

SCREENING REPORT

IN SUPPORT OF THE
APPROPRIATE ASSESSMENT
OF THE
**TURVEY AVENUE ENHANCEMENT, DONABATE
Co. DUBLIN**

IN ACCORDANCE WITH THE REQUIREMENTS OF
ARTICLE 6(3) OF THE EU HABITATS DIRECTIVE

prepared for
OCSC



on behalf of
Fingal County Council



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Table of Contents

1 Introduction	1
1.1 Background	1
1.2 Legislative Context.....	1
2 Description of the Proposed Enhancements to Turvey Avenue, Donabate.....	3
2.1 Receiving Environment.....	3
2.2 Proposed Road Works and Footpath Upgrades.....	3
3 Screening for Appropriate Assessment.....	5
3.1 Introduction	5
3.2 Identification of Relevant European sites	5
3.3 Assessment Criteria.....	16
3.4 Characterising Potential Significant Effects.....	17
3.5 Other Plans and Programmes	31
4 Conclusion	34

List of Tables

Table 3.1 European sites within 15 km of the proposed works boundary (listed according to distance)	9
Table 3.2 Screening assessment of the potential effects arising from the proposed works	20
Table 3.3 Plans or projects within the ZOI of the proposed works that may have in-combination effect	32

List of Figures

Figure 2.1 Location of the proposed development site.....	3
Figure 3.1 European sites within 15 km of the proposed works boundaries.....	7
Figure 3.2 European sites and EPA Rivers and Catchments	8

1 Introduction

1.1 Background

Environmental Impact Services (EIS) has been appointed by O'Connor Sutton Cronin & Associates Multidisciplinary Consulting Engineers (OSCO) on behalf of Fingal County Council to prepare this Screening Report in support of the Appropriate Assessment (AA) of the proposed Turvey Avenue enhancement, Co. Dublin in accordance with the requirements of Article 6(3) of Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) (hereafter referred to as the "Habitats Directive").

1.2 Legislative Context

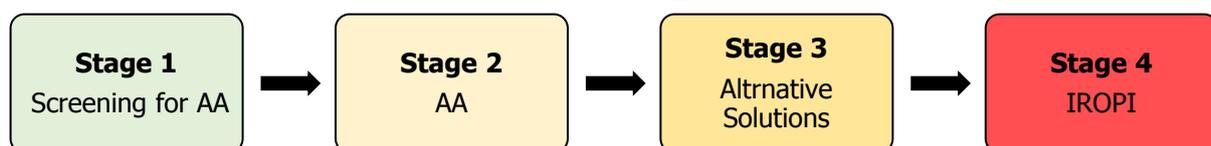
The Habitats Directive provides legal protection for habitats and species of European importance. The overall aim of the Habitats Directive is to maintain or restore the "favourable conservation status" of habitats and species of European Community Interest. These habitats and species are listed in the Habitats and Birds Directives (Habitats Directive as above and Directive 2009/147/EC on the conservation of wild birds) with Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) designated to afford protection to the most vulnerable of them. These two designations are collectively known as European sites. Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect such sites. Article 6(3) establishes the requirement for AA. These requirements are implemented in the Republic of Ireland by the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) and the Planning and Development Act 2000 (as amended).

This AA screening is based on best scientific knowledge and has utilised ecological and hydrological expertise. In addition, a detailed online review of published scientific literature and 'grey' literature was conducted. This included a detailed review of the National Parks and Wildlife Website including mapping and available reports for relevant sites and in particular sensitive qualifying interests/special conservation interests described and their conservation objectives. The EPA Envision map viewer (www.epa.ie) and available reports were also reviewed, as was the NPWS (2013) publication "*The Status of Protected EU Habitats and Species in Ireland*".

The ecological desktop study completed for the AA screening of the proposed development comprised the following elements:

- Identification of European sites within 15 km of the proposed project boundary with identification of potential pathways links for specific sites (if relevant) greater than 15 km from the proposed project boundary;
- Review of the NPWS site synopses and conservation objectives for European sites within 15 km and for which potential pathways from the proposed site have been identified; and
- Examination of available information on protected species.

There are four main stages in the AA process as follow:



Stage One: Screening

The process that identifies the likely impacts upon a European site of a project or plan, either alone or in combination with other projects or plans and considers whether these impacts are likely to be significant.

Stage Two: Appropriate Assessment

The consideration of the impact on the integrity of the European site of the project or plan, either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts. If adequate mitigation is proposed to ensure no significant adverse impacts on European sites, then the process may end at this stage. However, if the likelihood of significant impacts remains, then the process must proceed to Stage Three.

Stage Three: Assessment of Alternative Solutions

The process that examines alternative ways of achieving the objectives of the project or plan that avoids adverse impacts on the integrity of the European site.

Stage Four: Assessment where no alternative solutions exist and where adverse impacts remain

An assessment of compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the project or plan should proceed.

The Habitats Directive promotes a hierarchy of avoidance, mitigation and compensatory measures. This approach aims to avoid any impacts on European sites by identifying possible impacts early in the plan or project making process and avoiding such impacts. Second, the approach involves the application of mitigation measures, if necessary, during the AA process to the point where no adverse impacts on the site(s) remain. If potential impacts on European sites remain, and no further practicable mitigation is possible, the approach requires the consideration of alternative solutions. If no alternative solutions are identified and the plan or project is required for imperative reasons of overriding public interest, then compensation measures are required for any remaining adverse effects.

Ecological impact assessment of potential effects on European sites is conducted following a standard source-pathway-receptor model, where, in order for an effect to be established all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism is sufficient to conclude that a potential effect is not of any relevance or significance.

- Source(s) – e.g. pollutant run-off from proposed works;
- Pathway(s) – e.g. groundwater connecting to nearby qualifying wetland habitats and
- Receptor(s) – qualifying aquatic habitats and species of European sites.

In the interest of this report, receptors are the ecological features that are known to be utilised by the qualifying interests or special conservation interests of a European site. A source is any identifiable element of the proposed sports facility provision that is known to interact with ecological processes. The pathways are any connections or links between the source and the receptor. This report provides information on whether direct, indirect and cumulative adverse effects could arise from the proposed sports facility.

The AA Screening exercise has been prepared taking into account legislation including the aforementioned legislation and guidance including the following:

- *Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities, Department of the Environment, Heritage and Local Government, 2009.*
- *Commission Notice: Managing Natura 2000 sites - The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, European Commission 2018.*
- *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, European Commission Environment DG, 2002.*
- *Managing Natura 2000 sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC, European Commission, 2000.*

2 Description of the Proposed Enhancements to Turvey Avenue, Donabate

2.1 Receiving Environment

The site is located on Turvey Avenue which connects the R132 to the R126 in Donabate, Co. Dublin. It runs from the Turvey Drive junction for 120 m in an east to west direction towards the town of Donabate. The site is outlined in red on the site location map.

The site is in an urban landscape that is surrounded by agricultural land dominated by arable crops (BC1) and there are some small areas of mixed woodland (WD2). The existing roads are lined with hedgerows (WL1), treelines (WL2), amenity grassland (GA2), dry meadows and grassy verges (GS2) and residential gardens (BC4). The site is immediately northeast of Newbridge Demesne (WD5). The site is approximately 1.25 km south of Rogerstown Estuary SAC and SPA and approximately 1.18 km north of the Malahide Estuary SAC and SPA.

The closest surface water feature is the Turvey River which is approximately 685 m south of the site, and flows into the Malahide Estuary. Its status is currently unassigned by the EPA.

There were no annex I habitats identified on site. The important ecological features identified on the proposed enhancement sites are treelines, hedgerows and birds. There were no Annex I or Annex II species identified on site.



Figure 2.1 Location of the proposed development site

2.2 Proposed Road Works and Footpath Upgrades

Pathways along the Turvey Avenue site are to be enhanced, providing a pedestrian link to Turvey Drive through a 2 m footpath. The key elements of the project design include features such as:

- Providing a 2.0m wide footpath to the northside of Turvey Avenue

- Existing horizontal alignment maintained
- Impact on the following Plots:
 - Plot 6 – Hedge/Grassed Area removed
 - Plot 7 – Hedge/Grassed Area removed
 - Plot 8 – Hedge, wall and gate set back
 - Plot 9 – Walls and gate set back
 - Plot 10 – Walls and gate set back
 - Plot 11 – Section of wall set back
- All walls to be re-built the same as existing

The operational phase of the project will be the upgrade of the road at the site. The nature and extent of the proposed development is outlined in the associated planning application. This AA Screening Report should be read in conjunction with the supporting drawings and reports.

