓	**Reduction in water quality** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development due to a reduction in water quality including from suspended SSC (see above). Water quality can also be impacted by a pollution event with diving birds in particular considered vulnerable to a reduction in water quality from a pollution event. However considering the low numbers of these species recorded (see above) within the Ornithology Study Area, the requirement to comply with the MARPOL Convention and associated National Law (see section 5.5.1.2) and the pollution control measures built into the design of the project (see Chapter 6: Project Description) **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Visual disturbance** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. There is the potential for disturbance to roosting birds from this SPA if they visit the area arising from visual disturbance from workers, plant and machinery on site. In addition, lighting of the works area during hours of darkness may cause additional disturbance to roosting or feeding areas used by waders and waterbirds. However, the environs surrounding the Proposed Development Boundary present numerous alternative roosting locations for birds during the construction phase of the Proposed	**Out**

SPA & distance from Proposed Development	SCI	Conservation Objectives, Attributes and Targets	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	AA Screening Assessment for Likely Significant Effects (LSE)	Screened In/Out
												Development, and numbers of waders and waterbirds in the vicinity of the Proposed Development Boundary during baseline surveys were low. As the Proposed Development Boundary adjoins the existing Rosslare Europort and encompasses the existing small boat harbour, it is considered that the local birdlife will be used to regular noise, lights and vehicular activity associated with a busy 24-hour port as well as fishing and leisure activities. Therefore, due to the small numbers of birds observed within the Proposed Development Boundary and the existing activity adjacent to the Proposed Development, to which birds could be expected to be habituated **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Reduction in prey availability (in-direct effect)** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. Reduction in prey availability may occur due to habitat loss and reduction in water quality. There is the potential for temporary seabed disturbance resulting from dredging/reclamation activities which may release sediment into the water column, potentially causing fish and mobile invertebrates to temporarily avoid the area. Most seabird species have a variety of target prey species and have large foraging ranges, meaning that they are able to forage for alternative prey species or to forage in other areas if prey becomes temporarily unavailable due to increased suspended sediments resulting from dredging/reclamation activities (Woodward *et al*, 2019). With respect to habitat loss only a very small percentage of the marine environment will be subject to permanent habitat loss (24.5ha) and is not likely to impact prey species for these SCIs. In addition, Chapter 11: Benthic Ecology describes the benthic environment and the community complexes found within the Proposed Development Boundary which are common in Ireland and homogenous with the surrounding area. Therefore, there is not likely to be any impact on prey species. There is not likely to be any impact to prey species for these SCIs therefore **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.**	
004076 Wexford Harbour and Slobs SPA 4.4km by land 8.7km by sea	Great Crested Grebe (Podiceps cristatus) [A005]	**Conservation Objectives:** To maintain the favourable conservation condition for all these species within the SPA **Attributes and Targets (common to all species):** Population trend long term stable or increasing		✓	✓		✓	✓	✓		✓	**Increased Suspended Sediment Concentrations** Dredging Dispersion Modelling was undertaken as described in Chapter 8: Coastal Processes and its accompanying Technical Appendix. An overview is given in section 4.3.1.1 of this report. The modelling shows that there will be no impact on Wexford Harbour and Slobs SPA from increased SSC therefore **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Mortality, injury, displacement and / or disturbance from underwater noise** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. Red-throated Diver, Common Scoter and Red-breasted Merganser are considered highly sensitive to disturbance, with Greta Crested Grebe, Cormorant and Scaup considered moderately sensitive to disturbance including potentially from underwater noise. However, diving species feed opportunistically wherever its prey species occur and are likely to stay under water for	**Out**

SPA & distance from Proposed Development	SCI	Conservation Objectives, Attributes and Targets	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	AA Screening Assessment for Likely Significant Effects (LSE)	Screened In/Out
	Cormorant (Phalacrocorax carbo) [A017]	Distribution There should be no significant decrease in the numbers or range of areas used by waterbird species, other than that occurring from natural patterns of variation		✓	✓		✓	✓	✓		✓	only short periods of time and as such are not considered susceptible to disturbance effects from elevated levels of underwater noise. Special Conservation Interests (SCIs) designated for SPAs whose predominant foraging method is shallow diving, dip diving or surface/skim feeding, are considered unlikely to be impacted by underwater noise due to the relatively short exposure time. Being highly and moderately sensitive to disturbance these species are also likely to temporarily avoid the Proposed Development due to sensitivity to disturbance from the construction activities. Scaup was not recorded at all within the Ornithology Study Area with the remaining five species recorded in low to very low numbers within the Ornithology Study Area. Considering the low numbers recorded together with the short period during which they could be exposed to elevated noise levels under water and the localised temporary displacement of these species due to construction activities **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Displacement and/or disturbance from in-air noise** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. There is the potential for disturbance to birds arising from noise emissions from machinery on site if birds from this SPA visit the site. Red-throated Diver, Red-breasted Merganser and Common Scoter are classified as having a high sensitivity to disturbance. Cormorant, Scaup and Gret Crested Grebe are classified as having a moderate sensitivity to disturbance. It should be noted that Common Scoter was not observed within the Proposed Development Boundary at all, only occurring in the wider Ornithology Study Area at distances of approximately 600m to 1km away from the Proposed Development Boundary. Red-throated Diver was only observed in low numbers (peak count of six birds in January 2023) throughout the Ornithology Study Area. Cormorant and Red-breasted Merganser were observed in low numbers throughout the survey period. Scaup was not recoded at all and Great Crested Grebe in very low numbers. Therefore, due to low numbers of birds observed **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Reduction in water quality** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development due to a reduction in water quality including from suspended SSC (see above). Water quality can also be impacted by a pollution event with diving birds in particular considered vulnerable to a reduction in water quality from a pollution event. However considering the low numbers of these species recorded (see above) within the Ornithology Study Area, the requirement to comply with the MARPOL Convention and associated National Law (see section 5.5.1.2) and the pollution control measures built into the design of the project (see Chapter 6: Project Description) **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Visual disturbance** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. There is the potential for disturbance to roosting birds from this SPA if they visit the area arising from visual disturbance from workers, plant and machinery on site. In addition, lighting of the works area during hours of darkness may cause additional disturbance	**Out**
	Scaup (Aythya marila) [A062]			✓	✓		✓	✓	✓		✓		**Out**
	Red-breasted Merganser (Mergus serrator) [A069]			✓	✓		✓	✓	✓		✓		**Out**

SPA & distance from Proposed Development	SCI	Conservation Objectives, Attributes and Targets	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	AA Screening Assessment for Likely Significant Effects (LSE)	Screened In/Out
												to roosting or feeding areas used by waders and waterbirds. However, the environs surrounding the Proposed Development Boundary present numerous alternative roosting locations for birds during the construction phase of the Proposed Development, and numbers of waders and waterbirds in the vicinity of the Proposed Development Boundary during baseline surveys were low. As the Proposed Development Boundary adjoins the existing Rosslare Europort and encompasses the existing small boat harbour, it is considered that the local birdlife will be used to regular noise, lights and vehicular activity associated with a busy 24-hour port as well as fishing and leisure activities. Therefore, due to the small numbers of birds observed within the Proposed Development Boundary and the existing activity adjacent to the Proposed Development, to which birds could be expected to be habituated **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Reduction in prey availability (in-direct effect)** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. Reduction in prey availability may occur due to habitat loss and reduction in water quality. There is the potential for temporary seabed disturbance resulting from dredging/reclamation activities which may release sediment into the water column, potentially causing fish and mobile invertebrates to temporarily avoid the area. Most seabird species have a variety of target prey species and have large foraging ranges, meaning that they are able to forage for alternative prey species or to forage in other areas if prey becomes temporarily unavailable due to increased suspended sediments resulting from dredging/reclamation activities (Woodward et al, 2019). With respect to habitat loss only a very small area of the marine environment will be subject to permanent habitat loss (24.5ha) and is not likely to impact prey species for these SCIs. In addition, Chapter 11: Benthic Ecology describes the benthic environment, and the community complexes found within the Proposed Development Boundary which are common in Ireland and homogenous with the surrounding area. Therefore, there is not likely to be any impact on prey species. There is not likely to be any impact to prey species for these SCIs therefore **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.**	
	Black-headed Gull (Chroicocephalus ridibundus) [A179]						✓		✓		✓	**Displacement and/or disturbance from in-air noise** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. These SCI are considered less sensitive to disturbance. In addition, the footprint of the Proposed Development is very small compared to the overall marine environment and any SCIs avoiding the area during construction are not likely to affect the conservation objectives of the SPA. Therefore, due to the lower sensitivity of these SCI to displacement and/or disturbance from in-air noise **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Visual disturbance** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. There is the potential for disturbance to roosting birds arising from visual disturbance from workers, plant and machinery on site. The SCI considered here are less sensitive to disturbance. As the Proposed Development Boundary adjoins the existing Rosslare	**Out**

SPA & distance from Proposed Development	SCI	Conservation Objectives, Attributes and Targets	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	AA Screening Assessment for Likely Significant Effects (LSE)	Screened In/Out
	Lesser Black-backed Gull (Larus fuscus) [A183]						✓		✓		✓	Europort and encompasses the existing small boat harbour, it is considered that the local birdlife will be used to regular noise, lights and vehicular activity associated with a busy 24-hour port as well as fishing and leisure activities. Therefore, due to the small numbers of birds observed within the Proposed Development Boundary and the existing activity adjacent to the Proposed development, to which birds could be expected to be habituated **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Reduction in prey availability (in-direct effect)** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. Reduction in prey availability may occur due to habitat loss and reduction in water quality. There is the potential for temporary seabed disturbance resulting from dredging/reclamation activities which may release sediment into the water column, potentially causing fish and mobile invertebrates to temporarily avoid the area. Most seabird species have a variety of target prey species and have large foraging ranges, meaning that they are able to forage for alternative prey species or to forage in other areas if prey becomes temporarily unavailable due to increased suspended sediments resulting from dredging/reclamation activities (Woodward et al, 2019). With respect to habitat loss only a very small area of the marine environment will be subject to permanent habitat loss (24.5ha) and is not likely to impact prey species for these SCIs. In addition, Chapter 11: Benthic Ecology describes the benthic environment and the community complexes found within the Proposed Development Boundary which are common in Ireland and homogenous with the surrounding area. Therefore, there is not likely to be any impact on prey species. There is not likely to be any impact to prey species for these SCIs therefore **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.**	**Out**
004009 Lady's Island Lake SPA 8.6km by sea 4.4km by land	Black-headed Gull (Chroicocephalus ridibundus) [A179]	**There are no specific conservation objectives set for this SPA.** **There is a general conservation objective as follows:** To maintain or restore the favourable conservation condition for these SCIs. The favourable conservation status of a species is achieved when: • population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as					✓		✓		✓	**Displacement and/or disturbance from in-air noise** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. These SCI are considered less sensitive to disturbance. In addition, the footprint of the Proposed Development is very small compared to the overall marine environment and any SCIs avoiding the area during construction are not likely to affect the conservation objectives of the SPA. Therefore, due to the lower sensitivity of these SCI to displacement and/or disturbance from in-air noise **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Visual disturbance** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. There is the potential for disturbance to roosting birds arising from visual disturbance from workers, plant and machinery on site. The SCI considered here are less sensitive to disturbance with a number of tern species observed within the busy environs of Rosslare Europort on the existing harbour wall during tern roost surveys. As the Proposed Development Boundary adjoins the existing Rosslare Europort and encompasses the existing small boat harbour, it is considered that the local birdlife will be used to regular noise, lights and vehicular activity associated with a busy 24-hour port as well as fishing and leisure activities.	**Out**
	Sandwich Tern (Sterna sandvicensis) [A191]						✓		✓		✓		**Out**
	Roseate Tern (Sterna dougallii) [A192]						✓		✓		✓		**Out**
	Common Tern (Sterna hirundo) [A193]						✓		✓		✓		**Out**

SPA & distance from Proposed Development	SCI	Conservation Objectives, Attributes and Targets	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	AA Screening Assessment for Likely Significant Effects (LSE)	Screened In/Out
	Arctic Tern (Sterna paradisaea) [A194]	a viable component of its natural habitats, and • the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and • there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.					✓		✓		✓	Therefore, due to the small numbers of birds observed within the Proposed Development Boundary and the existing activity adjacent to the Proposed development, to which birds could be expected to be habituated **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Reduction in prey availability (in-direct effect)** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. Reduction in prey availability may occur due to habitat loss and reduction in water quality. There is the potential for temporary seabed disturbance resulting from dredging/reclamation activities which may release sediment into the water column, potentially causing fish and mobile invertebrates to temporarily avoid the area. Most seabird species have a variety of target prey species and have large foraging ranges, meaning that they are able to forage for alternative prey species or to forage in other areas if prey becomes temporarily unavailable due to increased suspended sediments resulting from dredging/reclamation activities (Woodward et al, 2019). With respect to habitat loss only a very small area of the marine environment will be subject to permanent habitat loss (24.5ha) and is not likely to impact prey species for these SCIs. In addition, Chapter 11: Benthic Ecology describes the benthic environment and the community complexes found within the Proposed Development Boundary which are common in Ireland and homogenous with the surrounding area. Therefore, there is not likely to be any impact on prey species. There is not likely to be any impact to prey species for these SCIs therefore **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.**	**Out**
004002 Saltee Islands SPA 25.8km	Fulmar (Fulmarus glacialis) [A009]	To maintain the favourable conservation condition for these breeding SCIs. **Attributes and Targets:** Breeding population abundance: apparently occupied sites (AOSs), apparently occupied nests (AONs) or apparently occupied burrows (Gannet, Cormorant, Fulmar, Lesser Black-backed Gull, Herring Gull, Kittiwake, Puffin) Breeding population abunda nce: individual adult (Guillemot, Razorbill)					✓		✓		✓	**Displacement and/or disturbance from in-air noise** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. These SCI are considered less sensitive to disturbance. In addition, the footprint of the Proposed Development is very small compared to the overall marine environment and any SCIs avoiding the area during construction are not likely to affect the conservation objectives of the SPA. Therefore, due to the lower sensitivity of these SCI to displacement and/or disturbance from in-air noise **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Visual disturbance** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. There is the potential for disturbance to roosting birds arising from visual disturbance from workers, plant and machinery on site. The SCI considered here are less sensitive to disturbance. As the Proposed Development Boundary adjoins the existing Rosslare Europort and encompasses the existing small boat harbour, it is considered that the local birdlife will be used to regular noise, lights and vehicular activity associated with a busy 24-hour port as well as fishing and leisure activities.	**Out**
	Lesser Black-backed Gull (Larus fuscus) [A183]						✓		✓		✓		**Out**

SPA & distance from Proposed Development	SCI	Conservation Objectives, Attributes and Targets	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	AA Screening Assessment for Likely Significant Effects (LSE)	Screened In/Out
	Herring Gull (Larus argentatus) [A184]	Productivity rate Distribution: breeding colonies Prey biomass available Target for all the above attributes is: No significant decline Barriers to connectivity Disturbance at the breeding site Disturbance at marine areas immediately adjacent to the colony The target for all attributes is: No significant increase Occurrence of mammalian predators – absent or under control (Puffin only)					✓		✓		✓	Therefore, due to the small numbers of birds observed within the Proposed Development Boundary and the existing activity adjacent to the Proposed Development, to which birds could be expected to be habituated **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Reduction in prey availability (in-direct effect)** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. Reduction in prey availability may occur due to habitat loss and reduction in water quality. There is the potential for temporary seabed disturbance resulting from dredging/reclamation activities which may release sediment into the water column, potentially causing fish and mobile invertebrates to temporarily avoid the area. Most seabird species have a variety of target prey species and have large foraging ranges, meaning that they are able to forage for alternative prey species or to forage in other areas if prey becomes temporarily unavailable due to increased suspended sediments resulting from dredging/reclamation activities (Woodward et al, 2019). With respect to habitat loss only a very small percentage of the marine environment will be subject to permanent habitat loss (24.5ha) and is not likely to impact prey species for these SCIs. In addition, Chapter 11: Benthic Ecology describes the benthic environment and the community complexes found within the Proposed Development Boundary which are common in Ireland and homogenous with the surrounding area. Therefore, there is not likely to be any impact on prey species. There is not likely to be any impact to prey species for these SCIs **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.**	**Out**
	Kittiwake (Rissa tridactyla) [A188]						✓		✓		✓		**Out**
	Gannet (Morus bassanus) [A016]			✓	✓		✓	✓	✓		✓	Puffin was not recorded within the Ornithology Study Area at all. Guillemot was recorded infrequently in the Ornithology Study Area in low numbers over the study period, with a peak of 15 birds in September 2022 against an estimated population of 13,504 birds within the SPA (NPWS 2024). Razorbill was recorded infrequently in the Ornithology Study Area in very low numbers over the study period, with a peak of two birds in August 2022. Gannet and Cormorant were recorded in low numbers. **Increased Suspended Sediment Concentrations** Dredging Dispersion Modelling was undertaken as described in Chapter 8: Coastal Processes and its accompanying Technical Appendix. An overview is given in section 4.3.1.1 of this report. The modelling shows that this SPA lies outside the Zone of Impact of increased SSC. The increase in SSC is not likely to impact the turbidity or quality of the water within the SPA and therefore **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Mortality, injury, displacement and / or disturbance from underwater noise** None of the species is considered to be highly sensitive to disturbance. Cormorant, Guillemot and Razorbill are considered of moderate sensitivity and Gannet of low sensitivity. Diving species feed opportunistically wherever its prey species occur and are likely to stay under water for only short periods of time and as such are not considered susceptible to disturbance effects from elevated levels of underwater noise. Special Conservation Interests (SCIs) designated for SPAs whose predominant foraging method is shallow diving, dip diving or surface/skim feeding, are considered unlikely to be impacted by underwater	**Out**
	Cormorant (Phalacrocorax carbo) [A017]			✓	✓		✓	✓	✓		✓		**Out**
	Guillemot (Uria aalge) [A199]			✓	✓		✓	✓	✓		✓		**Out**
	Razorbill (Alca torda) [A200]			✓	✓		✓	✓	✓		✓		**Out**
	Puffin (Fratercula arctica) [A204]			✓	✓		✓	✓	✓		✓		**Out**

SPA & distance from Proposed Development	SCI	Conservation Objectives, Attributes and Targets	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	AA Screening Assessment for Likely Significant Effects (LSE)	Screened In/Out
												noise due to the relatively short exposure time. Moderately sensitive species are also likely to temporarily avoid the Proposed Development due to noise from construction activities. Due to the very low numbers of birds observed within the Proposed Development Boundary, the short period during which they could be exposed to elevated noise levels under water and the localised temporary displacement of species moderately sensitive to disturbance due to construction activities **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Displacement and/or disturbance from in-air noise** These species have a moderate to low sensitivity to disturbance however considering the infrequently recorded very low numbers (none for Puffin) **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Reduction in water quality** See above for discussion relating to impacts to water quality from increased suspended sediment concentrations which determined that there would be no likely significant effects on the conservation objectives of the SPA relating to these SCIs. Water quality can also be impacted by a pollution event with diving birds in particular considered vulnerable to a reduction in water quality from a pollution event. However considering the very low numbers of these species recorded (none for Puffin) (see above) within the Ornithology Study Area, the requirement to comply with the MARPOL Convention and associated National Law (see section 5.5.1.2) and the pollution control measures built into the design of the project (see Chapter 6: Project Description) **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Visual disturbance** These species have a moderate to low sensitivity to disturbance however considering the infrequently very low and low numbers recorded during Project Specific Surveys (none for Puffin) **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Reduction in prey availability (in-direct effect)** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. Reduction in prey availability may occur due to habitat loss and reduction in water quality. There is the potential for temporary seabed disturbance resulting from dredging/reclamation activities which may release sediment into the water column, potentially causing fish and mobile invertebrates to temporarily avoid the area. Most seabird species have a variety of target prey species and have large foraging ranges, meaning that they are able to forage for alternative prey species or to forage in other areas if prey becomes temporarily unavailable due to increased suspended sediments resulting from dredging/reclamation activities (Woodward et al, 2019). With respect to habitat loss, only a very small percentage of the marine environment will be subject to permanent habitat loss (24.5ha) and is not likely to impact prey species for these SCIs. In addition, Chapter 11: Benthic Ecology describes the benthic environment and the community complexes found within the Proposed Development Boundary which are common in Ireland and homogenous with the surrounding area. Therefore, there is not likely to be any impact on prey species.	

SPA & distance from Proposed Development	SCI	Conservation Objectives, Attributes and Targets	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	AA Screening Assessment for Likely Significant Effects (LSE)	Screened In/Out
												Considering the infrequently very low and low numbers of these species recorded (none for Puffin) during the Project Specific Site Surveys **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.**	
004127 Wicklow Head SPA 80.6km	All SPAs Kittiwake (Rissa tridactyla) [A188] Lambay Islands SPA Fulmar (Fulmarus glacialis) [A009]	**Conservation Objective:** To restore the favourable conservation condition for these breeding SCIs within the relevant SPAs Attributes and Targets: **(Kittiwake - Wicklow Head SPA, Howth Head SPA, Irelands Eye SPA, Lambay Island SPA)** **(Fulmar – Lambay Island SPA)** Breeding population size with target of long-term SPA population trend is stable or increasing					✓		✓		✓	Fulmar (one bird) was recorded in May 2022. Kittiwake were recorded in most months with a peak count of 31 birds in May 2022. **Displacement and/or disturbance from in-air noise** There will be no impact on birds within the SPAs due to the distance between the SPAs and the Proposed Development. These SCI are considered less sensitive to disturbance. In addition, the footprint of the Proposed Development is very small compared to the overall marine environment and any SCIs avoiding the area during construction are not likely to affect the conservation objectives of the SPAs. Therefore, due to the lower sensitivity of these SCI to displacement and/or disturbance from in-air noise **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Visual disturbance** There will be no impact on birds within the SPAs due to the distance between the SPAs and the Proposed Development. There is the potential for disturbance to roosting birds arising from visual disturbance from workers, plant and machinery on site. The SCI considered here are less sensitive to disturbance. As the Proposed Development Boundary adjoins the existing	**Out**
004192 Helvick Head to Ballyquin SPA 91.9km							✓		✓		✓		**Out**
004113 Howth Head Coast SPA 126km							✓		✓		✓		**Out**
004117 Irelands Eye SPA 130km							✓		✓		✓		**Out**
004069 Lambay Islands SPA 139km							✓		✓		✓		**Out**

SPA & distance from Proposed Development	SCI	Conservation Objectives, Attributes and Targets	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	AA Screening Assessment for Likely Significant Effects (LSE)	Screened In/Out
cSPA North-West Irish Sea 125km		Productivity rate sufficient to maintain a stable or increasing population Distribution: sufficient availability of suitable nesting sites throughout the SPA to maintain a stable or increasing population Forage spatial distribution, extent, abundance and availability with sufficient number of locations, area of suitable habitat and available forage biomass to support the population target Disturbance levels that do not significantly impact on birds at the breeding site Disturbance at areas ecologically connected to the colony at levels that do not significantly impact on breeding population Barriers to connectivity not significantly impacting the population's access to the SPA or other ecologically important sites outside the SPA There are no specific conservation objectives set for **Helvick Head to Ballyquin SPA** **North-west Irish Sea SPA** Population size is stable or increasing long term Spatial distribution with sufficient number of locations, area, and availability (in terms of					✓		✓		✓	Rosslare Europort and encompasses the existing small boat harbour, it is considered that the local birdlife will be used to regular noise, lights and vehicular activity associated with a busy 24-hour port as well as fishing and leisure activities. Therefore due to the low sensitivity of these birds to disturbance and/or the low number of birds observed within the Proposed Development Boundary and the existing activity adjacent to the Proposed Development, to which birds could be expected to be habituated **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.** **Reduction in prey availability (in-direct effect)** There will be no impact on birds within the SPAs due to the distance between the SPAss and the Proposed Development. Reduction in prey availability may occur due to habitat loss and reduction in water quality. There is the potential for temporary seabed disturbance resulting from dredging/reclamation activities which may release sediment into the water column, potentially causing fish and mobile invertebrates to temporarily avoid the area. Most seabird species have a variety of target prey species and have large foraging ranges, meaning that they are able to forage for alternative prey species or to forage in other areas if prey becomes temporarily unavailable due to increased suspended sediments resulting from dredging/reclamation activities (Woodward et al, 2019). With respect to habitat loss only a very small percentage of the marine environment will be subject to permanent habitat loss (24.5ha) and is not likely to impact prey species for these SCIs. In addition, Chapter 11: Benthic Ecology describes the benthic environment, and the community complexes found within the Proposed Development Boundary which are common in Ireland and homogenous with the surrounding area. Therefore, there is not likely to be any impact on prey species. There is not likely to be any impact to prey species for these SCIs therefore **there will be no likely significant effects on the conservation objectives of the SPA relating to these SCI and it can be screened out at the screening stage.**	**Out**

