Skerries Harbour – Sheet Pile Wall Replacement

Screening for Appropriate Assessment Report

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Glossary of Terms and Abbreviations

AA	Appropriate Assessment
AASS	Appropriate Assessment Screening Statement
AEP	Annual Exceedance Probability
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
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 (formally ByrneLooby), were commissioned by Fingal County Council (FCC) to complete and submit a planning application for the proposed works on Skerries Harbour pier sheet pile section. Skerries Harbour, located in County Fingal on the Northeast coast of Ireland, was originally established in the 18th century and primarily provides mooring for 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.

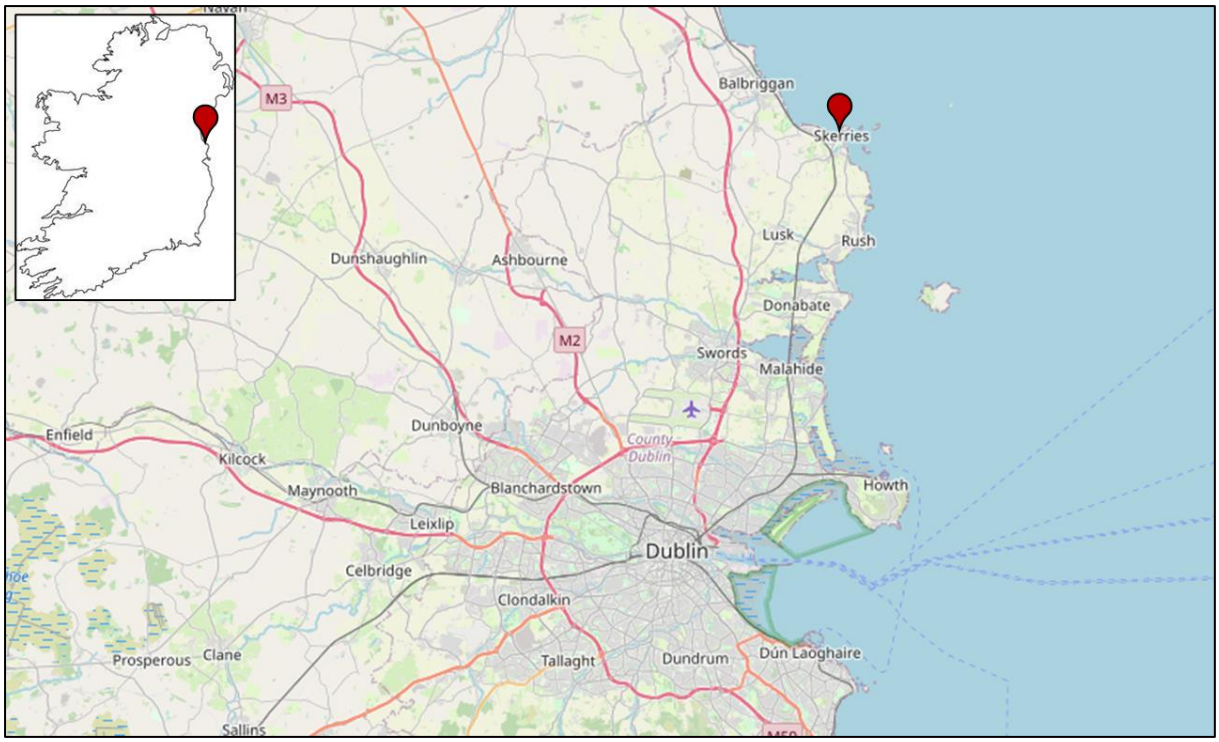

Figure 1-1: Location of the Skerries Harbour, Co. Fingal.

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

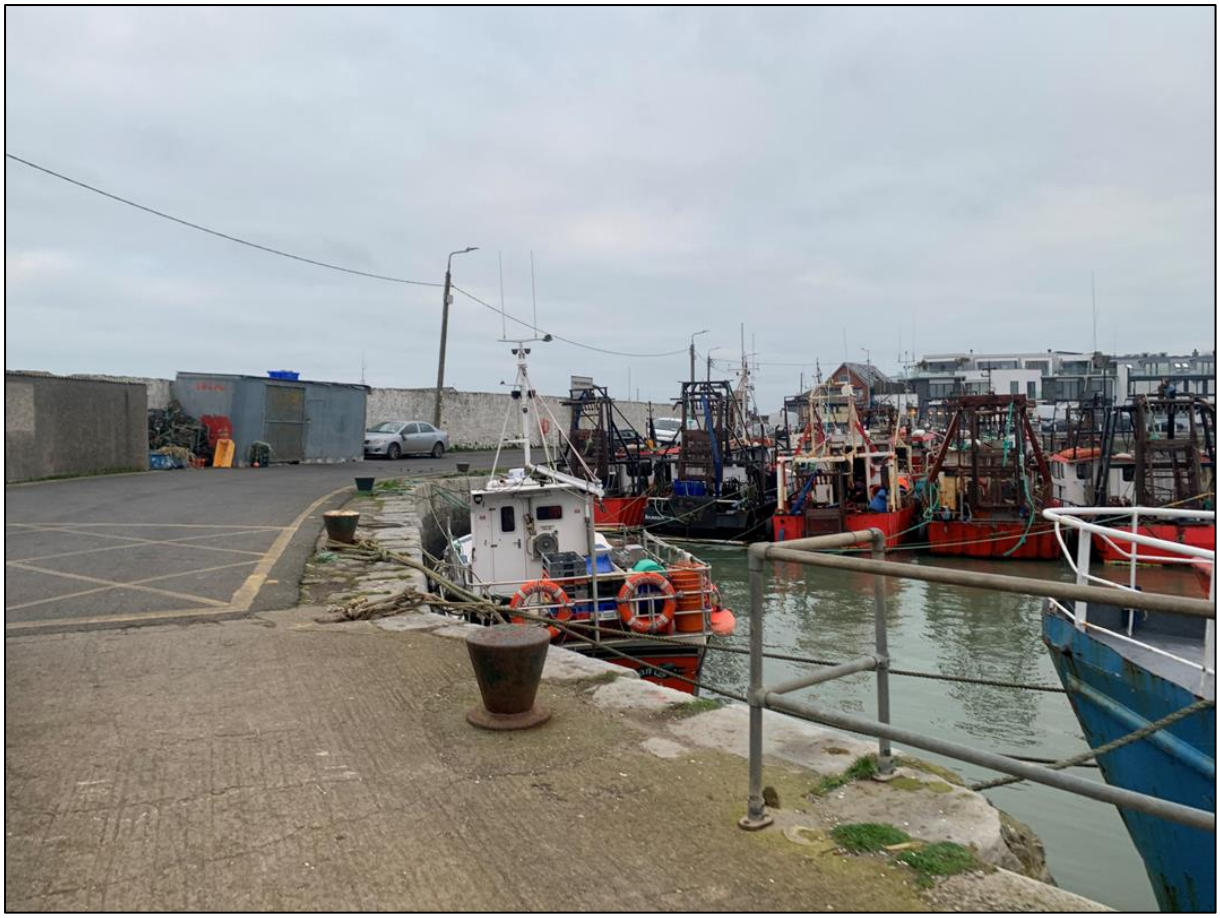

Figure 1-4: Additional views of Skerries Harbour and typical vessels that utilise berthing.

