Iarnród Éireann
Irish Rail

Rosslare ORE Hub

EIAR Environmental Topic Chapters

Chapter 14:

Ornithology

venterra | GDG GAVIN & DOHERTY GEOSOLUTIONS | NICHOLAS O'DWYER an RSK company

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LIST OF ABBREVIATIONS

AA	Appropriate Assessment
cSAC	Candidate Special Area of Conservation
cSPA	Candidate Special Protection Area
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EPA	Environmental Protection Agency
EU	European Union
GDG	Gavin & Doherty Geosolutions
IBA	Important Bird and Biodiversity Area
I-WeBS	Irish Wetland Bird Survey
JNCC	Joint Nature Conservation Committee
NBDC	National Biodiversity Data Centre
NHA	Natural Heritage Area
NPWS	National Parks and Wildlife Service
NTS	Non-Technical Summary
OPW	Office of Public Works
ORE	Offshore Renewable Energy
pNHA	Proposed Natural Heritage Area
RMP	Record of Monuments and Places
RoRo	Roll-on Roll-off
SAC	Special Area of Conservation
SCI	Site of Community Importance
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
WBS	Wetland Bird Survey (UK)
WFD	Water Framework Directive
ZoI	Zone of Influence

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14 ORNITHOLOGY

14.1 INTRODUCTION

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.

This chapter of the Environmental Impact Assessment (EIA) Report presents the assessment of the likely significant effects (as per the "EIA Regulations") of the Proposed Development on Ornithology arising from the construction and operation of the Proposed Development, both alone and cumulatively with other projects. The scope of this chapter was determined following issue of a scoping report to the following topic-relevant stakeholder (see EIAR Chapter 4: Scoping and Consultation for full details of consultation):

- Department of Housing, Local Government and Heritage, National Parks and Wildlife Service

The assessment presented in this chapter is informed by the following EIAR chapters/technical appendices:

- Volume 3 – EIAR Technical Appendix 14: Ornithology

Relevant information from Chapter 8: Coastal Processes, Chapter 12: Fish, Shellfish and Turtle Ecology and Chapter 15: Commercial Fisheries and Aquaculture was also used to inform this assessment.

The primary purpose of this chapter is to identify, describe and assess in an appropriate manner, the direct and indirect significant effects of the Proposed Development on key bird species, supporting habitats and designated conservation sites for birds within the Zone of Influence (ZoI) of the Proposed Development.

This chapter comprises the following elements:

- Summary of relevant policy and guidance
- Data sources used to characterise the Study Area

- Summary of consultations with stakeholders
- Methodology followed in assessing the impacts of the Proposed Development (such as information on the Study Area and the approach taken in assessing the potential impacts)
- Summary of baseline conditions
- Assessment of likely effects arising from the construction of the Proposed Development
- Identification of further mitigation measures and/or monitoring requirements (if any) in respect of any significant effects (following the 'mitigation hierarchy' of avoidance, minimisation, restoration and offsets in consecutive order)
- Summary of residual impact assessment determinations in the case of any additional mitigation measures identified during this process

14.1.1 Relevant Legislation and Guidelines

The following topic-relevant policy, legislation and guidance documents have been considered in the preparation of this chapter.

14.1.1.1 Legislation

Flora and fauna in Ireland are protected at a national level by the Wildlife Acts, 1976, as amended and by the European Communities (Birds and Natural Habitats) Regulations, 2011, as amended which transposes the requirements of the EC Habitats Directive (Council Directive 92/43/EEC) and the Birds Directive (Council Directive 79/409/EEC) codified in 2009 as Council Directive 2009/147/EC. Under this legislation, sites of nature conservation importance are then designated in order to legally protect species and important or vulnerable habitats. Designated conservation sites for birds are called Special Protection Areas (SPAs).

For this assessment, reference was made to the following key legislation, plans and policies for birds:

European

- Directive 2009/147/EC of the European Parliament and of the Council on the conservation of wild birds (codified version of Directive 79/409/EEC as amended) (The Birds Directive);

Republic of Ireland

- The Wildlife Act 1976 as amended
- The European Communities (Birds and Natural Habitats) Regulations 2011, as amended;

14.1.1.2 Guidance and Plans

In addition, the ornithological assessment was carried out with reference to the following publications:

- Guidelines on the information to be contained in Environmental Impact Assessment Reports (EPA, 2022);
- Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2 (CIEEM, 2022)

- Implementing the Mitigation Hierarchy from Concept to Construction Guidelines (IEMA, 2024).
- National Biodiversity Action Plan (NBAP) 2023-2030; Ireland's 4th National Biodiversity Action Plan was published by NPWS in 2023 and sets the national biodiversity agenda for the period 2023-2030. For this assessment, reference was made to the NBAP with regard to birds.
- Wexford County Development Plan 2022-2028, published in July 2022. For this assessment, reference was made to the County Development Plan with regard to birds.

14.2 Assessment Methodology

This assessment considers the potential impacts associated with the construction and operation of the Proposed Development and the potential effects on ornithology. The impact assessment process and methodology follow the principles and general approach outlined in Chapter 1: Introduction and Methodology. The methodology and parameters assessed have also taken into account issues identified through consultation with stakeholders as detailed in Section 14.2.2 along with relevant information regarding baseline conditions informed by the data sources referenced in Table 14.2.

The ornithology in the vicinity of the Proposed Development Boundary was first assessed in terms of habitats and species. The area over which the Proposed Development may affect species, designated conservation sites[1] and habitats is referred to as the Zone of Influence. The ZoI may be species-specific, for example during the breeding season, seabirds breeding at a colony will typically have a maximum foraging range or limit to the distance that they will travel from the colony.

The ZoI has been determined by reviewing existing information about the receiving environment within which the Proposed Development Boundary is located, and also site-specific baseline survey data collected for the Proposed Development, as well as evidence from other developments regarding the sensitivity of bird species.

In the breeding season, the ZoI for key seabird species has been determined by published information on the mean maximum foraging ranges of species (Woodward et al., 2019). For the non-breeding season, the wider Irish Sea area is considered appropriate for the majority of species.

For terrestrial bird species, the ZoI for this assessment has been set as the Terrestrial Survey Area, which extended up to 200 m beyond the Proposed Development Boundary (Figure 14.1).

The site-specific baseline bird surveys covered the terrestrial development area and a suitable buffer and also extended from the low water mark out to 1.5 km from shore (Figure 14.1). Further details are provided in Volume 3 – EIAR Technical Appendix 14: Ornithology.

[1] Note interactions between the Proposed Development and Natura 2000 sites, including the Seas off Wexford cSPA, have also been considered and assessed in the Appropriate Assessment (AA) Screening Report and, where relevant, the Natura Impact Statement (NIS), which accompany the planning application. These reports have been produced to support the AA process as required under the Habitats Directive (92/43/EEC) to assist the competent authority, An Coimisiún Pleanála, to undertake the Appropriate Assessment of the Proposed Development.

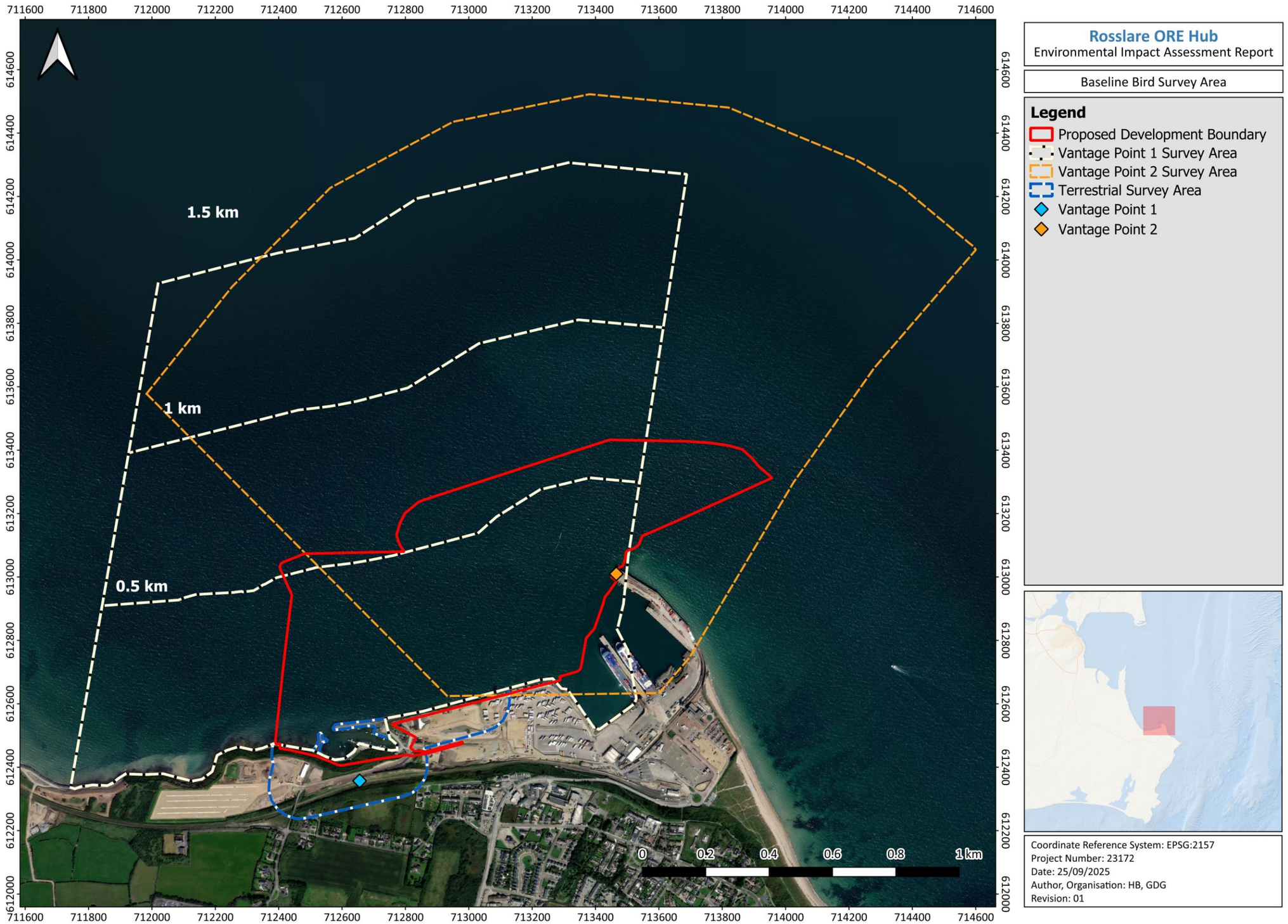


Figure 14.1: Vantage Point and Terrestrial Ornithology Survey Areas

14.2.1 STATEMENT OF COMPETENCE

Colin Barton, of Cork Ecology, is the lead author of the Ornithology chapter. Colin graduated from the University of Aberdeen in 1992, with a BSc. Honours degree in Biology (Ecology). Colin has worked as an independent consultant since 2001, specialising in all aspects of ornithology. He has prepared ornithology chapters for several terrestrial and offshore wind farm projects in Ireland and the UK, with key inputs including survey design, advice, data validation and analysis, the writing of baseline and impact assessment chapters on birds, input into HRA/NIS documents on birds and post-construction monitoring plans.

Site-specific survey data were collected by Nick Veale for APEM Ltd. Nick is a seasoned ornithologist and Principal Ecologist at Veale Ecology, working across the UK and Ireland. With over 22 years' experience, he has worked with consultancies such as RPS Group, WSP, Mouchel, and Golder Associates. Nick specialises in assessing bird collision risk for wind farms, conducting bird surveys, and producing Band collision models for Schedule 1 species. His expertise encompasses a wide range of surveys, including Breeding Bird Surveys (BTO, Atlas & WBBS), Common Bird Census (CBC), Wetland Bird Survey (WeBS), and Ecological Impact Assessments (EcIA). He is trained in European Seabirds at Sea (ESAS) and holds Construction Skills Certification Scheme (CSCS) accreditation with additional quarry site training, ensuring safe operation on construction sites and detailed risk assessments.

14.2.2 TOPIC-SPECIFIC CONSULTATION

As part of the EIA process, consultation regarding ornithology has been undertaken with statutory and non-statutory authorities. A record of key areas of consultation undertaken during the pre-application phases is summarised within Table 14.1.

Table 14.1: Summary of consultation relating to Ornithology

Date	Consultation type	Consultation and key relevant issues raised	Section of EIAR Chapter where provision is addressed
04/09/2023	Phone call	NPWS Consultation following issue of Scoping Report	n/a
24/07/2024	MS Teams meeting	Pre-Application Consultation Meeting with An Bord Pleanála • To ensure proper planning and sustainable development, proposed development consent application needs to consider: ○ Potential impact on birds and extent of survey area, using most up to date data and impact from construction and operation noise ○ Survey work- methodologies adopted, modelling assumptions and any data gaps clearly set out ○ Designated sites and habitats- consideration of Zone of Influence, noting extent of zone of influence can be large given mobility of species, and noting proximity to Seas off Wexford SPA and recent additions to SACs in the area • Important that EIAR includes robust impact assessments, setting out of	• Site-specific survey methods and topic-specific Survey Area(s) are outlined in Section 14.3.1 of this chapter, and in Section 3.2 to Section 3.5 (inclusive) of EIAR Technical Appendix 14.1. • Published data sources used to inform the baseline characterisation are presented in Table 14.2 of this chapter. • Data gaps have been detailed in Section 14.2.7 of this chapter and in Section 3.7 of EIAR Technical Appendix 14.1 • Designated sites in the vicinity of the Proposed Development, with consideration of an appropriate Zone of Influence are detailed Section 14.3.3 of this chapter and are further considered in the Screening for Appropriate Assessment Report in Volume 4 of the EIAR. • Potential impacts on birds are assessed in Section 14.4 of this Chapter and methodology used in assessing these impacts are described in Section 14.2.4 of this chapter

Date	Consultation type	Consultation and key relevant issues raised	Section of EIAR Chapter where provision is addressed
		methodology, most up to date data, source of survey data, dates of surveys etc and identify areas of uncertainty	
22/11/2024	MS Teams meeting	Birdwatch Ireland Consultation • Happy with levels of survey undertaken • Potential for breeding Sandwich terns from Lady's Island Lake to use the Long Bank sea area north-east of Rosslare Harbour for foraging.	• A summary of baseline survey methods is presented in Section 14.3. • A summary of Sandwich tern sightings on baseline surveys is provided in Table 14.8.
10/12/2024	MS Teams meeting	NPWS Consultation Issues raised: • Area of Proposed Development • Ornithology surveys and data • Ornithology – Black Guillemots • Increase in vessel traffic during construction and operation in relation to	• Area of Proposed Development is outlined in Section 4.4 of Chapter 4 - Project Description • Site-specific survey methods are outlined in Section 14.3.1 of this chapter. Published data sources used to inform the baseline characterisation are presented in Table 14.2. • Potential impacts on black guillemots are presented in Section 14.4.4 of this chapter. Information on mitigation measures including provision of artificial nest sites is presented in Section 14.5.2 of this chapter. • Information on mitigation measures is presented in Section 14.5.2 of this chapter.

Date	Consultation type	Consultation and key relevant issues raised	Section of EIAR Chapter where provision is addressed
		disturbance to Qualifying Interest species for the Seas of Wexford cSPA. • Potential mitigation through seasonal restrictions of construction activities.	

14.2.3 DATA SOURCES

The characterisation of the receiving environment has been informed based on information from a series of site-specific monthly bird surveys undertaken between May 2022 and September 2024. In addition, a thorough desk-based study of published data has also been conducted. Full details of the data sources considered in the development of the Ornithology baseline are presented in Table 14.2.

Table 14.2: Data sources considered in the development of the Ornithology Baseline

Data Source	Type of Data	Temporal and Spatial Coverage
Site-specific survey data		
April 2022-September 2024 bird survey data (EIAR Technical Appendix 14: Ornithology)	Monthly vantage point data Winter walkover survey data Breeding bird survey data Roosting tern survey data	26 vantage point (VP) surveys conducted between May 2022 and August 2024 (excluding May and June 2023). In addition, 8 monthly terrestrial winter walkover (WWO) surveys were also conducted between December 2022 and February 2023 (inclusive), and between October 2023 and February 2024 (inclusive). Breeding bird surveys (BBS) were conducted in 2022 (3 surveys from May to June), in 2023 (6 surveys from March to June, with 2 surveys in April and 2 surveys in May) and 2024 (3 surveys from April to June) breeding seasons Two roosting tern surveys were conducted during each tern survey period; August and September 2022, September 2023, and August and September 2024 These data were used to inform the EIAR Assessment.

Data Source	Type of Data	Temporal and Spatial Coverage
Published survey data covering the wider region		
I-WeBS (Irish Wetland Bird Survey) data	Data were supplied by the Irish Wetland Bird Survey (I-WeBS), a scheme coordinated by BirdWatch Ireland under contract to the National Parks and Wildlife Service of the Department of Housing, Local Government and Heritage	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 aerial surveys (Jessop *et al.,* 2018)	Published Report	Fine-scale aerial surveys conducted in summer, autumn and winter 2016 to assess the occurrence and distribution of seabird species in the western Irish Sea. This report was used to provide recent context for the wider Irish Sea.
ObSERVE II 2021 & 2022 aerial surveys (Giralt Paradell *et al.,* 2024))	Published Report	Fine-scale aerial surveys conducted 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. This report was used to provide recent context for the waters around Rosslare Harbour.
NPWS Online Protected Sites Database	Site Synopses and other information for relevant SPA conservation sites for birds https://www.npws.ie/protected-sites	Summary information regarding populations of Species of Conservation Interest (SCI) for SPAs
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. These data were used to provide SPA reference populations for breeding seabirds for the EIAR.

Data Source	Type of Data	Temporal and Spatial Coverage
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. These data were used to provide SPA reference populations for breeding seabirds for the EIAR.
Cummins *et al.*, 2019	NPWS published report	The Status of Ireland's Breeding Seabirds: Birds Directive Article 12 Reporting 2013 – 2018. These data were used to provide SPA reference populations for breeding seabirds for the EIAR.
Balmer *et al.*, 2013	Bird Atlas 2007-11: The Breeding and Wintering Birds of Britain and Ireland	Published summaries of breeding and wintering bird survey data collected between 2007 and 2011. Information was used to provide recent context for terrestrial and waterbird species recorded on baseline surveys in the vicinity of the Proposed Development Boundary.
National Biodiversity Data Centre Records	Online bird datasets for Ireland were obtained from the NBDC website (NBDC, 2024) at: https://maps.biodiversityireland.ie/Dataset	Online database of historic and recent bird records from national atlases and other datasets. Information was used to provide recent context for terrestrial and waterbird species recorded on baseline surveys in the vicinity of the site.

14.2.4 Approach to Assessment of Effects

An assessment of the likely significant impacts of the Proposed Development on the identified key bird species is presented in Section 14.4. This was carried out with regard to the criteria outlined in relevant impact assessment guidelines (EPA, 2022; CIEEM, 2022) that focus on a number of parameters, including magnitude of impact, duration, reversibility and species sensitivity, that should be considered when determining the elements of a proposed development that could be considered

as sources of impacts. Once impacts were defined, the significance of these impacts were then categorised based on EPA Guidelines (EPA, 2022).

The impact assessment process and methodology follow the principles and general approach outlined in Chapter 1: Introduction and Methodology, with some adaptations to make it specific to ornithological receptors. The methodology and parameters assessed have also considered issues identified through consultation with stakeholders as detailed in Table 14.1 and the understanding of baseline conditions informed by the data sources referenced in Table 14.2.

The baseline information obtained has been used to provide an understanding of the value of each receptor relevant to this topic (the 'baseline scenario'), and its sensitivity to the potential impacts associated with the construction and operation of the Proposed Development.

The baseline scenario has been determined with due consideration of the 'do nothing' scenario.

The 'source-pathway-receptor' model has been used to identify potential impacts resulting from the Proposed Development activities on the environment and sensitive receptors therein.

Chapter 6: Project Description of this EIAR outlines the Proposed Development activities for the construction and operation stages which have been assessed against the ornithology baseline to identify any potential interactions between the Proposed Development and the environment. These potential impacts were then assessed to determine a level of significance of effect upon the receiving environment.

The process for determining the significance of effects involves defining the sensitivity of the receptors and the magnitude of the potential impacts. This section describes the criteria applied in this chapter to assign values to the sensitivity of the key bird species and the magnitude of potential impacts. The potential environmental impacts identified have been assessed using a systematic approach to identify and evaluate the significance of the potential impacts both alone and in combination with impacts arising from other projects.