SPA & distance from Proposed Development	SCI	Conservation Objectives, Attributes and Targets	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	AA Screening Assessment for Likely Significant Effects (LSE)	Screened In/Out
		timing and intensity of use) of suitable habitat to support the population Forage spatial distribution, extent, abundance and availability with sufficient number of locations, area of suitable habitat and available forage biomass to support the population target Disturbance across the site with the intensity, frequency, timing and duration of disturbance occurring at levels that do not significantly impact the achievement of targets for population size and spatial distribution Barriers to connectivity with the number, location, shape and area of barriers not significantly impacting the site population's access to the SPA or other ecologically important sites outside the SPA											

SPA & distance from Proposed Development	SCI	Conservation Objectives, Attributes and Targets	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-direct)	AA Screening Assessment for Likely Significant Effects (LSE)	Screened In/Out
004023 Ballymacoda Bay SPA 118km	Lesser Black-backed Gull (Larus fuscus) [A183]	**Conservation Objective:** To maintain the favourable conservation condition of the species within the SPA **Attributes and targets:** Population trend stable or increasing long term Distribution with no significant decrease in the range, timing or intensity of use of areas by lesser black-backed gull, other than that occurring from natural patterns of variation					✓		✓		✓	Lesser Black-backed Gull was observed in very low numbers with a peak count of 4 bird in August and September 2022. **Displacement and/or disturbance from in-air noise** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. This SCI is considered less sensitive to disturbance. In addition, the footprint of the Proposed Development is very small compared to the overall marine environment and any SCI avoiding the area during construction are not likely to affect the conservation objectives of the SPA. Therefore, due to the lower sensitivity of the SCI to displacement and/or disturbance from in-air noise **there will be no likely significant effects on the conservation objectives of the SPA relating to this SCI and it can be screened out at the screening stage.** **Visual disturbance** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. There is the potential for disturbance to roosting birds arising from visual disturbance from workers, plant and machinery on site. The SCI is considered less sensitive to disturbance. As the Proposed Development Boundary adjoins the existing Rosslare Europort and encompasses the existing small boat harbour, it is considered that the local birdlife will be used to regular noise, lights and vehicular activity associated with a busy 24-hour port as well as fishing and leisure activities. Therefore, due to the small numbers of birds observed within the Proposed Development Boundary and the existing activity adjacent to the Proposed Development, to which birds could be expected to be habituated **there will be no likely significant effects on the conservation objectives of the SPA relating to this SCI and it can be screened out at the screening stage.** **Reduction in prey availability (in-direct effect)** There will be no impact on birds within the SPA due to the distance between the SPA and the Proposed Development. Reduction in prey availability may occur due to habitat loss and reduction in water quality. There is the potential for temporary seabed disturbance resulting from dredging/reclamation activities which may release sediment into the water column, potentially causing fish and mobile invertebrates to temporarily avoid the area. Most seabird species have a variety of target prey species and have large foraging ranges, meaning that they are able to forage for alternative prey species or to forage in other areas if prey becomes temporarily unavailable due to increased suspended sediments resulting from dredging/reclamation activities (Woodward et al, 2019). With respect to habitat loss only a very small percentage of the marine environment will be subject to permanent habitat loss (24.5ha) and is not likely to impact prey species for this SCI. In addition, Chapter 11: Benthic Ecology describes the benthic environment, and the community complexes found within the Proposed Development Boundary which are common in Ireland and homogenous with the surrounding area. Therefore, there is not likely to be any impact on prey species. There is not likely to be any impact to prey species for this SCI **therefore there will be no likely significant effects on the conservation objectives of the SPA relating to this SCI and it can be screened out at the screening stage.**	

Table 5.16: Screening for Likely Significant effects for SACs and their QIs for which S-P-R Connectivity has been identified

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
002269 Carnsore Point SAC 1.4km	Mudflats and sandflats not covered by seawater at low tide [1140]	**SSCO:** To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide. **Attributes and Targets:** Habitat area - The permanent habitat area is stable or increasing, subject to natural processes. Community distribution - The following community complex should be conserved in a natural condition: Intertidal sand dominated by polychaetes and crustacea community complex		✓				✓				The Proposed Development Boundary does not overlap with Carnsore Point SAC and therefore there will no habitat loss for the QIs: Mudflats and sandflats not covered by seawater at low tide; and Reefs. However, the SPR identification exercise identified possible SPR connectivity between the QI and the impact pathways of Increased Suspended Sediment Concentrations and Reduction in Water Quality which are examined below. **Increased Suspended Sediment Concentrations** Dredging Dispersion Modelling was undertaken as described in Chapter 8: Coastal Processes and its accompanying Technical Appendix. An overview is given in section 4.3.1.1 of this report. The modelling shows that the largest increase in SSC will be mostly contained within the Rosslare Harbour area itself with the highest SSC occurring at the weir box at the edge of the reclamation area within the Proposed Development Boundary with levels predicted to decrease substantially quite quickly away from Rosslare Harbour (refer Figure 4.3). The modelling also shows that the sediment can be expected to travel 2.5km to the southeast along the coast towards Carnsore Point and will partially overlap with the Carnsore Point SAC (Figure 5.3). The highest SSC level predicted to occur in an SAC (9.96 mg/L) are predicted to occur in the northwest of Carnsore Point SAC. Note the level is below the MarESA pressure benchmark for SSC for benthic habitats and species and classified as clear under turbidity/suspended solids measurements i.e., under 10mg/l SSC (UK TAG (2014)). Devlin et al. (2008) suggest that coastal waters are typically 3-24.1 mg/l. Bed thickness changes within the SAC are predicted to be as follows: • Stage 1: maximum predicted bed thickness change is 0.008cm (0.08mm) in the northwest of Carnsore Point SAC. • Stage 2: maximum predicted bed thickness change is 0.03cm (0.3mm) in the northwest of Carnsore Point SAC. • Stage 3: maximum predicted bed thickness change of 0.04cm (0.4mm) in the northwest of Carnsore Point SAC. The increase in SSC is not likely to impact the turbidity or quality of the water within the SAC and therefore **there will be no likely significant effects on the conservation objectives of the SAC relating to these QIs and it can be screened out at the screening stage.** **Reduction in water quality** See above for discussion relating to impacts to water quality from increased suspended sediment concentrations which determined that there would be no likely significant effects on the conservation objectives of the SAC relating to these QIs. Water quality can also be impacted by a pollution event. The construction and operational activities will result in an increase in vessels and therefore a potential risk of accidental spills however an incidence of pollution whether from an accidental occurrence or operational activities is not considered likely considering the legal obligations to comply with MARPOL 73/78 (see section 5.5.2.1 for further discussion on MARPOL) with the increased risk of a pollution event occurring due to these activities considered minimal	**Out**
	Reefs [1170]	**SSCO:** To maintain the favourable conservation condition of Reefs. **Attributes and Targets:** Habitat Disruption - The distribution of reefs should remain stable, subject to natural processes. See map 3 for mapped distribution Habitat area -The permanent habitat area is		✓				✓					

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
		stable, subject to natural processes. Community structure - The following reef community complexes should be maintained in a natural condition: Sheltered to moderately exposed intertidal reef community complex; and Exposed subtidal reef dominated by a faunal community complex. Community extent - The extent of Laminaria dominated community complex should be conserved, subject to natural processes. Biological composition - The biology of the Laminaria dominated community complex should be conserved, subject to natural processes										and not to be over and above existing background risk. All vessels used as required by law, will be MARPOL compliant and fully certified by the Marine Survey Office. Therefore, it is considered unlikely that there would be any occurrence of a pollution event either accidental or otherwise that could directly or indirectly cause a significant effect to Carnsore Point SAC. The Proposed Development has been designed to incorporate a pollution separation drainage system using interceptors (see Chapter 6: Project Description) which will separate out oils to prevent them discharging to the marine environment during operation of the Proposed Development therefore a pollution incidence is considered not likely during operation. Due to the requirement to comply with the MARPOL Convention and associated National Law and the pollution control measures built into the design of the project **there will be no likely significant effects on the conservation objectives of the SAC relating to these QIs and it can be screened out at the screening stage.**	
	Harbour porpoise (*Phocoena phocoena) [1351]*	**SSCO:** To maintain favourable condition of Harbour Porpoise. **Attributes and Targets:** Access to suitable habitat and states that the species range within the site should not be restricted by artificial barriers to site use. Disturbance and states that human activities should			✓	✓		✓			✓	Considering the characteristics of the Proposed Development which is positioned at a headland without obstructing migratory routes and in an already busy port, it is unlikely to interfere with sensitive habitats, such as breeding or calving grounds. Harbour Porpoise may utilise sheltered waters near port structures, but they typically do not rely on ports for key life stages like breeding or calving. However, the SPR identification exercise identified possible SPR connectivity between the QI and the following impact pathways which are assessed below: • Mortality, injury, displacement and/or disturbance from underwater noise • Mortality or injury from vessel collision • Reduction in Water Quality which are examined below • Reduction in prey availability **Mortality, injury, displacement and / or disturbance from underwater noise**	**In**

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
		occur at levels that do not adversely affect the Harbour Porpoise community at the site										Noise modelling for the construction activities (piling, dredging and blasting) was undertaken to determine the zone of impact of the underwater noise produced by the different construction methods for the different categories of marine mammals (refer section 4.6.3 for further information). The noise modelling shows that Harbour Porpoise may be impacted over the following distances: • Piling PTS (up to 110 m), TTS (up to 2.6km), Displacement (up to 4.6km) • Dredging PTS (threshold not exceeded), TTS (up to 410 m), Displacement (up to 1.3km) • Blasting PTS (up to 1,630 m), TTS (up to 3,000 m) The underwater noise modelling predicts the following: • Piling: TTS (up to 2.6km) and displacement (up to 4.6km) overlap with Carnsore Point SAC for the QI Harbour Porpoise • Dredging: Distances do not overlap with Carnsore Point SAC for the QI Harbour Porpoise • Blasting: Both PTS and TTS overlap with Carnsore Point SAC for the QI Harbour Porpoise Considering the distance between Carnsore Point and the predicted impact distance of the construction activities on Harbour Porpoise **significant effects on Harbour Porpoise within Carnsore Point SAC cannot be excluded at the Screening Stage and must proceed to Stage 2 Appropriate Assessment** **Mortality or injury from vessel collision** Observations during marine mammal surveys recorded Harbour Porpoise throughout the year. The key factors contributing to collision between marine mammals and vessels are the presence of both in the same area and vessel speed (see Schoeman et al., 2020 for review). Injuries to marine mammals from vessel strikes are species-dependent but generally are more severe at higher impact speeds (Wang *et al.*, 2007). Cetaceans and pinnipeds in the area are exposed to vessels of all sizes on a regular basis within the busy Rosslare Port environment. Vessel activity included as part of construction and operational phases of the Proposed Development includes barges, TSHD and other ORE component delivery vessels, all of which will be slow moving within the port limits with the risk of mortality or injury considered to be low. The number of vessel movements for the proposed small boat harbour is estimated to remain consistent with those that use the existing small boat harbour. **Therefore, there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Reduction in water quality** Dredging Dispersion Modelling was undertaken as described in Chapter 8: Coastal Processes and its accompanying Technical Appendix. An overview is given in section 4.3.1.1 of this report. The modelling shows that the largest increase in SSC will be mostly contained within the Rosslare Harbour area itself with the highest SSC occurring at the weir box at the edge of the reclamation area within the Proposed Development Boundary (refer Figure 4.3). The modelling also shows that the sediment can be expected to travel 2.5km to the southeast along the coast towards Carnsore Point. Water quality can also be impacted by a pollution event. The construction and operational activities will result in an increase in vessels and therefore a potential risk of accidental spills however an incidence of pollution whether from an accidental occurrence or operational activities is not considered likely considering the legal obligations to comply with MARPOL 73/78 (see section 5.5.3.1 for further discussion on MARPOL) with the increased risk of a pollution event occurring due to these activities considered minimal and not to be over and above existing background risk. All vessels used as required by law, will be MARPOL compliant and fully	

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
												certified by the Marine Survey Office. Therefore, it is considered unlikely that there would be any occurrence of a pollution event either accidental or otherwise that could directly or indirectly cause a significant effect to Carnsore Point SAC. The Proposed Development has been designed to incorporate a pollution separation drainage system using interceptors (see Chapter 6: Project Description) which will separate out oils to prevent them discharging to the marine environment during operation of the Proposed Development therefore a pollution incidence is considered unlikely during operation. Due to the requirement to comply with the MARPOL Convention and associated National Law and the pollution control measures built into the design of the project together combined with the distance between the SAC and the Proposed Development **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Reduction in prey availability (in-direct effect)** The Proposed Development could cause indirect effects to marine mammals due to underwater noise and/or increased suspended sediment concentrations displacing the prey species of marine mammals, namely fish. As described in Table 5.4 the Zone of Impact is limited to very close to the reclamation and dredging areas and predicted dispersion model results that indicate the movement of sediment that travels approximately 2.5km southeast along the shore and westward by 1.5km. However, the predicted SSC values are minimal outside the harbour area therefore the potential effect on prey availability is very low. There will be no impact on prey availability within the SAC. In addition, cetaceans have a wide variety of prey species that vary geographically and seasonally, reflecting availability of food resources. There is not likely to be any impact to prey species for these QIs therefore **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.**	
002161 Long Bank SAC 1.5km	Sandbanks which are slightly covered by sea water all the time [1110]	**SSCO:** To maintain the favourable conservation condition of Sandbanks which are slightly covered by sea water all the time. **Attributes and Targets:** Habitat area - The permanent habitat area is stable or increasing, subject to natural processes. Habitat distribution - The distribution of sandbanks is stable or increasing, subject to natural processes.		✓				✓				The Proposed Development Boundary does not overlap with the Long Bank SAC and therefore there will no habitat loss for the QI Sandbanks which are slightly covered by sea water all the time. However, the SPR identification exercise identified possible SPR connectivity between the QI and the impact pathways of Increased Suspended Sediment Concentrations and Reduction in Water Quality which are examined below. **Increased Suspended Sediment Concentrations** Dredging Dispersion Modelling was undertaken as described in Chapter 8: Coastal Processes and its accompanying Technical Appendix. An overview is given in section 4.3.1.1 of this report. The modelling shows that the largest increase in SSC will be mostly contained within the Rosslare Harbour area itself with the highest SSC occurring at the weir box at the edge of the reclamation area within the Proposed Development Boundary with levels predicted to decrease substantially quite quickly away from Rosslare Harbour (refer Figure 4.3). The modelling also shows that the sediment can be expected to travel 2.5km to the southeast along the coast towards Carnsore Point and 1.5km to the west along the shore. Outside these areas the level is expected to be in the region of 3 mg/l. Devlin et al. (2008) suggest that coastal waters typically have suspended sediment levels of 3-24.1 mg/l. Therefore, concentration of suspended sediment within the Long Bank SAC is expected to be at the lower end of typical measurements for coastal water bodies and the water quality within the SAC is not expected to be affected by any increase in SSC. The modelling shows that there will be no significant increase in SSC within the Long Bank SAC. **Therefore, there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Reduction in water quality**	**Out**

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
		Community distribution - Conserve the following community type in a natural condition: Sand with Nephtys cirrosa and Bathyporeia elegans community complex.										See above for discussion relating to impacts to water quality from increased suspended sediment concentrations which determined that there would be no likely significant effects on the conservation objectives of the SAC relating to this QI. Water quality can also be impacted by a pollution event. The construction and operational activities will result in an increase in vessels and therefore a potential risk of accidental spills however an incidence of pollution whether from an accidental occurrence or operational activities is not considered likely considering the legal obligations to comply with MARPOL 73/78 (see section 5.5.2.1 for further discussion on MARPOL) with the increased risk of a pollution event occurring due to these activities considered minimal and not to be over and above existing background risk. All vessels used as required by law, will be MARPOL compliant and fully certified by the Marine Survey Office. Therefore, it is considered unlikely that there would be any occurrence of a pollution event either accidental or otherwise that could directly or indirectly cause a significant effect to Long Bank SAC. The Proposed Development has been designed to incorporate a pollution separation drainage system using interceptors (see Chapter 6: Project Description) which will separate out oils to prevent them discharging to the marine environment during operation of the Proposed Development therefore a pollution incidence is considered unlikely during operation. Due to the requirement to comply with the MARPOL Convention and associated National Law and the pollution control measures built into the design of the project **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.**	
002953 Blackwater Bank SAC 4.9km	Harbour porpoise (*Phocoena phocoena) [1351]*	**SSCO:** To maintain favourable condition of Harbour Porpoise. **Attributes and Targets:** Access to suitable habitat with the target that the species range within the site should not be restricted by artificial barriers to site use. Disturbance with the target that human activities should occur at levels that do not adversely affect the Harbour Porpoise community at the site			✓	✓		✓			✓	The Proposed Development Boundary does not overlap with the Blackwater Bank SAC. Considering the characteristics of the Proposed Development which is positioned at a headland without obstructing migratory routes and in an already busy port, it is unlikely to interfere with sensitive habitats, such as breeding or calving grounds. Porpoises may utilise sheltered waters near port structures, but they typically do not rely on ports for key life stages like breeding or calving. There will be no barriers created that would restrict the movement of the QI within the SAC. The SPR identification exercise identified possible SPR connectivity between the QI and the following impact pathways which are assessed below: • Mortality, injury, displacement and/or disturbance from underwater noise • Mortality or injury from vessel collision • Reduction in Water Quality which are examined below. • Reduction in prey availability **Mortality, injury, displacement and / or disturbance from underwater noise** Noise modelling for the construction activities (piling, dredging and blasting) was undertaken to determine the zone of impact of the underwater noise produced by the different construction methods for the different categories of marine mammals (refer section 4.6.3 and 5.2.1.4 for further information). The noise modelling shows that Harbour Porpoise may be impacted over the following distances: • Piling PTS (up to 110 m), TTS (up to 2.6km), Displacement (up to 4.6km) • Dredging PTS (threshold not exceeded), TTS (up to 410 m), Displacement (up to 1.3km) • Blasting PTS (up to 1,630 m), TTS (up to 3,000 m) The distance of 3,000m for TTS for blasting is an average figure with the estimated distances for TTS falling between 900 m to 5km.	**In**

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
												The underwater noise modelling predicts the following: • Piling: Distances do not overlap with the Blackwater Bank SAC for the QI harbour Porpoise • Dredging: Distances do not overlap with Blackwater Bank SAC for the QI Harbour Porpoise • Blasting: The maximum estimated distance for TTS overlaps with the southernmost point of the Blackwater Bank SAC for the QI Harbour Porpoise Considering the distance between Blackwater Bank SAC and the predicted impact distance of the construction activities on Harbour Porpoise **significant effects on Harbour Porpoise within Blackwater Bank SAC cannot be excluded at the Screening Stage and must proceed to Stage 2 Appropriate Assessment.** **Mortality or injury from vessel collision** Observations during marine mammal surveys recorded Harbour Porpoise throughout the year. The key factors contributing to collision between marine mammals and vessels are the presence of both in the same area and vessel speed (see Schoeman et al., 2020 for review). Injuries to marine mammals from vessel strikes are species-dependent but generally are more severe at higher impact speeds (Wang et al., 2007). Cetaceans and pinnipeds in the area are exposed to vessels of all sizes on a regular basis within the busy Rosslare Port environment. Vessel activity included as part of construction and operational phases of the Proposed Development includes barges, TSHD and other ORE component delivery vessels, all of which will be slow moving within the port limits with the risk of mortality or injury considered to be low. The number of vessel movements for the proposed small boat harbour is estimated to remain consistent with those that use the existing small boat harbour. **Therefore**, **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Reduction in water quality** Dredging Dispersion Modelling was undertaken as described in Chapter 8: Coastal Processes and its accompanying Technical Appendix. An overview is given in section 4.3.1.1 of this report. The modelling shows that the largest increase in SSC will be mostly contained within the Rosslare Harbour area itself with the highest SSC occurring at the weir box at the edge of the reclamation area within the Proposed Development Boundary (refer Figure 4.3). The modelling also shows that the sediment can be expected to travel 2.5km to the southeast along the coast towards Carnsore Point and 1.5km to the west along the shore. Water quality can also be impacted by a pollution event. The construction and operational activities will result in an increase in vessels and therefore a potential risk of accidental spills however an incidence of pollution whether from an accidental occurrence or operational activities is not considered likely considering the legal obligations to comply with MARPOL 73/78 (see section 5.5.3.1 for further discussion on MARPOL) with the increased risk of a pollution event occurring due to these activities considered minimal and not to be over and above existing background risk. All vessels used as required by law, will be MARPOL compliant and fully certified by the Marine Survey Office. Therefore, it is considered unlikely that there would be any occurrence of a pollution event either accidental or otherwise that could directly or indirectly cause a significant effect to Blackwater Bank SAC. The Proposed Development has been designed to incorporate a pollution separation drainage system using interceptors (see Chapter 6: Project Description) which will separate out oils to prevent them discharging to the marine environment during operation of the Proposed Development therefore a pollution incidence is considered unlikely during operation.	