3 Screening for Appropriate Assessment

3.1 Introduction

This stage of the process identifies any likely significant effects to European sites from a project or plan, either alone or in combination with other projects or plans. The screening phase was progressed in the following stages. A series of questions are asked during the Screening Stage of the AA process in order to determine:

- Whether a plan or project can be excluded from AA requirements because it is directly connected with or necessary to the management of a European Site.
- Whether the project will have a potentially significant effect on a European Site, either alone or in combination with other projects or plans, in view of the site's conservation objectives or if residual uncertainty exists regarding potential impacts.

An important element of the AA process is the identification of the "conservation objectives", "Qualifying Interests" (QIs) and/ or "Special Conservation Interests" (SCIs) of European sites requiring assessment. QIs are the habitat features and species listed in Annexes I and II of the Habitats Directive for which each European Site has been designated and afforded protection. SCIs are wetland habitats and bird species listed within Annexes I and II of the Birds Directive. It is also vital that the threats to the ecological / environmental conditions that are required to support QIs and SCIs are considered as part of the assessment.

Site-Specific Conservation Objectives (SSCOs) have been designed to define favourable conservation status for a particular habitat or species at that site. According to the European Commission interpretation document 'Managing Natura 2000 sites: The provisions of Article 6 of the Habitats Directive 92/43/EEC', paragraph 4.6(3) states:

"The integrity of a site involves its ecological functions. The decision as to whether it is adversely affected should focus on and be limited to the site's conservation objectives."

Favourable conservation status of a habitat is achieved when:

- Its natural range, and area it covers within that range, are stable or increasing;
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future; and
- The conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats;
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future; and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.
- of the Appropriate Assessment where they were deemed relevant to the European sites and their QIs/SCIs.

3.2 Identification of Relevant European sites

This section of the screening process describes the European sites which exist within the Zone of Influence (ZOI) of the site. The Department of the Environment (2009) Guidance on AA recommends a 15 km buffer zone to be considered. A review of all sites within the ZOI has allowed a determination to be made that in the absence of significant hydrological links the characteristics of the proposed works will not impose effects beyond the 15 km ZOI.

European sites that occur within 15 km of the proposed works is listed in Table 3.1 and illustrated in Figure 3.1 below. Details on the specific QIs and SCIs of each European Site are also identified in Table 3.1 as well as site-specific threats and vulnerabilities of each of the sites.

In order to determine the potential for effects from the proposed works, information on the qualifying features, known vulnerabilities and threats to site integrity pertaining to any potentially affected European sites was reviewed. Background information on threats to individual sites and vulnerability of habitats and species that was used during this assessment included the following:

- Ireland's Article 17 Report to the European Commission "*Status of EU Protected Habitats and Species in Ireland*" (NPWS, 2013);
- Site Synopses¹; and
- NATURA 2000 Standard Data Forms¹.

The assessment takes consideration of the SSCOs of each of the sites within the ZOI. Since the conservation objectives for the European sites focus on maintaining the favourable conservation condition of the QIs/SCIs of each site, the screening process concentrated on assessing the potential effects of the proposed works against the QIs/SCIs of each site. The conservation objectives for each site were consulted throughout the assessment process.

Conservation objectives that have been considered by the assessment are included in the following NPWS documents:

- (2013) Conservation objectives for Rogerstown Estuary SPA [0040115]. Version 1.
- (2013) Conservation objectives for Rogerstown Estuary SAC [000208]. Version 1.
- (2013) Conservation Objectives for Malahide Estuary SAC [000205]. Version 1.
- (2013) Conservation Objectives for Malahide Estuary SPA [004025]. Version 1.
- (2013) Conservation Objectives for Rockabill to Dalkey Island SAC [003000]. Version 1.
- (2013) Conservation Objectives for Lambay Island SAC [000204]. Version 1.
- (2018) Conservation objectives for Lambay Island SPA [004069]. Generic Version 6.0.
- (2012) Conservation Objectives: Baldoyle Bay SAC 000199. Version 1.0.
- (2013) Conservation Objectives: Baldoyle Bay SPA 004016. Version 1.
- (2018) Conservation objectives for Skerries Islands SPA [004122]. Generic Version 6.0.
- (2013) Conservation Objectives for Rockabill SPA [004014]. Version 1.
- (2018) Conservation objectives for Ireland's Eye SPA [004117]. Generic Version 6.0.
- (2017) Conservation Objectives for Ireland's Eye SAC [002193]. Version 1.
- (2013) Conservation Objectives for North Dublin Bay SAC [000206]. Version 1.
- (2015) Conservation Objectives for North Bull Island SPA [004006]. Version 1.
- (2016) Conservation Objectives for Howth Head SAC [000202]. Version 1.
- (2018) Conservation objectives for Howth Head Coast SPA [004113]. Generic Version 6.0.
- (2015) Conservation Objectives for South Dublin Bay and River Tolka Estuary SPA [004024]. Version 1.

¹ NPWS (2019); NPWS Database of protected site data and associated documents for each European site; available at <https://www.npws.ie/protected-sites>

