Skerries Harbour – Sheet Pile Wall Replacement

Natura Impact Statement

Report No. M1060-AYE-R-ENV-03

04 March 2024

Revision 01

Comhairle Contae Fhine Gall
Fingal County Council

Document Control

Project: Skerries Harbour – Sheet Pile Wall Replacement

Document: Natura Impact Statement

Client: Fingal County Council

Report Number: M1060-AYE-R-ENV-03

Document Checking:

Revision	Revision/ Review Date	Details of Issue	Authorised		
			Prepared By	Checked By	Approved By
00	23 January 2024	Issued for Comment	Jeff Hean	Jackelyn Wren	Barry Sheridan
01	04 March 2024	Issued for Planning	Jeff Hean	Jackelyn Wren	Barry Sheridan
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Glossary of Terms and Abbreviations

AA	Appropriate Assessment
AASS	Appropriate Assessment Screening Statement
ABP	An Bord Pleanála
AEP	Annual Exceedance Probability
CFRAMS	Catchment Flood Risk Assessment and Management Study
CIEEM	Chartered Institute of Ecology and Environmental Management
CO	Conservation Objectives
EEC	European Economic Community
European Sites	Appropriate assessment tests whether a plan or a project is likely to have a significant negative impact on any Special Protection Areas, Special Areas of Conservation, and/or Ramsar sites. Jointly, these are called 'European sites'.
EU	European Union
IROPI	Imperative Reasons of Overriding Public Interest
km	Kilometre
LSE	Likely significant effects
m	Metres
m^2	Square metres
mm	Millimetres
Natura 2000	Natura 2000 is a network of core breeding and resting sites for rare and threatened species, and some rare natural habitat types which are protected in their own right. It stretches across all 27 EU countries, both on land and at sea.

NIS	Natura Impact Statement
OPW	Office of Public Works
SAC	Special Area of Conservation
SCI	Special Conservation Interests
SEA	Strategic Environmental Assessment
SPA	Special Protected Area
Qis	Qualifying Interests
UoM	Unit of Management
Zone of Influence	The area where potential environmental changes may potentially impact upon sensitive environmental receptors, considering the spatial scope of the proposed scheme.

1 Introduction

1.1 Project Background

Ayesa was commissioned to undertake a Stage 1 Appropriate Assessment (AA) Screening report in application for the planning permission surrounding the proposed Skerries Harbour sheet pile wall replacement works (henceforth, “the proposed development”). The AA Screening report concluded that impacts stemming from the proposed works to nearby Natura 2000 sites were likely and consequently recommended that a Stage 2 Appropriate Assessment (i.e., Natura Impact Statement – this report) report be compiled in support of the planning application.

Skerries Harbour, located in County Fingal on the Northeast coast of Ireland, was originally established in the 18th century and primarily provides mooring to small to medium sized fishing vessel and recreational leisure craft. The pier is a masonry pier that has undergone several renovations since the 1800’s, including the inclusion of a sheet-pile section of the pier in 1968. Consequently, due to weathering and use, the sheet pile section of the pier requires replacement to ensure the continued safe use and functionality of the pier.

The location of the site of the proposed development is provided in Figure 1-1 and Figure 1-2, below.

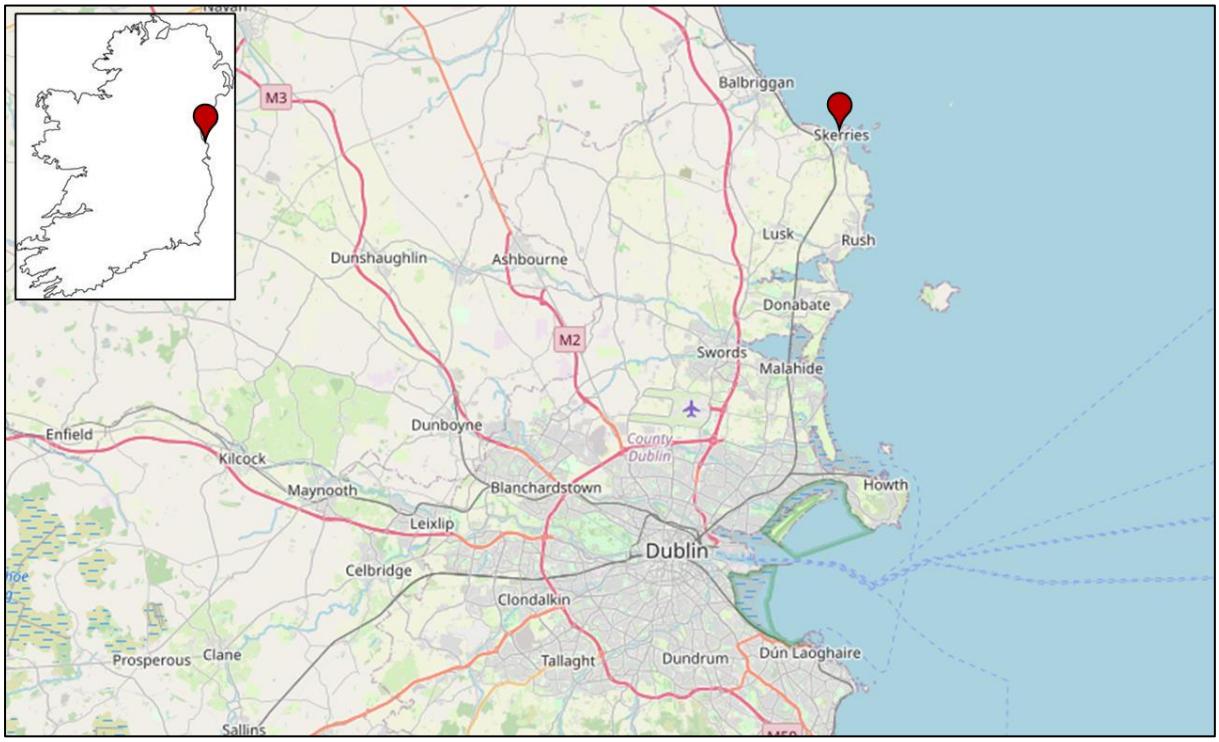

Figure 1-1: Location of the Skerries Harbour, Co. Fingal.

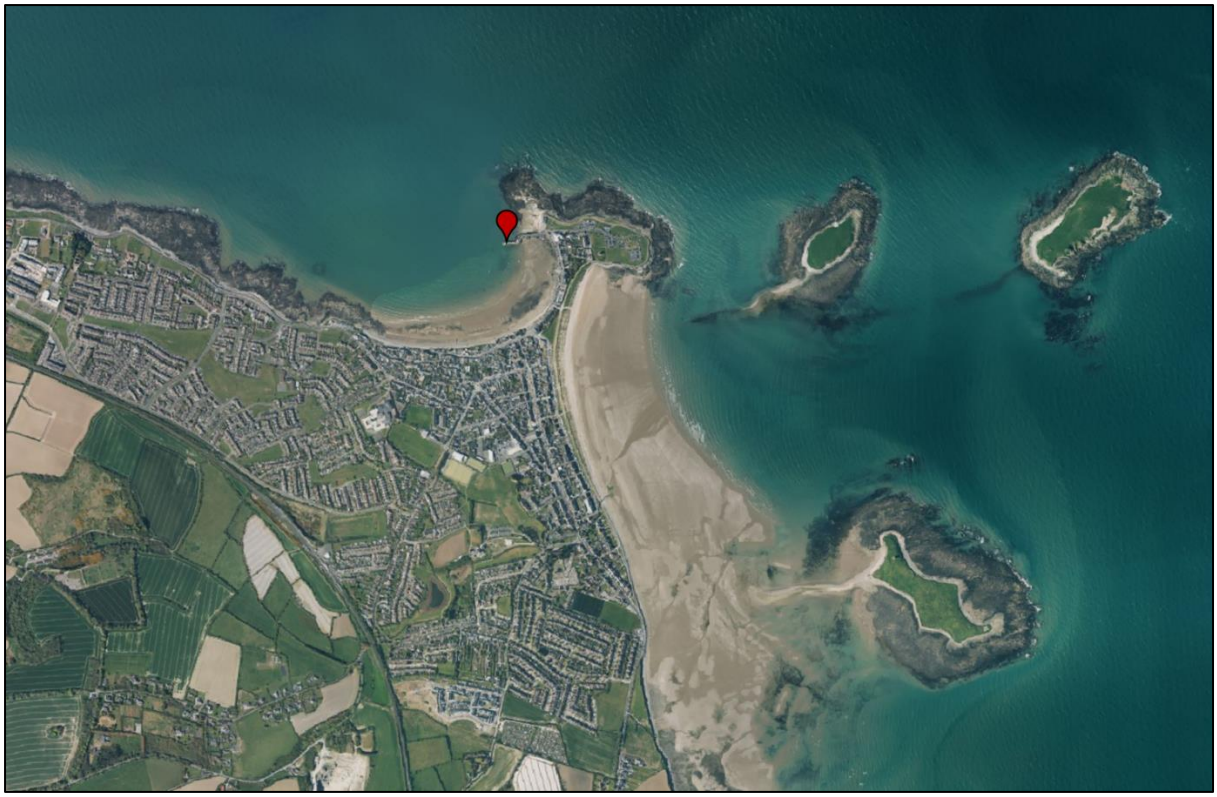

Figure 1-2: Aerial view of the Skerries Harbour and immediate surrounds.

1.2 Project Setting

Skerries Harbour, established in the 18th century, uniquely blends historical and modern architectural elements. It incorporates an older masonry section and a newer sheet-piled section added around 1968. The Pier expands east-to-west from the unique Red Island, providing significant shelter from southerly waves for fishing and leisure craft. However, the current alignment of the harbour exposes fishing vessels moored to northerly waves.

The harbour hosts berthing facilities for small to medium-sized fishing crafts, extending protection to moored fishing and leisure crafts and the harbour road area. The northern slipway provides valuable access to deeper waters for the public and the Royal National Lifeboat Institution (RNLI). On the other hand, the southern slipway is largely utilised by the Skerries Sailing Club and the general public.

The original masonry pier has seen several renovations and extensions since its inception in the 18th century, including the significant addition of the sheet pile section in 1968. This section has contributed to the harbour's current layout, shown in Figure 1-3, although it requires urgent attention due to substantial corrosion with some of the sheet pile out-pans corroded through, allowing the stone fill behind to escape see Figure 1-5.

Figure 1-3:Skerries Harbour Site Layout

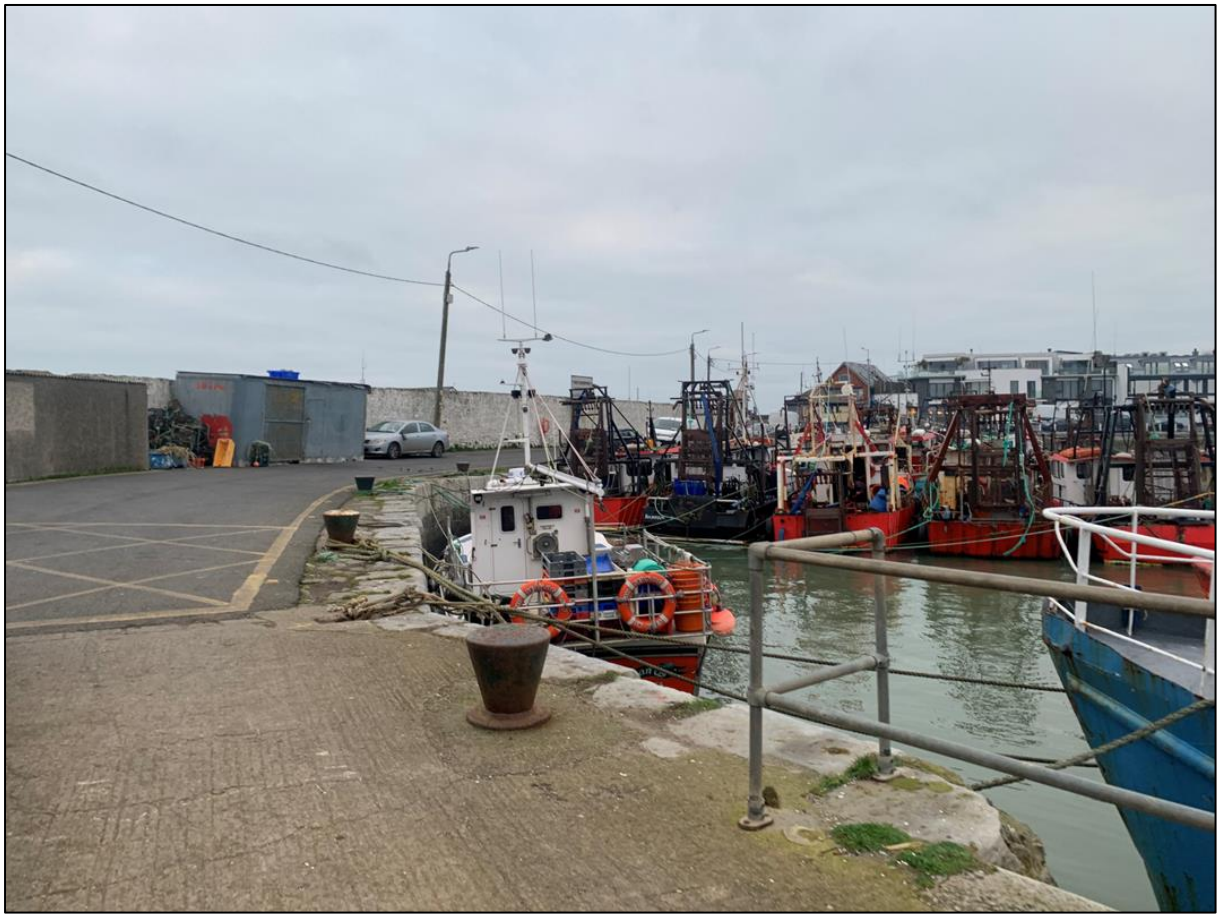

Figure 1-4: Additional views of Skerries Harbour and typical vessels that utilise berthing.

Figure 1-5: View of the Sheet pile pier and the extensive corrosion.

1.3 Project Description and Proposed Works

The installation process involves the installation of new sheet piles driven on each side (seaside, leeward side and end walls) of the existing Pier at a 2-3-meter offset and embedment into the ground is crucial for stability. Once the sheet piles are in place, the existing Pier will either remain or be safely demolished (cut and disposed of). Lateral stability is provided to the new sheet pile wall by installing tie-rods from the leeward side. Suitable backfill material is carefully placed behind the sheet piles to enhance structural stability, with compaction techniques ensuring the desired density to prevent settlement.

Ensuring the proper alignment and embedment of sheet piles is crucial for the stability and integrity of the sheet pile wall. Once the sheet piles are in the correct position, anchored, and backfilled, the construction of the concrete facade begins. A shuttering is installed outside the sheet piles to create the concrete facade, extending below the current seabed level to the determined to scour depth, ensuring a fully protected and sealed sheet-piled wall. After positioning the shuttering and required reinforcement, concrete is poured between the shuttering and the pile to form a clean, smooth concrete facade.

Subsequently, a capping beam and pier deck are constructed on the sheet piles and chosen rock fill. Following this, a reinforced concrete recurve seawall is built on the newly established seaside capping beam. The final steps involve installing pier furniture and essential services/utilities, such as lighting, drainage, and utilities. Additionally, furniture such as mooring bollards and ladders is installed.

However, the specific construction methodology cannot be definitively determined until load testing on the current pier structure is performed to verify the safe working load capacity of the Pier. This testing is crucial in determining the feasibility and suitability of the construction approach.