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

1.3 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.

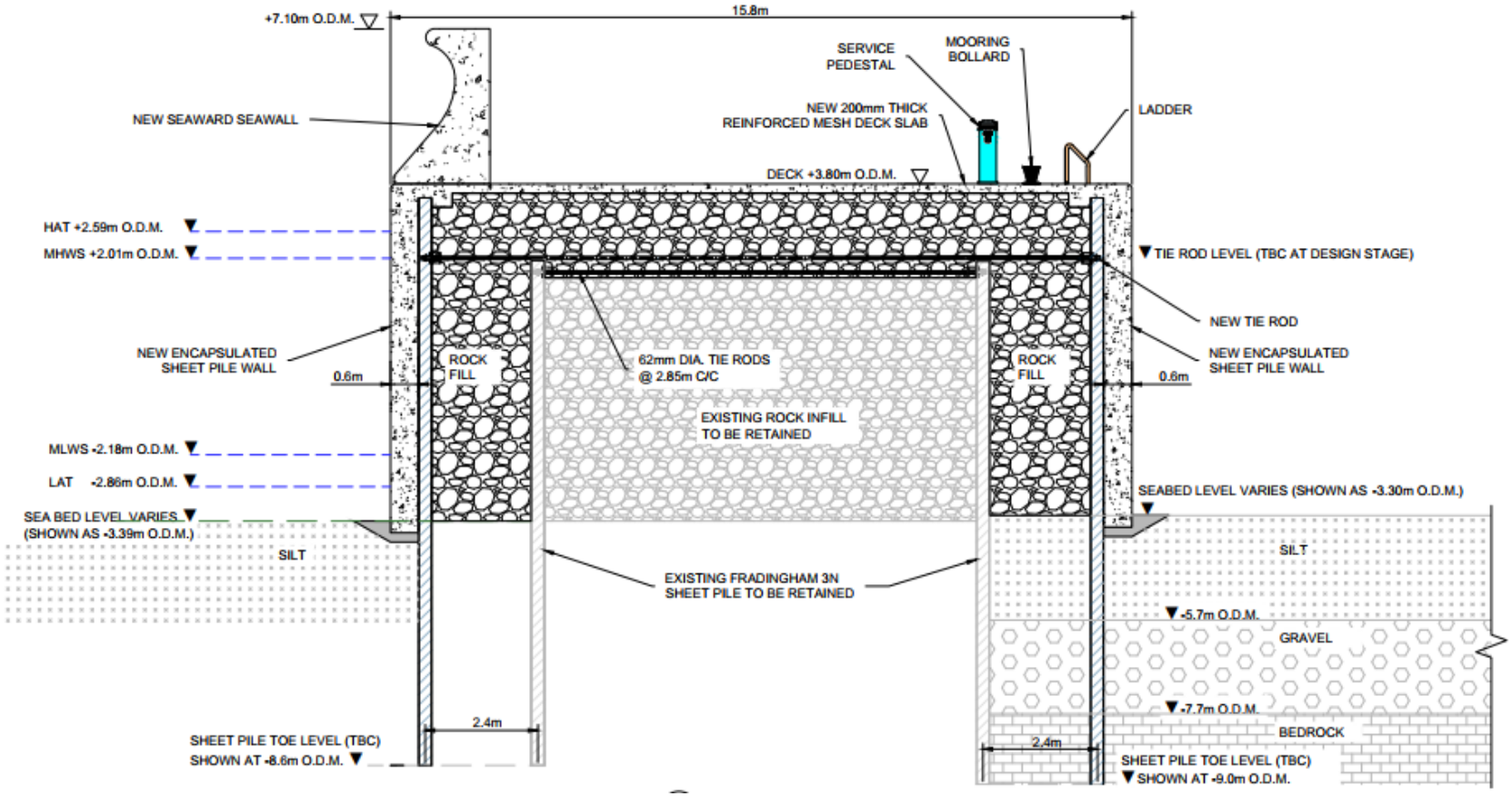

Figure 1-6: Proposed Development Cross-Section

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 sheet pile wall replacement at the Skerries Harbour. 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 Preparation of this Report

Jeff Hean is the Project Ecologist for this Report. He has been 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 and has prepared numerous reports for Appropriate Assessment, Natura Impact Statements and Environmental Impact Assessment reports, for a wide variety of proposed developments, including local authority 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 (current stage)

The aim of screening is to assess if the plan or project is directly connected with or necessary to the management of Natura 2000 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 Natura 2000 site. This is done by examining the proposed plan or project and the conservation objectives of any 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

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 Natura 2000 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 Natura 2000 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' [1]. In other words, if alternative solutions exist that do not have negative impacts on Natura 2000 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 Natura 2000 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 Natura 2000 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 Stage 1: AA Screening

This AA screening report has been completed in the following logical order:

- Definition of the zone of influence for the proposed works.
- Identification of the Natura 2000 Sites that are situated (in their entirety or partially) within the zone of influence of the proposed works.
- Identification of the most up-to-date Qualifying Interests (QIs) for each Natura 2000 Site occurring either wholly or partially within the zone of influence.
- Identification of the environmental conditions that maintain the QIs at the desired target of Favourable Conservation Status.
- Identification of the threats/impacts – actual or potential that could negatively impact the environmental conditions of the QIs within the Natura 2000 Sites.
- Highlighting the activities of the proposed works that could give rise to significant negative impacts; and
- Identification of other plans or projects, for which In-combination impacts would likely have significant effects.

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 Natura 2000 site.
- The status of Qualifying Interests of the Natura 2000 site (Annex I habitats and Annex II species of the EU Habitats Directive) and the relevant conservation status and objectives for these species.
- The key structural and functional relationships maintaining the integrity of the Natura 2000 site.

- The status of other annexed habitats and species occurring in proximity to the site of the proposed development; and
- The scale and nature of the aspects of the project in relation to the Natura 2000 site.

2.6 Legislative Background and Guidance Documents

2.6.1 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."

2.6.2 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.

2.6.3 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."

2.6.4 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.

2.6.5 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

3.1 Site Assessment

A general assessment of the site was carried out in line with the Heritage Council Best Practice Guidance for Habitat Survey and Mapping [2] 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 [3].

3.2 Desktop Information Consulted for this Report

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 13/12/2023)
- The status of EU Habitats and Species in Ireland 2013, NPWS, ed. D. Lynn
- Article 17 Reports [4]
- GIS spatial data[1]

3.3 Cumulative and In-Combination Effects

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.

