



**An Roinn Tithíochta,
Rialtais Áitiúil agus Oidhreachta**
Department of Housing,
Local Government and Heritage

SCREENING FOR APPROPRIATE ASSESSMENT REPORT

Application No. FS006909

14th December 2022



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Statement of Authority

This Screening for Appropriate Assessment Report has been undertaken by Dr [REDACTED], an experienced marine ecologist with a wide range of experience from conservation, developing a quality index tool for Water Framework Directive, habitat mapping, aquaculture to deep water reef ecology. She completed a Ph.D. in the polychaete taxonomy and ecology in NUIG. Following which she undertook Post-Doctoral research on shallow water hydrothermal vent ecosystems at the Institute of Marine Biology of Crete. For the last 11 years she has worked with the National Parks and Wildlife Service as a marine ecologist where she developed the Site Specific Conservation Objectives for all marine Special Areas of Conservation. In this position she also reviewed Appropriate Assessments for Aquaculture Licences and, as part of the statutory process, drafted Departmental responses to these. She has considerable experience in the Habitats Directive, Article 6 Assessments and the case law pertaining to them.

With NPWS she developed and delivered Article 17 monitoring programmes for Annex I habitats and Annex V species. She is on the Natura 2000 Marine Expert Working Group, the OSPAR Benthic Habitats Expert Group and MSFD Integrated Monitoring Programme working group. She has been on a number of research steering groups including the NPWS/EPA co-funded CLEAR project on restoration of coastal lagoons, EcoSystem Services on the VIBES project and the Ecostructure project [<https://www.ecostructureproject.eu>]. She has been Ireland's representative on the Marine and Coastal Biodiversity expert working group for the UN Convention on Biodiversity.

1 Introduction

1.1 Project Overview

Fingal County Council proposes to develop the Broadmeadow Way, a new greenway (shared footpath and cycleway) between Malahide Demesne and Newbridge Demesne via the railway causeway across the Malahide Estuary (figure 1). The proposed greenway is c. 6km in length, much of which follows existing pathways and roads.

The proposed development will extend from the grounds of Malahide Demesne to the R106 Dublin Road, O’Hanlon’s Lane and Bissets Strand in Malahide, cross Malahide Estuary, cross the agricultural land at Kilcrea and terminate at Newbridge Demesne, Donabate.

A new cycle/footpath bridge will be built adjacent to the existing railway bridge and the shoulder of the western embankment of the northern railway causeway. Existing roads and the weir maintenance access track at either end of the railway bridged will be utilised.

1.2 Application documents submitted

The following documents were submitted by the applicant, Fingal County Council on the 2nd December 2021:

- i. Foreshore Application form dated 1st December 2021
- ii. Foreshore Lease Map dated 12.10.2020
- iii. Broadmeadow Way Location Plan dated 12.10.2020
- iv. Private Foreshore Consent Map Section 10 dated 12.10.2020
- v. Admiralty Chart Malahide Estuary dated 02.03.2021
- vi. Admiralty Chart Nose of Howth to Ballyquin Point dated 02.03.2021
- vii. National Marine Planning Framework Report dated 1st June 2022
- viii. Natura Impact Statement in Support of Appropriate Assessment dated May 2019
- ix. Risk Assessment for Annex IV dated 2nd June 2022
- x. ABP inspectors Report dated 23rd October 2019
- xi. ABP Reports Board Direction Dated 7th May 2020
- xii. Fluvio Report on Hydrodynamic Modelling of Weir dated July 2015

1.3 Application breakdown

Within this Foreshore application there are the following elements:

- Foreshore Lease Application for Consent under Section 2 of the Foreshore Act 1933
- Foreshore Application of Consent Section 10 of the Foreshore Act 1933
- Section 226 Planning and Development Act 2000
- Land Purchase at Bissett Strand for Broadmeadow Way Greenway Project

1.4 Legislative background and AA process

Under Article 6.3 of the Habitats Directive (92/43/EEC) Member States are required to consider the potential effects of any project or plan which is not directly connected with, or necessary to, the management of a European site but is likely to have a significant effect on the site before a decision can be made to allow the plan or project to proceed. In order to ascertain if the plan or project, either alone or in-combination with other plans or projects, is likely to have significant effects on a European site an Appropriate Assessment of the implications of the plan or project on the site’s conservation objectives is required. The first step in the process is screening to determine if an Appropriate Assessment is required.

