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Appropriate Assessment Screening Report

Fingal County Council

October 2026

FINGAL COASTAL WAY SECTION 2 - GROUND INVESTIGATION WORKS

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Document history

Document title: Appropriate Assessment Screening Report

Document reference: 5188509DG0306

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
0	Draft for Comment	KC/CW	CW	KMcC	SW	21/09/2026
1	Final	TC	TC	SW	SW	20/10/2026

Client signoff

Client	Fingal County Council
Project	FINGAL COASTAL WAY SECTION 2 - GROUND INVESTIGATION WORKS
Job number	5188509
Client signature/date	

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1. Introduction

The Fingal Coastal Way is a strategic greenway project being progressed by Fingal County Council to provide a high-quality, continuous corridor along the north Dublin coastline between Newbridge Demesne and Balbriggan.

The scheme is being delivered in a number of sections and will provide safe, accessible and sustainable connectivity for pedestrians and cyclists while enhancing links between coastal communities, recreational amenities, transport hubs and areas of landscape value. The scheme forms part of Fingal County Council's wider sustainable mobility objectives and will facilitate both recreational and commuter use.

The c. 3km Section 2 of the Fingal Coastal Way comprises one of the more environmentally sensitive sections of the overall scheme route and will provide a key connection between Donabate and west of Rush. The proposed section extends from the junction of Beaverstown Road and Kingsland in Donabate, crosses the Dublin to Drogheda railway corridor, traverses the Rogerstown Estuary area and terminates at Rogerstown Park. The section incorporates new pedestrian and cycle infrastructure together with associated structures required to facilitate passage across the estuary.

This Appropriate Assessment Screening Report has been prepared as supplementary environmental documentation to support an application for a Maritime Usage Licence (MUL) to be submitted to the Maritime Area Regulatory Authority (MARA). The assessment specifically relates to the proposed Ground Investigation Works required to inform the detailed design of the Rogerstown Estuary section of the Fingal Coastal Way.

Figure 1.1 illustrates the extent and alignment of the Section 2 of the Fingal Coastal Way scheme.

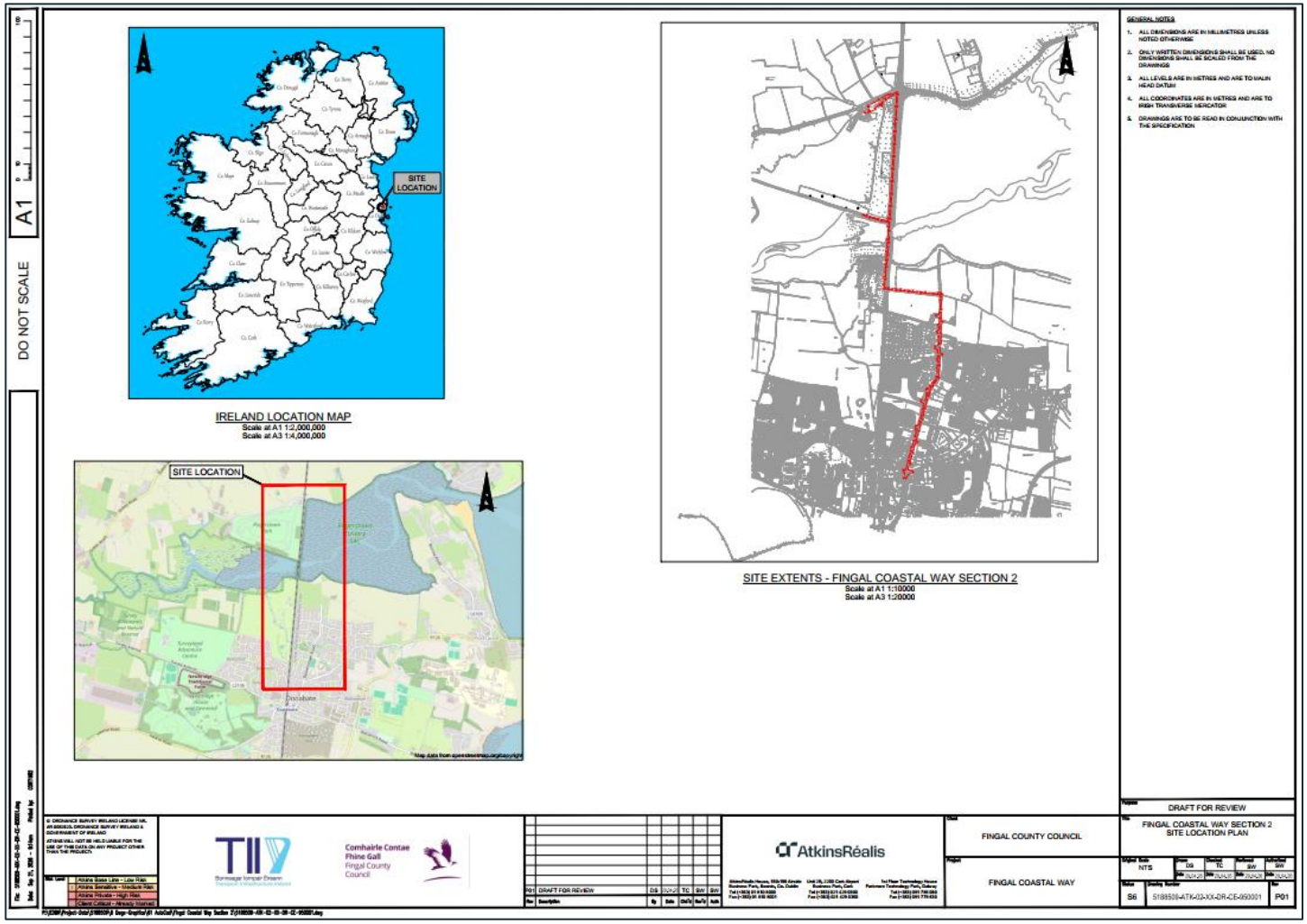


Figure 1-1 - Site Location of the Rogerstown Estuary Section

1.1 Description of the Proposed Ground Investigation Works

The works under assessment, hereafter referred to as the 'proposed project', comprises a programme of ground investigation (GI) works to inform the engineering design of the Section 2 of the Fingal Coastal Way. The investigations will provide information on underlying soil, rock and groundwater conditions necessary for the design of the proposed greenway scheme and associated structures. The works are temporary in nature and are intended solely to collect geotechnical and geological data to support the detailed design process.

The GI relates to a c. 3 km section of proposed Fingal Coastal Way scheme and includes investigation works associated with a range of proposed infrastructure elements, including reinforced earth retaining structures, a railway overbridge, a reinforced seawall and a new bridge crossing of the Rogerstown Estuary.

The proposed investigation programme will comprise a combination of intrusive and non-intrusive survey techniques, including:

- 17 no. boreholes to depths of up to approximately 15 m below ground level;
- 8 no. machine excavated trial pits to depths of up to approximately 4.5 m below ground level;
- Geophysical surveys using electrical resistivity and seismic refraction techniques;
- Collection of soil, rock and groundwater samples for geotechnical and geo-environmental laboratory analysis;
- In-situ geotechnical testing, including Standard Penetration Testing (SPT), Dynamic Cone Penetrometer (DCP) testing and hand vane shear testing;
- Groundwater monitoring and installation of selected standpipes at designated locations; and
- Associated access, temporary working areas, surveying, environmental monitoring, reinstatement and reporting activities.

The boreholes and trial pits will be distributed along the proposed route corridor at locations selected to characterise ground conditions associated with the proposed structures and embankments. The investigations comprise works within the estuarine area of Rogerstown Estuary, works within Rogerstown Park which forms part of the Maritime Area for consenting purposes, and works within terrestrial lands located outside the Maritime Area. Following completion of the investigations, all boreholes and trial pits will be reinstated, with disturbed areas restored as close as practicable to their original condition.

The investigations are expected to be of relatively short duration and will provide baseline geotechnical and environmental information required to support the subsequent detailed design and consenting of the Rogerstown Estuary section of the Fingal Coastal Way.

Area of excavation and borehole diameters and estimated durations of works for each GI Work type are outlined in Table 1-1 below.

Table 1-1 - Area of Excavation, Borehole Diameters and Estimated Duration of Ground Investigation Works

GI Works	Area of Excavation / Bore Diameter	Estimated Duration per Location
Trial Pit (TP)	Approximately 2.0 m × 1.5 m plan area; up to 4.5 m deep	1-2 hours
Cable Percussion Borehole (CP)	200 mm diameter	1-2 days
Cable Percussion Borehole with Rotary Core Follow-on (CP/RC)	200 mm diameter borehole with rotary coring to depth	2-3 days
Standpipe Installation	Installed within borehole footprint (200 mm diameter)	Included within borehole duration
Groundwater Monitoring	No additional excavation required	Approximately 30 minutes per monitoring event
Environmental Soil Sampling	Undertaken within borehole or trial pit footprint	Included within GI activity duration
Dynamic Cone Penetrometer (DCP) Testing	Negligible surface disturbance (<0.1 m²)	Approximately 30 minutes
Hand Vane Shear Testing	No additional excavation required	Approximately 15-30 minutes
Electrical Resistivity Survey (ER)	No excavation required; temporary electrodes inserted into ground	Approximately 4-8 hours per survey line
Seismic Refraction Survey (SR)	No excavation required; temporary geophones placed on ground surface	Approximately 4-8 hours per survey line

1.2 Proposed Works Methodology

The ground investigation (GI) works will be undertaken during the spring and summer months, with activities in the estuarine environment scheduled to coincide with low tide conditions. Where works are required within the Maritime Area, they will be undertaken only when tidal levels are at their lowest to maximise access and minimise interaction with estuarine waters. The entire GI works programme is estimated to take approximately eight weeks, with works within the estuarine area expected to take three to four weeks, including mobilisation, tidal constraints, pontoon relocation and weather related delays.

Figures 1-2 to 1-4 illustrate the locations of all proposed GI works along this section of the scheme.

The proposed GI works comprise 17 no. boreholes and 8 no. trial pits. Of these, 10 no. boreholes and 6 no. trial pits are located within the proposed investigation area in the Maritime Area (Figure 1-6), including 6 no. boreholes within the estuarine area of Rogerstown Estuary and a further 4 no. boreholes and 6 no. trial pits within Rogerstown Park.

The remaining 7 no. boreholes and 2 no. trial pits are located outside the Maritime Area. The GI works have been designed to minimise disturbance to estuarine habitats through the use of existing access routes and, where practicable, by locating investigations within existing disturbed or modified ground.

1.2.1 GI Works in the Estuary Area of the Maritime Area

In the context of the Maritime Usage Licence (MUL) application, 6 no. borehole locations are proposed within the estuarine area associated with Rogerstown Estuary. Boreholes BH08, BH09 and BH10 are located along the existing railway causeway which extends across the estuary and comprises rock armour / engineered stone fill. A further 3 no. boreholes, BH11, BH12 and BH13, are located within the estuarine channel immediately west of the existing railway bridge. These investigations are required to inform the detailed design of the proposed Rogerstown Estuary bridge, which will accommodate the proposed pedestrian and cycle route running parallel to the existing railway infrastructure.

The borehole locations within the estuary have been specifically selected to be within areas of existing rock armour and stone boulder protection associated with the railway bridge and causeway structures. As a result, all drilling activities within the estuary will be undertaken only within existing engineered stone surfaces, and no drilling directly within intertidal mudflat or sandflat habitats will occur.

Access to the estuarine borehole locations will be facilitated via a temporary stone ramp (approximately 30 m in length) constructed from the south eastern side of Rogerstown Park adjacent to the north western side of the existing railway bridge (Figure 1-5). The ramp will be formed through the placement of clean imported stone on existing rock armour and ballast associated with the railway infrastructure. No excavation of the estuary bed will be required.

The temporary ramp will provide access for the launch of a floating pontoon and associated drilling equipment. Following launch, a pontoon mounted drilling rig will be manoeuvred between the required borehole locations within the estuarine channel. All drilling, sampling and associated GI activities within the estuarine area will be undertaken from the pontoon platform, thereby avoiding direct access by heavy plant within the estuary. Upon completion of each borehole, the borehole will be sealed and reinstated in accordance with the approved GI methodology and relevant industry guidance. Core samples recovered during drilling will be retained for geological logging and laboratory testing. Upon completion of the works, the temporary ramp, pontoon and all associated temporary works will be removed and the area reinstated.

1.2.2 GI Works within Rogerstown Park (Maritime Area)

The Maritime Area also encompasses Rogerstown Park, which occupies lands reclaimed and subsequently restored following the historic Balleally Landfill operation. While these lands fall within the Maritime Area for consenting purposes, the park comprises a terrestrial environment and does not function as part of the estuarine habitat. The park is physically separated from the estuary by established park boundaries, fencing and, for all but one investigation location, the existing Dublin-Belfast railway line. Furthermore, although the site is located within an area historically influenced by tidal processes, the reclamation and restoration of the former landfill has altered the local position of the High Water Mark such that the proposed investigation locations within the park are not situated within estuarine habitat and have no direct hydrological connection to the estuary.

Within Rogerstown Park, 4 no. boreholes and 6 no. trial pits are proposed. These locations are situated on, or immediately adjacent to, existing surfaced park pathways and managed grassland areas. Access will be provided via the existing park access road and pathway network using small plant and equipment. Boreholes will be undertaken using a track mounted drilling rig, while trial pits will be excavated using a small excavator. Plant will

travel directly to each investigation location via existing paths wherever practicable, thereby avoiding unnecessary disturbance to surrounding parkland vegetation.

Upon completion of the investigations, boreholes will be appropriately sealed and trial pits will be backfilled and reinstated. All equipment and materials will be removed from site following completion of the works.

1.2.3 GI Works Outside of the Maritime Area

A further 7 no. boreholes and 2 no. trial pits are proposed outside of the Maritime Area. These investigation locations are situated within lands north and south of Rogerstown Estuary, including the Beaverstown area, and are located landward of the High Water Mark.

Access to these locations will be obtained via existing roads, tracks, pathways and agricultural access points as appropriate. Borehole and trial pit investigations will be undertaken using standard GI plant and equipment. Upon completion of the works, all boreholes and excavations will be reinstated in accordance with the approved GI methodology and all equipment removed from site.

Figures 1-2 to 1-4 illustrate the locations of the proposed GI works. Figure 1-5 shows the location of the proposed temporary stone ramp, while Figure 1-6 illustrates the proposed GI works locations specifically within the Maritime Area.

1.2.4 Non-Intrusive GI Works

In addition to the intrusive GI works, a programme of non-intrusive geophysical surveys comprising electrical resistivity and seismic refraction investigations will be undertaken within the study area prior to the commencement of intrusive works. These surveys will be carried out using portable surface based equipment to characterise subsurface conditions and inform the final positioning of intrusive investigations. The surveys will not require excavation, drilling, ground penetration, vegetation clearance or habitat removal and, as such, will not result in any direct disturbance to soils, estuarine substrates, terrestrial habitats or designated ecological features.