[1] https://www.npws.ie/maps-and-data/habitat-and-species-data/article-17

- 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.

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 [5] 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 [6] 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 European Sites within the 10 km Zone of Influence

There are five Special Protection Areas (SPA) and two Special Area of Conservation (SAC) 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.

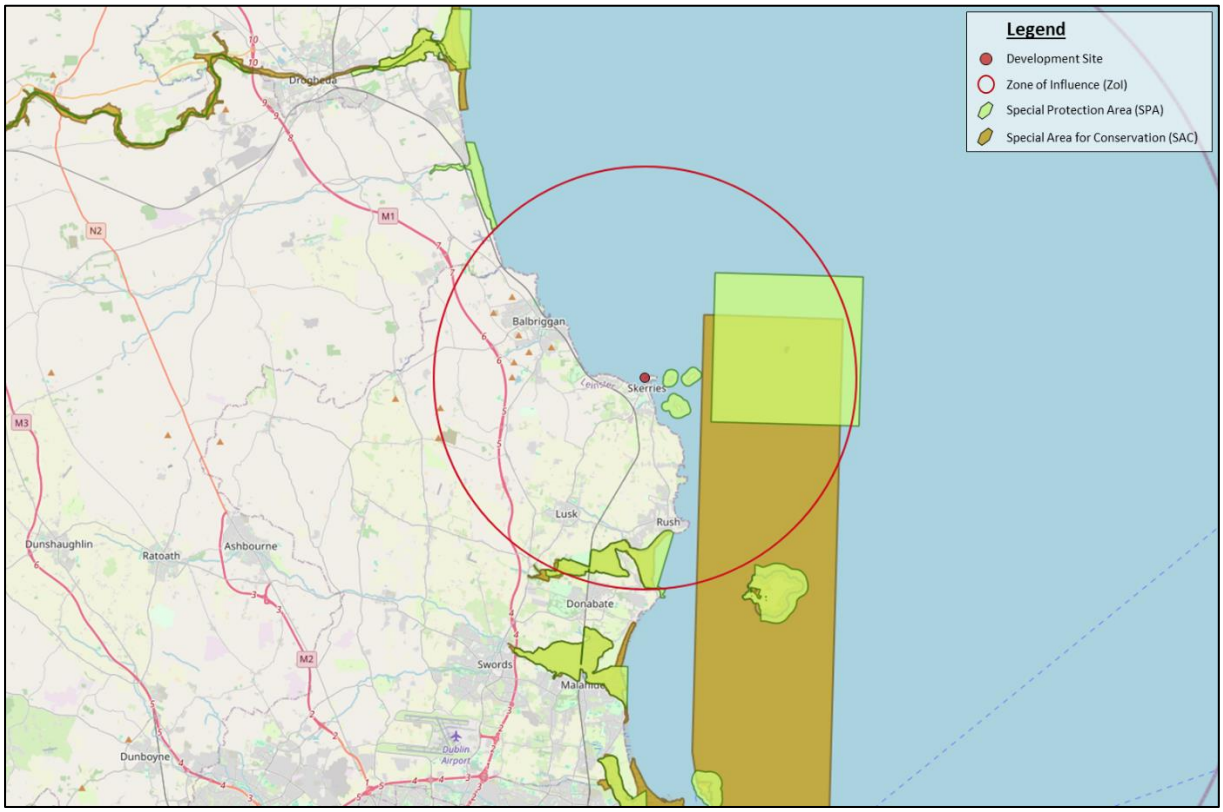

Figure 3-1: European Sites within 10 km of Skerries Harbour

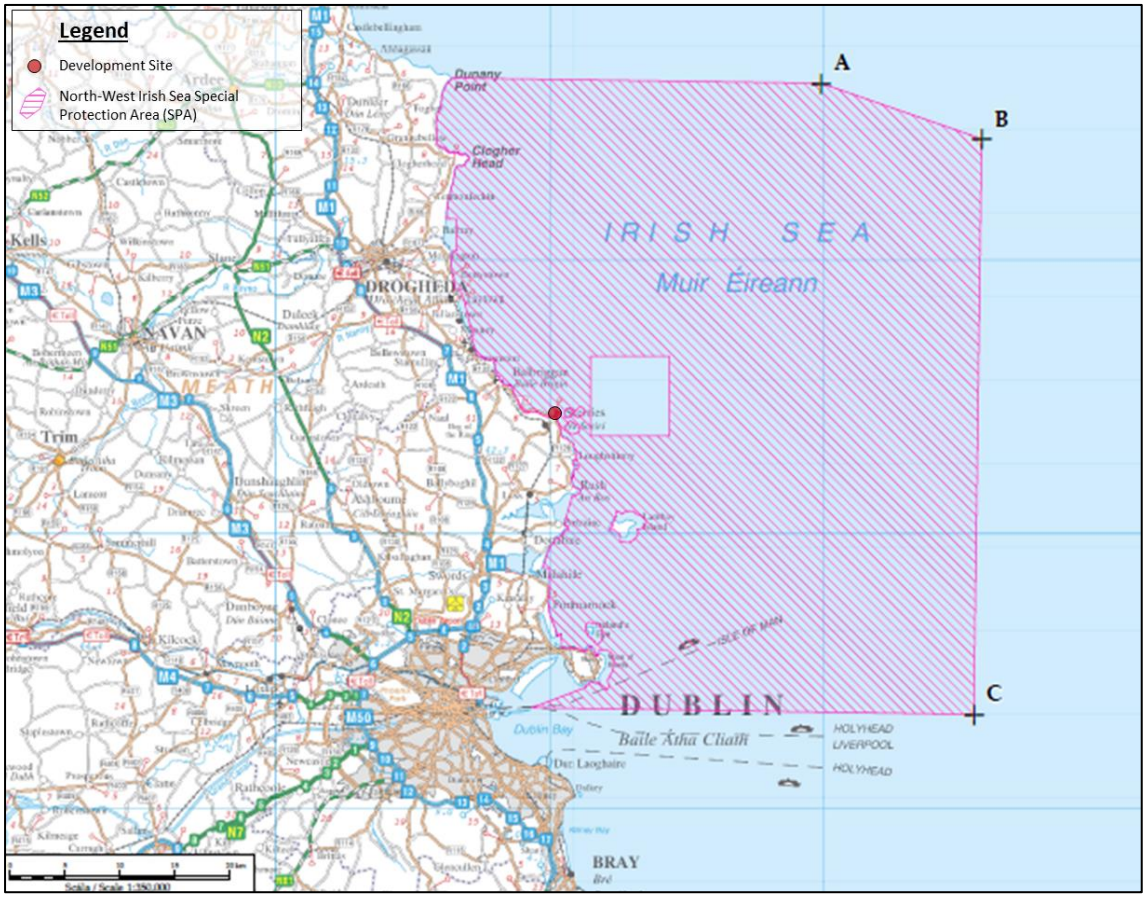

Figure 3-2: Location and extent of the North-East Irish Sea SPA.