Under the Foreshore Act, as amended, a lease or licence must be obtained from the Minister for Housing, Local Government & Heritage before carrying out activities within the Foreshore area. This area is defined as the HWM to the 12 nautical mile limit. As the Consenting Authority, the Department must carry out a screening for an Appropriate Assessment on any Foreshore application which may have significant effects on the conservation objectives of a European site. To enable the consenting authority to carry out its statutory obligations the applicant provides the Department with sufficient information to allow it to carry out a screening for an appropriate assessment.

This report presents the results of the Screening for Appropriate Assessment of the proposed project. It determines whether the proposed project, either alone or in-combination with other plans or projects, is likely to have significant effects on a European site. It will establish if a stage 2 appropriate assessment is required, thus meeting the Department's statutory obligations under the European Communities (Birds and Natural Habitats) Regulations 2011 to 2021 (the "Habitats Regulations"), to ensure compliance with the Habitats Directive (92/43/EEC).

1.4 Methodology

This report has been prepared with reference to the following guidelines and legislation:

- 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.
- Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (codified version).
- European Communities (Birds and Natural Habitats) Regulations 2011. SI No. 477 of 2011.
- Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC. European Commission 2019. Office for Official Publications of the European Communities, Luxembourg.
- Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities. DEHLG, 2009. Revision 2010.
- Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters. Department of Arts, Heritage and the Gaeltacht, 2014
- Appropriate Assessment Screening for Development Management OPR Practice Note PN01 March 2021
- Relevant case law

2 Project Description

2.1 Location

Fingal County Council proposes to develop the Broadmeadow Way the key parts of which include Malahide Demesne, Malahide village, the railway causeway across Malahide Estuary, Kilcrea townland, and Newbridge Demesne (figure 1). The proposed project area is approximately 12km².

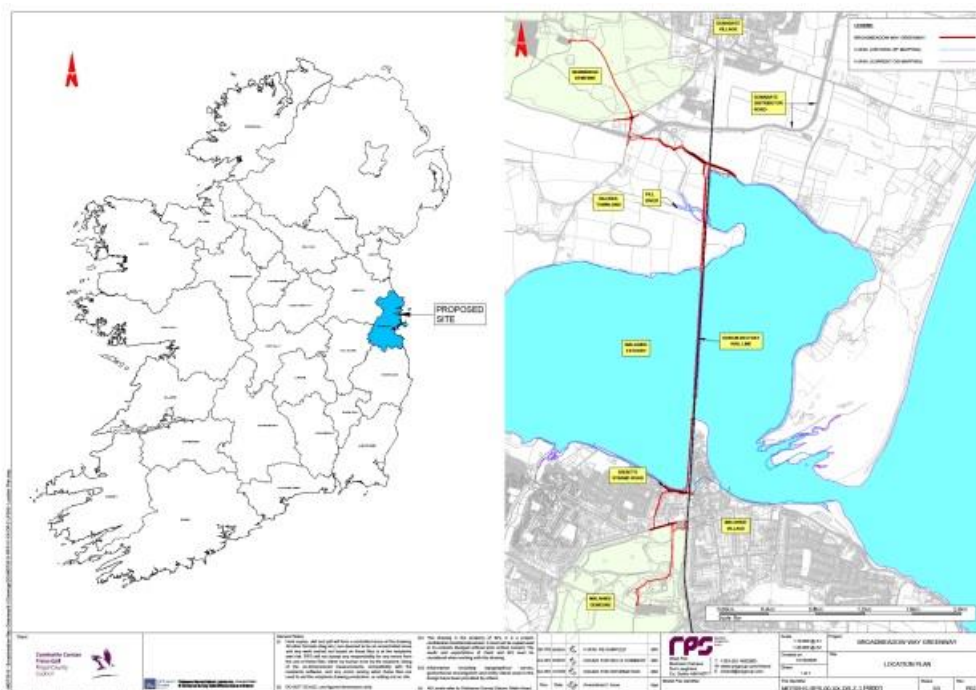


Figure 1 Site location map

2.2 Description of the receiving environment

The Foreshore element of the proposed project occurs within the Malahide Estuary. The proposed greenway travels from Malahide North toward Donabate running parallel to Dublin-Belfast railway line for much of its route. The railway line runs along an embankment which separates the inner Malahide Estuary from the outer Malahide Estuary. The inner estuary communicates with the outer estuary through a ~170m gap in the railway embankment coinciding with the railway viaduct. The tide moves in and out to the inner estuary at this point but the amount of exchange is controlled by a weir. The Broad Meadow and Ward Rivers join just north of the village of Swords and discharge into the Broadmeadow Water.