14.2.4.1 Sensitivity of Receptor Criteria

One of the core components of the assessment of potential impacts and their effects on birds is the sensitivity of a species.

In addition, there is a need to consider the conservation importance of a species when determining the overall sensitivity to any potential impact or effect. This needs to be taken on a species-by-species basis, as a species with a high conservation importance may not be sensitive to a specific effect, while a species with a low conservation importance might be very sensitive to the effect. For example, kittiwake is a species listed as a Special Conservation Interest (SCI) for some SPAs in Ireland and is classified as having a 'Red' conservation concern status in Ireland due to recent population declines (Gilbert *et al*., 2021). However, kittiwake is not considered to be particularly sensitive to human disturbance, as there are numerous examples of individuals nesting on man-made structures such as buildings, oil rigs and bridges. Red-throated diver is also a species listed as a SCI for some SPAs in Ireland and is currently 'Amber-listed' in the most recent Birds of Conservation Concern in Ireland (BoCCI) rankings (Gilbert *et al*., 2021). However, red-throated diver is considerably more sensitive to human-related disturbance than kittiwake.

The conservation importance of a species is based on the status of the population from which individuals are predicted to originate from. For this assessment, conservation importance is primarily related to the degree of connectivity of receptor species to SPAs in the region. Criteria for defining the sensitivity and conservation importance in this chapter are outlined in Table 14.3.

Table 14.3: Defining criteria of conservation importance for key bird species

Importance	Defining Criteria
International	Internationally designated sites within mean maximum foraging range +1 Standard Deviation (S.D.) of the Proposed Development in the breeding season (after Woodward et al., 2019). Regularly occurring species protected under international law (i.e., Annex I species listed as SCIs of SPAs within mean maximum foraging range +1 S.D. of the Proposed Development for breeding species, or for non-breeding season SPAs in the south-west Irish Sea).
National	Nationally designated sites within mean maximum foraging range +1 S.D. of the Proposed Development. Species protected under national law. Regularly occurring Annex I or Birds Directive Migratory species which are not listed as SCIs of SPAs within mean maximum foraging range +1 S.D. of the Proposed Development. BoCCI 'Red' list (Gilbert *et al.*, 2021) species that have nationally important populations within the south-west Irish Sea.
Regional	BoCCI 'Red' list (Gilbert *et al.,* 2021) species that have regionally important populations within the south-west Irish Sea (i.e., are locally widespread and/or abundant).
Local	The species is common throughout Irish waters but forms a key component of the bird assemblages in the south-west Irish Sea.

Previous reviews have ranked individual seabird and waterbird species for their sensitivity to potential impacts such as disturbance and displacement (e.g., Furness and Wade, 2012, Furness *et al*., 2013, Bradbury *et al.,* 2014, Dierschke *et al*., 2016). For terrestrial birds, several studies have assessed the sensitivity of species to disturbance and displacement, ranking them by factors such as flight initiation/flush distances, disturbance thresholds, and population responses (Ruddock and Whitfield, 2007; Blumstein *et al*., 2005; Pearce-Higgins *et al*., 2012). Conclusions from these reviews have been used to inform definitions of sensitivity for seabird species. For terrestrial waders and waterbirds, sensitivity to disturbance has been based on species information presented in the online Waterbird Disturbance Mitigation Toolkit (Cutts *et al.*, 2013), and on other studies (e.g., Hong Kong Bird Watching Society, 2016; Pierce-Higgins *et al*., 2012; Goodship & Furness, 2022).

A summary of conservation importance has been included (Table 14.4).

Table 14.4: Sensitivity and conservation importance criteria for key bird species

Sensitivity	Definition
High	Species has low tolerance of sources of disturbance such as noise, light, vessel movements and human activity, or a low tolerance of habitat loss. The receptor is of international importance and/or there is clear connectivity to a particular SPA.
Medium	Species has moderate tolerance of sources of disturbance such as noise, light, vessel movements and human activity, or a moderate tolerance of habitat loss. The receptor is of national or international importance and/or individuals at risk are probably drawn from a particular SPA, although other colonies (including non-SPA colonies) may also contribute to the population at risk.
Low	Species has high tolerance of sources of disturbance such as noise, light, vessel movements and human activity, or a high tolerance of habitat loss. The receptor is of national importance and/or it is not possible to determine connectivity to any SPAs with any certainty, or no SPAs designated for this species.
Negligible	Species has very high tolerance of sources of disturbance such as noise, light, vessel movements and human activity, or a very high tolerance of habitat loss. The receptor is of local importance and/or no SPAs are designated for this species.

14.2.4.2 MAGNITUDE OF IMPACT CRITERIA

The criteria for defining magnitude levels for key bird species in this chapter are outlined in Table 14.5. This set of criteria has been determined on the basis of predicted changes to regional bird populations. Timescales are based on definitions provided in EPA guidance (EPA, 2022).

Table 14.5: Magnitude of impact criteria

Magnitude	Definition
High	A change in the size or extent of distribution of the relevant regional population or the population that is the interest feature of a specific protected site that is predicted to irreversibly alter the population in the short-to-long term and to alter the long-term viability of the population and/or the integrity of the protected site. Recovery from that change predicted to be achieved in the long-term or irreversible following cessation of the project-related activity.
Medium	A change in the size or extent of distribution of the relevant regional population or the population that is the interest feature of a specific protected site that occurs in the short and long-term, but which is not predicted to alter the long-term viability of the population and/or the integrity of the protected site. Recovery from that change predicted to be achieved in the medium-term (i.e. in seven to 15 years) following cessation of the project-related activity.
Low	A change in the size or extent of distribution of the relevant regional population or the population that is the interest feature of a specific protected site that is sufficiently small-scale or of short duration to cause no long-term harm to the feature/population. Recovery from that change predicted to be achieved in the

Magnitude	Definition
	short-term (i.e. in one to seven years) following cessation of the project-related activity.
Negligible	Very slight change from the size or extent of distribution of the relevant regional population or the population that is the interest feature of a specific protected site. Recovery from that change predicted to be rapid (i.e. no more than 12 months) following cessation of the project-related activity.

14.2.4.3 DEFINING THE SIGNIFICANCE OF EFFECT

Assessment of the significance of the potential effect upon ornithology from the Proposed Development was determined by correlating the sensitivity of the receptor and the magnitude of the impact in a matrix table, based on EPA EIAR guidance (EPA, 2022) (Table 14.6). In addition, the conservation importance of the receptor was also considered using expert judgement to sense-check the matrix outcome.

In cases where a range was suggested for the significance of effect, there remains the possibility that this may span the significance threshold (i.e., the range is moderate to significant). In such cases the final significance was based upon the expert's professional judgement as to which outcome delineates the most likely effect, with an explanation as to why this was the case.

Table 14.6: Significance of potential effects matrix

Magnitude of Impact	Sensitivity of key species				
		High	Medium	Low	Negligible
Adverse impact	**High**	Profound or Very significant	Significant	Moderate	Imperceptible
	Medium	Significant	Moderate	Slight Negative	Imperceptible
	Low	Moderate	Slight Negative	Slight Negative	Imperceptible
Neutral impact	**Negligible**	Not significant	Not significant	Not significant	Imperceptible
Positive impact	**Low**	Moderate	Slight Positive	Slight Positive	Imperceptible
	Medium	Significant	Moderate	Slight Positive	Imperceptible
	High	Profound or Very significant	Significant	Moderate	Imperceptible

For the purposes of this assessment, a level of effect of moderate or less will be considered 'not significant' in terms of the EIA Regulations. Additional information is presented in Chapter 1: Introduction and Methodology.

Effects above moderate significance were therefore considered important in the decision-making process, whilst effects of moderate significance or less warrant little, if any, weight in the decision-making process. However, it should be noted that while impacts of slight significance are not significant in their own right, it is important to distinguish these from other non-significant impacts as they may contribute to significant impacts cumulatively or through interactions.

14.2.5 Mitigation

As discussed in Chapter 1: Introduction and Methodology, three types of mitigation measures are considered in this chapter.

- Primary mitigation
- Secondary mitigation
- Tertiary mitigation

14.2.6 Residual Effects

Where relevant, residual effects have been determined for each significant effect, considering all proposed mitigation. In cases where residual uncertainty of impact is identified within the EIAR, or the success of implemented mitigation measures requires validation, commitments have been made for the provision of monitoring.

14.2.7 Difficulties and Uncertainties

Limitations for baseline surveys and data sources used in the desktop assessment are outlined below.

14.2.7.1 Limitations of baseline surveys

As far as possible, baseline surveys were timed to coincide with suitable weather conditions. However, periods of poor weather (e.g., rain or strong winds) were occasionally encountered during surveys in winter months. Guidance on non-breeding bird surveys from the Bird Survey & Assessment Steering Group (2022) states that surveying in a variety of conditions is representative of variable weather conditions and associated levels of bird activity within the Survey Areas and is, therefore, acceptable. As such, sub-optimal weather is not considered to represent a constraint to the robustness of these data.

Disturbance events resulting from boats were recorded within the intertidal and nearshore Study Area during the vantage point surveys. Although these were noted to flush birds and, therefore, influence their distribution and abundance within the Study Area, these events are considered as baseline conditions. Therefore, these are not considered to represent a constraint to the robustness of the survey data collected.

Further details of limitations regarding baseline surveys are presented in Volume 3 – EIAR Technical Appendix 14: Ornithology of this EIAR (hereafter 'Appendix 14').

There is a high degree of variability in the marine environment, both spatially and temporally. However, as the baseline site characterisation for this Ornithology EIAR chapter has been based on

29 months of recent survey data supported by a desktop assessment of up to date publicly available information, it is considered to be representative of the Proposed Development and surrounding area for the purpose of impact assessment.

14.2.7.2 LIMITATIONS OF DESKTOP ASSESSMENT

The data sources used in the desktop assessment for this chapter are detailed in Table 14.2, with additional relevant information taken from Appendix 14. The published data used are the most up to date publicly available information obtained from the applicable data sources as cited.

14.3 BASELINE: ORNITHOLOGY IN RECEIVING ENVIRONMENT

Baseline ornithology surveys were undertaken between May 2022 and September 2024 within the project Study Area. The surveys conducted included:

- Coastal vantage point surveys (VP)
- Breeding bird surveys (BBS)
- Post-breeding tern aggregation surveys
- Winter walkover transect surveys (WWO)

Baseline surveys of waders, wildfowl and seabirds were conducted through monthly coastal VP surveys using the "Through The Tidal Cycle Count" (TTTCC) method (Gilbert *et al*., 1998). This method has been previously identified as the most appropriate approach for assessing waterbird use of the intertidal zone in Ireland (Lewis and Tierney, 2014). VP surveys were carried out from May 2022 to April 2023 and from July 2023 to August 2024.

VP surveys throughout this period were conducted from the VP1 location. To increase spatial coverage of the Study Area to include all of the dredge area following the notification of the intention to designate the Seas of Wexford cSPA in January 2023, an additional VP location (VP2) was identified. From March to August 2024, VP surveys were undertaken from the VP 2 location.

For clarity and ease of reference throughout this report, VP refers to the specific location at which the surveyor conducted the vantage point observations. The original VP location will be referred to as VP1, while the VP location used during the November 2023 survey will be referred to as VP2.

For terrestrial species, BBS and WWO surveys were conducted within the Study Area.

BBS followed the amended Common Bird Census (CBC) method (Bird Survey and Assessment Group, 2022). This approach is endorsed by CIEEM and is considered the most appropriate method for undertaking BBS in Ireland. Limitations at the time of survey commission resulted in a survey programme comprising a three-visit approach between May and July 2022, followed by an additional six visits between March and June 2023. In 2024, three BBS were conducted between April and June.

The WWO surveys followed the line transect methods outlined in Bibby *et al*. (2000), with three monthly visits undertaken between December 2022 and February 2023, and five monthly visits between October 2023 and February 2024.

In addition, two evening surveys for post-breeding roosting terns were undertaken in August and September 2022, September 2023, and August and September 2024, following the methods outlined by Burke *et al*. (2020).

Full details of bird surveys undertaken during the baseline data collection period are presented in Appendix 14.

14.3.1 BASELINE CHARACTERISATION

For the purposes of this Ornithology chapter, the Ornithology Survey Study Area is defined as the reclamation area of the Proposed Development Boundary and a 1.5 km study area around this based on the VP locations.

Note not all of the dredging area falls within the VP1 Area (Figure 14.1).

EIAR Technical Appendix 14: Ornithology presents a detailed characterisation of the receiving environment around the Proposed Development Boundary based on a series of site-specific surveys as outlined above.

This section is intended to be a summary of the key findings presented in Technical Appendix 14. Detail from EIAR Technical Appendix 14 has not been repeated within this chapter in order to present a clear and concise impact assessment.

Between May 2022 and September 2024, 30 seabird and waterbird species were regularly recorded on baseline surveys in the Ornithology Study Area. A summary of these species and their conservation status is presented in Table 14.8 with maps presenting locations of records for key species provided in Figure 14.2 to Figure 14.6 Note that the information presented was taken from a combination of VP surveys, BBS and WWO surveys, with further details presented in EIAR Technical Appendix 14.

Although baseline bird surveys regularly recorded 30 seabird and waterbird species in the project Study Area, many of these species only occurred in low numbers. Some species were only present during the breeding season (e.g., terns), while others were present throughout the year, although they may be more abundant during summer or winter months (e.g., gannet, gull species). Most wader species were recorded in low numbers during winter months.

Of the 30 regularly occurring species recorded on baseline surveys, for thirteen species, the peak recorded number was less than 10 individuals. The peak recorded number for a further eight species was less than 25 individuals, while peak number exceeded 25 individuals for only eight species (common scoter, kittiwake, black-headed gull, Mediterranean gull, herring gull, lapwing, turnstone and Sandwich tern).

In addition to the regularly recorded species, there were a further eleven species that were only occasionally recorded in the Ornithology Study Area in very low numbers over the survey period (Table 14.7). These species were not considered further in this assessment, on the basis that the numbers recorded in the Ornithology Study Area indicated that these species do not use the area regularly in significant numbers. The significance of any potential impacts on these species arising from the Proposed Development was therefore considered to be very low.

Table 14.7: Summary of waterbird species only recorded occasionally in very low numbers on baseline surveys in the Ornithology Study Area

Species and Conservation Status	Summary of Baseline Results
Fulmar *Fulmarus glacialis* BoCCI Amber-listed	**May 2022-April 2023** • During the VP1 surveys, one fulmar was recorded in May 2022. **July 2023-August 2024** • During the VP1 surveys, one fulmar was recorded in August 2024. • During the VP2 surveys, single birds were recorded in April 2024 and May 2024. • All birds were observed 1 to 1.5km offshore.
Grey heron *Ardea cinerea* BoCCI Green-listed	**May 2022-April 2023** **July 2023-August 2024** • During the VP1 surveys, single birds were recorded in September 2023, December 2023, January 2024, April 2024 and between June and August 2024. • During the VP2 surveys, two birds were recorded in November 2023 and June 2024, with single birds recorded in March and April 2024. • During the 2023 BBS , one bird was recorded in March 2023, April 2023, and May 2023. During the 2024 BBS, one bird was recorded in April 2024, with two birds in May 2024. There was no evidence of this species breeding in the vicinity of the Proposed Development.
Ringed Plover *Charadrius hiaticula* BoCCI Amber-listed	**May 2022-April 2023** • During the VP1 surveys, seven birds were recorded in January 2023. **July 2023-August 2024** • Ringed Plover was not recorded on surveys.
Curlew *Numenius arquata* BoCCI Red-listed	**May 2022-April 2023** • Curlew was not recorded on surveys. **July 2023-August 2024** • During the VP1 surveys, six curlews were recorded in November 2024 with two birds in January 2024 and two curlews in August 2024. • During the VP2 survey, 14 birds were recorded in November 2023, with one bird recorded in March 2024. • During the WWO surveys, 18 curlews were recorded in November 2023 and two in February 2024
Snipe *Gallinago gallinago* BoCCI Red-listed	**May 2022-April 2023** • During the VP1 surveys, one bird was recorded in March 2023.

Species and Conservation Status	Summary of Baseline Results
	• During the WWO survey, snipe were recorded during all three months surveyed, with a peak of five birds in January 2023 **July 2023-August 2024** • During the 2023 BBS 2023, two snipe were recorded in March 2023. There was no evidence of breeding within the Proposed Development Boundary and these records are considered passage migrants.
Golden Plover *Pluvialis apricaria* BoCCI Red-listed	**May 2022-April 2023** • Golden Plover was not recorded on surveys. **July 2023-August 2024** • During the VP2 surveys, a roosting flock of 38 golden plovers were recorded in March 2024 on the small boat harbour breakwater.
Dunlin *Calidris alpina* BoCCI Red-listed	**May 2022-April 2023** • Dunlin was not recorded on surveys. **July 2023-August 2024** • During the VP1 surveys, 23 dunlin were recorded in November 2023 foraging along the western shoreline. • During the WWO surveys, 16 dunlin were recorded in February 2024.
Greenshank *Tringa nebularia* BoCCI Green-listed	**May 2022-April 2023** • During the VP1 surveys, one bird was recorded in February 2023. **July 2023-August 2024** • Greenshank was not recorded on surveys.
Little Gull *Hydrocoloeus minutus* Annex I of EU Birds Directive; BoCCI Amber-listed	**May 2022-April 2023** • During the VP1 surveys, one bird was recorded in December 2022. **July 2023-August 2024** • Little gull was not recorded on surveys.
Iceland Gull *Larus glaucoides* BoCCI Green-listed	**May 2022-April 2023** • During the VP1 surveys, one bird was recorded in February 2023. **July 2023-August 2024** • Iceland gull was not recorded on surveys.
Roseate Tern *Sterna dougallii* Annex I of EU Birds Directive; BoCCI Amber-listed	**May 2022-April 2023** • During the VP1 surveys, two birds were recorded in May 2022. **July 2023-August 2024** • Roseate tern was not recorded on surveys.

Red-throated diver is listed in Annex I of the EU Birds Directive and is BoCCI Amber-listed for the breeding and non-breeding seasons, while common scoter is BoCCI Red-listed for the breeding and non-breeding seasons (Gilbert *et al.,* 2021).

There is a small breeding population of red-throated divers in County Donegal, with a maximum estimate of nine pairs in 2018 (Burke *et al.,* 2020). The breeding season has been defined as March to August (Furness, 2015). In the non-breeding season, red-throated divers are widespread off Irish coasts, with birds from Scandinavia, Iceland and Scotland moving into Irish waters. Largest numbers are recorded off the south-west coast of Ireland in winter months (Balmer, *et al.,* 2013).

There is a small and declining Irish breeding population of common scoter, restricted to a few loughs in the north-west of Ireland, which was estimated to be 39 pairs in 2012 (Hunt, *et al.*, 2012).

Both common scoter and red-throated diver are SCIs for the Seas off Wexford cSPA and The Raven SPA, (which is ecologically linked to the cSPA) (Table 14.12) in the non-breeding season (NPWS, 2024a). The boundary of the cSPA overlaps with the Proposed Development Boundary (Figure 14.7).

Common scoter were recorded on baseline vantage point surveys between August 2022 and March 2023, and between November 2023 and February 2024, with almost all sightings involving birds between 1 km and 1.5 km from shore (Figure 14.2), apart from December 2022, when 19 common scoter were recorded within the Proposed Development Boundary (Figure 14.3). The peak numbers of common scoter recorded on baseline surveys was 53 birds in October 2022, with 36 birds recorded in December 2022 and 19 birds in February 2024 (Table 14.8). All recorded counts were considerably lower than the All-Ireland 1% importance threshold (110 birds) (Lewis *et al.,* 2019).

Red-throated divers were recorded during baseline vantage point surveys between September 2022 and March 2023 and between September 2023 and April 2024. Typically, birds were scattered widely in small numbers throughout the Ornithology Study Area, with birds recorded in all distance bands between the shore and 1.5 km offshore (Figure 14.4). The peak counts of red-throated divers on baseline surveys was six birds in January 2023 and three birds in April 2024. All recorded counts were considerably lower than the All-Ireland 1% importance threshold (20 birds) (Lewis, *et al.,* 2019).

Black guillemot is BoCCI Amber-listed due to having an unfavourable conservation status in Europe (Gilbert, *et al.,* 2021), rather than any immediate conservation threat in Irish terms. Black guillemot is not listed as an SCI for any SPA in Ireland, including the Seas of Wexford cSPA (NPWS, 2024b).