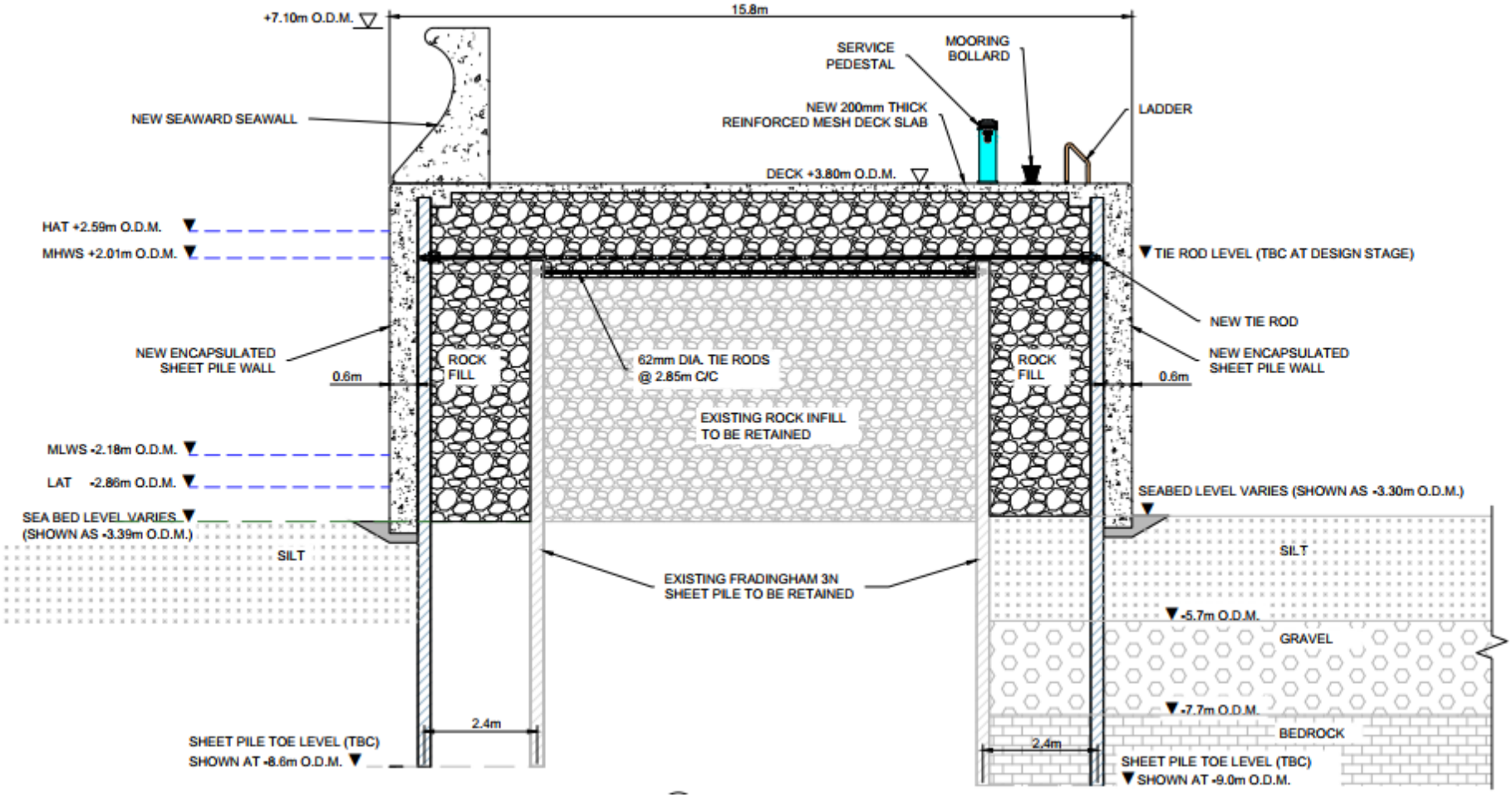

Figure 1-6: Proposed Development Cross-Section

1.4 Purpose of Report

This report contains information pertaining to the screening for Appropriate Assessment (AA), undertaken by Ayesa, in respect of the proposed Skerries Harbour sheet pile wall replacement works. This report has been prepared in accordance with the requirements of the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477/2011), as amended.

The Department of Agriculture, Food and the Marine (DAFM), in their role as the Competent Authority is obliged to examine whether the proposed development works could have significant effects, individually or in combination with other developments, on Natura 2000 Sites, considering their specific qualifying interests and conservation objectives. If screening determines that there is likely to be significant effects on a Natura 2000 Site, or the effects are uncertain or unknown, then an AA screening must be carried out for the works, including the compilation of a NIS to inform the decision making. This report provides relevant material to inform a decision by DAFM, as required under Article 6.3 of the EU Habitats Directive, as to whether the development works are likely to have any significant impacts on the Conservation Objectives of a Natura 2000 site. If it cannot be excluded on the basis of objective information that the proposed development, individually or in combination with other plans or projects, will have a significant effect on a Natura 2000 site then it will be necessary to carry out a stage 2 appropriate assessment and submit a NIS.

1.5 Roles and Qualifications

Table 1.1 provides a summary of the staff involved in the reporting.

Table 1.1: Ayesa Team

Title	Name	Role	Qualifications	Years' experience
Technical Director	Barry Sheridan	Report Review and Sign-off	MSc Environmental Management IES Chartership	20+
Senior Ecologist	Jeff Hean	Report Review	Ph. D in Zoology IES Member	8

Jeff Hean is the Project Ecologist for this Report. He was responsible for all ecological surveys and reporting. Jeff is an expert in ecological matters and the full spectrum of environmental assessment techniques, methodologies, and statutes. He has significant experience in relation to the Habitats Directives and associated Regulations. He has prepared numerous reports for Appropriate Assessment, Natura Impact Statements and Environmental Impact Assessment reports, for a wide variety of proposed developments, including wastewater treatment plants, flood defence schemes, soil recovery works, bridge improvements, landfills, large industrial developments and private housing.

2 Appropriate Assessment Process

The AA process is a sequential process consisting of four potential stages. If at the first stage in the process it is determined that there will be no significant effect on a European Site, the process is effectively completed. The four stages are as follows:

- Stage 1 – Screening of the proposed plan or project for AA (current stage).
- Stage 2 – An AA of the proposed plan or project.
- Stage 3 – Assessment of alternative solutions; and
- Stage 4 – Imperative Reasons of Overriding Public Interest (IROPI)/ Derogation.

Stage 1 relates to Regulation 42 of the Birds and Natural Habitats Regulations; and Stage 2 relates to Article 6(3) of the Habitats Directive; and Stages 3 and 4 to Article 6(4) of the Habitats Directive.

2.1 Stage 1: Screening

The aim of screening is to assess if the plan or project is directly connected with or necessary to the management of European Site(s); or on the basis of best scientific knowledge, if the plan or project, individually or in combination with other plans or projects, is likely to have a significant effect on a European site. This is done by examining the proposed plan or project and the conservation objectives of any European Sites that might potentially be affected. If screening determines that there are likely to be significant effects, or the significance of effects is uncertain or unknown then it will be recommended that a project is brought forward to full AA.

2.2 Stage 2: Appropriate Assessment (current stage)

The aim of Stage 2 of the AA process is to identify any adverse impacts that the plan or project might have on the integrity of relevant European Sites. As part of the assessment, a key consideration is ‘in combination’ effects with other plans or projects. Where adverse impacts are identified, mitigation measures can be proposed that would avoid, reduce, or remedy any such negative impacts and the plan or project should then be amended accordingly, thereby avoiding the need to progress to Stage 3.

2.3 Stage 3: Assessment of Alternative Solutions

If it is not possible during the stage 2 to reduce impacts to acceptable, non-significant levels by avoidance and/or mitigation, stage 3 of the process must be undertaken which is to objectively assess whether alternative solutions exist by which the objectives of the plan or project can be achieved. Explicitly, this means alternative solutions that do not have significant negative impacts on the integrity of a European Site. It should also be noted that EU guidance on this stage of the process states that, ‘other assessment criteria, such as economic criteria, cannot be seen as overruling ecological criteria’ (EC, 2001). In other words, if alternative solutions exist that do not have negative impacts on European Sites; they should be adopted regardless of economic considerations.

2.4 Stage 4: Imperative Reasons of Overriding Public Interest (IROPI)/Derogation

This stage of the AA process is undertaken when it has been determined that negative impacts on the integrity of a European Site will result from a plan or project, but that no alternatives exist. At this stage of the AA process, it is the characteristics of the plan or project itself that will determine whether the competent authority can allow the plan or project to progress. This is the determination of 'over-riding public interest'. It is important to note that in the case of European Sites that include in their qualifying features 'priority' habitats or species, as defined in Annex I and II of the Directive, the demonstration of 'overriding public interest' is not sufficient and it must be demonstrated that the plan or project is necessary for 'human health or safety considerations'. Where plans or projects meet these criteria, they can be allowed, provided adequate compensatory measures are proposed. Stage 4 of the process defines and describes these compensation measures.

2.5 Legislative Background and Guidance Documents

2.5.1 International Legislation

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as the "Habitats Directive", provides legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000. These are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/ECC) as codified by Directive 2009/147/EC.

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to have a significant effect on or to adversely affect the integrity of European Sites (Annex 1.1). Article 6(3) establishes the requirement for AA screening.:

"Any plan or project not directly connected with or necessary to the management of the [European] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."

Article 6(4) states:

"If, in spite of a negative assessment of the implications for the [European] site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 sites is protected. It shall inform the Commission of the compensatory measures adopted."

2.5.2 The Requirement for AA Screening

Section 42 (1) of S.I. No. 477 of 2011, the European Communities (Birds and Natural Habitats) Regulations 2011 states:

"*A screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European site*."

Where the screening process cannot exclude the possibility that a plan or project, individually or in combination with other plans or projects, could have a significant effect on a European site, there is a requirement under Article 42 (9) of these Regulations for the preparation of a Natura Impact Statement to inform the Appropriate Assessment process.

2.5.3 Screening Determination

In accordance with Regulation 42(7) of the Birds and Natural Habitats Regulations 2011 (S.I. No. 477/2011) as amended:

"The public authority shall determine that an Appropriate Assessment of a plan or project is not required where the plan or project is not directly connected with or necessary to the management of the site as a European Site and if it can be excluded on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site."

Further, under Regulation 42(8):

"(a)Where, in relation to a plan or project for which an application for consent has been received, a public authority decides that an Appropriate Assessment is required, the public authority shall give notice of the determination, including reasons for the determination of the public authority, to the following—

i. the applicant,

ii. if appropriate, any person who made submissions or observations in relation to the application to the public authority, or

iii. if appropriate, any party to an appeal or referral.

(b) Where a public authority has determined that an Appropriate Assessment is required in respect of a proposed development it may direct in the notice issued under subparagraph (a) that a Natura Impact Statement is required."

2.5.4 National Legislation

The Habitats Directive has been transposed into Irish law by Part XAB of the Planning and Development Act, 2000 - 2015 and the European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477/2011) as amended.

2.5.5 Guidance Documents on Appropriate Assessment

Where an AA is necessary, the AA requirements of Article 6(3) of the Habitats Directive 92/43/EEC (European Communities 2001) follow a sequential approach as outlined in the following guidance documents:

- Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities. Department of Environment, Heritage, and Local Government, 2010 revision.
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 and PSSP 2/10.
- Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC (European Commission Environment Directorate-General, 2002).
- Managing Natura 2000 Sites: The provisions of Article 6 of the Habitat's Directive 92/43/EEC Commission Notice (European Commission Environment Directorate-General, 2018).
- Guidelines for Good Practice Appropriate Assessment of Plans Under Article 6(3) Habitats Directive (International Workshop on Assessment of Plans under the Habitats Directive, 2011).
- The Department of the Environment, Heritage, and Local Government guidance *"Appropriate Assessment of Plans and Projects in Ireland – guidance for Planning Authorities, 2009"* and the European Commission (2001) guidelines *"Assessment of plans and projects significantly affecting Natura 2000 sites - Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC"*.
- Appropriate Assessment Screening for Development Management (OPR, March 2021)

3 Methods

This NIS has been completed in the following logical order:

- Definition of the zone of influence for the proposed works (completed at Screening stage);
- Identification of the most up-to-date Qualifying Interests (QIs) and Special Qualifying Interests (SCIs) for each European Site occurring either wholly or partially within the zone of influence (completed at Screening stage);
- Identification of other plans or projects, for which In-combination impacts would likely have significant effects (completed at Screening stage);
- Identification of the Conservation Objectives (and Targets set to meet these) required to maintain the QIs/SCIs at the desired target of Favourable Conservation Status;
- Identification of the threats/impacts – actual or potential that could negatively impact the Conservation Objectives of the QIs/SCIs within the European Sites;
- Identification of mitigation measures for any potentially adverse impacts.

The following issues have been considered:

- The nature and quality of habitats within the site of the proposed development;
- Information relating to the ecology of the European Sites, including the statuses of QIs/SCIs and the relevant conservation status and objectives for these species;
- The scale and nature of the aspects of the project in relation to the European Sites.

3.1 Desktop Information Consulted for this Report.

A general assessment of the site was carried out in line with the Heritage Council Best Practice Guidance for Habitat Survey and Mapping (Smith, 2011) and habitats were classified to level 3 of the Fossitt (2000) classification system. To illustrate the general habitat quality, photographs were taken using a digital camera. Grid references were recorded using a GPS handset. Site evaluation is based on the guidelines of the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018).

Sources of data reviewed as part of the Screening process for this project included:

- National Parks and Wildlife Service (NPWS); site synopses and conservation objectives for relevant Natura 2000 sites (accessible at https://www.npws.ie/)
- Bird of Conservation Concern, Ireland (BoCCI). Species list of bird species outlines for conservation efforts 2020-2026. https://birdwatchireland.ie/birds-of-conservation-concern-in-ireland/
- National Biodiversity Data Centre (NBDC) – 1km- and 2km-square species reports (accessed online on 15/11/2023)
- The status of EU Habitats and Species in Ireland 2013, NPWS, ed. D. Lynn
- Article 17 Reports (NPWS, 2019)

- GIS spatial data[1]

3.2 Site Assessment

A general assessment of the site was carried out by Ayesa senior ecologist Jeff Hean 15th December 2023. The site assessment was in line with the Heritage Council's Best Practice Guidance for Habitat Survey and Mapping (Smith *et al.,* 2011) and habitats were classified to level 3 of the Fossitt (2000) classification system. To illustrate the general habitat quality, photographs were taken using a digital camera. Grid references were recorded using a GPS handset. Site evaluation is based on the guidelines of the Chartered Institute of Ecology and Environmental Management (CIEEM 2019).

The site and immediate surroundings were inspected for the presence of invasive species, as listed in the Third Schedule of the Birds and Natural Habitats Regulations (S.I. No. 477/2011). Regulation 49 (2) states that "*any person who plants, disperses, allows or causes to disperse, spreads or otherwise causes to grow in any place any plant listed in the Third Schedule, shall be guilty of an offence*". The determination of the presence or absence of Annex I habitats was carried out in consultation with the habitat descriptions provided in the most recent Article 17 Reports (NPWS, 2019). The Interpretation Manual of European Union Habitats (EUR 28, April 2013) was also consulted. In addition, the spatial GIS data for the Article 17 Reports were examined to determine the distribution of these habitats (as known to the NPWS) within the study area. [2].

All surveys were completed by qualified specialists and in accordance with relevant legislation, particularly the "Guidelines for Ecological Impact Assessment in the UK and Ireland" (CIEEM, 2018) through the additional recording of specific features indicating the presence, or likely presence, of protected species or other species of nature conservation significance.

3.3 Assessment of Likelihood of Significant Effects

In assessing the likelihood of the occurrence of significant effects, the logic is as follows:

- The conditions necessary for a significant effect are considered.
- The likelihood of that effect is assessed, considering the process/emission magnitude, duration, timing and frequency, as well as the connectivity with the proposed project site and the sensitivity of the QI/SCI to the process/emission in question.

The below definitions are relevant at this Stage 1 Appropriate Assessment Screening stage:

- Likely Significant Effect - Where a plan or project is likely to undermine any of the site's conservation objectives.
- Possible Significant Effect - Where a plan or project has an indicated potential to undermine any of the site's conservation objectives but where doubt exists about the risk of a significant effect in the current context. Nevertheless, where doubt exists

[1] https://www.npws.ie/maps-and-data/habitat-and-species-data/article-17
[2] https://ec.europa.eu/environment/nature/legislation/habitatsdirective/docs/Int_Manual_EU28.pdf

about the risk of a significant effect, use of the precautionary principle requires this effect to be considered appropriately within the Article 6 assessment process.

It should be noted that this report has taken account of the 2017 ECJ ruling (C-323/17 - People Over Wind and Peter Sweetman v Coillte): "*Article 6(3) of the Habitats Directive must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce t harmful effects of the plan or project on that site"*.

3.4 Screening Assessment of European Sites

This chapter provides a Preliminary Screening Assessment to identify SACs and SPAs to be assessed fully in the Screening of Potential Impacts (Section 7).

As per the outcomes of the Judgement in Case C-721/21: Keegan Land Holdings vs. An Bord Pleanála, this screening assessment has been completed with consideration of "*Article 6(3) of Directive 92/43 must be interpreted as meaning that: in order to determine whether it is necessary to carry out an appropriate assessment of the implications of a plan or project for a site, **account may be taken of the features of that plan or project which involve the removal of contaminants and which therefore may have the effect of reducing the harmful effects of the plan or project on that site, where those features have been incorporated into that plan or project as standard features**, inherent in such a plan or project, irrespective of any effect on the site".*

3.4.1 Zone of influence (ZoI)

The 'zone of influence' for a project is defined as "the area over which ecological features may be affected by biophysical changes because of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries" (CIEEM, 2019). Subsequently, the zone of influence (ZoI) will vary for different ecological features depending on their sensitivity to an environmental change (CIEEM, 2018).

Irish guidance (Department of Environment, Heritage and Local Government, 2010) states, "*for the zone of influence, a distance of 15 km is currently recommended in the case of plans derives from UK guidance* (Scott Wilson et al, 2006)". The guidance goes on to state that "***for projects, the distance could be much less than 15 km, and in some cases less than 100 m, but this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, the sensitivities of the ecological receptors, and the potential for in-combination effects***.". Additionally, a practice note issued by the Office of the Planning Regulator (OPR, 2021) further states that "*The zone of influence of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. This should be established case-by-case using the Source-Pathway-Receptor framework and not by arbitrary distances (such as 15 km)".*

The ZoI for this project was identified through a review of the nature of the project, the type of impacts and effects that could arise as a result, the distance between the project and European sites, and the qualifying interests of the European sites. Considering the nature,

extent and location of the proposed works, particularly because the proposed works will occur directly within the marine environment, a ZoI of 10 km was used.