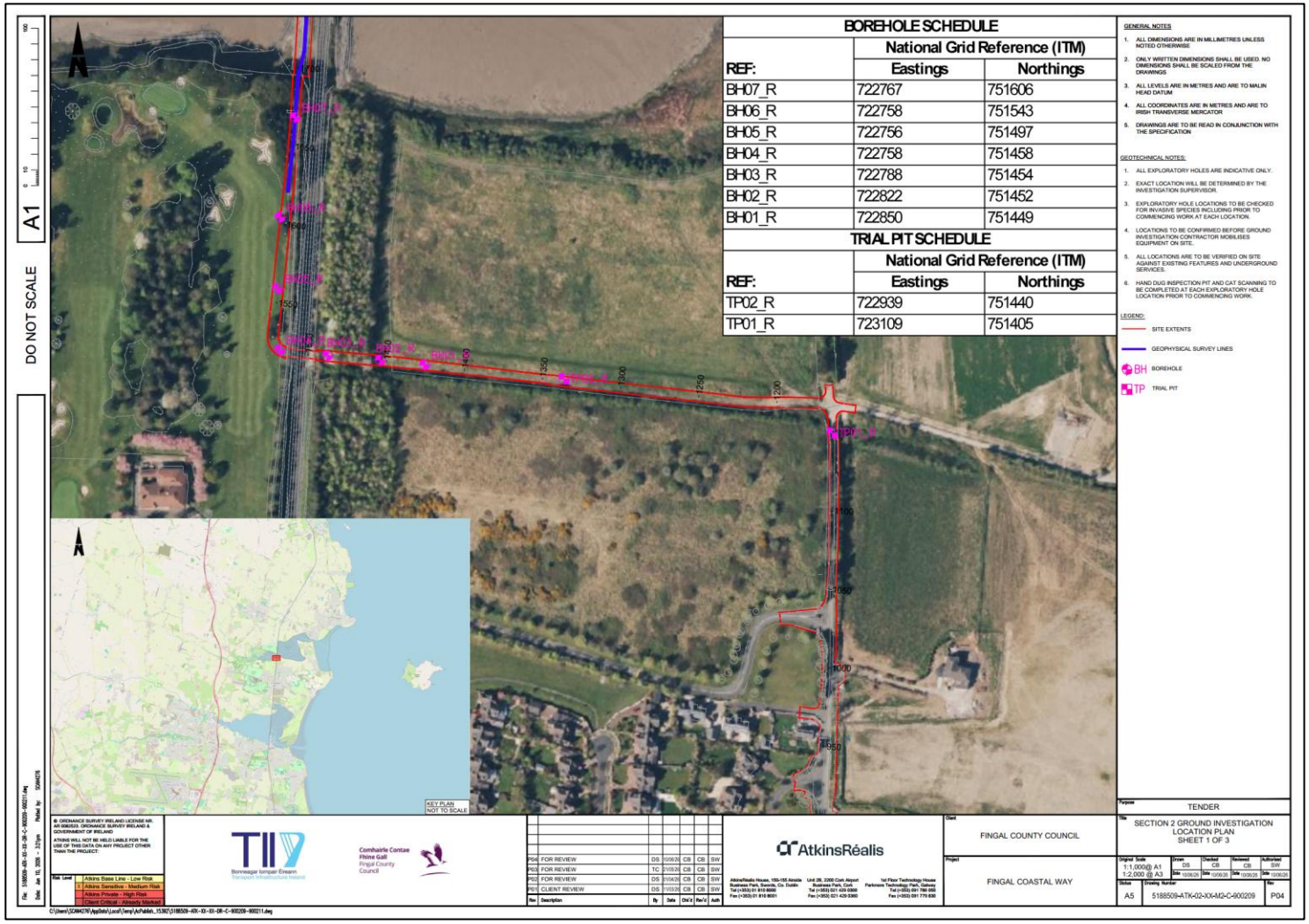


Figure 1-2 – GI Works areas in Beaverstown, south of the estuary, outside of the maritime area.

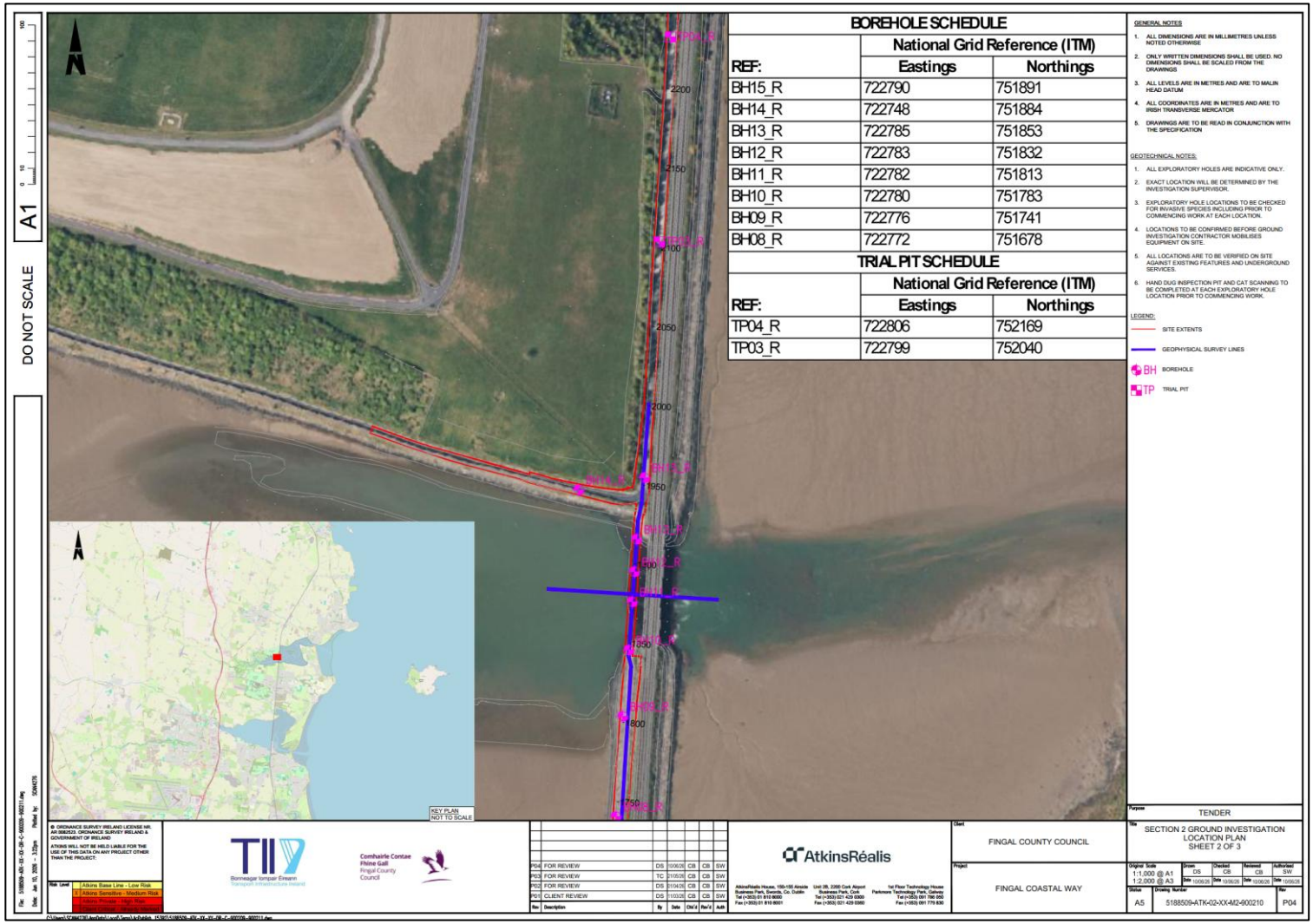


Figure 1-3 – GI Works areas within the estuarine area of the Maritime Area

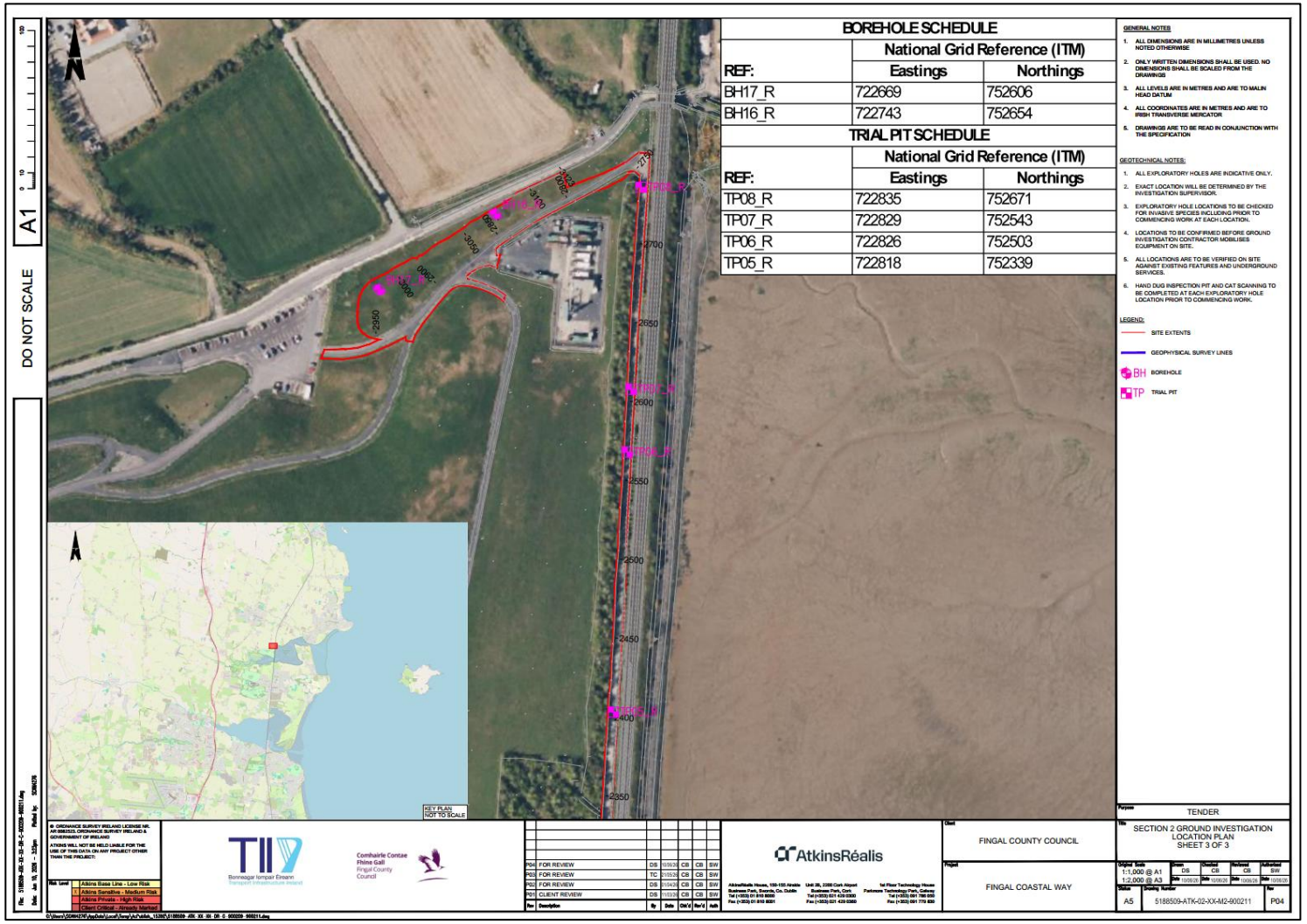


Figure 1-4 – GI Works areas within Rogerstown Park

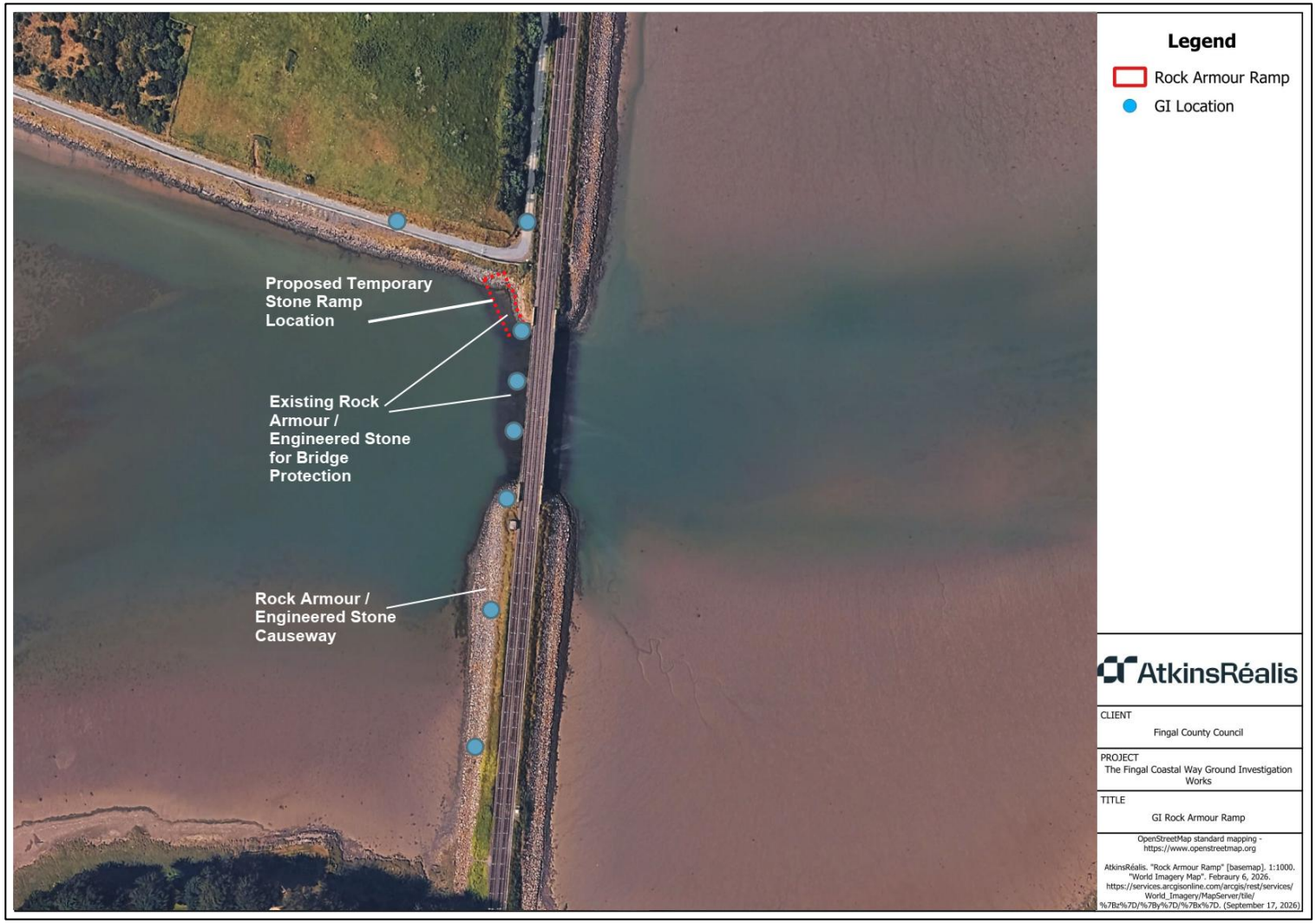


Figure 1-5 – Location of temporary stone ramp



Figure 1-6 – GI Works Locations in Maritime Area

2. Scope of Study

2.1 Legislative Context

2.1.1 Natura 2000

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora ("the Habitats Directive") is a legislative instrument of the European Union (EU) which provides legal protection for habitats and species of Community interest. Article 2 of the Directive requires the maintenance or restoration of such habitats and species at a favourable conservation status, while Articles 3 to 9, inclusive, provide for the establishment and conservation of an EU-wide network of special areas of conservation (SACs), known as Natura 2000, which also includes special protection areas (SPAs) designated under Article 4 of Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds ("the Birds Directive"). Both SACs and SPAs are commonly referred to as "European sites" or "Natura 2000 sites".

SACs are selected for natural habitat types listed on Annex I to the Habitats Directive and the habitats of species listed on Annex II to the Habitats Directive. SPAs are selected for species listed on Annex I to the Birds Directive, other regularly occurring migratory species and other species of special conservation interest. The habitats and species for which a Natura 2000 site is selected are referred to as the "*qualifying interests*" of that site and each is assigned a "*conservation objective*" aimed at maintaining or restoring its "*favourable conservation condition*" at the site, which contributes to the maintenance or restoration of its "*favourable conservation status*" at national and European levels.

2.1.2 Appropriate Assessment

Article 6 of the Habitats Directive deals with the management and protection of Natura 2000 sites. Articles 6(3) and (4) set out the decision-making process, known as "*Appropriate Assessment*" (AA), for plans or projects in relation to Natura 2000 sites. Article 6(3) states: -

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

The first sentence of Article 6(3) provides a basis for determining which plans and projects require AA, i.e., those "*not directly connected with or necessary to the management of* [one or more Natura 2000 sites] *but likely to have a significant effect thereon, either individually or in combination with other plans or projects*".

In *Waddenzee* (C-127/02), the Court of Justice of the European Union (CJEU) ruled that significant effects must be considered "*likely*" if "*it cannot be excluded, on the basis of objective information*", that they would occur. This clearly sets a low threshold, such that AA is required wherever there is a reasonable possibility of significant effects on a Natura 2000 site. In the same judgment, the CJEU established that the test of significance relates specifically to the conservation objectives of the site concerned, i.e., "*significant effects*" are those which, "*in the light, inter alia, of the characteristics and specific environmental conditions of the site*", could undermine the site's conservation objectives.

In addition to the effects of the plan or project on its own, the combined effects arising from the plan or project under consideration and other plans and projects must also be assessed (see Section 5.7 for more details).