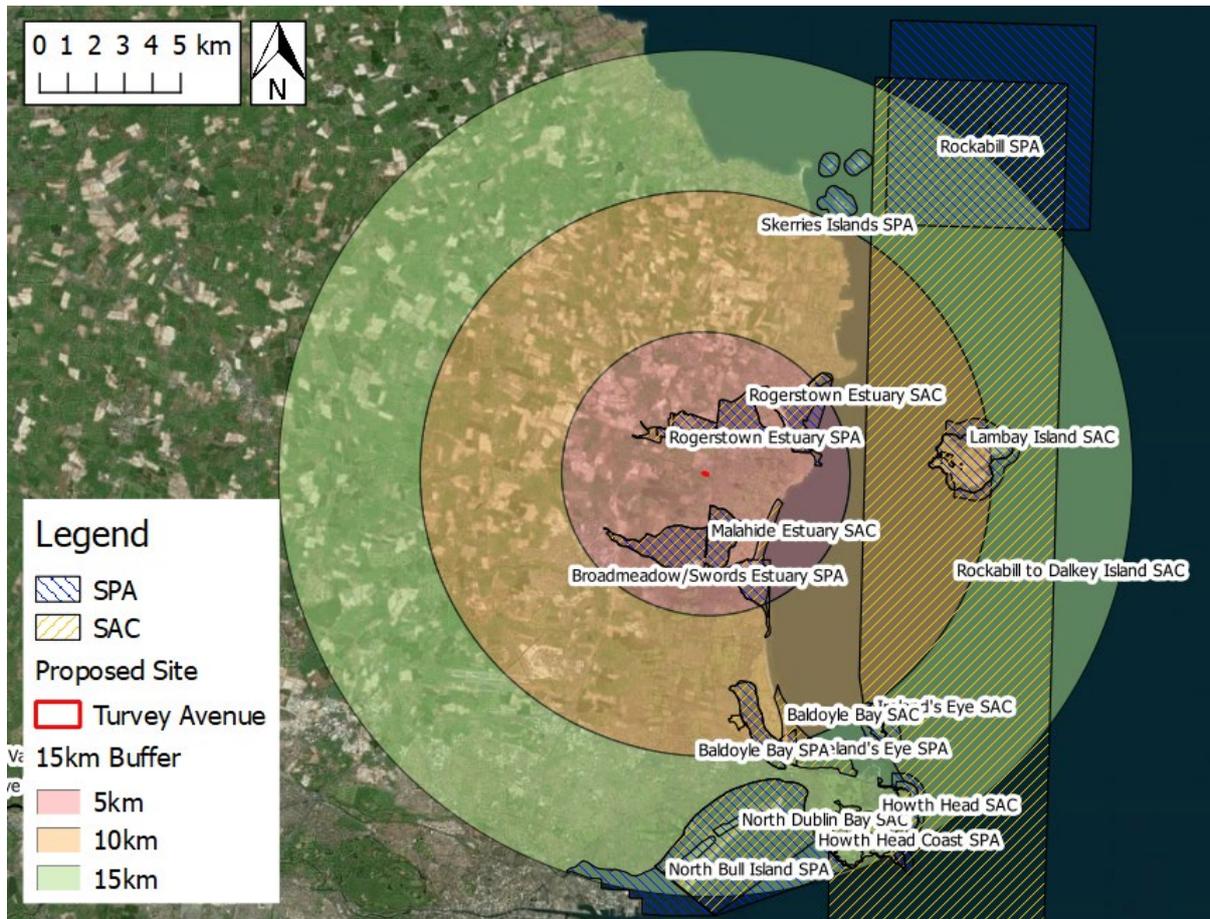


Figure 3.1 European sites within 15 km of the proposed works boundaries

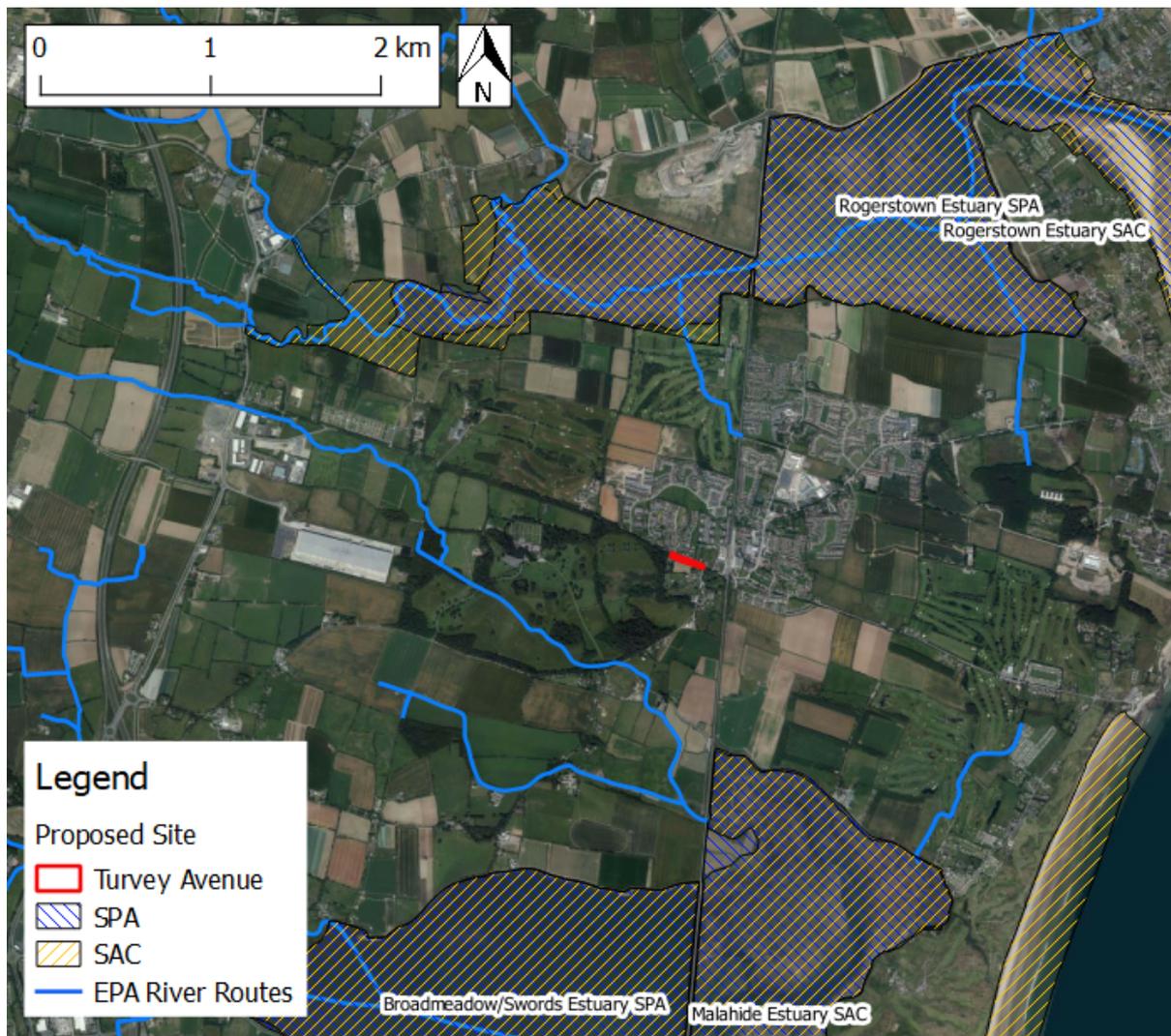


Figure 3.2 European sites and EPA Rivers and Catchments

Table 3.1 European sites within 15 km of the proposed works boundary (listed according to distance)

Site Code	Site Name	Distance (km)	Sensitive Receptors (Qualifying Interests & Special Conservation Interests) [including the relevant code for the qualifying feature]	Site Synopsis and Existing Threats or Sensitivities
000205	Malahide Estuary SAC	1.18	Mudflats and sandflats not covered by seawater at low tide [1140] <i>Salicornia</i> 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]	<p>Malahide Estuary is situated immediately north of Malahide and east of Swords in Co. Dublin. It is the estuary of the River Broadmeadow. The site is divided by a railway viaduct. This site is a fine example of an estuarine system with all the main habitats represented such as sand and mud flats, sand dunes, salt marshes and salt meadows and rocky shore. The outer part of the estuary is mostly cut off from the sea by a large sand spit, known as 'the island'. The outer estuary drains almost completely at low tide, while the inner estuary does not, tide apart from the extreme inner part. The rocky shore that extends towards Portmarnock represents the only continuous section through the fossiliferous Lower Carboniferous rocks in the Dublin Basin, and is the type locality for several species of fossil coral. The estuary is an important ornithological site. Up to the 1950s there was a major tern colony at the southern end of the island and the habitat remains suitable for these birds.</p> <p>The standard data form for the site details a list of potential threats for the site such as recreational activities, infrastructure, hunting and invasive species. All of these pressures are identified within the boundary. The site synopsis identifies pressures beyond the site boundary including urbanisation, fertilisation and a golf course. Land reclamation has identified as a threat both inside and outside the boundary. No other site-specific threats have been identified by the NPWS.</p>
004025	Malahide Estuary SPA	1.19	Great Crested Grebe (<i>Podiceps cristatus</i>) [A005] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Shelduck (<i>Tadorna tadorna</i>) [A048] Pintail (<i>Anas acuta</i>) [A054] Goldeneye (<i>Bucephala clangula</i>) [A067] Red-breasted Merganser (<i>Mergus serrator</i>) [A069] Oystercatcher (<i>Haematopus ostralegus</i>) [A130] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Grey Plover (<i>Pluvialis squatarola</i>) [A141] Knot (<i>Calidris canutus</i>) [A143] Dunlin (<i>Calidris alpina</i>) [A149] Black-tailed Godwit (<i>Limosa limosa</i>) [A156] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Redshank (<i>Tringa totanus</i>) [A162] Wetland and Waterbirds [A999]	<p>Malahide Estuary is situated immediately north of Malahide and east of Swords in Co. Dublin. It is the estuary of the River Broadmeadow. The site is divided by a railway viaduct. This site is a fine example of an estuarine system with all the main habitats represented such as sand and mud flats, sand dunes, salt marshes and salt meadows and rocky shore. The estuary provides both feeding and roosting areas for a range of wintering waterfowl. The lagoonal nature of the inner estuary is of particular value as it increases the diversity of birds which occur. The site is of high conservation importance, with internationally important populations of Light-bellied Brent Goose and Black-tailed Godwit, and nationally important populations of a further 12 species.</p> <p>The standard data form for the site details a list of potential threats for the site such as recreational activities, infrastructure, invasive species. All of these pressures are identified within the boundary. The site synopsis identifies pressures beyond the site boundary including urbanisation, commercial areas and infrastructure. Land reclamation and a railway have been identified as a threat both inside and outside the boundary. No other site-specific threats have been identified by the NPWS.</p>