3.4.2 Natura 2000 Sites within the 10km Zone of Influence

There are five Special Protection Areas (SPA), two Special Area of Conservation (SAC), and one (1) Natural Heritage Area (NHA) sites within 10 km of the Skerries Harbour (see Figure 3-1). Figure 3-2 shows the location and extent of the North-East Irish Sea SPA, a new addition to the Natura 2000 sites roster.

Natura 2000 and NHA sites identified within the 10 km ZoI include;

- North-West Irish Sea SPA
- Skerries Islands SPA
- Rockabill SPA
- River Nanny Estuary and Shore SPA
- Rogerstown Estuary SPA
- Rockabill to Dalkey SAC
- Rogerstown Estuary SAC
- Skerries Islands NHA

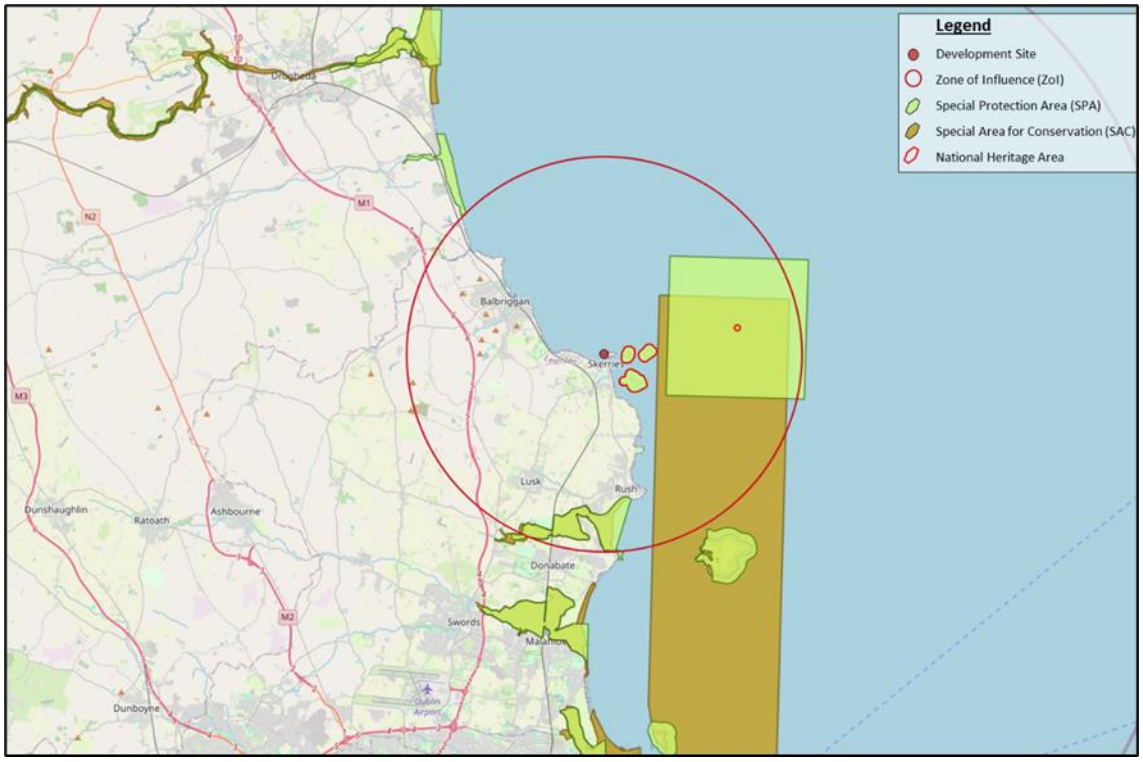

Figure 3-1: Harbour European and Natural Heritage Area sites within 10 km of Skerries Harbour.

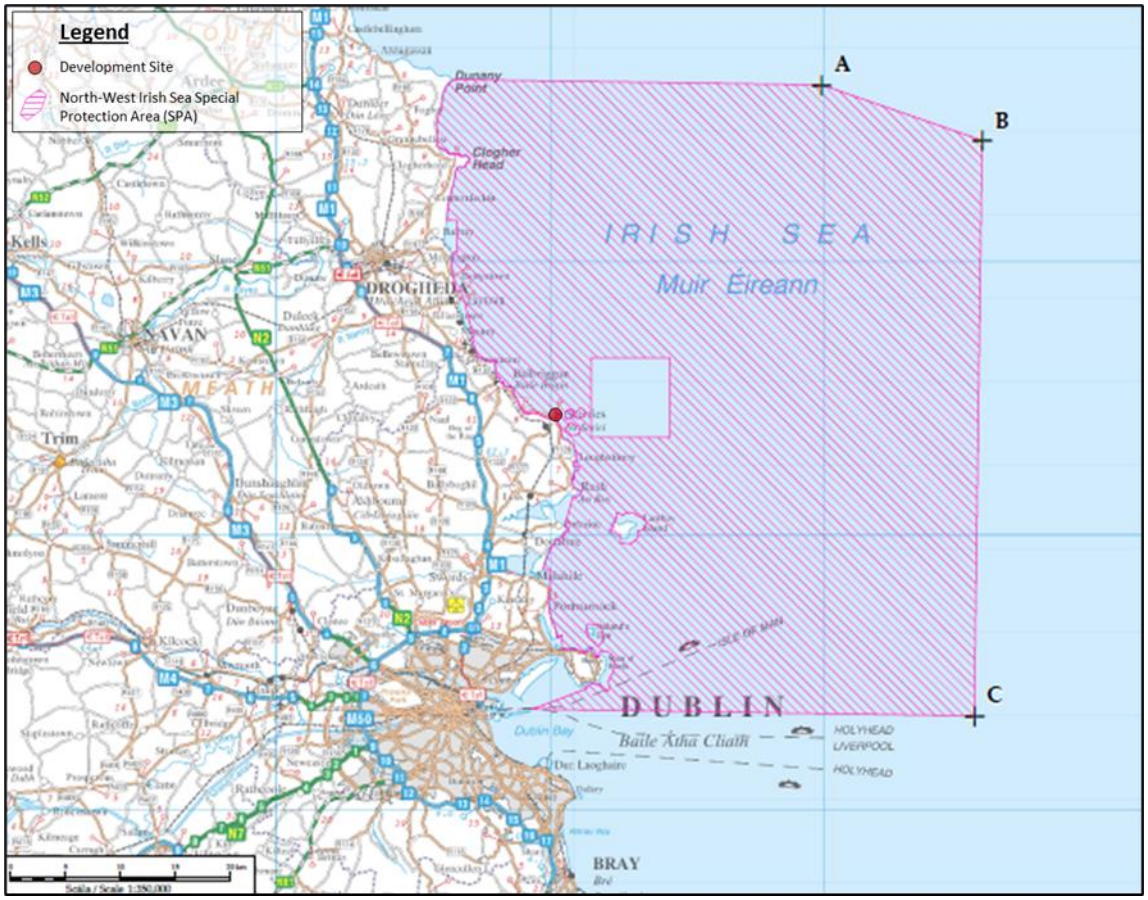

Figure 3-2: Location and extent of the North-East Irish Sea SPA

3.5 Cumulative and In-combination Impacts

It is a requirement of screening for Appropriate Assessment that the cumulative or in-combination effects of the proposed development together with other plans or projects are assessed. Cumulative impacts can be defined as a project/plan/programme likely to have a significant effect thereon, either individually or in combination with other plans or projects.

In accordance with EC Article 6 Guidance Document (EC 2018), in order to ensure all impacts upon the site are identified, including those direct and indirect impacts that are a result of cumulative impacts, the following steps were completed;

- Identify all projects/ plans which might act in combination: Identify all possible sources of effects from the project or plan under consideration, together with all other sources in the existing environment and any other effects likely to arise from other proposed projects or plans.
- Impacts identification: Identify the types of impacts that are likely to affect aspects of the structure and functions of the site vulnerable to change.
- Define the boundaries for assessment: define boundaries for examination of cumulative effects which will be different for different types of impact and may include remote locations.
- Pathway identification: Identify potential cumulative pathways (e.g. via water, air etc.; accumulations of effects in time or space).

- Prediction: Prediction of magnitude/extent of identified likely cumulative effects.
- Assessment: Comment on whether or not the potential cumulative impacts are likely to be significant.

4 Results

4.1 Development Site Habitats

The site of the proposed works is in the western portion of the Skerries Harbour pier, located within the Skerries Harbour, Co. Fingal. The coastal town of Skerries dominates the surrounding landscape and is a moderately built-up area. The terrestrial habitat assemblage surrounding the proposed development site is dominated by Buildings and Artificial Surfaces (BL3) which is comprised of roads, residential and commercial properties, harbour quays, piers and berths. The landscape to the west and south of the site is interspersed by Amenity Grassland (GA2), Grassy Verges (GS2), Hedgerows (WL1) and Treelines (WL2). The pier is comprised of concrete and other hard surfaces (BL3), whilst the sheet pile portion of the pier is surrounded by open marine water (MW4).

No botanical species protected under the Flora (Protection) Order 2015, listed in Annex II or IV of the EU Habitats Directive (92/43/EEC), or listed as species of conservation concern in Ireland were recorded for the study site. All species recorded during the botanical survey are considered common for similar habitats in the general area.

Figure 4-1: Additional views of the Skerries Harbour Pier and Skerries Harbour Bay.

4.2 Alien Invasive Species

Under Section 49 (2) of S.I. No. 477 of 2011, the European Communities (Birds and Natural Habitats) Regulations 2011, it is an offence to allow or cause to disperse, any plant which is included in Part 1 of the Third Schedule of this S.I.

No alien invasive plant species (as listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011) were identified anywhere within the immediate vicinity of the proposed development site or immediate surrounding area.

4.3 Hydrology

There are no watercourses in the vicinity of the proposed development (see figure 4.4). The Skerries Mill Stream is located 1.1 km South-East of the development site, with no physical or hydrological connectivity.

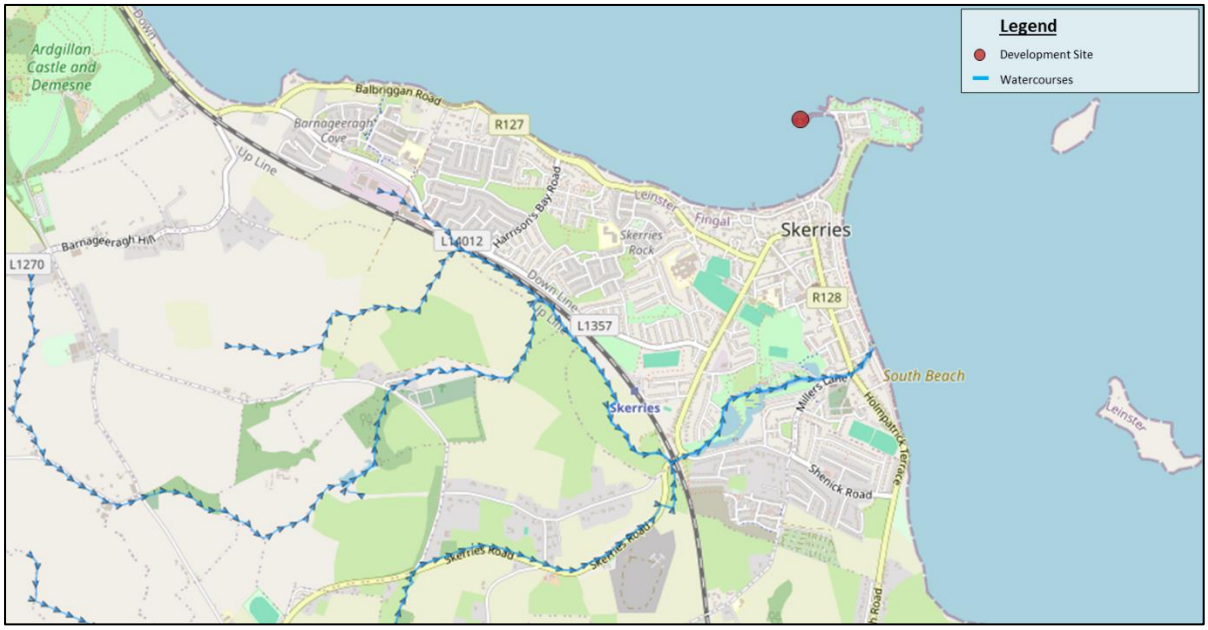

Figure 4-2: Hydrology of the proposed development site and greater surrounds.

4.4 Natura 2000 sites

The following sections hereunder provide a summary of Natura 2000 sites identified within the 10 km ZoI, with specific mention of Qualifying Interests (QI), Species of Conservation Interest (SCI's) and Conservation Objectives (CO)[3].

4.4.1 North-West Irish Sea SPA, Skerries Islands SPA, Roackabill SPA

The Site Synopsis and Conservation Objectives for the North-West Irish Sea SPA can be found online at https://www.npws.ie/protected-sites/spa/004236. The proposed development is located within the western portion of the SPA. Figure 4.5 provides an overview of the location of the North-Irish Sea SPA boundary relative to the proposed development site.

[3] The integrity of a European Site (referred to in Article 6.3 of the Habitat's Directive) whether it be a Special Area of Conservation (SAC) or Special Protection Area (SPA) is determined based on the conservation status of the individual qualifying features (QIs or SCIs) of the designated site. The overarching aim of the Natura 2000 network is to maintain at, or as the case may be, restore to Favourable Conservation Status of conservation worthy habitats listed in Annex I and the habitats of species listed in Annex II of the Habitats Directive and/or of regularly occurring migratory bird species as well as those species defined in Annex I of the Birds Directive. It should be noted that in some situations that there is overlap in extent between certain SACs and SPAs and indeed SAC and SAC. In that regard, the Conservation Objectives (CO's) should be jointly used as appropriate.

Figure 4-3: Location of the North-Irish Sea SPA in relation to the proposed development site.

4.4.1.1 Marine Birds

Marine birds are the sole QI's identified for the North-West Irish Sea SPA, and span several temporal and spatial ecological niches (i.e., pelagic, nomadic, resident, winter visitor, breeding only, etc). Table 4.1, below, provides a summary of marine bird species identified for the SPA. Most marine birds associated with this SPA are pelagic in nature and have preference to open ocean for foraging. Moreover, most species require rocky sea cliffs or headlands in which to breed, making the greater Skerries harbour area non-preferable to many marine bird species for foraging or breeding. Nonetheless, there are several marine bird species identified as QI's for this SPA have an affinity to sandy beaches and/or sandy bays, in which the Skerries Harbour and greater Skerries peninsula exhibits adequate habitat for breeding and foraging purposes. Additionally, there are six (6) species listed as "Red" status under the Birds of Conservation Concern Ireland (BoCCI).

Table 4.1: Summary of Marine birds identified as QI's for the North-West Irish Sea SPA.

Species	BoCCI Status	Preferred Breeding/Foraging Habitat	Comments
Red-throated Diver (*Gavia stellata)*	Amber	Shallow sandy bays	Rare breeding bird in Ireland; breeding population concentrated in West Donegal. In Winter most common on Eastern Coasts.
Great Northern Diver (*Gavia immer)*	Amber	Rocky Headlands	Winter visitor to Ireland.

Fulmar (*Fulmarus glacialis)*	Amber	Pelagic Ocean	Breeds all around the coast of Ireland where there are suitable cliffs for nesting opportunities, most common on the West coast. Present throughout the year, can be seen at sea year-round.
Manx Shearwater (*Puffinus puffinus)*	Amber	Pelagic Ocean and Offshore Islands	Common summer visitor can be seen on all coasts.
Cormorant (*Phalacrocorax carbo)*	Amber	Rocky Outcrops & Headlands	Common resident either at sea or on inland lakes/rivers. Population increased by immigration during winter months.
Shag (*Phalacrocorax aristotelis)*	Amber	Seaside Cliffs	Common breeding resident along rocky coasts.
Common Scoter (*Melanitta nigra)*	Red	Coastal sandy bays	Small breeding populations On West and Northwest Lakes. Wintering sites located on the Eastern Coast.
Little Gull (*Larus minutus)*	Amber	Estuaries	During Spring and Summer passage, although uncommon, Little Gulls frequent coasts and some inland sites. In Winter, they can be found at various sites around the coast.
Black-headed Gull (*Chroicocephalus ridibundus)*	Red	Sand dunes, coastal marshes & sandy beaches	Resident along all Irish coasts, with significant numbers arriving from the Continent in winter. Breeds in small numbers on islands in larger lakes in western Ireland.
Common Gull (*Larus canus*	Amber	Coastlines	Local breeding species on islands in larger lakes in western Ireland. Winter visitor to all Irish coasts.
Lesser Black-backed Gull (*Larus fuscus)*	Amber	sand dunes, well-vegetated sea cliffs and islands	Summer visitor to lakes and coasts from March to September. Winter visitor in small numbers along eastern and southern coasts.
Herring Gull (*Larus argentatus)*	Red	Sea cliffs, beaches and shingle islands.	A widespread resident along all Irish coasts, with some interchange between Ireland and west Britain. Numbers grow significantly during winter with arrivals from Scandinavia.
Great Black-backed Gull (*Larus marinus)*	Amber	Rocky coasts and islands, estuaries & sandy coastal areas	Resident along breeding bird all Irish coasts. Numbers increase in Winter with the arrival of Norwegian birds, most likely to move inland.
Kittiwake (*Rissa tridactyla*	Red	Rocky coasts & pelagic ocean	Small breeding colonies can be found at most headlands along the coast. Summer visitor to steep coastal cliffs along all Irish coasts. Disperses to the open ocean in winter and less frequently seen.
Roseate Tern (*Sterna dougalli*	Amber	Rocky or sandy marine islands in close proximity to shorelines	Rare summer visitor from April to October, the majority breeding at two sites in the Irish Sea; Ladys Island County Wexford and Rockabill Island off Dublin Bay.
Common Tern (*Sterna hirundo*	Amber	Sand or shingle beaches & craggy seashores	Summer visitor breeding on inshore islands and undisturbed beaches.
Arctic Tern (*Sterna paradisaea*	Amber	Rocky offshore islands	Summer visitor from March to September to all Irish coasts.