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
												Due to the requirement to comply with the MARPOL Convention and associated National Law and the pollution control measures built into the design of the project together combined with the distance between the SAC and the Proposed Development **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Reduction in prey availability (in-direct effect)** The Proposed Development could cause indirect effects to marine mammals due to underwater noise and/or increased suspended sediment concentrations displacing the prey species of marine mammals, namely fish. As described in Table 5.4 the Zone of Impact is limited to very close to the reclamation and dredging areas and predicted dispersion model results that indicate the movement of sediment that travels approximately 2.5km southeast along the shore and westward by 1.5km. However, the predicted SSC values are minimal outside the harbour area therefore the potential effect on prey availability is very low. There will be no impact on prey availability within the SAC. In addition, cetaceans and pinnipeds, have a wide variety of prey species that vary geographically and seasonally, reflecting availability of food resources. There is not likely to be any impact to prey species for this QIs therefore **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.**	
000781 Slaney River Valley SAC 6.6km	*Alosa fallax* (Twaite Shad) [1103]	**SSCO:** To restore the favourable conservation condition of Twaite shad. **Attributes and Targets:** Distribution: extent of anadromy - Greater than 75% of main stem length of rivers accessible from estuary. Population structure, age classes - More than one age class present. Extent and distribution of spawning habitat - No decline in extent and distribution of spawning habitats. Water quality-oxygen levels - No lower than 5mg/l.		✓	✓			✓				The Slaney River Valley SAC lies outside the Zone of Influence for any of the impacts from the Proposed Development identified for Twaite Shad. Taking account of the "Attributes and Targets" of the species distribution within the river system, the population structure within the SAC, water quality within the SAC, extent and spawning habitat quality within the SAC, together with the distance between the SAC and the Proposed Development, **the Proposed Development will not have any significant effects on the conservation objective for Twaite Shad within the Slaney River Valley SAC and it can be screened out at the screening stage**. Each impact identified is examined individually further below. **Increased Suspended Sediment Concentrations** Dredging Dispersion Modelling was undertaken as described in Chapter 8: Coastal Processes and its accompanying Technical Appendix. An overview is given in section 4.3.1.1 of this report. The modelling shows that the largest increase in SSC will be mostly contained within the Rosslare Harbour area itself with the highest SSC occurring at the weir box at the edge of the reclamation area within the Proposed Development Boundary with levels predicted to decrease substantially quite quickly away from Rosslare Harbour (refer Figure 4.3). The modelling also shows that the sediment can be expected to travel 2.5km to the southeast along the coast towards Carnsore Point and 1.5km to the west along the shore. Outside these areas the maximum level of increased suspended sediment concentrations is expected to be in the region of 3 mg/l with 1.4mg/L at Slaney River Valley SAC. This is below the threshold for a change in one rank on the WFD water clarity scale (e.g. from clear to intermediate). Devlin et al. (2008) suggest that coastal waters typically have suspended sediment levels of 3-24.1 mg/l and transitional waters (e.g. estuarine) 8.2-73.8 mg/l. Therefore, increased concentration of suspended sediment within the Slaney River Valley SAC as a result of the Proposed Development is expected to be below the typical measurements for coastal water or estuarine bodies therefore the water quality within the SAC is not expected to be affected by any increase in SSC. The modelling shows that there will be no significant increase in SSC within the Slaney River Valley SAC. Therefore, **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.**	**Out**

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
		Spawning habitat quality: Filamentous algae; macrophytes; sediment - Maintain stable gravel substrate with very little fine material, free of filamentous algal (macroalgae) growth and macrophyte (rooted higher plants) growth.										**Mortality, injury, displacement and/or disturbance from underwater noise** • Fish species with anatomical specializations between the swim bladder and the ear generally have lower thresholds and wider hearing bandwidths than species without such specializations and may have greater ability to detect, and therefore respond to, sound pressure. This is the case of fish belonging to clupeiform species (e.g., shad, herring, sardines, and alewives). Clupeids of the shad family (Alosinae) in particular, have shown sensitivity to a range of frequencies that can extend to >100 kHz. (Popper et al 2014). • The noise modelling shows that Twaite Shad may be subject to recoverable injury from the blasting activity if they are close to the noise source (maximum 170 m). Considering the distance between the Proposed Development and the SAC and the conservation objectives of Twaite Shad which relate to the condition of the species within the SAC **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Reduction in Water Quality** See above for discussion relating to impacts to water quality from increased suspended sediment concentrations which determined that there would be no likely significant effects on the conservation objectives of the SAC relating to this QI. Water quality can also be impacted by a pollution event. The construction and operational activities will result in an increase in vessels and therefore a potential risk of accidental spills however an incidence of pollution whether from an accidental occurrence or operational activities is not considered likely considering the legal obligations to comply with MARPOL 73/78 (see section 5.5.4.1 for further discussion on MARPOL) with the increased risk of a pollution event occurring due to these activities considered minimal and not to be over and above existing background risk. All vessels used as required by law, will be MARPOL compliant and fully certified by the Marine Survey Office. Therefore, it is considered unlikely that there would be any occurrence of a pollution event either accidental or otherwise that could directly or indirectly cause a significant effect to Slaney River Valley SAC. The Proposed Development has been designed to incorporate a pollution separation drainage system using interceptors (see Chapter 6: Project Description) which will separate out oils to prevent them discharging to the marine environment during operation of the Proposed Development therefore a pollution incidence is considered unlikely during operation. Due to the requirement to comply with the MARPOL Convention and associated National Law and the pollution control measures built into the design of the project **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.**	
	Salmo salar (Salmon) [1106]	**SSCO:** To restore the favourable conservation condition of Salmon. **Attributes and Targets:** Distribution: extent of anadromy - 100% of river channels down to second		✓				✓				The Slaney River Valley SAC lies outside the Zone of Influence for any of the impacts from the Proposed Development identified for Salmon. Taking account of the "Attributes and Targets" which relate to water quality within the SAC and species distribution and population composition within the river system, including in relating to adult spawning fish, salmon fry abundance, out-migrating smolt abundance and number and distribution of spawning redds, together with the distance between the SAC and the Proposed Development, **the Proposed Development will not have any significant effects on the conservation objective for Salmon within the Slaney River Valley SAC and it can be screened out at the screening stage**. Each impact identified is examined individually further below. **Increased Suspended Sediment Concentrations**	**Out**

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
		order accessible from estuary. Adult spawning fish - Conservation Limit (CL) for each system consistently exceeded. Salmon fry abundance - Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 min sampling. Out-migrating smolt abundance - No significant decline. Number and distribution of redds - No decline in number and distribution of spawning redds due to anthropogenic causes. Water quality - At least Q4 at all sites sampled by EPA.										See above discussion for Twaite Shad within the Slaney River Valley SAC which showed that outside the immediate vicinity of the Proposed Development Boundary for the Rosslare ORE Hub the maximum level of increased suspended sediment concentrations is expected to be in the region of 3 mg/l with 1.4mg/L at Slaney River Valley SAC. This is below the threshold for a change in one rank on the WFD water clarity scale (e.g. from clear to intermediate). Devlin et al. (2008) suggest that coastal waters typically have suspended sediment levels of 3-24.1 mg/l and transitional waters (e.g. estuarine) 8.2-73.8 mg/l. Therefore, increased concentration of suspended sediment within the Slaney River Valley SAC as a result of the Proposed Development is expected to be below the typical measurements for coastal water or estuarine bodies therefore the water quality within the SAC is not expected to be affected by any increase in SSC. The modelling shows that there will be no significant increase in SSC within the Slaney River Valley SAC. **Therefore, there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Reduction in Water Quality** See above for discussion relating to impacts to water quality from increased suspended sediment concentrations which determined that there would be no likely significant effects on the conservation objectives of the SAC relating to this QI. Water quality can also be impacted by a pollution event. The construction and operational activities will result in an increase in vessels and therefore a potential risk of accidental spills however an incidence of pollution whether from an accidental occurrence or operational activities is not considered likely considering the legal obligations to comply with MARPOL 73/78 (see section 5.5.4.1 for further discussion on MARPOL) with the increased risk of a pollution event occurring due to these activities considered minimal and not to be over and above existing background risk. All vessels used as required by law, will be MARPOL compliant and fully certified by the Marine Survey Office. Therefore, it is considered unlikely that there would be any occurrence of a pollution event either accidental or otherwise that could directly or indirectly cause a significant effect to Slaney River Valley SAC. The Proposed Development has been designed to incorporate a pollution separation drainage system using interceptors (see Chapter 6: Project Description) which will separate out oils to prevent them discharging to the marine environment during operation of the Proposed Development therefore a pollution incidence is considered unlikely during operation. Due to the requirement to comply with the MARPOL Convention and associated National Law and the pollution control measures built into the design of the project **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.**	
	Petromyzon marinus (Sea Lamprey) [1095]	**SSCO:** To restore the favourable conservation condition of Sea lamprey **Attributes and Targets:** Distribution: extent of anadromy - Greater than 75% of main stem length of rivers accessible from estuary.		✓	✓			✓				The Slaney River Valley SAC lies outside the Zone of Influence for any of the impacts from the Proposed Development identified for Lamprey species. Taking account of the "Attributes and Targets" of the species distribution within the river system, the population structure within the SAC, juvenile density within the SAC, extent and distribution of spawning habitat within the SAC and availability of juvenile habitat within the SAC, and the distance between the SAC and the Proposed Development, **the Proposed Development will not have any significant effects on the conservation objective for Sea Lamprey, Brooke Lamprey or River Lamprey within the Slaney River Valley SAC and it can be screened out at the screening stage**. Each impact identified is examined individually further below. **Increased Suspended Sediment Concentrations** Dredging Dispersion Modelling was undertaken as described in Chapter 8: Coastal Processes and its accompanying Technical Appendix. An overview is given in section 4.3.1.1 of this report. The modelling shows that the largest increase in SSC will be mostly	**Out**

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
		Population structure of juveniles - At least three age/size groups present. Juvenile density in fine sediment - Juvenile density at least 1/m². Extent and distribution of spawning habitat - No decline in extent and distribution of spawning beds. Improved dispersal of spawning beds into areas upstream of barriers. Availability of juvenile habitat - More than 50% of sample sites positive.										contained within the Rosslare Harbour area itself with the highest SSC occurring at the weir box at the edge of the reclamation area within the Proposed Development Boundary with levels predicted to decrease substantially quite quickly away from Rosslare Harbour (refer Figure 4.3). The modelling also shows that the sediment can be expected to travel 2.5km to the southeast along the coast towards Carnsore Point and 1.5km to the west along the shore. Outside these areas the level of increased suspended sediment concentrations is expected to be in the region of 3 mg/l. Devlin et al. (2008) suggest that coastal waters typically have suspended sediment levels of 3-24.1 mg/l and transitional waters (e.g. estuarine) 8.2-73.8 mg/l. Therefore, increased concentration of suspended sediment within the Slaney River Valley SAC as a result of the Proposed Development is expected to be at the lower end of typical measurements for coastal water bodies and below those of estuarine bodies therefore the water quality within the SAC is not expected to be affected by any increase in SSC. The modelling shows that there will be no significant increase in SSC within the Slaney River Valley SAC. **Therefore, there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Mortality, injury, displacement and/or disturbance from underwater noise** • Mortality, injury, displacement and/or disturbance from underwater noise was identified as a possible impact on Lamprey species due to their parasitic relationship with Twaite Shad as opposed to any direct impact on Lamprey species themselves. The screening assessment for Twaite Shad determined that there will be no likely significant effects on Twaite Shad within the Slaney River Valley SAC, therefore there will be no likely significant effects on Lamprey species within the Slaney River Valley SAC. **There will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Reduction in Water Quality** See above for discussion relating to impacts to water quality from increased suspended sediment concentrations which determined that there would be no likely significant effects on the conservation objectives of the SAC relating to this QI. Water quality can also be impacted by a pollution event. The construction and operational activities will result in an increase in vessels and therefore a potential risk of accidental spills however an incidence of pollution whether from an accidental occurrence or operational activities is not considered likely considering the legal obligations to comply with MARPOL 73/78 (see section 5.5.4.1 for further discussion on MARPOL) with the increased risk of a pollution event occurring due to these activities considered minimal and not to be over and above existing background risk. All vessels used as required by law, will be MARPOL compliant and fully certified by the Marine Survey Office. Therefore, it is considered unlikely that there would be any occurrence of a pollution event either accidental or otherwise that could directly or indirectly cause a significant effect to Slaney River Valley SAC. The Proposed Development has been designed to incorporate a pollution separation drainage system using interceptors (see Chapter 6: Project Description) which will separate out oils to prevent them discharging to the marine environment during operation of the Proposed Development therefore a pollution incidence is considered unlikely during operation.	
	Lampetra planeri (Brook Lamprey) [1096] *Lampetra fluviatilis* (River Lamprey) [1099]	**SSCO:** To restore the favourable conservation condition of Brook/River Lamprey. **Attributes and Targets (common to both):** Distribution - Access to all water courses down to first order streams. Population structure of juveniles - At least three age/size groups of brook/river lamprey present. Juvenile density in fine sediment - Mean catchment juvenile density of brook/river lamprey at least 2/m².		✓	✓			✓					**Out**

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
		Extent and distribution of spawning habitat - No decline in extent and distribution of spawning beds. Availability of juvenile habitat - More than 50% of sample sites positive. **Conservation Objectives:** To restore the favourable conservation condition of River lamprey.										Due to the requirement to comply with the MARPOL Convention and associated National Law and the pollution control measures built into the design of the project **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.**	
	Lutra lutra (Otter) [1355]	**SSCO:** To restore the favourable conservation condition of Otter. **Attributes and Targets:** Distribution - No significant decline. Extent of terrestrial habitat - No significant decline. Area mapped and calculated as 64.7ha above HWM; 453.4ha along riverbanks/ around ponds. Extent of marine habitat - No significant decline. Area mapped and calculated as 534.7ha. Extent of freshwater (river) habitat - No significant decline. Length mapped and calculated as 264.1km. Extent of freshwater (lake/lagoon) habitat - No significant decline. Area		✓	✓			✓			✓	There were signs of Otter observed during survey 2025 within the terrestrial study areas for the Proposed Development. There were signs of Otter, couch sites within the Terrestrial Study Area during 2025 survey. The Slaney River Valley SAC lies outside the Zone of Influence for any of the impacts from the Proposed Development identified for Otter. Taking account of the "Attributes and Targets" which relate to distribution within the SAC, extent of habitat (terrestrial, river, marine and freshwater lake/lagoon all within the SAC), couching sites and holts within the SAC, prey biomass and barriers to connectivity within the SAC and the distance between the SAC and the Proposed Development, **the Proposed Development will not have any significant effects on the conservation objective for Otter within the Slaney River Valley SAC and it can be screened out at the screening stage**. Each impact identified is examined individually further below. **Increased Suspended Sediment Concentrations** See above discussion for Twaite Shad within the Slaney River Valley SAC which showed that outside the immediate vicinity of the Proposed Development Boundary for the Rosslare ORE Hub the maximum level of increased suspended sediment concentrations is expected to be in the region of 3 mg/l with 1.4mg/L at Slaney River Valley SAC. This is below the threshold for a change in one rank on the WFD water clarity scale (e.g. from clear to intermediate). Devlin et al. (2008) suggest that coastal waters typically have suspended sediment levels of 3-24.1 mg/l and transitional waters (e.g. estuarine) 8.2-73.8 mg/l. Therefore, increased concentration of suspended sediment within the Slaney River Valley SAC as a result of the Proposed Development is expected to be below the typical measurements for coastal water or estuarine bodies therefore the water quality within the SAC is not expected to be affected by any increase in SSC. The modelling shows that there will be no significant increase in SSC within the Slaney River Valley SAC. Therefore, **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Mortality, injury, displacement and / or disturbance from underwater noise** Noise modelling for the construction activities (piling, dredging and blasting) was undertaken to determine the zone of impact of the underwater noise produced by the different construction methods for the different categories of marine mammals (refer section 4.6.3 for further information).	**Out**

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
		mapped and calculated as 0.4ha. Couching sites and holts - No significant decline. Fish biomass available - No significant decline. Barriers to connectivity - No significant increase.										Seals were used as a proxy for Otter. Using seal as the proxy the noise modelling shows that Otter may be impacted over the following distances: • Piling PTS (8 m), TTS (80 m), Displacement (up to 4.6km using Harbour Porpoise as a proxy) • Dredging PTS (threshold not exceeded), TTS (threshold not exceeded), Displacement (up to 1.3km using Harbour Porpoise as a proxy) • Blasting PTS (320 m), TTS (590 m) Considering the conservation objectives for Otter (which all relate to suitable habitat within and use of the SAC) together with the distance between Slaney River Valley SAC and the predicted impact distance of the construction activities **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Reduction in water quality** Dredging Dispersion Modelling was undertaken as described in Chapter 8: Coastal Processes and its accompanying Technical Appendix. An overview is given in section 4.3.1.1 of this report. The modelling shows that the largest increase in SSC will be mostly contained within the Rosslare Harbour area itself with the highest SSC occurring at the weir box at the edge of the reclamation area within the Proposed Development Boundary (refer Figure 4.3). The modelling also shows that the sediment can be expected to travel 2.5km to the southeast along the coast towards Carnsore Point. Water quality can also be impacted by a pollution event. The construction and operational activities will result in an increase in vessels and therefore a potential risk of accidental spills however an incidence of pollution whether from an accidental occurrence or operational activities is not considered likely considering the legal obligations to comply with MARPOL 73/78 (see section 5.5.4.1 for further discussion on MARPOL) with the increased risk of a pollution event occurring due to these activities considered minimal and not to be over and above existing background risk. All vessels used as required by law, will be MARPOL compliant and fully certified by the Marine Survey Office. Therefore, it is considered unlikely that there would be any occurrence of a pollution event either accidental or otherwise that could directly or indirectly cause a significant effect to Slaney River Valley SAC. The Proposed Development has been designed to incorporate a pollution separation drainage system using interceptors (see Chapter 6: Project Description) which will separate out oils to prevent them discharging to the marine environment during operation of the Proposed Development therefore a pollution incidence is considered unlikely during operation. Due to the requirement to comply with the MARPOL Convention and associated National Law and the pollution control measures built into the design of the project together combined with the distance between the SAC and the Proposed Development **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Reduction in prey availability (in-direct effect)** The Proposed Development could cause indirect effects to marine mammals due to underwater noise and/or increased suspended sediment concentrations displacing the prey species of marine mammals, namely fish. As described in Table 5.4 the Zone of Impact is limited to very close to the reclamation and dredging areas and predicted dispersion model results that indicate the movement of sediment that travels approximately 2.5km southeast along the shore and westward by 1.5km. However, the predicted SSC values are minimal outside the harbour area therefore the potential effect on prey availability is very low. There will be no impact on prey availability within the SAC. In addition, cetaceans and pinnipeds, have a wide variety of prey species that vary geographically and seasonally, reflecting availability of food resources.	

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
												There is not likely to be any impact to prey species for these QIs therefore **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.**	
	Phoca vitulina (Harbour Seal) [1365]	**SSCO:** To maintain the favourable conservation condition of Harbour Seal. **Attributes and Targets:** Access to suitable habitat - Species range within the site should not be restricted by artificial barriers to site use. Breeding behaviour - The breeding sites should be maintained in a natural condition. Moulting behaviour - The moult haul-out sites should be maintained in a natural condition. Resting behaviour - The resting haul-out sites should be maintained in a natural condition. Disturbance - Human activities should occur at levels that do not adversely affect the harbour seal population at the site.			✓	✓		✓			✓	Considering the characteristics of the Proposed Development which is positioned at a headland without obstructing migratory routes and in an already busy port, it is unlikely to interfere with sensitive habitats, such as breeding or calving grounds for marine mammals. Seals may haul out on quieter structures within port zones, though sensitive activities like pupping and moulting occur in more secluded areas. The Slaney River Valley SAC lies outside the Zone of Influence for any of the impacts from the Proposed Development identified for Harbour Seal. Taking account of the "Attributes and Targets" of access to suitable habitat, seal behaviour (breeding, moulting and haul out) within the SAC, population composition within the SAC and human disturbance levels within the SAC and the distance between the SAC and the Proposed Development, **the Proposed Development will not have any likely significant effects on the conservation objective for Harbour Seal within the Slaney River Valley SAC for the majority of the year.** However, harbour seal pups are known to enter the water from birth and may accompany their mother outside the SAC. While the SAC lies outside the disturbance range for Harbour Seal from underwater noise, it is close enough that pups could be subject to disturbance during the breeding season if accompanying their mother which could lead to separation of mother and pup, leading to a potential increased mortality rate of pups from the Slaney River Valley SAC. **Therefore, likely significant effects cannot be excluded at the screening stage and the Slaney River Valley must proceed to Stage 2 Appropriate Assessment for the QI Harbour Seal.** Each impact identified is examined individually further below. **Mortality, injury, displacement and / or disturbance from underwater noise** Noise modelling for the construction activities (piling, dredging and blasting) was undertaken to determine the zone of impact of the underwater noise produced by the different construction methods for the different categories of marine mammals (refer section 4.6.3 for further information). The noise modelling shows that Grey Seal may be impacted over the following distances: • Piling PTS (8 m), TTS (80 m), Displacement (up to 4.6km using Harbour Porpoise as a proxy) • Dredging PTS (threshold not exceeded), TTS (threshold not exceeded), Displacement (up to 1.3km using Harbour Porpoise as a proxy) • Blasting PTS (320 m), TTS (590 m) The Slaney River Valley SAC lies outside the Zone of Influence for the impacts identified for Harbour Seal and the Proposed Development will not have any likely significant effects on the conservation objective for Harbour Seal within the Slaney River Valley SAC for the majority of the year. However, harbour seal pups are known to enter the water from birth and may accompany their mother outside the SAC. While the SAC lies outside the disturbance range for Harbour Seal from underwater noise, it is close enough that pups could be subject to disturbance during the breeding season if accompanying their mother which could lead to separation of mother and pup, leading to a potential increased mortality rate of pups from the Slaney River Valley SAC. **Therefore, likely significant effects cannot be excluded at the screening stage and the Slaney River Valley must proceed to Stage 2 Appropriate Assessment for the QI Harbour Seal.** **Mortality or injury from vessel collision**	**In**

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
												Observations during marine mammal surveys recorded Grey Seals on every watch. The key factors contributing to collision between marine mammals and vessels are the presence of both in the same area and vessel speed (see Schoeman et al., 2020 for review). Injuries to marine mammals from vessel strikes are species-dependent but generally are more severe at higher impact speeds (Wang et al., 2007). Cetaceans and pinnipeds in the area are exposed to vessels of all sizes on a regular basis within the busy Rosslare Port environment. Vessel activity included as part of construction and operational phases of the Proposed Development includes barges, TSHD and other ORE component delivery vessels, all of which will be slow moving within the port limits with the risk of mortality or injury considered to be low. The number of vessel movements for the proposed small boat harbour is estimated to remain consistent with those that use the existing small boat harbour. **Therefore, there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Reduction in water quality** Dredging Dispersion Modelling was undertaken as described in Chapter 8: Coastal Processes and its accompanying Technical Appendix. An overview is given in section 4.3.1.1 of this report. The modelling shows that the largest increase in SSC will be mostly contained within the Rosslare Harbour area itself with the highest SSC occurring at the weir box at the edge of the reclamation area within the Proposed Development Boundary (refer Figure 4.3). The modelling also shows that the sediment can be expected to travel 2.5km to the southeast along the coast towards Carnsore Point. Water quality can also be impacted by a pollution event. The construction and operational activities will result in an increase in vessels and therefore a potential risk of accidental spills however an incidence of pollution whether from an accidental occurrence or operational activities is not considered likely considering the legal obligations to comply with MARPOL 73/78 (see section 5.5.3.1 for further discussion on MARPOL) with the increased risk of a pollution event occurring due to these activities considered minimal and not to be over and above existing background risk. All vessels used as required by law, will be MARPOL compliant and fully certified by the Marine Survey Office. Therefore, it is considered unlikely that there would be any occurrence of a pollution event either accidental or otherwise that could directly or indirectly cause a significant effect to Slaney River Valley SAC. The Proposed Development has been designed to incorporate a pollution separation drainage system using interceptors (see Chapter 6: Project Description) which will separate out oils to prevent them discharging to the marine environment during operation of the Proposed Development therefore a pollution incidence is considered unlikely during operation. Due to the requirement to comply with the MARPOL Convention and associated National Law and the pollution control measures built into the design of the project together combined with the distance between the SAC and the Proposed Development **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Reduction in prey availability (in-direct effect)** The Proposed Development could cause indirect effects to marine mammals due to underwater noise and/or increased suspended sediment concentrations displacing the prey species of marine mammals, namely fish. As described in Table 5.4 the Zone of Impact is limited to very close to the reclamation and dredging areas and predicted dispersion model results that indicate the movement of sediment that travels approximately 2.5km southeast along the shore and westward by 1.5km. However, the predicted SSC values are minimal outside the harbour area therefore the potential effect on prey availability is very low. There will be no impact on prey availability within the SAC. In	