The last part of the first sentence of Article 6(3) defines AA as an assessment of the "*implications* [of the plan or project] *for the site in view of the site's conservation objectives*". In the second sentence, Article 6(3) requires that, prior to agreeing to a plan or project, the competent authority must "*ascertain*" that "*it will not adversely affect the integrity of the site concerned*". In *Sweetman v. An Bord Pleanála* (C-258/11), the CJEU ruled that a plan or project "*will adversely affect the integrity of that site if it is liable to prevent the lasting preservation of the constitutive characteristics of the site that are connected to the presence of a priority natural habitat whose conservation was the objective justifying the designation of the site in the list of sites*". On that basis, EC (2018) described the "*integrity of the site*" as "*the coherent sum of the site's ecological structure, function and ecological processes, across its whole area, which enables it to sustain the habitats, complex of habitats and/or populations of species for which the site is designated*". As such, the "*integrity*" of a specific site is defined by its conservation objectives and is "*adversely affected*" when those objectives are undermined. In *Waddenzee*, the CJEU ruled that the absence of adverse effects can only be ascertained "*where no reasonable scientific doubt remains*".

The "*precautionary principle*" applies to all of the legal tests in AA, i.e., in the absence of objective information to demonstrate otherwise, the worst-case scenario is assumed. Where the tests established by Article 6(3) cannot be satisfied, Article 6(4) applies (see explanation in Section 2.2 below).

2.1.3 Competent Authority

The requirements of Articles 6(3) and (4) are transposed into Irish law by, inter alia, Part 5 of the European Communities (Birds and Natura Habitats) Regulations, 2011 (as amended) ("the Habitats Regulations") and Part XAB of the Planning and Development Act, 2000 (as amended) ("the Planning and Development Acts"). As per the second sentence of Article 6(3), it is the "*competent national authorities*" who are responsible for carrying out AA and, by extension, for determining which plans and projects require AA. The competent authority in each case is the body responsible for authorising a plan or project, e.g. local or other public authorities (including TII), An Bord Pleanála, the Environmental Protection Agency (EPA) or a Government Minister. In all cases, it is the competent authority who is ultimately responsible for determining whether or not a plan or project requires AA and for carrying out the AA, where required.

2.2 Appropriate Assessment Process

The AA process can be described as being made up of three distinct stages, as described below, the need to progress to each stage being determined by the outcome of the preceding stage.

Stage 1: Screening – This stage involves a determination by the competent authority as to whether or not a given plan or project required AA. As explained in Section 2.1, AA is required in respect of any plan or project not directly connected with or necessary to the management of a Natura 2000 site, but for which the possibility of likely significant effects on one or more Natura 2000 sites cannot be excluded. The CJEU's Judgment on *Eco Advocacy v. An Bord Pleanála* (C-721/21) and the *Opinion* of Advocate General Kokott in the same case set out the principles for identifying any aspects of a plan or project which may constitute what the CJEU termed in *People Over Wind* (C-323/17) "*measures intended to avoid or minimise harmful effects on a Natura 2000 site*" and, as such, cannot be taken into account in making an AA Screening determination. Consideration of the potential for in-combination effects is also required at this stage.

Stage 2: Appropriate Assessment – This stage involves a detailed assessment of the implications of the plan or project, individually and in combination with other plans and projects, for the integrity of the Natura 2000 site(s) concerned. This stage also involves the development of appropriate mitigation to address any adverse effects and an assessment of the significance of any residual impacts following the inclusion of mitigation. In *Kelly v. An Bord Pleanála* (IEHC 400), the High Court ruled that a lawful AA must contain complete, precise, and definitive findings based on examination and analysis, and conclusions and a final determination based on an evaluation of the findings. In the same judgment, the High Court stressed that, in order for the findings to be complete, precise, and definitive, the AA must be carried out in light of best scientific knowledge in the field and cannot have gaps or lacunae. In

Holohan v. An Bord Pleanála (C-461/17), the CJEU clarified that AA must "*catalogue the entirety of habitat types and species for which a site is protected*" (i.e. the qualifying interests of the site) and assess the implications of the plan or project for the qualifying interests, both within and outside the site boundaries, and other, non-qualifying interest habitats and species, whether inside or outside the site boundaries, "*provided that those implications are liable to affect the conservation objectives of the site*". The proposer of a plan or project requiring AA is furnishes the competent authority with the scientific evidence upon which to base its AA by way of a Natura Impact Statement (NIS) or Natura Impact Report (NIR). If it is not possible to ascertain that the plan or project will not adversely affect one or more Natura 2000 sites, authorisation can only be granted subject to Article 6(4).

Stage 3: Article 6(4) – If a plan or project does not pass the legal test at Stage 2, alternative solutions to achieve its aims must be considered and themselves subject to Article 6(3). If no feasible alternatives exist, authorisation can only be granted where it can be demonstrated that there are imperative reasons of overriding public interest (IROPI) justifying its implementation. Where this is the case, all compensatory measures must be taken to protect the overall coherence of Natura 2000.

The three stages described above are illustrated in Figure 2-1 below.

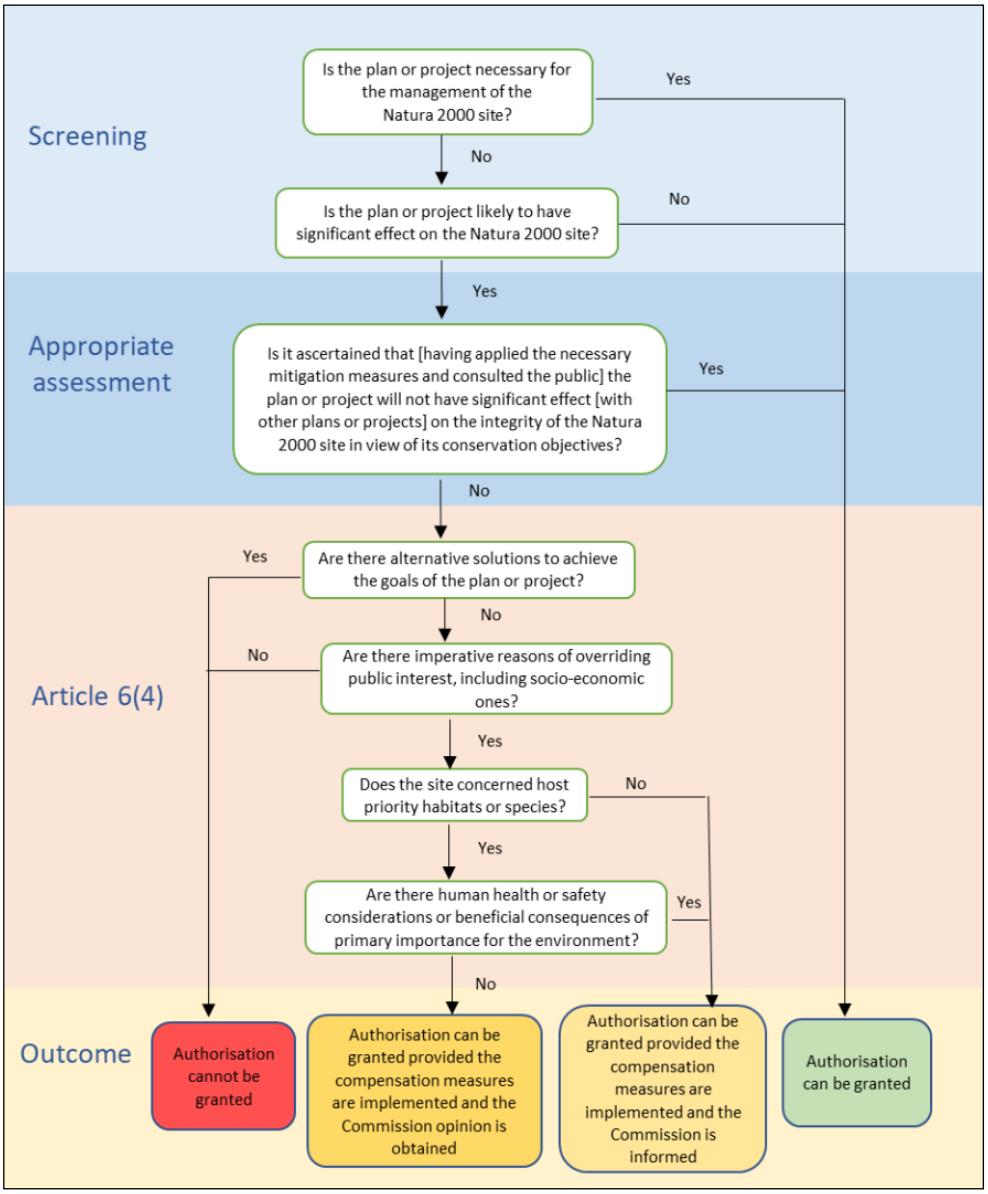


Figure 2-1 - Stages of the Appropriate Assessment process (EC, 2021a)

3. Methods

3.1 Guidance documents

The Screening for Appropriate Assessment was prepared with reference and due consideration to the following documents, guidelines and case law, including but not limited to: -

- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild flora and fauna. *Official Journal of the European Communities* L 206/7-50.
- Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds. *Official Journal of the European Union* L 20/7-25.
- European Communities (Birds and Natural Habitats) Regulations, 2011. *S.I. No. 77/2011* (as amended) ("the Habitats Regulations").
- Planning and Development Act, 2000. *No. 30 of 2000* (as amended) ("the Planning and Development Acts").
- Planning and Development Regulations, 2001. S.I. No. 600/2001 (as amended) ("the Planning Regulations").
- EC (2019). *Managing Natura 2000 sites – The provisions of Article 6 of the Habitats Directive 92/43/EEC.* European Commission, Brussels. *Official Journal of the European Union* C 33/1-62.
- EC (2021a). *Assessment of plans and projects in relation to Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC.* European Commission, Brussels. *Official Journal of the European Union* C 437/1-107.
- EC (2021b) *Guidance document on the strict protection of animal species of Community interest under the Habitats Directive. C(2021) 7301.* European Commission, Brussels.
- DG Env (2022) *Guidance document on assessment of plans and projects in relation to Natura 2000 sites – A summary.* Directorate-General for Environment, European Commission, Brussels. Publications Office of the European Union, Luxemburg.
- DEHLG (2010a) *Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Revised 11/02/2010.* Department of the Environment, Heritage and Local Government, Dublin.
- DEHLG (2010b) *Circular NPW 1/10 & PSSP 2/10. Dated 11/03/2010.* Department of the Environment, Heritage and Local Government, Dublin.
- NPWS (2012) *Marine Natura Impact Statements in Irish Special Areas of Conservation. A Working Document. April 2012.* National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.
- NPWS (2021) Guidance on the Strict Protection of Certain Animal and Plant Species under the Habitats Directive in Ireland. *National Parks & Wildlife Service Guidance Series* 1, Department of Housing, Local Government and Heritage, Dublin.
- Mullen, E., Marnell, F. and Nelson, B. (2021) Strict Protection of Animal Species – Guidance for Public authorities on the Application of Articles 12 and 16 of the EU Habitats Directive to development/works undertaken by or on behalf of a Public authority. *National Parks & Wildlife Service Guidance Series* 2, Department of Housing, Local Government and Heritage, Dublin.

- OPR (2021) *Appropriate Assessment Screening for Development Management. OPR Practice Note PN01.* Office of the Planning Regulator, Dublin.

- Case law, including *Waddenzee* (C-127/02), *Sweetman v. An Bord Pleanála* (C-258/11), *Kelly v. An Bord Pleanála* (IEHC 400), *Commission v. Germany* (C-142/16), *People Over Wind* (C-323/17), *Holohan v. An Bord Pleanála* (C-461/17), *Eoin Kelly v. An Bord Pleanála* (IEHC 84), *Heather Hill* (IEHC 450) and *Eco Advocacy v. An Bord Pleanála* (C-721/21).

- Sundseth, K. and Roth, P. (2014) *Article 6 of the Habitats Directive – Rulings of the European Court of Justice.* Ecosystems LTD (N2K Group), Brussels.

3.2 Desk Study

Baseline data regarding the receiving environment, including European sites, was gathered through a thorough desk study.

The boundaries of European sites were downloaded from *NPWS: Maps and Data* <https://www.npws.ie/maps-and-data>. Information on sites, including their overall structures and functions, qualifying interests, conservation objectives and threats/pressures and activities therein, was found in the Site Synopsis, Natura 2000 Standard Data Form, Conservation Objectives and supporting documents for each site. Spatial data for site-specific conservation objectives of European sites, and boundary data for other designated sites, such as Natural Heritage Areas, was also retrieved from *NPWS: Maps and Data.* Reporting under Article 17 of the Habitats Directive (NPWS, 2019a-c; *Article 17 web tool*) and Article 12 of the Birds Directive (NPWS, 2024c; *Article 12 web tool*) provided further information on the habitats and species concerned at the national level.

Information relating to recent and historical records of species was obtained from the National Biodiversity Data Centre (NBDC) *Biodiversity Maps* <https://maps.biodiversityireland.ie/Map>.

The Environmental Protection Agency (EPA) map viewer *EPA Maps (Water)* <https://gis.epa.ie/EPAMaps/ Water> and spatial data for river, lake, canal, transitional and coastal waterbodies downloaded from the *EPA Geoportal* <https://gis.epa.ie/GetData/Download> was used to identify any hydrological connection between the proposed works and European sites or connected features. Satellite and aerial imagery from Google Earth, Bing Maps and Tailte Éireann was reviewed to identify hedgerows, treelines and other potential ecological features.

In order to inform the assessment of potential in-combination effects, planning applications from the surrounding area were reviewed using the National Planning Application Database, An Coimisiún Pleanála's online map viewer and the EIA Portal.

Information from the aforementioned data sources was last access 20/08/2026

3.3 Statement of Authority

The Screening for Appropriate Assessment report was prepared by Kevin Coogan and Colin Wilson. Kevin McCaffrey provided peer review and support.

Kevin Coogan (AtkinsRéalis) has a BSc (Hons) in Zoology from University College Dublin and has 2 years professional experience in consultancy. He has developed ecological surveying skills through country-wide small river sampling experience, as well as habitat evaluation experience in Spain and Ireland. He has volunteer experience in bird surveying on North Bull Island SPA and Ireland's Eye SPA. He conducts research and site surveys including habitat classification (Fossitt classification), bird surveys, and terrestrial mammal activity. He assists in bat surveying and has carried out numerous bat emergence/activity surveys. He also assists in the development of Appropriate

Assessment Screening reports, biodiversity chapters in various types of environmental assessment report (environmental constraints reports, feasibility reports, project design reports). Kevin is the co-author of this report.

Colin Wilson (Atkins Dublin) has a BSc (Hons) in Environmental Science and is a Full Member of the Chartered Institute of Ecology and Environmental Management (MCIEEM). He has over 19 years working in the fields of ecology and environmental management. He is a Senior Ecologist with experience in ecological surveying, environmental assessment, on-site ecological supervision and mitigation. He has experience on multiple infrastructure projects regarding all elements of surface and groundwater management, monitoring, sampling and associated reporting. Colin also has a broad range of experience in invasive species management, biosecurity and control. Colin has prepared AA screening reports, Natura Impact Statements and has also been involved in the development of Environmental Operating Plans and Construction Environmental Management Plans for a number of national infrastructure projects. Colin is the author of this report.

Kevin Mc Caffrey (Atkins Galway) has a BSc (Hons) in Applied Freshwater and Marine Biology and a MSc in Environmental Sustainability. He is a Senior Ecologist with over 14 years' experience in freshwater and marine ecology, environmental surveying, impact assessment and as an Ecological clerk of Works. He has prepared and reviewed a wide range of technical reports including Environmental Impact Assessment, AA screening, Natura Impact Assessment and sanitary surveys. Kevin provided peer review and support for this assessment.

4. Existing Environment

4.1 General Overview

The proposed project is located within the Beaverstown area, Rogerstown Estuary and Rogerstown Park. The proposed investigation area within the Maritime Area extends across part of Rogerstown Estuary and Rogerstown Park and comprises approximately 45,888 m². The Maritime Area encompasses both estuarine and reclaimed lands and extends from the present day High Water Mark into the estuarine environment.

Rogerstown Estuary comprises a dynamic and highly tidal estuarine environment which drains almost completely during low tide, resulting in the exposure of extensive mudflat and sandflat habitats throughout much of the estuary. Only the main estuarine channel and a limited number of deeper sections remain wetted throughout the tidal cycle. The estuary supports a range of coastal and estuarine habitats and represents the principal ecological feature within the wider study area. A railway causeway and bridge crossing traverse the estuary at its narrowest point between Beaverstown Golf Club on the southern side and Rogerstown Park on the northern side. The bridge structure and associated causeway are protected by engineered rock armour and stone protection along both sides of the crossing. Areas of Atlantic salt meadow occur along the southern margins of the estuary, forming a transitional habitat between the intertidal zone and adjacent terrestrial lands.