000208	Rogerstown Estuary SAC	1.25	<p>Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] <i>Salicornia</i> 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]</p>	<p>Rogerstown Estuary is situated about 2km north of Donabate in north County Dublin. It is a relatively small, funnel shaped estuary separated from the sea by a sand and shingle peninsula; the site extends eastwards to include an area of shallow marine water. The estuary has a wide salinity range, from near full seawater to near full freshwater. It is divided by a causeway and narrow bridge, that carries the Dublin-Belfast railway line. At low tide extensive intertidal sand and mud flats are exposed. Salt meadows and wet brackish fields occur along the tidal river. Low sand hills occur on the outer spit, including some small areas of fixed dunes and Marram Grass dunes. Fine sandy beaches and intertidal sandflats occur at the outer part of the estuary. Two plant species which are legally protected under the Flora (Protection) Order, 1999, occur within the site: Hairy Violet (<i>Viola hirta</i>) and Meadow Barley (<i>Hordeum secalinum</i>).</p> <p>The standard data form for the site details a list of potential threats for the site such as bait-digging, erosion, sea defences, fire suppression and invasive species. All of these pressures are identified within the boundary. Pressures identified by the NPWS outside the boundary include roads infrastructure, application of fertiliser/chemicals and waste resulting in discharges. Recreational activities and grazing have been identified as threats both inside and outside the boundary. No other site-specific threats have been identified by the NPWS.</p>
444015	Rogerstown Estuary SPA	1.31	<p>Greylag Goose (<i>Anser anser</i>) [A043] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Shelduck (<i>Tadorna tadorna</i>) [A048] Shoveler (<i>Anas clypeata</i>) [A056] Oystercatcher (<i>Haematopus ostralegus</i>) [A130] Ringed Plover (<i>Charadrius hiaticula</i>) [A137] Grey Plover (<i>Pluvialis squatarola</i>) [A141] Knot (<i>Calidris canutus</i>) [A143] Dunlin (<i>Calidris alpina</i>) [A149] Black-tailed Godwit (<i>Limosa limosa</i>) [A156] Redshank (<i>Tringa totanus</i>) [A162] Wetland and Waterbirds [A999]</p>	<p>Rogerstown Estuary is situated about 2 km north of Donabate in north County Dublin. It is a relatively small, funnel shaped estuary separated from the sea by a sand and shingle peninsula; the site extends eastwards to include an area of shallow marine water. At low tide extensive intertidal sand and mud flats are exposed. The site is important for winter waterfowl, wading birds and scarce migrants. It is an important link in the chain of estuaries on the east coast.</p> <p>The standard data form for the site details a list of potential threats for the site such as water sports, bait-digging, grazing and invasive species. All of these pressures are identified within the boundary. Pressures identified by the NPWS outside the boundary include land reclamation, grazing, fertilisation, recreational activities and disposal of waste resulting in discharges. No other site-specific threats have been identified by the NPWS.</p>
003000	Rockabill to Dalkey Islands SAC	5.52	<p>Reefs [1170] Harbour Porpoise (<i>Phocoena phocoena</i>) [1351]</p>	<p>This site includes a range of dynamic inshore and coastal waters in the western Irish Sea. These include sandy and muddy seabed, reefs, sandbanks and islands. This site extends southwards, in a strip approximately 7 km wide and 40 km in length, from Rockabill, running adjacent to Howth Head, and crosses Dublin Bay to Frazer Bank in south Co. Dublin. The site encompasses Dalkey, Mughlins and Rockabill islands.</p> <p>The standard data form for the site details a list of potential threats for the site such as: Shipping lanes, professional active fishing, noise nuisance and noise pollution, discharge and utility & service lines. All of these pressures occur within and outside the boundary. No other site-specific pressures have been identified by the NPWS.</p>

000199	Baldoyle Bay SAC	7.39	Mudflats and sandflats not covered by seawater at low tide [1140] <i>Salicornia</i> and other annuals colonising mud and sand [1310] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritim</i>) [1410]	Baldoyle Bay SAC extends from just below Portmarnock village to the west pier at Howth in Co. Dublin. It is a tidal estuarine bay protected from the open sea by a large sand-dune system. Two small rivers, the Mayne and the Sluice, flow into the bay. Baldoyle Bay is a fine example of an estuarine system containing intertidal flats, saltmarsh and brackish march. It contains four Annex I habitats, and supports two legally protected plant species. The site is also an important ornithologically and supports internationally important numbers of Brent Goose and nationally important numbers of six other bird species. The standard data form for the site details a list of potential threats for the site such as recreational activities, dog walking, bait-digging, hunting, land reclamation, eutrophication, discharges and invasive species. All of these pressures are identified within the boundary. The site synopsis identifies pressures beyond the site boundary including urbanisation and roads. Golf courses have been identified as a threat both inside and outside the boundary. No other site-specific threats have been identified by the NPWS.
004016	Baldoyle Bay SPA	7.49	Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Shelduck (<i>Tadorna tadorna</i>) [A048] Ringed Plover (<i>Charadrius hiaticula</i>) [A137] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Grey Plover (<i>Pluvialis squatarola</i>) [A141] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Wetland and Waterbirds [A999]	Baldoyle Bay SAC extends from just below Portmarnock village to the west pier at Howth in Co. Dublin. It is a tidal estuarine bay protected from the open sea by a large sand-dune system. Two small rivers, the Mayne and the Sluice, flow into the bay. Baldoyle Bay is a fine example of an estuarine system containing intertidal flats, saltmarsh and brackish march. Baldoyle Bay is of high conservation importance, as it is an important site for wintering waterfowl, providing good quality feeding areas and roost sites for an excellent diversity of species. The inner part of the site is a Statutory Nature Reserve and also designated as a wetland of international importance under the Ramsar Convention. The standard data form for the site details a list of potential threats for the site such as recreational activities, bait-digging, hunting, land reclamation, eutrophication and invasive species. All of these pressures are identified within the boundary. The site synopsis identifies pressures beyond the site boundary including urbanisation and roads, golf courses and fertilisation. No other site-specific threats have been identified by the NPWS.
000204	Lambay Island SAC	7.88	Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Grey Seal (<i>Halichoerus grypus</i>) [1364] Harbour Seal (<i>Phoca vitulina</i>) [1365]	Lambay Island is a large (250 ha) inhabited island lying 4 km off Portrane on the north Co. Dublin coast. It is privately owned and is accessible by boat from Rogerstown Quay. The island rises to 127 m and is surrounded by steep cliffs on the north, east and south slopes. The island is a mixture of intensively grazed pasture, parkland, deciduous and coniferous woodland, rocky outcrops, bracken, buildings, walled gardens and a harbour. The island is flanked by extensive areas of reef habitat. Lambay supports the east coast's principal breeding colony of Grey Seal and is internationally important for its breeding seabirds. The standard data form for the site details a list of potential threats for the site such as mowing, grazing and hunting. All of these pressures are identified within the boundary. The site synopsis identifies pressures beyond the site boundary including urbanisation, commercial areas and fishing. No other site-specific threats have been identified by the NPWS.