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
												addition, cetaceans and pinnipeds, have a wide variety of prey species that vary geographically and seasonally, reflecting availability of food resources. There is not likely to be any impact to prey species for these QIs therefore **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.**	
000707 Saltee Islands SAC 21km	*Halichoerus grypus* (Grey Seal) [1364]	**SSCO:** To maintain the favourable conservation condition of Grey Seal in the Saltee Islands SAC **Attributes and Targets:** Access to suitable habitat Species range within the site should not be restricted by artificial barrier to site use. Breeding, moulting and resting behaviour with targets of the breeding sites, moulting sites and haul out sites should be maintained in a natural condition Population composition with a target that the Grey Seal population cohort should contain adult, juvenile and pup cohort annually Disturbance with a target that human activities should occur at levels that do not adversely affect the Grey Seal population			✓	✓		✓			✓	Considering the characteristics of the Proposed Development which is positioned at a headland without obstructing migratory routes and in an already busy port, it is unlikely to interfere with sensitive habitats, such as breeding or calving grounds for marine mammals. Seals may haul out on quieter structures within port zones, though sensitive activities like pupping and moulting occur in more secluded areas. The Saltee Islands SAC lies outside the Zone of Influence for any of the impacts from the Proposed Development identified for Grey Seal. Taking account of the "Attributes and Targets" of access to suitable habitat, seal behaviour (breeding, moulting and haul out) within the SAC, population composition within the SAC and human disturbance levels within the SAC and the distance between the SAC and the Proposed Development, **the Proposed Development will not have any significant effects on the conservation objective for Grey Seal within the Saltee Islands SAC and it can be screened out at the screening stage**. Each impact identified is examined individually further below. **Mortality, injury, displacement and / or disturbance from underwater noise** Noise modelling for the construction activities (piling, dredging and blasting) was undertaken to determine the zone of impact of the underwater noise produced by the different construction methods for the different categories of marine mammals (refer section 4.6.3 for further information). The noise modelling shows that Grey Seal may be impacted over the following distances: • Piling PTS (8 m), TTS (80 m), Displacement (up to 4.6km using Harbour Porpoise as a proxy) • Dredging PTS (threshold not exceeded), TTS (threshold not exceeded), Displacement (up to 1.3km using Harbour Porpoise as a proxy) • Blasting PTS (320 m), TTS (590 m) Considering the distance between Saltee Islands SAC and the predicted impact distance of the construction activities on Grey Seal **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Mortality or injury from vessel collision** Observations during marine mammal surveys recorded Grey Seals on every watch. The key factors contributing to collision between marine mammals and vessels are the presence of both in the same area and vessel speed (see Schoeman et al., 2020 for review). Injuries to marine mammals from vessel strikes are species-dependent but generally are more severe at higher impact speeds (Wang *et al*., 2007). Cetaceans and pinnipeds in the area are exposed to vessels of all sizes on a regular basis within the busy Rosslare Port environment. Vessel activity included as part of construction and operational phases of the Proposed Development includes barges, TSHD and other ORE component delivery vessels, all of which will be slow moving within the port limits with the risk of mortality or injury considered to be low. The number of vessel movements for the proposed small boat harbour is estimated to remain consistent with those that use the existing small boat harbour. **Therefore, there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.**	**Out**

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
												Reduction in water quality Dredging Dispersion Modelling was undertaken as described in Chapter 8: Coastal Processes and its accompanying Technical Appendix. An overview is given in section 4.3.1.1 of this report. The modelling shows that the largest increase in SSC will be mostly contained within the Rosslare Harbour area itself with the highest SSC occurring at the weir box at the edge of the reclamation area within the Proposed Development Boundary (refer Figure 4.3). The modelling also shows that the sediment can be expected to travel 2.5km to the southeast along the coast towards Carnsore Point. Water quality can also be impacted by a pollution event. The construction and operational activities will result in an increase in vessels and therefore a potential risk of accidental spills however an incidence of pollution whether from an accidental occurrence or operational activities is not considered likely considering the legal obligations to comply with MARPOL 73/78 (see section 5.5.3.1 for further discussion on MARPOL) with the increased risk of a pollution event occurring due to these activities considered minimal and not to be over and above existing background risk. All vessels used as required by law, will be MARPOL compliant and fully certified by the Marine Survey Office. Therefore, it is considered unlikely that there would be any occurrence of a pollution event either accidental or otherwise that could directly or indirectly cause a significant effect to Saltee Islands SAC. The Proposed Development has been designed to incorporate a pollution separation drainage system using interceptors (see Chapter 6: Project Description) which will separate out oils to prevent them discharging to the marine environment during operation of the Proposed Development therefore a pollution incidence is considered unlikely during operation. Due to the requirement to comply with the MARPOL Convention and associated National Law and the pollution control measures built into the design of the project together combined with the distance between the SAC and the Proposed Development **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Reduction in prey availability (in-direct effect)** The Proposed Development could cause indirect effects to marine mammals due to underwater noise and/or increased suspended sediment concentrations displacing the prey species of marine mammals, namely fish. As described in Table 5.4 the Zone of Impact is limited to very close to the reclamation and dredging areas and predicted dispersion model results that indicate the movement of sediment that travels approximately 2.5km southeast along the shore and westward by 1.5km. However, the predicted SSC values are minimal outside the harbour area therefore the potential effect on prey availability is very low. There will be no impact on prey availability within the SAC. In addition, cetaceans and pinnipeds, have a wide variety of prey species that vary geographically and seasonally, reflecting availability of food resources. There is not likely to be any impact to prey species for these QIs therefore **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.**	
000764 Hook Head SAC 40.2km	*Tursiops truncatus* (Common Bottlenose	**SSCO:** To maintain the Favourable conservation condition of Bottlenose Dolphin and			✓	✓		✓			✓	Considering the characteristics of the Proposed Development which is positioned at a headland without obstructing migratory routes and in an already busy port, it is unlikely to interfere with sensitive habitats, such as breeding or calving grounds for marine mammals.	**Out**

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
	Dolphin) [1349] *Phocoena phocoena* (Harbour Porpoise) [1351]	Harbour Porpoise in Hook Head SAC. **Attributes and Targets:** Access to suitable habitat with a target of species range within the site should not be restricted by artificial barriers to site use. Disturbance with a target of human activities should occur at levels that do not adversely affect the species population at the site										Hook Head SAC lies outside the Zone of Influence for any of the impacts from the Proposed Development identified for Harbour Porpoise or Bottlenose Dolphin. Taking account of the "Attributes and Targets" of access to suitable habitat and human disturbance levels within the SAC and the distance between the SAC and the Proposed Development, **the Proposed Development will not have any significant effects on the conservation objective for Harbour Porpoise or Bottlenose Dolphin within the Hook Head SAC and it can be screened out at the screening stage**. Each impact identified is examined individually below. **Mortality, injury, displacement and / or disturbance from underwater noise** Noise modelling for the construction activities (piling, dredging and blasting) was undertaken to determine the zone of impact of the underwater noise produced by the different construction methods for the different categories of marine mammals (refer section 4.6.3 for further information). The noise modelling shows that Harbour Porpoise may be impacted over the following distances: • Piling PTS (up to 110 m), TTS (up to 2.6km), Displacement (up to 4.6km) • Dredging PTS (threshold not exceeded), TTS (up to 410 m), Displacement (up to 1.3km) • Blasting PTS (up to 1,630 m), TTS (up to 3,000 m) The noise modelling shows that Bottlenose Dolphin may be impacted over the following distances: • Piling PTS (up to 2 m), TTS (up to 4 m), Displacement (up to 1.3km) • Dredging PTS (threshold not exceeded), TTS (threshold not exceeded), Displacement (up to 1.3km based on Harbour Porpoise as a proxy) • Blasting PTS (up to 95 m), TTS (up to 170 m) Considering the distance between Hook Head SAC and the predicted impact distance of the construction activities on Harbour Porpoise and Bottlenose Dolphin **there will be no likely significant effects on the conservation objectives of the SAC relating to these QI and it can be screened out at the screening stage.** **Mortality or injury from vessel collision** Observations during marine mammal surveys recorded Harbour Porpoise throughout the year and Bottlenose Dolphin in the spring and September. The key factors contributing to collision between marine mammals and vessels are the presence of both in the same area and vessel speed (see Schoeman et al., 2020 for review). Injuries to marine mammals from vessel strikes are species-dependent but generally are more severe at higher impact speeds (Wang et al., 2007). Cetaceans and pinnipeds in the area are exposed to vessels of all sizes on a regular basis within the busy Rosslare Port environment. Vessel activity included as part of construction and operational phases of the Proposed Development includes barges, TSHD and other ORE component delivery vessels, all of which will be slow moving within the port limits with the risk of mortality or injury considered to be low. The number of vessel movements for the proposed small boat harbour is estimated to remain consistent with those that use the existing small boat harbour. **Therefore, there will be no likely significant effects on the conservation objectives of the SAC relating to these QI and it can be screened out at the screening stage.** **Reduction in water quality** Dredging Dispersion Modelling was undertaken as described in Chapter 8: Coastal Processes and its accompanying Technical Appendix. An overview is given in section 4.3.1.1 of this report. The modelling shows that the largest increase in SSC will be mostly	

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
												contained within the Rosslare Harbour area itself with the highest SSC occurring at the weir box at the edge of the reclamation area within the Proposed Development Boundary (refer Figure 4.3). The modelling also shows that the sediment can be expected to travel 2.5km to the southeast along the coast towards Carnsore Point. Water quality can also be impacted by a pollution event. The construction and operational activities will result in an increase in vessels and therefore a potential risk of accidental spills however an incidence of pollution whether from an accidental occurrence or operational activities is not considered likely considering the legal obligations to comply with MARPOL 73/78 (see section 5.5.3.1 for further discussion on MARPOL) with the increased risk of a pollution event occurring due to these activities considered minimal and not to be over and above existing background risk. All vessels used as required by law, will be MARPOL compliant and fully certified by the Marine Survey Office. Therefore, it is considered unlikely that there would be any occurrence of a pollution event either accidental or otherwise that could directly or indirectly cause a significant effect to Hook Head SAC. The Proposed Development has been designed to incorporate a pollution separation drainage system using interceptors (see Chapter 6: Project Description) which will separate out oils to prevent them discharging to the marine environment during operation of the Proposed Development therefore a pollution incidence is considered unlikely during operation. Due to the requirement to comply with the MARPOL Convention and associated National Law and the pollution control measures built into the design of the project together with the distance between the SAC and the Proposed Development **there will be no likely significant effects on the conservation objectives of the SAC relating to these QI and it can be screened out at the screening stage.** **Reduction in prey availability (in-direct effect)** The Proposed Development could cause indirect effects to marine mammals due to underwater noise and/or increased suspended sediment concentrations displacing the prey species of marine mammals, namely fish. As described in Table 5.4 the Zone of Impact is limited to very close to the reclamation and dredging areas and predicted dispersion model results that indicate the movement of sediment that travels approximately 2.5km southeast along the shore and westward by 1.5km. However, the predicted SSC values are minimal outside the harbour area therefore the potential effect on prey availability is very low. There will be no impact on prey availability within the SAC. In addition, cetaceans and pinnipeds, have a wide variety of prey species that vary geographically and seasonally, reflecting availability of food resources. There is not likely to be any impact to prey species for these QIs therefore **there will be no likely significant effects on the conservation objectives of the SAC relating to these QI and it can be screened out at the screening stage.**	
003000 Rockabill to Dalkey Island SAC 112km 003015 Codling Fault Zone SAC 124km 000204 Lambay Island SAC 140km	Harbour porpoise *(Phocoena Phocoena)* [1351]	**SSCO:** To maintain the Favourable conservation condition of Harbour Porpoise in these SACs. **Attributes and Targets:** Access to suitable habitat with a target of species range within the site			✓	✓		✓			✓	Considering the characteristics of the Proposed Development which is positioned at a headland without obstructing migratory routes and in an already busy port, it is unlikely to interfere with sensitive habitats, such as breeding or calving grounds for marine mammals. These SACs are identified for Harbour Porpoise. Taking account of the "Attributes and Targets" of access to suitable habitat and human disturbance levels within the SACs and the distance between the SACs and the Proposed Development, **the Proposed Development will not have any significant effects on the conservation objective for Harbour Porpoise within the SACs and they can be screened out at the screening stage**. Each impact identified is examined individually below. **Mortality, injury, displacement and / or disturbance from underwater noise**	**Out**

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
000101 Roaringwater Bay and Islands SAC 234.5km 002158 Kenmare Bay SAC 293.6km 002172 Blasket Islands SAC 349.9km 000213 Inishmore Island SAC 481km 002111 Kilkieran Bay and Islands SAC 492km 000625 Bunduff Lough and Machair / Trawalua / Mullaghmore SAC 587.8km 002998 West Connacht Coast SAC 596.5km		should not be restricted by artificial barriers to site use. Disturbance with a target of human activities should occur at levels that do not adversely affect the species population at the site.										Noise modelling for the construction activities (piling, dredging and blasting) was undertaken to determine the zone of impact of the underwater noise produced by the different construction methods for the different categories of marine mammals (refer section 4.6.3 for further information). The noise modelling shows that Harbour Porpoise may be impacted over the following distances: • Piling PTS (up to 110 m), TTS (up to 2.6km), Displacement (up to 4.6km) • Dredging PTS (threshold not exceeded), TTS (up to 410 m), Displacement (up to 1.3km) • Blasting PTS (up to 1,630 m), TTS (up to 3,000 m) Considering the distance between these SACs (112km to 140km) and the predicted impact distance of the construction activities on Harbour Porpoise **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Mortality or injury from vessel collision** Observations during marine mammal surveys recorded Harbour Porpoise throughout the year. The key factors contributing to collision between marine mammals and vessels are the presence of both in the same area and vessel speed (see Schoeman et al., 2020 for review). Injuries to marine mammals from vessel strikes are species-dependent but generally are more severe at higher impact speeds (Wang et al., 2007). Cetaceans and pinnipeds in the area are exposed to vessels of all sizes on a regular basis within the busy Rosslare Port environment. Vessel activity included as part of construction and operational phases of the Proposed Development includes barges, TSHD and other ORE component delivery vessels, all of which will be slow moving within the port limits with the risk of mortality or injury considered to be low. The number of vessel movements for the proposed small boat harbour is estimated to remain consistent with those that use the existing small boat harbour. **Therefore, there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Reduction in water quality** Dredging Dispersion Modelling was undertaken as described in Chapter 8: Coastal Processes and its accompanying Technical Appendix. An overview is given in section 4.3.1.1 of this report. The modelling shows that the largest increase in SSC will be mostly contained within the Rosslare Harbour area itself with the highest SSC occurring at the weir box at the edge of the reclamation area within the Proposed Development Boundary (refer Figure 4.3). The modelling also shows that the sediment can be expected to travel 2.5km to the southeast along the coast towards Carnsore Point. Water quality can also be impacted by a pollution event. The construction and operational activities will result in an increase in vessels and therefore a potential risk of accidental spills however an incidence of pollution whether from an accidental occurrence or operational activities is not considered likely considering the legal obligations to comply with MARPOL 73/78 (see section 5.5.3.1 for further discussion on MARPOL) with the increased risk of a pollution event occurring due to these activities considered minimal and not to be over and above existing background risk. All vessels used as required by law, will be MARPOL compliant and fully certified by the Marine Survey Office. Therefore, it is considered unlikely that there would be any occurrence of a pollution event either accidental or otherwise that could directly or indirectly cause a significant effect to SACs.	

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
												The Proposed Development has been designed to incorporate a pollution separation drainage system using interceptors (see Chapter 6: Project Description) which will separate out oils to prevent them discharging to the marine environment during operation of the Proposed Development therefore a pollution incidence is considered unlikely during operation. Due to the requirement to comply with the MARPOL Convention and associated National Law and the pollution control measures built into the design of the project together with the distance between the SACs and the Proposed Development **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Reduction in prey availability (in-direct effect)** The Proposed Development could cause indirect effects to marine mammals due to underwater noise and/or increased suspended sediment concentrations displacing the prey species of marine mammals, namely fish. As described in Table 5.4 the Zone of Impact is limited to very close to the reclamation and dredging areas and predicted dispersion model results that indicate the movement of sediment that travels approximately 2.5km southeast along the shore and westward by 1.5km. However, the predicted SSC values are minimal outside the harbour area therefore the potential effect on prey availability is very low. There will be no impact on prey availability within the SAC. In addition, cetaceans and pinnipeds, have a wide variety of prey species that vary geographically and seasonally, reflecting availability of food resources. There is not likely to be any impact to prey species for these QIs therefore **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.**	
000204 Lambay Island SAC 140km (Grey and Harbour Seal) 000101 Roaringwater Bay and Islands SAC 234.5km (Grey Seal) 002172 Blasket Islands SAC 349.9km (Grey Seal)	*Harbour Seal (Phoca vitulina*) [1365] Grey seal *(Halichoerus grypus)* [1364]	**SSCO:** To maintain the favourable conservation condition. **Attributes and Targets:** Access to suitable habitat - Species range within the site should not be restricted by artificial barriers to site use. Breeding sites - The breeding sites should be maintained in a natural condition. Moulting behaviour - The moult haul-out sites should be maintained in a natural condition. Resting behaviour - The resting haul-out sites			✓	✓		✓			✓	Considering the characteristics of the Proposed Development which is positioned at a headland without obstructing migratory routes and in an already busy port, it is unlikely to interfere with sensitive habitats, such as breeding or calving grounds for marine mammals. Seals may haul out on quieter structures within port zones, though sensitive activities like pupping and moulting occur in more secluded areas. The SACs lie outside the Zone of Influence for any of the impacts from the Proposed Development identified for Grey Seal or Harbour Seal. Taking account of the "Attributes and Targets" of access to suitable habitat, seal behaviour (breeding, moulting and haul out) within the SAC, population composition within the SAC and human disturbance levels within the SAC and the distance between the SACs and the Proposed Development, **the Proposed Development will not have any significant effects on the conservation objectives for Grey Seal or Harbour Seals within the SAC and they can be screened out at the screening stage**. Each impact identified is examined individually further below. **Mortality, injury, displacement and / or disturbance from underwater noise** Noise modelling for the construction activities (piling, dredging and blasting) was undertaken to determine the zone of impact of the underwater noise produced by the different construction methods for the different categories of marine mammals (refer section 4.6.3 for further information). The noise modelling shows that Grey and Harbour Seal may be impacted over the following distances: • Piling PTS (8 m), TTS (80 m), Displacement (up to 4.6km using Harbour Porpoise as a proxy) • Dredging PTS (threshold not exceeded), TTS (threshold not exceeded), Displacement (up to 1.3km using Harbour Porpoise as a proxy) • Blasting PTS (320 m), TTS (590 m)	**Out**

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
		should be maintained in a natural condition. Disturbance - Human activities should occur at levels that do not adversely affect the grey seal population at the site.										Considering the distance between the SACs and the predicted impact distance of the construction activities on Grey Seal or Harbour Seal **there will be no likely significant effects on the conservation objectives of the SACs relating to these QI and they can be screened out at the screening stage.** **Mortality or injury from vessel collision** Observations during marine mammal surveys recorded Grey Seals on every watch. Harbour Seals were only recorded on one quarter of the watches. The key factors contributing to collision between marine mammals and vessels are the presence of both in the same area and vessel speed (see Schoeman et al., 2020 for review). Injuries to marine mammals from vessel strikes are species-dependent but generally are more severe at higher impact speeds (Wang et al., 2007). Pinnipeds in the area are exposed to vessels of all sizes on a regular basis within the busy Rosslare Port environment. Vessel activity included as part of construction and operational phases of the Proposed Development includes barges, TSHD and other ORE component delivery vessels, all of which will be slow moving within the port limits with the risk of mortality or injury considered to be low. The number of vessel movements for the proposed small boat harbour is estimated to remain consistent with those that use the existing small boat harbour **there will be no likely significant effects on the conservation objectives of the SACs relating to these QI and it can be screened out at the screening stage.** **Reduction in water quality** Dredging Dispersion Modelling was undertaken as described in Chapter 8: Coastal Processes and its accompanying Technical Appendix. An overview is given in section 4.3.1.1 of this report. The modelling shows that the largest increase in SSC will be mostly contained within the Rosslare Harbour area itself with the highest SSC occurring at the weir box at the edge of the reclamation area within the Proposed Development Boundary (refer Figure 4.3). The modelling also shows that the sediment can be expected to travel 2.5km to the southeast along the coast towards Carnsore Point. Water quality can also be impacted by a pollution event. The construction and operational activities will result in an increase in vessels and therefore a potential risk of accidental spills however an incidence of pollution whether from an accidental occurrence or operational activities is not considered likely considering the legal obligations to comply with MARPOL 73/78 (see section 5.5.3.1 for further discussion on MARPOL) with the increased risk of a pollution event occurring due to these activities considered minimal and not to be over and above existing background risk. All vessels used as required by law, will be MARPOL compliant and fully certified by the Marine Survey Office. Therefore, it is considered unlikely that there would be any occurrence of a pollution event either accidental or otherwise that could directly or indirectly cause a significant effect to the SACs. The Proposed Development has been designed to incorporate a pollution separation drainage system using interceptors (see Chapter 6: Project Description) which will separate out oils to prevent them discharging to the marine environment during operation of the Proposed Development therefore a pollution incidence is considered unlikely during operation. Due to the requirement to comply with the MARPOL Convention and associated National Law and the pollution control measures built into the design of the project together combined with the distance between the SAC and the Proposed Development **there will be no likely significant effects on the conservation objectives of the SAC relating to these QI and it can be screened out at the screening stage.** **Reduction in prey availability (in-direct effect)**	

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-...	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
												The Proposed Development could cause indirect effects to marine mammals due to underwater noise and/or increased suspended sediment concentrations displacing the prey species of marine mammals, namely fish. As described in Table 5.4 the Zone of Impact is limited to very close to the reclamation and dredging areas and predicted dispersion model results that indicate the movement of sediment that travels approximately 2.5km southeast along the shore and westward by 1.5km. However, the predicted SSC values are minimal outside the harbour area therefore the potential effect on prey availability is very low. There will be no impact on prey availability within the SACs. In addition, cetaceans and pinnipeds, have a wide variety of prey species that vary geographically and seasonally, reflecting availability of food resources. There is not likely to be any impact to prey species for these QIs therefore **there will be no likely significant effects on the conservation objectives of the SACs relating to these QI and it can be screened out at the screening stage.**	
French SACs Mers Celtiques 250km to Baie du Mont Saint-Michel 575km (ref Appendix B for full list)	Harbour porpoise (*Phocoena Phocoena*) [1351]	To maintain or restore species of Community Interest and their functional habitats to a favourable conservation status. This objective is a commitment of the Habitats Directive. The aim is to monitor the evolution of the population of these species, limit their disturbance and maintain their functional habitat in a state of conservation favourable to their ecological requirements (INPN 2024)			✓	✓		✓			✓	Considering the characteristics of the Proposed Development which is positioned at a headland without obstructing migratory routes and in an already busy port, it is unlikely to interfere with sensitive habitats, such as breeding or calving grounds for marine mammals. All of the French SACs lie outside (250km to 575km away) the Zone of Influence for any of the impacts from the Proposed Development identified for Harbour Porpoise. Taking account of the Conservation objective and aims of access to suitable habitat and limiting human disturbance levels within the SAC and the distance between the SAC and the Proposed Development, **the Proposed Development will not have any significant effects on the conservation objectives for Harbour Porpoise within any of the SACs and they can be screened out at the screening stage**. Each impact identified is examined individually below. **Mortality, injury, displacement and / or disturbance from underwater noise** Noise modelling for the construction activities (piling, dredging and blasting) was undertaken to determine the zone of impact of the underwater noise produced by the different construction methods for the different categories of marine mammals (refer section 4.6.3 for further information). The noise modelling shows that Harbour Porpoise may be impacted over the following distances: • Piling PTS (up to 110 m), TTS (up to 2.6km), Displacement (up to 4.6km) • Dredging PTS (threshold not exceeded), TTS (up to 410 m), Displacement (up to 1.3km) • Blasting PTS (up to 1,630 m), TTS (up to 3,000 m) Considering the distance between the SACs (250km to 575km) and the predicted impact distance of the construction activities on Harbour Porpoise **there will be no significant effects on the conservation objective for these species within any of the French SACs as a result of underwater noise.** **Mortality or injury from vessel collision** Observations during marine mammal surveys recorded Harbour Porpoise throughout the year. The key factors contributing to collision between marine mammals and vessels are the presence of both in the same area and vessel speed (see Schoeman et al., 2020 for review). Injuries to marine mammals from vessel strikes are species-dependent but generally are more severe at higher impact speeds (Wang et al., 2007). Cetaceans and pinnipeds in the area are exposed to vessels of all sizes on a regular basis within the busy Rosslare Port environment. Vessel activity included as part of construction and operational phases of the Proposed Development includes	**Out**

SAC & distance from Proposed Development	QIs	Site-Specific Conservation Objectives	Habitat loss	Increased SSC	Underwater noise	Vessel collision	In-air noise	Reduction in water quality	Visual disturbance	In-air dust	Reduction in prey availability (in-	AA Stage 1 Screening for Likely Significant Effects (LSE)	Screened In/Out
												barges, TSHD and other ORE component delivery vessels, all of which will be slow moving within the port limits with the risk of mortality or injury considered to be low. The number of vessel movements for the proposed small boat harbour is estimated to remain consistent with those that use the existing small boat harbour. **Therefore, there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Reduction in water quality** Dredging Dispersion Modelling was undertaken as described in Chapter 8: Coastal Processes and its accompanying Technical Appendix. An overview is given in section 4.3.1.1 of this report. The modelling shows that the largest increase in SSC will be mostly contained within the Rosslare Harbour area itself with the highest SSC occurring at the weir box at the edge of the reclamation area within the Proposed Development Boundary (refer Figure 4.3). The modelling also shows that the sediment can be expected to travel 2.5km to the southeast along the coast towards Carnsore Point. Water quality can also be impacted by a pollution event. The construction and operational activities will result in an increase in vessels and therefore a potential risk of accidental spills however an incidence of pollution whether from an accidental occurrence or operational activities is not considered likely considering the legal obligations to comply with MARPOL 73/78 (see section 5.5.3.1 for further discussion on MARPOL) with the increased risk of a pollution event occurring due to these activities considered minimal and not to be over and above existing background risk. All vessels used as required by law, will be MARPOL compliant and fully certified by the Marine Survey Office. Therefore, it is considered unlikely that there would be any occurrence of a pollution event either accidental or otherwise that could directly or indirectly cause a significant effect to any of these SACs. The Proposed Development has been designed to incorporate a pollution separation drainage system using interceptors (see Chapter 6: Project Description) which will separate out oils to prevent them discharging to the marine environment during operation of the Proposed Development therefore a pollution incidence is considered unlikely during operation. Due to the requirement to comply with the MARPOL Convention and associated National Law and the pollution control measures built into the design of the project together with the distance between the SACs and the Proposed Development **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.** **Reduction in prey availability (in-direct effect)** The Proposed Development could cause indirect effects to marine mammals due to underwater noise and/or increased suspended sediment concentrations displacing the prey species of marine mammals, namely fish. As described in Table 5.4 the Zone of Impact is limited to very close to the reclamation and dredging areas and predicted dispersion model results that indicate the movement of sediment that travels approximately 2.5km southeast along the shore and westward by 1.5km. However, the predicted SSC values are minimal outside the harbour area therefore the potential effect on prey availability is very low. There will be no impact on prey availability within any of the SACs. In addition, cetaceans and pinnipeds, have a wide variety of prey species that vary geographically and seasonally, reflecting availability of food resources. There is not likely to be any impact to prey species for these QIs therefore **there will be no likely significant effects on the conservation objectives of the SAC relating to this QI and it can be screened out at the screening stage.**	

5.5.5 SUMMARY OF LSE

Table 5.17 (SPAs) and Table 5.18 (SACs) summarises the outcome of the screening for LSE for all QIs and SCI of those SPAs and SACs determined to have connectivity with the Proposed Development using the S-P-R model (refer: Table 5.7 and Table 5.8).