To the east of the railway line the intertidal area includes intertidal sea grass meadows and mussel beds. Such areas support a large overwintering waterfowl population. The inner estuary does not drain at low tide apart from the extreme inner part, here patches of saltmarsh and salt meadows occur.

2.3 Description of the proposed survey works

The overall development has been divided by the applicant into six sections with Sections 3 and 4 requiring a Foreshore Licence Application. It is planned that all of these construction works will be completed in 16 weeks with the works being carried out directly over the water being completed in eight weeks. It is planned that all of these construction works will be completed in 16 weeks. The works being carried out directly over the water will be completed in eight weeks.

- Section 1 – Malahide Demesne
- Section 2 – R106 Dublin Road, Malahide
- Section 3 – R106 Dublin Road to Bissets Strand
- Section 4 – Bissets Strand to the North Shore of Malahide Estuary
- Section 5 – North Shore of Malahide Estuary to R126 Hearse Road
- Section 6 – Newbridge Demesne development

The proposed greenway will typically be c.4m in width, other than sections where the proposed greenway is utilising existing public roads, tracks and pathways. The route will utilise existing paths at Malahide Demesne and Newbridge Demesne (Figure 1). The proposed development crosses the High Water Mark in a number of locations along the railway causeway and across the Pill River. The elements associated with the Foreshore include:

- The construction of approximately 260m of off-road shared pedestrian and cyclist facilities and associated landscaping and ancillary works on Bissets Strand.
- Works to facilitate a new greenway some 615m in length along the existing weir maintenance access track on the western embankment of the Dublin-Belfast railway causeway, extending north from Bissets Strand into Malahide Estuary, to include new surfacing, fencing, boundary walls, local stone fill, route lighting and signage, and a viewing area.
- Provision of a new 12-span pedestrian/cycleway bridge deck of approximately 180m in length on the existing piers located alongside the Dublin-Belfast railway bridge situated on the weir in Malahide Estuary.
- Works to facilitate a new greenway of approximately 1,000m in length along the shoulder of the western embankment of the Dublin-Belfast railway causeway, from the railway bridge on the weir in Malahide Estuary extending as far as the northern shoreline of Malahide Estuary at Kilcrea, to include new surfacing, fencing, boundary walls, local stone fill, route lighting and signage.
- Where not already provided, low-level illumination will be installed along the scheme for user comfort and safety.

3 Screening for Appropriate Assessment

3.1 Management of Natura 2000 site/s

Plans or projects that are directly connected with or necessary to the management of a Natura 2000 site do not require AA. The proposed project is not directly connected with or necessary for the management of a Natura 2000 site. Therefore this project is subject to screening for Appropriate Assessment to determine if it alone, or in-combination with other plans or projects, is likely to cause significant effects to a European site.

3.2 Identification of possible effects

A European site is only at risk of likely significant effects where the Source-Pathway-Receptor link exists between the proposed development and the European site (OPR 2021). Direct and indirect effects.

3.2.1. Annex I habitats

During the construction phase there is potential for increased risk of run-off and water turbidity, the introduction of contaminants, habitat removal or degradation, impact of normal tidal flow and the introduction of invasive species. During the operation phase there is the potential for introduction of litter and other waste material as a result of increased human presence. There is the risk of pollution, contamination or degradation of habitats during maintenance of the weir and greenway.

3.2.2 Annex II species

Marine mammals

Annex II species marine mammals which may use this area include the European otter, grey seal and harbour seal. The proposed project may result in the physical disturbance of these species in both the construction and operational stages of this project.

Migratory fish

The proposed project may have adverse effects on Annex II migration fish species as a result of increased run-off and water turbidity, the introduction of contaminants and changes to normal tidal flow.

3.2.3. Birds

Different seabird species exhibit varying sensitivities to noise. Some species, such as herring gull, lesser black-backed gull and to a lesser extent kittiwake, display habituated responses to additional anthropogenic noise. Other species groups, such as divers, are sensitive to anthropogenic disturbance (Furness *et al.*, 2012, Black *et al.*, 2015, Dierschke *et al.*, 2017, Fleissbach *et al.*, 2019).