Rogerstown Park is located on lands historically associated with the former Balleally Landfill, which has since been restored and redeveloped as a public amenity and biodiversity resource. The park comprises predominantly amenity grassland, restored landfill cap, pathways, landscaped habitats and areas of scattered scrub and planting. Although the park lies within the Maritime Area for consenting purposes, it comprises a terrestrial environment that is physically separated from the estuary by existing park boundaries, fencing and sections of the Dublin-Belfast railway line. The habitats within the park are therefore distinct from the intertidal and subtidal habitats associated with Rogerstown Estuary SAC.

Away from the estuary, the railway corridor is bordered by established hedgerows and treelines which provide linear habitat connectivity throughout the landscape. The surrounding land use is predominantly agricultural in character, interspersed with recreational amenities including Beaverstown Golf Club and Rogerstown Park. Collectively, the study area comprises a mosaic of estuarine, coastal, agricultural and amenity habitats, reflecting the varied ecological and landscape character of the area surrounding the proposed project.

4.2 Designated Sites

4.2.1 Internationally Designated Sites – Special Conservation Areas and Special Protection Areas

The Proposed Works are located within Rogerstown Estuary SAC and SPA. The next closest European Site is Malahide Estuary SAC/SPA, located c. 2.7km to the south, there is no connectivity to this site. Within the wider area, the nearest European Site is North-West Irish Sea SPA, situated approximately 3.5km to the east of the Proposed Works. Further details on European Sites and potential connecting pathways are provided in Section 5. The locations of European Sites relative to the proposed project are shown in Figure 5-1 and Figure 5-2.

4.2.2 Nationally Designated Sites – Natural Heritage Areas and proposed Natural Heritage Areas

Natural Heritage Area (NHA) is the basic designation for wildlife sites. These sites are considered to represent important habitats for species of plants and animals whose habitat needs protection[1]. These sites are protected under the Wildlife Amendment Act (2000)[2]. Additionally, proposed Natural Heritage Areas (pNHA) are those which have been published on a non-statutory basis, and have yet to be statutorily designated. These sites are of significance to flora, fauna, and their respective habitats. These sites will be designated on a phased basis over the coming years. Prior to designation pNHAs are subject to limited protection[3]. The proposed project does not lie directly within any NHA site. There are no NHAs within 5km of the proposed works.

The proposed works lie directly within Rogerstown Estuary pNHA. This pNHA is designated for the protection of same habitats as Rogerstown Estuary SAC as discussed below in Section 5.

The proposed project is located c. 3km from Portraine Shore pNHA (Site Code; 001215). There is potential indirect hydrological connectivity from the proposed works to this site.

4.3 Non-Qualifying Interest Annex I Habitats

Annex I habitats were reviewed in the context of the Proposed Development. These are habitats listed on Annex I to the Habitats Directive and for which Member States must designate SACs. The overall objective of the Habitats Directive is to achieve and maintain favourable conservation status for all habitats and species of community interest; and to contribute towards maintaining biodiversity of natural habitats and of wild flora and fauna in member states. To this end, EU member states are obliged to monitor the conservation status of habitats and species. As all habitats (as listed in Annex I) and species of Community interest are included, the monitoring requirements obliged to be undertaken by member states is not restricted to European sites (SACs and SPAs) but encompasses the total national resource of each habitat. Consequently, data on Annex I habitat must be collected both within and outside the Natura 2000 network. In addition, member states are obliged, as detailed in Article 17 of the Habitats Directive, to report to the EU commission every six years on the implementation of measures taken towards meeting the objectives of the directive. Annex I habitats are categorised into the following general habitat categories: - Bogs, mires and fens, Coastal habitats, Dunes habitats, Forests, Freshwater habitats, Grasslands, Heath and scrub and Rocky habitats.

A review of NPWS Article 17 datasets[4] and site survey findings did not identify any Non-Qualifying Interest Annex I habitats within the proposed project site red line boundary.

Non-Qualifying Interest Annex I habitat; Large shallow inlets and bays [1160) are found at the outer seaward side of Rogerstown Estuary approximately 2.5km from the proposed project site and Non-Qualifying Interest Annex I habitat; Hydrophilous tall herb [6430] is found c. 4km north of the proposed project site.

4.4 Surface Water Features

The hydrological regime of Rogerstown Estuary is influenced by a network of rivers, streams, drainage channels and tidal waters that collectively drain the wider catchment and discharge to the estuarine environment. The principal freshwater inflow is provided by the Ballyboghil River and its tributary, the Corduff Stream (Ballough Stream), which enter the inner estuary from the west and form the main fluvial input to the system. Additional tributaries include the

[1] https://www.npws.ie/protected-sites/nha

[2] https://www.npws.ie/legislation/irish-law/wildlife-amendment-act-2000

[3] https://www.npws.ie/protected-sites/nha

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

Rahillion, Ballalease North, Regles, Palmerstown and Horestown. These watercourses drain predominantly agricultural lands and provide hydrological connectivity between the wider catchment and the estuary.

Within the inner reaches of the SAC, the estuary narrows to form a tidal river, creating a transition zone between freshwater and marine environments. This interaction between freshwater inflows and tidal exchange supports a complex mosaic of estuarine habitats, including tidal mudflats and sandflats, saltmarsh, wet brackish grassland, tidal creeks and transitional freshwater brackish habitats. The outer estuary drains almost completely at low tide, exposing extensive intertidal sediments, while the main tidal channel remains inundated throughout much of the tidal cycle. These hydrological processes are fundamental to the ecological functioning of the site and contribute to the maintenance of the Annex I habitats for which is designated, including Estuaries, Tidal Mudflats and Sandflats, Salicornia Mud, Atlantic Salt Meadows and Mediterranean Salt Meadows.

The proposed works are located within and adjacent to the Rogerstown Estuary transitional waterbody (EPA Code: IE_EA_050_0100). Water Framework Direct (WFD) Waterbody Status within EPA datasets detail this estuary as ‘poor’ status (2019–2024). The latest WFD River Waterbodies Risk monitoring data (2019–2024) classifies the Ecological status/potential of Rogerstown Estuary as being ‘Poor’ with ‘Moderate’ status for Supporting Chemistry Conditions, ‘Good’ status for Nutrient conditions and ‘Good’ status for Phosphorous conditions.

The proposed project site is hydrologically linked via Rogerstown Estuary to the Northwestern Irish Sea coastal waterbody (EPA code: HA_08). Water Framework Direct (WFD) Waterbody Status within EPA datasets detail this coastal waterbody as ‘Good’ status (2019–2024). The latest WFD River Waterbodies Risk monitoring data (2019–2024) classifies the Ecological status/potential of the coastal waterbody as being ‘Good’ with ‘Good’ Invertebrate status/potential, ‘High’ status for Supporting Chemistry Conditions, ‘High’ status for Nutrient conditions and High’ status for Phosphorous conditions. See figure 4-1 below for surface water features near the proposed project.

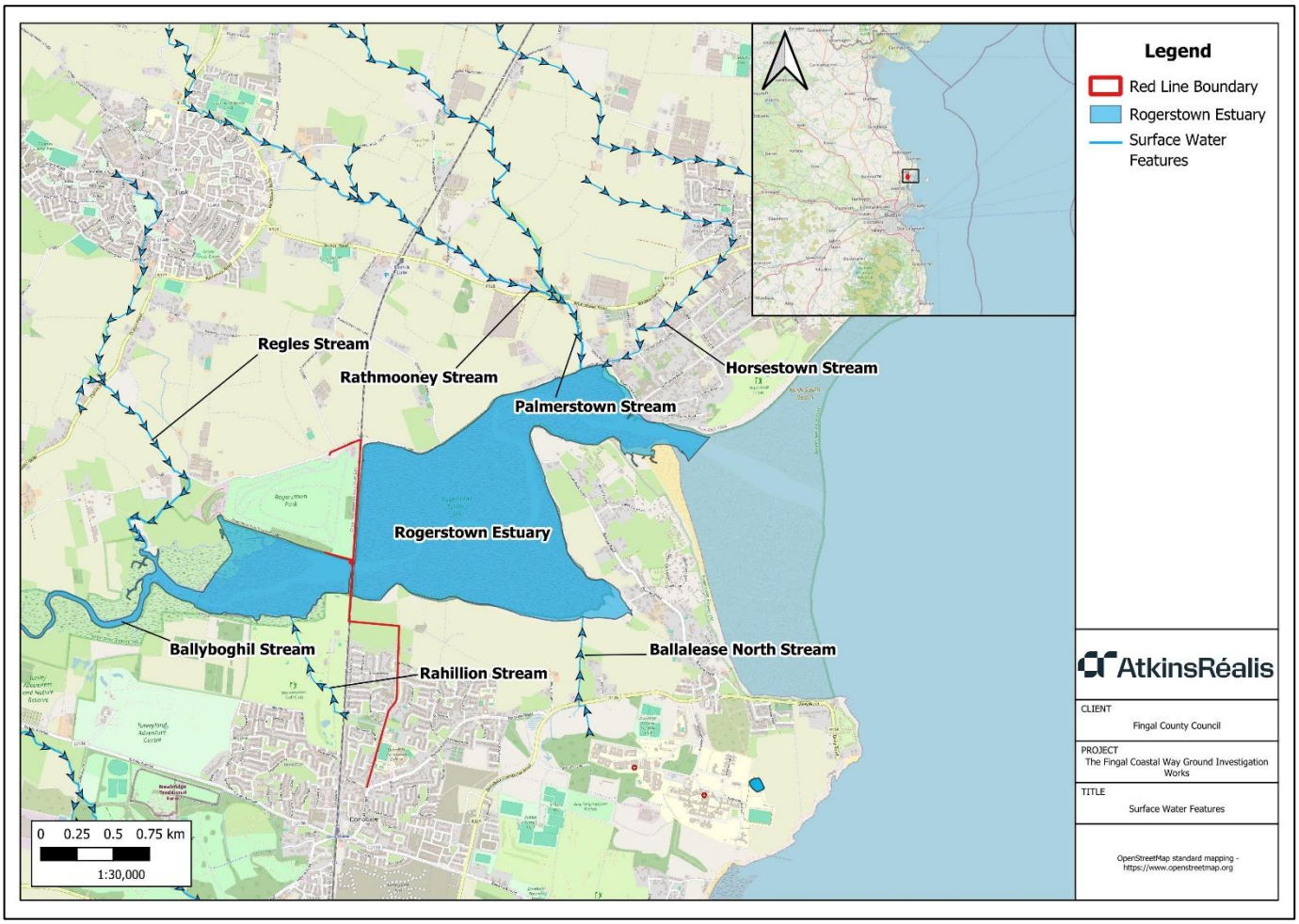


Figure 4-1 - Surface water features: Rogerstown estuary and connecting watercourses

4.5 Bird Sites

One Irish Wetland Bird Survey (I-WeBS) count site, Rogerstown Estuary (Site Code: 0U407), occurs within the project boundary. The wider Rogerstown Estuary I-WeBS site is divided into a number of individual subsites to facilitate the recording and analysis of waterbird distribution throughout the estuary. The proposed project is situated within the South-West Raheen Point to Viaduct subsite (Subsite Code: 0U440), which represents the portion of the overall count area encompassing the project works.

The peak count data recorded during the five most recent I-WeBS count periods for both the Rogerstown Estuary I-WeBS main site and the South-West Raheen Point to Viaduct subsite are presented in Tables 4-1 and 4-2, respectively.

The SPA supports internationally important numbers of Light-bellied Brent Goose and nationally important populations of a range of waterbird species, including Shelduck, Oystercatcher, Ringed Plover, Grey Plover, Knot, Dunlin, Black-tailed Godwit and Redshank. The extensive intertidal mudflats, sandflats, saltmarsh and shallow coastal waters of the estuary provide important feeding, roosting and commuting habitats for these species.

Recent I-WeBS data indicate that the wider Rogerstown Estuary regularly supports large assemblages of wintering wildfowl and waders. The most abundant species recorded during the most recent five year period include Golden Plover, Dunlin, Teal, Light-bellied Brent Goose, Curlew, Wigeon, Oystercatcher, Redshank and Shelduck. These

records confirm the continued importance of the estuary as a key wintering waterbird site within the east coast estuarine network.

Within the South-West Raheen Point to Viaduct subsite containing the proposed works, bird usage is lower than that recorded across the wider estuary but remains characterised by regular use by estuarine and coastal waterbirds. The subsite supports recurring observations of Shelduck, Dunlin, Redshank, Black-tailed Godwit, Light-bellied Brent Goose, Ringed Plover and Wigeon, while SPA qualifying interest species such as Oystercatcher, Grey Plover, Knot and Curlew are also recorded. This indicates that the project area contributes to the wider network of feeding and roosting habitat available within Rogerstown Estuary.

The estuarine channel and adjacent coastal waters are also utilised by a variety of water associated bird species, including Red-breasted Merganser, Cormorant, Little Egret, Grey Heron and occasional diver species. Overall, the project area forms part of a larger estuarine habitat complex that supports wintering waterfowl, waders and other wetland birds, although the highest concentrations of birds are generally associated with the more extensive intertidal habitats elsewhere within the estuary.

Table 4-1 - Annual Peak Waterbird counts for I-WeBS site Rogerstown Estuary (0U407)

Species Name	Scientific name	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025	Mean
Mute Swan	*Cygnus olor*	0	8	5	11	14	8
Whooper Swan	*Cygnus cygnus*	0	1	0	0	1	0
Pink-footed Goose	*Anser brachyrhynchus*	6	0	0	13	0	4
Light-bellied Brent Goose	*Branta bernicla hrota*	2043	1764	1188	1059	863	1383
Shelduck	*Tadorna tadorna*	812	390	441	460	578	536
Wigeon	*Mareca penelope*	1158	2249	1290	562	1201	1292
Gadwall	*Mareca strepera*	7	0	11	32	21	14
Teal	*Anas crecca*	1439	1221	1722	2164	850	1479
Mallard	*Anas platyrhynchos*	102	284	190	136	204	183
Pintail	*Anas acuta*	3	1	5	6	57	14
Shoveler	*Spatula clypeata*	17	46	40	23	75	40
Pochard	*Aythya ferina*	0	0	0	2	0	0
Tufted Duck	*Aythya fuligula*	0	0	0	3	0	1
Scaup	*Aythya marila*	0	4	0	0	0	1
Eider	*Somateria mollissima*	0	5	0	0	0	1
Common Scoter	*Melanitta nigra*	0	3	4	0	0	1
Red-breasted Merganser	*Mergus serrator*	39	32	34	69	37	42
Red-throated Diver	*Gavia stellata*	2	3	0	1	8	3
Black-throated Diver	*Gavia arctica*	0	0	0	0	1	0
Great Northern Diver	*Gavia immer*	0	0	1	1	1	1
Little Grebe	*Tachybaptus ruficollis*	6	11	20	20	9	13
Great Crested Grebe	*Podiceps cristatus*	5	2	2	1	26	7

Species Name	Scientific name	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025	Mean
Slavonian Grebe	*Podiceps auritus*	1	0	0	0	0	0
Cormorant	*Phalacrocorax carbo*	17	22	30	20	27	23
Shag	*Gulosus aristotelis*	14	23	106	14	40	39
Little Egret	*Egretta garzetta*	57	51	147	85	84	85
Grey Heron	*Ardea cinerea*	16	25	14	10	16	16
Water Rail	*Rallus aquaticus*	0	0	0	0	0	0
Moorhen	*Gallinula chloropus*	0	3	11	28	16	12
Coot	*Fulica atra*	0	2	0	5	10	3
Oystercatcher	*Haematopus ostralegus*	1304	1224	912	1026	754	1044
Ringed Plover	*Charadrius hiaticula*	212	163	144	437	272	246
Golden Plover	*Pluvialis apricaria*	4000	2000	6400	4004	3620	4005
Grey Plover	*Pluvialis squatarola*	71	82	164	106	151	115
Lapwing	*Vanellus vanellus*	3204	764	2189	2121	1219	1899
Knot	*Calidris canutus*	600	134	250	1113	308	481
Sanderling	*Calidris alba*	248	93	15	8	12	75
Little Stint	*Calidris minuta*	0	1	0	0	0	0
Curlew Sandpiper	*Calidris ferruginea*	4	1	0	0	0	1
Purple Sandpiper	*Calidris maritima*	0	3	0	7	6	3
Dunlin	*Calidris alpina*	3427	1131	1212	3734	2128	2326
Ruff	*Calidris pugnax*	2	2	0	0	0	1
Jack Snipe	*Lymnocryptes minimus*	0	3	0	3	4	2
Snipe	*Gallinago gallinago*	13	12	16	3	7	10
Black-tailed Godwit	*Limosa limosa*	213	525	402	220	146	301
Bar-tailed Godwit	*Limosa lapponica*	95	82	323	224	114	168
Whimbrel	*Numenius phaeopus*	4	6	3	5	3	4
Curlew	*Numenius arquata*	1330	1466	1899	1446	652	1359
Redshank	*Tringa totanus*	464	850	471	414	504	541
Greenshank	*Tringa nebularia*	46	58	61	24	49	48
Green Sandpiper	*Tringa ochropus*	0	2	0	1	2	1
Turnstone	*Arenaria interpres*	79	126	136	77	96	103
Kingfisher	*Alcedo atthis*	1	1	1	1	1	1