Table 5.17: Summary of LSE screening for SPAs

SPA to include in LSE screening	SCIs	Assessment of LSE
Seas off Wexford cSPA	All SCIs	No LSE identified
The Raven SPA	Common Scoter Red-throated diver Cormorant	No LSE identified
Wexford Harbour & Slobs SPA	Great Crested Grebe Cormorant Scaup Red-breasted Merganser Black-headed gull Lesser Black-backed gull	No LSE identified
Lady's Island Lake SPA	Black-headed Gull Sandwich Tern Roseate Tern Common Tern Arctic Tern	No LSE identified
Saltee Islands SPA	Fulmar Gannet Cormorant * Lesser Black-backed Gull Herring Gull Kittiwake Guillemot Razorbill Puffin	No LSE identified
Wicklow Head SPA Helvick Head to Ballyquin SPA Howth Head Coast SPA Irelands Eye SPA Lambay Islands SPA	Kittiwake (all SPAs) Fulmar (Lambay Islands SPA)	No LSE identified

Table 5.18: Summary of LSE screening for SACs

SAC to include in LSE screening	QIs	Assessment of LSE
Carnsore Point SAC	Mudflats and sandflats not covered by seawater at low tide Reefs	No LSE identified
	Harbour porpoise	Potential LSE owing to mortality, injury, displacement and/or disturbance from underwater noise
Long Bank SAC	Sandbanks which are slightly covered by sea water all the time	No LSE identified
Blackwater Bank SAC	Harbour porpoise	Potential LSE owing to mortality, injury, displacement and/or disturbance from underwater noise
Slaney River Valley SAC	Brooke Lamprey River Lamprey Sea Lamprey Salmon	No LSE identified
	Twaite Shad	No LSE identified
	Otter	No LSE identified
	Harbour Seal	Potential LSE owing to mortality, injury, displacement and/or disturbance from underwater noise
Saltee Islands SAC	Grey Seal	No LSE identified
Hook Head SAC	Bottlenose dolphin Harbour porpoise	No LSE identified
Rockabill to Dalkey Island SAC	Harbour porpoise	No LSE identified
Codling Fault Zone SAC	Harbour porpoise	No LSE identified
Lambay Island SAC	Harbour porpoise Grey seal Harbour seal	No LSE identified
Murlough SAC	Harbour Seal	No LSE identified
Roaringwater Bay and Islands SAC	Harbour Porpoise	No LSE identified
Kenmare Bay SAC	Harbour Porpoise	No LSE identified
Blasket Islands SAC	Harbour Porpoise	No LSE identified

SAC to include in LSE screening	QIs	Assessment of LSE
Inishmore Island SAC	Harbour Porpoise	No LSE identified
Kilkieran Bay and Islands SAC	Harbour Porpoise	No LSE identified
Bunduff Lough and Machair / Trawalua / Mullaghmore SAC 587.8km	Harbour Porpoise	No LSE identified
West Connacht Coast SAC 596.5km	Harbour Porpoise	No LSE identified
French sites from French SACs Mers Celtiques 250km to Baie du Mont Saint-Michel 575km (ref Appendix B for full list)	Harbour Porpoise	No LSE identified

5.6 SCREENING FOR IN-COMBINATION EFFECTS

5.6.1 INTRODUCTION

In-combination screening for cumulative effects has been undertaken following the approach outlined in the European Commission Notice: Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive (EC, 2021).

Table 5.19 outlines the steps for assessing cumulative effects on the Natura 2000 sites identified.

Table 5.19: Cumulative Impact Assessment steps (EC, 2021)

Steps in the assessment	Activity to be completed
Defining geographic boundaries and the timeframe for assessment	Define boundaries for examining cumulative effects (e.g. effects on water resources, noise) and may include remote (off-site) locations.
Identify all projects/plans that could act in combination	Identify all possible sources of effects from the plan or project under consideration, together with other sources in the existing environment and other possible effects from other proposed projects or plans; timing and phasing of projects or plans.
Impact Identification	Identify types of impact (e.g. noise, water, resource reduction, chemical emissions) that can affect the structure and functions of the site vulnerable to change.

Steps in the assessment	Activity to be completed
Pathway Identification	Identify potential cumulative pathways (e.g. via water, air, accumulation of effects in time or space). Examine site conditions to identify where vulnerable aspects of the structure and function of the site are at risk.
Prediction	Predict the magnitude/extent of identified likely cumulative effects.
Assessment	Explain whether or not the potential cumulative impacts are likely to be significant, taking into account information collected during the assessing significance step.

5.6.2 DEFINING GEOGRAPHIC BOUNDARIES AND TIMEFRAME FOR ASSESSMENT

The boundary for examination of in-combination effects has been defined considering the types of impact which relate to the activities set out in the Project Description (Chapter 6: Project Description) and includes remote (off-site) locations as set out in the EC 2021.

Chapter 25: Interactions sets out the rationale and data sources that identified in-combination effects from known surrounding projects, creating a “long list” of projects that after further consideration of special or temporal overlap was refined to a “short list”.

In addition, the zones of impact for the Proposed Development activities are outlined in Table 5.2 to Table 5.6. The largest zone of impact identified is associated with underwater noise associated with minimal blasting that maybe required as part of piling activities.

The JNCC Guidance on Assessing the Significance of Noise Disturbance against Harbour Porpoise SAC Conservation Objectives (JNCC, 2020) uses published ranges for the effects of noise from different noise producing activities to determine Effective Deterrence Ranges (EDRs). Where evidence is limited for a particular activity, the EDR is informed by studies which consider the most similar sound levels or appropriate characteristics.

This information was used to define the geographical boundary for the assessment, Figure 5.4, Figure 5.5, Figure 5.6 and Figure 5.7.

The timescales where there is the potential for in combination effects depends on any overlap in construction programme of the Proposed Development and other projects and a prediction of future projects that may temporally overlap once the ORE Hub is operational.

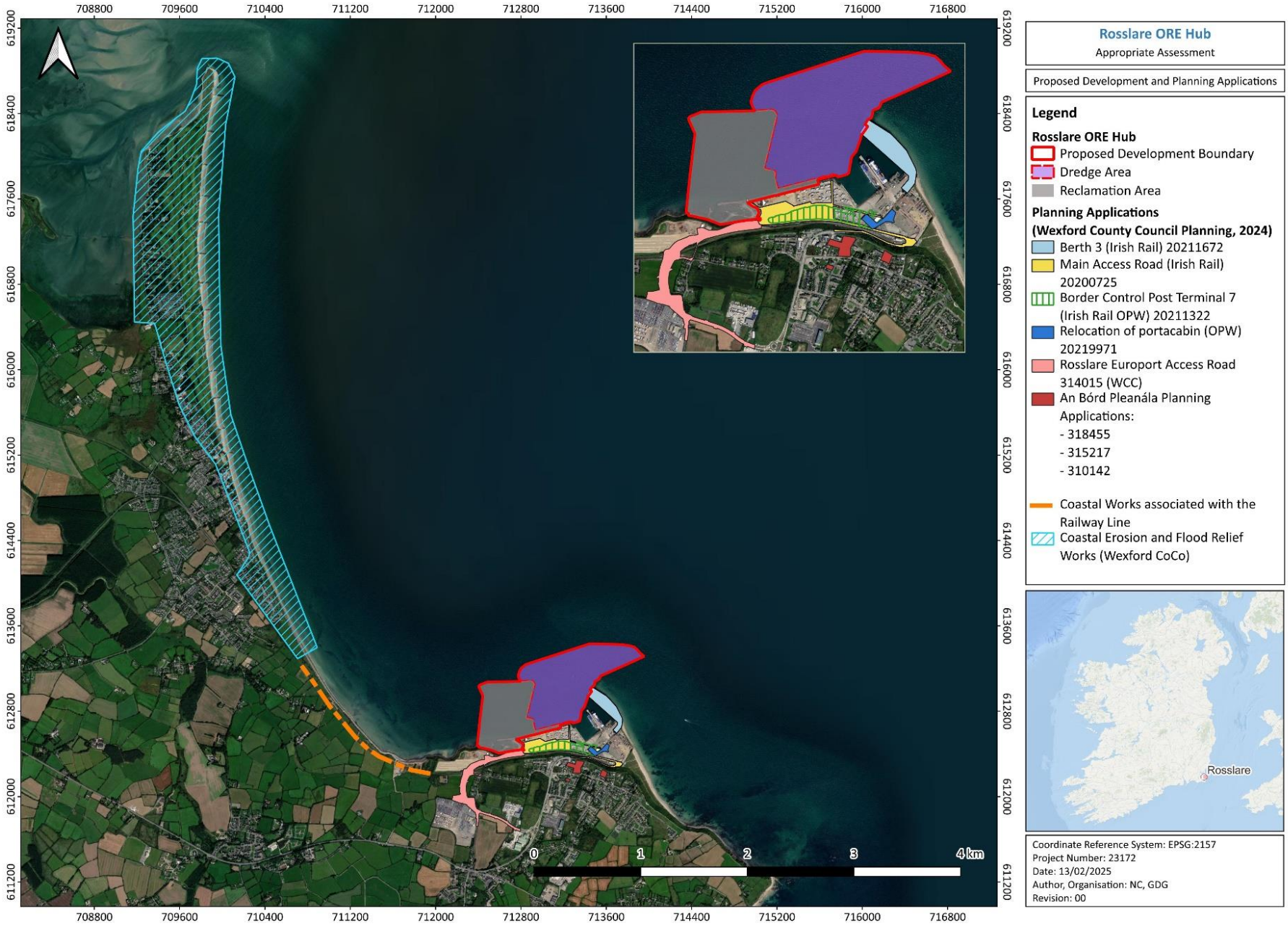

Figure 5.4: Planning Applications close to the Proposed Development

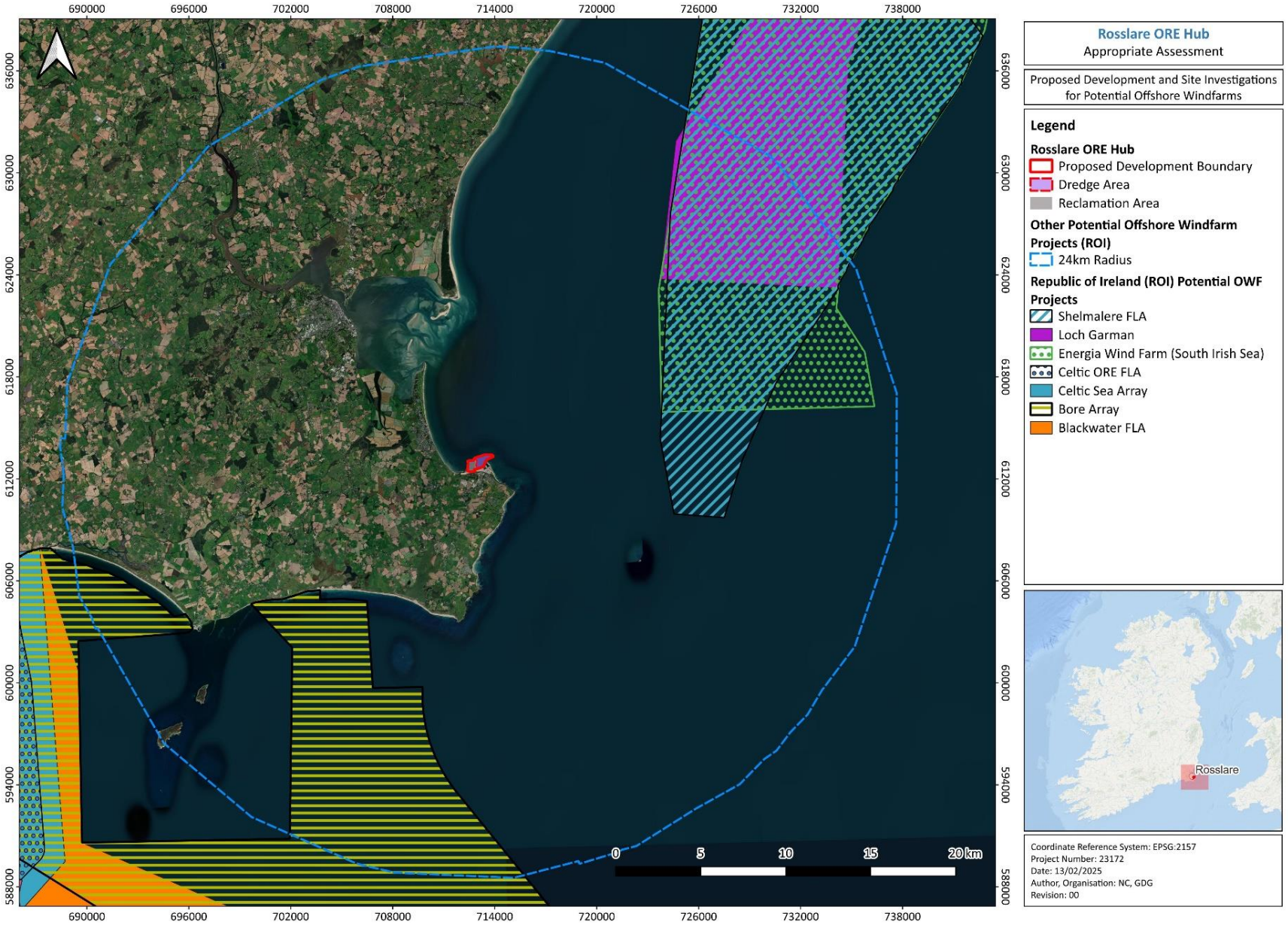

Figure 5.5: Foreshore Licence or Maritime Usage Licence applications in the vicinity of the Proposed Development

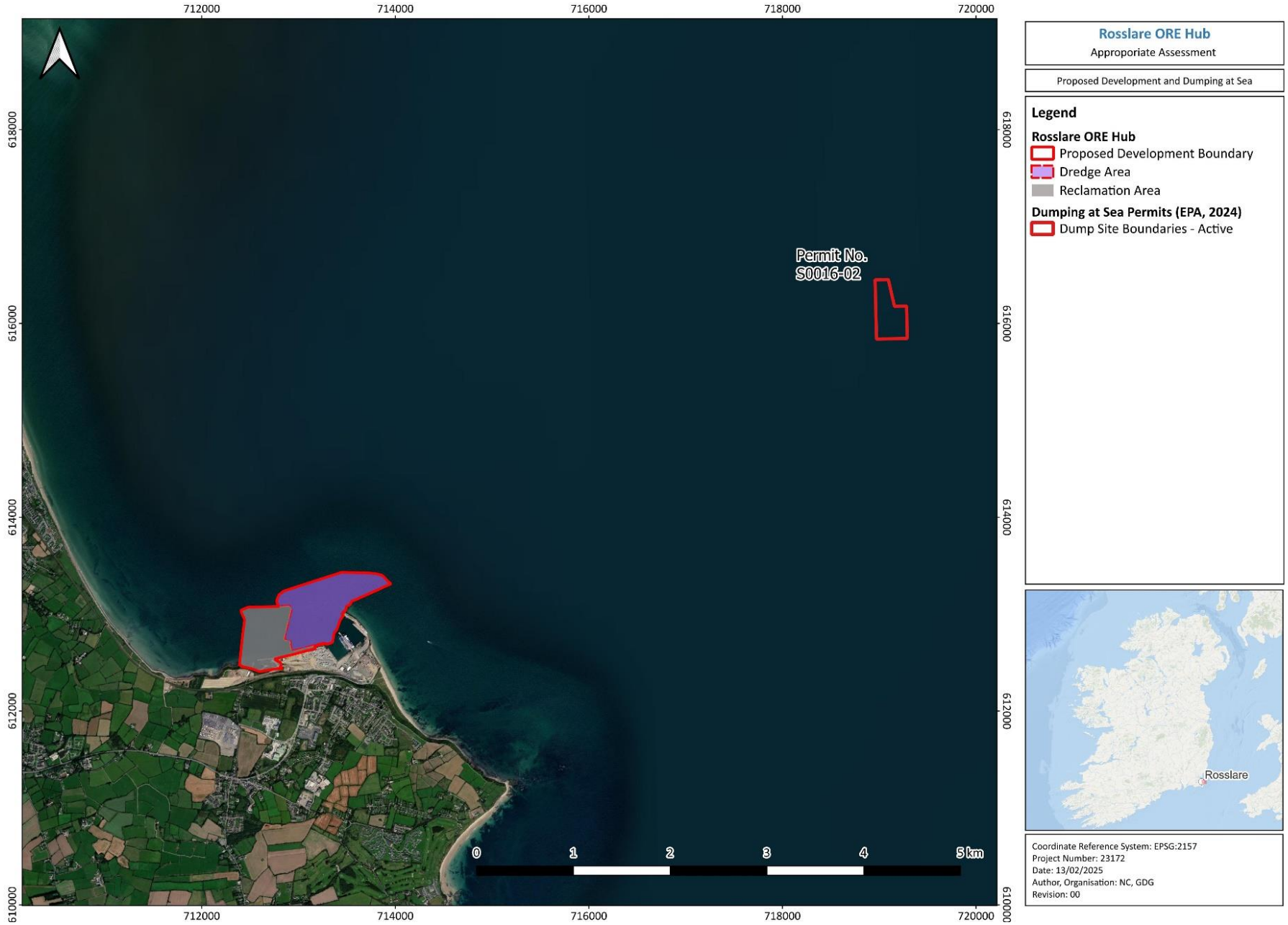

Figure 5.6: Dumping at Sea Licences in the vicinity of the Proposed Development

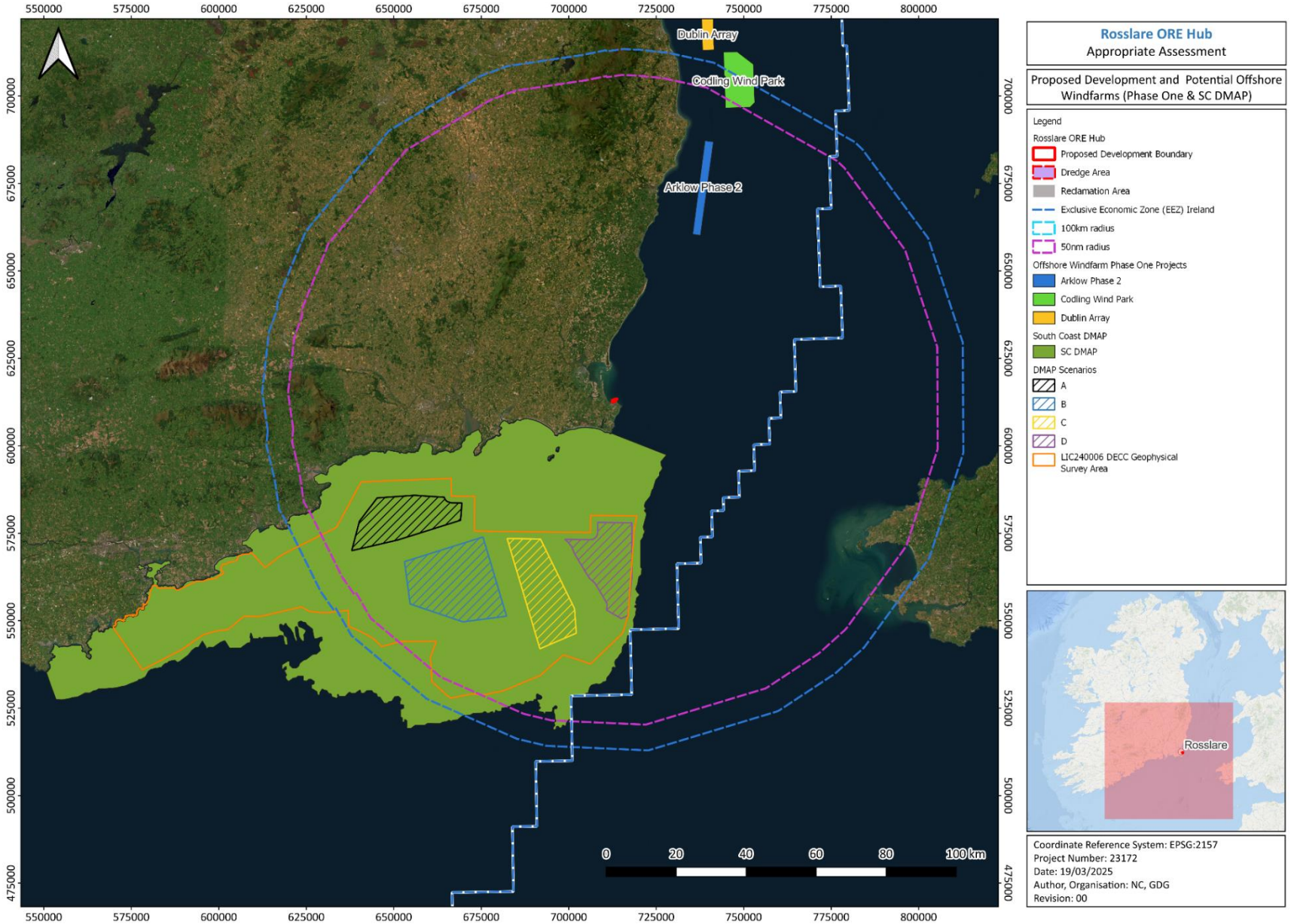

Figure 5.7: Offshore Windfarms Phase One and South Coast DMAP

5.6.3 OTHER PROJECTS/PLANS THAT COULD ACT IN COMBINATION

The significance of any identified in combination effects of the Proposed Development and other past, present or reasonably foreseeable future plans or projects has been assessed with a range of other projects also considered in terms of their potential to have in-combination effects as set out in Table 5.20.