A total of six black guillemots were listed as breeding at Rosslare Harbour in 2018, as part of the Seabirds Count national seabird census (Burnell, *et al*., 2023). Two other breeding sites were recorded in Wexford at Bag-in-bun Head (12 birds) and at Kilmore Quay (1 bird) as part of the Seabirds Count national seabird census (Burnell, *et al*., 2023). In July 2011, 16 to 17 Apparently Occupied Nests (AONs) were identified in Rosslare Harbour (NPWS, 2011, Figure 14.6).

Although no dedicated breeding surveys of black guillemots were conducted during the baseline surveys, the peak counts of black guillemot recorded on baseline surveys during the prescribed census period (late March to early May per Walsh *et al.,* 1995) were 17 birds in April 2023 and nine birds in

April 2024 (Figure 14.9 and Table 14.8:). As outlined in Chapter 4: Scoping and Consultation of this EIAR, in December 2024, NPWS advised that black guillemots were observed breeding on the inner wall of the existing Rosslare Europort breakwater, to the east of the existing ferry berth locations in Summer 2023. In addition, at least one breeding pair of black guillemots was recorded on the outer wall of Rosslare Harbour in June 2025 (Figure 14.6). It is considered that the breeding population of black guillemots at Rosslare Harbour is therefore between six and 17 individuals.

Table 14.8: Summary of regularly occurring waterbird species recorded on baseline surveys in the Ornithology Study Area

Species and Conservation Status	Summary of Baseline Results
Common Scoter *Melanitta nigra* BoCCI Red-listed	**May 2022-April 2023** • During the VP1 surveys, birds were recorded from August 2022 to March 2023, with peak counts of 53 birds in October 2022 and 36 birds in December 2022. • In addition, 19 common scoter were recorded within the Proposed Development Boundary in December 2022 during the Winter Walk Over (WWO) survey. **July 2023-August 2024** • During the VP1 surveys, birds were recorded in November, December 2023, and February 2024, with a peak count of 19 birds in February.
Red-breasted Merganser *Mergus serrator* BoCCI Amber-listed	**May 2022-April 2023** • During the VP1 surveys, birds were recorded in very low numbers between August 2022 and April 2023, with a peak count of two birds recorded in all months except January, when 1 bird was recorded. No birds were recorded in March 2023. **July 2023-August 2024** • During the VP1 surveys, birds were recorded in August 2023, January 2024, and February 2024, with a peak count of 4 birds in February.
Great Crested Grebe *Podiceps cristatus* BoCCI Amber-listed	**May 2022-April 2023** • During the VP1 surveys, birds were recorded in very low numbers between September 2022 and March 2023, with a peak count of four birds recorded in October and December 2022. **July 2023-August 2024** • During the VP1 surveys, birds were recorded from September to November 2023, and in February and March 2024, with a peak count of three birds recorded in February. • During the VP2 survey in November 2023 one bird was recorded.

Species and Conservation Status	Summary of Baseline Results
Black-necked grebe *Podiceps nigricollis* BoCCI Red-listed	**May 2022-April 2023** • During the VP1 surveys, two birds were recorded in December 2022 and two birds in February 2023. • During the WWO surveys, two birds were recorded in January 2023. It is presumed that these are the same individuals recorded during the January 2023 VP1 survey.
Red-throated Diver *Gavia stellata* Annex I of EU Birds Directive; BoCCI Amber-listed	**May 2022-April 2023** • During the VP1 surveys, red-throated diver was recorded in very low numbers between September 2022 and March 2023, with a peak count of six birds recorded in January 2023. The species was typically recorded between 250m and 350m offshore. **July 2023-August 2024** • During the VP1 surveys, red-throated diver was recorded in every VP1 survey between September 2023 and April 2024 inclusively, with a peak count of two birds in September, October, December 2023, and February 2024 and three birds in April 2024. • During the VP2 surveys, two birds were recorded in November 2023 and in March 2024.
Great Northern Diver *Gavia immer* BoCCI Amber-listed	**May 2022-April 2023** • During the VP1 surveys, great northern divers were recorded in very low numbers between October 2022 and April 2023, with a peak count of three birds recorded in October 2022. **July 2023-August 2024** • During the VP1 surveys, single birds were recorded in December 2023,February 2024 and April 2024. Both records were observed feeding approximately 1.4 km offshore. • During the VP2 surveys, one individual was recorded in March 2024.
Manx shearwater *Puffinus puffinus* BoCCI Amber-listed	A summer visitor to Irish waters. **May 2022-April 2023** • During the VP1 surveys, seven birds were recorded in June 2022, and 25 birds in July 2022. All birds were recorded beyond 1.5 km of the shoreline. **July 2023-August 2024**

Species and Conservation Status	Summary of Baseline Results
	• During the VP1 surveys, 14 birds were recorded in August 2023. All Manx shearwaters were recorded beyond 1 km of the shoreline.
Gannet *Morus bassanus* BoCCI Amber-listed	**May 2022-April 2023** • During the VP1 surveys, gannet was mainly recorded in the Ornithology Study Area in summer months from May 2022 to September 2022, with fewer birds recorded in winter (December 2022). Gannets were recorded in March and April 2023 also. The peak counts were seven birds in May 2022, and eight birds in July 2022. The majority of gannet were recorded beyond 0.5 km of the shoreline. • During the WWO surveys, two birds were recorded in January 2023. **July 2023-August 2024** • During the VP1 surveys, gannets were recorded in July, August, and September 2023, January 2024 and in March to August 2024. The peak counts for the survey period were four birds in August 2023 and seven birds in April 2024. All gannets were recorded foraging beyond 0.5 km of the shoreline. • During the VP2 surveys, gannets were recorded between March and August 2024, with a peak count of nine birds in June 2024.
Shag *Gulosus aristotelis* BoCCI Amber-listed	**May 2022-April 2023** • During the VP1 surveys, shag was recorded in low numbers in all months, with peak counts of nine birds in May 2022 and seven birds in June 2022. Shags were distributed across the Survey Area, with higher concentrations recorded towards the east side of the Survey Area. • During the BBS 2022 survey, shag was recorded foraging during all three months surveyed, with a peak count of twelve birds in June 2022. There was no evidence that this species breeds within the Proposed Development Boundary. **July 2023-August 2024** • During the VP1 surveys, shags were recorded in all months, with a peak count of six birds in September 2023 and five birds in March 2024. The shags recorded were mostly distributed on the east side of the survey area. • During the VP2 surveys, shags were recorded in all months, with a peak count of 12 birds in both July and August 2024. • During the WWO surveys, five birds were recorded in December 2023.

Species and Conservation Status	Summary of Baseline Results
Cormorant *Phalacrocorax carbo* BoCCI Amber-listed	**May 2022-April 2023** • During the VP1 surveys, cormorants were recorded in low numbers in all months, with a peak count of five birds in December 2022. The majority of cormorants were recorded foraging less than 0.5 km offshore. • During the 2022 BBS survey, cormorants were recorded during all months surveyed, with a peak count of four birds in July 2022. There was no evidence that this species breeds within the Proposed Development Boundary. • During the WWO surveys, four birds were recorded in December 2022. **July 2023-August 2024** • During the VP1 surveys, cormorants were recorded in all months, with peak counts of four birds in both August and December 2023 and nine birds in April 2024. The majority of cormorants were recorded foraging less than 0.5 km offshore. • During the VP2 surveys cormorants were recorded in all months, with peaks counts of three birds in November 2023 and seven birds in June 2024. • During the WWO surveys, cormorants were recorded across all months surveyed, with a peak count of five birds in December 2023. • During the 2024 BBS survey, three cormorants were recorded in May 2024 with four birds recorded in June 2024.
Little Egret *Egretta garzetta* BoCCI Green-listed	**May 2022-April 2023** • During the 2022 BBS, little egret was recorded in very low numbers, with three birds recorded in May and June 2022. • During the WWO surveys, little egret was recorded in very low numbers, with singles recorded in December 2022 and February 2023. **July 2023-August 2024** • During the VP1 surveys, the peak count was two little egrets in November 2023, with single little egrets recorded foraging along the shoreline in July 2023, September 2023, January 2024, May 2024 and August 2024. • During the VP2 surveys, single little egrets were recorded in November 2023 and between April and June 2024. • During the 2023 BBS , Little egrets were recorded in April, May, and June 2023 with a peak count of two birds recorded in June 2023. During the 2024 BBS, one little egret was recorded in May 2024.

Species and Conservation Status	Summary of Baseline Results
	• During the WWO surveys, one individual was recorded in each of the four recorded months: November, December 2023, January and February 2024.
Oystercatcher *Haematopus ostralegus* BoCCI Red-listed	**May 2022-April 2023** • During the VP1 surveys, oystercatcher was recorded in seven months, with a peak count of eight birds in January 2023. • During the WWO surveys, oystercatchers were recorded during all three surveyed months, with a peak count of four birds in February 2023. **July 2023-August 2024** • During the VP1 surveys, oystercatchers were recorded between October 2023 and January 2024 and in August 2024, with a peak count of sixteen birds in October 2023. • During the VP2 surveys, 22 oystercatchers were recorded in November 2023, with one oystercatcher recorded in March 2024. • Note, across all surveys, oystercatchers were recorded foraging or roosting along the shoreline west of the old boat harbour.
Lapwing *Vanellus Vanellus* BoCCI Red-listed	**May 2022-April 2023** • No lapwings were recorded during this survey period **July 2023-August 2024** • During the VP1 surveys, lapwings were recorded between September and December 2023 and in February 2024, with a peak count of 190 birds in November 2023 roosting on the old boat harbour wall. • During the VP2 survey, 38 birds were recorded. • During the WWO surveys, lapwings were recorded in every month from October 2023 to February 2024, except in January 2024. The peak counts were 159 birds in November and 223 birds in December 2023. These observations were made on the breakwaters to the west and north of the small boat harbour.
Turnstone *Arenaria interpres*	**May 2022-April 2023**

Species and Conservation Status	Summary of Baseline Results
BoCCI Amber-listed	• During the VP1 surveys, turnstones were recorded in every month from August 2022 to April 2023 , with peak counts of 18 birds in October 2022, 16 birds in December 2022 and 17 birds in February 2023. **July 2023-August 2024** • During the VP1 surveys, turnstone was recorded in every month from September 2023 to April 2024, and in August 2024, with peak counts of 25 birds in October 2023, 26 birds in January 2024, 21 birds in March 2024 and 24 birds in April 2024. • During the VP2 surveys, turnstones were recorded in November 2023 and in March, June and August 2024, with peak counts of 16 turnstones in November 2023 and four birds in March 2024.
Redshank *Tringa tetanus* BoCCI Red-listed	**May 2022-April 2023** • During the VP1 surveys, redshanks were recorded in very low numbers in September and November 2022, and January to March 2023, inclusively, with a peak count of two birds recorded between January and March. • During the WWO survey, redshanks were recorded during all three months surveyed, with a peak count of two individuals in January and February 2023. **July 2023-August 2024** • During the VP1 surveys, two individuals were recorded in December 2023 and again in January 2024, March 2024 and August 2024. • During the VP2 surveys, three birds were recorded. • During the WWO surveys, one individual was recorded in October 2023 and again in February 2024.
Kittiwake *Rissa tridactyla* BoCCI Red-listed	**May 2022-April 2023** • During the VP1 surveys, kittiwakes were recorded in eight months, with peak counts of 31 birds in May 2022 and 22 birds in December 2022. • During the 2022 BBS , four kittiwakes were recorded in May 2022 and three individuals in July 2022. **July 2023-August 2024**

Species and Conservation Status	Summary of Baseline Results
	• During the VP1 surveys, kittiwakes were recorded in September 2023 and November 2023, and between March and August 2024, with a peak count of 28 birds in April 2024. All records were observed foraging between 1 and 1.5 km offshore. • During the VP2 surveys, kittiwakes were recorded between March and August 2024 (except in July), with a peak count of 8 birds in August. **June 2025** • 17 Apparently Occupied Nests (AON) were recorded on the outer wall of Rosslare Harbour, outside the Proposed Development boundary in June 2025 during buoy recovery operations (Figure 14.6)
Black-headed gull *Chroicocephalus ridibundus* BoCCI Amber-listed	**May 2022-April 2023** • During the VP1 surveys, black-headed gulls were recorded in all months, with higher numbers in the non-breeding season. The peak counts included 85 birds in October 2022, 46 birds in December 2022 and 49 birds in February 2023. • During the WWO survey, 94 birds were recorded in December 2022 and 12 individuals in January 2023. **July 2023-August 2024** • During the VP1 survey, black-headed gulls were recorded from August 2023 to August 2024, with peak counts involving 100 birds in January and 82 birds in February 2024. • During the VP2 survey, black-headed gulls were recorded in all survey months, with a peak count of 11 birds in July 2024. • During the 2023 BBS , black-headed gulls were recorded in March and during both April surveys, with a peak count of four birds in March 2023. During the 2024 BBS, three black-headed gulls were recorded in May 2024. There was no evidence that this species breeds within the Proposed Development Boundary. • During the WWO surveys, four birds were recorded in October 2023, and 33 birds in December 2023. • Note, most records of black-headed gull were recorded foraging within 500 m of the shoreline or roosting on the two piers in the east of the Study Area
Mediterranean Gull	**May 2022-April 2023**

Species and Conservation Status	Summary of Baseline Results
Ichthyaetus melanocephalus Annex I of EU Birds Directive; BoCCI Amber-listed	• During the VP1 surveys, Mediterranean gulls were recorded in ten of the twelve months surveyed, with no observations recorded in June 2022 and January 2023. The peak counts recorded were 38 birds in July 2022, and 34 birds in August 2022. . • During the 2022 BBS , single Mediterranean gulls were recorded in May, June, , with 27 individuals in July 2022. • During the WWO surveys, Mediterranean gulls were recorded in two of the three months surveyed, with three birds recorded in December 2022 and eight birds in January 2023. **July 2023-August 2024** • During the VP1 surveys, two Mediterranean gulls were recorded in August 2023, with four birds in September 2023, one individual in February 2024 and one bird in April 2024. • During the WWO surveys, two birds were recorded in December 2023.
Common Gull *Larus canus* BoCCI Amber-listed	**May 2022-April 2023** • During the VP1 surveys, common gulls were recorded in all months except April 2023. Numbers were low in all months, with peak counts of 19 birds in August 2022, 21 birds in October 2022 and 20 birds in January 2023. **July 2023-August 2024** • During the VP1 surveys, common gulls were recorded in very low numbers, in August to October 2023, December 2023, February 2024 and between March and August 2024, with peak counts of 11 birds in October 2023, 10 birds in February 2024, 13 birds in July 2024 and 11 birds in August 2024. • During the VP2 surveys, common gull was recorded between March and August 2024, with a peak count of two birds in April 2024.
Great black-backed Gull *Larus marinus* BoCCI Green-listed	**May 2022-April 2023** • During the VP1 surveys, great black-backed gulls were recorded in low numbers in all months , with slightly higher numbers in the non-breeding season, and a peak count of 21 birds in September 2022. **July 2023-August 2024**

Species and Conservation Status	Summary of Baseline Results
	• During the VP1 surveys, great black-backed gulls were recorded in low numbers in all months (except September 2023), with peak counts of 17 birds in October 2023, 15 birds in February 2024, 11 birds in July 2024 and 13 birds in August 2024. • During the VP2 survey, great black-backed gulls were recorded in low numbers in all survey months, with a peak count of six birds in both June and July 2024. • During the 2024 BBS, two birds were recorded in April 2024 with seven birds in May 2024. There was no evidence that this species breeds within the Proposed Development Boundary.
Herring Gull *Larus argentatus* BoCCI Amber-listed	**May 2022-April 2023** • During the VP1 surveys, herring gulls were recorded in all months, with peak counts of 51 birds in August 2022 and 47 birds in January 2023. • During the 2022 BBS, nine birds were recorded in May 2022. **July 2023-August 2024** • During the VP1 surveys, herring gulls were recorded in all months, with peak counts of 129 birds in October 2023 and 92 birds in February 2024. • During the VP2 surveys, herring gulls were recorded in all survey months, with a peak count of 20 birds in July 2024. • During the 2024 BBS, 15 herring gulls were recorded in April 2024, 20 birds in May 2024 and four in June 2024 • During the WWO surveys, herring gull was recorded in all five months surveyed, with a peak count of 57 birds recorded roosting or loafing in December 2023.
Lesser black-backed Gull *Larus fuscus* BoCCI Amber-listed	**May 2022-April 2023** • During the VP1 surveys, lesser black-backed gulls were recorded in very low numbers between May and August 2022, October 2022 and March 2023. The peak counts were four birds in August and September 2022. **July 2023-August 2024** • During the VP1 surveys, lesser black-backed gulls were recorded occasionally in very low numbers, with a peak count of four birds in August 2024. During the VP2 surveys, two birds were recorded in June 2024.

Species and Conservation Status	Summary of Baseline Results
	•
Sandwich Tern *Thalasseus sandvicensis* Annex I of EU Birds Directive; BoCCI Amber-listed	**May 2022-April 2023** • During the VP1 surveys, sandwich terns were recorded in low numbers between May to August 2022, and March and April 2023, with a peak count of 26 birds in July 2022. • During the 2022 tern roost survey, 17 sandwich terns were recorded roosting on Rosslare Harbour wall in August 2022 with four roosting birds in September 2022. **July 2023-August 2024**. • During VP1 surveys, sandwich terns were recorded from July to September 2023 and between April and August 2024, with a peak count of 19 birds in June 2024. • During the VP2 surveys, sandwich terns were recorded between April and August 2024, with a peak count of 12 birds in July 2024. • During the 2023 and 2024 autumn tern roost surveys, no Sandwich terns were recorded roosting in the Study Area.
Common Tern *Sterna hirundo* Annex I of EU Birds Directive; BoCCI Amber-listed	**May 2022-April 2023** • During the VP1 surveys, common terns were recorded in low numbers between May and August 2022, and in April 2023, with a peak of 23 birds in May 2022. During the 2022 autumn tern roost survey, four common terns were recorded roosting on Rosslare Harbour wall in August 2022. **July 2023-August 2024** • During the VP1 surveys, two common terns were recorded in August 2023 with one bird in September 2023, and six common terns in June 2024. All common tern records were observed foraging within 1 km offshore. • During the VP2 surveys, one common tern was recorded in June 2024. • During the 2023 and 2024 autumn tern roost surveys, no common terns were recorded.