Species Name	Scientific name	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025	Mean
Black-headed Gull	*Chroicocephalus ridibundus*	445	427	335	433	335	395
Common Gull	*Larus canus*	182	410	147	191	103	207
Lesser Black-backed Gull	*Larus fuscus*	1	41	13	20	6	16
Herring Gull	*Larus argentatus*	448	372	517	215	182	347
Great Black-backed Gull	*Larus marinus*	88	63	34	42	23	50
Mediterranean Gull	*Ichthyaetus melanocephalus*	1	1	0	0	1	1
Sandwich Tern	*Thalasseus sandvicensis*	152	194	8	27	186	113
Common Tern	*Sterna hirundo*	0	20	8	100	2	26
Arctic Tern	*Sterna paradisaea*	0	0	0	0	5	1
Little Tern	*Sternula albifrons*	0	3	11	2	0	3
Mallard (domestic)	*Anas platyrhynchos*	0	0	0	0	1	0
Green-winged Teal	*Anas carolinensis*	0	0	0	1	0	0
Kittiwake	*Rissa tridactyla*	0	0	1	0	0	0
Roseate Tern	*Sterna dougallii*	0	0	0	0	0	0
Glossy Ibis	*Plegadis falcinellus*	0	1	0	0	0	0

Table 4-2 - Annual Peak Waterbird counts for I-WeBS site SW Raheen Pt - Viaduct (G) subsite (Subsite Code: 0U440)

Species Name	Scientific name	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025	Mean
Mute Swan	*Cygnus olor*	1	0	0	0	0	0
Light-bellied Brent Goose	*Branta bernicla hrota*	141	9	15	38	7	42
Shelduck	*Tadorna tadorna*	342	6	22	30	1	80
Wigeon	*Mareca penelope*	80	0	9	80	8	23
Gadwall	*Mareca strepera*	3	0	0	0	0	0
Teal	*Anas crecca*	160	20	8	126	2	51
Mallard	*Anas platyrhynchos*	24	0	7	4	4	8
Pintail	*Anas acuta*	2	0	0	0	0	0
Scaup	*Aythya marila*	1	0	1	0	0	0
Red-breasted Merganser	*Mergus serrator*	15	2	3	4	3	2
Red-throated Diver	*Gavia stellata*	3	0	0	0	0	0
Little Grebe	*Tachybaptus ruficollis*	5	0	1	2	2	2
Cormorant	*Phalacrocorax carbo*	3	0	1	3	1	1
Little Egret	*Egretta garzetta*	16	8	3	7	7	6
Grey Heron	*Ardea cinerea*	3	1	3	1	0	1
Moorhen	*Gallinula chloropus*	1	0	0	0	0	0
Oystercatcher	*Haematopus ostralegus*	8	6	7	6	6	7
Ringed Plover	*Charadrius hiaticula*	120	0	16	0	120	27
Golden Plover	*Pluvialis apricaria*	1	0	0	0	0	0
Grey Plover	*Pluvialis squatarola*	40	0	5	0	2	9
Lapwing	*Vanellus vanellus*	50	0	0	3	0	1
Knot	*Calidris canutus*	55	55	0	0	0	11
Dunlin	*Calidris alpina*	175	64	9	175	30	62
Snipe	*Gallinago gallinago*	6	0	0	1	0	1
Black-tailed Godwit	*Limosa limosa*	180	2	134	60	10	50
Bar-tailed Godwit	*Limosa lapponica*	24	1	0	20	0	9
Whimbrel	*Numenius phaeopus*	1	0	0	0	1	0
Curlew	*Numenius arquata*	21	6	3	12	15	8
Redshank	*Tringa totanus*	140	87	17	45	10	50
Greenshank	*Tringa nebularia*	7	1	7	1	4	3

Species Name	Scientific name	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025	Mean
Turnstone	*Arenaria interpres*	14	0	8	8	14	6
Black-headed Gull	*Chroicocephalus ridibundus*	60	5	15	5	3	6
Common Gull	*Larus canus*	5	0	1	0	0	1
Lesser Black-backed Gull	*Larus fuscus*	1	1	1	0	0	0
Herring Gull	*Larus argentatus*	16	3	6	5	10	7
Great Black-backed Gull	*Larus marinus*	4	1	4	1	0	2
Sandwich Tern	*Thalasseus sandvicensis*	1	0	1	0	0	0

4.5.1 Species Records

A review of species records was undertaken to inform the Appropriate Assessment Screening and to determine whether qualifying interest (QI) species associated with European sites in the wider area have the potential to utilise the proposed project area or surrounding habitats. Particular consideration was given to mobile species for which ecological connectivity may extend beyond European site boundaries, including marine mammals. Relevant records were obtained from the National Biodiversity Data Centre (NBDC) to identify any evidence of use of Rogerstown Estuary by species associated with nearby marine based SACs.

A search of National Biodiversity Data Centre (NBDC) records was undertaken on 11/09/2026, encompassing the proposed project area and a 1 km buffer to account for the mobility of QI species and the potential use of surrounding habitats. No records of harbour porpoise (*Phocoena phocoena*), grey seal (*Halichoerus grypus*) or harbour seal (*Phoca vitulina*), which are QIs of Rockabill to Dalkey Island SAC and Lambay Island SAC, were identified within Rogerstown Estuary.

Although Rogerstown Estuary is hydrologically connected to adjacent coastal waters, the estuary is characterised by shallow waters, extensive intertidal mudflat and sandflat habitat, and the near complete drainage of estuarine waters at low tide, leaving only a relatively narrow tidal channel wetted. Consequently, the estuary does not represent optimal habitat and provides limited opportunities for foraging, resting or regular passage by harbour porpoise, grey seal or harbour seal, which are generally associated with deeper coastal waters, offshore habitats and established seal haul-out sites. On this basis, Rogerstown Estuary is considered unlikely to support regular use by these species.

5. Connectivity to European Sites

5.1 Source-Pathway-Receptor

Appropriate Assessment screening requires a clear and systematic evaluation of whether the proposed works may give rise to likely significant effects on any European site. In line with current best practice, including the Office of the Planning Regulator's Practice Note PN01 (2021), the screening process is based on a source–pathway–receptor (SPR) model rather than reliance on predefined geographic distances or broad zones of influence.

Under the SPR model, the screening exercise identifies:

- **Sources** — the elements of the proposed works capable of exerting pressures or producing effects (e.g., emissions, habitat loss, noise, lighting, hydrological changes).
- **Pathways** — the mechanisms or connections through which an effect could be transmitted from the source to ecological receptors (e.g., surface water links, groundwater connectivity, air, disturbance pathways, functional ecological linkages).
- **Receptors** — the ecological features that could be affected, specifically the Qualifying Interests and Conservation Objectives of European sites.

Effects can only arise where all three components of the chain are present. If any one of the links; source, pathway, or receptor is absent or can be objectively ruled out, the potential for significant effects can likewise be excluded.

In establishing which European sites require consideration in AA Screening, the screening process therefore focuses on the existence or absence of viable pathways between the proposed works and the features for which each European site is designated. This approach reflects OPR (2021), which notes that reliance on arbitrary distance thresholds (e.g., 15km) is inappropriate unless supported by hydrological, ecological, or functional linkages.

Earlier guidance such as Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities (DEHLG, 2010) identified three broad categories of sites that need to be included in screening. These remain relevant through the SPR approach:

1. European sites within or adjacent to the proposed works area, where there is the potential for direct effects.
2. European sites connected by identifiable pathways, which may include hydrological networks, ecological corridors, or functional linkages for mobile species (e.g., feeding, roosting, or commuting habitats).
3. Any European sites where, applying the precautionary principle, the possibility of significant effects cannot be excluded, for example where hydrological connectivity extends throughout a river catchment or where mobile fauna associated with a European site may utilise habitats within or near the proposed works site.

The European Commission's (2021) guidance on Article 6(3) further emphasises the need to consider:

- Faunal mobility, whereby species of conservation interest may use areas outside the designated site and could be affected by changes in habitat, disturbance, or severance of ecological linkages.
- Connectivity within and between European sites, including whether proposed works could interrupt functional ecological pathways essential to the achievement of site conservation objectives.

By applying these principles, the screening process identifies all European sites with a potential for significant effects, while avoiding the unnecessary inclusion of sites where no such connections exist.

The proposed project is located within Rogerstown Estuary SAC and Rogerstown Estuary SPA.

In addition to the qualifying interests and special conservation interests for which these European sites are designated, consideration has been given to the potential use of the project area by SCI waterbird species associated with other SPAs in the wider region. Many SPA waterbird species are highly mobile and may utilise habitats outside the designated boundaries of their supporting European sites for feeding, roosting, commuting and overwintering. Consequently, the potential for SCI waterbird species to occur within Rogerstown Estuary, irrespective of the SPA with which they are primarily associated, has been considered as part of this assessment.

Table 5-1 identifies all European sites considered within the source-pathway-receptor assessment and indicates whether a potential pathway for effect and ecological connectivity exists between the proposed project and the relevant qualifying interests or special conservation interests. The locations of the European sites included in the assessment are shown in Figures 5-1 and 5-2.

Table 5-1 - European sites assessed for potential connectivity to the proposed works

Natura 2000 Site (Site Code)	Distance from Scheme	Qualifying Interests	Potentially within the Zone of Influence
Rogerstown Estuary SAC (000208)[5]	Within	▪ 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]	Yes. There is direct ecological connectivity between the proposed works and Rogerstown Estuary SAC, as the works are located within and immediately adjacent to the designated site. As such, there is a clear source-pathway-receptor relationship between the proposed project and the qualifying interests of the SAC, with the potential for direct interaction with designated habitats and the ecological processes that support them. Rogerstown Estuary SAC is carried forward for further assessment.
Rogerstown Estuary SPA (004015)[6]	Within	▪ Greylag Goose (*Anser anser*) [A043] ▪ Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] ▪ Shelduck (*Tadorna tadorna*) [A048] ▪ Oystercatcher (*Haematopus ostralegus*) [A130] ▪ Ringed Plover (*Charadrius hiaticula*) [A137] ▪ Grey Plover (*Pluvialis squatarola*) [A141] ▪ Knot (*Calidris canutus*) [A143]	Yes. There is direct ecological connectivity between the proposed works and Rogerstown Estuary SPA, as the works are located within and immediately adjacent to the designated site. The project area overlaps habitats and areas utilised by the SPA's Special Conservation Interest (SCI) waterbird species, establishing a clear source-pathway-receptor relationship between the proposed works and the conservation interests of the SPA. Consequently, there is potential for interaction

[5] https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000208.pdf

[6] https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004015.pdf

Natura 2000 Site (Site Code)	Distance from Scheme	Qualifying Interests	Potentially within the Zone of Influence
		▪ Dunlin (*Calidris alpina*) [A149] ▪ Black-tailed Godwit (*Limosa limosa*) [A156] ▪ Redshank (*Tringa totanus*) [A162] ▪ Shoveler (*Spatula clypeata*) [A857] ▪ Wetland and Waterbirds [A999]	with supporting habitats used for feeding, roosting and movement by SCI species. Rogerstown Estuary SPA is carried forward for further assessment.
Malahide Estuary SPA (004025)[7]	c. 2.8km south	▪ Great Crested Grebe (*Podiceps cristatus*) [A005] ▪ Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] ▪ Shelduck (*Tadorna tadorna*) [A048] ▪ Pintail (*Anas acuta*) [A054] ▪ Goldeneye (*Bucephala clangula*) [A067] ▪ Red-breasted Merganser (*Mergus serrator*) [A069] ▪ Oystercatcher (*Haematopus ostralegus*) [A130] ▪ Golden Plover (*Pluvialis apricaria*) [A140] ▪ Grey Plover (*Pluvialis squatarola*) [A141] ▪ Knot (*Calidris canutus*) [A143] ▪ Dunlin (*Calidris alpina*) [A149] ▪ Black-tailed Godwit (*Limosa limosa*) [A156] ▪ Bar-tailed Godwit (*Limosa lapponica*) [A157] ▪ Redshank (*Tringa totanus*) [A162] ▪ Wetland and Waterbirds [A999]	Yes. The proposed works are located approximately 2.8 km north of Malahide Estuary SPA. While no spatial overlap occurs, the SPA is designated for a number of waterbird species that are also qualifying interests of Rogerstown Estuary SPA, as well as other species that utilise similar estuarine, intertidal and coastal habitats. Given the mobility of these waterbird species and their ability to forage, roost and commute beyond the boundaries of their designated sites, consideration has been given to the potential use of the proposed works area and the wider Rogerstown Estuary by ex-situ SPA species associated with Malahide Estuary SPA. Malahide Estuary SPA has been considered further within the assessment.

[7] https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004025.pdf

Natura 2000 Site (Site Code)	Distance from Scheme	Qualifying Interests	Potentially within the Zone of Influence
North-west Irish Sea SPA (004236)[8]	c. 3.4km east	▪ 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] ▪ 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] ▪ Guillemot (*Uria aalge*) [A199] ▪ Razorbill (*Alca torda*) [A200] ▪ Puffin (*Fratercula arctica*) [A204] ▪ Little Gull (*Hydrocoloeus minutus*) [A862] ▪ Little Tern (*Sternula albifrons*) [A885]	Yes. The proposed works are located approximately 3.4 km west of North-west Irish Sea SPA. While many of the Special Conservation Interest (SCI) species associated with this SPA are seabirds and other marine species that typically utilise offshore and coastal marine environments and are therefore unlikely to regularly use the estuarine habitats present within Rogerstown Estuary, a number of SCI species have broader habitat requirements and may utilise nearshore coastal waters, estuaries or adjacent intertidal habitats during periods of foraging or passage. Given the mobility of these bird species and the proximity of the proposed works to the wider coastal environment, consideration has been given to the potential for ex-situ use of the project area and Rogerstown Estuary by SCI bird species associated with North-west Irish Sea SPA. North-west Irish Sea SPA has been considered further within the assessment.

[8] https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004236.pdf

Natura 2000 Site (Site Code)	Distance from Scheme	Qualifying Interests	Potentially within the Zone of Influence
Malahide Estuary SAC (000205)[9]	c. 2.8km south	▪ 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]	No. There is no direct overlap between the proposed works and Malahide Estuary SAC, and no direct impact pathway has been identified between the project and the qualifying interests of the SAC. Although both sites comprise estuarine environments, they are hydrologically separated with no shared surface water connections. The proposed works are located entirely within the Rogerstown Estuary catchment and will not result in disturbance, habitat loss, habitat degradation, or changes to the ecological processes supporting the qualifying habitats of Malahide Estuary SAC. In addition, given the separation distance between the proposed works and the SAC, together with the localised, temporary and small scale nature of the ground investigation works, there is no mechanism by which significant effects could arise through noise, visual disturbance, lighting, emissions, hydrological alteration or reductions in water quality. As no direct or indirect source-pathway-receptor relationship exists between the proposed project and the qualifying interests of Malahide Estuary SAC the potential for likely significant effects can be excluded.
Rockabill to Dalkey Island SAC (003000)[10]	c. 5.2km east	▪ Reefs [1170] ▪ *Phocoena phocoena* (Harbour Porpoise) [1351]	No. There is no direct overlap between the proposed works and Rockabill to Dalkey Island SAC, which is designated for a range of marine habitats and species. The proposed works are located within Rogerstown Estuary and are separated from the SAC by a substantial

[9] https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000205.pdf

[10] https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO003000.pdf

Natura 2000 Site (Site Code)	Distance from Scheme	Qualifying Interests	Potentially within the Zone of Influence
			distance, with no direct habitat connectivity between the project area and the designated site. While Rogerstown Estuary is connected to coastal waters, it does not provide optimal habitat for marine mammals. The estuary is characterised by shallow waters, extensive intertidal mudflats and sandflats, and the estuary drains almost completely at low tide, leaving only a relatively narrow tidal channel wetted. As a result, the estuary offers limited opportunities for feeding, resting or regular passage by marine mammal species, which are generally associated with deeper coastal waters, offshore habitats and established haul out locations. Furthermore, a review of National Biodiversity Data Centre (NBDC) records did not identify records of seals or other marine mammals within the estuary. The proposed ground investigation works are localised, temporary and limited in scale and will not result in habitat loss, habitat degradation, disturbance, or alteration of the ecological processes supporting the qualifying interests of Rockabill to Dalkey Island SAC. The works will not generate emissions, noise, vibration, hydrological changes or water quality effects capable of extending to the SAC. Accordingly, no source-pathway-receptor relationship exists between the proposed project and the qualifying interests of Rockabill to Dalkey Island SAC, and the potential for likely significant effects can be excluded.
Lambay Island SAC (000204)[11]	c. 7.5km east	▪ Reefs [1170]	No.