3.5 Source-Pathway-Receptor (SPR) Model

The likely effects of the proposed development on any European site have been assessed using a source-pathway-receptor model, where:

- A 'source' is defined as the individual element of the proposed works that has the potential to impact on a European site, its qualifying features and its conservation objectives.
- A 'pathway' is defined as the means or route by which a source can affect the ecological receptor.
- A 'receptor' is defined as the SCI of SPAs or QI of SACs for which conservation objectives have been set for the European sites being screened.

Where a source-pathway-receptor link between the proposed development and a European site exists and there is a potential negative impact, further assessment is required. In accordance with EC Article 6 Guidance Document [7], 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.

3.6 Development Site Habitat Assessment Methods

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 [4]. 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" [3] through the additional recording of specific features indicating the presence, or likely presence, of protected species or other species of nature conservation significance.

3.7 Assessment of Likelihood of Significant Effects

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

[2] https://ec.europa.eu/environment/nature/legislation/habitatsdirective/docs/Int_Manual_EU28.pdf

- 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 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"*.

4 Results

4.1 Development Site Habitats

The site of the proposed works is located 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.

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Figure 4-1: Views of the Skerries Harbur Pier and typical vessels at berth.

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 Skerries Harbour and Skerries Bay Marine Environment & Coastal Water

The location of the proposed development site is within the western portion of the Skerries Harbour. The site of the proposed development is currently used to berth commercial fishing vessels and recreational vessels (see 4-1, above). There are no major river systems that provide freshwater inputs into Skerries Harbour, whilst the only significant watercourse

proximal to the proposed development site is the Skerries Mill Stream, located ca. 1 km South-East of the site.

The eastern portion of the Skerries Harbour bay intertidal zone is characterised by sandy shores (LS2; Fossit, 2018). According to the European Marine Observation and Data Network (EMODnet), the benthic marine habitat is classified as High Energy Infralittoral fine sand or Infralittoral muddy sand (A5.23 / A5.24). The seabed to the North of Skerries Harbour (ca. 200 m) is classified as High Energy Circalittoral fine sand or Circalittoral muddy sand (A5.25 or A5.26). Figure 4-4, below, provides an example of the typical marine substrate of the Skerries Harbour Bay.

Figure 4-2: Example of sandy shores (LS2) along the eastern portion of the Skerries Harbour Bay.

Typical coastal marine habitats observed to the north of the proposed development site was dominated by exposed rocky shore (LR1), and mixed substrata shores (LR4).

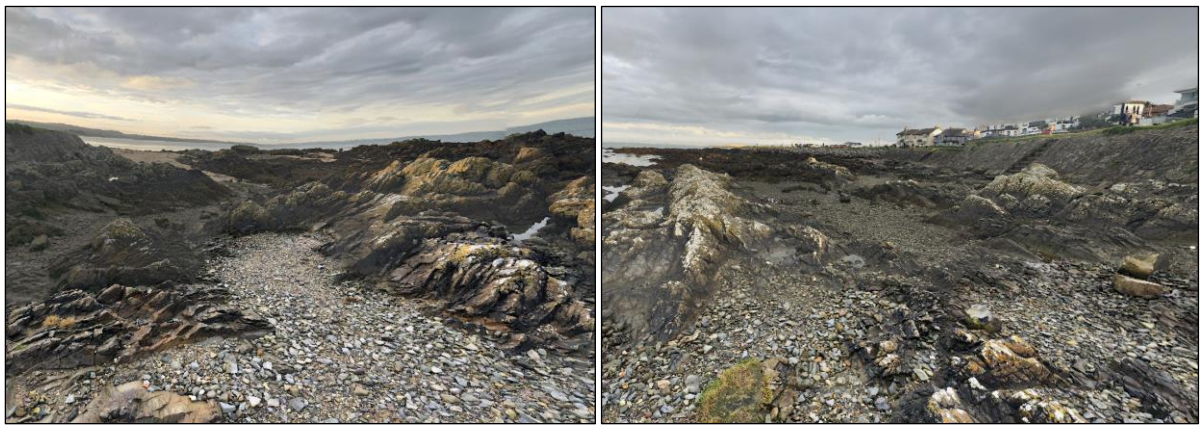

Figure 4-3: Views of the rocky shore habitats observed to the North of the development site.

According to the EPA website (www.epa.ie), Skerries Harbour and surrounding marine environment (within 2 km) is classified as "At risk" per the WFD Risk Status (2021) and was classified as "Unpolluted" under the EPA Coastal Waterbody Score system (EPA, 2021). The ecological status was reported as "Good" (EPA, 2021). The unpolluted status of water quality within Skerries Harbour and surrounding marine environment can be strongly attributed to the significant tidal influence and movement of marine water, along with the low volume of large vessels utilising the Skerries Harbour.

4.4 Other Considerations

Grey (*Halichoerus grypus*) are a common occurrence in the Skerries Harbour. These seals frequent the harbour, typically foraging for scraps from local commercial fishing vessels and resting on the harbour pier.

Although Harbour Seals are not highlighted as QI's for any nearby Natura 2000 sites, Grey Seals are listed as a protected species, protected under the following Irish and EU legislation;

- Habitats Directive (92/43/EEC)
- Annex II
- Annex V
- Irish Wildlife Act, 1976
- EU's Marine Mammal Protection Act, 1972

Grey Seals are a widespread species along the Irish coastline and are typically most abundant along the western seaboard of Ireland (NPWS, 2023).

5 Screening of Likely Impacts

The following sections hereunder consider whether the construction phase of the proposed development works could cause 'likely significant effects' on the qualifying features of the European site(s), alone or in-combination with other plans/projects. The proposed development site does not overlap or encroach on the boundaries of any European sites or other protected habitats, but there is direct distant hydrological connectivity between the development site and European sites. It is therefore required to assess any potential negative impacts on habitats and/or SCI species for which the European sites are designated.

5.1 Source-Pathway-Receptor (SPR) Model

5.1.1 Sources

Sediment

Construction works can result in sediment influx into adjacent areas, which can have various environmental impacts. This is particularly concerning when rivers, streams or 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.

Construction works included in the proposed development are demolition activities (e.g., concrete breaking, removal of existing sheet piles, etc), placement of new sheet pilings, ballast rock infilling and concrete pouring. These proposed construction activities along the Skerries Harbour Pier will result in sediments and/or contaminated surface water run-off from the works area entering the adjacent marine environment, whilst the installation of new sheet pilings will result in the direct disturbance of the seabed. Additionally, the proposed works may include the use of floating vessels (i.e. construction/work barges) with outboard motors, which may additionally result in the disturbance of marine sediments in the immediate area of the proposed site.