004069	Lambay Island SPA	7.88	Fulmar (<i>Fulmarus glacialis</i>) [A009] Cormorant (<i>Phalacrocorax carbo</i>) [A017] Shag (<i>Phalacrocorax aristotelis</i>) [A018] Greylag Goose (<i>Anser anser</i>) [A043] Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183] Herring Gull (<i>Larus argentatus</i>) [A184] Kittiwake (<i>Rissa tridactyla</i>) [A188] Guillemot (<i>Uria aalge</i>) [A199] Razorbill (<i>Alca torda</i>) [A200] Puffin (<i>Fratercula arctica</i>) [A204]	Lambay Island is a large (250 ha) inhabited island lying 4 km off Portrane on the north Co. Dublin coast. It is privately owned and is accessible by boat from Rogerstown Quay. The island rises to 127 m and is surrounded by steep cliffs on the north, east and south slopes. Lambay Island is internationally important for its breeding seabirds, and is of particular note for its diversity, with 12 species breeding regularly. The island is the only regular wintering site in Ireland for Whimbrel, is a traditional nesting site for Peregrine and also supports the largest colony of breeding Oystercatcher on the east coast. It supports important wintering populations of Greylag Goose and Herring Gull. The standard data form for the site details a list of potential threats for the site such as mowing, grazing, hunting and dispersed habitation. All of these pressures are identified within the boundary. The site synopsis identifies pressures beyond the site boundary including water sports and shipping lanes. No other site-specific threats have been identified by the NPWS.
004117	Ireland's Eye SPA	9.78	Cormorant (<i>Phalacrocorax carbo</i>) [A017] Herring Gull (<i>Larus argentatus</i>) [A184] Kittiwake (<i>Rissa tridactyla</i>) [A188] Guillemot (<i>Uria aalge</i>) [A199] Razorbill (<i>Alca torda</i>) [A200]	Ireland's Eye is an uninhabited island located about 1.5 km north of Howth in Co. Dublin. The site encompasses Ireland's Eye, Rowan Rocks, Thulla, Thulla Rocks, Carrageen Bay and a seaward extension of 200 m in the west and 500 m to the north and east. The island has an area of c. 24 ha above the high tide mark. Cambrian rocks form impressive near vertical cliffs, reaching 69 m, along the northern and eastern sides of the island. A tall stack, which is completely cut off from the main island at mid to high tide, occurs at the eastern side of the cliffs. A sandy beach, backed by low sand hills, occurs at Carrageen Bay on the western shore, while a shingle beach extends from Carrageen to Thulla Rocks. Ireland's Eye is of high ornithological importance, with five seabird species having populations of national importance: Cormorant, Herring Gull, Kittiwake, Guillemot and Razorbill. A breeding pair of Peregrine is a regular presence. The standard data form for the site details a list of potential threats for the site such as walking and leisure fishing. All of these pressures are identified within the boundary. No other site-specific threats have been identified by the NPWS.
004122	Skerries Island SPA	10.12	Cormorant (<i>Phalacrocorax carbo</i>) [A017] Shag (<i>Phalacrocorax aristotelis</i>) [A018] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Purple Sandpiper (<i>Calidris maritima</i>) [A148] Turnstone (<i>Arenaria interpres</i>) [A169] Herring Gull (<i>Larus argentatus</i>) [A184]	The Skerries Islands are a group of three small uninhabited islands, Shenick's Island, St Patrick's Island and Colt Island, situated between 0.5 km and 1.5 km off the north Co. Dublin coast. Skerries Islands SPA comprises the islands and the seas surrounding them, to a distance of 200 m from the shore. The three islands are all low-lying. St Patrick's Island and Colt Island have low cliffs, while Shenick's Island has more extensive expanses of intertidal rocky shore and sand flats. Shenick's Island also has a shingle bar and is connected to the mainland at low tides. The islands are of importance for both breeding seabirds and wintering waterfowl. The standard data form for the site includes the potential threat of human disturbance such as walking. This pressure is identified within the boundary. No other site-specific threats have been identified by the NPWS.

002193	Ireland's Eye SAC	10.21	Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]	<p>Ireland's Eye is located about 1.5 km north of Howth in Co. Dublin. It is a Cambrian island with quartzite which forms spectacular cliffs on the north-east side. Elsewhere much of the area is covered by drift. This uninhabited marine island has a well-developed maritime flora, with two habitats (sea cliffs and shingle) listed on Annex II of the E.U. Habitats Directive, and nationally important seabird colonies. Owing to its easy access and proximity to Dublin it has great educational and amenity value.</p> <p>The standard data form for the site details a list of potential threats for the site such as wildlife watching, trampling, fire and lack of grazing. All of these pressures are identified within the boundary. The site synopsis identifies water sports as pressures inside and outside the site boundary. No other site-specific threats have been identified by the NPWS.</p>
004041	Rockabill SPA	10.86	Purple Sandpiper (<i>Calidris maritima</i>) [A148] Roseate Tern (<i>Sterna dougallii</i>) [A192] Common Tern (<i>Sterna hirundo</i>) [A193] Arctic Tern (<i>Sterna paradisaea</i>) [A194]	<p>Rockabill consists of two small, low-lying, granitic islets situated c. 7 km off the Co. Dublin coast. The islands are separated by a narrow channel, though are connected at low spring tides. The site includes the two islands and the surrounding seas to a distance of 3.5 km from the islands. Rockabill has a long history of nesting by terns and it is now the most important Roseate tern colony in Europe. The site also supports nationally important breeding populations of Common Tern and Arctic Tern, and a nationally important wintering population of Purple Sandpiper. Owing to its international and national importance, Rockabill is a designated Refuge for Fauna.</p> <p>The standard data form for the site includes the potential threats of water sports within the boundary, and transport/communications both inside and outside of the boundary. No other site-specific threats have been identified by the NPWS.</p>
004006	North Bull Island SPA	11.03	Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Shelduck (<i>Tadorna tadorna</i>) [A048] Teal (<i>Anas crecca</i>) [A052] Pintail (<i>Anas acuta</i>) [A054] Shoveler (<i>Anas clypeata</i>) [A056] Oystercatcher (<i>Haematopus ostralegus</i>) [A130] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Grey Plover (<i>Pluvialis squatarola</i>) [A141] Knot (<i>Calidris canutus</i>) [A143] Sanderling (<i>Calidris alba</i>) [A144] Dunlin (<i>Calidris alpina</i>) [A149] Black-tailed Godwit (<i>Limosa limosa</i>) [A156] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Curlew (<i>Numenius arquata</i>) [A160] Redshank (<i>Tringa totanus</i>) [A162] Turnstone (<i>Arenaria interpres</i>) [A169] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Wetland and Waterbirds [A999]	<p>This site covers all of the inner part of north Dublin Bay, with the seaward boundary extending from the Bull Wall lighthouse across to Drumleck Point at Howth Head. The North Bull Island sand spit is a relatively recent depositional feature, formed as a result of improvements to Dublin Port during the 18th and 19th centuries. It is almost 5 km long and 1 km wide and runs parallel to the coast between Clontarf and Sutton. Part of the interior of the island has been converted to golf courses.</p> <p>The standard data form for the site details a list of potential threats for the site including, recreational activities, bait-digging, transportation (bridge, viaduct), discharges and urbanisation. Pressures identified by the NPWS outside the boundary include urbanisation, shipping lanes, paths/tracks and continuous urbanisation. No other site-specific threats have been identified by the NPWS.</p>

000206	North Dublin Bay SAC	11.04	<p>Mudflats and sandflats not covered by seawater at low tide [1140]</p> <p>Annual vegetation of drift lines [1210]</p> <p>Salicornia and other annuals colonising mud and sand [1310]</p> <p>Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330]</p> <p>Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410]</p> <p>Embryonic shifting dunes [2110]</p> <p>Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120]</p> <p>Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]</p> <p>Humid dune slacks [2190]</p> <p>Petalwort (<i>Petalophyllum ralfsii</i>) [1395]</p>	<p>This site covers the inner part of north Dublin Bay, the seaward boundary extending from the Bull Wall lighthouse across to the Martello Tower at Howth Head. The North Bull Island is the focal point of this site. The main land uses of this site are amenity activities and nature conservation. The North Bull Island is the main recreational beach in Co. Dublin and is used throughout the year. Much of the land surface of the island is taken up by two golf courses. Two separate Statutory Nature Reserves cover much of the island east of the Bull Wall and the surrounding intertidal flats. The site is used regularly for educational purposes. North Bull Island has been designated a Special Protection Area under the E.U. Birds Directive and it is also a statutory Wildfowl Sanctuary, a Ramsar Convention site, a Biogenetic Reserve, a Biosphere Reserve and a Special Area Amenity Order site.</p> <p>The standard data form for the site details a list of potential threats for the site such as: pollution to surface water, urbanisation, agricultural activities, intensive maintenance, recreational activities, bait-digging/collection, invasive species. All of these pressures are identified within the boundary. The site synopsis identifies pressures beyond the site boundary including: urbanisation and a golf course. No other site-specific threats have been identified by the NPWS.</p>
000202	Howth Head SAC	12.37	<p>Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]</p> <p>European dry heaths [4030]</p>	<p>Howth Head is a rocky headland situated on the northern side of Dublin Bay. A mosaic of heathland vegetation occurs on the slopes above the sea cliffs and in the area of the summit. The heath merges into dry grassland in places. The maritime flora is of particular interest as a number of scarce and local plants have been recorded. Widely distributed rock outcrops are important for lichens. A number of Red Data Book plant species and rare invertebrates have been recorded. The site is of national importance for breeding seabirds. The main land use within the area is recreation, mostly walking and horse-riding.</p> <p>The standard data form for the site details a list of potential threats for the site such as paths and track, recreational activities, vandalism, fire, invasive species and lack of grazing. All of these pressures are identified within the boundary. The site synopsis identifies urbanisation and quarrying as pressures both inside and outside the site boundary. No other site-specific threats have been identified by the NPWS.</p>
004113	Howth Head Coast SPA	12.42	<p>Kittiwake (<i>Rissa tridactyla</i>) [A188]</p>	<p>Howth Head is a rocky headland situated on the northern side of Dublin Bay. The site comprises the sea cliffs extending from just east of the Nose of Howth to the tip of the Bailey Lighthouse peninsula. The marine area to a distance of 500 m from the cliff base is included within the site. The cliffs vary from between about 60 m and 90 m in height, and in places comprise fairly sheer, exposed rock face. Howth Head SPA is of high ornithological importance as it supports a nationally important population of Kittiwake and is also a traditional nesting site for Peregrine Falcon. The site is easily accessible and has important amenity and educational value due to its proximity to Dublin City.</p> <p>The standard data form for the site details a list of potential threats for the site such recreational activities and fire. All of these pressures are identified within the boundary. No other site-specific threats have been identified by the NPWS.</p>