[11] https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000204.pdf

Natura 2000 Site (Site Code)	Distance from Scheme	Qualifying Interests	Potentially within the Zone of Influence
		▪ Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] ▪ *Phocoena phocoena* (Harbour Porpoise) [1351] ▪ *Halichoerus grypus* (Grey Seal) [1364] ▪ *Phoca vitulina* (Harbour Seal) [1365]	There is no direct overlap between the proposed works and Lambay Island SAC, which is designated for Reefs, Vegetated Sea Cliffs, and marine mammals. The proposed works are located within Rogerstown Estuary and are separated from the SAC by a substantial distance, with no direct habitat connectivity between the project site and the SAC. While Rogerstown Estuary is connected to coastal waters, it does not provide optimal habitat for marine mammals. The estuary is characterised by shallow waters, extensive intertidal mudflats and sandflats, and the estuary drains almost completely at low tide, leaving only a relatively narrow tidal channel wetted. As a result, the estuary offers limited opportunities for foraging, resting or regular passage by Harbour Porpoise, Grey Seal and Harbour Seal, which are generally associated with deeper coastal waters, offshore habitats, and established haul out locations. Furthermore, a review of National Biodiversity Data Centre (NBDC) records identified no records of seals or other marine mammals within the estuary. The proposed ground investigation works are localised, temporary and limited in scale and will not result in impacts capable of affecting the qualifying interests of Lambay Island SAC. Accordingly, no source-pathway-receptor relationship exists between the proposed project and the qualifying interests of the SAC, and the potential for likely significant effects can be excluded.
Lambay Island SPA (004069)[12]	c. 7.5km east	▪ Fulmar (*Fulmarus glacialis*) [A009] ▪ Cormorant (*Phalacrocorax ca*rbo) [A017] ▪ Shag (*Phalacrocorax aristotelis*) [A018]	No There is no direct overlap between the proposed works and Lambay Island SPA. The SPA is designated primarily for seabird species

[12] https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004069.pdf

Natura 2000 Site (Site Code)	Distance from Scheme	Qualifying Interests	Potentially within the Zone of Influence
		▪ Greylag Goose (*Anser anser*) [A043] ▪ Lesser Black-backed Gull (*Larus fuscus*) [A183] ▪ Herring Gull (*Larus arg*entatus) [A184] ▪ Kittiwake (*Rissa tridactyla*) [A188] ▪ Guillemot (*Uria aalge*) [A199] ▪ Razorbill (*Alca torda*) [A200] ▪ Puffin (*Fratercula arctica*) [A204]	associated with offshore and coastal marine environments, the majority of which are unlikely to utilise the estuarine habitats present within Rogerstown Estuary. While a limited number of SPA bird species may occasionally use coastal and estuarine habitats outside the SPA boundary during foraging, dispersal or migration, the proposed works are located at a substantial distance from Lambay Island SPA and, as per IWeBS data, are not situated within habitats known to support significant concentrations of these species. The proposed ground investigation works are localised, temporary and limited in scale, and will not result in habitat loss, habitat degradation, disturbance or displacement effects capable of affecting the qualifying interest species of the SPA. Furthermore, the availability of extensive alternative coastal and marine habitat within the wider area means there is no credible mechanism by which the conservation objectives of Lambay Island SPA could be adversely affected.

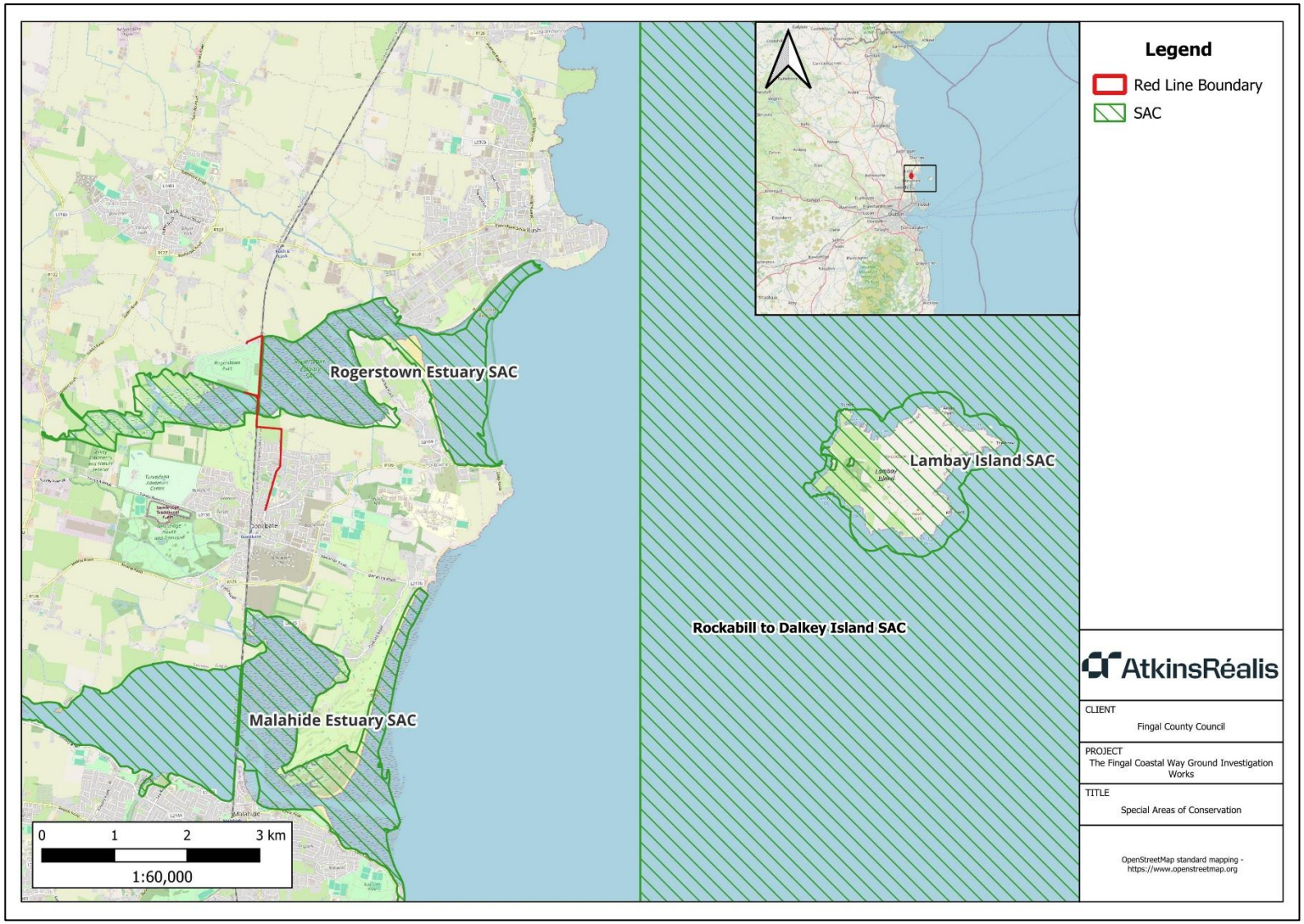


Figure 5-1 – Special Areas of Conservation assessed for potential connectivity to the proposed works.

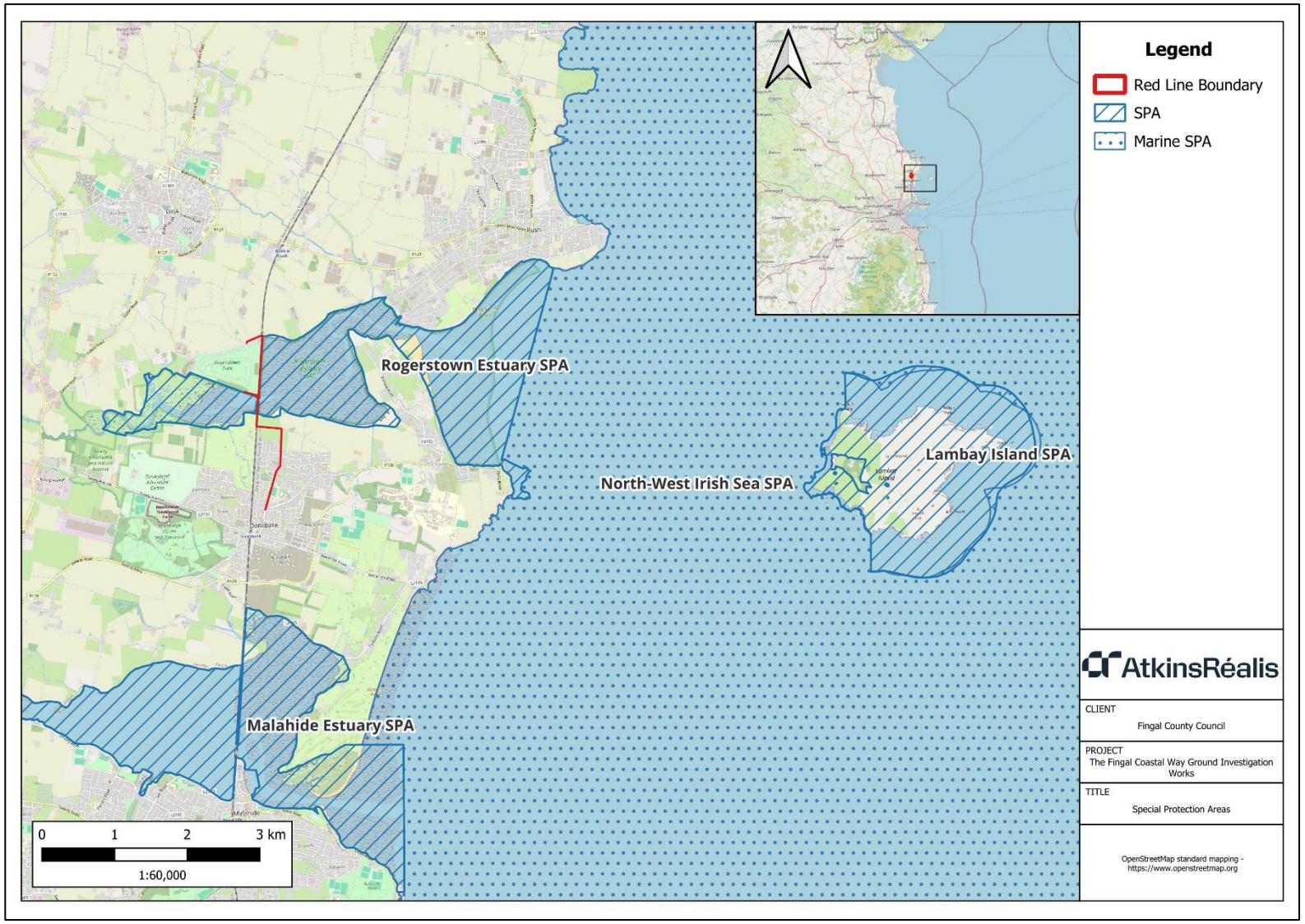


Figure 5-2 – Special Protection Areas assessed for potential connectivity to the proposed works.

5.2 Brief Description of Rogerstown Estuary SAC

A synopsis of the SAC, as detailed in the Natura 2000 Standard Data Form, is as follows [13]:

According to the Natura 2000 Standard Data Form[14] this SAC comprises a relatively small estuarine system in North County Dublin. It receives the Ballyboghil and Balllough rivers, both of which flow through an agricultural catchment. The SAC has a sandy peninsula which stretches across the outer part of the estuary. In addition to salt marsh and sand dune habitats, some agricultural fields which adjoin the estuary are included in site. This SAC is a typical eastern estuary with fairly extensive intertidal sand and mud flats. The salt marshes which fringe the estuary are of moderate importance and quality and include both Atlantic and Mediterannean salt meadows, as well as *Salicornia* flats. The sand dune element at site is limited in its distribution and quality. This SAC has three Red Data Book plant species and is of high importance for wintering waterfowl.

5.2.1 Conservation Objectives of Rogerstown Estuary SAC

The conservation objectives for Rogerstown Estuary SAC[15], to maintain the favourable conservation for each of the qualifying interests of the site, were published by NPWS (2013) Version 1.0; 14/08/2013. These were reviewed and considered when preparing this report. The conservation objectives are summarised as follows:-

- To maintain the favourable conservation condition of Estuaries in Rogerstown Estuary SAC,
- To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Rogerstown Estuary SAC,
- To maintain the favourable conservation condition of *Salicornia* and other annuals colonizing mud and sand in Rogerstown Estuary SAC,
- To restore the favourable conservation condition of Atlantic salt meadows (*Glauco Puccinellietalia maritimae*) in Rogerstown Estuary SAC,
- To maintain the favourable conservation condition of Mediterranean salt meadows (*Juncetalia maritimi*) in Rogerstown Estuary SAC,
- To restore the favourable conservation condition of Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes') in Rogerstown Estuary SAC,
- To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation ('grey dunes') in Rogerstown Estuary SAC.

5.2.2 Potential Threats

The threats, pressures and activities with impacts on the SAC[16] are listed below in Table 5.3.

[13] https://natura2000.eea.europa.eu/Natura2000/sdf/#/sdf?site=IE0000208&release=62

[14] https://natura2000.eea.europa.eu/Natura2000/sdf/#/sdf?site=IE0000208&release=62

[15] https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000208.pdf

[16] https://biodiversity.europa.eu/sites/natura2000/IE0000208

Table 5-2 - Threats, Pressures and activities with impacts on Rogerstown Estuary SAC.

Rank	Threats, Pressures, and Activities (type)
High	Erosion
High	Invasive non-native species
High	Reclamation of land from sea, estuary or marsh
High	Sea defense or coast protection works, tidal barrages
High	Use of biocides, hormones and chemicals
Medium	Bait digging / collection
Medium	Discharges
Medium	Dispersed habitation
Medium	Fertilisation
Medium	Golf course
Medium	Grazing
Medium	Nautical sports
Medium	Roads, motorways
Medium	Walking, horseriding and non-motorised vehicles

5.3 Brief Description of Rogerstown Estuary SPA

A synopsis of the SPA, as detailed in the Natura 2000 Standard Data Form, is as follows [17]:

The Natura Standard Data Form[18] (NPWS, 2020m) lists Rogerstown Estuary SPA as a relatively small estuarine system in north County Dublin. It has salt marsh and sand dune habitat as well as agricultural fields which have ornithological and botanical interest. It has extensive sand and mud flats and supports wintering waterfowl. It supports an internationally important population of light-bellied brent goose and nationally important populations of a further 15 species. It is an important and regular site for a range of autumn passage migrants. Little tern has bred in Rogerstown Estuary in the past and there are populations of three Red Data Book plant species present. The main threats to the site include disposal of household/recreational facility waste, invasive species, disposal of industrial waste, fertilisation and landfill, land reclamation and drying out.