Hydrocarbons & Toxic Contaminants

Hydrocarbon spills into the adjacent marine ecosystem can have severe environmental impacts. Sources of hydrocarbons include fuels, hydraulic fluids and oils from construction machinery, excavators, and/ or construction vehicles used to undertake the proposed development works. Hydrocarbon spills are particularly toxic to biota, including aquatic fauna such as fish, crustaceans, amphibians and 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.

Hydrocarbon spills/precipitation into the marine ecosystem will result in deterioration of water quality, including low dissolved oxygen and altered pH, resulting in aquatic fauna die-offs. The toxins from hydrocarbon spills can also accumulate in the food chain, causing harmful impacts on animals that consume contaminated water or soil. Unlike suspended sediment,

which (depending on particle size) can drop out of solution in areas of reduced flow velocities, petroleum-range hydrocarbons are largely insoluble in water and will float on the surface, thereby allowing for greater potential for extended transport within the marine environment.

Primary sources of hydrocarbons, such as diesel fuel, oil, hydraulic fluid, etc, are from excavators, piling 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).

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.

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.

The de facto daytime noise limit, as recommended by most local authorities in Ireland, is a sound pressure level (SPL) of 55 decibels (dB) (see British Standard BS 5228:2009+A1:2014). Although the Skerries Harbour berths small to moderate commercial and recreational vessels, Skerries Harbour does not typically exhibit high marine vessel traffic volumes. Consequently, ambient noise and vibration levels are typically near ambient, and elevated noise and vibration emissions emanating from construction works have the potential to impact marine fauna.

5.1.2 Pathways

The proposed works site on the Skerries Harbour pier overlaps with the Irish North Sea SPA and has direct connectivity with several other European sites. Potential impacts will be imparted directly onto the marine environment within the Skerries Harbour. Consequently, it has been determined that likely impacts (if any) will become motile within the greater Skerries Harbour and surrounding marine environment.

5.1.3 Receptors

The connectivity of the proposed works site to several identified Natura 2000 sites within the ZoI is assessed below. Habitats and species detailed in European sites identified as sites that are likely to receive impacts from the proposed development are provided in the sections hereunder. Additionally, any sensitive/protected species/habitats within the immediate vicinity of the proposed works have also been considered.

5.1.3.1 Special Protection Area (SPA)

North-West Irish Sea SPA 004236

The Site Synopsis and Conservation Objectives for the site are available on http://www.npws.ie/protected-sites/sac/004236. The location of this SPA in the vicinity of the proposed development is shown in Figure 3-1 and Figure 3-2. This SPA is of high conservation value for the following QI habitats and/or Species of Conservation Interest (SCI).

- Red-throated Diver (*Gavia stellata*) [A001]
- Great Northern Diver (*Gavia immer*) [A003]
- Fulmar (*Fulmarus glacialis*) [A009]
- Manx Shearwater (*Puffinus puffinus*) [A013]
- Cormorant (*Phalacrocorax carbo*) [A017]
- Shag (*Phalacrocorax aristotelis*) [A018]
- Common Scoter (*Melanitta nigra*) [A065]
- Little Gull (*Larus minutus*) [A177]
- Black-headed Gull (*Chroicocephalus ridibundus*) [A179]
- Common Gull (*Larus canus*) [A182]
- Lesser Black-backed Gull (*Larus fuscus*) [A183]
- Herring Gull (*Larus argentatus*) [A184]
- Great Black-backed Gull (*Larus marinus*) [A187]
- Kittiwake (*Rissa tridactyla*) [A188]
- Roseate Tern (*Sterna dougallii*) [A192]
- Common Tern (*Sterna hirundo*) [A193]
- Arctic Tern (*Sterna paradisaea*) [A194]
- Little Tern (*Sterna albifrons*) [A195]
- Guillemot (*Uria aalge*) [A199]
- Razorbill (*Alca torda*) [A200]
- Puffin (*Fratercula arctica*) [A204]

Skerries Island SPA 004122

The Site Synopsis and Conservation Objectives for the site are available on http://www.npws.ie/protected-sites/sac/004122. The location of this SPA in the vicinity of the proposed development is shown in Figure 3-1. This SPA is of high conservation value for the following QI habitats and/or Species of Conservation Interest (SCI).

- Cormorant (*Phalacrocorax carbo*) [A017]
- Shag (Phalacrocorax aristotelis) [A018]

- Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]
- Purple Sandpiper (*Calidris maritima*) [A148]
- Turnstone (*Arenaria interpres*) [A169]
- Herring Gull (*Larus argentatus*) [A184]

Rockabill SPA 004014

The Site Synopsis and Conservation Objectives for the site are available on http://www.npws.ie/protected-sites/sac/004014. The location of this SPA in the vicinity of the proposed development is shown in Figure 3-1 above. This SPA is of high conservation value for the following QI habitats and/or Species of Conservation Interest (SCI).

- Purple Sandpiper (*Calidris maritima*) [A148]
- Roseate Tern (*Sterna dougallii*) [A192]
- Common Tern (*Sterna hirundo*) [A193]
- Arctic Tern (*Sterna paradisaea*) [A194]

Rogerstown Estuary SPA 004015

The Site Synopsis and Conservation Objectives for the site are available on http://www.npws.ie/protected-sites/sac/004015. The location of this SPA in the vicinity of the proposed development is shown in Figure 3-1 above. This SPA is of high conservation value for the following QI habitats and/or Species of Conservation Interest (SCI).

- Greylag Goose (*Anser anser*) [A043]
- Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]
- Shelduck (*Tadorna tadorna*) [A048]
- Shoveler (*Anas clypeata*) [A056]
- Oystercatcher (*Haematopus ostralegus*) [A130]
- Ringed Plover (*Charadrius hiaticula*) [A137]
- Grey Plover (*Pluvialis squatarola*) [A141]
- Knot (*Calidris canutus*) [A143]
- Dunlin (*Calidris alpina*) [A149]
- Black-tailed Godwit (*Limosa limosa*) [A156]
- Redshank (*Tringa totanus*) [A162]
- Wetland and Waterbirds [A999]

River Nanny Estuary and Shore SPA 004158

The Site Synopsis and Conservation Objectives for the site are available on http://www.npws.ie/protected-sites/sac/004158. The location of this SPA in the vicinity of the proposed development is shown in Figure 3-1 above. This SPA is of high conservation value for the following QI habitats and/or Species of Conservation Interest (SCI).

- Oystercatcher (*Haematopus ostralegus*) [A130]
- Ringed Plover (*Charadrius hiaticula*) [A137]
- Golden Plover (*Pluvialis apricaria*) [A140]
- Knot (*Calidris canutus*) [A143]
- Sanderling (*Calidris alba*) [A144]
- Herring Gull (*Larus argentatus*) [A184]
- Wetland and Waterbirds [A999]

5.1.3.2 Special Area for Conservation (SAC)

Rockabill to Dalkey Island SAC 003000

The Site Synopsis and Conservation Objectives for the site are available on http://www.npws.ie/protected-sites/sac/003000. The location of this SAC in the vicinity of the proposed development is shown in Figure 3-1. This SAC is of high conservation value for the following QI habitats and/or Species of Conservation Interest (SCI).