004024	South Dublin Bay & River Tolka SPA	14.08	<p>Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Oystercatcher (<i>Haematopus ostralegus</i>) [A130] Ringed Plover (<i>Charadrius hiaticula</i>) [A137] Grey Plover (<i>Pluvialis squatarola</i>) [A141] Knot (<i>Calidris canutus</i>) [A143] Sanderling (<i>Calidris alba</i>) [A144] Dunlin (<i>Calidris alpina</i>) [A149] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Redshank (<i>Tringa totanus</i>) [A162] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Roseate Tern (<i>Sterna dougalli</i>) [A192] Common Tern (<i>Sterna hirundo</i>) [A193] Arctic Tern (<i>Sterna paradisaea</i>) [A194] Wetland and Waterbirds [A999]</p>	<p>The South Dublin Bay and River Tolka Estuary SPA comprises a substantial part of Dublin Bay. It includes the intertidal area between the River Liffey and Dun Laoghaire, and the estuary of the River Tolka to the north of the River Liffey, as well as Booterstown Marsh. A portion of the shallow marine waters of the bay is also included. The site is of ornithological importance as it supports an internationally important population of Light-bellied Brent Goose and nationally important populations of a further nine wintering species. It supports a nationally important colony of breeding Common Tern and is an internationally important passage/staging site for three tern species. Four of the species that regularly occur at this site are listed on Annex I of the E.U. Birds Directive, <i>i.e.</i> Bar-tailed Godwit, Common Tern, Arctic Tern and Roseate Tern. Sandymount Strand/Tolka Estuary is also a Ramsar Convention site.</p> <p>The standard data form for the site details a list of potential threats for the site such as recreational activities, fishing, bait-digging, discharges and eutrophication. All of these pressures are identified within the boundary. The site synopsis identifies urbanisation, infrastructure, commercial/industrial areas and land reclamation as pressures outside the site boundary. No other site-specific threats have been identified by the NPWS.</p>
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3.3 Assessment Criteria

3.3.1 Is the Plan Necessary to the Management of European sites?

Under the Habitats Directive, Plans that are directly connected with or necessary to the management of a European Site do not require AA. For this exception to apply, management is required to be interpreted narrowly as nature conservation management in the sense of Article 6(1) of the Habitats Directive. This refers to specific measures to address the ecological requirements of annexed habitats and species (and their habitats) present on a site(s). The relationship should be shown to be direct and not a by-product of the plan, even if this might result in positive or beneficial effects for a site(s).

The primary purpose of the proposed works is not the nature conservation management of the sites, but to provide enhancements to roads and footpaths from Donabate. Therefore, the proposed works is not considered by the Habitats Directive to be directly connected with or necessary to the management of European designated sites.

3.3.2 Elements of the proposed works with Potential to Give Rise to Effects

The construction phase elements of the proposed enhancements have the potential to introduce effects such as alteration to hydrological characteristics, air quality, and/or indirect disturbance due to noise/vibrations. These effects are examined below in relation to the sensitive receptors of each of the European sites identified with regard to the conservation objectives and the potential pathways for effects. The operation phase elements of the proposed project will not introduce effects, over and above those already existing at the sites as the site is an existing road.

3.3.3 Identification of Potential Effects and Screening of Sites

This section documents the final stage of the screening process. It has used the information collected on the sensitivity of each European Site and describes any potential effects to the integrity of European sites resulting from the proposed works. This assumes the absence of any controls, conditions, or mitigation measures. In determining the potential for effects, a number of factors have been taken into account. Firstly, the sensitivity and reported threats to the European Site. Secondly, the individual elements of the proposed works and the potential effect they may cause to the site were considered. The elements of the proposed works with potential to cause effect to the integrity of European sites are presented in Table 3.2 below.

Sites are screened out based on one or a combination of the following criteria:

- Where it can be shown that there are no significant pathways such as hydrological links between activities of the proposed works, and the site to be screened;
- Where the site is located at such a distance from proposed works that effects are not foreseen; and
- Where it is that known threats or vulnerabilities at a site cannot be linked to potential impacts that may arise from the proposed works.

3.4 Characterising Potential Significant Effects

The following parameters are described when characterising impacts (following guidance from the Chartered Institute of Ecology and Environmental Management, Environmental Protection Agency and National Roads Authority):

Direct and Indirect Impacts - An impact can be caused either as a direct or as an indirect consequence of a proposed development.

Magnitude - Magnitude measures the size of an impact, which is described as high, medium, low, very low or negligible.

Extent - The area over which the impact occurs – this should be predicted in a quantified manner.

Duration - The time for which the effect is expected to last prior to recovery or replacement of the resource or feature.

- Temporary: Up to 1 Year;
- Short Term: The effects would take 1-7 years to be mitigated;
- Medium Term: The effects would take 7-15 years to be mitigated;
- Long Term: The effects would take 15-60 years to be mitigated; and
- Permanent: The effects would take 60+ years to be mitigated.

Likelihood – The probability of the effect occurring taking into account all available information.

- Certain/Near Certain: >95% chance of occurring as predicted;
- Probable: 50-95% chance as occurring as predicted;
- Unlikely: 5-50% chance as occurring as predicted; and
- Extremely Unlikely: <5% chance as occurring as predicted.

The Chartered Institute of Ecology and Environmental Management guidelines for ecological impact assessment (2016) define: an ecologically significant impact as an impact (negative or positive) on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographic area; and the integrity of a site as the coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified.

The Habitats Directive requires the focus of the assessment at this stage to be on the integrity of the site as indicated by its Conservation Objectives. It is an aim of NPWS to draw up conservation management plans for all areas designated for nature conservation. These plans will, among other things, set clear objectives for the conservation of the features of interest within a site.

SSCOs have been prepared for a number of European sites. These detailed SSCOs aim to define favourable conservation condition for the qualifying habitats and species at that site by setting targets for appropriate attributes which define the character habitat. The maintenance of the favourable condition for these habitats and species at the site level will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

***Favourable conservation status of a species** can be described as being achieved when: 'population data on the species concerned indicate that it is maintaining itself, and the natural range of the species is neither being reduced or likely to be reduced for the foreseeable future, and there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.'*

***Favourable conservation status of a habitat** can be described as being achieved when: 'its natural range, and area it covers within that range, is stable or increasing, and the ecological factors that are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and the conservation status of its typical species is favourable'.*

Generic Conservation Objectives for cSACs have been provided as follows:

- *To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.*

One generic Conservation Objective has been provided for SPAs as follows:

- *To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.*

EC guidance² outlines the types of effects that may affect European sites. These include effects from the following activities:

- Land take
- Resource Requirements (Drinking Water Abstraction Etc.)
- Emissions (Disposal to Land, Water or Air)
- Excavation Requirements
- Transportation Requirements
- Duration of Construction, Operation, Decommissioning

In addition, the guidance outlines the following likely changes that may occur at a designated site, which may result in effects on the integrity and function of that site:

- Reduction of Habitat Area
- Disturbance to Key Species
- Habitat or Species Fragmentation
- Reduction in Species Density
- Changes in Key Indicators of Conservation Value (Water Quality Etc.)
- Climate Change

The elements detailed above were considered with specific reference to each of the European sites identified in Section 2.