Breeding seabirds nesting on shorelines or structures in proximity to human activities can be disturbed from their nests. Similarly other seabird aggregations or individual birds may be disturbed by presence of a vessel or on its approach (Althouse *et al.*, 2019, Furness *loc. cit.*, Dierschke *loc. cit.*, Fleissbach *loc. cit.*).

Wildfowl differentially respond to visual disturbance depending on their activity, the species concerned and context of the stimulus (Cutts *et al.*, 2013). In particular foraging or roosting aggregations of dabbling ducks or geese may be sensitive to visual disturbance. Waders respond differentially to visual disturbance depending on factors that include the species involved, flock size and context of their location (i.e. industrialised areas) (Cutts *loc. cit.*, Goss-Custard *et al.* 2019).

For coastal SPAs many of the qualifying interests are highly mobile and use resources in a number of coastal sites within the area. This is particularly the case with wintering waterbirds and waders which have long been understood to utilise a range of feeding and roosting sites throughout the overwintering period (Erwin 1983).

3.3 Identification of the relevant European site/s

Special Area of Conservations (SAC) were screened on the potential for connectivity between the proposed project and their qualifying interests. Potential connectivity was considered if there was overlap with the Foreshore Licence Application Area and an SAC (direct effects) or if the SAC was within range of the effects of the proposed activity (indirect effects).

3.3.1 Annex I habitats

As these works are being undertaken in the marine environment, using the Source-Pathway-Receptor model (OPR 2021), only the marine and coastal Annex I habitats were considered in this screening process.

The Foreshore Licence Application Area overlaps with Malahide Estuary SAC and is within 15km to the following SACs:

- Rogerstown Estuary SAC
- Rockabill to Dalkey SAC
- Ireland's Eye SAC
- Lambay Island SAC
- Baldoyle Bay SAC
- Howth Head SAC

The only likely source of impact is an increase in suspended solids concentrations (SSC) during the construction phase. Dispersion and dilution of SSC in the coastal waters will mean that the level reaching other SACs will be insignificant. Direct impacts may occur on the Malahide Estuary SAC as it overlaps with the proposed project. However as the next closest SAC, Rockabill to Dalkey SAC, is 6km away indirect impacts on other SACs is not significant.

3.3.2 Annex II species

Migratory fish

Once they leave freshwater salmon migrate to their feeding grounds in the northern Atlantic. Recent studies have found that salmon populations migrate towards oceanographic fronts for feeding (Rikardsen *et al.*, 2021). Salmon from northwest Spain and southeast Ireland appear to move out to the shelf edge before crossing the Atlantic towards Greenland. Barry *et al.* (2020) found that individuals from Irish rivers in the northeast migrate out of the Irish Sea through the North Channel into deeper offshore waters further north. Therefore only SACs along the eastern seaboard south of and in the vicinity of the works were considered to be in the Zone of Influence of the proposed project.

The Freshwater Pearl Mussel utilises Atlantic salmon at a certain stage in its life cycle, Sea lamprey is a predator of salmon (OSPAR 2009). Therefore it is considered that if the salmon is significantly impacted by an activity there is a possibility that these species may also be negatively affected. The Zone of Influence for these species was considered the same as that for Atlantic salmon. This logic was also applied to sea lamprey which is a predator of both shad and salmon (OSPAR 2009). Similarly only SACs designated for River lamprey in the east coasts of Ireland were considered further in the screening process.

Recent information on Twaité Shad recorded movement of up to 950km from the River Severn with one individual detected in the Blackwater Estuary (Davies *et al.* 2020). However given the spatial and temporal nature of the proposed works only those SAC designated for shad species on the east coast of Ireland are considered to have connectivity with the Application Area; more distant sites are considered too far for any significant interaction to occur.

Using the above criteria no SACs were identified as being within the Zone of Influence of the proposed project.

Marine mammals

After breeding most grey seals disperse away from their haul-out sites, therefore their usage of a particular SAC is very time and location specific. Therefore there is potential for interactions between grey seals and projects 200km distant from the SAC for which they are designated (e.g. Cronin *et al.*, 2011; SMRU Ltd, 2011; Russell and McConnell, 2014). In Ireland the foraging range for harbour seal ranges between 20km and 40km (Cronin 2010). However when reviewing the occurrences of these species in the Malahide Estuary, despite the proximity of Lambay Island for which both species are a qualifying interests, there are no records within the Malahide Estuary.