Species and Conservation Status	Summary of Baseline Results
Arctic tern *Sterna paradisaea* Annex I of EU Birds Directive; BoCCI Amber-listed	**May 2022-April 2023** • During the VP1 surveys, Arctic terns were recorded in very low numbers in May 2022 (one bird) and July 2022 (two birds). • During the 2022 autumn tern roost survey, five Arctic terns were recorded in August 2022 **July 2023-August 2024** • During the 2023 and 2024 autumn tern roost surveys, no Arctic terns were recorded.
Unidentified common/Arctic tern	**May 2022-April 2023** • During the VP1 surveys, unidentified common/Arctic terns were recorded in low numbers from May 2022 to August 2022, with a peak count of 15 birds in July. The majority of records were observed foraging beyond 500 m offshore. **July 2023-August 2024** • During the VP1 surveys, three common/Arctic terns were recorded in July 2023, with five birds in August 2023 and three birds in July 2024. All records were observed foraging beyond 500 m offshore. • During the VP2 surveys, two common/Arctic terns were recorded in July 2024, with three birds in August 2024. • During the 2023 and 2024 autumn tern roost surveys, no common/Arctic terns were recorded.
Guillemot *Uria aalge* BoCCI Amber-listed	**May 2022-April 2023** • During the VP1 surveys, guillemots were recorded infrequently in low numbers over the survey period. Birds were recorded between May and September 2022, and April 2023, with a peak of 15 birds in September 2022. **July 2023-August 2024** • During the VP1 surveys, guillemots were recorded in most months, with peak counts of four birds in January 2024, March 2024 and August 2024. Guillemots were observed foraging across the entire offshore study area. • During the VP2 surveys, guillemots were recorded between March and July 2024, with a peak count of four birds in June 2024.
Razorbill *Alca torda*	**May 2022-April 2023**

Species and Conservation Status	Summary of Baseline Results
BoCCI Red-listed	• During VP1 surveys, razorbills were recorded infrequently in very low numbers. Birds were recorded in June, August, October and December 2022, with a peak of two birds in August 2022. **July 2023-August 2024** • During VP1 surveys, four razorbills were recorded in September 2023, and between June and August 2024, with a peak count of two birds in June 2024. • During the VP2 surveys, single razorbills were recorded between April and June 2024, with five birds recorded in August 2024.
Unidentified Guillemot/Razorbill	**July 2023-August 2024** • During the VP1 surveys, three unidentified guillemot/razorbills were recorded in August 2023
Black Guillemot *Cepphus grille* BoCCI Amber-listed	**May 2022-April 2023** • During the VP1 surveys, black guillemots were recorded between June and November 2022, and between January and April 2023, in low numbers, with a peak count of 17 birds in April 2023. • During the 2022 BBS, two black guillemots were recorded in June 2022 with three birds in July 2022. **July 2023-August 2024** • During the VP1 surveys, black guillemots were recorded in every month except August 2024, with peak counts of 16 birds in July 2023, 10 birds in August 2023, nine birds in April 2024 and 10 birds in June 2024. • During the VP2 surveys, black guillemots were recorded between March and July 2024, with a peak count of nine birds in June 2024. • During the 2024 BBS, three black guillemots were recorded in April 2024 with two birds in May 2024. **June 2025** 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 (Figure 14.6)

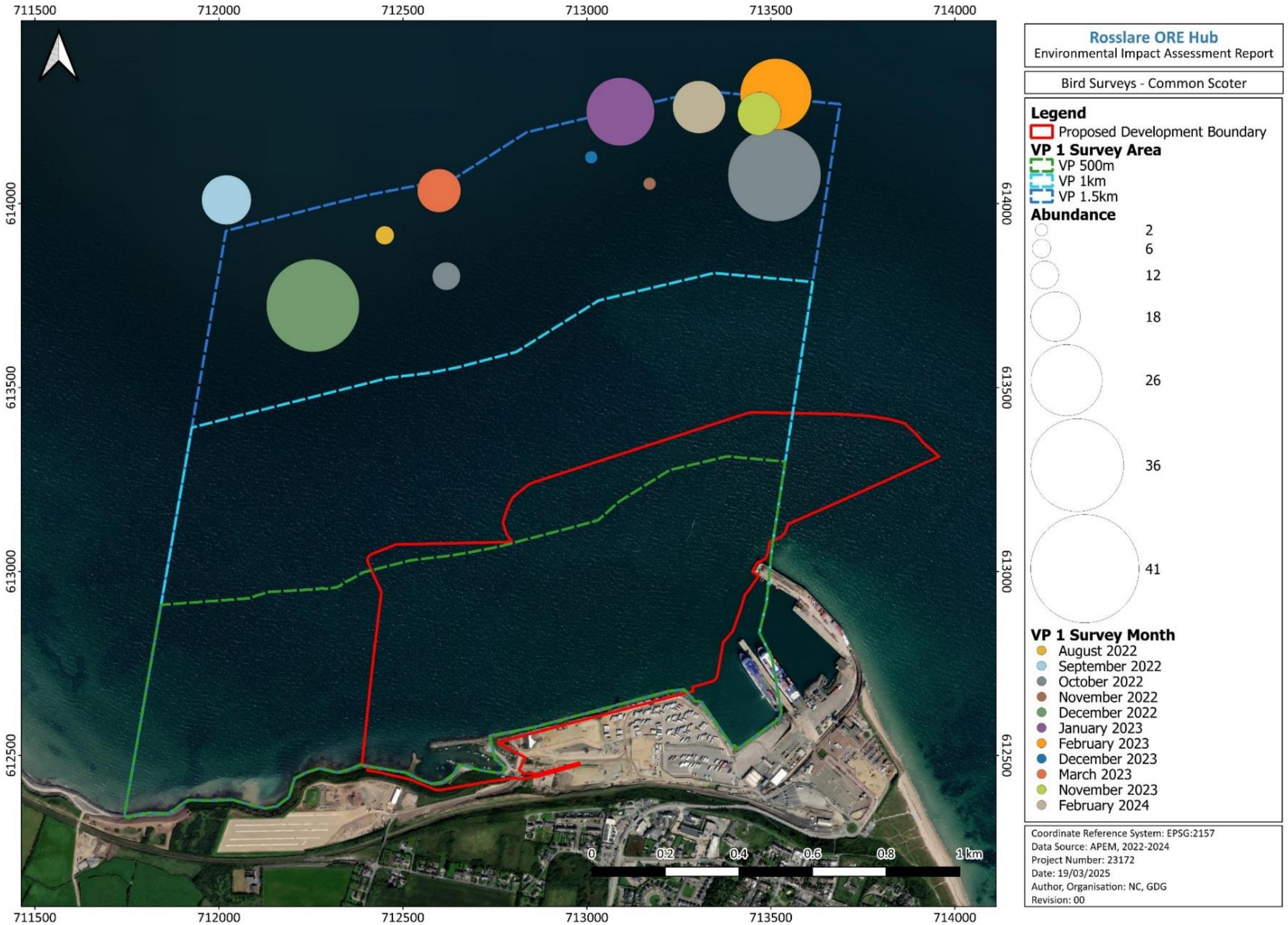


Figure 14.2: Distribution of Common Scoter recorded during baseline VP1 bird surveys

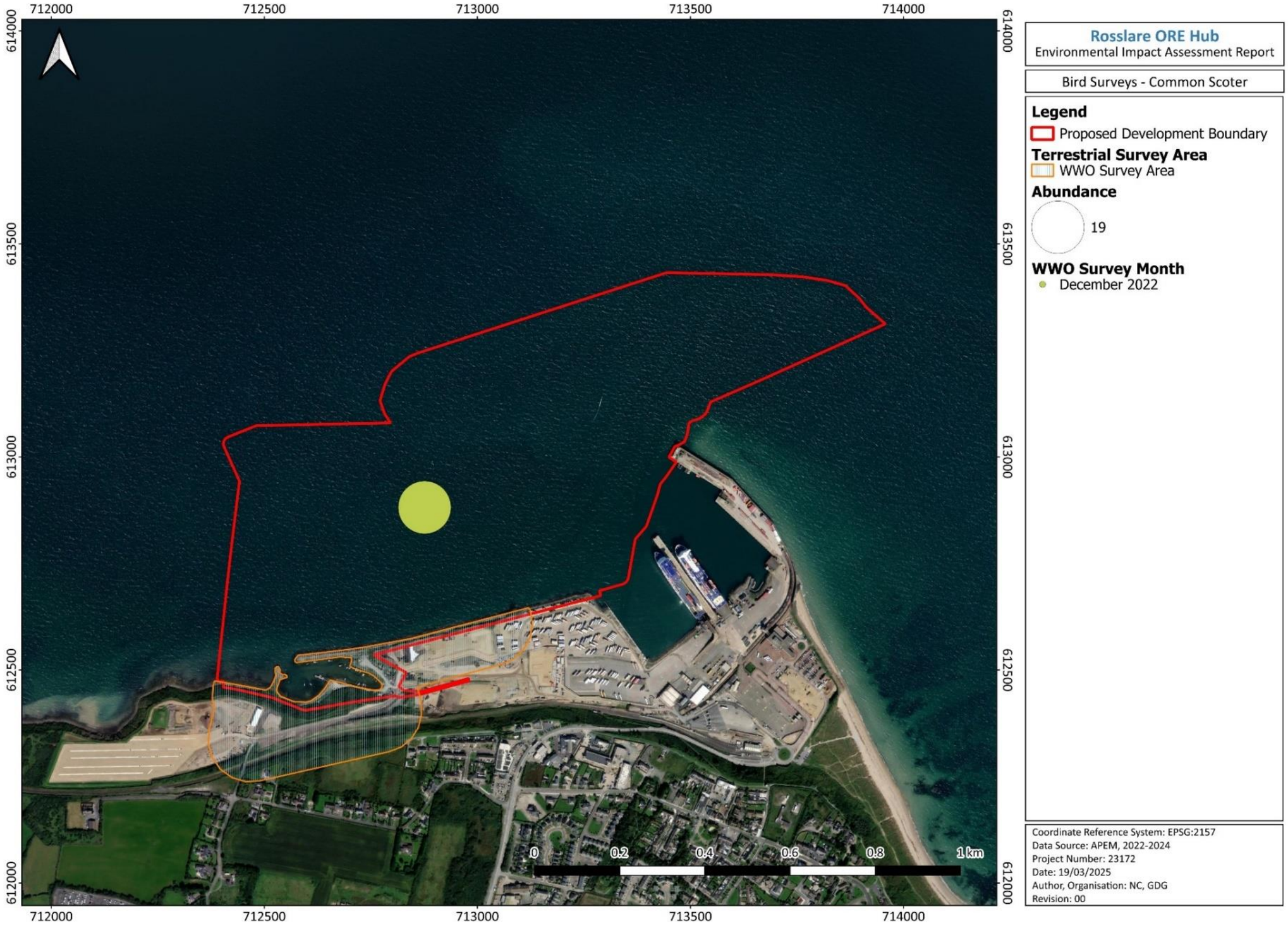


Figure 14.3: Distribution of Common Scoter recorded during baseline WWO bird surveys

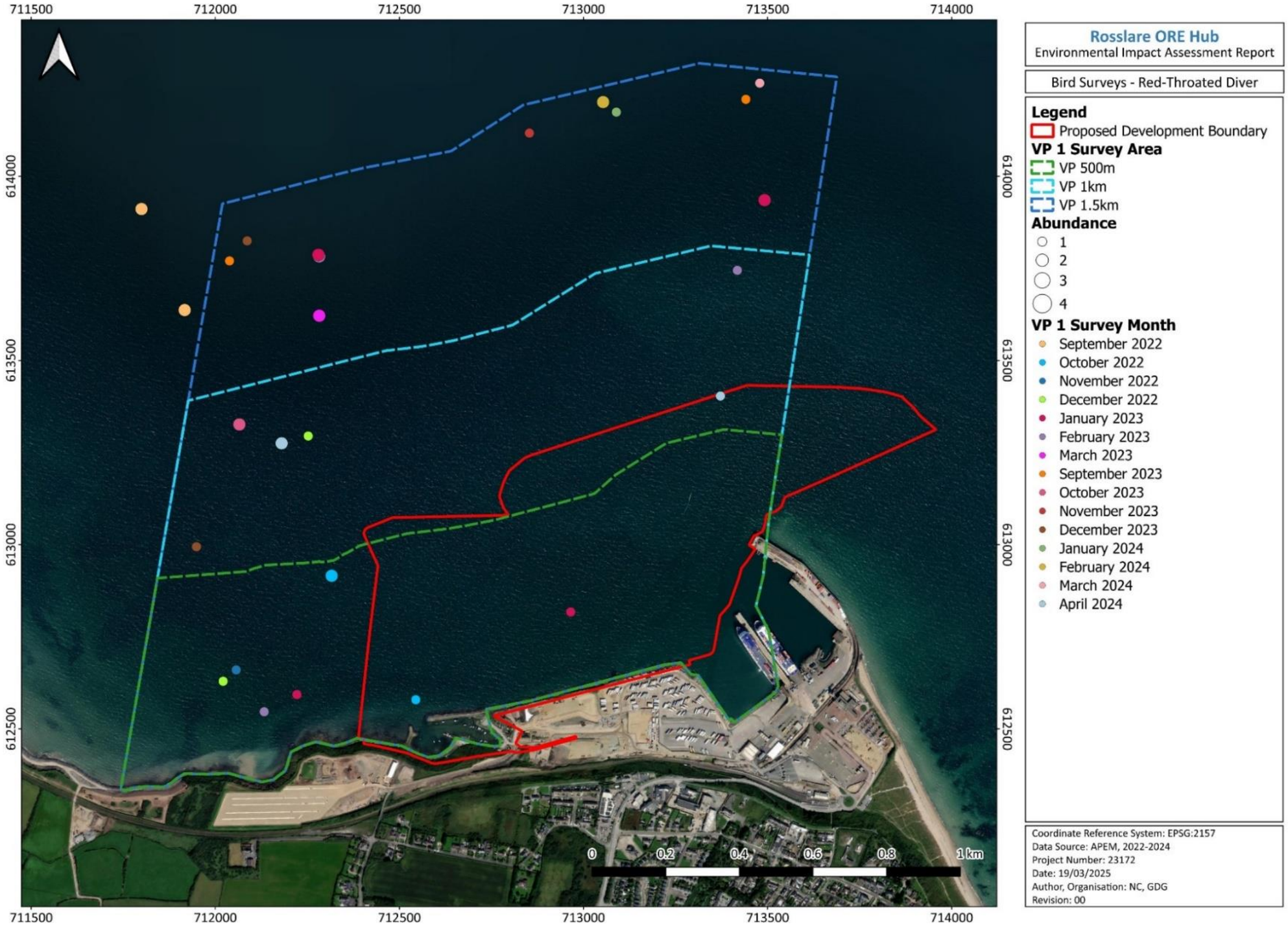


Figure 14.4: Distribution of Red-throated Diver recorded during baseline VP1 bird surveys

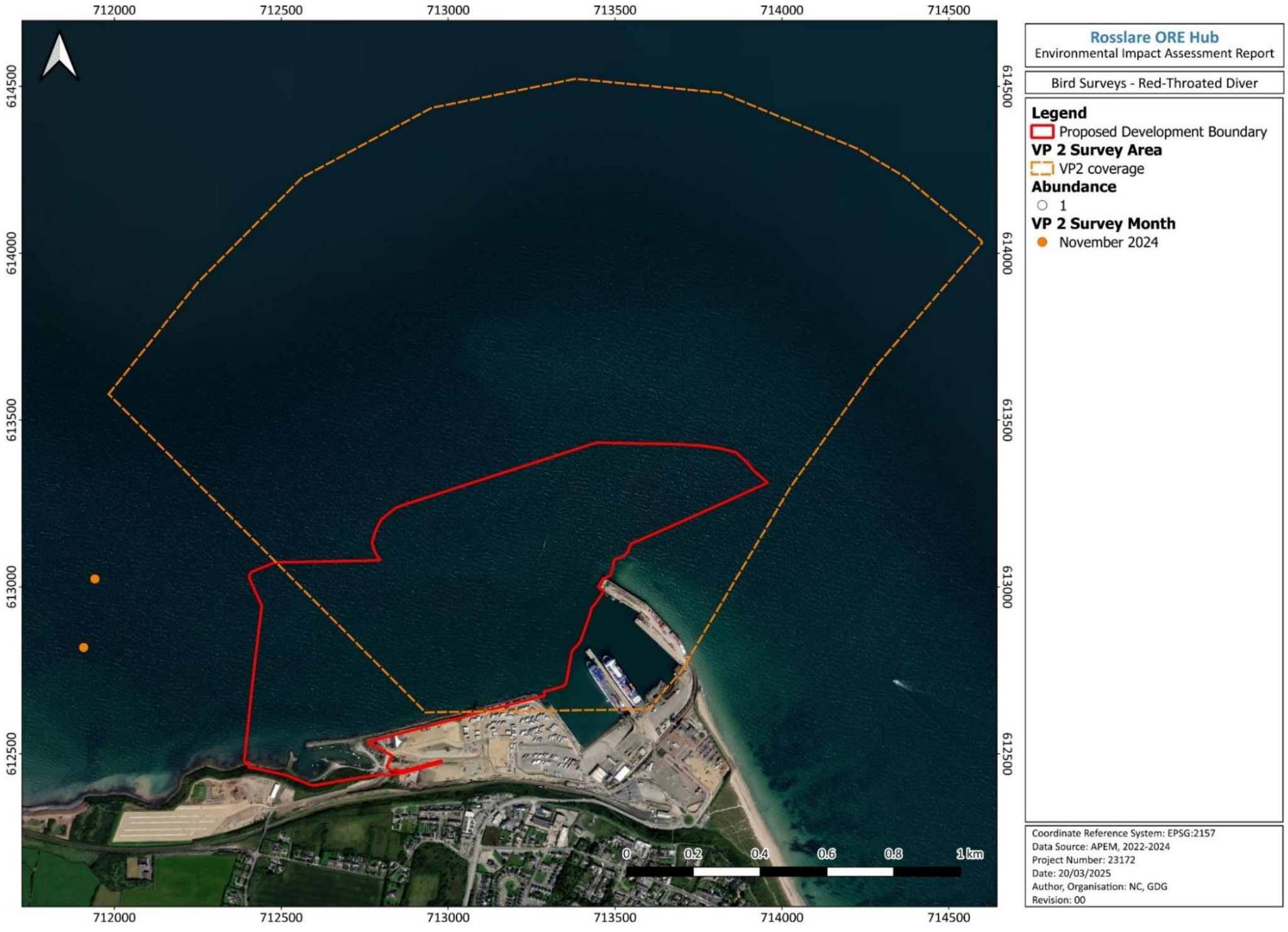


Figure 14.5: Distribution of Red-throated Diver recorded during baseline VP2 bird surveys

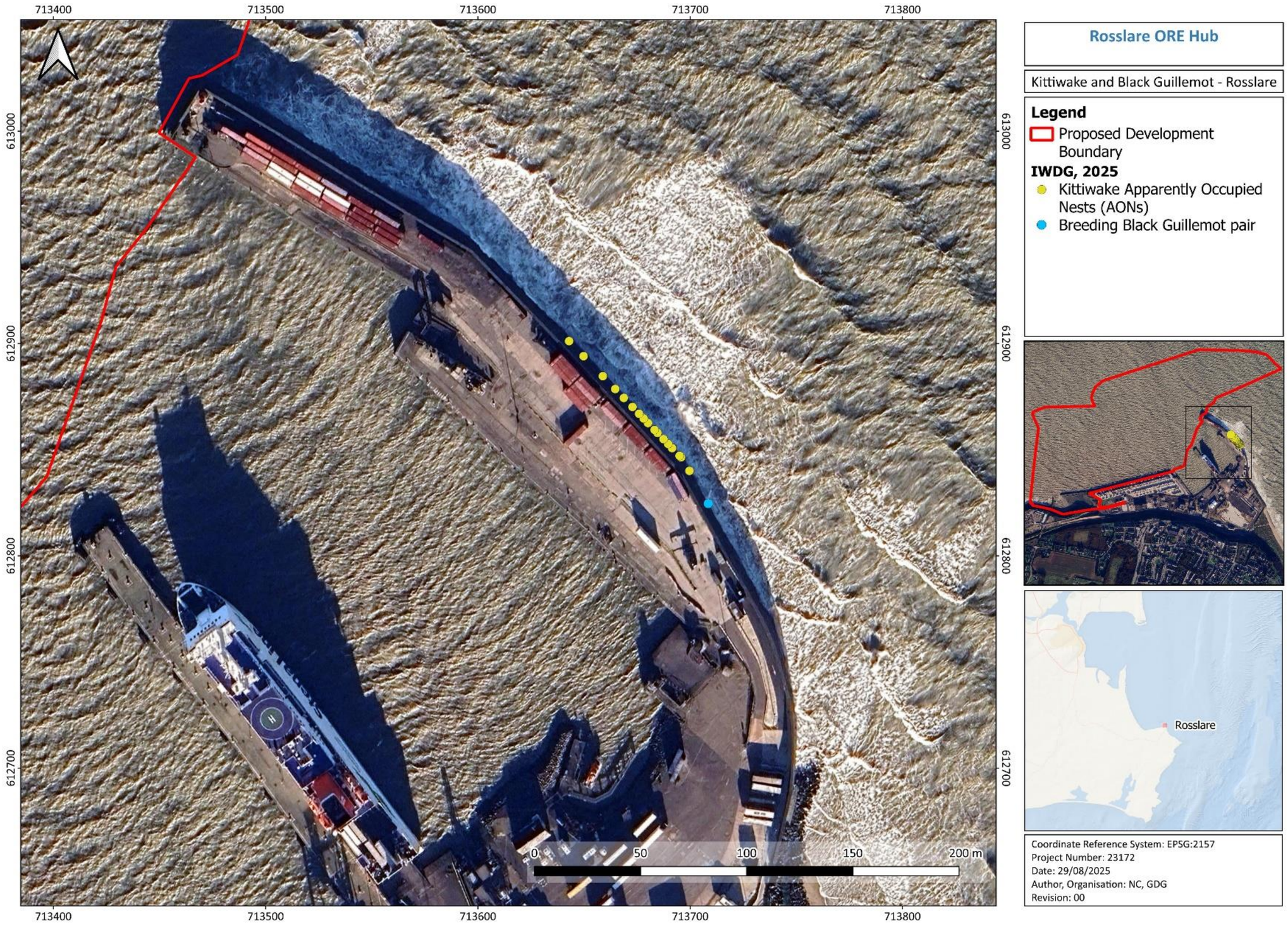


Figure 14.6: Locations of Kittiwake Apparently Occupied Nests (AONs) and breeding Black Guillemot pair recorded by IWDG on the outer wall of Rosslare Harbour in June 2025 during buoy recovery operations

14.3.2 TERRESTRIAL NON-WATERBIRD SPECIES

As part of the baseline characterisation, walkover surveys for terrestrial non-waterbird species were undertaken within the terrestrial element of the Ornithology Study Area. The species considered here are more regularly referred to as passerines, which means perching birds. Three BBS were conducted between May and July 2022, six BBS between March and June 2023, and three BBS between April and June 2024.