3.4.1 Land Take

There are no European sites or qualifying habitat features within 1.18 km of the site, therefore there will be no effects posed to European sites in this respect.

3.4.2 Resource Requirements (Drinking Water Abstraction Etc.)

There are no resource requirements of the proposed enhancements which will be additional to existing requirements. Therefore, there will be no interactions with resources necessary for the maintenance of the ecological integrity of any European sites.

3.4.3 Emissions (Disposal to Land, Water or Air)

Drainage for the site will be managed by the existing site surface water drainage system. Construction phase elements of the plan may give rise to increased temporary site effects such as noise or contamination due to dust. Given the distance between the closest European sites and the development, combined with the small-scale nature of the development, these effects are determined to be negligible. The operational phase elements of the project will be consistent with existing condition.

3.4.4 Excavation Requirements

There are no major excavation works. There will be small-scale, temporary excavations in relation to road and path enhancements. The site is 686 m from the Turvey River which flows into the Malahide Estuary. The distance to the waterway and the small-scale temporary nature of the proposed enhancements ensure that there are no significant risks to the water quality of Malahide Estuary. Therefore, given the scale of the development and distance the effects arising from these works will be negligible.

² *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*, European Commission Environment DG, 2001

3.4.5 Transportation Requirements

There will be a minor temporary increase in traffic during the construction phase and operational traffic will be alleviated due to the road widening works but levels will be consistent. However, these effects are considered to be negligible with regard to European sites due to the small-scale nature of the works, the distances observed and the indirect pathways for effects.

3.4.6 Duration of Construction, Operation, Decommissioning

The proposed project duration is 3 to 6 months, with all works to be completed within this time. The enhancements will be permanent features with no decommissioning phase. The duration of the construction will have no effects on European sites given the small-scale nature of the works, the distances and indirect pathways identified.

3.4.7 Reduction of Habitat Area

There are no European sites or qualifying habitat features within 1.18 km of the site and there are no supporting habitats identified on site for any Annex I or Annex II species; therefore, there will be no reduction of habitat area posed to European sites in this respect.

3.4.8 Disturbance to Key Species

None of the species and/or habitats identified in Table 3.1 were recorded on site. The nearest European site is 1.18 km away from the Turvey Avenue site and therefore disturbance effects due to noise or lighting etc. are not present. There are no pathways for disturbance effects identified due to the distance between the proposed enhancements and the nearest European site.

3.4.9 Habitat or Species Fragmentation or Reduction in Species Density

The existing site has low ecological value comprised of predominantly built structures. All hedgerows and treelines will remain intact with the exception of the loss of shrubbery at Plots 6 and 7, and the setting-back of hedges at Plots 8 and 9 to facilitate enhancement of footpaths at the Turvey Avenue site. These hedges are primarily composed of ornamental species typical of residential gardens. There will be a reduction in the size of the grass verge at Plot 22 of the site. These reductions will take place within the red boundary zone of the site. The nearest European site is 1.18 km away from the site. Given the existing low ecological value of the development site combined with its scale, timeline and distance from the European site the proposal is considered to have no potential effects on any European site in this regard.

3.4.10 Changes in Key Indicators of Conservation Value (Water Quality Etc.)

The nearest European site is 1.18 km away from the Turvey Avenue site. The site is 686 m from the Turvey River which flows into the Malahide Estuary. Therefore, given the scale and timeline of the development, combined with the distance and indirect pathways identified, effects arising from these works will be negligible.

3.4.11 Climate Change

Due to the nature and scale of the proposed road and footpath enhancements, its effects of the proposed development on climate and Ireland's obligations under the Kyoto Protocol are not anticipated to be significant.

Table 3.2 Screening assessment of the potential effects arising from the proposed works

Site Code	Site Name	Distance (km)	Qualifying features (QIs/SCIs)	Characterization of Potential Effects ³	Potential Significant Effects	Potential In-Combination Effects
000205	Malahide Estuary SAC	1.18	Mudflats and sandflats not covered by seawater at low tide [1140] <i>Salicornia</i> 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]	<p>The threats to the site identified by the NPWS in the standard data form relate to recreational activities, urbanisation, commercial activity, infrastructure and invasive species. The terrestrial habitats are sensitive to direct land use management and the intertidal habitats are sensitive to pollution and changes in hydrological conditions. Sandy habitats are sensitive to recreational use and coastal defences.</p> <p>There are no sources for effect to the terrestrial habitats of the SAC. Drainage for the site will be managed by the existing site surface water drainage system. The only pathways for effect to the sensitive receptors of the SAC are indirect hydrological links. Construction phase effects such as dust are known to persist over a short distance (less than 250 m), all other effects from the sites are identified to be localised. However, there are indirect hydrological pathways for effects. The site is 685 m from the Turvey River and flows into the Malahide Estuary.</p> <p>The indirect hydrological links and the small-scale temporary nature of the enhancements ensure that there are no significant risks to the water quality of Malahide Estuary. The projects identified in the surrounding area are also small scale and were subject to their own AA processes (see below for details). Therefore, these effects are determined to be negligible.</p> <p>The small-scale temporary nature of the enhancements combined with the indirect hydrological pathway and significant dilution potential of the system ensure that there will be no significant effect to the trophic structure or water quality of the SAC. All of the developments within the receiving environment are also small in scale with negligible effects to water quality and therefore there are no in combination effects observed.</p>	No	No
004025	Malahide Estuary SPA	1.19	Great Crested Grebe (<i>Podiceps cristatus</i>) [A005] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Shelduck (<i>Tadorna tadorna</i>) [A048] Pintail (<i>Anas acuta</i>) [A054] Goldeneye (<i>Bucephala clangula</i>) [A067] Red-breasted Merganser (<i>Mergus serrator</i>) [A069]	<p>The threats to the site identified by the NPWS in the standard data form relate to recreational activities, urbanisation, commercial activity, infrastructure and invasive species. The species are sensitive to direct disturbance through noise pollution, human disturbance, hydrological condition and prey availability/trophic structure.</p> <p>Drainage for the site will be managed by the existing site surface water drainage system. The only pathways for effect to the sensitive receptors of the SPA are indirect hydrological links. Construction phase effects such as dust are known to persist over a short distance (less than 250 m), all other effects from the sites are identified to be localised. However, there are indirect hydrological pathways for effects. The site is 685 m from the Turvey River and flows into the Malahide Estuary.</p> <p>The indirect hydrological links and the small-scale temporary nature of the enhancements ensure that there are no significant risks to the water quality of Malahide Estuary. The</p>	No	No

³ NPWS (2013). The Status of Protected EU Habitats and Species in Ireland. Overview Volume 1. Unpublished Report, National Parks & Wildlife Services. Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.

Site Code	Site Name	Distance (km)	Qualifying features (QIs/SCIs)	Characterization of Potential Effects ³	Potential Significant Effects	Potential In-Combination Effects
			Oystercatcher (<i>Haematopus ostralegus</i>) [A130] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Grey Plover (<i>Pluvialis squatarola</i>) [A141] Knot (<i>Calidris canutus</i>) [A143] Dunlin (<i>Calidris alpina</i>) [A149] Black-tailed Godwit (<i>Limosa limosa</i>) [A156] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Redshank (<i>Tringa totanus</i>) [A162] Wetland and Waterbirds [A999]	<p>projects identified in the surrounding area are also small scale and were subject to their own AA processes (see below for details). Therefore, these effects are determined to be negligible.</p> <p>The small-scale temporary nature of the enhancements combined with the indirect hydrological pathway and significant dilution potential of the system ensure that there will be no significant effect to the trophic structure or water quality of the SAC. All of the developments within the receiving environment are also small in scale with negligible effects to water quality and therefore there are no in combination effects observed.</p>		
000208	Rogerstown Estuary SAC	1.25	Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] <i>Salicornia</i> 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]	<p>The threats to the site identified by the NPWS in the standard data form relate to bait-digging, erosion, sea defences, land management, discharges and road infrastructure. The terrestrial habitats are sensitive to direct land use management and the intertidal habitats are sensitive to pollution and changes in hydrological conditions. Sandy habitats are sensitive to recreational use and coastal defences.</p> <p>There are no sources for effect to the terrestrial habitats of the SAC. Drainage for the site will be managed by the existing site surface water drainage system. The only pathways for effect to the sensitive receptors of the SAC are indirect hydrological links. Construction phase effects such as dust are known to persist over a short distance⁴ (less than 250m⁵), all other effects from the sites are identified to be localised. The site is 685 m from the Turvey River and flows into the Malahide Estuary.</p> <p>The indirect hydrological links and the small-scale temporary nature of the enhancements ensure that there are no significant risks to the water quality of Malahide Estuary. The projects identified in the surrounding area are also small scale and were subject to their own AA processes (see below for details). Therefore, these effects are determined to be negligible.</p> <p>The small-scale temporary nature of the enhancements combined with the indirect</p>	No	No

⁴ Williams, W.B., 2014. Source Apportionment and Dispersion Mapping of Fugitive Dust Using Directional Passive Monitors (Doctoral dissertation, University of Portsmouth).