[17] https://natura2000.eea.europa.eu/Natura2000/sdf/#/sdf?site=IE0004015&release=55

[18] https://natura2000.eea.europa.eu/Natura2000/sdf/#/sdf?site=IE0004015&release=55

5.3.1 Conservation Objectives of Rogerstown Estuary SPA

The conservation objectives for Rogerstown Estuary SAC[19], to maintain the favourable conservation for each of the qualifying interests of the site, were published by NPWS (2013) Version 1.0; 20/05/2013. These were reviewed and considered when preparing this report. The conservation objectives are summarised as follows:-

- To maintain the favourable conservation condition of Greylag Goose in Rogerstown Estuary SPA,
- To maintain the favourable conservation condition of Light-bellied Brent Goose in Rogerstown Estuary SPA,
- To maintain the favourable conservation condition of Shelduck in Rogerstown Estuary SPA,
- To maintain the favourable conservation condition of Shoveler in Rogerstown Estuary SPA,
- To maintain the favourable conservation condition of Oystercatcher in Rogerstown Estuary SPA,
- To maintain the favourable conservation condition of Ringed Plover in Rogerstown Estuary SPA,
- To maintain the favourable conservation condition of Grey Plover in Rogerstown Estuary SPA,
- To maintain the favourable conservation condition of Knot in Rogerstown Estuary SPA,
- To maintain the favourable conservation condition of Dunlin in Rogerstown Estuary SPA,
- To maintain the favourable conservation condition of Black-tailed Godwit in Rogerstown Estuary SPA,
- To maintain the favourable conservation condition of Redshank in Rogerstown Estuary SPA,
- To maintain the favourable conservation condition of wetland habitat in Rogerstown Estuary SPA as a resource for the regularly occurring migratory waterbirds that utilise it.

5.3.2 Potential Threats

The threats, pressures and activities with impacts on the SPA[20] are listed below in Table 5.3.

Table 5-3 - Threats, Pressures and activities with impacts on Rogerstown Estuary SPA.

Rank	Threats, Pressures, and Activities (type)
High	Disposal of household / recreational facility waste
High	Disposal of industrial waste
High	Fertilisation
High	Invasive non-native species
High	Landfill, land reclamation and drying out, general

[19] https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004015.pdf

[20] https://biodiversity.europa.eu/sites/natura2000/IE0004015

Rank	Threats, Pressures, and Activities (type)
Medium	Bait digging / collection
Medium	Dispersed habitation
Medium	Golf course
Medium	Grazing
Medium	Nautical sports
Low	Hunting

5.4 Brief Description of Malahide Estuary SPA

A synopsis of the SAC, as detailed in the Natura 2000 Standard Data Form, is as follows [21]

Malahide Estuary SPA comprises the estuary of the River Broadmeadow. According to the Natura 2000 Standard Data Form[22] for the site (NPWS, 2020j), the estuary comprises, saltmarsh habitats and extensive intertidal flats. This site is of high importance for wintering waterfowl and supports a particularly good diversity of species. It provides both feeding and roosting areas for a range of wintering waterfowl. It supports an internationally important population of light-bellied brent geese and nationally important populations of a further 12 species. The site is also an important and regular site for a range of autumn passage migrants

5.4.1 Conservation Objectives of Malahide Estuary SPA

The conservation objectives for Malahide Estuary SPA[23], to maintain the favourable conservation for each of the qualifying interests of the site, were published by NPWS (2013) Version 1.0; 16/08/2013. These were reviewed and considered when preparing this report. The conservation objectives are summarised as follows:-

- To maintain the favourable conservation condition of Great Crested Grebe in Malahide Estuary SPA,
- To maintain the favourable conservation condition of Light-bellied Brent Goose in Malahide Estuary SPA,
- To maintain the favourable conservation condition of Shelduck in Malahide Estuary SPA,
- To maintain the favourable conservation condition of Pintail in Malahide Estuary SPA,
- To maintain the favourable conservation condition of Goldeneye in Malahide Estuary SPA,
- To maintain the favourable conservation condition of Red-breasted Merganser in Malahide Estuary SPA,
- To maintain the favourable conservation condition of Oystercatcher in Malahide Estuary SPA,
- To maintain the favourable conservation condition of Golden Plover in Malahide Estuary SPA,

[21] https://natura2000.eea.europa.eu/Natura2000/sdf/#/sdf?site=IE0004025&release=62

[22] https://natura2000.eea.europa.eu/Natura2000/sdf/#/sdf?site=IE0004025&release=62

[23] https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004025.pdf

- To maintain the favourable conservation condition of Grey Plover in Malahide Estuary SPA,
- To maintain the favourable conservation condition of Knot in Malahide Estuary SPA,
- To maintain the favourable conservation condition of Dunlin in Malahide Estuary SPA,
- To maintain the favourable conservation condition of Black-tailed Godwit in Malahide Estuary SPA,
- To maintain the favourable conservation condition of Bar-tailed Godwit in Malahide Estuary SPA,
- To maintain the favourable conservation condition of Redshank in Malahide Estuary SPA,
- To maintain the favourable conservation condition of the wetland habitat in Malahide Estuary SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.

5.4.2 Potential Threats

The threats, pressures and activities with impacts on the SAC[24] are listed below in Table 5.3.

Table 5-4 - Threats, Pressures and activities with impacts on Malahide Estuary SAC.

Rank	Threats, Pressures, and Activities (type)
High	Nautical Sports
High	Paths, tracks, cycling tracks
High	Reclamation of land from sea, estuary or marsh
High	Urbanised areas, human habitation
Medium	Fertilisation
Medium	Industrial or commercial areas
Medium	Invasive non-native species
Medium	Walking, horseriding and non-motorised vehicles
Medium	Bridge, viaduct
Medium	Railway lines, TGV

[24] https://biodiversity.europa.eu/sites/natura2000/IE0004025

5.5 Brief Description of North-west Irish Sea SPA

A synopsis of the SAC, as detailed in the Natura 2000 Standard Data Form, is as follows [25]

According to the Natura 2000 Standard Data Form[26] - The North-west Irish Sea cSPA constitutes an important resource for marine birds. The estuaries and bays that open into it along with connecting coastal stretches of intertidal and shallow subtidal habitats, provide safe feeding and roosting habitats for waterbirds throughout the winter and migration periods. These areas, along with more pelagic marine waters further offshore, provide additional supporting habitats (for foraging and other maintenance behaviours) for those seabirds that breed at colonies on the north-west Irish Sea's islands and coastal headlands. These marine areas are also important for seabirds outside the breeding period.

5.5.1 Conservation Objectives of North-west Irish Sea SPA

The conservation objectives for the North-west Irish Sea SPA[27], to maintain the favourable conservation for each of the qualifying interests of the site, were published by NPWS (2023) Version 1.0; 19/09/2023. These were reviewed and considered when preparing this report. The conservation objectives are summarised as follows:-

- To maintain the favourable conservation condition of red-throated diver at North-west Irish Sea SPA,
- To maintain the favourable conservation condition of great northern diver at North-west Irish Sea SPA,
- To restore the favourable conservation condition of fulmar in North-west Irish Sea SPA,
- To maintain the favourable conservation condition of manx shearwater in North-west Irish Sea SPA,
- To restore the favourable conservation condition of cormorant in North-west Irish Sea SPA,
- To restore the favourable conservation condition of shag in North-west Irish Sea SPA,
- To maintain the favourable conservation condition of common scoter at North-west Irish Sea SPA,
- To maintain the favourable conservation condition of black-headed gull at North-west Irish Sea SPA,
- To maintain the favourable conservation condition of common gull at North-west Irish Sea SPA,
- To maintain the favourable conservation condition of lesser black-backed gull in Northwest Irish Sea SPA,
- To restore the favourable conservation condition of herring gull in North-west Irish Sea SPA,
- To maintain the favourable conservation condition of great black-backed gull at North-west Irish Sea SPA,
- To restore the favourable conservation condition of kittiwake in North-west Irish Sea SPA,
- To maintain the favourable conservation condition of roseate tern in North-west Irish Sea SPA,
- To maintain the favourable conservation condition of common tern in North-west Irish Sea SPA,

[25] https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY004236.pdf

[26] https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY004236.pdf

[27] https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004236.pdf

- To maintain the favourable conservation condition of Arctic tern in North-west Irish Sea SPA,
- To maintain the favourable conservation condition of little tern in North-west Irish Sea SPA,
- To maintain the favourable conservation condition of guillemot in North-west Irish Sea SPA,
- To maintain the favourable conservation condition of razorbill in North-west Irish Sea SPA,
- To restore the favourable conservation condition of puffin in North-west Irish Sea SPA,
- To maintain the favourable conservation condition of little gull at North-west Irish Sea SPA.

5.5.2 Potential Threats

Current available documentation has not as yet detailed site specific threats, pressures, and activities with impacts on North-west Irish Sea SPA.

5.6 Identification of Potential Impacts on European Sites

5.6.1 Direct and Indirect Effects on SACs

The proposed project is located within Rogerstown Estuary SAC and therefore has direct connectivity with the designated site. However, the proposed GI works are temporary, localised and very small in scale, comprising a limited number of boreholes and trial pits across the study area, with works within the Maritime Area anticipated to extend over a period of approximately 3 to 4 weeks.

The proposed GI works comprise both investigations within the estuarine area of the Maritime Area and investigations within Rogerstown Park, which also falls within the Maritime Area. The principal area of interaction with the SAC relates to the six boreholes proposed within the estuarine environment. These maritime boreholes are required to inform the design of the proposed estuary bridge and are confined to locations associated with existing engineered railway infrastructure. The boreholes are located within existing railway rock armour and engineered stone protection associated with the railway bridge and causeway infrastructure (Figure 1-5). These engineered surfaces do not constitute qualifying interest habitats of Rogerstown Estuary SAC and are distinct from the estuarine mudflat, sandflat, saltmarsh and other Annex I habitats for which the SAC is designated. Accordingly, the proposed works do not directly overlap with, or result in the loss, fragmentation, alteration or degradation of any qualifying interest habitat within Rogerstown Estuary SAC.

The principal qualifying interest habitats of the SAC comprise estuaries, mudflats and sandflats, Salicornia communities and salt meadow habitats associated with the wider estuarine system. The proposed works do not require excavation, removal, infilling or permanent modification of any of these habitats. The temporary access ramp (c. 10 m wide by 30 m long; Figure 1-5) required to facilitate pontoon launch will be formed using clean imported stone placed directly onto existing railway rock armour and ballast adjacent to the bridge structure. No excavation of the estuary bed will be required and the temporary access ramp will be removed following completion of the works. Consequently, there will be no direct habitat loss, fragmentation or deterioration of qualifying interest habitats.

The estuarine GI works are restricted to discrete locations within existing engineered infrastructure and will not encroach upon the extensive mudflat, sandflat, Salicornia or salt meadow habitats that form part of the SAC's qualifying interests. The investigation works comprise six small diameter boreholes (200 mm) only. Boreholes are proposed to a maximum depth of 15 m. The estimated total volume of material within each borehole would be

approximately 0.47 m³, equating to approximately 2.8 m³ across all six boreholes. This figure represents the maximum volume of material within all boreholes and substantially overestimates the quantity of material that could be released to the surrounding environment. The majority of material within the drill bore will be recovered as intact core samples for laboratory testing and geological logging and removed from site. As such, only limited quantities of residual drill cuttings and fines are expected to be generated.

Any residual drill arisings would occur within the existing railway rock armour and engineered stone protection associated with the bridge infrastructure, rather than within qualifying interest habitats. While tidal exchange occurs through the rock armour during inundation, the limited quantity of residual material not recovered as core would be highly localised in nature. Given the limited number of boreholes, their small diameter, short duration and highly localised nature, with works expected to be completed over approximately 3 to 4 weeks, the residual quantities of drill arisings generated would be insufficient to result in any measurable change in suspended sediment concentrations, sediment dynamics, habitat structure or ecological function within Rogerstown Estuary SAC. Furthermore, the qualifying interest mudflat and sandflat habitats of the SAC are naturally sediment dominated environments that are routinely influenced by tidal erosion, deposition and sediment movement. As such, the limited quantities of residual drill cuttings and fines that may be generated during drilling activities would not result in habitat loss, habitat degradation, changes in habitat structure, or any measurable effect on the distribution, extent or ecological function of these qualifying interest habitats. Consequently, no likely significant effects on estuarine, mudflat or sandflat habitats will occur.

In addition to the estuarine boreholes, four boreholes and six trial pits are proposed within Rogerstown Park, which forms part of the Maritime Area for consenting purposes. However, these works are located within a terrestrial parkland environment comprising existing pathways, amenity grassland and restored landfill lands associated with the former Balleally Landfill. While these lands fall within the Maritime Area, they are not located within estuarine habitat and are situated landward of the current High Water Mark. The proposed investigation locations within the park are physically separated from the estuary by existing park boundaries, fencing and, in most instances, the existing railway corridor. The habitats present within the park are therefore distinct from, and not functionally connected to, the qualifying interest habitats of Rogerstown Estuary SAC. As the proposed works within Rogerstown Park do not occur within qualifying interest habitats, do not interact with estuarine habitats or tidal processes, and will be undertaken within existing managed parkland, no likely significant effects on the SAC will arise.

The remaining GI works, including seven boreholes and two trial pits, are located outside the Maritime Area and are set back from the estuary. These works are situated within agricultural land, existing pathways and amenity grassland areas to the south of the estuary and are physically separated from the estuarine environment by existing field boundaries, embankments, vegetation and the railway line. Given this separation, together with the small scale and temporary nature of the works, there is no pathway by which these terrestrial works could affect estuarine habitats, water quality, tidal processes or any qualifying interest habitat of Rogerstown Estuary SAC. Accordingly, no likely significant effects on the SAC will occur as a result of these works.

The proposed GI works will not result in land reclamation, infilling of estuarine habitat, coastal defence works, hydrological alteration, impediment to tidal exchange or any of the identified threats and pressures associated with the SAC. The works are temporary and confined either to existing engineered rock armour within the estuary or to terrestrial locations remote from estuarine qualifying interest habitats. Consequently, there is no potential for the proposed project to adversely affect the conservation objectives of Rogerstown Estuary SAC.

The possibility of impacts on marine mammals has also been considered. While harbour porpoise, grey seal and harbour seal are qualifying interests of coastal SACs within the wider region, Rogerstown Estuary is not considered suitable habitat for these species. The estuary waters are shallow even at high tide and drain extensively during each tidal cycle, leaving only a narrow residual channel at low tide. Consequently, the estuary does not provide the deeper, permanently inundated waters typically required by marine mammals such as seals and harbour porpoise. The absence of suitable water depths, together with limited foraging opportunities and a lack of suitable resting or haul out habitat for seals, means that the estuary is not considered capable of supporting marine mammals other than potentially on a rare and transient basis at high tide. This is supported by available records, no records were identified

from the NBDC database and the estuary provides highly suboptimal habitat due to its shallow nature and extensive drainage at low tide. Marine mammals are associated with the deeper coastal waters of the Irish Sea rather than the inner estuarine environment.

Furthermore, the proposed GI works in the maritime area are highly localised, temporary and of a very limited scale, comprising only six small diameter boreholes. The works will be undertaken during low tide conditions, when the estuary has largely drained and extensive areas of intertidal sediment are exposed, leaving only a narrow residual tidal channel. As a result, there is very limited water available through which underwater noise or vibration could propagate. Any noise or vibration generated would be confined to the immediate vicinity of the works and would dissipate rapidly within the shallow estuarine environment. The potential for transmission of disturbance beyond the inner estuary is further restricted by the physical and geographical characteristics of the area. Marine mammal habitat is absent within the estuary, which is shallow even at high tide and drains extensively during each tidal cycle, lacking the deeper, permanently inundated waters typically used by seals and harbour porpoise. The deeper coastal waters of the Irish Sea, where marine mammals are more typically associated, are located approximately 3.5 km from the proposed works area. In addition, the Burrow Peninsula north of Portrane forms a substantial natural barrier separating the inner estuary from open coastal waters, while the narrow tidal connection between the Burrow Peninsula and Rush, approximately 200m wide, provides only a highly constrained link between the estuary and the Irish Sea. Collectively, these factors ensure that any noise or vibration generated by the works would be fully attenuated within the inner estuary and would not propagate to coastal waters used by marine mammals. As such, no credible pathway exists by which the proposed works could affect marine mammals within the wider coastal environment.

Overall, the proposed works will not result in habitat loss, habitat degradation, hydrological change, water quality deterioration or disturbance capable of affecting the qualifying interests or conservation objectives of Rogerstown Estuary SAC or any other SAC. Therefore, likely significant effects can be excluded.

5.6.2 Direct and Indirect Effects on SPAs

Consideration has also been given to SCI species associated with Rogerstown Estuary SPA, Malahide Estuary SPA and North-west Irish Sea SPA. Irish Wetland Bird Survey (I-WeBS) data for the South-West Raheen Point to Viaduct subsite, within which the proposed works are located, confirms that the area is utilised by a range of wintering waterbirds, including SPA SCI species such as Light-bellied Brent Goose, Shelduck, Oystercatcher, Ringed Plover, Grey Plover, Knot, Dunlin, Black-tailed Godwit, Curlew and Redshank. However, bird usage within the works area is considerably lower than that recorded across the wider Rogerstown Estuary, with the largest concentrations of wintering waterbirds generally occurring within the more extensive mudflat, sandflat and roosting habitats elsewhere in the estuary. The works area therefore forms only a small component of the wider habitat resource available to waterbirds within the SPA.