During the 2022 BBS, 25 passerine species were recorded within the terrestrial element of the Ornithology Study Area. The species recorded in the highest numbers were linnet, goldfinch, stonechat, wren, song thrush and dunnock. During the 2023 BBS, 26 species were recorded. The species recorded in the highest numbers were house sparrow, starling, robin, stonechat, blackbird and wren. During the 2024 BBS, 22 species were recorded, with linnet, wren, blue tit, blackbird and rock pipit recorded in the highest numbers (Table 14.9). It is considered likely that the majority of these species were breeding within or close to the Ornithology Study Area.

Table 14.9: Summary of passerine species recorded on baseline BBS in the terrestrial element of the Ornithology Study Area (species are BOCCI Green-listed unless otherwise specified)

Species and Conservation Status	Peak count between May and July 2022	Peak count between March and June 2023	Peak count between April and June 2024
Woodpigeon *Columba palumbus*	4	4	0
Collared dove *Streptopelia decaocto*	2	4	2
Grey Partridge *Perdix perdix* BoCCI Red-listed	1	0	0
Magpie *Pica pica*	2	2	2
Jackdaw *Coloeus monedula*	4	0	4
Rook *Corvus frugilegus*	4	0	0
Hooded crow *Corvus cornix*	2	2	0
Blue tit *Cyanistes caeruleus*	4	9	7
Great tit *Parus major*	0	3	1
Willow warbler *Phylloscopus trochilus* BoCCI Amber-listed	1	3	2

Species and Conservation Status	Peak count between May and July 2022	Peak count between March and June 2023	Peak count between April and June 2024
Chiffchaff *Phylloscopus collybita*	3	2	2
Sedge warbler *Acrocephalus schoenobaenus*	1	0	1
Blackcap *Sylvia atricapilla*	0	1	0
Whitethroat *Sylvia communis*	6	0	0
Wren *Troglodytes troglodytes*	14	5	9
Starling *Sturnus vulgaris* BoCCI Amber-listed	1	14	4
Song thrush *Turdus philomelos*	13	2	1
Blackbird *Turdus merula*	7	6	7
Robin *Erithacus rubecula*	9	8	6
Stonechat *Saxicola rubicola*	16	6	5
House sparrow *Passer domesticus* BoCCI Amber-listed	6	18	5
Dunnock *Prunella modularis*	13	3	3
Pied wagtail *Motacilla alba yarrellii*	4	4	5
Meadow pipit *Anthus pratensis* BoCCI Red-listed	2	4	5
Rock pipit *Anthus petrosus*	5	4	7
Chaffinch *Fringilla coelebs*	2	4	5
Bullfinch *Pyrrhula pyrrhula*	0	2	0

Species and Conservation Status	Peak count between May and July 2022	Peak count between March and June 2023	Peak count between April and June 2024
Linnet *Linaria cannabina* BoCCI Amber-listed	25	4	17
Goldfinch *Carduelis carduelis*	18	2	0
Yellowhammer *Emberiza citrinella* BoCCI Red-listed	0	2	0
Reed Bunting *Emberiza schoeniclus*	0	3	2
Total number of species recorded over the survey period	25	26	22

Three WWO surveys were undertaken between December 2022 and February 2023, and five surveys between October 2023 and February 2024. During the WWO 2022/23, 18 passerine species were recorded within the terrestrial element of the Ornithology Study Area between December 2022 and February 2023. The five most frequently recorded species during the 2022/23 WWO surveys were goldfinch, chaffinch, woodpigeon, linnet and redwing. During the 2023/24 winter bird surveys, 22 species were recorded between October 2023 and February 2024. The six most frequently recorded during the 2023/24 winter bird surveys were starling, meadow pipit, linnet, stonechat, goldfinch and blackbird (Table 14.10).

Table 14.10: Summary of passerine species recorded on baseline WWO surveys in the terrestrial part of the Ornithology Study Area. Species are BOCCI Green-listed unless otherwise specified

Species and Conservation Status	Peak count between December 2022 and February 2023	Peak count between October 2023 and February 2024
Woodpigeon	18	0
Collared dove	0	2
Magpie	1	3
Jackdaw	2	0
Hooded crow	3	0
Blue tit	0	2
Great tit	0	4
Wren	1	2
Starling	2	18

Species and Conservation Status	Peak count between December 2022 and February 2023	Peak count between October 2023 and February 2024
Song thrush	2	1
Mistle thrush *Turdus viscivorus*	0	1
Redwing	11	0
Blackbird	0	5
Robin	2	2
Black redstart	1	2
Stonechat	5	6
Wheatear *Oenanthe oenanthe*	0	4
House sparrow	0	4
Dunnock	0	2
Grey wagtail BOCCI Red-listed	1	0
Pied wagtail	2	0
Meadow pipit BOCCI Red-listed	1	10
Rock pipit	4	3
Chaffinch	18	4
Linnet	15	8
Goldfinch	29	5
Yellowhammer	0	2
Reed Bunting	0	1
Fieldfare *Turdus pilaris* BOCCI Amber-listed	8	0
Total number of species recorded over the survey period	17	22

14.3.3 DESIGNATED CONSERVATION SITES FOR BIRDS

Special Protection Areas

Designated SPAs for breeding and foraging seabirds within mean maximum foraging range of SCI species (based on Woodward, *et al*., 2019) are presented in Figure 14.7. In addition to the SPAs listed, species marked with * are also SCI species for the Seas off Wexford cSPA. This cSPA overlaps with and is ecologically linked to four breeding seabird SPAs (Lady's Island Lake SPA, Wexford Harbour and Slobs SPA (little tern is the only breeding SCI, all other SCIs are wintering), Keeragh Islands SPA and Saltee Islands SPA and recent counts for these SPA colonies marked * have been used in this assessment where no population estimate for the Seas off Wexford cSPA are provided in the cSPA Site Synopsis (NPWS, 2024).

Table 14.11: Summary of SPAs for breeding and foraging seabirds

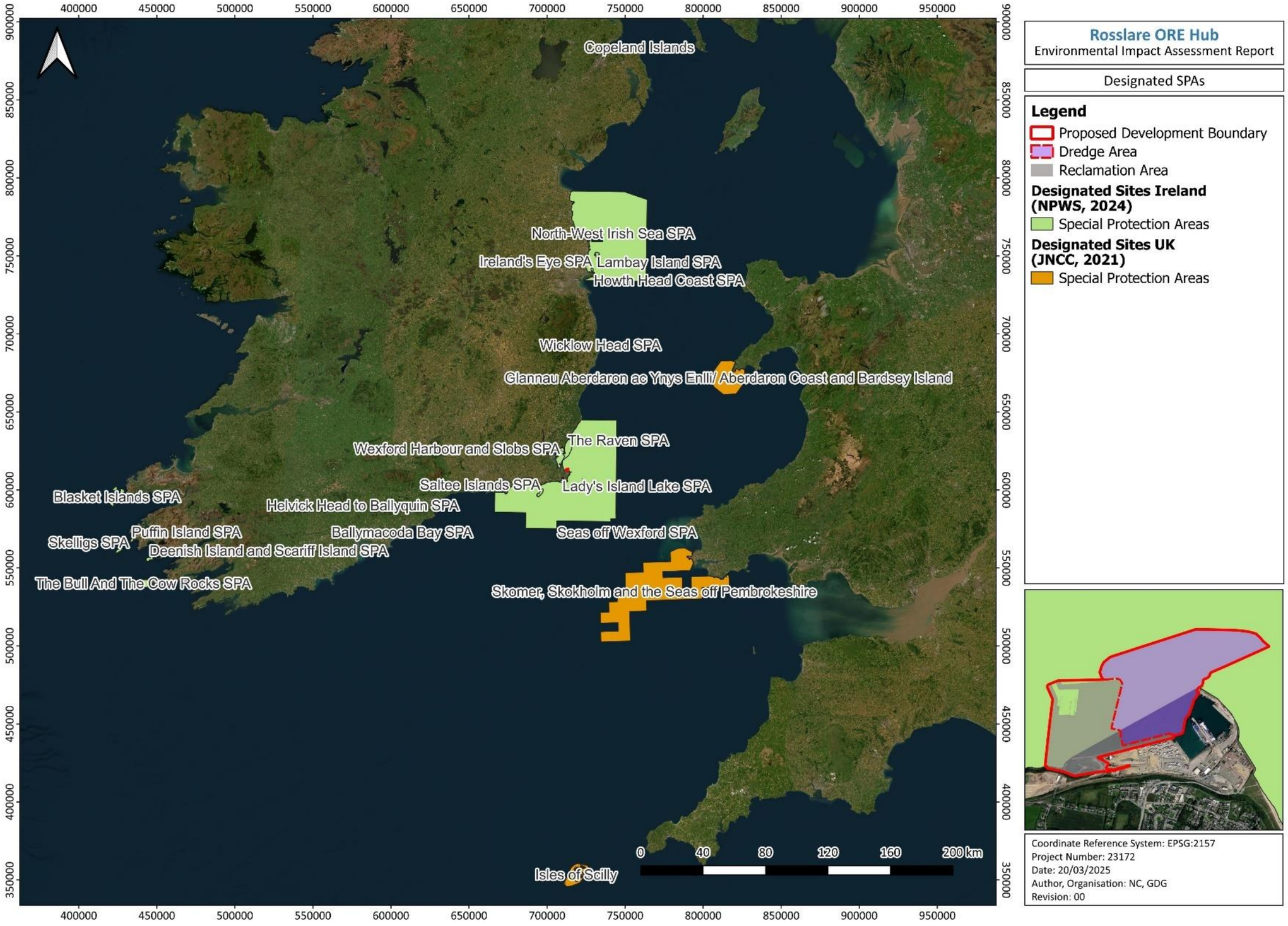
Species and mean max foraging range[(1)]	SPA	Distance (km)	Recent count	Source
Manx shearwater 1346.8 km[(2)]	Seas off Wexford cSPA	Overlapping	8,269 birds	NPWS, 2024a
	Skelligs SPA	326.5	573 pairs, 2021	Burnell *et al.,* 2023
	Blasket Islands SPA	353.6	109,390 pairs (2019, 2021)	Burnell *et al.,* 2023
	Puffin Island SPA	327.9	3,381 pairs (2019)	Burnell *et al.,* 2023
	Deenish & Scarriff Islands SPA	313.5	15,508 pairs (2021)	Burnell *et al.,* 2023
	Glannau Aberdaron ac Ynys Enlli/ Aberdaron Coast and Bardsey Island SPA	106.8	20,675 pairs (2015)	Burnell *et al.,* 2023
	Skomer, Skokholm and the Seas off Pembrokeshire / Sgomer, Sgogwm a Moroedd Penfro SPA	75.7	455,156 pairs (2018)	Burnell *et al.,* 2023
	Isles of Scilly SPA	253.2	568 pairs (2015-2021)	Burnell *et al.,* 2023
	Copeland Islands SPA	276.8	4,850 pairs (2015-2021)	Burnell *et al.,* 2023
Gannet* 315.2 km	Seas off Wexford cSPA	Overlapping	772 birds	NPWS, 2024a

Species and mean max foraging range[1]	SPA	Distance (km)	Recent count	Source
	Saltee Islands SPA	25.8	4,722 pairs, 2014	Burnell *et al.,* 2023
	Skelligs SPA	326.5	29,683 pairs, 2014	Burnell *et al.,* 2023
	The Bull and Cow Rocks SPA	297.5	3,694 pairs, 2014	Burnell *et al.,* 2023
Cormorant* 25.6 km	Saltee Islands SPA*	25.8	269 pairs, 2016	Burnell *et al.,* 2023
	The Raven SPA	6.5		
	Wexford Harbour and Slobs SPA	8.7		
Kittiwake* 156.1 km	Helvick Head to Ballyquin SPA	91.9	130 pairs, 2018	Burnell *et al.,* 2023
	Old Head of Kinsale SPA	174.9	711 pairs, 2015	Burnell *et al.,* 2023
	Saltee Islands SPA*	25.8	1,038 pairs, 2015	Burnell *et al.,* 2023
	Howth Head Coast SPA	125.7	1,773 pairs, 2015	Burnell *et al.,* 2023
	Ireland's Eye SPA	130.1	455 pairs, 2015	Burnell *et al.,* 2023
	Lambay Island SPA	138.8	3,320 pairs, 2051	Burnell *et al.,* 2023
	Wicklow Head SPA	80.6	773 pairs, 2019	Burnell *et al.,* 2023
Black-headed Gull* 18.5 km	Lady's Island Lake SPA*	8.6	2,429 pairs, 2016	Burnell *et al.,* 2023
	Wexford Harbour and Slobs SPA	8.7		
Mediterranean Gull* 20 km	Lady's Island Lake SPA*	8.6	51 pairs, 2015-18	Cummins *et al.,* 2019
Common Gull 50 km	None designated in range			
Great black-backed Gull 73 km	None designated in range			

Species and mean max foraging range[1]	SPA	Distance (km)	Recent count	Source
Herring Gull* 58.8 km	Seas off Wexford cSPA	Overlapping	572 birds	NPWS, 2024a
	Saltee Islands SPA	25.8	115 pairs, 2016	Burnell *et al.,* 2023
Lesser black-backed Gull* 127 km	Saltee Islands SPA*	25.8	251 pairs, 2016	Burnell *et al.,* 2023
	Lambay Island SPA	138.8	345 pairs, 2015	Burnell *et al.,* 2023
	Ballymacoda Bay SPA	118.3		
	Wexford Harbour and Slobs SPA	8.7		
Sandwich Tern*34.3 km	Seas off Wexford cSPA	Overlapping	887 birds	NPWS, 2024a
	Lady's Island Lake SPA	8.6	1,799 pairs, 2016	Burnell *et al.,* 2023
Common Tern* 18 km	Seas off Wexford cSPA	Overlapping	515 birds	NPWS, 2024a
	Lady's Island Lake SPA	8.6	1,012 pairs, 2016	Burnell *et al.,* 2023
Arctic tern 25.7 km	Seas off Wexford cSPA	Overlapping	401 birds	NPWS, 2024a
	Lady's Island Lake SPA	8.6	844 pairs, 2016	Burnell *et al.,* 2023
Guillemot 73.2 km	Seas off Wexford cSPA	Overlapping	13,504 birds	NPWS, 2024a
	Saltee Islands SPA	25.8	25,851 birds, 2015	Burnell *et al.,* 2023
Razorbill 88.7 km	Seas off Wexford cSPA	Overlapping	2,747 birds	NPWS, 2024a
	Saltee Islands SPA	25.8	6,519 birds, 2015	Burnell *et al.,* 2023
Black Guillemot	None designated			

(1) Based on Woodward *et al.*, 2019.

(2) As Manx shearwater has a very large foraging range, only SPAs within the mean maximum foraging range of gannet (509.4 km) have been included in this assessment. This is considered a precautionary approach.



Rosslare ORE Hub
Environmental Impact Assessment Report

Designated SPAs

Legend

- Proposed Development Boundary
- Dredge Area
- Reclamation Area

Designated Sites Ireland (NPWS, 2024)

- Special Protection Areas

Designated Sites UK (JNCC, 2021)

- Special Protection Areas

Coordinate Reference System: EPSG:2157
Project Number: 23172
Date: 20/03/2025
Author, Organisation: NC, GDG
Revision: 00

Figure 14.7: Designated SPAs within foraging range of species for breeding seabirds.

In addition, key SPAs for wintering wildfowl and waders are listed in Table 14.12.

Table 14.12: Summary of key SPAs for wintering seabirds, wildfowl and waders

Species	SPA	Distance	Recent count	Source
Common Scoter	Seas off Wexford cSPA	Overlapping	1,078 birds	NPWS, 2024a
	The Raven SPA	6.5 km	2 birds	I-WeBS[1]
Red-breasted Merganser	Wexford Harbour & Slobs SPA	4.4 km	130 birds	I-WeBS[1]
Great Crested Grebe	Wexford Harbour & Slobs SPA	4.4 km	127 birds	I-WeBS[1]
Black-necked grebe	None designated			
Red-throated Diver	Seas off Wexford cSPA	Overlapping	499 birds	NPWS, 2024a
	The Raven SPA	6.5 km	3 birds	I-WeBS[1]
Great Northern Diver	None designated in range			
Cormorant	Seas off Wexford cSPA	Overlapping	180 birds	NPWS, 2024a
	The Raven SPA	6.5 km	113 birds	I-WeBS[1]
	Wexford Harbour & Slobs SPA	4.4 km	186 birds	I-WeBS[1]
Little Egret	None designated			
Oystercatcher	Wexford Harbour & Slobs SPA	4.4 km	424 birds	I-WeBS[1]
Snipe	None designated			
Turnstone	None designated in range			
Redshank	Wexford Harbour & Slobs SPA	4.4 km	496 birds	I-WeBS[1]

Species	SPA	Distance	Recent count	Source
Kittiwake	North-West Irish Sea cSPA		944 birds in autumn/winter	NPWS, 2023
Black-headed gull	Wexford Harbour & Slobs SPA	4.4 km	3,052	I-WeBS[1]
Lesser black-backed Gull	Wexford Harbour & Slobs SPA	4.4 km	18 birds	I-WeBS[1]

1 I-WeBS five-year mean count between 2019/20 & 2023/24

Ramsar Sites

The Ramsar Convention on Wetlands of International Importance, especially habitats for waterbirds, is an international treaty established for the conservation and sustainable use of wetlands. The Ramsar Convention was ratified by Ireland in 1984 and came into force in Ireland on 15th March 1985. There are 45 designated Ramsar sites in Ireland (IRWC, 2024).

There are two Ramsar sites in the vicinity of the Proposed Development, Wexford Wildfowl Reserve [3IE001] (12 km) and The Raven [3IE010] (10 km), both of which are also covered by SPA designations (Wexford Harbour & Slobs SPA and The Raven SPA, respectively) (Figure 14.8). Wexford Wildfowl Reserve was established for the Greenland white-fronted goose (*Anser albifrons flavirostris*), for which the Reserve is one of the two most important sites in the world, hosting 35% of the international population in winter. More than one per cent of the bioregional populations of the whooper swan (*Cygnus cygnus*), light-bellied brent goose (*Branta bernicla hrota*) and black-tailed godwit (*Limosa limosa*) are also found within the Reserve, along with nationally important numbers of other bird species (IRWC, 2024).

The Raven nature reserve provides important roosting sites for passage terns and supports a small nesting colony of the little tern *Sterna albifrons*. Internationally important numbers of the globally vulnerable Greenland white-fronted goose winter at the site and large numbers of waders roost at high tide (IRWC, 2024).

Important Bird and Biodiversity Areas (IBAs)

Important Bird and Biodiversity Areas (IBAs) are areas identified using an internationally agreed set of criteria as being globally important for the conservation of bird populations, as identified by Birdlife International. There are six IBAs in county Wexford; Wexford Harbour and Slobs, Lady's Island Lake, Tacumshin Lake, Saltee Islands, The Cull and Killag (Ballyteige Burrow SPA) and Bannow Bay (Birdlife International, 2024), and all six are also designated as SPAs for birds (NPWS, 2024) – see Figure 14.8.