- Reefs [1170]
- *Phocoena phocoena* (Harbour Porpoise) [1351]

Rogerstown Estuary SAC 000208

The Site Synopsis and Conservation Objectives for the site are available on http://www.npws.ie/protected-sites/sac/000208. The location of this SAC in the vicinity of the proposed development is shown in Figure 3-1 above. This SAC is of high conservation value for the following QI habitats and/or Species of Conservation Interest (SCI).

- Estuaries [1130]
- Mudflats and sandflats not covered by seawater at low tide [1140]
- Salicornia and other annuals colonising mud and sand [1310]
- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]
- Mediterranean salt meadows (*Juncetalia maritimi*) [1410]
- Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]
- Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]

6 Impact Assessment

The following section provides an assessment of the likelihood of the proposed works along the Skerries Harbour pier having significant impacts on QI's and SCI's identified within Natura 2000 sites, as highlighted in Section 5.1.3.

6.1 Estuaries [1130]

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.

The nearest estuary habitat lies within the Rogerstown Estuary SAC (ca. 10 km South of the proposed site). The proposed works do not overlap with or are proximal to any protected habitats. It is therefore determined that any **potential impacts from the proposed works to designated habitats is unlikely.**

6.2 Mudflats and Sandflats not covered by Seawater at Low Tide [1140]

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.

6.3 Salicornia and Other Annuals Colonising Mud and Sand [1310]

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.

Salcornia dominated habitats are associated with the Rogerstown Estuary SAC, which is located ca. 10 km South of the proposed works. Additionally, the proposed works do not overlap with or is proximal to any protected habitats. It is therefore determined that any **potential impacts from the proposed works to designated habitats is unlikely.**

6.4 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.

Atlantic salt meadows are associated with the Rogerstown Estuary SAC, which is located ca. 10 km South of the proposed works. Additionally, the proposed works do not overlap with or is proximal to any protected habitats. It is therefore determined that any **potential impacts from the proposed works to designated habitats is unlikely.**

6.5 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.

Mediterranean salt meadows are primarily terrestrial habitats within the estuarine reaches of rivers, which in this instance is found within the Rogerstown Estuary SAC (ca. 10 km South of the proposed site). The proposed works do not overlap with or are proximal to any protected habitats. It is therefore determined that any **potential impacts from the proposed works to designated habitats is unlikely.**

6.6 Shifting Dunes along the shoreline with *Ammophila arenaria* (white dunes)[2120] 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).

Shifting Dunes habitat is found in the southern portions of the Rogerstown Estuary, which is located ca. 10,5 km South of the proposed Development site. Additionally, the proposed works do not overlap with or are proximal to any protected habitats. It is therefore determined that any **potential impacts from the proposed works to designated habitats is unlikely.**

6.7 Reefs [1170]

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.*"

The proposed development works are located ca. 2,7 km East of the Rockabill to Dalkey Island SAC. Considering the nature and duration of the proposed works, there is risk of increased sedimentation, increased suspended solids, alteration in marine water quality and noise and vibration effects on reef habitats. Consequently, it is determined that **potential impacts from the proposed works are likely.**

6.8 Harbour Porpoise (*Phocoena Phocoena*) [1351]

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).

The proposed development works are located ca. 2,7 km East of the Rockabill to Dalkey Island SAC. Considering the nature and duration of the proposed works, there is risk of increased sedimentation, increased suspended solids, alteration in marine water quality and noise and vibration effects on reef habitats. Consequently, it is determined that **potential impacts from the proposed works are likely.**

6.9 Pelagic and Wading Marine Birds

Pelagic and wading marine birds is in reference to SCI species identified for SPA and SAC sites within the 10 km ZoI. Avian Species highlighted for nearby natura 2000 sites include, Arctic Tern (*Sterna paradisaea*), Black-headed Gull (*Chroicocephalus ridibundus*), Black-tailed Godwit (*Limosa limosa*), Common Gull (*Larus canus*), Common Scoter (*Melanitta nigra*), Common Tern (*Sterna hirundo*), Cormorant (*Phalacrocorax carbo*), Dunlin (*Calidris alpina*), Fulmar (*Fulmarus glacialis*), Golden Plover (*Pluvialis apricaria*), Great Black-backed Gull (*Larus marinus*), Great Northern Diver (*Gavia immer*), Grey Plover (*Pluvialis squatarola*), Greylag Goose (*Anser anser*), Guillemot (*Uria aalge*), Herring Gull (*Larus argentatus*) Kittiwake (*Rissa tridactyla*), Knot (*Calidris canutus*), Lesser Black-backed Gull (*Larus fuscus*), Light-bellied Brent Goose (*Branta bernicla hrota*), Little Gull (*Larus minutus*), Little Tern (*Sterna albifrons*), Manx Shearwater (*Puffinus puffinus*), Oystercatcher (*Haematopus ostralegus*), Puffin (*Fratercula arctica*), Purple Sandpiper (*Calidris maritima*), Razorbill (*Alca torda*), Redshank (*Tringa totanus*) Red-throated Diver (*Gavia stellata*), Ringed Plover (*Charadrius hiaticula*), Ringed Plover (*Charadrius hiaticula*), Roseate Tern (*Sterna dougallii*), Sanderling (*Calidris alba*), Shag (*Phalacrocorax aristotelis*), Shelduck (*Tadorna tadorna)*, Shoveler (*Anas clypeata*).

The proposed development works are located at the western point of the Skerries Harbour pier and within the marine environment. The rocky shore habitats located ca. 200 m North of the proposed development are prime foraging habitat for several of the marine bird species listed above. Similarly, a notable increase in noise and vibration emissions will have a significant impact on marine birds within the greater Skerries Bay area. Considering the nature and duration of the proposed works, there is a high likelihood for increased sedimentation, increased suspended solids, alteration in marine water quality and noise and underwater vibration effects on the marine ecosystem, which will significantly negatively impact preferred habitats , food resources and marine birds directly. Consequently, it is determined that **potential impacts from the proposed works are likely.**