Little Tern (*Sterna albifrons*	Amber	Sand or shingle beaches	Rare summer visitor from April to late August to shingle or sandy beaches, mainly on the east and west coasts.
Guillemot (*Uria aalge)*	Amber	Rocky sea cliffs & Pelagic ocean	Resident seabird, though occur inshore/ land during the breeding season. In Winter occur out to sea all around the coast.
Razorbill (*Alca torda)*	Red	Rocky sea Cliffs	Resident, though occur inshore/ land during the breeding season. Reside at sea during the Winter months.
Puffin (*Fratercula arctica)*	Red	High sea cliffs & pelagic ocean	Summer visitor from March to September to sea stacks and cliffs, mainly along the west coast of Ireland.

4.4.2 Skerries Islands SPA

The Site Synopsis and Conservation Objectives for the Skerries Islands SPA can be found online at https://www.npws.ie/protected-sites/spa/004122.. The proposed development does not overlap with the boundary of the Skerries Island SPA and is located 890 m West of the SPA site. Figure 4-6 provides an overview of the location of the North-Irish Sea SPA boundary relative to the proposed development site.

Figure 4-4: Location of the Skerries Islands SPA in relation to the proposed development site.

4.4.2.1 Marine Birds

Marine birds are the sole QI's identified for the Skerries Islands SPA, and typically encompass species that forage along rocky shorelines. Table 4-2, below, provides a summary of marine bird species identified for the SPA. There is one species listed as "Red" status under the BoCCI listing.

Table 4.2: Summary of Marine birds identified as QI's for the North-West Irish Sea SPA.

Species	BoCCI Status	Preferred Breeding/Foraging Habitat	Comments
Cormorant (*Phalacrocorax carbo)*	Amber	Rocky Outcrops & Headlands	Common resident either at sea or on inland lakes/rivers. Population increased by immigration during winter months.
Shag (*Phalacrocorax aristotelis)*	Amber	Seaside Cliffs	Common breeding resident along rocky coasts.
Light-bellied Brent Goose (*Branta bernicla hrota*)	Amber	Estuaries	Winter migrant from high-Arctic Canada. Most occur in Ireland between October and April. This population winters almost entirely in Ireland, with small numbers in parts of Britain and France.
Purple Sandpiper (*Calidris maritima*)	Red	Rocky beaches & Islets	Localised Winter visitor to coastal areas including Rockabill, Skerries, Howth, Dun Laoghaire Harbour, and the Dalkey Islands.
Turnstone (*Arenaria interpres*)	Amber	Rocky shores & muddy shores of estuaries	During Winter season, found all around Coast particularly on shores, headlands, islands, and piers
Herring Gull (*Larus argentatus*)	Red	Sea cliffs, beaches and shingle islands.	A widespread resident along all Irish coasts, with some interchange between Ireland and west Britain. Numbers grow significantly during winter with arrivals from Scandinavia.

4.4.3 Rockabill SPA

The Site Synopsis and Conservation Objectives for the Skerries Islands SPA can be found online at https://www.npws.ie/protected-sites/spa/004014. The proposed development does not overlap with the boundary of the Rockabill SPA and is located 3.2 km West of the SPA site. Figure 4-7, below, provides an overview of the location of the Rockabill SPA boundary relative to the proposed development site.

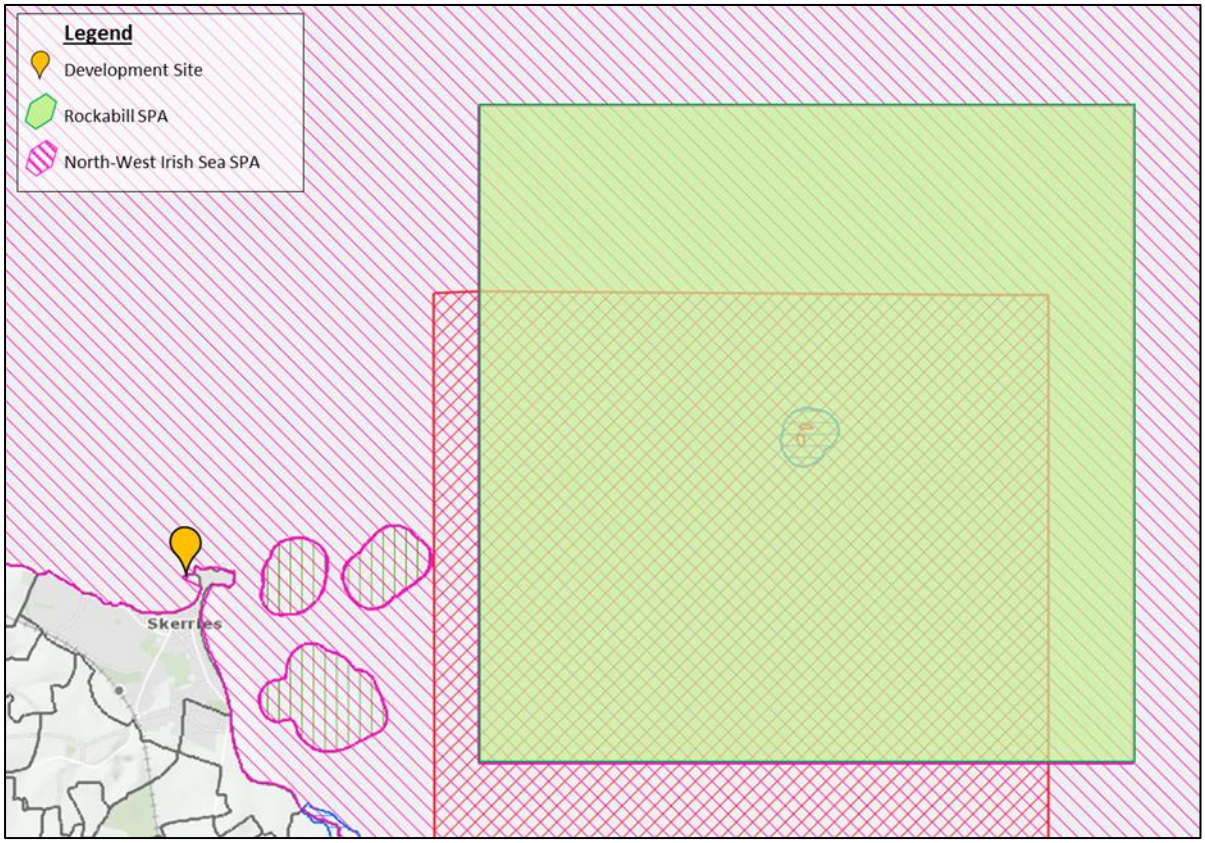

Figure 4-5: Location of the Skerries Islands SPA in relation to the proposed development site.

4.4.3.1 Marine Birds

Marine birds are the sole QI's identified for the Rockabill SPA, and are predominantly pelagic foragers. Several species listed are temporal migrants and occur along the Irish coastline during the summer months only. Table 4.3, below, provides a summary of marine bird species identified for the SPA. Moreover, all marine bird species listed are associated with Rockabill Island, where the rocky cliffs and shorelines are used as breeding sites. There is one (1) species listed as "Red" status under the Birds of Conservation Concern Ireland (BoCCI).

Table 4.3: Summary of Marine birds identified as QI's for the North-West Irish Sea SPA.

Species	BoCCI Status	Preferred Breeding/Foraging Habitat	Comments
Roseate Tern (*Sterna dougallii*)	Amber	Rocky or sandy marine islands	Rare summer visitor from April to October, the majority breeding at two sites in the Irish Sea; Ladys Island County Wexford and Rockabill Island off Dublin Bay.
Common Tern (*Sterna hirundo*)	Amber	Pelagic / beaches of sand or shingle	Summer visitor breeding on inshore islands and undisturbed beaches
Purple Sandpiper (*Calidris maritima*)	Red	Rocky beaches & Islets	Localised Winter visitor to coastal areas including Rockabill, Skerries, Howth, Dun Laoghaire Harbour, and the Dalkey Islands
Arctic Tern (*Sterna paradisaea*)	Amber	Pelagic / Offshore islands	Summer visitor from March to September to all Irish coasts

4.4.4 Rogerstown Estuary SPA

The Site Synopsis and Conservation Objectives for the Skerries Islands SPA can be found online at https://www.npws.ie/protected-sites/spa/004015. The proposed development does not overlap with the boundary of the Rogerstown Estuary SPA and is located 10 km North-Northwest of the SPA site. Figure 4-8, below, provides an overview of the location of the Rogerstown Estuary SPA boundary relative to the proposed development site.

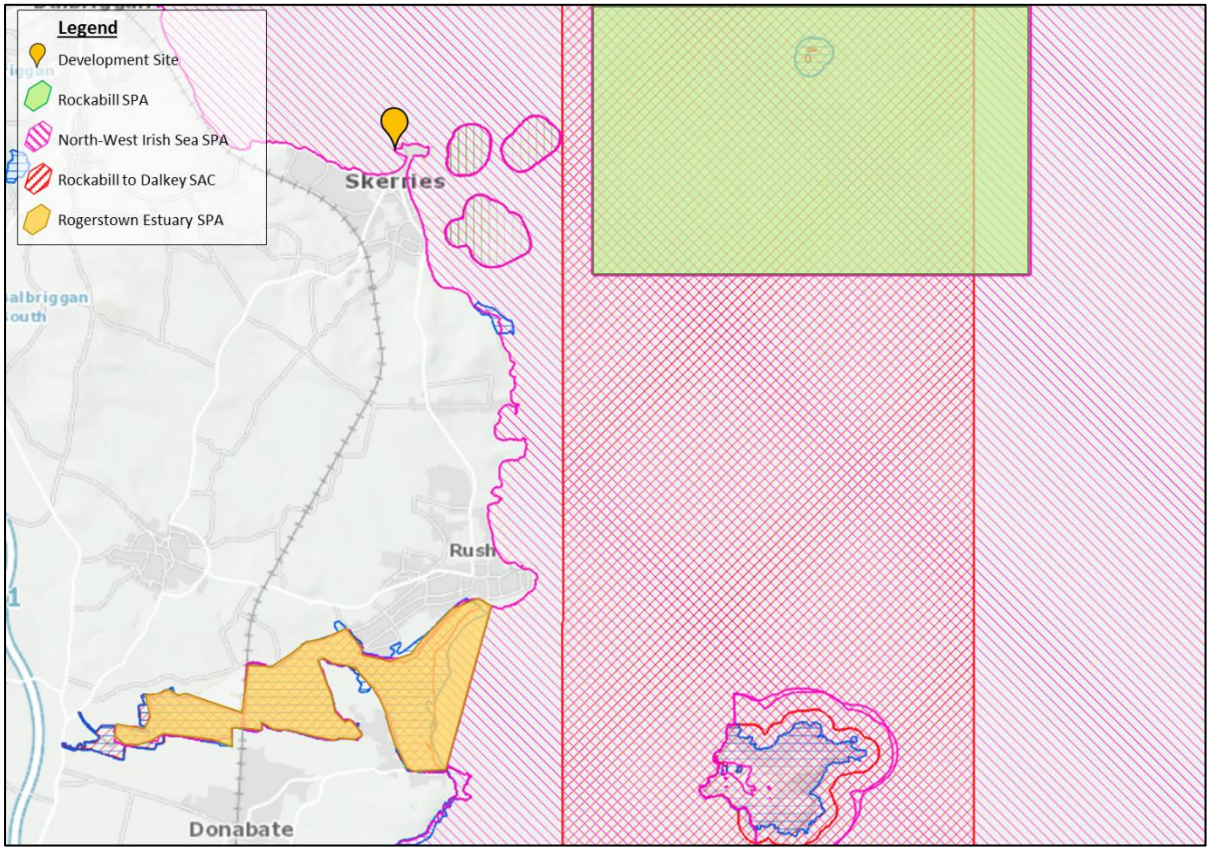

Figure 4-6: Location of the Rogerstown Estuary SPA in relation to the proposed development site.

4.4.4.1 Marine Birds

Marine birds are the sole QI's identified for the Rogerstown Estuary SPA, and span several temporal and spatial ecological niches (i.e., nomadic, resident, winter visitor, breeding only, etc). Table 4.4, below, provides a summary of marine bird species identified for the SPA. All bird species identified as QI's for the Rogerstown Estuary SPA are associated with estuarine / brackish habitats, and most require sandy and/or muddy benthic substrates in which to forage. Several species are temporal migrants, and only resident within the Rogerstown Estuary SPA during the summer or winter months. Additionally, there are seven (7) species listed as "Red" status under the Birds of Conservation Concern Ireland (BoCCI).

Table 4.4: Summary of Marine birds identified as QI's for the North-West Irish Sea SPA.

Species	BoCCI Status	Preferred Breeding/Foraging Habitat	Comments
Greylag Goose (*Anser anser*)	Amber	Freshwater lakes, rivers & Estuaries	Resident populations but form part of larger population which spends most of the winter on Lambay Island.

Shelduck (*Tadorna tadorna*)	Amber		Resident and winter migrant - Ireland receives additional birds during the winter (October to March) from Scandinavia and the Baltic.
Light-bellied Brent Goose (Branta bernicla hrota)	Amber	Estuaries	Winter migrant from high-Arctic Canada. Most occur in Ireland between October and April. This population winters almost entirely in Ireland, with small numbers in parts of Britain and France.
Shoveler (*Anas clypeata*)	Red	marshes or lowland wet grassland, estuaries and mudflats	Resident and winter migrant. Most occur between October and March. Wintering birds originate from breeding populations which range across France, northern Europe, the Baltic and western Russia.
Oystercatcher (*Haematopus ostralegus*)	Red	Rocky coasts, dunes, saltmarshes and on the grassy tops of islands.	Resident and winter visitor (from Iceland and the Faeroes). The largest numbers f Oystercatcher occur in Ireland between September & March
Ringed Plover (*Charadrius hiaticula*)	Amber	Sandy or shingly beaches and river margins	Resident and winter visitor from further north (Iceland, the Baltic & southern Scandinavia). Peak numbers between August and early October.
Grey Plover (*Pluvialis squatarola*)	Red	Estuaries and sandy beaches	Migratory species from Siberia. Resident along the Irish coastline from July – September only. Siberia
Knot (*Calidris canutus*)	Red	Estuaries	Winter visitor from northern Greenland and from the Queen Elizabeth Islands of high Arctic Canada west to Prince Patrick Island. Resident along the Irish coastline between October - Frebruary
Dunlin (*Calidris alpina*)	Red	Estuaries, mudflats, coastal pools and shallow inland water	Summer visitor from NW Africa/SW Europe, winter visitor from Scandinavia to Siberia.
Black-tailed Godwit (*Limosa limosa*)	Red	Muddy estuaries and coastal grassland	Winter visitor from Iceland.
Redshank (*Tringa totanus*)	Red	Saltmarshes	Passage migrant in variable numbers to all Irish coasts from July to November.

4.4.5 River Nanny Estuary and Shore

The Site Synopsis and Conservation Objectives for the Skerries Islands SPA can be found online at https://www.npws.ie/protected-sites/spa/004158. The proposed development does not overlap with the boundary of the River Nanny Estuary and Shore SPA and is located 10 km South-East of the SPA site. Figure 4-9, below, provides an overview of the location of the Rogerstown Estuary SPA boundary relative to the proposed development site.