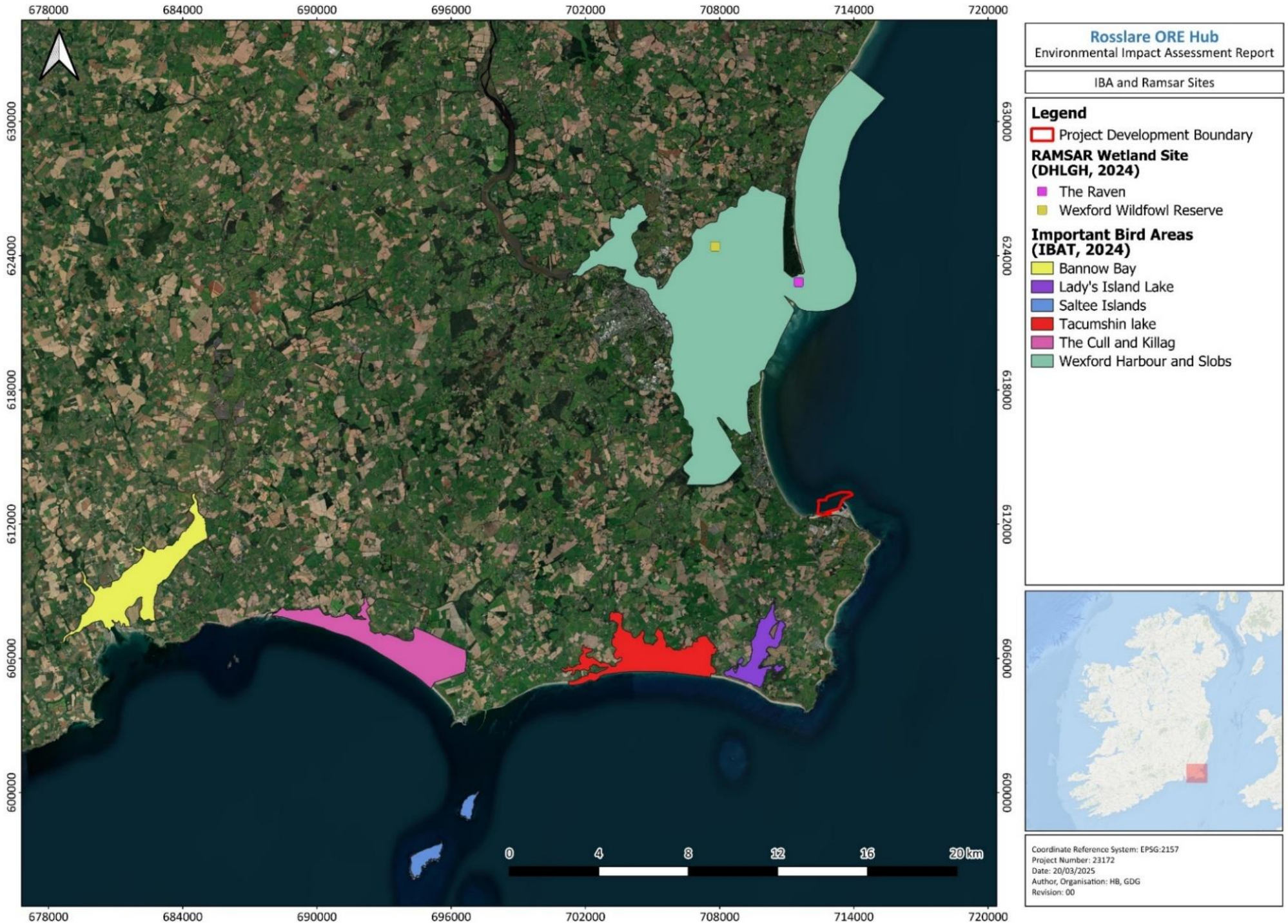


Figure 14.8: Designated RAMSAR sites and Important Bird Areas

14.4 Assessment of Effects

The assessment of effects has been informed by the baseline information presented in this chapter and considers potential effects arising from the Proposed Development on individual bird species, including those that are SCIs for SPAs

"Do-Nothing" Scenario

Assessment of the do-nothing alternative considers the evolution of the key environmental factors of the site and environs if the Proposed Development did not proceed (EPA, 2022). If the Proposed Development did not proceed, then it is considered likely that breeding seabird populations within foraging range of the project footprint, including SCI species of SPAs, would continue to use the sea area in the breeding season as recorded on baseline surveys. Numbers and distribution of terrestrial species breeding in the vicinity would also be predicted to remain similar to the baseline. The numbers and species of birds passing through or using the area in the non-breeding season and on spring or autumn migration would be similar to those recorded on the baseline surveys. These birds would be subject to potential impacts arising from other offshore developments or industries in the vicinity.

14.4.1 Primary Mitigation

No Ornithology-specific primary mitigation measures are proposed as part of the Proposed Development.

14.4.2 Tertiary Mitigation

The Wildlife Act 1976, as amended, provides that it is an offence to destroy vegetation on uncultivated land between 1st March and 31st August (inclusive). As such, pre-construction site clearance works and removal of any vegetation including trees, scrub, hedgerows and shrubs will take place outside this period, which will ensure that there will be no disturbance to birds within the Proposed Development Boundary during the breeding season from these activities.

14.4.3 Construction Phase

Disturbance to breeding birds

Terrestrial construction activities within the site have the potential to impact terrestrial nesting birds in the breeding season as a result of disturbance. Such disturbance impacts from construction activities in the non-breeding season are much less likely to cause significant effects, as birds can just move away from the area of construction activities. Most of the area to be developed comprises an existing small boat harbour surrounded by rock armour sea defences, as well as rocky shoreline and intertidal areas with sand beaches to the northwest. The habitat to the south of the small boat harbour consists mainly of long grass with some small areas of shrubs and bushes.

Current understanding of noise disturbance effects on wintering waterbirds during construction is informed by research from *Construction and Waterfowl: Defining Sensitivity, Response, Impact and Guidance* by Cutts, Phelps, and Burdon (2009), prepared by the Institute of Estuarine and Coastal

Studies, University of Hull, and Humber INCA, and *Exploring Behavioural Responses of Shorebirds to Impulse Noise* by Wright, Goodman, and Cameron (2010) in *Wildfowl* (2010, 60: 150–167).

In terms of noise impacts, construction noise levels below 50 dB (decibels) are unlikely to cause any behavioural changes in foraging or roosting birds. Noise levels between 50 dB and 70 dB may trigger moderate responses, such as heightened alertness or minor behavioural adjustments (e.g., reduced feeding), though habituation to these levels is generally anticipated. Noise levels above 70 dB are more likely to cause birds to move out of the affected area or vacate the site entirely. Typical construction noise levels at a distance of approximately 300 meters, based on *British Standard 5228-1:2009 +A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 1: Noise* (BSI, 2008), are generally below 60 dB, often approaching the 50 dB threshold.

The majority of passerine species recorded on baseline surveys within the terrestrial element of the Ornithology Study Area were not of conservation concern as they are currently BOCCI Green-listed (Gilbert *et al.,* 2021) (Table 14.9 and Table 14.10). In addition, five BOCCI Amber-listed and three Red-listed passerine species were also recorded on baseline walkover surveys (Table 14.9 and Table 14.10).

The five Amber-listed species (willow warbler, starling, wheatear, house sparrow and linnet) are all Amber-listed due to having an unfavourable conservation status in Europe (Gilbert *et al.,* 2021), rather than any immediate conservation threat in Irish terms. In addition, wheatear was only recorded on baseline surveys in very low numbers (four birds) on the 2023/24 winter surveys.

Of the three BOCCI Red-listed species (grey wagtail, meadow pipit and yellowhammer) recorded on baseline walkover surveys, grey wagtail was not recorded during the breeding season and is considered not likely to breed in the vicinity. There will therefore be no construction impacts on this species in the breeding season.

Overall, the majority of the terrestrial element of the Proposed Development Boundary offers limited breeding habitat for the majority of these species, comprising an existing small boat harbour surrounded by rock armour sea defences, together with rocky shoreline and intertidal areas with sand beaches. On this basis, any potential breeding season impacts on green and amber-listed species arising from construction activities are considered to be not significant.

The remainder of this assessment considers potential breeding season impacts from construction activities on the Red-listed species recorded in the breeding season on baseline surveys (Meadow Pipit and Yellowhammer).

Baseline breeding bird surveys within the terrestrial element of the Ornithology Study Area recorded four meadow pipit breeding territories in the 2022 breeding season, all outside the Proposed Development Boundary. During the 2023 baseline breeding surveys, two breeding territories of meadow pipits were recorded in the terrestrial element of the Ornithology Study Area but outside the Proposed Development Boundary. In the 2023 breeding season, two yellowhammer territories were recorded in the terrestrial element of the Ornithology Study Area but outside the Proposed Development Boundary. Yellowhammers were not recorded on breeding bird surveys in the 2022 breeding season (EIAR Technical Appendix 14: Ornithology).

As no breeding territories of these species were recorded within the Proposed Development Boundary, it is considered that disturbance to these species during the construction period will not be significant.

Based on the baseline breeding bird surveys, and the primary mitigation incorporated into the design of the Proposed Development which includes seasonal restrictions for any clearance/removal of vegetation, it is concluded that the Proposed Development will not significantly impact upon the breeding populations of passerine species in the vicinity.

Once the construction phase is complete, it is considered that the passerine species present in the area will continue to use the habitats within and adjacent to the site. It is considered that the habitat loss required as part of the Proposed Development will result in a permanent imperceptible impact on passerines using the area.

Based on the fact that breeding passerine species of conservation concern were not recorded within the Proposed Development Boundary, and the passerine species recorded on baseline surveys in the vicinity of the site, it is considered that passerine species sensitivity to disturbance from construction activities will be **Low.** On this basis, it is considered that any disturbance to breeding passerines from construction activities will be of local spatial extent, intermittent, and of temporary to short-term duration, therefore the magnitude of any effect will be **Low** (Table 14.5).

For breeding passerines, the magnitude of the impact is deemed to be **Low** and the overall sensitivity of these species is considered to be **Low**. The effect will therefore be a **Slight Negative** effect, which is not significant in EIA terms (Table 14.5).

Construction impacts on waders and waterbirds

A number of activities associated with the construction phase of the Proposed Development could potentially impact on waders and waterbirds using the coastal environment within the Proposed Development Boundary. The principal sources of potential impacts on waders and waterbirds are disturbances due to presence of workers and operation of plant on site, dredging activities and other works-associated with vessel movements, and noise generation.

Baseline surveys indicate that the majority of waterbirds recorded in the vicinity of the Proposed Development occurred in low numbers (Table 14.8). While red-throated diver and common scoter are considered sensitive to disturbance (e.g., Furness & Wade, 2012, Bradbury *et al.,* 2014), baseline data indicates that red-throated diver and common scoter do not regularly use the Proposed Development area in significant numbers.

Additionally, it is considered that waterbird species that occur in and around Rosslare Europort are already accustomed to anthropogenic noise due to existing high levels of vessel activity and the heavily modified habitats within the port environment.

Disturbance due to presence of workers and noise/operation of plant on site

Some seabird species are more susceptible to disturbance than others. There is evidence from studies that demonstrate that species such as divers and scoters may avoid shipping by several kilometres (Garthe and Hüppop, 2004; Schwemmer, *et al*. 2011), while gulls are not considered

susceptible to disturbance, as they are often attracted to fishing boats as a potential food source (Camphuysen, 1995; Hüppop and Wurm, 2000).

There is also the potential for disturbance to roosting birds arising from visual disturbance from workers, plant and machinery and from noise emissions from machinery on site. In addition, lighting of the works area at night 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 habituated to regular noise, lights and vehicular activity associated with a busy 24-hour port as well as fishing and leisure activities.

In order to focus this assessment, a screening exercise was undertaken to identify those species likely to be susceptible to disturbance and displacement as a result of increased human activity, noise, lighting and vessel activity associated with construction (Table 14.13). This was based on previous sensitivity reviews such as Garthe and Hüppop (2004), who developed a scoring system for such disturbance factors, which has been used widely in offshore wind farm EIAs. Similarly, Furness and Wade (2012) developed disturbance ratings for particular seabird species based on Garthe and Hüppop (2004), alongside scores for habitat flexibility and conservation importance in a Scottish context. These were subsequently revised to provide seabird sensitivity scores for species in English territorial waters (Bradbury, *et al.,* 2014). A similar vulnerability to ship traffic derived for German waters (Fliessback, *et al.,* 2019), was also used to inform this screening exercise.

Species with a low sensitivity to disturbance or species that were not recorded or only recorded within the Ornithology Study Area in very small numbers on baseline surveys were screened out of further assessment for this impact.

Table 14.13: Sensitivity of regularly occurring species to disturbance from increased human activity, noise and vessel activity associated with construction

Species	Sensitivity to disturbance and displacement during construction	Screening Result (In/Out)
Common Scoter	High	**Screened IN** due to moderate numbers recorded on baseline surveys (peak of 53 birds), QI for adjacent Seas off Wexford cSPA and classified as High sensitivity to disturbance and displacement.
Red-breasted Merganser	High	**Screened OUT** as the species was recorded in very low numbers on baseline surveys (peak of 4 birds), therefore disturbance/ displacement would be negligible.

Species	Sensitivity to disturbance and displacement during construction	Screening Result (In/Out)
Great Crested Grebe	Moderate	**Screened OUT** as the species was recorded in very low numbers on baseline surveys (peak of 4 birds) and therefore disturbance/ displacement would be negligible.
Black-necked grebe	Moderate [1]	**Screened OUT** as the species was recorded in very low numbers on baseline surveys (peak of 2 birds), therefore disturbance/ displacement would be negligible.
Red-throated Diver	High	**Screened IN** due to low numbers regularly recorded in winter months (peak count of 6 birds), QI for adjacent Seas off Wexford cSPA and classified as High sensitivity to disturbance and displacement.
Great Northern Diver	High	**Screened OUT** as the species was recorded in very low numbers on baseline surveys (peak of 3 birds) and therefore l disturbance/ displacement would be negligible.
Manx shearwater	Very Low	**Screened OUT** as the species has a very low sensitivity to disturbance and is not known to avoid vessels.
Gannet	Low	**Screened OUT** as the species has a low sensitivity to disturbance and displacement from vessels.
Shag	Moderate	**Screened OUT** as the species was recorded in very low numbers on baseline surveys (peak of 12 birds) and species has a moderate sensitivity to disturbance.
Cormorant	Moderate	**Screened OUT** as the species was recorded in very low numbers on baseline surveys (peak of 9 birds) and species has a moderate sensitivity to disturbance.
Little Egret	High (for breeding birds)[3]	**Screened OUT** as the species was recorded infrequently in very low numbers on baseline surveys (peak of 4 birds) between January and April, and the peak count (2 birds) was well below

Species	Sensitivity to disturbance and displacement during construction	Screening Result (In/Out)
		the All-Ireland 1% threshold for national importance (20 birds) (Lewis *et al.,* 2019).
Oystercatcher [2]	Moderate	**Screened OUT** as the species was recorded in very low numbers on baseline surveys (peak of 22 birds) and species has a moderate sensitivity to disturbance.
Lapwing [2]	Moderate	**Screened OUT** as the species was recorded in moderate numbers on baseline surveys (peak of 223 birds, which is less than the 1% All-Ireland importance threshold of 850 birds (Lewis *et al.,* 2019)) and species has a moderate sensitivity to disturbance.
Snipe	High (for breeding birds)[4]	**Screened OUT** as the species was recorded infrequently in very low numbers on baseline surveys in the non-breeding season (peak of 5 birds).
Turnstone [2]	Low	**Screened OUT** as the species was recorded in low numbers on baseline surveys (peak of 26 birds) and species has a low sensitivity to disturbance.
Redshank [2]	High sensitivity to noise disturbance; Low sensitivity to visual disturbance	**Screened OUT** as the species was recorded in very low numbers on baseline surveys (peak of 3 birds) and species has a low sensitivity to visual disturbance.
Kittiwake	Low	**Screened OUT** as the species has a low sensitivity to disturbance and displacement.
Black-headed gull	Low	**Screened OUT** as the species has a low sensitivity to disturbance and displacement.
Mediterranean Gull	Low	**Screened OUT** as the species has a low sensitivity to disturbance and displacement.
Common Gull	Low	**Screened OUT** as the species has a low sensitivity to disturbance and displacement.

Species	Sensitivity to disturbance and displacement during construction	Screening Result (In/Out)
Great black-backed Gull	Low	**Screened OUT** as the species has a low sensitivity to disturbance and displacement.
Herring Gull	Low	**Screened OUT** as the species has a low sensitivity to disturbance and displacement.
Lesser black-backed Gull	Low	**Screened OUT** as the species has a low sensitivity to disturbance and displacement.
Sandwich Tern	Low away from breeding colonies[5]	**Screened OUT** as the species was recorded in low numbers on baseline surveys (peak of 26 birds) and species has a low sensitivity to disturbance away from breeding colonies.
Common Tern	Low	**Screened OUT** as the species has a low sensitivity to disturbance and displacement.
Arctic tern	Low	**Screened OUT** as the species has a low sensitivity to disturbance and displacement.
Guillemot	Moderate	**Screened OUT** as the species was recorded infrequently in low numbers on baseline surveys (peak of 15 birds) and species has a moderate sensitivity to disturbance.
Razorbill	Moderate	**Screened OUT** as the species was recorded infrequently in low numbers on baseline surveys (peak of 5 birds) and species has a moderate sensitivity to disturbance.
Black Guillemot	Moderate	**Screened IN** as the species is considered likely to be breeding close to Site Boundary and has a moderate sensitivity to disturbance.

1 Sensitivity ranking for red-necked grebe was used as ranking for black-necked grebe is unavailable

2 Based on sensitivity rankings in Waterbird Disturbance Mitigation Toolkit (Cutts *et al.,* 2013)

3 Based on disturbance studies of breeding birds at colonies (Hong Kong Bird Watching Society, 2016)

4 Based on disturbance studies of breeding birds at upland wind farms during construction (Pierce-Higgins *et al*., 2012)

5 Based on NatureScot literature review on disturbance distances (Goodship & Furness, 2022)

Sensitivity of the Receptor

Three species were screened in as being potentially susceptible to disturbance as a result of increased human activity, noise and vessel activity associated with construction – common scoter, red-throated diver and black guillemot.

A literature review of disturbance distances undertaken by NatureScot (Goodship and Furness, 2022) concluded that common scoter is particularly sensitive to human activities in marine areas including disturbance effects of ship and helicopter traffic (Garthe and Hüppop, 2004; Schwemmer *et al.,* 2011; Furness *et al.,* 2013; Furness and Wade, 2012; Bradbury *et al.,* 2014; Kaiser *et al*.,2006). Common scoter may flush from boats that are over 3 km distant (Schwemmer *et al.*, 2011).

Goodship and Furness (2022) reported that red-throated diver has been assessed as having a very high sensitivity to boat disturbance (Furness *et al*., 2013), and has been identified as being particularly sensitive to human activities, including through the disturbance effects of ship and helicopter traffic (Mendel *et al*. 2019; Garthe and Hüppop, 2004; Schwemmer *et al.,* 2011; Furness and Wade, 2012; Bradbury *et al.,* 2014; Dierschke *et al.,* 2016). Red-throated divers are very likely to take flight in the 200-300 m distance band from a passing ferry (Jarrett *et al*., 2018). Other studies have suggested that this species will fly away from approaching vessels at a distance of at least 1 km or more (Garthe and Hüppop, 2004; Schwemmer *et al.,* 2011; Topping and Petersen, 2011).

A disturbance vulnerability index for effects of ship traffic ranked red-throated diver and black guillemot as being the most vulnerable species to ship disturbance, while common scoter was ranked less vulnerable on the basis of its lower population sensitivity (Fliessbach *et al.,* 2019).

Based on the above, the overall sensitivity of black guillemot, common scoter and red-throated diver to disturbance impacts associated with construction is therefore considered to be High.

Magnitude of Impact

Construction activities for the Proposed Development could potentially result in the disturbance or displacement of birds as a result of increased vessel activity, noise and human activity associated with the construction works. This activity will occur intermittently throughout the construction period. The construction works are likely to occur over a period of up to 18-24 months between 7am and 7pm.

As the baseline sightings of common scoter and red-throated diver were only recorded between August and March, any disturbance from construction activity will be limited to the non-breeding season, when birds are in the vicinity of the site, and there will be no disturbance to breeding birds of these species in the breeding season, therefore reproductive rates will not be affected.

With regard to the Seas off Wexford cSPA, for common scoter, the estimated minimum non-breeding season population for the Seas off Wexford cSPA is 1,078 birds (Table 14.12). The peak count of 19 common scoter recorded within the Proposed Development area on baseline surveys in October 2022 would therefore correspond to approximately 1.8% of the cSPA estimated population. However, the cSPA population estimate is an under-estimate as it is based on the northern section of the cSPA only, as outlined in the cSPA site synopsis (NPWS, 2024a). Therefore, considering that

the population of the whole cSPA would be larger than 1,078 birds, it is considered reasonable to assume that the peak count of common scoter recorded within the Proposed Development area on baseline surveys will equate to less than 1% of the cSPA population.