Table 5.20: Activities and Developments identified for consideration in the screening exercise

Projects	Description	Consideration for LSE
Irish Rail Port Development		
Existing port activities	• Passenger and freight movements within existing port facilities including ferry berths, cargo handling areas, and a small boat harbour.	• The construction activities are temporary in nature. • Not considered further for LSE
Extension of Berth 3 (ref 20211322) adjacent	• Extension to the existing Berth 3 at Rosslare Europort, the replacement of the existing linkspan at Berth 3 with a new linkspan and support structures, the demolition and removal of the existing Berth 4 linkspan and associated works	• Potential construction temporal overlap. • Operational overlap between the Rosslare ORE hub and continued ferry operations at the port, considered small scale. • Considered further for LSE
Main Access Road (ref 20200725) adjacent	• Permission for a new main access road, roundabout, internal road and freight entrance plaza.	• Construction anticipated to be completed prior to the construction of the Proposed Development. • No construction temporal overlap. • Operational overlap between the Rosslare ORE hub and transport to and from the port, considered small scale. • Not considered further for LSE
Border Control Post Terminal 7 (ref 20211322) adjacent	• Permission for the construction of Rosslare Europort Terminal 7, Border Control Post (BCP) at Rosslare Europort. • The Border Control Post facilitates existing customs operations at the Port.	• Under an advanced stage of construction at time of writing, no construction overlap with the Proposed Development predicted. • No construction temporal overlap. • Not considered further for LSE

Projects	Description	Consideration for LSE
Relocation of portacabin (ref 20219971) adjacent	• Permission for A) the relocation of the existing pet-check portacabin, B) the erection of new directional signage, C) the creation of a new lay-by, pedestrian path and additional parking spaces, together with all associated site works	• No - small scale development • Not considered further for LSE
Developments in the Surrounding Area		
Rosslare Europort Access Road (REAR) (ref 314015) adjacent	• Wexford County Council (WCC) proposes to develop the N25 Rosslare Europort Access Road. The proposed road scheme will improve the existing L3068 Ballygeary Link Road to the standards required for a national primary road and to meet the forecast future demand for port traffic. • Once operational traffic generated by activities within the ORE Hub will use this REAR for all transit to and from the facility.	• Potential for construction overlap with the Proposed Development. • Operational overlap • REAR developed to the south of the Proposed Development and has no LSE with the marine environment. • Proposed Development has no LSE with the terrestrial environment. • Not considered further for LSE
N11 / N25 Oilgate to Rosslare Harbour scheme	• This road scheme commenced the Phase 3 Design and Environmental evaluation in December 2021. The latest update June 2024 the project has progressed on the development of the design of the Preferred Transport Solution. Planning Application submission is anticipated in Q3 2026 (Transport Infrastructure Ireland ND)	• Land based project with no spatial overlap. • Not considered further for LSE
An Bord Pleanála Planning applications 0.5km at the closest	• Three applications associated with alteration of existing buildings / change in use • 318709 Amhola Rosslare Nursing Home Trading Limited Pending decision 12/12/2023, Formerly the Great Southern Hotel, St. Martin's Road, Rosslare, Co. Wexford, Whether the use of premises for the purpose of accommodating persons seeking international protection is or is	No - small scale development • Not considered further for LSE

Projects	Description	Consideration for LSE
	not development or is or is not exempted development • 315217 Longfield Ventures Limited Granted 29/08/2024 Ballygillane Big, St. Helens, Co. Wexford. Change of use of hotel to 19 apartments. The construction of a second-floor extension for 5 apartments. Internal modifications and alterations including a new lift. External alterations to elevations and all ancillary site works, including the demolition of circa 39sqm of the existing hotel building to the east elevation. • 310142 John Leader Granted 16/02/2022 Rear of St. Martins, St. Permission for the demolition of existing garage, construction of a 3-storey building with 3 two bedroomed duplex apartments over 3 one-bedroomed ground floor apartments, and all associated site works	
Coastal works associated with the railway 0.5km at the closest	• Coastal works are currently under construction & likely to be completed before the construction of the Proposed Development.	• Coastal works are currently under construction & likely to be completed before the construction of the Proposed Development. • No construction temporal overlap. • Not considered further for LSE
Coastal Erosion and Flood Relief Works (Wexford CoCo) 1.5km at the closest	• Wexford County Council Study, preliminary design to detailed design and construction of proposed flood relief and coastal erosion measures for the northern section of Rosslare Point to protect the Strand at Rosslare. • The scheme is currently in Stage 1 Options Assessment, Scheme Development and Preliminary Design. Stage 4 Construction is anticipated Q4 2027 to Q1 2029	• Potential 1- or 2-month construction overlap with the Proposed Development. • Not considered further for LSE

Projects	Description	Consideration for LSE
Wexford County Development Plan 2022-2028	• The Wexford County Development Plan came into effect in July 2022. The plan sets out policies and objectives for the development of the County during the period of the plan.	• Not considered further for LSE
Rosslare Harbour & Kilrane Local Area Plan 2012-2018	• An expired local area plan. See Wexford County Development Plan for current detail.	• Not considered further for LSE
Phase 1 OWF projects		
Arklow Bank Wind Park 2	• This proposed offshore windfarm is situated on and around Arklow Bank, approximately 6 to 15km east of Arklow and comprises of 56 or 47 turbines (SSE Renewables EIAR NTS 2024). The Proposed Development is situated approximately 52km from Arklow Bank Wind Park 2	• Construction and operation of this Phase 1 OWF projects will temporally overlap while Rosslare Europort ORE Hub will be in operation. • Given the distance from the Proposed Development to the Phase 1 project, at site construction and operation activities are **not considered further for LSE**. • If Rosslare is used as a marshalling and assembly and/or operations and maintenance port for this proposed offshore windfarm, the slight increase in maritime traffic associated with these activities (relative to existing traffic in the region) is **not considered likely to result in LSE**
Codling Wind Park (CWP) Project	• This project is a proposed offshore windfarm located in the Irish Sea approximately 13–22km off the east coast of Ireland, at County Wicklow. The Proposed Development is situated approximately 89km from Codling Wind Park	• Construction and operation of this Phase 1 OWF projects will temporally overlap while Rosslare Europort ORE Hub will be in operation. • Given the distance from the Proposed Development to the Phase 1 project, at site construction and operation activities are **not considered further for LSE**. • If Rosslare is used as a marshalling and assembly

Projects	Description	Consideration for LSE
		and/or operations and maintenance port for this proposed offshore windfarm, the slight increase in maritime traffic associated with these activities (relative to existing traffic in the region) is **not considered likely to result in LSE**
Dublin Array	• Dublin Array is located approximately 10km off the coast of Dublin and Wicklow counties in the Irish Sea. The project will have an installed capacity of up to 834 MW. The Proposed Development is situated approximately 103km from Dublin Array	• Construction and operation of this Phase 1 OWF projects will temporally overlap while Rosslare Europort ORE Hub will be in operation. • Given the distance from the Proposed Development to the Phase 1 project, at site construction and operation activities are **not considered further for LSE**. • If Rosslare is used as a marshalling and assembly and/or operations and maintenance port for this proposed offshore windfarm, the slight increase in maritime traffic associated with these activities (relative to existing traffic in the region) is **not considered likely to result in LSE**
FLA Applications & distance	OWF Marine Site Investigation Activities	
Shelmalere FLA FS007261 Wexford and Wicklow 9.8km	• Foreshore Licence for Site Investigations to inform the engineering and design of a potential offshore wind farm and associated export cable route. • Status - Consultation	• Outside of recently announced South Coast Designated Maritime Area Plan (SC-DMAP) for offshore wind development and therefore not in compliance with National ORE Policy. • In line with National ORE Policy, ORE development including related site investigations is only permitted within a DMAP for

Projects	Description	Consideration for LSE
		ORE development and applicants for a licence to undertake such activities must be the holder of a Maritime Area Consent for the area in question. • As the area subject of FLA FS007261 does not satisfy the criteria, the site investigations subject of this licence application are not likely to proceed. • Not considered further for LSE
Energia FS007048 Wexford 10.2km	• Marine Site investigations off Wexford Coast, SI activities • Licence expires 04/07/2026 • The licence pre-dates the policy statements for the South Coast DMAP. However, as it is outside the DMAP the developer is unlikely to undertake any further SI before expiry of the licence.	• Outside of recently announced South Coast Designated Maritime Area Plan (SC-DMAP) for offshore wind development and therefore not in compliance with National ORE Policy. • In line with National ORE Policy, future ORE development is only permitted within a DMAP for ORE development and applicants for planning permission to undertake such development must be the holder of a Maritime Area Consent for the area in question. • Not considered further for LSE
Loch Garman FS007135 Wexford 14.3km	• This foreshore application relates to the Site Investigation works only. These activities are required to inform: the overall project feasibility; the conditions at site and along the cable route; the various assessments required to progress the project; and the development of the project. • Status - Consultation	• Outside of recently announced south coast DMAP for offshore wind development and therefore not in compliance with National ORE Policy. • In line with National ORE Policy, ORE development including related site investigations is only permitted within a DMAP for ORE development and applicants for a licence to

Projects	Description	Consideration for LSE
		undertake such activities must be the holder of a Maritime Area Consent for the area in question. • As the area subject of FLA FS007135 does not satisfy the criteria, the site investigations subject of this licence application are not likely to proceed. • Not considered further for LSE
Bore Array FS007646 Wexford 15.6km	• Foreshore Licence Application is for site investigation works to determine the suitability for cable routeing, and positioning of turbines and other electrical infrastructure associated with the development of an OWF. • Status - Applied	• Within the recently announced south coast DMAP however, the policy statement which accompanied the SC-DMAP stated that developer applicants for a licence to undertake site investigation activities within the SC-DMAP to support offshore wind must be the holder of a Maritime Area Consent for the area in question. The first SC DMAP development area to be auctioned is Tonn Nua which lies off the coast of Waterford which does not overlap the Bore Array. Only the successful bidder under the Tonn Nua subsidy support auction will be able to apply for a Maritime Area Consent. Therefore, this the site investigations subject of this licence application are not likely to proceed. • Not considered further for LSE
Dumping at Sea Permits		
Iarnród Éireann - Rosslare Europort Maintenance Dredging FS007219, Wexford, adjacent	• Maintenance dredging at Rosslare Europort (Permit S0016-02). This permit is for the loading and dumping at sea of dredged material, arising from maintenance dredging at	• Potential Construction Overlap • Considered for LSE

Projects	Description	Consideration for LSE
	Rosslare Europort and Ballygeary Harbour, Co. Wexford. The proposed activities involve the loading and dumping of 478,500 tonnes (wet weight) of dredged material from 2023 to 2027	

It is noted that SC-DMAP is within 50km of the Proposed Development. Any construction overlap is unlikely however there may be temporal overlap during the operational phase of the Proposed Development with any future site investigation, construction and operation works for potential wind farms that may be developed within the South Coast DMAP. It will be a matter for those developers to consider the ongoing operations of the Rosslare ORE Hub when applying for permission to undertake any activities or development within the South Coast DMAP at the appropriate time in the future. However, construction and operation of these potential OWF projects would temporally overlap with the operational phase of the Proposed Development.

Given the distance from the Proposed Development to the South Coast DMAP area, at-site construction and operation activities are not considered further for LSE.

If Rosslare is used as a marshalling and assembly and/or operations and maintenance port for the potential South Coast DMAP offshore windfarms, the slight increase in maritime traffic associated with these activities (relative to existing traffic in the region) is not considered likely to result in LSE.

The following projects/plans have therefore been screened in to Stage 2 Appropriate Assessment for consideration of likely significant in-combination effects:

- Iarnród Éireann - Rosslare Europort Maintenance Dredging
- Extension of Berth 3

6 SCREENING OUTCOME

The following SACs and QIs have been screened in for Stage 2 Appropriate Assessment.

Table 6.1: Natura 2000 sites screened in for Stage 2 AA

Natura 2000 Site	QI / SCI	Effect
Carnsore Point SAC	Harbour porpoise	Mortality, injury, displacement and/or disturbance from underwater noise
Blackwater Bank SAC	Harbour porpoise	Mortality, injury, displacement and/or disturbance from underwater noise
Slaney River Valley SAC	Harbour seal	Mortality, injury, displacement and/or disturbance from underwater noise

The following projects and plans have been screened in for Stage 2 Appropriate Assessment of potential in-combination effects on the Natura 2000 Sites listed in Table 6.1.

- Iarnród Éireann - Rosslare Europort Maintenance Dredging
- Extension of Berth 3

This Report to inform a screening for Appropriate Assessment has been completed in compliance with EU and Irish law and the relevant European Commission and national guidelines to determine whether Likely Significant Effects on any Natura 2000 site could be excluded as a result of the Proposed Development.

It cannot be excluded, on the basis of objective information, that the Proposed Development, individually and in combination with other plans or project, will have a significant effect on the following Natura 2000 sites:

- Carnsore Point SAC
- Blackwater Bank SAC
- Slaney River Valley SAC

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APPENDIX A

A.1 ORNITHOLOGY

A.1.1 FEEDING MECHANISMS SUPPORTING INFORMATION

Table A-1: Description of Feeding Methods for Marine and Estuarine Birds

Feeding Method	Exposure to Underwater Noise
Surface Plunging: Terns, such as the Common Tern (*Sterna hirundo*), use rapid surface plunging to catch small fish just below the water's surface. The bird briefly submerges to catch fish or other prey, then returns to the surface. They typically dive for only a few seconds, with minimal time spent underwater.	Their brief plunges limit their exposure to underwater disturbances, however their time spent resting on the surface makes them more vulnerable to surface-level displacement.
Surface Scavenging: Gulls, gannets, and fulmars feed on prey/scraps primarily at the water's surface or washed up on shore. For instance, gannets (*Morus bassanus*) may scavenge fish without diving or after shallow plunges. These species rarely submerge, spending little time underwater, but gannets may dive for short durations if needed. Their primary feeding method involves quickly grabbing food from the surface.	Their minimal submersion reduces their exposure to underwater noise, making them less vulnerable to underwater noise inducing marine construction activities.
Dip-Feeding: Birds like the Fulmar (*Fulmarus glacialis*) and Terns often employ dip-feeding, where they dip their heads into the water to catch prey, without fully diving or plunging. This method involves extremely short submersion times, typically lasting only one to three seconds.	Since they rarely stay underwater, their exposure to underwater noise will likely be brief and minimal.
Fluttering on the Surface: Some seabirds flutter their wings on the water's surface, stirring up prey. Petrels are known to use this technique. During this technique, birds remain above water, with no prolonged submersion.	They may briefly dip into the water for a fraction of a second, but they largely remain airborne, which means they would not be significantly affected by underwater noise.
Underwater Pursuit: Auks, such as the Puffin (*Fratercula arctica*), are adept at underwater pursuit, where they dive and chase prey beneath the surface. This involves diving directly from the water's surface and chasing prey underwater without any initial aerial component. Puffins can stay submerged for 20 to 30 seconds, making them more vulnerable to underwater habitat disturbances. They use their wings to "fly" underwater in pursuit of fish, making them more dependent on underwater conditions than surface feeders.	This longer submersion time could increase their exposure to underwater noise generated by construction activities, making them more vulnerable compared to surface feeders.
Deep Plunging: Gannets also use a deep plunging technique, diving from heights of up to 30 meters and staying underwater for 10 to 15 seconds. This involves a high-speed dive from a significant height,	Although their time submerged is longer than surface feeders, it is still relatively brief. They could be exposed to underwater noise

Feeding Method	Exposure to Underwater Noise
reaching deep underwater allowing them to capture prey at greater depths, but they quickly resurface, minimising their time submerged compared to auks.	depending on the proximity and frequency of construction activities.
Pursuit Plunging: Shearwaters, such as the Manx Shearwater (*Puffinus puffinus*) and Sooty Shearwater (*Ardenna grisea*), perform pursuit plunging, diving for prey and pursuing it underwater. This involves an aerial (moderate) plunge followed by an active chase underwater in pursuit of prey. They usually remain submerged for about 10 seconds. This foraging behaviour involves rapid dives, combining short submersion times with fast, targeted hunting.	Their moderate time submerged suggests some exposure to underwater noise, but not to the same extent as species like auks that dive for longer durations.
Stealing in Flight: Skuas, like the Great Skua (*Stercorarius skua*), do not dive underwater. Instead, they steal food from other birds in flight, using aggressive tactics to harass and force prey drops.	Since they do not spend time submerged, they would not be directly affected by underwater noise.

Table A-2: Diving bird species considered potentially vulnerable to underwater noise

Bird Species	Name	Feeding Method
Divers and Grebes	Great northern diver (*Gavia immer)*	Underwater Pursuit
	Red-throated diver *(Gavia stellata)*	Underwater Pursuit
	Black-throated diver (*Gavia arctica)*	Underwater Pursuit
	Little grebe (*Tachybaptus ruficollis)*	Underwater Pursuit
	Great crested grebe (*Podiceps cristatus)*	Underwater Pursuit
	Slavonian grebe (*Podiceps auritus)*	Underwater Pursuit
Seabirds	Manx shearwater (*Puffinus puffinus)*	Pursuit Plunging
	Gannet (*Morus bassanus)*	Deep Plunging
	Cormorant (*Phalacrocorax carbo carbo)*	Underwater Pursuit
	Shag (*Phalacrocorax aristotelis)*	Underwater Pursuit
	Guillemot (*Uria aalge)*	Underwater Pursuit
	Razorbill (*Alca torda)*	Underwater Pursuit
	Puffin (*Fratercula arctica)*	Underwater Pursuit
	Mediterranean Gull (*Larus melanocephalus*)	Surface Scavenging and Surface Dipping
	Black-headed Gull (*Chroicocephalus ridibundus*)	Surface Scavenging and Surface Dipping
	Great Black-backed Gull (*Larus marinus*)	Surface Scavenging, Predation and Kleptoparasitism
	Lesser Black-backed Gull (*Larus fuscus*)	Surface Scavenging and Surface Dipping
	Herring Gull (*Larus argentatus*)	Surface Scavenging and Surface Dipping
	Kittiwake (*Rissa tridactyla*)	Surface Scavenging and Surface Dipping
	Sandwich Tern (*Sterna sandvicensis*)	Surface Plunging (with aerial scanning)

Bird Species	Name	Feeding Method
	Roseate Tern (*Sterna dougallii*)	Surface Plunging (with aerial scanning)
	Common Tern (*Sterna hirundo*)	Surface Plunging (with aerial scanning)
	Arctic Tern (*Sterna paradisaea*)	Surface Plunging (with aerial scanning)
	Little Tern (*Sterna albifrons*)	Surface Plunging (with aerial scanning)
Diving ducks	Pochard (*Aythya farina)*	Underwater Pursuit
	Tufted duck *Aythya fuligula*	Underwater Pursuit
	Scaup *Aythya marila*	Underwater Pursuit
	Eider *Somateria mollissima*	Underwater Pursuit
	Long-tailed duck *Clangula hyemalis*	Underwater Pursuit
	Common scoter *Melanitta nigra*	Underwater Pursuit
	Velvet scoter *Melanitta fusca*	Underwater Pursuit
	Goldeneye *Bucephala clangula*	Underwater Pursuit
	Red-breasted merganser *Mergus serrator*	Underwater Pursuit
	Goosander *Mergus merganser*	Underwater Pursuit
Dabbling birds	Bewick's Swan (*Cygnus columbianus bewickii*)	Dabbles and Grazes
	Whooper Swan (*Cygnus cygnus*)	Dabbles and Grazes
	Light-bellied Brent Goose (*Branta bernicla hrota*)	Dabbles and Grazes
	Shelduck (*Tadorna tadorna*)	Dabbles and Filter Feeder in mudflats
	Wigeon (*Anas penelope*)	Dabbles and Grazes
	Teal (*Anas crecca*)	Dabbles and Forages on Land
	Mallard (*Anas platyrhynchos*)	Dabbles and Forages on Land
	Pintail (*Anas acuta*)	Dabbles and Forages on Land
	Greenland White-fronted Goose (*Anser albifrons flavirostris*)	Dabbles and Grazes occasionally
	Gadwall (*Anas strepera*)	Dabbles and Forages on Land
	Shoveler (*Anas clypeata*)	Filter feeder and Dabbles
Wader Species	Grey Heron (*Ardea cinerea*)	Stalking and spearing
	Oystercatcher (*Haematopus ostralegus*)	Hammering and probing
	Golden Plover (*Pluvialis apricaria*)	Pecking and running
	Grey Plover (*Pluvialis squatarola*)	Pecking and probing
	Lapwing (*Vanellus vanellus*)	Pecking and surface gleaning
	Knot (*Calidris canutus*)	Probing
	Sanderling (*Calidris alba*)	Chasing and pecking
	Dunlin (*Calidris alpina*)	Probing
	Black-tailed Godwit (*Limosa limosa*)	Deep probing
	Bar-tailed Godwit (*Limosa lapponica*)	Deep probing
	Curlew (*Numenius arquata*)	Deep probing
	Redshank (*Tringa totanus*)	Probing and picking
Freshwater divers	Coots (*Fulica atra*)	Dabbler, Diver and Forages on Land - primarily freshwater birds and are most commonly found in lakes, ponds, rivers, and marshes.

A.1.2 FORAGING RANGES

Data on foraging movements of a number of seabird species has increased over the years mainly due to technological data capture systems such as satellite and other tracking technologies (e.g. Langston *et al*. 2013, Wakefield *et al*. 2015, 2017, Thaxter *et al*. 2014, 2018, Cleasby *et al*. 2015, 2020, Bogdanova *et al*. 2017, Carter *et al*. 2016, EPA *et al*. 2016, Votier *et al*. 2017). Available information on foraging areas used by species from particular colonies is still limited. Woodward et al. (2019) have reported on representative breeding season foraging ranges for a range of species.

Table 7-1 provides indicative foraging ranges (mean maximum) travelled for a range of seabird species from a breeding colony to a foraging area, which have been used to identify relevant sites on the basis that related Qualifying Interests could interact with the Proposed Development and construction activities. The mean maximum foraging range values are used to address potential interaction with relevant SPAs; as it provides the mean across the maximum foraging distances for each colony within the study. These are highly precautionary foraging distances as it used the maximum range as a basis of the calculation for each species and deemed appropriate foraging ranges. It should be noted however that bird density will not be continuous throughout this range and these measurements are based on seabirds flying long distances around major land masses. It is unlikely that seabirds would travel across land or extremely large distances during chick-rearing stages of the breeding season in order to forage in an offshore site where site investigation activities are occurring. Other ways of representing foraging ranges (e.g. the mean, or percentage foraging area derived from kernel analyses) may therefore provide more useful information, where available.

Whilst applying mean maximum foraging radius would encompass the majority of a population's home-range area, the overall size of the predicted foraging areas around the colony would potentially make it too large to be a useful management tool, without further refinement using habitat and bathymetric data (Soanes et al. 2016). Similarly, the assumption that seabirds are uniformly distributed out to some threshold distance from their colonies, such as their putative maximum foraging range, is unrealistic. Seabird density declines with distance from the colony with density-dependent competition, coastal morphology and habitat preferences (Wakefield et al. 2017). For example, oceanographic features at which seabirds preferentially forage include shelf-edge fronts, upwelling and tidal-mixing fronts, offshore banks and internal waves, regions of stratification, and topographically complex coastal areas subject to strong tidal flow (Cox et al. 2018), result in highly non-uniform distributions. While Critchley et al. (2018) used a distance-weighted foraging radius approach to project distributions at sea for a wide range of seabird species during the breeding season, the authors recognised the limitations of not considering environmental variables that contribute to such non-uniform distributions noted above.

The zone of influence approach using the mean maximum foraging range is the simplistic approach to identifying relevant sites. The approach taken here has been to review the initial selection of sites on this basis and use expert judgement to exclude those for which an interaction would be unrealistic. For example, sites where Fulmar is identified as a Qualifying Interest on the far north and west of Ireland are not considered as Fulmar's are highly pelagic seabirds and are highly unlikely to move large distances over land which could bring them to within the Proposed Development

Boundary. The potential mean maximum foraging range for this species has therefore been applied across the marine area, including where birds could move around headlands.