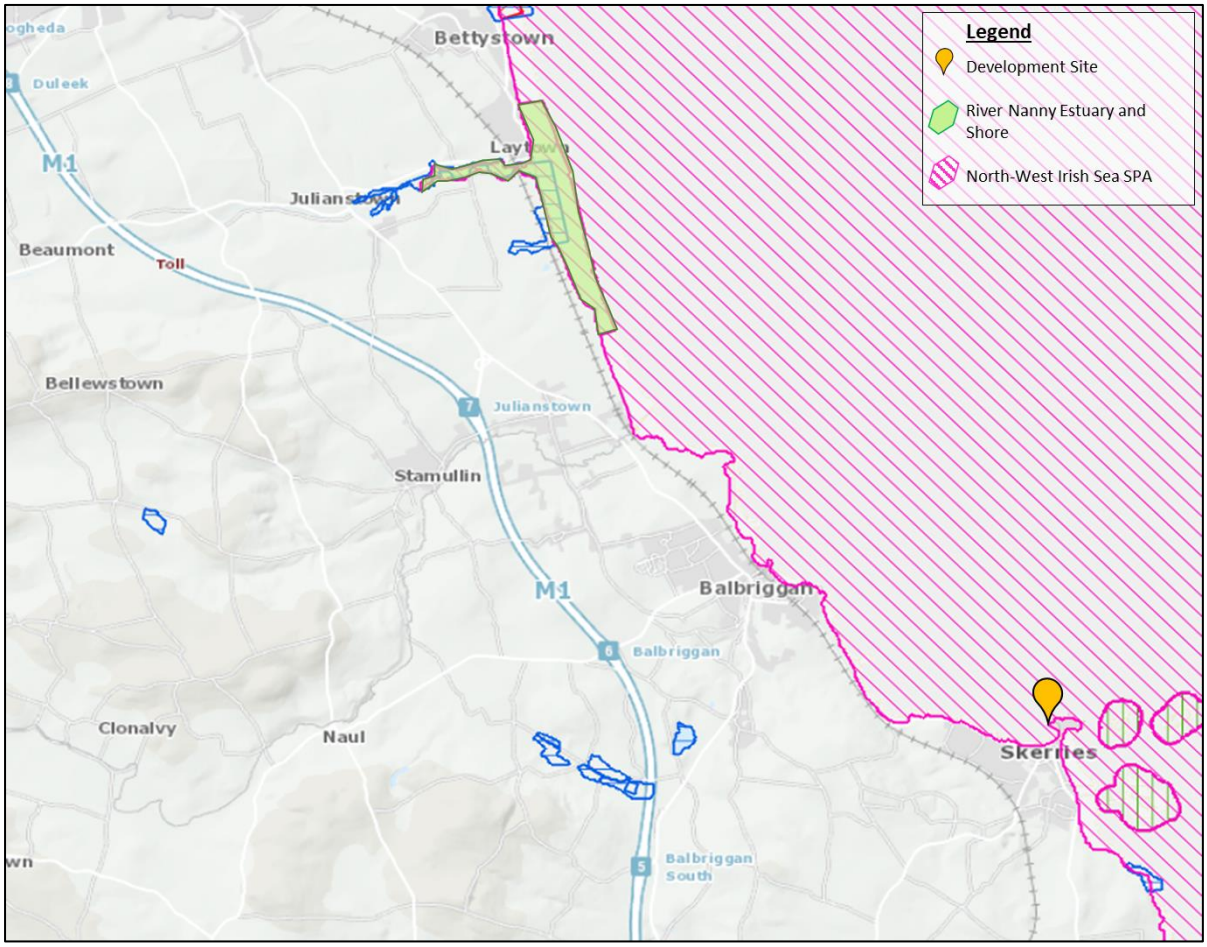

Figure 4-7: Location of the River Nanny Estuary and Shore SPA in relation to the proposed development site.

4.4.5.1 Marine Birds

Marine birds are the sole QI's identified for the Rogerstown Estuary SPA, and span several temporal and spatial ecological niches (i.e., nomadic, resident, winter visitor, breeding only, etc). Table 4.5, below, provides a summary of marine bird species identified for the SPA. All bird species identified as QI's for the River Nanny Estuary and Shore SPA are associated with estuarine / brackish habitats, and most require sandy and/or muddy benthic substrates in which to forage. Several species are temporal migrants, and only resident within the River Nanny Estuary and Shore SPA during the summer or winter months. Additionally, there are four (4) species listed as "Red" status under the Birds of Conservation Concern Ireland (BoCCI).

Table 4.5: Summary of Marine birds identified as QI's for the North-West Irish Sea SPA.

Species	BoCCI Status	Preferred Breeding/Foraging Habitat	Comments
Golden Plover (*Pluvialis apricaria*)	Red	Blanket bog, heather moorland and limestone grassland / coastal marshes and estuaries	Summer visitor from France & Iberia (though possibly some remain year-round in Ireland) & winter visitor from Iceland. Most frequent October – February.
Sanderling (*Calidris alba*)	Amber	Sandy shores or estuaries	Winter visitor

Oystercatcher (*Haematopus ostralegus*)	Red	Rocky coasts, dunes, saltmarshes and on the grassy tops of islands.	Resident and winter visitor (from Iceland and the Faeroes). The largest numbers f Oystercatcher occur in Ireland between September & March
Ringed Plover (*Charadrius hiaticula*)	Amber	Sandy or shingly beaches and river margins	Resident and winter visitor from further north (Iceland, the Baltic & southern Scandinavia). Peak numbers between August and early October.
Knot (*Calidris canutus*)	Red	Estuaries	Winter visitor from northern Greenland and from the Queen Elizabeth Islands of high Arctic Canada west to Prince Patrick Island. Resident along the Irish coastline between October - Frebruary
Herring Gull (*Larus argentatus*)	Red	Sea cliffs, beaches and shingle islands.	A widespread resident along all Irish coasts, with some interchange between Ireland and west Britain. Numbers grow significantly during winter with arrivals from Scandinavia.

4.4.6 Rockabill to Dalkey Island SAC

The Site Synopsis and Conservation Objectives for the Skerries Islands SPA can be found online at https://www.npws.ie/protected-sites/spa/003000. The proposed development does not overlap with the boundary of the Rockabill to Dalkey Island SAC and is located 2,8 km West of the SPA site. Figure 4-10, below, provides an overview of the location of the Rockabill to Dalkey Island SAC boundary relative to the proposed development site.

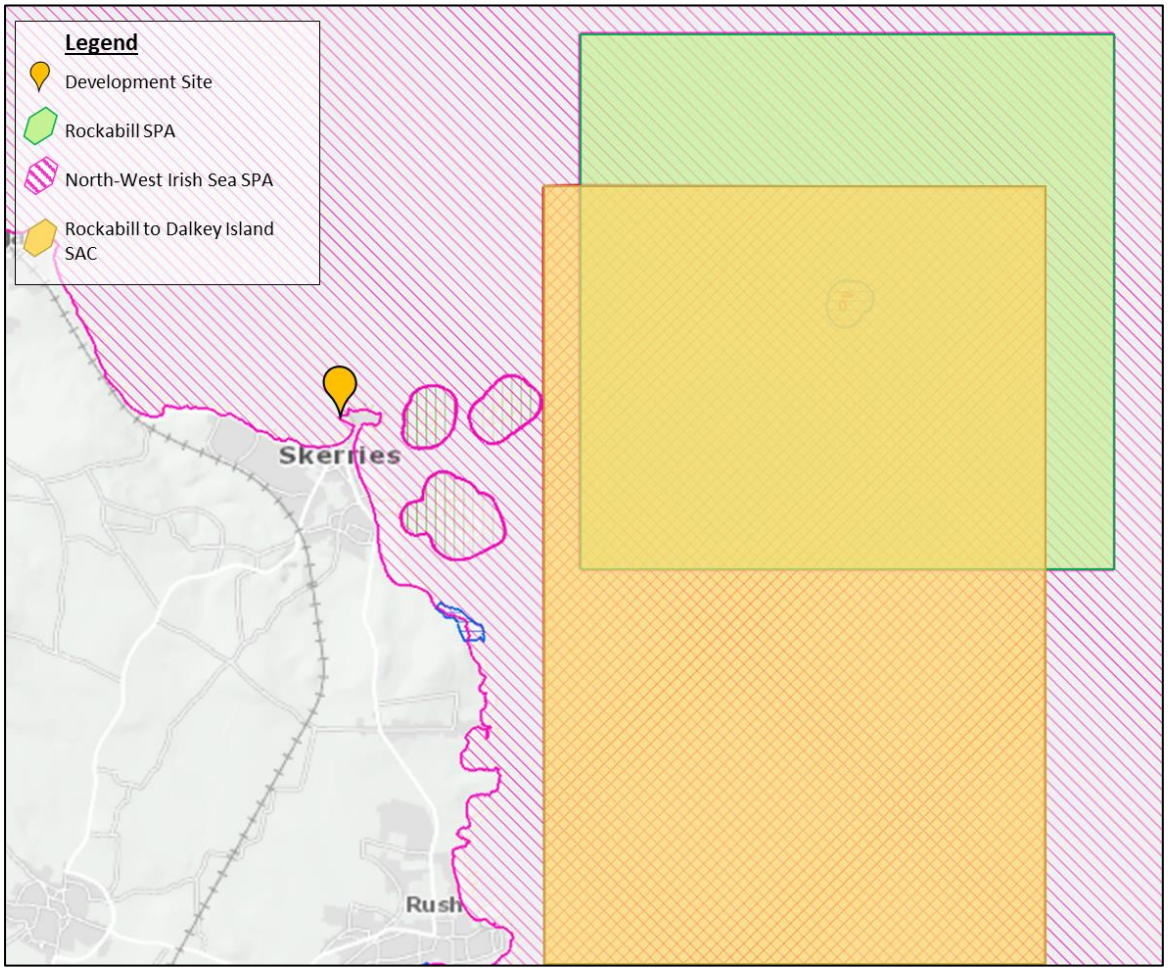

Figure 4-8: Location of the River Nanny Estuary and Shore SPA in relation to the proposed development site.

4.4.6.1 Reefs

This habitat type is associated with the Rockabill to Dalkey Island SAC. According to the site synopsis, "*Reef habitat is uncommon along the eastern seaboard of Ireland due to prevailing geology and hydrographical conditions. Expansive surveys of the Irish coast have indicated that the greatest resource of this habitat within the Irish Sea is found fringing offshore islands which are concentrated along the Dublin coast. These reefs are subject to strong tidal currents with an abundant supply of suspended matter resulting in good representation of filter feeding fauna such as sponges, anemones and echinoderms.*"

4.4.6.2 Harbour Porpoise

Harbour porpoise are an SCI species for the Rockabill to Dalkey Island SAC. According to the site synopsis, “The Rockabill to Dalkey Island SAC represents a key habitat for the Annex II species Harbour Porpoise within the Irish Sea. Population survey data show that porpoise occurrence within the site boundary meets suitable reference values for other designated sites in Ireland. The species occurs year-round within the site and comparatively high group sizes have been recorded. The selected site contains a wide array of habitats believed to be important for Harbour Porpoise including inshore shallow sand and mudbanks and rocky reefs scoured by strong current flow” (NPWS, 2014).

4.4.7 Rogerstown Estuary SAC

The Site Synopsis and Conservation Objectives for the Skerries Islands SPA can be found online at https://www.npws.ie/protected-sites/spa/000208. The proposed development does not overlap with the boundary of the Rogerstown Estuary SAC and is located 10 km North-Northwest of the SAC site. Figure 4-11, below, provides an overview of the location of the Rogerstown Estuary SAC boundary relative to the proposed development site.

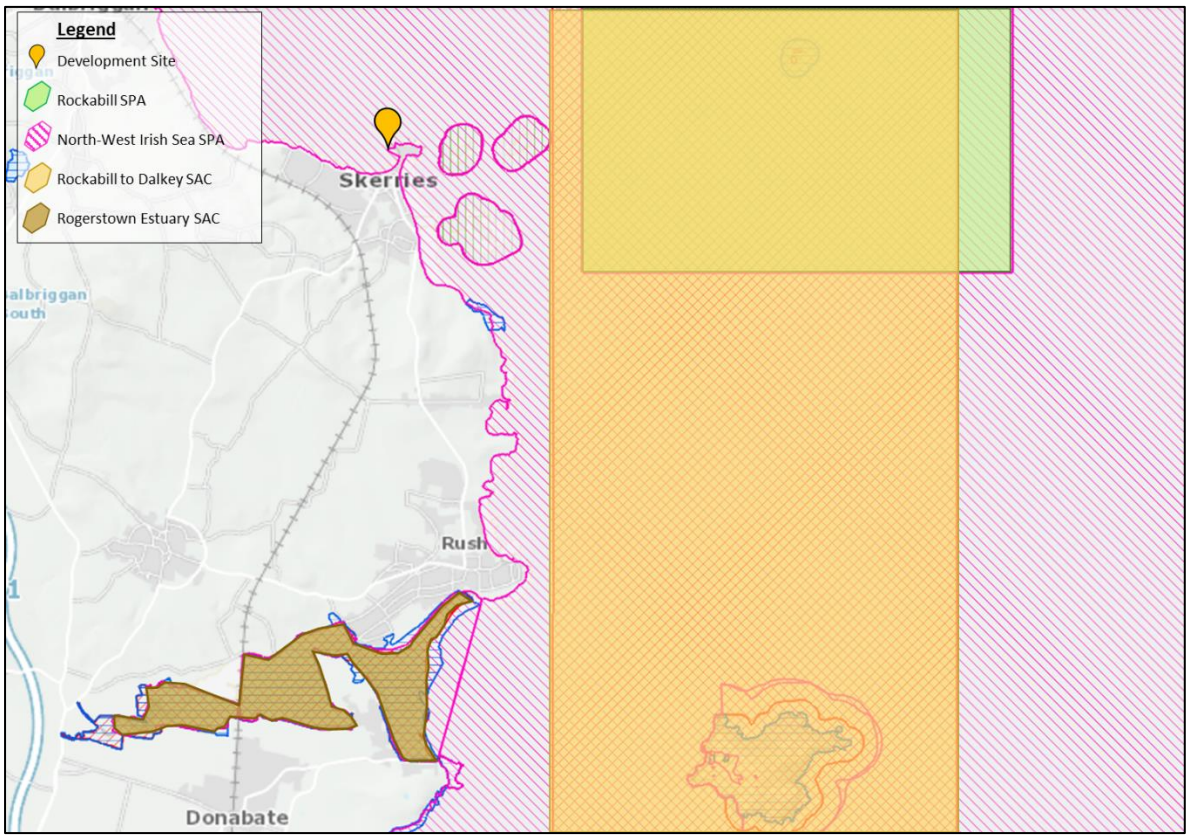

Figure 4-9: Location of the Rogerstown Estuary SAC in relation to the proposed development site.

4.4.7.1 Estuaries

The estuary drains almost completely at low tide. The intertidal flats of the outer estuary are mainly of sands, with soft muds in the north-west sector and along the southern shore. Associated with these muds are stands of Common Cordgrass (*Spartina anglica*). Green

algae (mainly Enteromorpha spp. and *Ulva lactuca*) are widespread and form dense mats in the more sheltered areas.

4.4.7.2 Mudflats and Sandflats not covered by Seawater at Low Tide

The sediments are mostly muds, which arevery soft in places. Common Cordgrass is widespread in parts, and in summer, dense green algal mats grow on the muds. In the extreme inner part, the estuary narrows to a tidal river.

4.4.7.3 Salicornia and Other Annuals Colonising Mud and Sand

Glasswort (*Salicornia europaea*), as known as samphire, thrives in Irish mudflats, sheltered beaches, and estuaries along the coastline. *Salicornia* is a fleshy, leafless plant that is prevalent in salt marshes and coastal mudflats. *Salicornia* is a pioneer saltmarsh macrophyte that colonises intertidal mud and sandflats in areas protected from strong waves.

4.4.7.4 Atlantic Salt Meadows [1330]

Atlantic Salt Meadows form when halophytic vegetation colonises soft intertidal sediments of mud and sand, particularly in areas that are sheltered from strong wave action. *Glauco Puccinellietalia maritimae* is recognised as the dominant vegetation in Atlantic Salt Meadows.

4.4.7.5 Mediterranean Salt Meadows [1410]

The area of saltmarsh within the Blackwater River SAC is small, and typically found along the Tourig and Kinsalebeg estuaries (NPWS, 2016). This habitat type is classified as a typical grassy upper Mediterranean salt meadow community and is located along the terrestrial grassy ridge and represents one of the upper saltmarsh communities in the overall saltmarsh zonation.

4.4.7.6 Shifting Dunes along the shoreline with *Ammophila arenaria* (White Dunes) and Fixed coastal dunes with herbaceous vegetation (grey dunes)

These habitat types are associated with the eastern portion of the Rogerstown Estuary SAC only. According to the site synopsis, "*Low sand hills occur on the outer spit, including some small areas of fixed dunes and Marram Grass (Ammophila arenaria) dunes. Fine sandy beaches and intertidal sandflats occur at the outer part of the estuary*" (NPWS, 2013).

4.4.7.7 Grey Seals (Additional consideration)

Grey (*Halichoerus grypus*) are a common visitor to Skerries Harbour, following commercial fishing vessels foraging for food and using the Skerries Harbour Pier as a resting place. Grey Seals are found on both sides of the North Atlantic Ocean although the greatest proportion of the population is found in UK waters (NPWS, 2023). Grey Seals occur in greatest numbers on the western seaboard of Ireland although significant numbers also occur on the east and southeast coasts (NPWS, 2023).