Otters are a semi-aquatic species who use the marine environment for foraging. Otters that forage on the coast have flexible foraging times linked to the tides. The Zone of Influence for this species is 20km along the shore.

In Ireland there are a number of SACs designated for the cetaceans, harbour porpoise and common bottlenose dolphin. These species are highly mobile, open water species and highly unlikely to occur within a shallow inlet such the Malahide Estuary. Therefore it is considered that there is no hydrological link to these species.

Using the above criteria no SACs were identified as being within the Zone of Influence of the proposed project.

Table 3.1 Special Area of Conservation (SAC) and their qualifying interests to be considered further in the screening process. **The QIs in red are screened in for Stage 2 Appropriate Assessment.**

Site and Code	Distance from Survey Area	Qualifying Interests	Screened In/Out	Potential source of impact
Malahide Estuary SAC [Site code IE000205]	overlap	Mudflats and sandflats not covered by seawater at low tide [1140] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]	In	Habitat modification, degradation during construction and operation phase.
Balydoyle Bay SAC [Site code IE000199]	6km	Mudflats and sandflats not covered by seawater at low tide [1140] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410]	Out	No Source-Pathway-Receptor link
Rockabill to Dalkey SAC [IE003000]	6km	Reefs [1170] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]	Out	No Source-Pathway-Receptor link
Ireland's Eye SAC [Site code IE002193]	8.5km	Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]	Out	No Source-Pathway-Receptor link to habitats
Rogerstown Estuary SAC [Site code IE000208]	9km	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 (<i>Glauco-Puccinellietalia maritima</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]	Out	No Source-Pathway-Receptor link to habitats

Site and Code	Distance from Survey Area	Qualifying Interests	Screened In/Out	Potential source of impact
Lambay Island SAC [Site code IE000204]	10km	Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Halichoerus grypus (Grey Seal) [1364] Phoca vitulina (Harbour Seal) [1365]	Out	No Source-Pathway-Receptor link
Howth Head SAC [Site code IE000202]	11km	Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] European dry heaths [4030]	Out	No Source-Pathway-Receptor link

3.3.3 Birds

A Special Protection Area (SPA) is considered to have connectivity if it either overlaps with the Foreshore Licence Application Area or is within 15km of this area. It should be noted that the proposed project is associated with an existing road and railway corridor which is heavily used by people.

It is acknowledged that seabirds generally have large foraging ranges (Woodward *et al.* 2019) and may occasionally occur in the Foreshore Licence Application Area from more distant SPAs. If the survey area represents the outer extent of the foraging range of species, such as Manx Shearwater which have very large ranges, then the connectivity between it and SPAs for which the species is an SCI is considered to be insignificant.

Different seabird species exhibit varying sensitivities to noise. Some species, such as herring gull, lesser black-backed gull and to a lesser extent kittiwake, display habituated responses to additional anthropogenic noise. Other species groups, such as divers, are sensitive to anthropogenic disturbance (Furness *et al.*, 2012, Black *et al.*, 2015, Dierschke *et al.*, 2017, Fleissbach *et al.*, 2019). Fulmar, Shag, Guillemot, Razorbill and Puffin generally move offshore to feed on occasion make use of inshore waters along the coast from Howth northwards to Malahide.

Wintering estuarine species (waders and waterfowl) which are SCIs for an SPA may move between estuarine areas and therefore utilise estuarine habitats outside of the SPAs in which they are listed as SCIs. This is likely to happen most frequently between estuarine areas that are within close proximity to the SPA for which they are designated. Therefore if such areas are within 1km of the Foreshore Licence Application Area and within 15km of their designated SPA it is considered that there is potential for those wintering estuarine species to be affected by the proposed activity.

Disturbance and displacement of species may have consequences at individual and population levels (Joint SNCB note 2017). The survey works may also have effects on the prey species of these birds, reducing their availability which may then adversely affect survival and productivity.

Wildfowl differentially respond to visual disturbance depending on their activity, the species concerned and context of the stimulus (Cutts *et al.*, 2013). In particular foraging or roosting aggregations of dabbling ducks or geese may be sensitive to visual disturbance. Waders respond differentially to visual disturbance depending on factors that include the species involved, flock size and context of their location (i.e. industrialised areas) (Cutts *loc. cit.*, Goss-Custard *et al.* 2019).