Similarly, the estimated minimum non-breeding season population of red-throated diver for the Seas off Wexford cSPA is 499 birds (Table 14.12). The peak count of six red-throated divers recorded on baseline surveys in January 2023 would therefore correspond to approximately 1.2% of the cSPA estimated population. However, the cSPA population estimate is an under-estimate as it is based on the northern section of the cSPA only, as outlined in the cSPA site synopsis (NPWS, 2024a). Therefore, considering that the population of the whole cSPA would be larger than 499 birds, it is considered reasonable to assume that the peak count of six red-throated divers recorded on baseline surveys will equate to less than 1% of the cSPA population.

The impact is therefore predicted to be of local spatial extent, intermittent, and temporary to short-term duration. The EPA (2022) guidance defines temporary duration as lasting less than one year, while “short-term” duration is defined as between one- and seven-years duration. However, it is considered that only a small proportion of the total development site will be affected by construction activities at any one time, and that individual construction activities will typically be completed within a few months. Consequently, only birds in the vicinity of these individual activities will be affected directly.

On this basis, it is considered that any disturbance to common scoter and red-throated diver will be temporary (non-breeding season only), and that the magnitude of any effect will therefore be **Low** (Table 14.5).

For black guillemot, there is the potential for disturbance from construction activity during the breeding season, although the breeding location is outside the Proposed Development Boundary. As such, it is considered that black guillemots breeding at Rosslare Europort are already habituated to regular ferry traffic, maintenance activities such as dredging of the ferry berths and construction activity which has been ongoing within the existing Rosslare Europort since July 2023 and therefore birds are likely to be generally tolerant of additional vessel activity associated with construction for the Proposed Development.

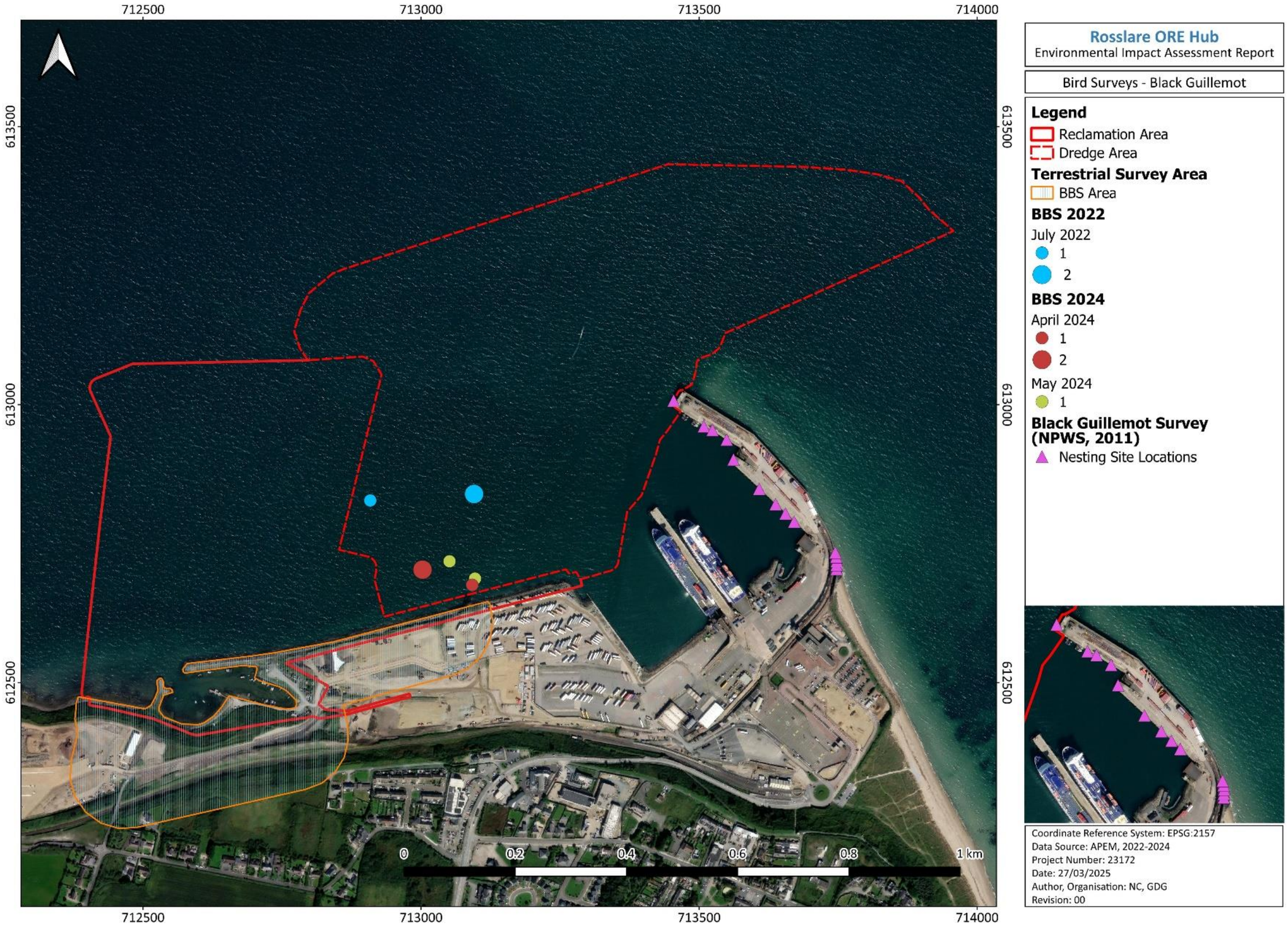


Figure 14.9: Observations of Black Guillemot during the surveys (APEM, July 2023; April and May 2024) and historic Black Guillemot Nest Sites (NPWS, 2011)

A study for the onshore substation for Codling Wind Park at Poolbeg, Dublin, reported that black guillemots were highly tolerant of close approach by humans, with flushing distances observed down to as little as 3 metres. Pier-side activity by humans within the study area was generally ignored by black guillemots except in cases of direct approach to nest sites (ALC Nature, 2024).

A study on the flush response of foraging black guillemots in the Bay of Fundy (Canada) in response to vessel activity found that vessel speed, together with approach distance, were key factors in predicting flushing probability. Overall, this study concluded that if the distance from the foraging birds was greater than 600 m and the vessel speed was less than 25 km/h, then the probability of black guillemots flushing would be reduced to about 10% (Roncoli, *et al.,*2002). Although this study was focussed on typically small vessels, it is considered that vessel speed and approach distance will also be key factors affecting flush responses of black guillemots at Rosslare Harbour.

Vessel movements within harbour bounds at Rosslare Europort are overseen by the harbourmaster. Vessels entering/leaving the small boat harbour, where smaller vessels including CTVs and fishing vessels will be berthed, will have a six-knot speed limit (approximately 11 km/h) while in harbour bounds.

However, as breeding black guillemots at Rosslare Harbour are considered to be already habituated to the regular ferry traffic, and as the breeding location is outside the Proposed Development Boundary, it is considered that the magnitude of any disturbance effect will be **Low** (Table 14.5).

For black guillemot, common scoter and red-throated diver, the magnitude of the impact is deemed to be **Low** and the overall sensitivity of these species is considered to be **High**. The effect will therefore be of **Moderate** significance, which is not significant in EIA terms (Table 14.6).

Indirect effects as a result of temporary reduction in prey species due to disturbance to seabed during dredging

As part of the construction activities, dredging will be required during the initial activities of the Proposed Development outside the existing port facility (Figure 14.10). An area of approximately 48.4 ha will be dredged as part of the construction activities. Dredged material will be re-used on-site as infill material for the Reclamation Area, including the existing small boat harbour, for the development of a storage and assembly area.

Changes to seabed habitats in the dredged area may also reduce the amount of suitable habitat and available food resource for fish and shellfish species and communities associated with the baseline substrates/sediments, which could in turn, reduce the availability of these prey fish species for foraging seabirds within the vicinity of the Proposed Development Dredge Area.

As outlined in Chapter 8: Coastal Processes of this EIAR, sediment dispersal modelling indicates that dredging and reclamation activities would result in the formation of a sediment plume extending approximately 2.5 km southeast along the shore to Greenore Point and about 1.5 km westward to Rosehill Bay Beach from the Proposed Development Boundary. The highest concentrations of suspended sediment were predicted to remain around Rosslare Harbour, decreasing significantly beyond Greenore Point to the south and Rosehill Bay Beach to the west, following an 8-month

dredging and reclamation period. Note disposal of dredged sediment to the reclamation area will be into a bunded lagoon, as described in Chapter 6: Project Description.

Temporary seabed disturbance from these dredging and reclamation activities, may release sediment into the water column which could cause fish and mobile invertebrates to temporarily avoid the area. Increased suspended sediments can reduce water visibility, making it more challenging for foraging seabirds to locate prey. Consequently, these activities may lead to a temporary reduction in prey availability in the vicinity of the dredging and reclamation activities for foraging seabirds during the active dredging and reclamation period.

Additionally sediment dispersal modelling predictsSACs and SPAs in the vicinity of the Proposed Development will experience increased suspended sediment concentrations (SSC), with the highest predicted recorded level at Carnsore Point SAC at 9.96 mg/L (c. ~10ppm (parts per million). The proposed duration of operations was predicted to result in a relatively broad dispersion of sediment, although estimated changes in bed thickness remained negligible, with a maximum of only 0.02 cm of bed thickness change predicted within the harbour area and less than 0.001 cm of bed thickness change predicted within a 1 km radius of the Proposed Development Site.

Given these factors, the impacts from sediment dispersal and temporary seabed disturbance are expected to be localised and short-term, with no significant adverse effects on designated sites or foraging species in the wider area.

Sensitivity of the Receptor

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 become temporarily unavailable due to increased suspended sediments resulting from dredging or reclamation activities. The sensitivity of seabirds to a temporary reduction in prey availability during dredging/reclamation activities is therefore considered to be **Low**.

Magnitude of Impact

The majority of fish species would be able to avoid the effects of temporary disturbance resulting from dredging/reclamation activities due to their mobility and would recover into the areas affected following cessation of dredging/reclamation activities. Overall, the effect on fish species is considered to be of slight negative significance, which is not significant in EIA terms (See Chapter 12: Fish, Shellfish and Turtle Ecology and Chapter 15: Commercial Fisheries and Aquaculture

Following a slight negative impact on fish that are prey species for seabirds, the impact on seabirds is predicted to be of local spatial extent, indirect and of short-term duration, as prey species distribution is considered likely to recover over time following cessation of dredging/reclamation activities. The magnitude of this indirect effect on foraging seabirds is therefore considered to be Low.

The magnitude of the impact is deemed to be Low and the overall sensitivity of seabird species to a temporary reduction in prey availability during dredging/reclamation activities is considered to be

Low. The effect will therefore be of **Slight Negative** significance, which is not significant in EIA terms (Table 14.6).

Habitat loss and species displacement associated with reclamation area

Following construction of the Proposed Development, there will be long-term loss of foraging habitat associated with the area of land reclamation (approximately 28 ha) (Figure 14.10). Overall, approximately 23.5 ha of sub-tidal seabed habitat and 1.75 ha of intertidal habitat will be lost to foraging bird species as a result of the reclamation works.

The seabed habitats removed by the reclamation of this area will reduce the amount of suitable habitat and available food resource for fish and shellfish species and communities associated with the baseline substrates/sediments, which could in turn, reduce the availability of these prey fish species for foraging seabirds in the vicinity.

This permanent habitat loss can result in a secondary impact, displacement, since waterbirds will no longer be able to use the reclaimed area. Displacement may contribute to the overall fitness of individual birds, which could also affect individual breeding success or, at an extreme level, could cause mortality of individuals.

However, the total area of seabed that will become unavailable to foraging waterbirds due to the presence of the reclaimed land area is small (24.5ha), and the number of species and individual birds that were recorded utilising this area during baseline surveys was low. Recorded numbers did not exceed the 1% national threshold of importance (as defined by Lewis, *et al.,* 2019), for any species.

Based on the screening exercise conducted on the bird species regularly recorded within the Proposed Development Study Area in terms of their sensitivity to construction activity and disturbance to vessels (Table 14.13), it is considered that the key species that may be susceptible to displacement impacts are common scoter and red-throated diver.

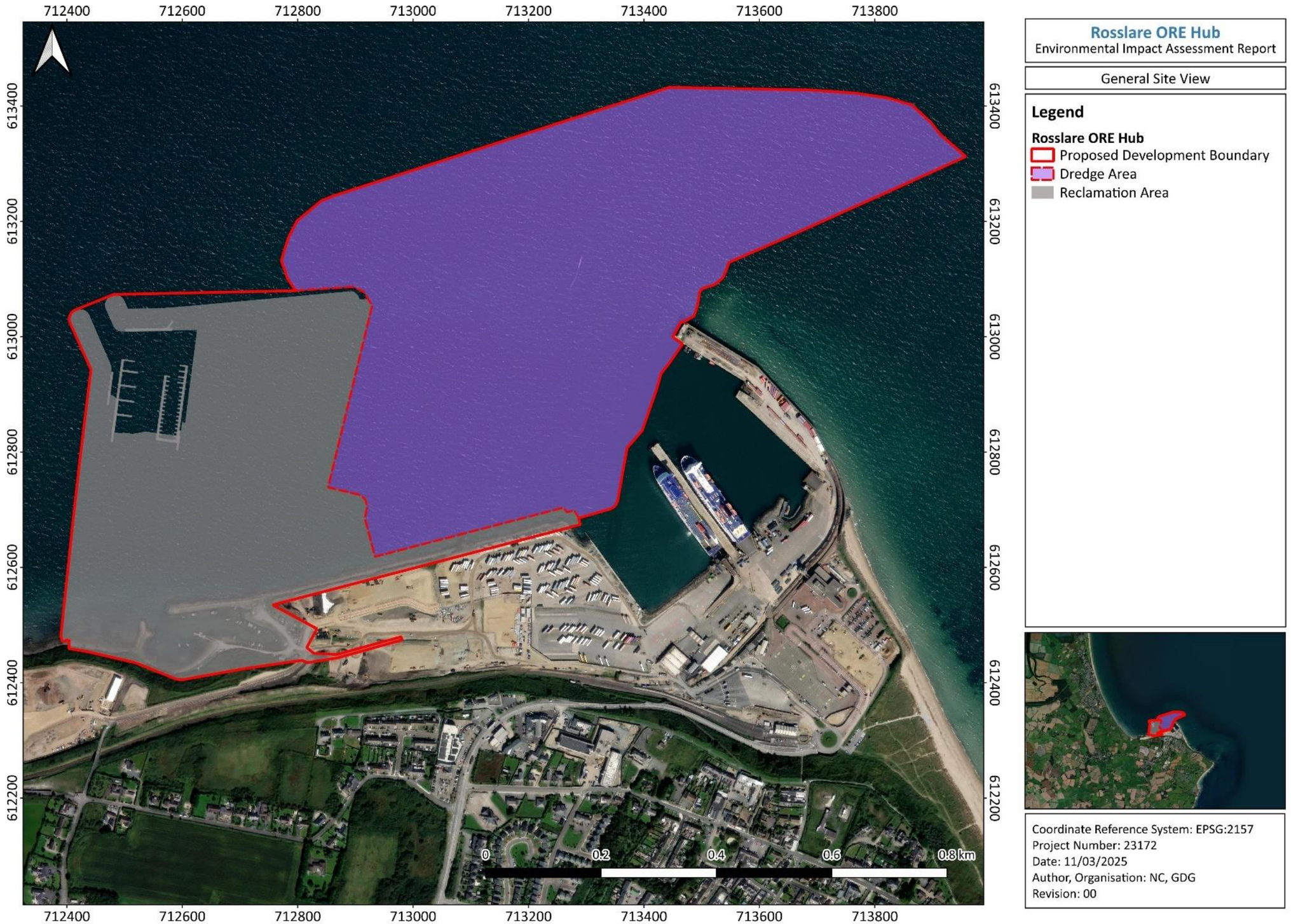


Figure 14.10: Area of Dredging and Reclamation Activity in relation to Proposed Development Site boundary

Sensitivity of the Receptor

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 an area of habitat is no longer available. The sensitivity of the majority of seabird species to displacement as a result of long-term habitat loss due to the creation of the reclamation land area is therefore considered to be low.

However, based on the previous evidence for disturbance impacts, the overall sensitivity of common scoter and red-throated diver to long-term habitat loss associated with the reclamation works is considered to be **High**.

Magnitude of Impact

Overall, 24.5 ha of existing seabed habitat will be lost to foraging bird species as a result of the reclamation works. The number of species and individual birds that were recorded utilising this area during baseline surveys was very low. Recorded numbers did not exceed the 1% All-Ireland threshold of importance (as defined by Lewis, *et al.,* 2019), for any species.

Any alteration in habitat availability will not have an impact beyond displacement of a very small number of birds and would not be considered significant at anything more than a local level. The loss of potential foraging habitat for waterbirds that would occur as a result of the reclamation of the existing small boat harbour, was 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; however, recorded usage of this area by species of divers, grebes and auks was periodic and only involved very low numbers of birds. Therefore, the magnitude of any displacement effect on foraging birds is considered to be **Negligible**.

The magnitude of the impact is deemed to be **Negligible** and the overall sensitivity of common scoter and red-throated diver as a result of long-term habitat loss (displacement) is considered to be **High**. The effect will therefore be **Not Significant**, which is not significant in EIA terms (Table 14.6).

14.4.4 Operational Phase

Disturbance due to increased vessel activity

Following completion of construction, there may be disturbance to foraging waterbirds in the vicinity of the Proposed Development as a result of vessel activity in and out of the new facilities.

As previously stated in Section 14.4.1, some seabird species are more susceptible to disturbance than others. There is evidence from studies that demonstrate that species such as divers and scoters may avoid shipping by several kilometres (Garthe and Hüppop, 2004; Schwemmer *et al*. 2011, Fleissbach *et al.,* (2019), while gulls are not considered susceptible to disturbance, as they are often attracted to fishing boats as a potential food source (Camphuysen, 1995; Hüppop and Wurm, 2000, Fleissbach *et al.,* (2019). However, as much of the existing site is an operational port, it is considered that the local birdlife will be used to regular noise, lights and vehicular activity associated with a busy 24-hour port.

Sensitivity of the Receptor

Based on the screening exercise that was undertaken to identify those species likely to be susceptible to disturbance and displacement associated with construction (Table 14.13), three species were also screened in as being potentially susceptible to disturbance as a result of vessel activity associated with the operational phase of the Proposed Development – common scoter, red-throated diver and black guillemot.

Red-throated diver is listed in Annex I of the EU Birds Directive and is BoCCI Amber-listed for the breeding and non-breeding seasons, while common scoter is BoCCI Red-listed for the breeding and non-breeding seasons (Gilbert *et al.,* 2021). Both species are SCIs for the Seas off Wexford SPA in the non-breeding season (NPWS, 2024a). The boundary of this SPA overlaps with the Proposed Development Boundary (Figure 14.7). Black guillemot is not listed as an SCI for any SPA in Ireland, including the Seas off Wexford cSPA (NPWS, 2024b).

A disturbance vulnerability index for effects of ship traffic ranked red-throated diver and black guillemot as being the most vulnerable species to ship disturbance, while common scoter was ranked less vulnerable on the basis of its lower population sensitivity (Fliessbach, *et al.,* 2019).

Based on the above, the overall sensitivity of black guillemot, common scoter and red-throated diver to disturbance impacts from vessels in the operational phase is therefore considered to be High.

Magnitude of Impact

Operational activities for the Proposed Development could potentially result in the disturbance or displacement of birds as a result of increased vessel activity.

Annual vessel density based on Automatic Identification System (AIS) data shows that the Proposed Development typically has between one and 50 vessel transits per year, which corresponds to an average of one transit per week over a year. In comparison, the adjacent route into the existing Rosslare Europort berthing area has between 1,000-7,008 vessel transits per year. Analysis of the tracks and manoeuvring areas used by these vessels demonstrates that the overwhelming majority (>99.9%) already pass clear of the Proposed Development reclamation area due to its insufficient water depth for their typical draft requirements. The existing Rosslare Europort is expected to operate as normal following construction of the Proposed Development (see Chapter 20: Shipping and Navigation of this EIAR).

During the operational phase, it is anticipated that there would typically be one large project vessel movement per week or up to one large project vessel movement per day during peak OWF (Offshore Wind Farm) activity. Small vessel traffic transiting to and from the Small Boat Harbour is likely to be mainly maintained at current levels. The large project vessels will be bound by the same requirements as other large commercial vessels within Rosslare Europort, including the clear channel policy (Chapter 20: Shipping and Navigation).