4.5 Natural Heritage Areas (NHA's)

The Skerries Island NHA is the only Natural Heritage Site within the ZoI surrounding the proposed development works site. The proposed development does not overlap with the boundary of the Skerries Island SPA and is located 890 m West of the SPA site. Figure 4-11 provides an overview of the location of the North-Irish Sea SPA boundary relative to the proposed development site.

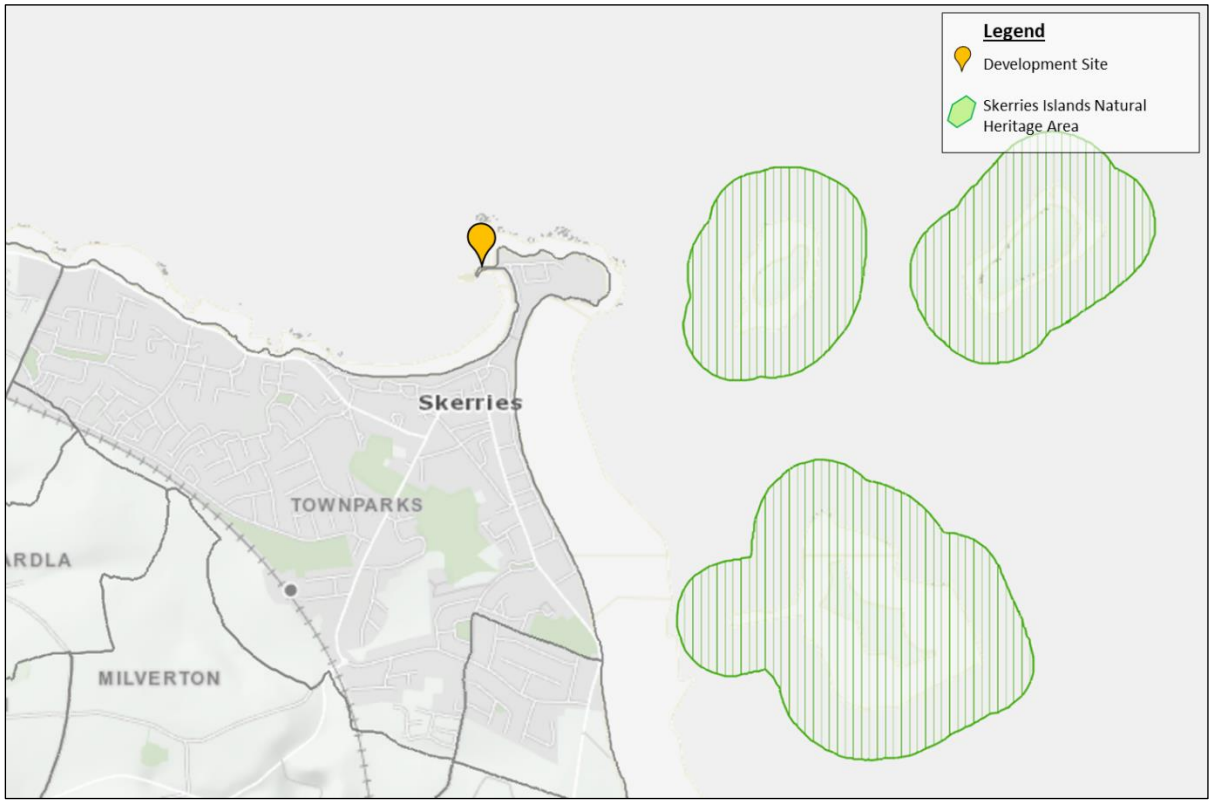

Figure 4-10: Location of the Skerries Islands NHA relation to the proposed development site.

There are no specific designations (species for conservation or habitats) for NHA's. However, NHA's are an area considered important for the habitats present or which holds species of plants and animals whose habitat needs protection. Consequently, the Skerries Islands NHA should be considered in the same light as the Skerries Islands SPA area (see Section 4.4.2 for details)

5 Impact Assessment

5.1 Introduction

This chapter describes the relationship between the proposed development works and the qualifying habitats and species found within Natura 2000 sites within the 10 km ZoI. A detailed description of the potential impacts associated with the works is provided hereunder. Where required, mitigation measures[4] have been proposed (see Section 6).

The potential impacts which could occur to habitats and species because of the proposed works include:

- Loss of qualifying habitat or species within the SAC due to the release of sediments into watercourses near the proposed development site during the works.
- Loss of qualifying habitat or species within the SAC due to the release of other pollutants, such as oils and petrochemicals, into watercourses near the proposed development site during the works.

Distribution and occurrence maps for all highlighted QI's in nearby Natura 200 sites can be found in Appendix A.

5.2 Description of Potential Impacts

5.2.1 Construction phase

The proposed works will occur along the western portion of the Skerries Harbour Pier, which is coincidentally located within the newly formed North-West Irish Sea SPA. Additionally, the Skerries Islands SPA, Rockabill SPA and Rockabill to Dalkey Island SAC are all located within 2,5 km of the proposed development site. Consequently, these four Natura sites are considered most at risk of incurring potential impacts from the proposed development works. Considering that the Rogerstown Estuary SPA and SAC, and the River Nanny Estuary and Shore are located ca. 10 km from the proposed development site, the likelihood of potential impacts to these Natura 2000 sites is considered very low (also see AA Screening report: M1060-R-ENV-AA) and are not considered further in this report.

5.2.1.1 Increased sedimentation, Sediment and Contaminated Run-off

The proposed works will include the placement of new sheet pilings around the existing pier structure to encapsulate the structure and to allow subsequent works to be contained within

[4] Where a potentially adverse effect has been identified during an Appropriate Assessment or cannot conclusively be ruled out, it may be possible to proceed where mitigation measures can be implemented to address the adverse effect. These measures will allow any potential impacts affecting the conservation status of Blackwater River SAC to be avoided.

the structure. The placement of the new sheet pilings will require them to be driven into the seabed, which will result in the disturbance of the seafloor. Consequently, there is a high likelihood of increased sedimentation of the immediate area surrounding the pier.

A major component of the proposed development is the demolition of the existing concrete pier. Although the existing pier will be encapsulated within the works area (defined by the new sheet pilings – as described above), the demolition of the concrete pier will inevitably result in the creation of concrete dust and/or other sediment, which may ultimately ingress into the adjacent marine environment.

Construction works can result in sediment influx into adjacent areas, which can have various environmental impacts. This is particularly concerning marine habitats are the potential receptors of sediment run-off influxes. Although sedimentation is a natural process that forms a key component of nutrient transfer between terrestrial and marine habitats, excessive sedimentation can result in is the alteration of water quality, as sediment can reduce water clarity, impact water quality through nutrient influx, disrupt aquatic plant growth, and result in the deterioration of habitats for marine mammals, fish and other marine fauna, and potentially have medium to long-term impacts on nearby QI habitats.

5.2.1.2 Dust from Demolition Works and Construction Activities

It is likely that the construction phase of the proposed development will produce dust, particularly during the demolition phase of the works. Considering the nature of the proposed works, it is assumed that dust creation will be confined to particles of dust greater than 10 µm (USEPA, 1986, Gibson et al 2023). Particles of dust greater than 10 µm are considered a nuisance but are not considered to cause significant health impacts (USEPA, 1986, Gibson et al 2023). The direct physical effects of airborne particulate matter on flora and fauna becomes apparent only at relatively high surface loads (> 7000 mg/m^2), although the chemical effects of reactive material, such as those found in cement dust, may become evident at loads exceeding 2000 mg/m^2 (Gibson et al, 2023). Typically, mineral dust is less soluble and less reactive than anthropogenic acid-forming sulphate and nitrate particles (e.g., cement and concrete dust), whilst dusts with pH values ≥ 9 may have significant impacts to plant life on which the dust is deposited or indirectly through alteration of soil pH (USEPA, 1986; Gibson et al, 2023).

The creation and influx of dust into the marine environment could have significant impacts on marine water pH, which will ultimately impact marine habitats, disrupting marine algal and reef growth, resulting in the deterioration of habitats for marine mammals, fish, crustaceans, benthic invertebrates and marine birds.

5.2.1.3 Hydrocarbons and other Toxic Contaminants

Hydrocarbon spills into the adjacent marine ecosystem can have severe environmental impacts. Hydrocarbon spills are particularly toxic to biota, including aquatic fauna such as fish, crustaceans, benthic invertebrates, marine birds and marine mammals. Hydrocarbon spills can impact the physical and chemical properties of water, leading to significant changes in water quality, which can result in the death of aquatic plants and fauna. The physiological effects of exposure to, and ingestion of significant concentrations of hydrocarbons on fish has been well-documented. These include mass die-offs, delayed maturation of larvae, embryo malformation and suppressed gene expression (Holth, 2009).

Reduction in fish numbers would reduce food availability for local key fisheries species, cetacean species and numerous marine birds.

Primary sources of hydrocarbons, such as diesel fuel, oil, hydraulic fluid, etc, in the instance of this development will stem from excavators, demolition machinery, piling equipment/machinery, and floating work platforms used in and around the development area. Although infrequent/rare, improper maintenance and/or on-site incidents may result in the discharge of hydrocarbons from construction machinery (as outlined above).

Additionally, wet concrete and concrete dust is a well-documented toxic substance to aquatic fauna. Lime, a major component of cement and concrete, is highly water soluble and drastically changes the pH of water, typically increasing the alkalinity (up to pH 11-13). Consequently, in sever instances, concrete spills and major concrete dust run-off can cause topical burns on marine fauna, whilst significantly increasing turbidity.

5.2.1.4 Noise and Vibration

Noise and vibration impacts are generally associated with the use of construction machinery and vehicles. The high levels of noise generated from construction activities can cause significant disturbance to local fauna such as seabirds, fish, marine turtles, and marine mammals. Vibration emissions can similarly impart impacts to marine fauna, as well as the disturbance of prey items such as fish, crustaceans and benthic invertebrates. Moreover, underwater noise and vibration emissions can interfere with the foraging behaviour and communication of marine mammals and subsequently cause them to vacate the affected habitats or become stressed, ultimately affecting their survival.

Noise and vibration pose specific risk to marine mammals, especially to cetaceans which use echolocation to forage and underwater sound to communicate. Behavioural responses from pinnipeds and cetaceans to underwater noise has been challenging to assess (Gomez et al. 2016, Southall et al. 2021). For example, changes in cetacean behaviour can be driven by the health and/or condition of the individual, age-class, context in which a change in behaviour may occur (e.g. transiting an area vs. actively foraging) (Helm et al., 2015). Consequently, it is difficult to derive a specific threshold of noise disturbance for marine mammals (Gomez et al. 2016, Southall et al. 2021).

The proposed development works will consist of the construction of several key structures, including demolition works, sheet pilings, ballast rock for infilling, and concrete pouring. Primary sources of noise and vibration impacts will subsequently stem from these works and the associated machinery required. Additionally, considering the location of the proposed works, there is high potential for direct underwater noise and vibration impacts to the marine environment.

Table 5.1. Potential Significant Effects to Qualifying Interests of Natura sites proximal to the proposed development site.

Qualifying Interest	Conservation Objectives (as per NPWS, 2013 - 2023)		Potential Impacts	Likelihood of Significant Negative Impacts with Mitigation
Marine birds	**Conservation/Maintenance of Habitats;** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. Distribution of habitat/s encapsulates the number of locations and area of potentially suitable habitat for marine bird populations and its availability for use. The suitability and availability of habitat areas may vary through time. The conservation objectives regarding marine bird habitat/s are achieved when - • the natural range of the habitat, and area it covers within that range, are stable or increasing, and; • the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and; • the conservation status of its typical species is favourable.	**Conservation/Maintenance of Populations;** The favourable conservation status of a species is achieved when: • population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and • the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and • there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.	• Loss of prey items through pollution impacts • Die-off of individuals due to ingestion of contaminated food items. • Loss of key breeding and/or foraging habitat • Long-term/permanent displacement of individuals and species through noise and vibration impacts	**Unlikely**

Reefs	• The permanent area is stable or increasing, subject to natural processes.
	• Distribution is stable or increasing, subject to natural processes
	• Conserve the following community types in a natural condition:
	  ○ Intertidal reef community complex
	  ○ Subtidal reef community complex
		• Loss of key reef habitat distribution and occurrence through pollution effects
		• Loss of key ecosystem drivers (e.g., fish species) that will result in loss of reef habitat
		• Contraction of reef habitat distribution from noise and vibration effects
			Unlikely

Harbour Porpoise	• Species range within the site should not be restricted by artificial barriers to site use. • Human activities should occur at levels that do not adversely affect the harbour porpoise community at the site	• Loss of prey items through pollution impacts • Die-off of individuals due to ingestion of contaminated food items. • Loss of key breeding and/or foraging habitat Long-term/permanent displacement of individuals and species through noise and vibration impacts	**Unlikely**

5.2.1.5 Operational Phase

The operational phase of the Skerries harbour pier will not vary from its current use as a berthing and vessel access facility. As such, it is concluded that no further impacts will stem from the operational phase of the project.

5.3 Cumulative and In-Combination Effects

It is a requirement of AA screening that the cumulative or in-combination effects of the proposed development together with other plans or projects are assessed. Cumulative impacts can be defined as a project/plan/programme likely to have a significant effect thereon, either individually or in combination with other plans or projects.

The following sources were consulted in order to determine if there were any other plans or projects in the area which could result in cumulative impacts[5]:

- Department of Housing, Local Government and Heritage (DHLGH) – Foreshore Applications https://www.housing.gov.ie/planning/foreshore/applications/
- DHPLG EIA Portal https://www.housing.gov.ie/planning/environmental-assessment/environmental-impact-assessment-eia/eia-portal
- Fingal County Council - Planning System https://fingalcoco.maps.arcgis.com/apps/webappviewer/index.html?id=3fa7d9df584c4d93aab202638db9dd1a

Only those applications which give rise to potential impacts to the QI habitats and species within the corresponding SPA's and SAC's have been considered in the context of this report.

There are no recently submitted plans/projects for developments within 1 km of the Skerries Harbour pier to the Fingal County Council that are currently under planning approval consideration which may have the potential to interact. All other committed/approved developments have been completed and typically encompass residential properties, all of which are not considered to be a risk of in-combination effects.

6 Recommended Mitigation

6.1 Summary of Potential Impacts

Section 5 of this report has identified potential impacts to both QI habitats and species of several nearby Natura 2000 sites. Likely impacts stemming from the proposed development works are linked to the following processes:

- Release of sediment from the site during construction via surface water run-off or dust emissions.
- Release of water-borne contaminants (e.g., oils/petrochemicals, cement, wet-concrete) from the site during construction.
- Noise and Vibration emissions from demolition works, heavy machinery movement and sheet piling works.

6.2 Mitigation Measures

6.2.1 Construction Phase

6.2.1.1 General Site Management During Construction to Avoid Contamination of Receiving Waters

Compliance with the below list of recommendations is proposed, in order to minimise risks of surface water contamination by potentially harmful materials or sediment.

- Avoidance of working during very wet weather conditions to minimise the occurrence of sediment and/or contaminant mobilisation.
- Demolition material must be hauled off site and disposed of at an approved licensed facility, in order to eliminate any possibility of habitat or species loss along the foreshore
- Fuels, lubricants and hydraulic fluids for equipment used on the construction site, as well as any solvents and oils, should be carefully handled to avoid spillage, properly secured against unauthorised access or vandalism, and provided with spill containment.
- There will be no fuel stored on the site at any time.
- Fuelling and lubrication of equipment should not be carried out within 100m of the works site and should only be undertaken in designated bunded areas.
- A fuel spill kit shall be retained on the site for the period of construction.
- Any spillage of fuels, lubricants, or hydraulic oils should be immediately contained, and immediate emergency control measures implemented to ensure no ingress into the marine environment.
- Waste oils and hydraulic fluids should be collected in leak-proof containers and removed from the site for delivery to an appropriately authorised waste facility.

- Raw or uncured waste concrete must be removed from site as soon as possible and disposed of at n appropriate waste disposal facility.
- Site office/lay-down areas must avoid the amenity grassland areas located to the East and North East of the Skerries Harbour.
- The washing of vehicles and/or construction machinery and/or HGV's must not occur on or near the development site. Moreover, it is recommended that a wash down area for vehicles/machinery does not occur within 200 m of the Skerries harbour.
- Moreover, wash down water from exposed aggregate surfaces, cast-in-place concrete and from concrete trucks should be trapped on-site in a dedicated area, to allow sediment to settle out and reach neutral pH before clarified water is allowed to percolate into the ground.
- Temporary portable toilet facilities are to be provided for staff during the construction period. These units would be maintained regularly, and the waste disposed of by an appropriate contractor.

6.2.1.2 Dust Suppression

There are no statutory guidelines regarding the maximum dust deposition levels that may be generated during the construction phase of a development in Ireland. However, guidelines from the Department of the Environment, Heritage and Local Government (DEHLG) currently exist for dust emissions from quarrying and ancillary activities. Consequently, guidelines contained within the DEHLG best practise documents can be implemented regarding dust emissions from the proposed development. Accordingly, the following guidelines are recommended for the control of dust emissions from the proposed development site.