Using the above criteria the following SPAs were considered to be within the Zone of Influence of the proposed project:

- Malahide Estuary SPA
- Lambay Island SPA
- Ireland's Eye SPA
- Rogerstown Estuary SPA
- Howth Head Coast SPA
- Bull Island SPA
- Baldoyle Bay SPA
- Skerries Islands SPA

Table 3.1 Special Protection Areas (SPA) and their qualifying interests to be considered further in the screening process.

Site and Code	Distance from Survey Area	Qualifying Interests	Screened In/Out	Potential source of impact
Malahide Estuary SPA [IE004025]	overlap	Great Crested Grebe [A005] Light-bellied Brent Goose [A046] Shelduck [A048] Pintail [A054] Goldeneye [A067] Red-breasted Merganser [A069] Oystercatcher [A130] Golden Plover [A140] Grey Plover [A141] Knot [A143] Dunlin [A149] Black-tailed Godwit [A156] Bar-tailed Godwit [A157] Redshank [A162] Wetland and Waterbirds [A999]	In	Disturbance during construction and operational phase. Increased inundation of inner estuary due to works on weir will reduce time that intertidal are exposed for birds to feed.
Lambay Island SPA [IE004069]	9km	Fulmar [A009] Cormorant [A017] Shag [A018] Greylag Goose [A043] Lesser Black-backed Gull [A183] Herring Gull [A184] Kittiwake [A188] Guillemot [A199] Razorbill [A200] Puffin [A204]	In	Disturbance during construction and operational phase of birds that may utilise the Malahide Estuary.
Rogerstown Estuary SPA [IE004015]	4.5km	Greylag Goose [A043] Light-bellied Brent Goose [A046] Shelduck [A048] Shoveler [A056] Oystercatcher [A130] Ringed Plover ([A137] Grey Plover [A141] Knot [A143] Dunlin [A149] Black-tailed Godwit [A156] Redshank [A162]	In	Disturbance during construction and operational phase of birds that may utilise the Malahide Estuary.
		Wetland and Waterbirds [A999]	Out	No Source-Pathway-Receptor link

Site and Code	Distance from Survey Area	Qualifying Interests	Screened In/Out	Potential source of impact
Ireland's Eye SPA [IE004117]	8km	Cormorant [A017] Herring Gull [A184] Kittiwake [A188] Guillemot [A199] Razorbill [A200]	In	Disturbance during construction and operational phase.
Howth Head Coast SPA [IE004113]	10km	Kittiwake [A188]	Out	Pelagic, very rarely recorded in Malahide Estuary.
Bull Island SPA [IE004006]	8km	Light-bellied Brent Goose [A046] Shelduck [A048] Teal [A052] Pintail [A054] Shoveler [A056] Oystercatcher [A130] Golden Plover [A140] Grey Plover [A141] Knot [A143] Sanderling [A144] Dunlin [A149] Black-tailed Godwit [A156] Bar-tailed Godwit [A157] Curlew [A160] Redshank [A162] Turnstone [A169] Black-headed Gull [A179]	In	Disturbance during construction and operational phase.
		Wetland and Waterbirds [A999]	Out	No Source-Pathway-Receptor link
Baldoyle Bay SPA [IE004016]	4.5km	Light-bellied Brent Goose [A046] Shelduck [A048] Ringed Plover [A137] Golden Plover [A140] Grey Plover [A141] Bar-tailed Godwit [A157]	In	Disturbance during construction and operational phase.
		Wetland and Waterbirds [A999]	Out	No Source-Pathway-Receptor link
Skerries Islands SPA [IE004122]	13km	Cormorant [A017] Shag [A018] Light-bellied Brent Goose [A046] Purple Sandpiper [A148] Turnstone [A169] Herring Gull [A184]	In	Disturbance during construction and operational phase.

3.4 Assessment of Likely Significant Effects

3.4.1 Annex I Habitats

At the construction phase there is the possibility of increases in suspended sediment concentrations, the introduction of contaminants or invasive alien species, disruption of normal tidal flow, and habitat removal or degradation. In the operational phase there is a risk of pollution during maintenance and as a result of waste due the increased presence of humans in the area. These effects however will be confined to the Malahide Estuary. The possibility of likely significant effects on the Annex I habitats in the Malahide Estuary SAC as a result of the proposed project **cannot be excluded**.