Importantly, the proposed ground investigation works will be undertaken during the spring and summer months, outside the wintering season when the internationally and nationally important migratory waterbird populations associated with Rogerstown Estuary SPA and other east coast SPAs are present. As such, the works will not coincide with the period during which these species rely on the estuary for feeding, roosting and overwintering. In the absence of any overlap with the wintering season, there is no realistic potential for disturbance, displacement or interruption of the ecological functions supporting migratory SPA bird populations, including those associated with Rogerstown Estuary SPA and Malahide Estuary SPA.

A limited number of resident and locally breeding waterbirds, including species such as Shelduck, Mallard and Oystercatcher, may utilise the estuary during the proposed works period. However, no known breeding colonies or important nesting locations occur within the proposed works areas, which are confined to existing engineered stone and rock armour associated with the railway infrastructure. The maritime works are confined to existing engineered stone and rock armour associated with the railway bridge and causeway infrastructure, which do not comprise suitable nesting or breeding habitat for the waterbird species associated with the SPA. The proposed works will not result in

the loss, damage or fragmentation of nesting habitat, nor will they alter the availability of suitable breeding, feeding or roosting habitat within the estuary. The works in the maritime area are highly localised and limited to six boreholes within existing engineered infrastructure, representing a very small proportion of the wider estuarine environment. Works will be temporary in duration, extending for approximately 3 to 4 weeks, and any disturbance generated would be confined to the immediate vicinity of the active works area. Extensive areas of suitable feeding, roosting and breeding habitat will remain available throughout the remainder of the estuary for the duration of the works. Any birds temporarily displaced from the immediate works area would be readily able to utilise adjacent habitats within the wider estuary without any meaningful reduction in habitat availability or function. Consequently, there is no realistic potential for significant disturbance, displacement, breeding bird effects or habitat impacts on resident waterbirds, nor any effect on the ecological function of the estuary as supporting habitat for SPA bird species.

Similarly, many of the SCI species associated with North-west Irish Sea SPA are seabirds and pelagic species which primarily utilise offshore and coastal marine waters rather than the inner estuarine habitats present within the project area. The proposed works are separated from the Irish Sea by approximately 3.5 km and are of insufficient scale, duration and intensity to generate disturbance effects capable of extending beyond the inner estuary. Accordingly, no likely significant effects on Rogerstown Estuary SPA, Malahide Estuary SPA, North-west Irish Sea SPA, or the conservation objectives of any associated SCI bird species, are predicted.

5.7 In-combination Effects

5.7.1 Requirement for Assessment

The requirement for AA arising out of Article 6(3) of the Habitats Directive covers plans and projects that, "*either individually or in combination with other plans or projects*", are likely to have a significant effect on one or more Natura 2000 sites. This means that AA is required for any plan or project that, in combination with other plans or projects, would have a significant effect on one or more Natura 2000 sites, irrespective of the presence or absence of such effects from that plan or project on its own. Therefore, regardless of the significance of the effects of the plan or project individually, the potential for significant effects in combination with other plans and projects must be considered in all cases.

5.7.2 Approach and Methodology

The objective of this requirement is to capture significant effects potentially arising from the cumulation or other interaction of non-significant effects from multiple plans and projects. Consequently, the assessment of potential in-combination effects is not a pair-wise assessment, rather, it considers the totality of the effects arising from all plans and projects affecting the Natura 2000 site(s) in question. In identifying the plans and projects to be included in this assessment, it is important to define an appropriate geographical scope and timescale over which potential in-combination effects are to be considered and the sources of information to be consulted, as described below. It is also important to consider the nature of the interactions between effects, which may be additive, antagonistic, synergistic or complex.

5.7.3 Geographical Scope

In defining the geographical scope for identifying potential in-combination effects, it is important to remember that effects are evaluated in view of the conservation objectives of the European site(s) concerned. As such, two or more effects relating to the same conservation objective for a given European site would combine even if their geographical extents did not overlap. For example, the loss of a small area of an Annex I habitat type listed as a qualifying interest of a European site would combine with the loss of an entirely unconnected area of the same habitat type from a remote part of the same site to produce an in-combination effect, the significance of which would need to be evaluated in view of the relevant conservation objective. On that basis, the scope of the assessment of in-combination effects extends to all plans and projects affecting the same conservation objectives as the plan or project under consideration, irrespective of whether those effects are significant or not.

In this case, however, given the scale of the proposed works and sensitivities of the European sites in its ZoI, it was deemed most appropriate to include areas in close proximity to the works and its ZoI (as described in Section 5.1) within the geographical scope for identifying potential in-combination effects.

5.7.4 Timescale

The timescale over which potential in-combination effects were considered in this case covered plans and projects from 5 years ago (i.e. 2021) to the present and all reasonably foreseeable future plans and projects, i.e. published draft plans and projects which are already in the planning system or have received planning permission.

5.7.5 Sources of Information

The following sources of information were consulted to gather information on other plans and projects:

- Fingal County Council Planning Data viewed through; https://experience.arcgis.com/experience/1c25414d8c4448229ad3f9b5e57c65c0
- An Coimisiún Pleanála Planning Applications viewed through; https://www.pleanala.ie/en-ie/home
- Fingal Development Plan 2023-2029 [28]
- Transport Infrastructure Ireland [29]
- Irish Water [30]

The threats, pressures and activities with negative impacts on the Rogerstown Estuary SAC/SPA were used to identify plans and projects which, by their nature, are likely to give rise to potential impacts on the sites concerned.

5.7.6 Assessment

Fingal Development Plan sets out policies and objectives for the development of the county. The Development Plan aims to promote the sustainable development and improvement of the economic, environmental, cultural and social aspects of Fingal. The Development Plan also requires that any developments must be subject to AA process and that permitted developments comply with the requirements of the WFD, the relevant River Basin Management Plans and the Habitats Directive. A Strategic Environmental Assessment (SEA) was prepared for the Development Plan and it went through the AA process. The findings of which were integrated into the objectives of the Development Plan resulting in a plan that affords high levels of protection to the environment and European sites.

A review of Transport Infrastructure Ireland (TII) publicly available planned projects[31] did not identify any major road projects within 10km of the proposed works.

A review of Uisce Éireann (Irish Water) projects[32] did not identify any water project in the vicinity of the proposed works.

A search of Fingal County Council planning and An Coimisiún Pleanála planning applications has been undertaken for applications submitted within the last 5 years in the vicinity the works (last accessed 19/08/2026). A number of small-scale residential projects in the vicinity of the proposed GI works site have been granted planning permission, including the retention of existing developments and the construction or extension of domestic dwellings. These developments are limited in scale and, based on their location, do not have any pathways that could give rise to direct, indirect, or cumulative impacts on European sites. While foul and surface water from these residential projects will discharge to the existing municipal foul and stormwater networks, they do not interact with the estuary and therefore do not create a hydrological pathway for effects. In addition, there are no other ecological pathways, such as habitat loss, disturbance, airborne emissions, or ecological connectivity, through which these projects could combine with the proposed project to affect any European site. Given the absence of any source–pathway–receptor linkages for water quality or for any other impact pathways, it is concluded that the small scale residential projects in the area will not give rise to significant effects in combination with the proposed GI works.

Key developments which shall be considered are large-scale developments in the region of the proposed works, there are 4 no. of these developments which have been further assessed in terms of in-combination effects with the proposed project/development/scheme and are presented in Table 5-5 below.

[28] https://www.fingal.ie/development-plan-2023-2029

[29] https://www.tii.ie/projects/

[30] https://www.water.ie/projects/

[31] https://www.tii.ie/public-transport/projects-and-improvements/

[32] https://www.water.ie/projects/?map=our-projects&id=627

It is considered that there are no An Coimisiún Pleanála or Council approved or planned developments or projects that will act in combination with the proposed GI works to give rise to significant in-combination effects on the Rogerstown Estuary SAC/SPA or any other European site.

Table 5-5 - Planning applications near the proposed project.

Ref. No.	Project Applicant	Project Summary	In-combination Assessment
FCC Planning Ref: F22A/0491	Iarnróid Éireann	The proposed Iarnród Éireann GI works are to inform railway infrastructure works and include the following: ▪ 13 No. cable percussion boreholes off track, with sampling and in situ testing, to approximately 10m depth below ground level or refusal, whichever occurs first; ▪ 10 No. follow-on rotary core boreholes off track, to depths of 13m below ground level (at cable percussion borehole locations) into rock; ▪ 12 No. window samples to a maximum depth of 8.0mBGL located on-track; and ▪ 12 No. dynamic probes to a depth of 8.0BGL of which are located on-track (at window sample locations).	This rail project has been subject to the Appropriate Assessment process which concluded: "*It has been objectively concluded by Scott Cawley Ltd., following an examination, analysis and evaluation of the relevant information, including in particular the nature of the predicted impacts from the proposed works, that the proposed works will not adversely affect (either directly or indirectly) the integrity of any European site, either alone or in combination with other plans or projects.*" – Scott Cawley The proposed Fingal Coastal Way GI works and the previously consented Iarnród Éireann GI works both have potential connectivity to Rogerstown Estuary SAC and SPA. However, both projects comprise temporary, localised ground investigation activities of limited duration and scale, undertaken primarily to inform future design processes rather than construction works. The Iarnród Éireann project has been assessed through the Appropriate Assessment process and was concluded not to give rise to adverse effects on the integrity of any European site. Similarly, the proposed Fingal Coastal Way GI works have been demonstrated to have no potential to result in habitat loss, habitat degradation, hydrological impacts, deterioration in water quality or significant disturbance to SCI bird species. Given the small scale, temporary nature and absence of significant effects associated with either project, there is no mechanism by which impacts could interact cumulatively to affect Rogerstown Estuary SAC, Rogerstown Estuary SPA or any other European site. Accordingly, no likely significant in-combination effects are predicted.

Ref. No.	Project Applicant	Project Summary	In-combination Assessment
FCC Planning Ref: PARTXI/009/21	Fingal County Council, (Environment Department, Climate Action Division)	Balleally Landfill Site: ▪ Construction of a detached maintenance building to store vehicles and equipment used to operate and maintain Balleally Landfill Site. ▪ At roof level solar PV panels will be installed at each front and rear of the building. ▪ Roof lights will also be installed to allow natural light into the building. ▪ All associated site development works.	This project has been subject to the Appropriate Assessment Screening process which concluded: "*It is concluded beyond reasonable scientific doubt that there are not likely to be significant effects from the proposed development on any European sites, either alone or in combination with other plans or projects*" – Fehily Timoney Both this project and the proposed GI works have potential connectivity to Rogerstown Estuary SAC and SPA. However, the Balleally Landfill proposal relates to the construction of a small maintenance building and associated site works within an established operational facility and has been concluded through Appropriate Assessment Screening to have no likely significant effects on any European site. The proposed GI works are similarly temporary, localised and of limited extent. The projects do not overlap spatially, cannot affect the same habitats within Rogerstown Estuary and do not share any pathway capable of resulting in cumulative habitat loss, water quality deterioration or disturbance effects. As neither project independently gives rise to significant effects and no cumulative impact pathway exists between them, there is no potential for likely significant in-combination effects on Rogerstown Estuary SAC, Rogerstown Estuary SPA or any other European site.
ACP Ref: NA29N.320164	Iarnróid Éireann	DART + Coastal North Railway Order 2024 Northern Line between Dublin City Centre and Drogheda including the Howth Branch	This rail project has been subject to the Appropriate Assessment process which concluded: "*It has been objectively concluded by Scott Cawley Ltd., following an examination, analysis and evaluation of the relevant information, including in particular the nature of the predicted impacts from the Proposed Development and the effective implementation of the mitigation measures proposed, that the Proposed Development will not adversely affect (either directly or*

Ref. No.	Project Applicant	Project Summary	In-combination Assessment
			indirectly) the integrity of any European site, either alone or in combination with other plans or projects and there is no reasonable scientific doubt in relation to this conclusion." – Scott Cawley Both the DART+ Coastal North project and the proposed GI works have potential connectivity to Rogerstown Estuary SAC and SPA. The DART+ project has been subject to Appropriate Assessment and it was concluded that, with embedded mitigation, the project would not adversely affect the integrity of any European site, either alone or in combination with other plans or projects. The proposed GI works are temporary, highly localised and limited within the estuarine area to six small diameter boreholes within existing engineered infrastructure and will not result in habitat loss, habitat degradation, hydrological change or significant disturbance effects. Given the conclusions of the DART+ Appropriate Assessment and the absence of any significant effects associated with the proposed GI works, there is no potential for additive or cumulative effects to arise. Accordingly, no likely significant in-combination effects are predicted for Rogerstown Estuary SAC, Rogerstown Estuary SPA or any other European site.
ACP Ref:JA06F.324069	Application not identified in available documentation	Proposed development under sections 175 and 177AE of the Planning and Development Act 2000 (as amended) and the Planning and Development Regulations 2001-2005 (as amended) for proposed coastal and flood risk management works	The proposed coastal and flood risk management works have potential connectivity to Rogerstown Estuary SAC and SPA by virtue of their location within the wider coastal environment. However, the project will be subject to its own environmental assessment and Appropriate Assessment processes as required under the Planning and Development Act. The proposed Fingal Coastal Way GI works are temporary, localised and of very short duration, with no habitat loss, hydrological alteration or long-term disturbance effects identified. Given the limited nature of the GI works and their anticipated completion over approximately 3 to 4 weeks within the maritime area, there is no realistic potential for

Ref. No.	Project Applicant	Project Summary	In-combination Assessment
			the proposed works to interact cumulatively with the coastal and flood risk management project in a manner that would affect the conservation objectives of any European site. Consequently, no likely significant in-combination effects are predicted.

5.8 Likelihood of Significant Effects on Natura 2000 Sites

The assessment has demonstrated that the proposed ground investigation works in the Maritime Area are temporary, highly localised and limited in scale, comprising a small number of boreholes undertaken over a short duration, within existing engineered railway infrastructure and parkland. The works will not result in the loss, fragmentation or degradation of qualifying interest habitats within Rogerstown Estuary SAC, nor will they alter the tidal regime, hydrological processes, estuarine function or water quality. Furthermore, the nature and scale of the works are insufficient to generate significant emissions, sedimentation, noise or vibration effects capable of affecting qualifying interests within Rogerstown Estuary SAC or any other European site.

The assessment has also concluded that there is no likely potential for significant disturbance effects on SCI bird species associated with Rogerstown Estuary SPA, Malahide Estuary SPA or North-west Irish Sea SPA. While some waterbirds utilise the project area during the winter period, the works will be undertaken during the spring and summer months, outside the principal wintering season for SPA populations. The disturbance footprint is limited to a very small area of the estuary, with extensive alternative feeding and roosting habitat remaining available throughout Rogerstown Estuary. Any disturbance to occasional resident waterbirds would be temporary, highly localised and would not affect population viability or the conservation objectives of the SPAs.

The potential for effects on marine mammal qualifying interests was also considered and excluded. Rogerstown Estuary does not provide suitable habitat for marine mammals due to its shallow nature and extensive drainage during each tidal cycle. The proposed works will be undertaken largely during low tide conditions, when very little water is present, thereby greatly restricting any potential transmission of underwater noise or vibration. In addition, the separation distance to coastal waters and the intervening geographical barriers preclude any pathway for effects on marine mammals associated with coastal SACs.

The in-combination assessment identified no plans or projects capable of interacting with the proposed GI works to give rise to significant cumulative effects.

5.9 Consideration of Findings

On the basis of objective information and in view of best scientific knowledge and applying a precautionary principle, it is concluded by the authors of this report that with the absence of any mitigation measures the proposed Fingal Coastal Way Section 2 Ground Investigation project, either alone or in-combination with other plans or projects, will not result in likely significant effects on Rogerstown Estuary SAC, Rogerstown Estuary SPA, Malahide Estuary SPA, North-west Irish Sea SPA or any other European site. Thus, it is recommended that it is not necessary for the proposed ground investigation works project to proceed to Appropriate Assessment.

Should the scope, nature or extent of the proposed project change, a new assessment (AA Screening Report or AA Screening Addendum Report) would be required.

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WS Atkins Ireland Limited
Atkins House
150 Airside Business Park
Swords
Co. Dublin
K67 K5W4

Tel: +353 1 810 8000

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