- The German TA-Luft standard for dust (2002) deposition (non-hazardous dust) sets a maximum permissible dust emission level of 350 mg / m^2 per day.
- Recommendations outlined by the Department of the Environment, Health & Local Government (8), apply this limit of 350 mg/ m^2 *day) to the site boundary of quarries.
- Public roads and footpaths in the vicinity of the development site must be maintained in a tidy condition by the developer / contractor during the construction phase.
- During periods of dry weather, surfaces will be dampened to assist in the suppression of dust creation. The dampening of surfaces in this way is a common dust suppression technique. However, care must be taken to ensure that excessive volumes of water are not used in dust suppression activities in that it results in contaminated surface water run-off from the site into the marine environment.
- During working hours, dust control methods must be monitored appropriately, depending on the prevailing meteorological conditions with particular emphasis on the adjacent North-Irish Sea SPA.
- During periods of very high winds, construction activities likely to generate significant dust emissions should be postponed until the high wind has subsided.

6.2.1.3 Mitigation to Negate impacts to nearby Natura 2000 sites

There is a likelihood that the construction stage of the proposed development has potential for significant effects on the well-being of marine habitats and fauna within nearby Natura 2000 Sites. Consequently, standard best practice guidance for working near water and standard mitigation measures for controlling of pollution and sediments from construction sites should be consulted. This includes the following documents:

- IFI (2016) Guidelines on protection of fisheries during construction works in and adjacent to waters - Guidance for consultants and contractors.
- CIRIA (2006) Control of water pollution from linear construction projects. Site guide.
- SEPA (2017) Works and maintenance in or near water. GPP 5.

6.2.1.4 Noise control

The following mitigation measures are recommended to limit noise and vibration emissions impacts to nearby Natura 2000 sites and the QI habitats and species within.

- Demolition works must be undertaken in a timeous and efficient manner, and all effort must be made to ensure that the agreed works timeline is adhered to.
- Where possible, the use of sound boards / shuttering must be placed around the construction site to reduce noise emissions to the immediate surroundings.
- Whenever machinery is not in use, it should be turned off to help limit noise emissions from the site.
- No machinery should be left running outside of the agreed operation hours (daylight hours). This will limit any noise emissions from the site in the late evenings and early mornings when marine birds are highly active.
- Careful consideration must be given to the noise emission levels of plant and/or construction vehicles when used outside of the designated works area, to limit noise and vibration emissions over an extended area.

6.2.1.5 Post-Construction Phase

An ecologist / environmental manager shall audit the site post-works, to ensure EPA compliance and that they are happy with the standard of works undertaken. The ecologist / environmental manager shall subsequently recommend any immediate remedial action if necessary.

6.3 Additional Recommendations

6.3.1 Lay Down Area and Disturbance Avoidance

To limit the potential impact of construction works and activities on wintering birds / winter migrant bird species, the amenity grassland areas in the Northern and Eastern portions of the Skerries peninsula must be avoided by all plant, HGV's and construction vehicles (see

Figure 6-1, below). No material lay-down area, site office, fuel storage, plant storage, or vehicle storage must be made in or in the immediate vicinity of the amenity grasslands.

Amenity grasslands are important foraging areas for several marine birds' species (e.g., Brent Geese) during the winter period (November to February, inclusive). Where the construction programme does not allow this, an ecologist should undertake a winter bird check immediately to inform the contractor on updated "no-go" areas.

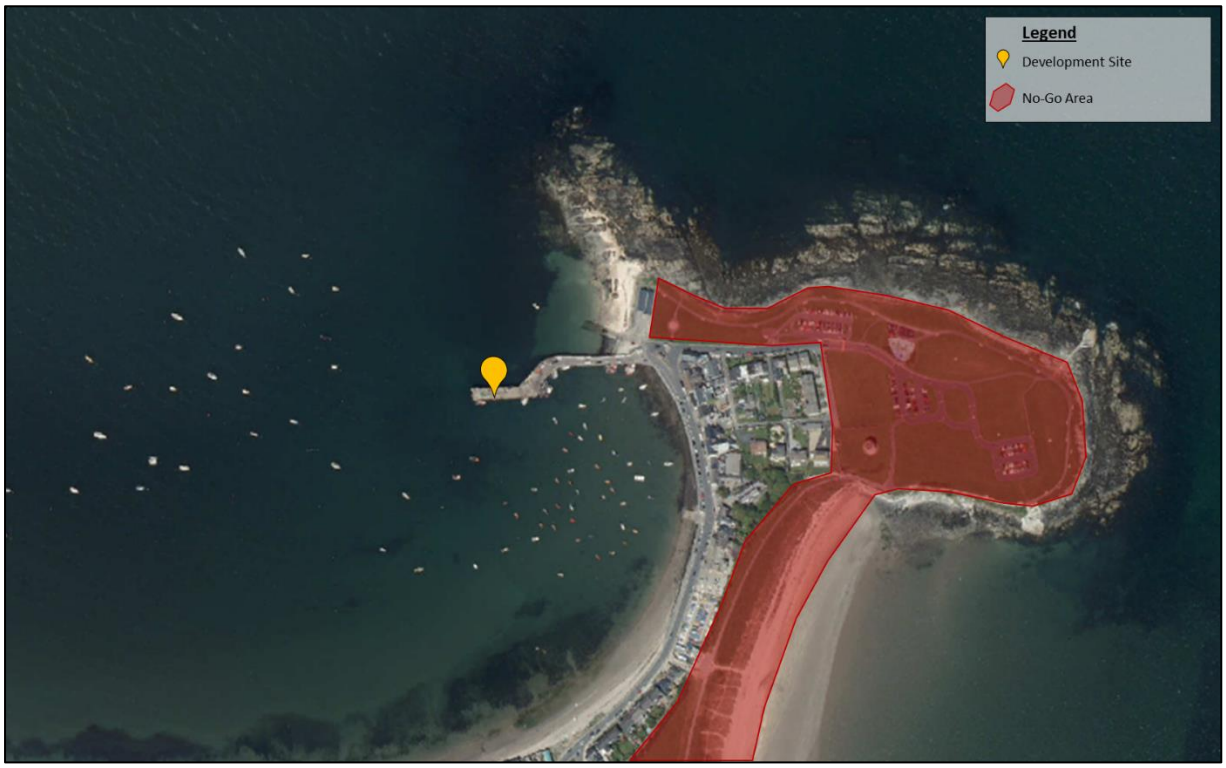

Figure 6-1: Recommended No-go areas for construction activities.

7 Conclusion

This Appropriate Assessment Natura Impact Statement has been completed in compliance with the relevant European and national guidelines. The potential impacts during the proposed works have been considered in the context of the European Sites potentially affected, their Qualifying Interests, Special Conservation Interests and Conservation Objectives. Robust and effective mitigation measures have been proposed for the avoidance of any impacts affecting marine water quality and QIs of the several nearby Natura 2000 sites.

In light of the mitigation measures proposed, and based on the best scientific knowledge available, it is concluded that there will be no significant adverse impacts on the integrity of nearby Natura 2000 sites, particularly the North Irish Sea SPA, Skerries Islands SPA, Rockabill SPA or Rockabill to Dalkey Island SAC, as a result of the proposed development.

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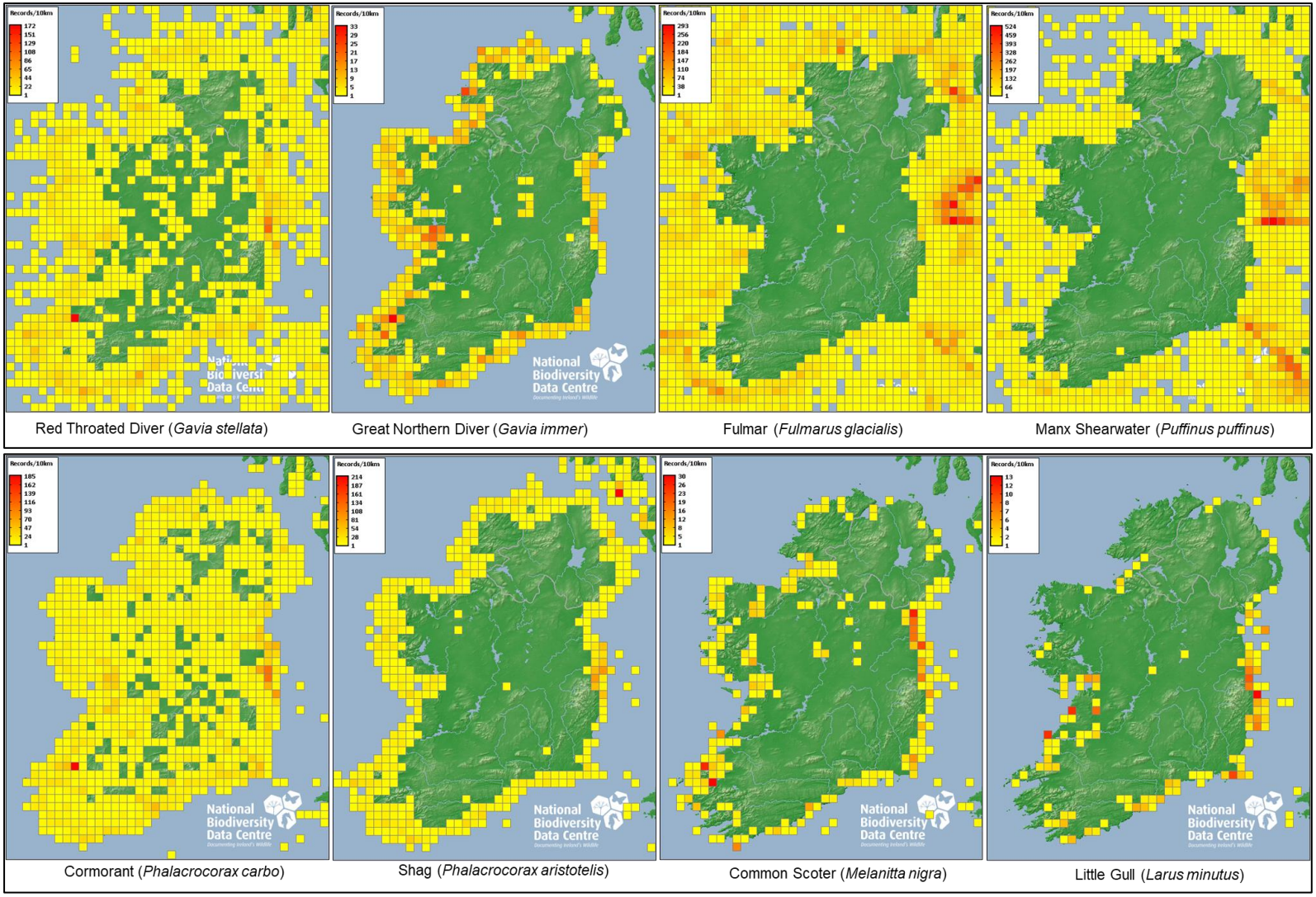
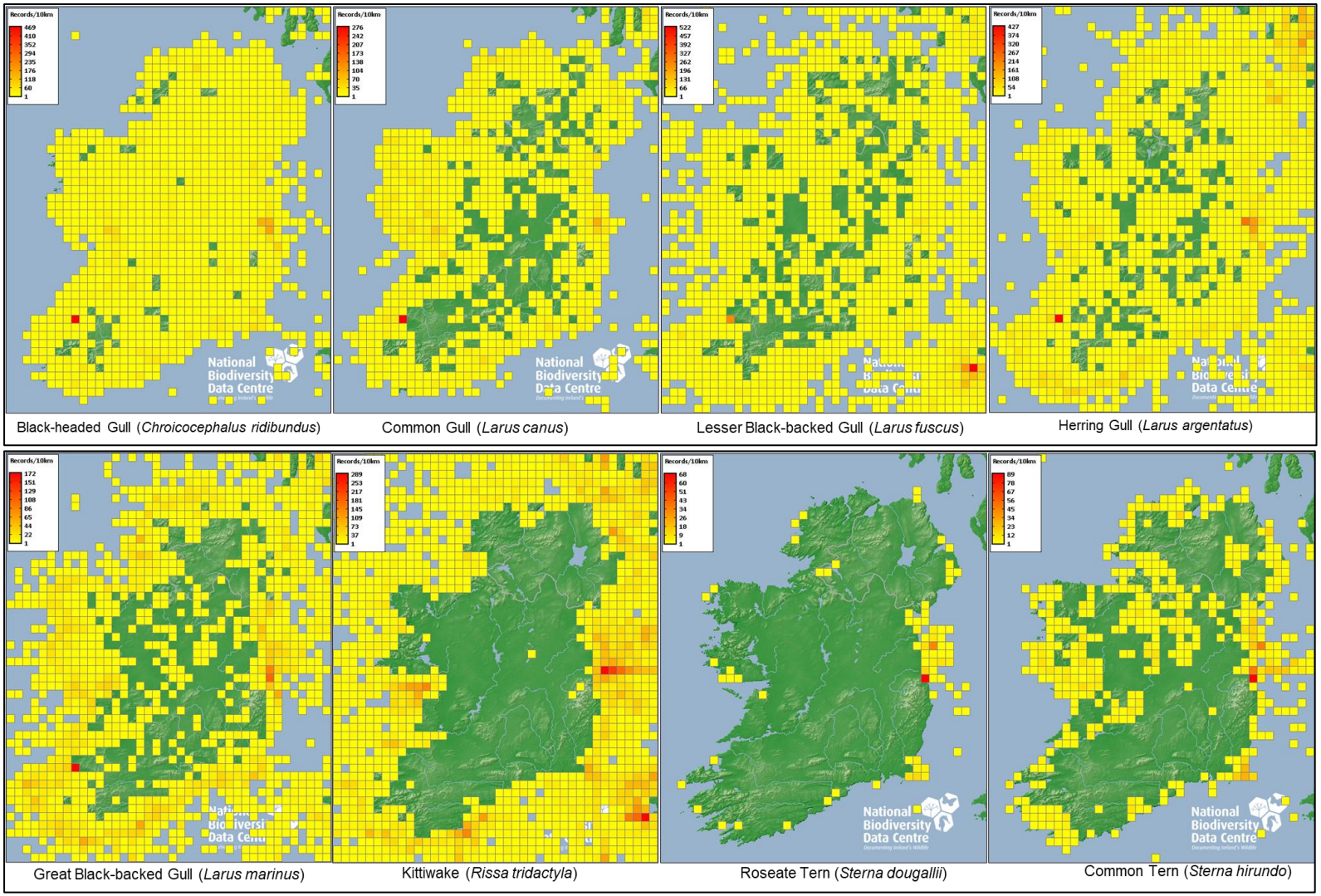
Appendix A – Marine Birds Distribution Maps



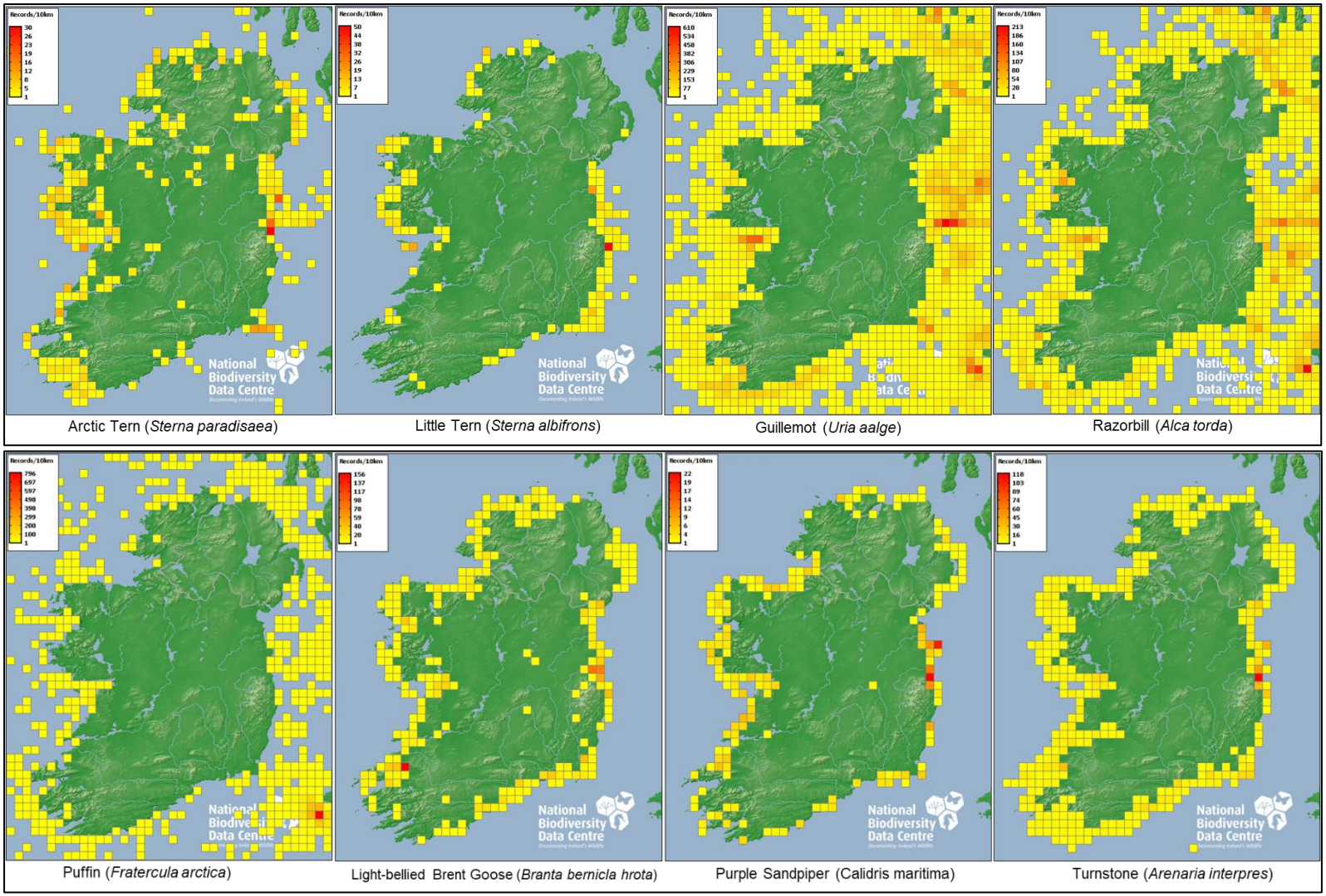
Source: National Biodiversity Data Centre (NBDC, 2023)