3.4.2 Annex II species

The effects of the works are confined to the Malahide Estuary SAC and therefore as there are no species designated for this site the possibility of likely significant effects as a result of the proposed project on Annex II species **can be excluded**.

3.4.2 Birds

During the construction and operational phase disturbance to the qualifying interests of the Malahide Estuary SPA is likely. Waders and wintering species utilise a range of feeding and roosting sites throughout the overwintering period (Erwin, 1982) and therefore move between the surrounding coastal SPAs. Therefore likely significant effects as a result of the proposed project on a number of SPAs, namely Malahide Estuary SPA, Lambay Island SPA, Ireland's Eye SPA, Rogerstown Estuary SPA, Bull Island SPA, Baldoyle Bay SPA and Skerries Islands SPA **cannot be excluded**.

3.4.3 In-combination effects

Article 6(3) of the Habitats Directive requires that an Appropriate Assessment be carried out in respect of any plan or project which is likely to have a significant effect on one or more European sites, either individually or in combination with other plans or projects. Therefore, regardless of whether or not the likely effects of a plan or project are significant when considered in isolation, the potential for the plan or project to significantly affect European sites in combination with other past, present or foreseeable future plans or projects must also be assessed.

A comprehensive list of possible historic and current projects for consideration of in-combination effects is listed in the applicant's Natura Impact Statement in Support of Appropriate Assessment dated May 2019. A further search of Department's Foreshore applications web site and Fingal County Council web site was undertaken on the 8th of December 2022. No addition plans or projects were identified at this time.

A review of current plans and projects assessed that likely significant effect on the conservation objectives of Natura 2000 sites considered in this report as a result of in-combination effects with the proposed project **can be excluded**.

4. Conclusion

4.1 Appropriate Assessment Screening Conclusion

The qualifying interests of European sites which may experience likely significant effects as a result of the proposed project were identified using the Source-Pathway-Receptor approach.

Habitat modification and degradation during construction and operation phase could not be discounted for the Annex I habitats of Malahide Estuary SAC. Disturbance during construction and operational phase could not be discounted for the qualifying interests of Malahide Estuary SPA. Similarly qualifying interests of other SPAs which utilise the Malahide Estuary as a roosting or feeding resource could not be discounted. These included the following SPAs:

- Lambay Island SPA
- Ireland's Eye SPA
- Rogerstown Estuary SPA
- Bull Island SPA
- Baldoyle Bay SPA
- Skerries Islands SPA

It is concluded that likely significant effects as a result of this project on the conservation objectives of European sites cannot be excluded and therefore an Appropriate Assessment is required.

5. References

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6. Site Specific Conservation Objectives

All others are Version 1 of the site specific conservation objectives which were on NPWS's website at the time of writing. Site specific conservation objectives were not available for Cardigan Bay/ Bae Ceredigion [UK 0012712], Bristol Channel Approaches / Dynesfeydd Môr Hafren UK0030396 or any of the French sites at time of writing.

Kilkieran Bay and Islands IE002111

https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002111.pdf

Slyne Head Islands SAC IE000328

https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000328.pdf

Slyne Head Peninsula SAC IE002074

https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002074.pdf

Connemara Bog Complex SAC IE002034

https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002034.pdf

West Connacht Coast SAC IE002998

https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002998.pdf

Inishbofin and Inishshark SAC Site code IE000278

https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000278.pdf

Duvillaun Islands SAC IE000495

https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000495.pdf

Inishkea Islands SAC IE000507

https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000507.pdf

Blasket Islands SAC IE002172

https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002172.pdf

Slieve Tooley/Tormore Island/Loughros Beg Bay SAC IE000190

https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000190.pdf

Roaringwater Bay and Islands SAC IE000101

https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000101.pdf

Rockabill to Dalkey SAC IE003000

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

North Anglesey Marine / Gogledd Môn Forol UK0030398

<https://data.jncc.gov.uk/data/f4c19257-2341-46b3-8e29-49665cd8f3d2/NorthAnglesey-Conservation-Advice.pdf>

North Channel UK0030399

<https://data.jncc.gov.uk/data/be0492aa-f1d6-4197-be22-e9a695227bdb/NorthChannel-conservation-advice.pdf>

West Wales Marine / Gorllewin Cymru Forol UK0030397

<https://data.jncc.gov.uk/data/029e40f3-5f67-4168-b10d-8730f2c40e0a/WWM-conservation-advice.pdf>