Table 6-1: Summary of Potential Impacts to SPA habitats or QI/SCI species

SAC/SPA/SCI	Process/Emission	Source of Impact	Impact Effects	Likelihood of significant effect	Comments
North-East Irish Sea SPA	Sedimentation and run-off	Construction works; Work platform/Vessel movements; Pilings	Deterioration in water quality, habitat degradation, loss of prey resources	**Likely**	The proposed works will occur at the western end of the Skerries Harbour pier. Skerries Harbour is a sheltered harbour, but still subjected to strong biotic and abiotic forces (tides, currents, wind, swell, etc). Consequently, construction activities that result in sediment and/or contaminated surface water run-off have the potential to incur far reaching impacts to nearby Natura 2000 sites. **Impacts are therefore considered Likely.**
	Hydrocarbon Emissions	Construction vehicles; Heavy machinery; Piling platforms	Mortality/morbidity via direct ingestion and/or poor water quality.	Unlikely	The proposed works will occur at the western end of the Skerries Harbour pier. The proposed works include the placement of sheet piles to enclose the works area prior to the deconstruction of the pier. Additionally, considering the size of the pier and the proposed works methods, the volume of heavy machinery that can tangibly access the pier during construction is low. **Impacts are considered Unlikely.**
	Noise and Vibration	Heavy machinery and equipment; construction activities	Noise and vibration impacts may cause disturbance of individuals that will most likely vacate the immediate area	**Likely**	The proposed works will occur within the marine environment, within little to no sound buffering features. Construction works will include concrete and stone breaking, sheet pilings placement and concrete pouring, which will incur noise and underwater vibration impacts. Given that seabirds and cetaceans are the primary SCI's for nearby Natura 2000 sites, **Impacts are considered Likely.**
	Spread of Invasive Species	Human and machinery movement	None	N/A	Not sensitive to spread of terrestrial alien invasive flora.

SAC/SPA/SCI	Process/Emission	Source of Impact	Impact Effects	Likelihood of significant effect	Comments
Skerries Islands SPA	Sedimentation and run-off	Construction works; Work platform/Vessel movements; Pilings	Deterioration in water quality, habitat degradation, loss of prey resources	**Likely**	The proposed works will occur at the western end of the Skerries Harbour pier. Skerries Harbour is a sheltered harbour, but still subjected to strong biotic and abiotic forces (tides, currents, wind, swell, etc). Consequently, construction activities that result in sediment and/or contaminated surface water run-off have the potential to incur far reaching impacts to nearby Natura 2000 sites. **Impacts are therefore considered Likely.**
	Hydrocarbon Emissions	Construction vehicles; Heavy machinery; Piling platforms	Mortality/morbidity via direct ingestion and/or poor water quality.	Unlikely	The proposed works will occur at the western end of the Skerries Harbour pier. The proposed works include the placement of sheet piles to enclose the works area prior to the deconstruction of the pier. Additionally, considering the size of the pier and the proposed works methods, the volume of heavy machinery that can tangibly access the pier during construction is low. **Impacts are considered Unlikely.**
	Noise and Vibration	Heavy machinery and equipment; construction activities	Noise and vibration impacts may cause disturbance of individuals that will most likely vacate the immediate area	**Likely**	The proposed works will occur within the marine environment, within little to no sound buffering features. Construction works will include concrete and stone breaking, sheet pilings placement and concrete pouring, which will incur noise and underwater vibration impacts. Given that seabirds are the primary SCI's for this nearby Natura 2000 sites, **Impacts are considered Likely.**
	Spread of Invasive Species	Human and machinery movement	None	N/A	Not sensitive to spread of terrestrial alien invasive flora.

SAC/SPA/SCI	Process/Emission	Source of Impact	Impact Effects	Likelihood of significant effect	Comments
Rockabill SPA	Sedimentation and run-off	Construction works; Work platform/Vessel movements; Pilings	Deterioration in water quality, habitat degradation, loss of prey resources	**Likely**	The proposed works will occur at the western end of the Skerries Harbour pier. Skerries Harbour is a sheltered harbour, but still subjected to strong biotic and abiotic forces (tides, currents, wind, swell, etc). Consequently, construction activities that result in sediment and/or contaminated surface water run-off have the potential to incur far reaching impacts to nearby Natura 2000 sites. **Impacts are therefore considered Likely.**
	Hydrocarbon Emissions	Construction vehicles; Heavy machinery; Piling platforms	Mortality/morbidity via direct ingestion and/or poor water quality.	Unlikely	The proposed works will occur at the western end of the Skerries Harbour pier. The proposed works include the placement of sheet piles to enclose the works area prior to the deconstruction of the pier. Additionally, considering the size of the pier and the proposed works methods, the volume of heavy machinery that can tangibly access the pier during construction is low. **Impacts are considered Unlikely.**
	Noise and Vibration	Heavy machinery and equipment; construction activities	Noise and vibration impacts may cause disturbance of individuals that will most likely vacate the immediate area	**Likely**	The proposed works will occur within the marine environment, within little to no sound buffering features. Construction works will include concrete and stone breaking, sheet pilings placement and concrete pouring, which will incur noise and underwater vibration impacts. Given that seabirds are the primary SCI's for this nearby Natura 2000 sites, **Impacts are considered Likely.**
	Spread of Invasive Species	Human and machinery movement	None	N/A	Not sensitive to spread of terrestrial alien invasive flora.

SAC/SPA/SCI	Process/Emission	Source of Impact	Impact Effects	Likelihood of significant effect	Comments
River Nanny Estuary and Shore SPA	Sedimentation and run-off	Construction works; Work platform/Vessel movements; Pilings	Deterioration in water quality, habitat degradation, loss of prey resources	Unlikely	The proposed works will occur at the western end of the Skerries Harbour pier. Skerries Harbour is a sheltered harbour, but still subjected to strong biotic and abiotic forces (tides, currents, wind, swell, etc). Consequently, construction activities that result in sediment and/or contaminated surface water run-off have the potential to incur far reaching impacts to nearby Natura 2000 sites. However, the River Nanny Estuary and Shore SPA is located ca. 10 km North of the site, whereby the marine environment will provide a sufficient dilution effect to construction run-off. **Impacts are therefore considered Unlikely.**
	Hydrocarbon Emissions	Construction vehicles; Heavy machinery; Piling platforms	Mortality/morbidity via direct ingestion and/or poor water quality.	Unlikely	The proposed works will occur at the western end of the Skerries Harbour pier. The proposed works include the placement of sheet piles to enclose the works area prior to the deconstruction of the pier. Additionally, considering the size of the pier and the proposed works methods, the volume of heavy machinery that can tangibly access the pier during construction is low. **Impacts are considered Unlikely.**
	Noise and Vibration	Heavy machinery and equipment; construction activities	Noise and vibration impacts may cause disturbance of individuals that will most likely vacate the immediate area	Unlikely	The proposed works will occur at the western end of the Skerries Harbour pier, with little to no noise buffering. However, the River Nanny Estuary and Shore SPA is located ca. 10 km North of Skerries Harbour, where noise and vibration emissions will be completely dissipated. **Impacts are considered Unlikely.**
	Spread of Invasive Species	Human and machinery movement	None	N/A	Not sensitive to spread of terrestrial alien invasive flora.