Black-headed Gull (*Chroicocephalus ridibundus*) | Common Gull (*Larus canus*) | Lesser Black-backed Gull (*Larus fuscus*) | Herring Gull (*Larus argentatus*)

Great Black-backed Gull (*Larus marinus*) | Kittiwake (*Rissa tridactyla*) | Roseate Tern (*Sterna dougallii*) | Common Tern (*Sterna hirundo*)

Source: National Biodiversity Data Centre (NBDC, 2023)



Arctic Tern (*Sterna paradisaea*) | Little Tern (*Sterna albifrons*) | Guillemot (*Uria aalge*) | Razorbill (*Alca torda*)

Puffin (*Fratercula arctica*) | Light-bellied Brent Goose (*Branta bernicla hrota*) | Purple Sandpiper (Calidris maritima) | Turnstone (*Arenaria interpres*)

Source: National Biodiversity Data Centre (NBDC, 2023)

Appendix B – 1 km2 Marine Bird counts (NPWS, 2023)

Records for all species of birds were retrieved from the National Biodiversity Data Centre records taken from their website www.biodiversityireland.ie, found within the 1km grid square O2561 in which the Site the is located.

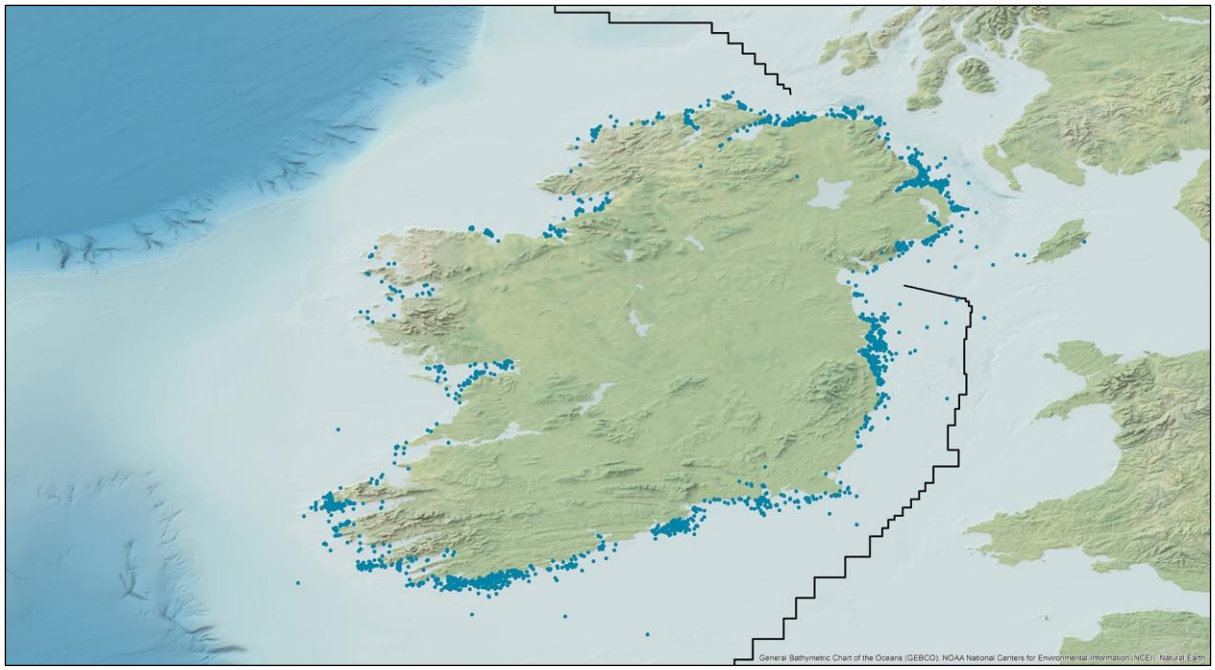
Table 2.1. Bird Records from grid square O2561.

Species Name	Record Count	Date of Last Record	Designation
Arctic Tern (*Sterna paradisaea*)	2	10/10/2022	Protected Species: Wildlife Acts EU Birds Directive: Annex I Birds of Conservation Concern - Amber List
Barn Swallow (*Hirundo rustica*)	1	25/04/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Black Guillemot (*Cepphus grylle*)	3	30/05/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Black-legged Kittiwake (*Rissa tridactyla*)	2	24/07/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Bonaparte's Gull (*Larus philadelphia*)	2	18/03/2013	Protected Species: Wildlife Acts
Common Eider (*Somateria mollissima*)	4	19/03/2022	Protected Species: Wildlife Acts EU Birds Directive: Annex II and III Birds of Conservation Concern - Amber List
Common Greenshank (*Tringa nebularia*)	1	28/09/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Common Guillemot (*Uria aalge*)	3	30/05/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Common Kestrel (*Falco tinnunculus*)	1	27/04/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Common Redshank (*Tringa totanus*)	1	28/09/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Red List
Common Scoter (*Melanitta nigra*)	1	07/01/2006	Protected Species: Wildlife Acts EU Birds Directive: Annex II and III Birds of Conservation Concern – Red List
Common Tern (*Sterna hirundo*)	3	25/05/2020	Protected Species: Wildlife Acts EU Birds Directive: Annex I Birds of Conservation Concern - Amber List
Dunlin (*Calidris alpina*)	2	12/03/2020	Protected Species: Wildlife Acts EU Birds Directive: Annex I Birds of Conservation Concern - Amber List
Eurasian Curlew (*Numenius arquata*)	5	10/07/2021	Protected Species: Wildlife Acts EU Birds Directive: Annex II and III Birds of Conservation Concern – Red List
Eurasian Hobby (*Falco subbuteo*)	1	24/06/2013	Protected Species: Wildlife Acts
Eurasian Oystercatcher (*Haematopus ostralegus*)	2	28/12/2019	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
European Shag (*Phalacrocorax aristotelis*)	2	14/08/2019	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
European Storm-petrel (*Hydrobates pelagicus*)	2	19/07/2009	Protected Species: Wildlife Acts EU Birds Directive: Annex I Birds of Conservation Concern - Amber List
Forster's Tern (*Sterna forsteri*)	1	26/12/2004	Protected Species: Wildlife Acts
Great Black-backed Gull (*Larus marinus*)	2	18/06/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Great Cormorant (*Phalacrocorax carbo*)	2	14/08/2019	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Great Egret (*Ardea alba*)	1	16/08/2005	Protected Species: Wildlife Acts
Grey Plover (*Pluvialis squatarola*)	1	28/09/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Herring Gull (*Larus argentatus*)	2	28/12/2019	Protected Species: Wildlife Acts Birds of Conservation Concern -Red List

Kumlien's Iceland Gull (*Larus glaucoides* subsp. *kumlieni*)	2	09/04/1994	Protected Species: Wildlife Acts
Little Bustard (*Tetrax tetrax*)	1	19/12/1931	Protected Species: Wildlife Acts
Little Egret (*Egretta garzetta*)	1	12/10/2020	Protected Species: Wildlife Acts EU Birds Directive: Annex I
Little Tern (*Sternula albifrons*)	1	31/07/2022	Protected Species: Wildlife Acts EU Birds Directive: Annex I Birds of Conservation Concern - Amber List
Manx Shearwater (*Puffinus puffinus*)	2	24/07/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Meadow Pipit (*Anthus pratensis*)	1	24/07/2011	Protected Species: Wildlife Acts
Mew Gull (*Larus canus*)	1	28/09/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Northern Fulmar (*Fulmarus glacialis*)	1	14/08/2019	Protected Species: Wildlife Acts
Northern Gannet (*Morus bassanus*)	6	17/08/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Northern Wheatear (*Oenanthe oenanthe*)	14	22/03/2022	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Purple Sandpiper (*Calidris maritima*)	2	01/05/2020	Protected Species: Wildlife Acts
Razorbill (*Alca torda*)	3	18/08/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Red Knot (*Calidris canutus*)	1	19/07/2009	Protected Species: Wildlife Acts Birds of Conservation Concern - Red List
Red-throated Diver (*Gavia stellata*)	2	19/03/2022	Protected Species: Wildlife Acts EU Birds Directive: Annex I Birds of Conservation Concern - Amber List
Ringed Plover (*Charadrius hiaticula*)	2	12/10/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Rock Pipit (*Anthus petrosus*)	1	23/03/2020	Protected Species: Wildlife Acts
Roseate Tern (*Sterna dougallii*)	3	11/09/1986	Protected Species: Wildlife Acts EU Birds Directive: Annex I Birds of Conservation Concern - Amber List
Rosy Starling (*Sturnus roseus*)	1	26/06/1892	Protected Species: Wildlife Acts
Ruddy Shelduck (*Tadorna ferruginea*)	1	17/05/2020	Protected Species: Wildlife Acts
Ruddy Turnstone (Arenaria interpres)	3	12/03/2020	Protected Species: Wildlife Acts
Sanderling (Calidris alba)	2	24/07/2011	Protected Species: Wildlife Acts
Sandwich Tern (Sterna sandvicensis)	1	17/10/1991	Protected Species: Wildlife Acts EU Birds Directive: Annex I Birds of Conservation Concern - Amber List
Surf Scoter (Melanitta perspicillata)	3	19/09/1976	Protected Species: Wildlife Acts
White-winged Tern (Chlidonias leucopterus)	1	11/09/1986	Protected Species: Wildlife Acts

Appendix C – Harbour Porpoise (*Phocoena phocoena*) Observations (2018-2023)

Harbour porpoises can be seen easily in any inshore waters, especially in calm sea conditions. They are particularly abundant between Howth Head and Dalkey off Co. Dublin.



Harbour Porpoise sightings between 2009-2018 (iwdg.ie; Accessed Online – January 2023)

Harbour Porpoise are recognised as a Threatened Species under the OSPAR Convention and are subsequently afforded protection under the EU Habitats Directive. Additionally, Harbour Porpoise are listed as Annex II and IV protected species in Irish Waters.

The table below provides an overview of recent sighting of Harbour Porpoise along the Irish coastline between January and December 2023. (iwdg.ie)

#	EVENT DATE	SPECIES	NO. ANIMALS	LOCATION	RECORD ID	OBSERVER	
1	31/12/2023	harbour porpoise	3	Skerries - Co. Dublin	45329	Fidelma Carroll	Details
2	27/12/2023	harbour porpoise	1	Skerries - Co. Dublin	45360	Niamh Dalziel	Details
3	20/09/2023	harbour porpoise	2	Skerries - Co. Dublin	44752	Conal O'Flanagan	Details
4	21/08/2023	harbour porpoise	1	Skerries - Co. Dublin	44367	Conal O'Flanagan	Details
5	27/07/2023	harbour porpoise	2	Skerries - Co. Dublin	44106	Bryan Barry	Details
6	10/07/2023	harbour porpoise	1	Skerries - Co. Dublin	43895	Conal O'Flanagan	Details
7	27/06/2023	harbour porpoise	2	Skerries - Co. Dublin	43817	Ciara Halpin	Details
8	20/05/2023	harbour porpoise	2	Skerries - Co. Dublin	43267	Ciara Halpin	Details
9	16/05/2023	harbour porpoise	2	Skerries - Co. Dublin	43226	Sinead Cunnane	Details
10	07/05/2023	harbour porpoise	2	Skerries - Co. Dublin	43176	Ian Kavanagh	Details
11	28/01/2023	harbour porpoise	3	Skerries - Co. Dublin	42390	Bryan Barry	Details
12	15/01/2023	harbour porpoise	2	Skerries - Co. Dublin	42326	Grainne Meade	Details

Appendix D – Assessment of In-combination Effects

Plan/Project	Overview	Status (date)	Potential significant effects from plan/project	Potential in-combination effects
National				
Ireland 2040 - Our Plan, the National Planning Framework (and associated National Development Plan)	The National Planning Framework is the Government's high-level strategic plan for shaping the future growth and development of to the year 2040. It is a framework to guide public and private investment, to create and promote opportunities for people, and to protect and enhance the environment – from villages to cities, and everything around and in between.	Published (18/01/2019)	Potential in-combination effect may arise where there is a requirement to provide for new infrastructure or where new development occurs.	This Framework was subject to SEA and AA that incorporated robust mitigation measures to minimise effects. Until project-specific plans are drafted for new development, there is no scope for assessment of in-combination effects.
Grid 25	Grid25 is a high-level strategy outlining how EirGrid intends to undertake the development of the electricity transmission grid in the short, medium and longer terms, to support a long-term sustainable and reliable electricity supply.	Published (2011)	Potential in-combination effect may arise where there is a requirement to provide for new infrastructure or where new development occurs.	This Framework was subject to SEA and AA that incorporated robust mitigation measures to minimise effects. Until project-specific plans are drafted for new development, there is no scope for assessment of in-combination effects.
Energy Policy framework 2007-2020, Governments White Paper	This policy states that the Government is committed to delivering a significant growth in renewable energy as a contribution to fuel diversity in power generation with a 2020 target of 33% electricity consumption.	Published (2007)	Potential in-combination effect may arise where there is a requirement to provide for new infrastructure or where new development occurs.	This Framework was subject to SEA and AA that incorporated robust mitigation measures to minimise effects. Until project-specific plans are drafted for new development, there is no scope for assessment of in-combination effects.
Irish Water's Water Services Strategic Plan	This Water Services Strategic Plan sets out strategic objectives for the	Published (2015 and 2014)	Meeting additional potable water demands and wastewater	This Framework was subject to SEA and AA that incorporated

Plan/Project	Overview	Status (date)	Potential significant effects from plan/project	Potential in-combination effects
2015 and associated Proposed Capital Investment Plan 2020-2024	delivery of water services over the next 25 years up to 2040. It details current and future challenges that affect the provision of water services and identifies the priorities to be tackled in the short and medium term.		treatment demands arising from the proposed increase in population has the potential to adversely affect, in the case of abstractions from and effluent discharges to surface waters, the ecological status of surface waters and, in the case of groundwater abstractions, the quantitative status of groundwaters.	robust mitigation measures to minimise effects. Until project-specific plans are drafted for new development, there is no scope for assessment of in-combination effects.
Regional				
Regional Spatial and Economic Strategy (RSES) 2020-2032	The RSES provides a long-term regional level strategic planning and economic framework in support of the implementation of the National Planning Framework.	Published (2020)	Potential in-combination effect may arise where there is a requirement to provide for new infrastructure or where new development occurs.	This strategy was subject to SEA and AA that incorporated robust mitigation measures to minimise effects. Until project-specific plans are drafted for new development, there is no scope for assessment of in-combination effects.
County/Local				
Cork County Development Plan 2022-2028	Overall strategies for the proper planning and sustainable development of the administrative area of Cork County Council.	Published (2022)	Potential in-combination effect may arise where there is a requirement to provide for new infrastructure or where new development occurs.	Appropriate assessment of the Cork County Development Plan 2022–2028 concluded a finding of no significant effects following the completion of Stage 2 of the process in relation to the proposed material alterations (CCC, 2022).
Planning Applications				

Plan/Project	Overview	Status (date)	Potential significant effects from plan/project	Potential in-combination effects
Planning Ref. 235594	235594: "*Permission for retention for a second floor gable window, relocation of front door, elevational changes to rear façade and all associated site works*"	235595: Approved (Conditional)	This planning application is small in scale and will not significantly interact with the project site.	Significant in-combination effects are not considered likely.
EIA Portal				
There are no recently granted plans or projects requiring EIA within the vicinity of the Project site.				