Common scoter were recorded on baseline vantage point surveys between August 2022 and March 2023, and between November 2023 and February 2024, with almost all sightings involving birds between 1 km and 1.5 km from shore (Figure 14.2), apart from December 2022, when 19 common

scoter were recorded within the Proposed Development Boundary (Figure 14.3). The peak numbers of common scoter recorded in the Ornithology Study Area on baseline surveys was 53 birds in October 2022, with 36 birds recorded in December 2022 and 19 birds in February 2024 (Table 14.8). All recorded counts were considerably below the All-Ireland 1% importance threshold (110 birds) (Lewis, *et al.,* 2019).

Published visual aerial survey data off the east coast of Ireland (Jessopp, *et al.,*2018) shows that the key areas for common scoter are off the coasts of Counties Louth and Dublin in autumn and winter, with a smaller concentration also recorded off the north Wexford coast at this time. No common scoter were recorded on transect lines in the vicinity of Rosslare Harbour in the 2016 summer, autumn or winter ObSERVE visual aerial surveys (Jessopp, *et al.,*2018).

Common scoter was not listed as a recorded species on the recent ObSERVE II surveys off the south east, south and south-west coasts of Ireland, which included surveys in the vicinity of Rosslare Harbour in summer 2021 (Giralt Paradell, *et al.,* 2024). This indicates that common scoter is not a key species off the south-east coast of Ireland at this time of year. Surveys were not undertaken around the south-east coast of Ireland in the autumn and winter periods of the ObSERVE II survey programme.

Red-throated divers were recorded during baseline vantage point surveys between September 2022 and March 2023 and between September 2023 and April 2024. Typically, birds were scattered widely in small numbers throughout the Ornithology Study Area, with birds recorded in all distance bands between the shore and 1.5 km offshore (Figure 14.4). The peak counts of red-throated divers on baseline surveys was six birds in January 2023 and three birds in April 2024. All recorded counts were considerably below the All-Ireland 1% importance threshold (20 birds) (Lewis, *et al.,* 2019).

Published visual aerial survey data off the east coast of Ireland shows that the key areas for red-throated diver in autumn are off the coasts of Counties Louth, Meath and Dublin, with low numbers of birds recorded further south. In winter, red-throated divers were more widespread off the east coast of Ireland, including off the coast of Wexford, but no birds were recorded on the transect running east-west closest to Rosslare Harbour (Jessopp, *et al.,*2018). Black guillemots were recorded on baseline surveys in most months in the project Study Area in low numbers, with a peak of 17 birds in April 2023 and 16 birds in July 2023. All other counts involved 10 birds or less.

As the baseline sightings of common scoter and red-throated diver were only recorded between August and April, any disturbance from vessel activity will be limited to the non-breeding season, when birds are in the vicinity of the site, and there will be no disturbance to breeding birds in the breeding season, therefore, reproductive rates will not be affected.

The impact is therefore predicted to be of local spatial extent, intermittent, and of temporary duration, during vessel movements. However, it is considered that only a small proportion of the total Proposed Development Boundary will be affected by vessel activities at any one time. Consequently, only birds in the vicinity of these individual vessels will be affected directly. Numbers of these species recorded during the baseline surveys were low, therefore any disturbance is considered to only affect a low number of individuals of these species.

On this basis, it is considered that any disturbance to common scoter and red-throated diver will be temporary (non-breeding season only), and that the magnitude of any effect will therefore be **Low** (Table 14.5).

For black guillemot, there is the potential for disturbance from vessel activity in the operational phase during the breeding season, although the breeding location is outside the Proposed Development Boundary (Figure 14.6). The breeding location is on the inner wall of the existing harbour, to the east of the existing ferry berthing locations. As such, it is considered that black guillemots breeding at Rosslare Harbour are already habituated to regular ferry traffic and therefore are likely to be generally tolerant of additional vessel activity associated with the operational phase of the Proposed Development.

As breeding black guillemots at Rosslare Harbour are considered to be already habituated to regular ferry traffic, and as the breeding location is outside the Proposed Development boundary, it is considered that the magnitude of any disturbance effect will be **Low** (Table 14.5).

For black guillemot, common scoter and red-throated diver, the magnitude of the impact is deemed to be **Low** and the overall sensitivity of these species is considered to be **High**. The effect will therefore be of **Moderate** significance, which is not significant in EIA terms (Table 14.6).

Maintenance dredging will be undertaken on an ongoing basis throughout the lifetime of the port, however, this will be subject to separate licencing through the Maritime Area Regulatory Authority (MARA) and the Environmental Protection Agency (EPA) when required and as such is not considered further in this EIAR.

14.4.5 Cumulative Effects and Other Interactions

An assessment of relevant projects was undertaken to determine the potential for significant in combination effects on birds. Cumulative impacts can arise as a result of incremental changes caused by other past, present or reasonably foreseeable activities together with the Proposed Development.

The first step in determining cumulative effects comprised the identification of a list of 'other projects which may have the potential to overlap with the Proposed Development. Other projects that have been considered as part of this cumulative assessment were identified through a desk study involving general internet searches and information from consenting authority websites, in particular the Wexford County Council planning website. Other relevant projects for which a planning application has been submitted or consent granted were included. Potential future projects which have not yet submitted a planning application were considered. Other projects include Phase One OWFs and the four sites designated within the South Coast DMAP for potential future OWF development.

Projects with potential impacts which could foreseeably overlap with the construction or operation of the Proposed Development or where construction impacts may be consecutive but cumulative, were considered (Table 14.14). Further details of these projects and the screening process are presented in Chapter 25: Interactions of this EIAR.

Table 14.14: Projects considered for cumulative effects on Ornithology in conjunction with the Proposed Development

Project	Likely overlap with Proposed Development in Construction phase	Likely overlap with Proposed Development in Operation phase	Potential cumulative effect on ornithology
Construction of Rosslare Europort Terminal 7	No	No	No, on the basis that the two construction periods will not overlap, therefore there will not be cumulative disturbance effects on ornithology.

Project	Likely overlap with Proposed Development in Construction phase	Likely overlap with Proposed Development in Operation phase	Potential cumulative effect on ornithology
Construction of N25 Rosslare Europort Access Road	Yes	No	Potential for cumulative effects on ornithology during construction. Construction is anticipated to take 18 to 24 months (N25 Rosslare Europort Access Road Planning and Environmental Considerations Report (PECR) June 2022 Mott MacDonald).
Maintenance dredging at Rosslare Europort and Ballygeary Harbour, Co. Wexford	No	Yes	Potential for cumulative effect on ornithology during operation.
Phase One OWF projects	No	No	Potential for cumulative effect on ornithology during operation.
South Coast Designated Maritime Area Plan (DMAP)	No	Yes	Potential for cumulative effect on ornithology during operation.

14.4.5.1 CONSTRUCTION PHASE

During the construction phase, one project is identified that could potentially result in cumulative effects on ornithology (Table 14.14) as considered further hereunder.

Construction of N25 Rosslare Europort Access Road (REAR)

There is the potential for cumulative effects on ornithology in the construction phase arising from the construction of the N25 REAR and the Proposed Development.

Wexford County Council (WCC) proposes to develop the N25 REAR. 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. A new section of road will then extend from the western end of the existing L3068 Ballygeary Link Road at its junction with the existing L7021 Churchtown Road. The new section of road then turns to the north, crossing over the existing Dublin to Rosslare Harbour rail line before continuing east to connect into Rosslare Europort, via a new roundabout proposed as part of the Masterplan Phase 1 development of Rosslare Europort.

The construction of the REAR includes vegetation clearance, with a recommendation for prior confirmatory surveys and scheduling outside the breeding bird season. The Mott Macdonald N25 Rosslare Europort Access Road, Planning and Environmental Considerations Report (PECR) 2022

recommends the use of sound barriers and noise reduction measures for construction plant to minimise noise and visual impacts on birds during the construction phase.

However, it is considered that any such cumulative effects would not be significant, on the basis of the areas where construction will be taking place, the distance between these areas and the construction works for the Proposed Development, and the different species that would potentially be affected (i.e., terrestrial species in the vicinity of the REAR construction and waterbirds in the vicinity of the construction activities for the Proposed Development).

14.4.5.2 Operational Phase

During the operational phase, there were three onshore projects, the development of Phase One OWF projects and the South coast DMAP potential OWF developments identified that could potentially result in cumulative effects on ornithology (Table 14.14). The OWF projects are considered further below.

Arklow Bank Wind Park 2 is a proposed OWF situated on and around Arklow Bank (approx. 6 to 15 km east of Arklow. 49km to the north of Rosslare Harbour and approximately 52 km north of the proposed Rosslare Hub at its nearest point) consisting of 56 or 47 turbines (SSE Renewables EIAR NTS 2024). Potential cumulative environmental impacts, mitigation and monitoring for offshore ornithology for Arklow Bank Wind Park 2 include Environmental Vessel Management Plan, Best practice vessel and marine machinery operation and a lower blade tip. Residual effects were therefore concluded to be not significant (SSE Renewables EIAR, Chapter 24 summary of cumulative effects 2024).

Codling Wind Park (CWP) Project is a proposed OWF located in the Irish Sea approximately 13–22 km off the east coast of Ireland, (County Wicklow), 85 km to the north of Rosslare Harbour and approximately 89 km north of the proposed Rosslare Hub at its nearest point. The CWP Project has an expected generating capacity of 1,300 megawatts (MW). Codling Wind Park EIAR Chapter 10 Ornithology states "*Cumulative effects on offshore ornithological receptors with schemes other than offshore renewables are considered to be unlikely given the scale and nature of such developments (e.g., aggregate dredging projects, dredging and disposal projects, cabling projects and coastal projects). Any potential cumulative effects are predicted not to be significant (e.g., potential disturbance and effects on prey availability are predicted to be highly localised and temporary*)".

The Oriel OWF Project is located in the Irish Sea off the coast of County Louth. The project will have up to 375 MW in production capacity and will be located between 6 and 22km from the coast. The Oriel OWF project is approximately 187 km north of the proposed Rosslare Hub, at its nearest point. The cumulative effects assessment of the Oriel OWF EIAR considered that the only feasible effect – receptor pathways involved other OWF projects (RPS, 2024).

The North Irish Sea Array (NISA) OWF project is located off the coast of Dublin, Meath and Louth. The closest potential turbine location would be approximately 13 km from shore, and approximately 142 km north of the proposed Rosslare Hub at its nearest point. The cumulative effects assessment of the NISA OWF EIAR concluded that the only project type considered relevant to the ornithology

cumulative effects assessment was other OWF projects, on the basis of likely effect – receptor pathways, likely timescales of development and a lack of comparable data (NISA, 2024).

Dublin Array OWF will be located approximately 10 km off the coast of Dublin and Wicklow counties in the Irish Sea, 100 km to the north of Rosslare Harbour and approximately 104 km north of the proposed Rosslare Hub at its nearest point. The cumulative effects assessment of the Dublin Array EIAR screened out projects other than OWF projects e.g. ,dredging activities or port extensions from the cumulative effects assessment on the basis that there is low potential for cumulative effects on offshore and intertidal ornithology with Dublin Array because the contribution from Dublin Array in terms of temporary habitat loss/disturbance and increased suspended sediment concentrations (SSCs) is predicted to be small (and even if these occurred at the same time this would not constitute a significant effect) (RWE, 2024).

The Proposed Development is coastal with no predicted significant effects on offshore ornithology from the operational phase. The key impacts from the Phase One OWF projects are predicted to be collisions with turbines and displacement effects (e,g. RPS, 2024, NISA, 2024, SSE Renewables, 2024). There are no collision impacts predicted for the Proposed Development, therefore, there will be no additional cumulative collision impacts arising from the Proposed Development and the Phase One OWF projects. Similarly, any displacement impacts arising during the operational lifetime of the Proposed Development that might occur on sensitive species such as red-throated diver and common scoter were not considered to be significant. Based on the distance between the Proposed Development and the Phase One OWF projects (minimum of 52 km), plus the low number of individuals of these sensitive species recorded within the Ornithology Study Area, it is considered that there will be no significant cumulative displacement effects between the Proposed Development and the Phase One OWF projects.

Lastly the South Coast DMAP identifies four maritime areas within a wider geographical area, which is the subject of the Plan, and within which proposed future deployments of ORE may proceed subject to further project level assessment, in accordance with the plan-led approach envisaged by the EU Maritime Spatial Planning (MSP) Directive (Directive 2014/89/EU) and required by the Plan. An objective of the plan has been to avoid potential adverse impacts on biodiversity on EU protected sites, and future national protected site designations. In addition to the identification of the four Maritime Areas and policy objectives of the SC-DMAP, this is reflected in a suite of policy objectives and associated measures, which will inform the scale, precise location, and timing of future ORE developments within the SC-DMAP area. As EIARs have not yet been prepared for any of these maritime areas it is not possible to include these sites in the cumulative impact assessment for the Proposed Development.

There is the potential for in-combination disturbance effects on sensitive species such as red-throated diver and common scoter arising from vessel movements associated with vessel movements between the Rosslare Hub and the Phase One OWF projects, and fishing vessels in the vicinity. However, as outlined in Section 14.4.4, the numbers of these species in the vicinity of the Proposed Development were low and vessels moving between Rosslare Harbour and OWF sites will be using existing shipping lanes and adhering to vessel speed limits and therefore any increases in

disturbance are predicted to be minimal and will result in cumulative effects that are not significant in EIA terms.

Maintenance dredging at Rosslare Europort, Co. Wexford

There is the potential for cumulative effects on ornithology in the operational phase arising from future maintenance dredging at Rosslare Europort and the operation of the Proposed Development. Future maintenance dredging requirements are not known at this point in time and any future maintenance dredging will be preceded by and subject to environmental assessment and licencing processes through MARA and the EPA when required, which will consider relevant cumulative and in-combination impacts at that point in time. Potential cumulative effects involving future maintenance dredging are therefore not considered further in this EIAR.

14.4.5.3 TRANSBOUNDARY EFFECTS

Transboundary effects may arise if impacts from a development within one country affects the environment of another country or state. Transboundary impacts upon seabird species are potentially possible due to the large foraging ranges and migrations undertaken by several seabird species in the Irish Sea.

There is limited potential for transboundary impacts between the Rosslare ORE Hub and seabird breeding colonies off the west coast of the UK during the construction phase. During the breeding season, it is highly unlikely that key seabird species with relatively large mean-maximum foraging ranges such as gannet will travel further than the Irish and Celtic Seas (Wakefield *et al.,* 2013; Woodward *et al.,* 2019). All west coast UK seabird colonies within mean maximum foraging range in the breeding season have been included in the transboundary assessment of impacts on offshore ornithology presented here, and the findings are that there would be no significant effects on these species.

Breeding colonies beyond the west coast of the UK and Irish waters, e.g., European colonies, will not be significantly affected by the Proposed Development due to the large distances involved, and the temporary nature of the Proposed Development construction activities. On this basis, any transboundary effects beyond the west coast of the UK and Irish waters are considered very unlikely.

During the non-breeding season, seabird species may travel more widely and as such, seabirds from more distant countries may interact with the Proposed Development during the construction phase. However, any potential transboundary effects would be in relation to much larger bio-geographic populations than those considered at the Irish-UK-scale. Therefore, it is considered that any transboundary effects in the non-breeding season would not be significant due to the larger bio-geographic reference populations involved.

Overall, any transboundary impacts on seabirds from the west coast of the UK or further afield are considered highly unlikely to result in significant effects at the species population level due to the large spatial scales involved and the predicted non-significant impacts associated with the Proposed Development. These, together with the temporary nature of the proposed construction activities will not result in any transboundary effects on offshore ornithology.

14.5 Secondary Mitigation Measures for Ornithology

14.5.1 Construction Phase Mitigation Measures

Given that no significant effects were predicted, no construction phase secondary mitigation measures have been identified for Ornithology receptors.

14.5.2 Operational Phase Mitigation Measures

In order to reduce disturbance to sensitive species such as red-throated divers and common scoters, as well as other seabird species in the vicinity, a speed limit of 6 knots will be applied within the harbour bounds for small boat harbour users (including CTVs).

14.6 Residual Effects

14.6.1 Construction Phase

Disturbance to breeding birds

The impacts associated with disturbance to breeding birds from construction activity associated with the Proposed Development have been assessed as 'not significant' in EIA terms. Therefore, no mitigation is considered necessary. No ecologically significant adverse residual effects on breeding birds have therefore been predicted.

Disturbance to waders and waterfowl

The impacts associated with disturbance to waders and waterfowl from construction activity associated with the Proposed Development have been assessed as 'not significant' in EIA terms. Therefore, no mitigation is considered necessary. No ecologically significant adverse residual effects on waders and waterbirds have therefore been predicted.

Changes to prey availability due to disturbance to the seabed

The impacts associated with disturbance to the seabed during dredging/reclamation construction works associated with the Proposed Development have been assessed as 'not significant' in EIA terms. Therefore, no mitigation is considered necessary. No ecologically significant adverse residual effects on birds have therefore been predicted.

Long-term habitat loss from reclamation works

The impacts associated with long-term habitat loss from reclamation works associated with the Proposed Development have been assessed as 'not significant' in EIA terms. Therefore, no mitigation is considered necessary. No ecologically significant adverse residual effects on birds have therefore been predicted.

14.6.2 Operational Phase

The impacts associated with the operational phase of the Proposed Development have been assessed as 'not significant' in EIA terms. Therefore, no mitigation is considered necessary. No ecologically significant adverse residual effects on birds have therefore been predicted.

14.7 MONITORING

Following completion of construction works, a series of bird surveys will be carried out to monitor bird usage of the area. The bird survey programme will be based on the programme for the baseline bird surveys, with a combination of vantage point surveys and walkover surveys carried out within the site and offshore area for a minimum of 12 months.

Kittiwake breeding surveys will be undertaken as part of post-construction monitoring with count of nests to be conducted following construction each June for a minimum of 2 years.

All post-construction monitoring and reporting requirements will be agreed with NPWS and the planning authority prior to commencement of survey work.

14.8 ENVIRONMENTAL ENHANCEMENTS

Potential disturbance to breeding black guillemots was considered to not be significant due to the likely habituation of birds to regular ferry traffic and the nesting locations being outside the Proposed Development Boundary. However, as this species will readily use artificial nest sites, the provision of artificial nest boxes is proposed as a biodiversity enhancement measure to increase potential breeding locations after construction of the Proposed Development. Artificial nest boxes have been successfully used by breeding black guillemots at other ports in Ireland, for example, in Dublin Port (Dublin Port, 2017).

It is proposed to provide in-built or “bolt-on” nestboxes, suitable for black guillemots at a suitable rate equal to the approximate 50% nest site uptake that is considered likely (e.g., ALC Nature, 2024). In order to create five sites/potential sites, ten artificial sites will be provided and maintained, upon construction, in a comparable area, and sited with ecological supervision, and to best practice.

Salt tolerant native trees and shrubs, which will provide opportunities for nesting terrestrial birds and other wildlife, and will soften hard edges of the reclaimed area to help it blend into the existing environment, especially on the landward side, will be planted.

14.9 SUMMARY

This chapter of the EIAR has assessed the potential environmental impacts on ornithology from the construction and operation phases of the Proposed Development, the assessment is summarised in Table 14.15.

Table 14.15: Summary table

Potential Effect	Construction/ Operation	Beneficial /Adverse/Neutral	Extent (Site/Local/National /Transboundary)	Short term/ Long term	Direct/ Indirect	Permanent / Temporary	Reversible / Irreversible	Significance of Effect (according to defined criteria)	Proposed mitigation	Residual Effects (according to defined criteria)
Disturbance to breeding birds	Construction	Adverse	Local	Short term	Direct	Temporary	Reversible	Slight Negative	Planting of native shrubs to increase nesting habitat for birds & other wildlife	No residual effects
Disturbance to waders and waterbirds	Construction	Adverse	Local	Short term	Direct	Temporary	Reversible	Moderate for Black Guillemot, Common Scoter and Red-throated Diver.	N/A	No residual effects
Temporary reduction in prey species due to disturbance to seabed during dredging/reclamation construction works	Construction	Adverse	Local	Short term	Indirect	Temporary	Reversible	Slight Negative	N/A	No residual effects
Long-term habitat loss associated with dredging activities and reclamation works	Construction	Adverse	Local	Long term	Direct	Permanent	Irreversible	Not significant	N/A	No residual effects
Disturbance due to increased vessel activity	Operation	Adverse	Local	Long term	Direct	Permanent	Irreversible	Moderate for Black Guillemot, Common Scoter and Red-throated Diver.	Speed limit of 6 knots will be applied within the harbour bounds for small boat harbour users (including CTVs).	No residual effects

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