To aid in the selection process in identifying the mean maximum foraging ranges for the relevant SPAs within the zone of influence of the Proposed Development measurements were taken across landward distance, seaward distance and some measured across headlands where there were large areas of land that could be covered. This process was used to ensure all distance measurements and foraging ranges were considered in the assessment and screening process for the seabird ranges that were identified from Woodward et al., 2019).

Table A-3: Indicative breeding season foraging ranges (in bold) (Woodward et al, 2019) and associated confidence levels.

Species	Mean maximum[1] (km ± SD)	Confidence Level[2]
Eider	**21.5**	Poor
Red-throated diver	**9**	Low
Fulmar	**542.3** ± 657.9	Good
Manx shearwater	**1,346.8** ±,1,018.7	Moderate
European storm petrel	**336**	Poor
Leach's storm petrel	n/a	Moderate
Gannet	**315.2** ± 194.2	Highest
Cormorant	**25.6** ± 8.3	Moderate
Shag	**13.2** ± 10.5	Highest
Arctic skua	n/a	Poor
Great skua	**443.3** ± 487.9	Uncertain
Black-headed gull	**18.5**	Uncertain
Common gull	**50**	Poor
Mediterranean gull	**20**	Uncertain
Herring gull	**58.8** ± 26.8	Good
Lesser black-backed gull	**127** ± 109	Highest
Kittiwake	**156.1** ± 144.5	Good
Sandwich tern	**34.3** ± 23.2	Moderate
Roseate tern	**12.6** ± 10.6	Moderate
Common tern	**18.0** ± 8.9	Good
Arctic tern	**25.7** ± 14.8	Good
Little tern	**5**	Moderate

Species	Mean maximum[1] (km ± SD)	Confidence Level[2]
Guillemot	**73.2** ± 80.5	Highest
Razorbill	**88.7** ± 75.9	Good
Puffin	**137.1** ± 128.3	Good

[1]The maximum range reported in each study averaged across studies.
[2] Confidence levels were assigned as follows: highest (based on >5 direct studies, graphs and standard deviation suggest relatively low variability between sites and hence higher confidence); good (based on >5 direct studies; graphs and standard deviation show wider variability between sites, hence lower confidence); moderate (between 2-5 direct studies); low (indirect measures or only one direct tracking study); uncertain (survey-based estimates); poor (few survey estimates or speculative data available

A.2 MARINE MAMMALS

Table A-4: Generalised marine mammal hearing groups and species

Hearing group	Generalised hearing range	Species
LF	7 Hz to 35 kHz	Blue whale, bowhead whale, fin whale, humpback whale, **minke whale**, northern right whale, sei whale
HF	150 Hz to 160 kHz	Beaked whales, beluga whale, **bottlenose dolphin**, **common dolphin**, killer whale, pilot whale, **Risso's dolphin**, sperm whale, striped dolphin, white-beaked dolphin, white-sided dolphin.
VHF	275 Hz to 160 kHz	**Harbour porpoise**
PCW	50 Hz to 86 kHz	**Grey seal**, **harbour seal**
The listed species are those that have been observed or known to be present in European Atlantic waters (Hammond *et al.,* 2021; Waggitt *et al.,* 2019; Rogan *et al.,* 2018; Berrow *et al.,* 2018). The bold highlighted species are those that were observed to be present in the area of the Proposed Development during baseline visual and acoustic surveys.		

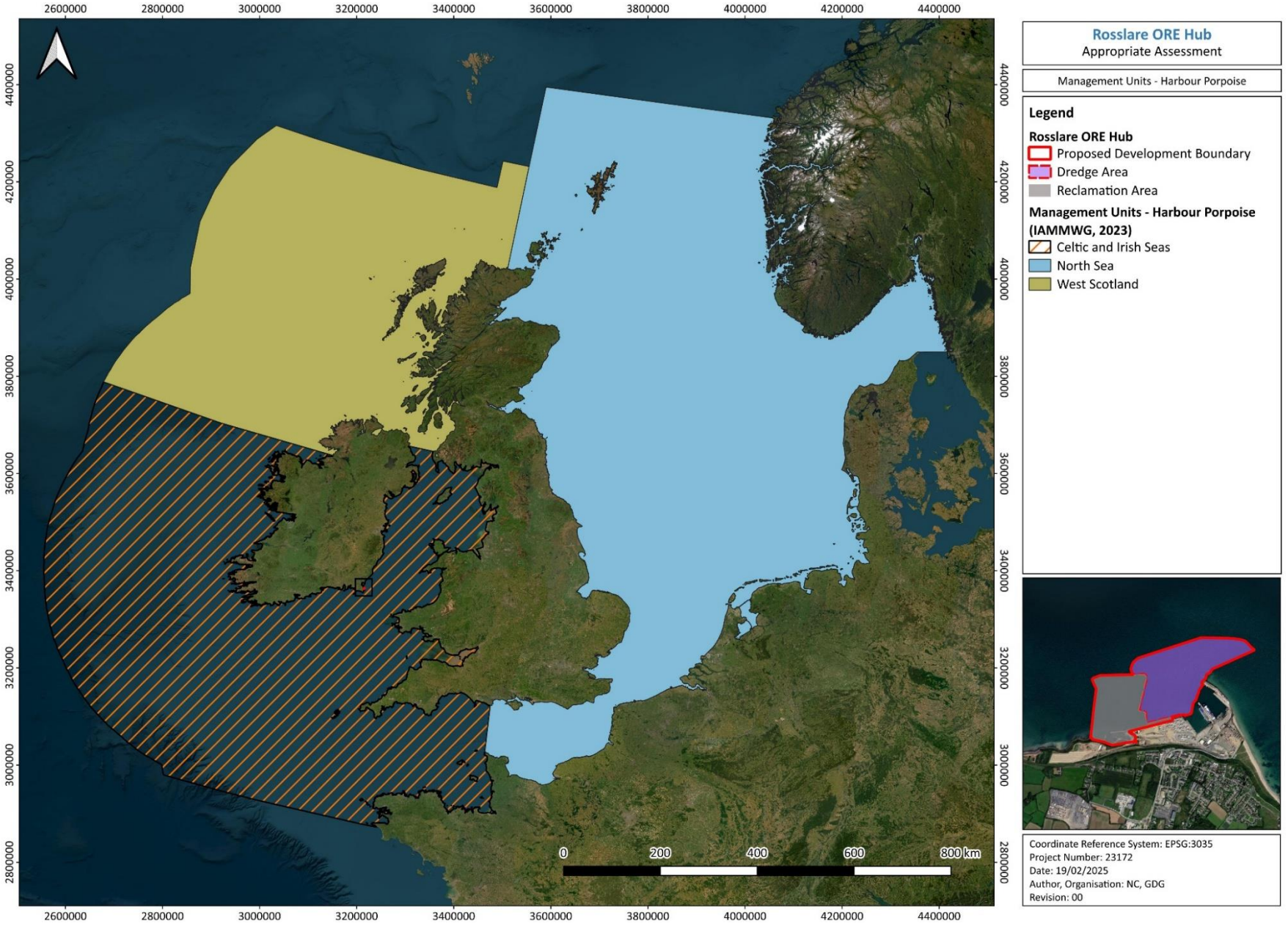

Figure A-1: Management Units – Harbour Porpoise

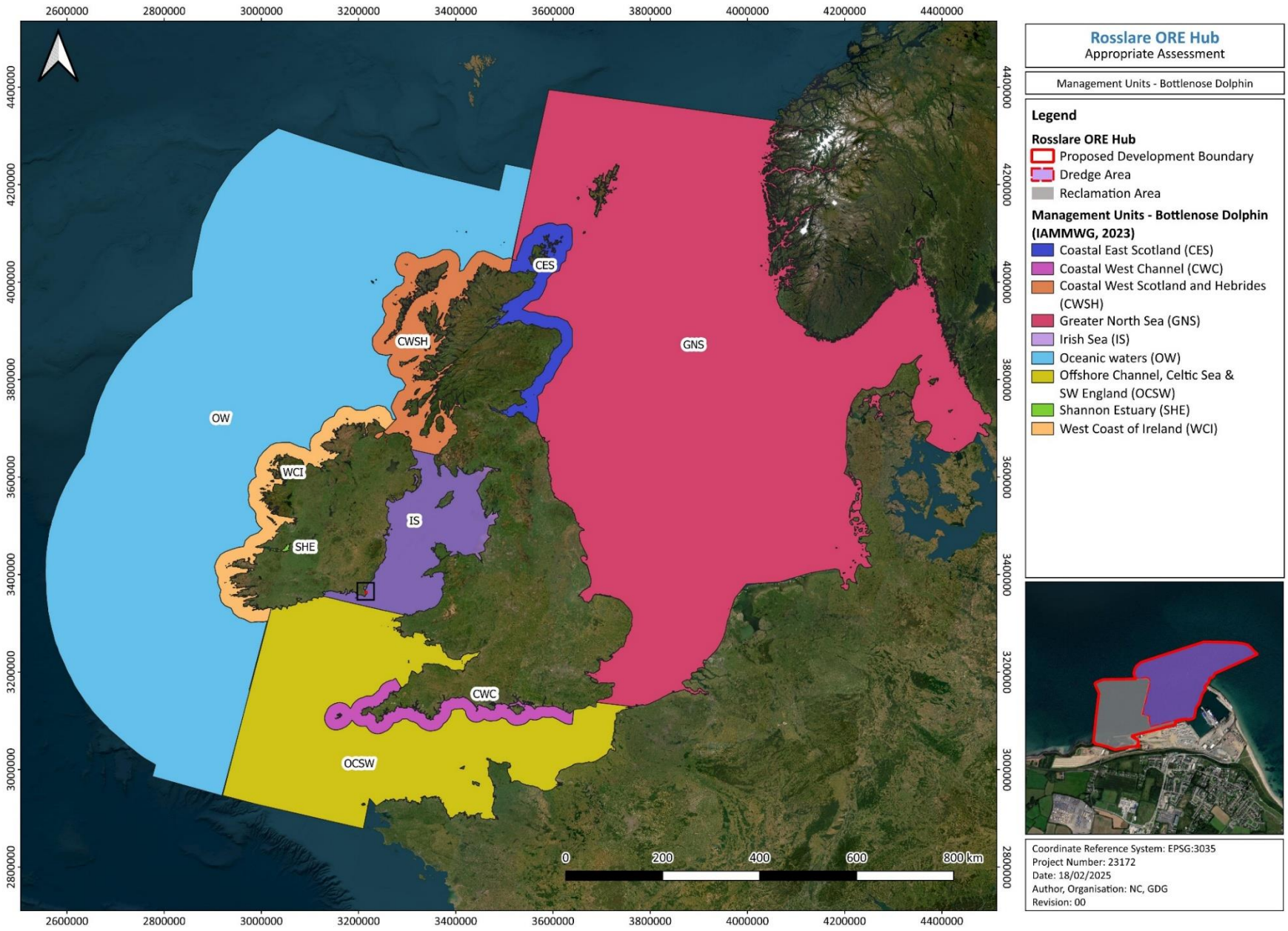

Figure A-2: Management Units – Bottlenose Dolphins

A.3 FISH

Table A-5: Fish injury thresholds for piling.

Fish group	Zero-to-peak SPL (dB re 1 µPa^2)	cSEL (dB re 1 µPa^{2}s)		
	Potential mortal injury or recoverable injury	Potential mortal injury	Recoverable injury	TTS
Fish with no swim bladder	213	219	216	186
Fish with swim bladder involved in hearing	207	210	203	186
Fish with swim bladder not involved in hearing	207	207	203	186
Fish eggs and larvae	207	210	N/A	N/A

APPENDIX B

The GDG measuring tool used to measure distances to Natura 2000 sites includes UK SAC and SPA sites, which are included in the maps below for completeness. UK SAC and SPA sites are no longer part of the Natura 2000 network and are not consideredin this Stage 1 AA screening report.

Table B-1: Summary of Irish SPA for Consideration within the Assessment

		Max Forag	5	9	18.5	21.5	12.6	13.2	18	25.6	25.7	50	34.3	58.8	91.7	73.2	88.7	127	137.1	156.1	336	315.2	542.3	1346.8	73	20	
Site Code	**Site Name**	**Distance from**	**Littl_Tern**	**R.Th_Diver**	**Bk.Hd_Gull**	**Eider**	**Roseate Tern**	**Shag**	**Common Tern**	**Cormorant**	**Arcti_Tern**	**Common Gull**	**Sandwich Tern**	**Herri_Gull**	**Leach's Storm-**	**Guillemot**	**Razorbill**	**Le.Bk_Gull**	**Puffin**	**Kittiwake**	**European Storm-**	**Gannet**	**Fulmar**	**Manx_Shear**	**Great Black-backed Gull**	**Med Gull**	**Consider for S-P-R**
004237	Seas off Wexford SPA	0	YES	YES	YES	NO - species not present	YES	YES	YES	YES	YES	NO - species not present	YES	YES	NO - species not present	YES	YES	YES	YES	YES	NO - species not present	YES	YES	YES	NO - species not present	YES	YES
004019	The Raven SPA	6.5	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES
004076	Wexford Harbour and Slobs	8.7	NO - out of range	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES
004009	Lady's Island Lake SPA	13.97	NO - species not present	NO - species not present	YES	NO - species not present	NO - out of range	NO - species not present	YES	NO - species not present	YES	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES
004002	Saltee Islands SPA	25.8	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - out of range	NO - species not present	NO - out of range	NO - species not present	NO - species not present	NO - species not present	YES	NO - species not present	YES	YES	YES	YES	YES	NO - species not present	YES	YES	NO - species not present	NO - species not present	NO - species not present	YES
004127	Wicklow Head SPA	80.6	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES
004192	Helvick Head to Ballyquin SP	91.9	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - out of range	NO - species not present	NO - species not present	NO - species not present	NO - out of range	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES
004023	Ballymacoda Bay SPA	118.3	NO - species not present	NO - species not present	NO - out of range	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - out of range	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES
004113	Howth Head Coast SPA	125.7	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES
004117	Ireland's Eye SPA	130.1	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - out of range	NO - species not present	NO - species not present	NO - species not present	NO - out of range	NO - species not present	NO - out of range	NO - out of range	NO - species not present	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES
004069	Lambay Island SPA	138.8	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - out of range	NO - species not present	NO - out of range	NO - species not present	NO - species not present	NO - species not present	NO - out of range	NO - species not present	NO - out of range	NO - out of range	NO - out of range	NO - out of range	YES	NO - species not present	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES
004236	North-West Irish Sea SPA	170.9	NO - out of range	NO - out of range	NO - out of range	NO - species not present	NO - out of range	NO - out of range	NO - out of range	NO - out of range	NO - out of range	NO - out of range	NO - species not present	NO - out of range	NO - species not present	NO - out of range	NO - out of range	NO - out of range	NO - out of range	NO - out of range	NO - species not present	NO - species not present	YES	YES	NO - out of range	NO - species not present	YES	
004155	Beara Peninsula SPA	286.44	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	YES
004066	The Bull And The Cow Rocks	297.5	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - out of range	NO - species not present	YES	YES	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES
004175	Deenish Island and Scariff Is	313.5	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - out of range	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - out of range	NO - species not present	NO - species not present	YES	NO - species not present	YES	YES	NO - species not present	NO - species not present	YES
004154	Iveragh Peninsula SPA	319.4	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - out of range	NO - species not present	NO - species not present	NO - species not present	NO - out of range	NO - species not present	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	YES
004007	Skelligs SPA	326.5	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - out of range	NO - species not present	NO - species not present	NO - out of range	NO - out of range	YES	NO - out of range	YES	YES	NO - species not present	NO - species not present	YES
004003	Puffin Island SPA	327.9	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - out of range	NO - out of range	NO - out of range	NO - species not present	YES	NO - species not present	YES	YES	NO - species not present	NO - species not present	YES
004008	Blasket Islands SPA	353.6	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - out of range	NO - species not present	NO - species not present	NO - out of range	NO - species not present	NO - species not present	NO - out of range	NO - species not present	NO - species not present	NO - out of range	NO - out of range	NO - out of range	NO - out of range	NO - out of range	NO - out of range	NO - species not present	YES	YES	NO - species not present	NO - species not present	YES
004153	Dingle Peninsula SPA	357.67	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	YES
004189	Kerry Head SPA	411.37	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	YES
004194	Horn Head to Fanad Head SP	471.6	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - out of range	NO - species not present	NO - out of range	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - out of range	NO - out of range	NO - species not present	NO - species not present	NO - out of range	NO - species not present	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	YES
004005	Cliffs of Moher SPA	475.2	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - out of range	NO - out of range	NO - species not present	NO - out of range	NO - out of range	NO - species not present	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	YES
004073	Tory Island SPA	484.4	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - out of range	NO - species not present	NO - out of range	NO - species not present	NO - species not present	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	YES

Table B-2: Summary of UK SPA for Consideration within the Assessment

		Max Foraging range (km) -->	25.6	25.7	50	62.5	58.8	73.2	88.7	127	137.1	156.1	336	315.2	443.3	542.3	1346.8	
Site Code	**Site Name**	**Distance from Rosslare (km)**	**Cormorant**	**Arctic Tern**	**Common Gull**	**Arctic Skua**	**European Herring Gull**	**Common Guillemot**	**Razorbill**	**Lesser Black-backed Gull**	**Puffin**	**Kittiwake**	**European Storm-petrel**	**Gannet**	**Great Skua**	**Fulmar**	**Manx Shearwater**	**Consider for S-P-R**
UK9014051	Skomer, Skokholm and the Seas off Pembrokeshire	75.7	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES
UK9014041	Grassholm	80.6	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	YES
UK9013121	Glannau Aberdaron ac Ynys Enlli/ Aberdaron Coast and Bardsey Island	106.8	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES	YES
UK9020328	Irish Sea Front	171.5	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES	YES
UK9020288	Isles of Scilly	253.2	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES	NO - species not present	NO - species not present	NO - species not present	NO - species not present	YES

Table B-3: Summary of French SPA for Consideration within the Assessment

		Max Foraging range (km) -->	**336**	**315.2**	**443.3**	**542.3**	**1346.8**	
Site Code	**Site Name**	**Distance from Rosslare (km)**	**European Storm-petrel**	**Gannet**	**Great Skua**	**Fulmar**	**Manx Shearwater**	**Consider for S-P-R**
FR5212016	Mers Celtiques - Talus du golfe de Gascogne	351.4	NO - out of range	NO - out of range	YES	YES	YES	YES
FR5310072	Ouessant-Molène	424.6	NO - out of range	NO - out of range	YES	YES	YES	YES
FR5310011	Cote de Granit Rose-Sept Iles	431.2	NO - out of range	NO - out of range	NO - species not present	YES	YES	YES
FR5310073	Baie de Morlaix	435.4	NO - out of range	NO - out of range	NO - species not present	NO - species not present	YES	YES
FR2512005	Nord Bretagne DO	442.9	NO - out of range	NO - out of range	YES	YES	YES	YES
FR5310070	Tregor Goëlo	454.2	NO - species not present	NO - species not present	NO - species not present	YES	NO - species not present	YES
FR5312004	Camaret	463.8	NO - out of range	NO - species not present	NO - species not present	YES	NO - species not present	YES
FR5310055	Cap Sizun	482.4	NO - out of range	NO - out of range	NO - species not present	YES	NO - species not present	YES

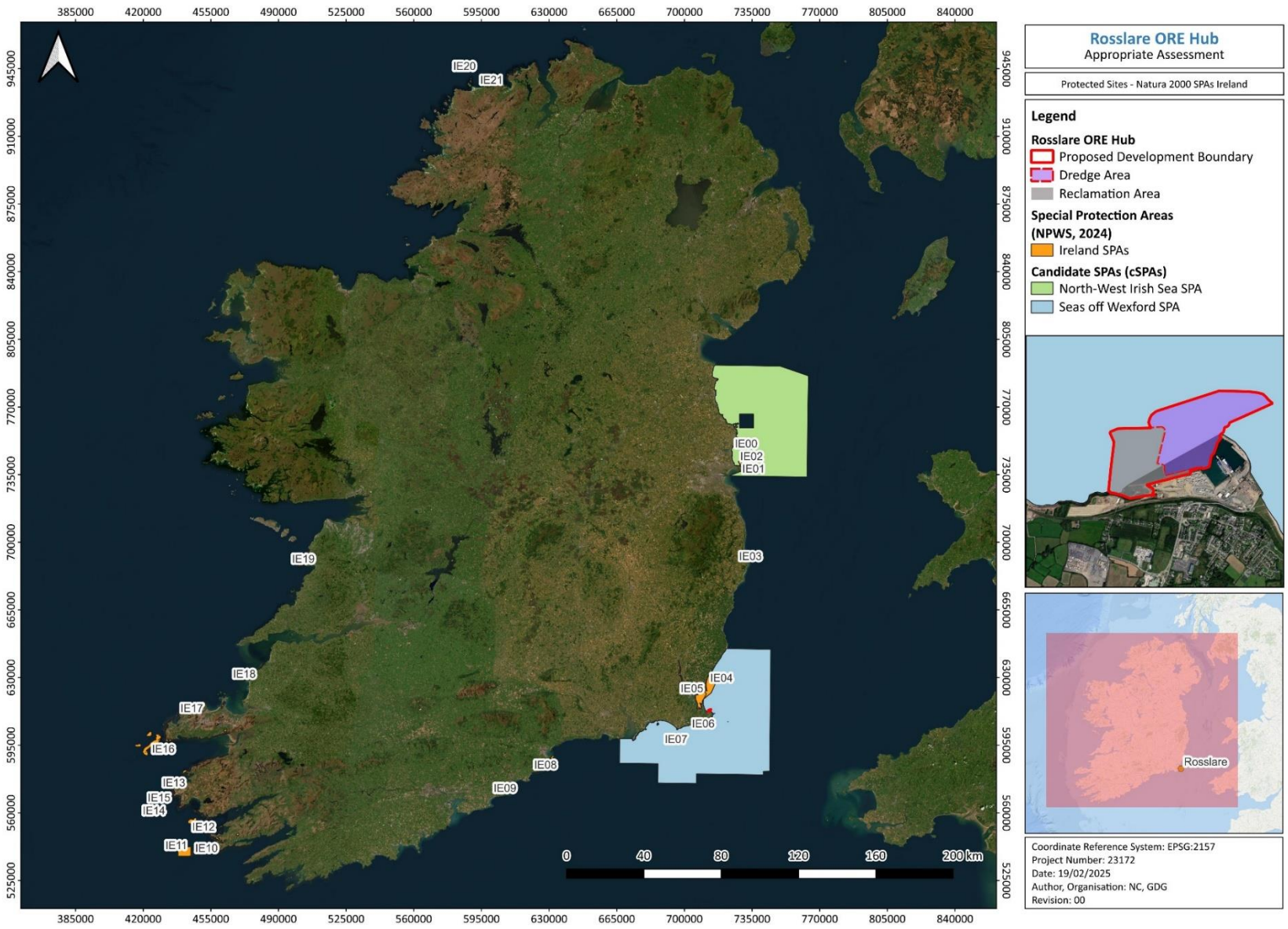

Figure B-1: Irish SPA

Table B-4: Irish SPAs

Site Code	Site Name	Label
004069	Lambay Island SPA	IE00
004113	Howth Head Coast SPA	IE01
004117	Ireland's Eye SPA	IE02
004127	Wicklow Head SPA	IE03
004019	The Raven SPA	IE04
004076	Wexford Harbour and Slobs SPA	IE05
004009	Lady's Island Lake SPA	IE06
004002	Saltee Islands SPA	IE07
004192	Helvick Head to Ballyquin SPA	IE08
004023	Ballymacoda Bay SPA	IE09
004155	Beara Peninsula SPA	IE10
004066	The Bull And The Cow Rocks SPA	IE11
004175	Deenish Island and Scariff Island SPA	IE12
004154	Iveragh Peninsula SPA	IE13
004007	Skelligs SPA	IE14
004003	Puffin Island SPA	IE15
004008	Blasket Islands SPA	IE16
004153	Dingle Peninsula SPA	IE17
004189	Kerry Head SPA	IE18
004005	Cliffs of Moher SPA	IE19
004073	Tory Island SPA	IE20
004194	Horn Head to Fanad Head SPA	IE21