SAC/SPA/SCI	Process/Emission	Source of Impact	Impact Effects	Likelihood of significant effect	Comments
Rogerstown Estuary SPA	Sedimentation and run-off	Construction works; Work platform/Vessel movements; Pilings	Deterioration in water quality, habitat degradation, loss of prey resources	Unlikely	The proposed works will occur at the western end of the Skerries Harbour pier. Skerries Harbour is a sheltered harbour, but still subjected to strong biotic and abiotic forces (tides, currents, wind, swell, etc). Consequently, construction activities that result in sediment and/or contaminated surface water run-off have the potential to incur far reaching impacts to nearby Natura 2000 sites. However, the Rogerstown Estuary is located ca. 9 km South of the site, whereby the marine environment will provide a sufficient dilution effect to construction run-off. Impacts are therefore considered Unlikely.
	Hydrocarbon Emissions	Construction vehicles; Heavy machinery; Piling platforms	Mortality/morbidity via direct ingestion and/or poor water quality.	Unlikely	The proposed works will occur at the western end of the Skerries Harbour pier. The proposed works include the placement of sheet piles to enclose the works area prior to the deconstruction of the pier. Additionally, considering the size of the pier and the proposed works methods, the volume of heavy machinery that can tangibly access the pier during construction is low. **Impacts are considered Unlikely.**
	Noise and Vibration	Heavy machinery and equipment; construction activities	Noise and vibration impacts may cause disturbance of individuals that will most likely vacate the immediate area	Unlikely	The proposed works will occur at the western end of the Skerries Harbour pier, with little to no noise buffering. However, the River Nanny Estuary and Shore SPA is located ca. 10 km North of Skerries Harbour, where noise and vibration emissions will be completely dissipated. **Impacts are considered Unlikely.**
	Spread of Invasive Species	Human and machinery movement	None	N/A	Not sensitive to spread of terrestrial alien invasive flora.

SAC/SPA/SCI	Process/Emission	Source of Impact	Impact Effects	Likelihood of significant effect	Comments
Rockabill to Dalkey Island SAC	Sedimentation and run-off	Construction works; Work platform/Vessel movements; Pilings	Deterioration in water quality, habitat degradation, loss of prey resources	**Likely**	The proposed works will occur at the western end of the Skerries Harbour pier. Skerries Harbour is a sheltered harbour, but still subjected to strong biotic and abiotic forces (tides, currents, wind, swell, etc). Consequently, construction activities that result in sediment and/or contaminated surface water run-off have the potential to incur far reaching impacts to nearby Natura 2000 sites. **Impacts are therefore considered Likely.**
	Hydrocarbon Emissions	Construction vehicles; Heavy machinery; Piling platforms	Mortality/morbidity via direct ingestion and/or poor water quality.	Unlikely	The proposed works will occur at the western end of the Skerries Harbour pier. The proposed works include the placement of sheet piles to enclose the works area prior to the deconstruction of the pier. Additionally, considering the size of the pier and the proposed works methods, the volume of heavy machinery that can tangibly access the pier during construction is low. **Impacts are considered Unlikely.**
	Noise and Vibration	Heavy machinery and equipment; construction activities	Noise and underwater vibration impacts may cause disturbance of individuals, prey and habitats, resulting in displacement and/or mortality.	**Likely**	The proposed works will occur within the marine environment, within little to no sound buffering features. Construction works will include concrete and stone breaking, sheet pilings placement and concrete pouring, which will incur noise and underwater vibration impacts. Given that seabirds and cetaceans are the primary SCI's for this nearby Natura 2000 sites, **Impacts are considered Likely.**
	Spread of Invasive Species	Human and machinery movement	None	N/A	Not sensitive to spread of terrestrial alien invasive flora.

SAC/SPA/SCI	Process/Emission	Source of Impact	Impact Effects	Likelihood of significant effect	Comments
Rogerstown Estuary SAC	Sedimentation and run-off	Construction works; Work platform/Vessel movements; Pilings	Deterioration in water quality, habitat degradation, loss of prey resources	Unlikely	The proposed works will occur at the western end of the Skerries Harbour pier. Skerries Harbour is a sheltered harbour, but still subjected to strong biotic and abiotic forces (tides, currents, wind, swell, etc). Consequently, construction activities that result in sediment and/or contaminated surface water run-off have the potential to incur far reaching impacts to nearby Natura 2000 sites. However, the Rogerstown Estuary is located ca. 9 km South of the site, whereby the marine environment will provide a sufficient dilution effect to construction run-off. **Impacts are therefore considered Unlikely.**
	Hydrocarbon Emissions	Construction vehicles; Heavy machinery; Piling platforms	Mortality/morbidity via direct ingestion and/or poor water quality.	Unlikely	The proposed works will occur at the western end of the Skerries Harbour pier. The proposed works include the placement of sheet piles to enclose the works area prior to the deconstruction of the pier. Additionally, considering the size of the pier and the proposed works methods, the volume of heavy machinery that can tangibly access the pier during construction is low. Moreover, the Rogerstown Estuary is located ca. 9 km South of the Skerries harbour, whereby the marine environment will provide a sufficient dilution effect. **Impacts are considered Unlikely.**
	Noise and Vibration	Heavy machinery and equipment; construction activities	Noise and vibration impacts may cause disturbance of individuals that will most likely vacate the immediate area	Unlikely	The proposed works will occur at the western end of the Skerries Harbour pier, with little to no noise buffering. However, the River Nanny Estuary and Shore SPA is located ca. 10 km North of Skerries Harbour, where noise and vibration emissions will be completely dissipated. **Impacts are considered Unlikely.**
	Spread of Invasive Species	Human and machinery movement	None	N/A	Not sensitive to spread of terrestrial alien invasive flora.

6.10 Cumulative and in-combination Impacts

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[3]:

- 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
- Donegal County Council - Planning System https://donegal.maps.arcgis.com/apps/webappviewer/index.html?id=8be91e332a8f47bfbbe83add1550c666

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.

7 Screening Statement

The Screening exercise was completed in compliance with the relevant EC and national legislation and associated guidance. Article 42 (7) of the European Communities (Birds and Natural Habitats) Regulations 2011 states that: *"The public authority shall determine that an Appropriate Assessment of a plan or project is not required […] 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."*

Several European sites were identified within the ZoI of the proposed works along the Skerries Harbour pier that have direct/indirect connectivity with the proposed development works site. The potential impacts from the proposed development works in Skerries Harbour, alone and in-combination with other developments, have been considered in the context of these European sites and the conservation objectives of their Qualifying Interests/Special Conservation Interest.

From this screening exercise, it has been determined that significant effects are likely to arise on several European sites and/or on the conservation objectives of their Qualifying Interests/Special Conservation Interests as a result of the proposed works, through surface water, land and air, and underwater emission pathways. Consequently, it is the opinion of the assessing ecologist, Dr. Jeff Hean, that this project **be required to undertake a Stage 2 Appropriate Assessment.**

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