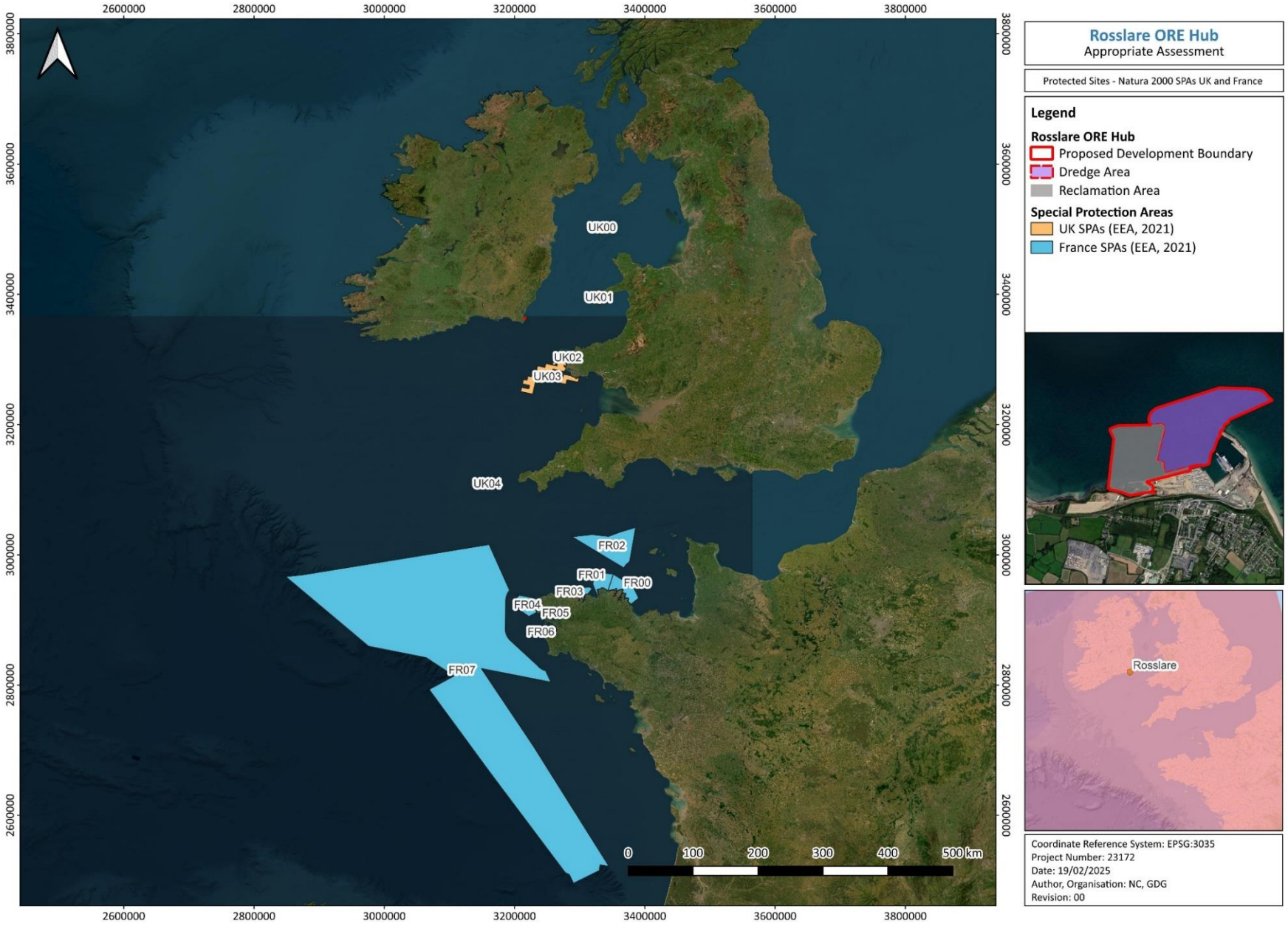

Figure B-2: SPA UK & France.

Table B-5: UK and French SPAs

Site Code	Site Name	Label
UK9020328	Irish Sea Front	UK00
UK9013121	Glannau Aberdaron ac Ynys Enlli/ Aberdaron Coast and Bardsey Island	UK01
UK9014041	Grassholm	UK02
UK9014051	Skomer, Skokholm and the Seas off Pembrokeshire	UK03
UK9020288	Isles of Scilly	UK04
FR5310070	Tregor Goëlo	FR00
FR5310011	Cote de Granit Rose-Sept Iles	FR01
FR2512005	Nord Bretagne DO	FR02
FR5310073	Baie de Morlaix	FR03
FR5310072	Ouessant-Mol	FR04
FR5312004	Camaret	FR05
FR5310055	Cap Sizun	FR06
FR5212016	Mers Celtiques - Talus du golfe de Gascogne	FR07

Table B-6: Irish SAC for Consideration in the Assessment

Site Code	Site Name	Distance from Rosslare (km)	Otter	Twaite Shad	Atlantic Salmon	Sea Lamprey	River Lamprey	Harbour Seal	Grey Seal	Harbour Porpoise	Bottlenose Dolphin	Consider for S-P-R
002269	Carnsore Point SAC	1.5	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species	YES	NO - species not present	YES
002953	Blackwater Bank SAC	4.9	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species	YES	NO - species not present	YES
000781	Slaney River Valley SAC	6.6	NO - out of ra	YES	YES	YES	YES	YES	NO - species	NO - species not present	NO - species not present	YES
000707	Saltee Islands SAC	21.0	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species	YES	NO - species not present	NO - species not present	YES
003000	Rockabill to Dalkey Island SAC	112.9	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species	YES	NO - species not present	YES
003015	Codling Fault Zone SAC	123.5	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species	YES	NO - species not present	YES
000204	Lambay Island SAC	139.4	NO - species	NO - species	NO - species	NO - species	NO - species	YES	YES	YES	NO - species not present	YES
000101	Roaringwater Bay and Islands SAC	234.5	NO - out of ra	NO - species	NO - species	NO - species	NO - species	NO - species	YES	YES	NO - species not present	YES
002158	Kenmare River SAC	293.6	NO - out of ra	NO - species	NO - species	NO - species	NO - species	NO - out of r	NO - species	YES	NO - species not present	YES
002172	Blasket Islands SAC	349.9	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species	YES	YES	NO - species not present	YES
000213	Inishmore Island SAC	481.0	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species	YES	NO - species not present	YES
002111	Kilkieran Bay and Islands SAC	492.0	NO - out of ra	NO - species	NO - species	NO - species	NO - species	NO - out of r	NO - species	YES	NO - species not present	YES
000625	Bunduff Lough and Machair/Trawalua/Mullaghmore SAC	587.8	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species	YES	NO - species not present	YES
002998	West Connacht Coast SAC	596.5	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species	YES	NO - outside relevant MU	YES
002329	South-West Porcupine Bank SAC	620.0	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species not present	NO - outside relevant MU	No
003001	Porcupine Bank Canyon SAC	621.0	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species	NO - species not present	NO - outside relevant MU	No

Table B-7: UK SAC for Consideration in the Assessment

		Max Foraging range (km) -->	273	448	Management Units		
Site Code	Site Name	Distance from Rosslare (km)	Harbour Seal	Grey Seal	Harbour Porpoise	Bottlenose Dolphin	Consider for S-P-R
UK0013116	Pembrokeshire Marine/ Sir Benfro Forol	64.9	NO - species not present	YES	NO - species not present	NO - species not present	YES
UK0030397	West Wales Marine / Gorllewin Cymru Forol	72.1	NO - species not present	NO - species not present	YES	NO - species not present	YES
UK0012712	Cardigan Bay/ Bae Ceredigion	91.0	NO - species not present	NO - species not present	NO - species not present	YES	YES
UK0013117	Pen Llyn a`r Sarnau/ Lleyn Peninsula and the Sarnau	112.4	NO - species not present	NO - species not present	NO - species not present	YES	YES
UK0030396	Bristol Channel Approaches / Dynesfeydd Môr Hafren	128.7	NO - species not present	NO - species not present	YES	NO - species not present	YES
UK0030398	North Anglesey Marine / Gogledd Môn Forol	140.1	NO - species not present	NO - species not present	YES	NO - species not present	YES
UK0013114	Lundy	161.8	NO - species not present	YES	NO - species not present	NO - species not present	YES
UK0016612	Murlough	210.7	YES	NO - species not present	NO - species not present	NO - species not present	YES
UK0030399	North Channel	221.1	NO - species not present	NO - species not present	YES	NO - species not present	YES
UK0016618	Strangford Lough	234.5	YES	NO - species not present	NO - species not present	NO - species not present	YES
UK0013694	Isles of Scilly Complex	251.6	NO - species not present	YES	NO - species not present	NO - species not present	YES
UK0030384	The Maidens	303.0	NO - species not present	YES	NO - species not present	NO - species not present	YES

Table B-8: French SAC for Consideration in the Assessment

			Management Units		
Site Code	Site Name	Distance from Rosslare (km)	Harbour Porpoise	Bottlenose Dolphin	Consider for S-P-R
FR5302015	Mers Celtiques - Talus du golfe de Gascogne	351.4	YES	NO - outside relevant MU	YES
FR2502022	Nord Bretagne DH	383.9	YES	NO - outside relevant MU	YES
FR5300017	Abers - Côte des légendes	423.2	YES	NO - outside relevant MU	YES
FR5300018	Ouessant-Molène	424.6	YES	NO - outside relevant MU	YES
FR5300009	Côte de Granit rose-Sept-Iles	431.2	YES	NO - outside relevant MU	YES
FR5300015	Baie de Morlaix	435.4	YES	NO - species not present	YES
FR5300010	Tregor Goëlo	454.2	YES	NO - outside relevant MU	YES
FR5302006	Côtes de Crozon	462.2	YES	NO - species not present	YES
FR5302007	Chaussée de Sein	473.1	YES	NO - outside relevant MU	YES
FR5302016	Récifs du talus du golfe de Gascogne	481.7	YES	NO - outside relevant MU	YES
FR2500084	Récifs et landes de la Hague	519.5	YES	NO - outside relevant MU	YES
FR2502019	Anse de Vauville	520.8	YES	NO - outside relevant MU	YES
FR5300011	Cap d'Erquy-Cap Fréhel	522.1	YES	NO - outside relevant MU	YES
FR5300066	Baie de Saint-Brieuc - Est	523.0	YES	NO - outside relevant MU	YES
FR5300012	Baie de Lancieux, Baie de l'Arguenon, Archipel de Saint Malo et Dinard	545.5	YES	NO - outside relevant MU	YES
FR2500079	Chausey	546.7	YES	NO - outside relevant MU	YES
FR5300061	Estuaire de la Rance	562.6	YES	NO - outside relevant MU	YES
FR2500077	Baie du Mont Saint-Michel	575.5	YES	NO - outside relevant MU	YES

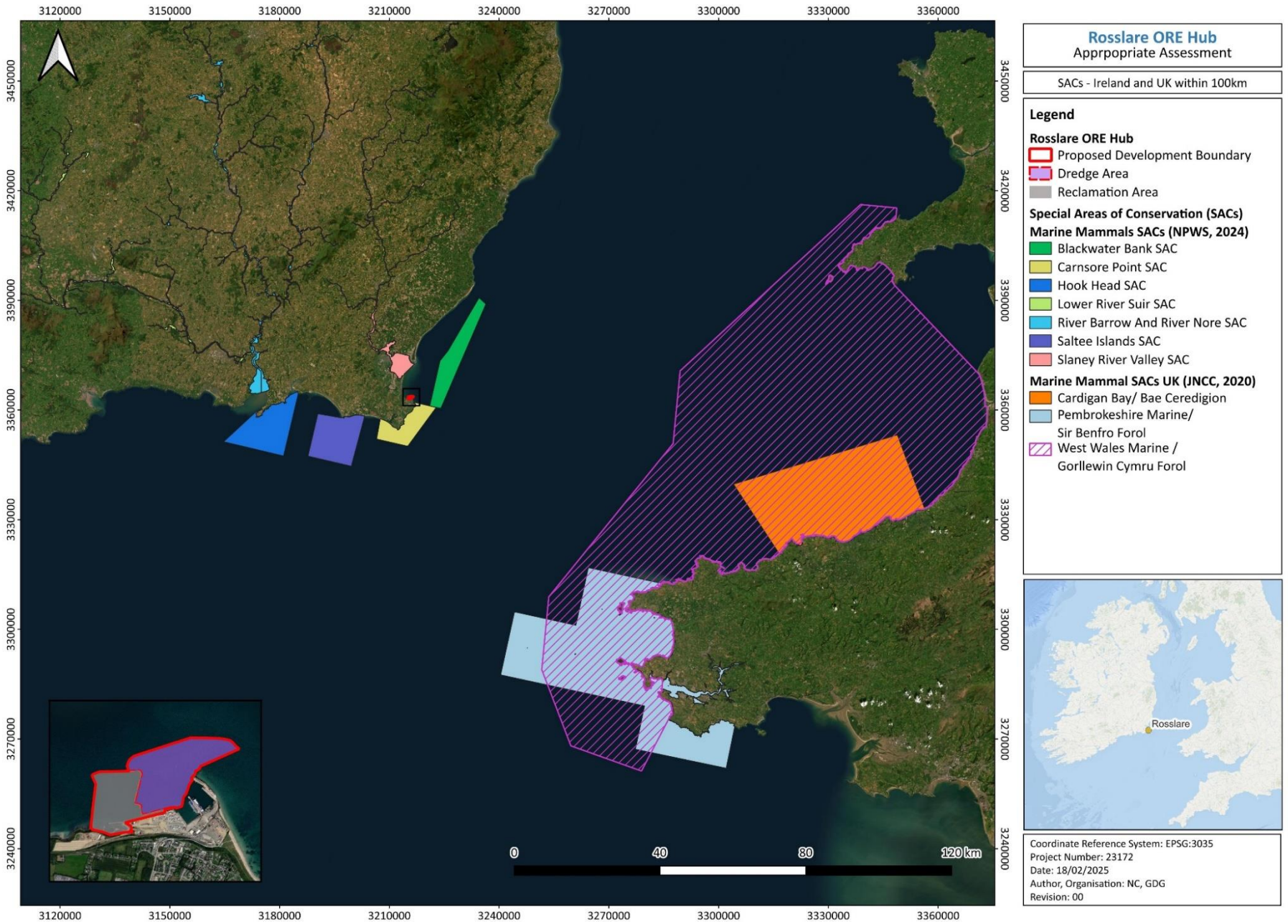

Figure B-3: SAC Locations

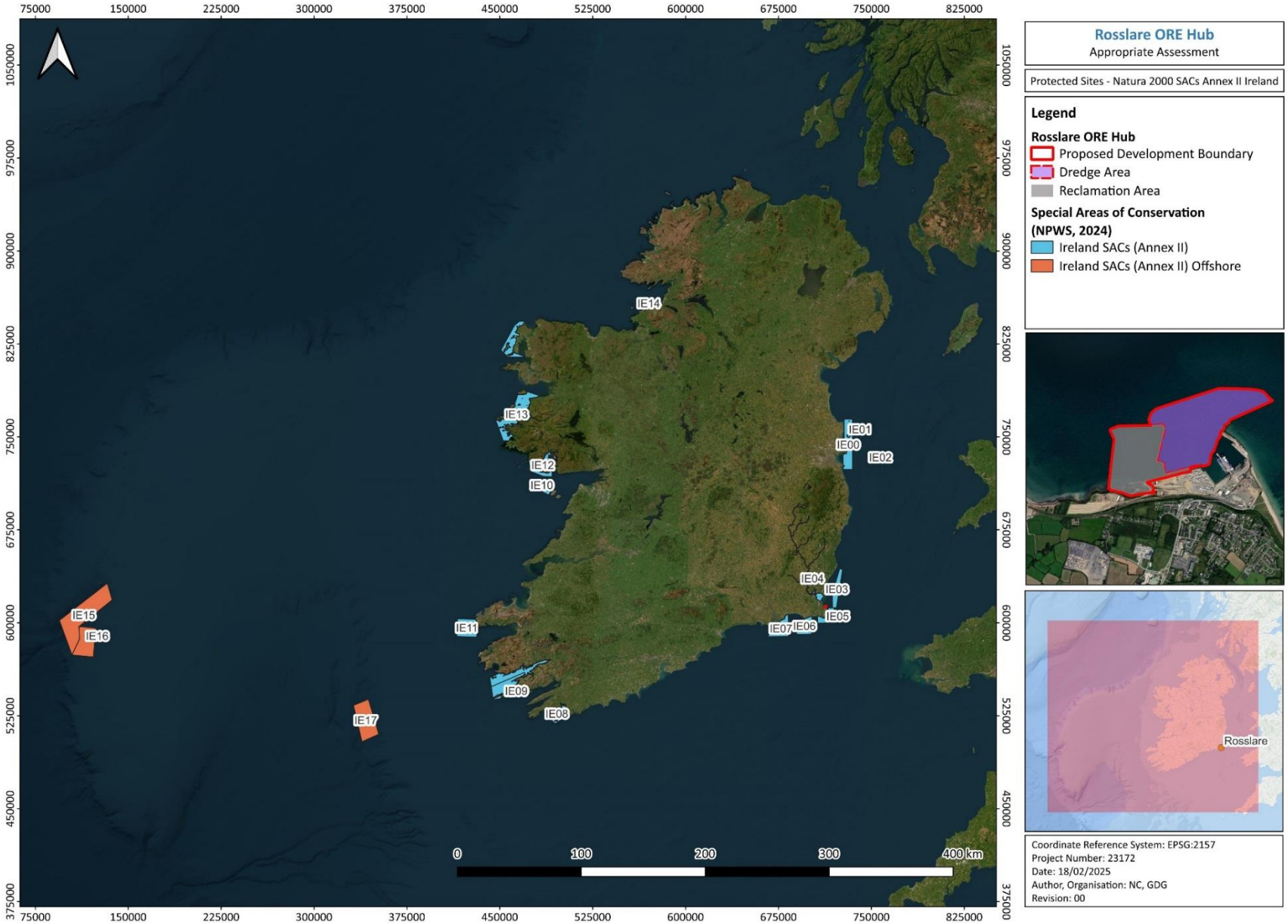

Figure B-4: Irish SACs

Table B-9: Irish SACs

Site Code	Site Name	Label
003000	Rockabill to Dalkey Island SAC	IE00
000204	Lambay Island SAC	IE01
003015	Codling Fault Zone SAC	IE02
002953	Blackwater Bank SAC	IE03
000781	Slaney River Valley SAC	IE04
002269	Carnsore Point SAC	IE05
000707	Saltee Islands SAC	IE06
000764	Hook Head SAC	IE07
000101	Roaringwater Bay and Islands SAC	IE08
002158	Kenmare River SAC	IE09
000213	Inishmore Island SAC	IE10
002172	Blasket Islands SAC	IE11
002111	Kilkieran Bay And Islands SAC	IE12
002998	West Connacht Coast SAC	IE13
000625	Bunduff Lough and Machair/Trawalua/Mullaghmore SAC	IE14
003001	Porcupine Bank Canyon SAC	IE15
002329	South-West Porcupine Bank SAC	IE16
002327	Belgica Mound Province SAC	IE17

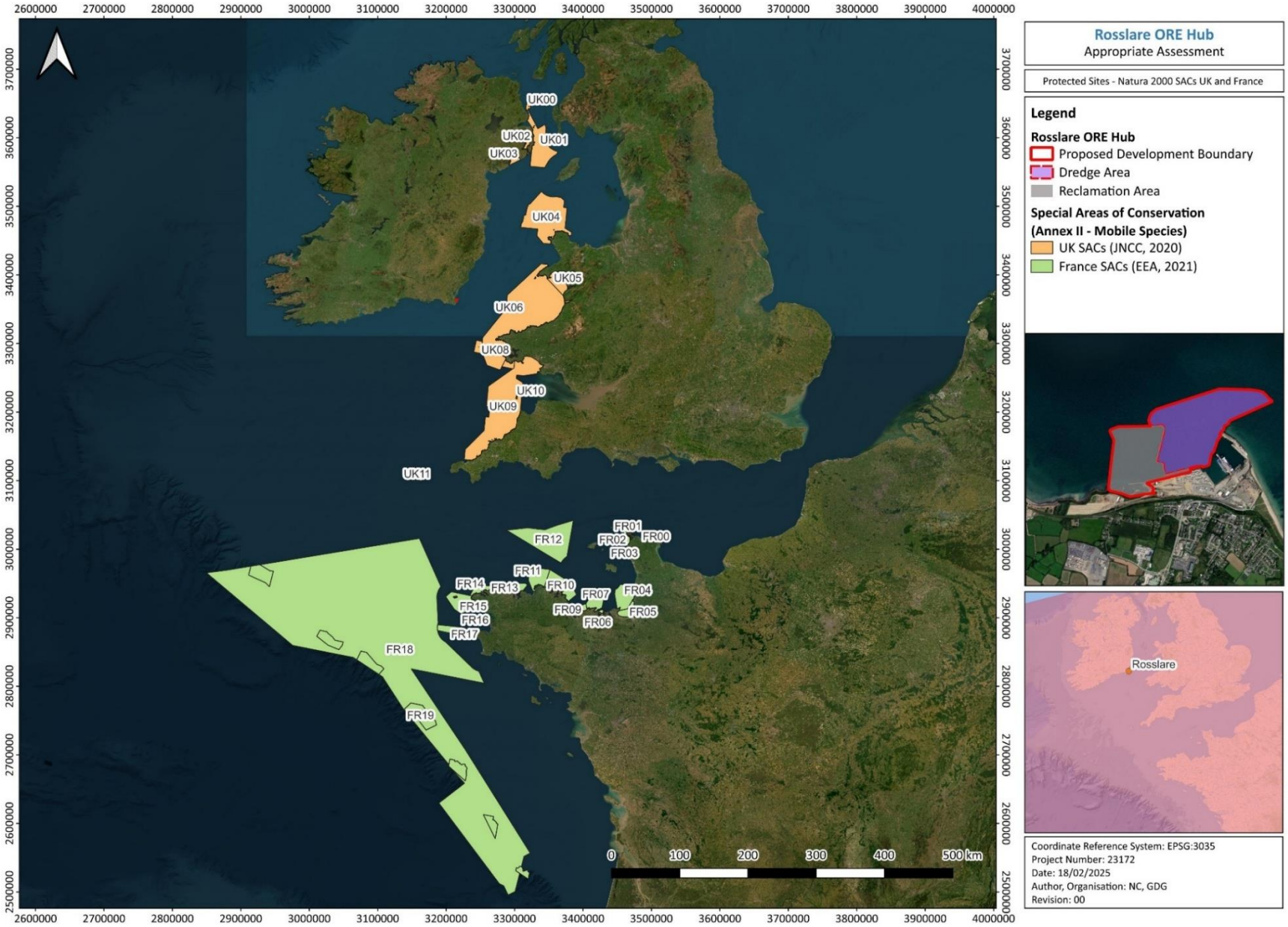

Figure B-5: UK and French SACs

Table B-10: UK SACs

Site Code	Site Name	Label
UK0030384	The Maidens	UK00
UK0030399	North Channel	UK01
UK0016618	Strangford Lough	UK02
UK0016612	Murlough	UK03
UK0030398	North Anglesey Marine	UK04
UK0013117	Pen Llyn a`r Sarnau/ Lleyn Peninsula and the Sarnau	UK05
UK0030397	West Wales Marine / Gorllewin Cymru Forol	UK06
UK0012712	Cardigan Bay/ Bae Ceredigion	UK07
UK0013116	Pembrokeshire Marine/ Sir Benfro Forol	UK08
UK0030396	Bristol Channel Approaches / Dynesfeydd Môr Hafren	UK09
UK0013114	Lundy	UK10
UK0013694	Isles of Scilly Complex	UK11

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