⁵ Tian, G., Li, G., Yan, B.L., Huang, Y.H. and Qin, J.P., 2008. Spatial dispersion laws of fugitive dust from construction sites. Huan jing ke xue= Huanjing kexue, 29(1), pp.259-262.

Site Code	Site Name	Distance (km)	Qualifying features (QIs/SCIs)	Characterization of Potential Effects ³	Potential Significant Effects	Potential In-Combination Effects
				hydrological pathway and significant dilution potential of the system ensure that there will be no significant effect to the trophic structure or water quality of the SAC. All of the developments within the receiving environment are also small in scale with negligible effects to water quality and therefore there are no in combination effects observed.		
444015	Rogerstown Estuary SPA	1.31	<p>Greylag Goose (<i>Anser anser</i>) [A043] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Shelduck (<i>Tadorna tadorna</i>) [A048] Shoveler (<i>Anas clypeata</i>) [A056] Oystercatcher (<i>Haematopus ostralegus</i>) [A130] Ringed Plover (<i>Charadrius hiaticula</i>) [A137] Grey Plover (<i>Pluvialis squatarola</i>) [A141] Knot (<i>Calidris canutus</i>) [A143] Dunlin (<i>Calidris alpina</i>) [A149] Black-tailed Godwit (<i>Limosa limosa</i>) [A156] Redshank (<i>Tringa totanus</i>) [A162] Wetland and Waterbirds [A999]</p>	<p>The threats to the site identified by the NPWS in the standard data form relate to recreational activities, bait-digging, agricultural practices, waste disposal and invasive species. The species are sensitive to direct disturbance through noise pollution, human disturbance, hydrological condition and prey availability/trophic structure.</p> <p>Drainage for the site will be managed by the existing site surface water drainage system. The only pathways for effect to the sensitive receptors of the SPA are indirect hydrological links. Construction phase effects such as dust are known to persist over a short distance (less than 250 m), all other effects from the sites are identified to be localised. The site is 685 m from the Turvey River and flows into the Malahide Estuary.</p> <p>The indirect hydrological links and the small-scale temporary nature of the enhancements ensure that there are no significant risks to the water quality of Malahide SPA. The projects identified in the surrounding area are also small scale and were subject to their own AA processes (see below for details). Therefore, these effects are determined to be negligible.</p> <p>The small-scale temporary nature of the enhancements combined with the indirect hydrological pathway and significant dilution potential of the system ensure that there will be no significant effect to the trophic structure or water quality of the SAC. All of the developments within the receiving environment are also small in scale with negligible effects to water quality and therefore there are no in combination effects observed.</p>	No	No
003000	Rockabill to Dalkey Islands SAC	5.52	<p>Reefs [1170] Harbour Porpoise (<i>Phocoena phocoena</i>) [1351]</p>	<p>The threats to the site identified by the NPWS in the standard data form relate to shipping lanes, fishing, noise pollution, discharge and utility & service lines. Reef systems and harbour porpoise are sensitive to hydrological condition, disturbance by human activities, fishing and effects to trophic structures.</p> <p>The only pathways for effect to the sensitive receptors of the SAC are indirect hydrological links. Construction phase effects such as dust are known to persist over a short distance (less than 1 km), all other effects from the sites are identified to be localised. The site is 685 m from the Turvey River and flows into the Malahide Estuary.</p> <p>The indirect hydrological links and the small-scale temporary nature of the enhancements ensure that there are no significant risks to the water quality of Malahide SAC. The projects identified in the surrounding area are also small scale and were subject to their</p>	No	No

Site Code	Site Name	Distance (km)	Qualifying features (QIs/SCIs)	Characterization of Potential Effects ³	Potential Significant Effects	Potential In-Combination Effects
				<p>own AA processes (see below for details). Therefore, these effects are determined to be negligible.</p> <p>The small-scale temporary nature of the enhancements combined with the indirect hydrological pathway and significant dilution potential of the system ensure that there will be no significant effect to the trophic structure or water quality of the SAC. All of the developments within the receiving environment are also small in scale with negligible effects to water quality and therefore there are no in combination effects observed.</p>		
000199	Baldoye Bay SAC	7.39	<p>Mudflats and sandflats not covered by seawater at low tide [1140]</p> <p><i>Salicornia</i> and other annuals colonising mud and sand [1310]</p> <p>Atlantic salt meadows (<i>Glaucopuccinellietalia maritima</i>) [1330]</p> <p>Mediterranean salt meadows (<i>Juncetalia maritima</i>) [1410]</p>	<p>The threats to the site identified by the NPWS in the standard data form relate to recreational activities, dog-walking, bait-digging and urbanisation. The terrestrial habitats are sensitive to direct land use management and the intertidal habitats are sensitive to pollution and changes in hydrological conditions.</p> <p>There are no sources for effect to the terrestrial habitats of the SAC. The only pathways for effect to the sensitive receptors of the SAC are indirect hydrological links. Construction phase effects such as dust are known to persist over a short distance (less than 1km), all other effects from the sites are identified to be localised. The site is 685 m from the Turvey River and flows into the Malahide Estuary.</p> <p>The indirect hydrological links and the small-scale temporary nature of the enhancements ensure that there are no significant risks to the water quality of Malahide SAC. The projects identified in the surrounding area are also small scale and were subject to their own AA processes (see below for details). Therefore, these effects are determined to be negligible.</p> <p>The small-scale temporary nature of the enhancements combined with the indirect hydrological pathway and significant dilution potential of the system ensure that there will be no significant effect to the trophic structure or water quality of the SAC. All of the developments within the receiving environment are also small in scale with negligible effects to water quality and therefore there are no in combination effects observed.</p>	No	No
004016	Baldoye Bay SPA	7.49	<p>Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046]</p> <p>Shelduck (<i>Tadorna tadorna</i>) [A048]</p> <p>Ringed Plover (<i>Charadrius hiaticula</i>) [A137]</p> <p>Golden Plover (<i>Pluvialis apricaria</i>) [A140]</p> <p>Grey Plover (<i>Pluvialis squatarola</i>) [A141]</p> <p>Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]</p>	<p>The threats to the site identified by the NPWS in the standard data form relate to recreational activities, hunting, bait-digging, land reclamation and urbanisation. The species are sensitive to direct disturbance through noise pollution, human disturbance, hydrological condition and prey availability/trophic structure.</p> <p>The only pathways for effect to the sensitive receptors of the SPA are indirect hydrological links. Construction phase effects such as dust are known to persist over a short distance (less than 1km), all other effects from the sites are identified to be localised. The site is 685 m from the Turvey River and flows into the Malahide Estuary.</p> <p>The indirect hydrological links and the small-scale temporary nature of the enhancements ensure that there are no significant risks to the water quality of Malahide SPA. The projects identified in the surrounding area are also small scale and were subject to their</p>	No	No

Site Code	Site Name	Distance (km)	Qualifying features (QIs/SCIs)	Characterization of Potential Effects ³	Potential Significant Effects	Potential In-Combination Effects
			Wetland and Waterbirds [A999]	<p>own AA processes (see below for details). Therefore, these effects are determined to be negligible.</p> <p>The small-scale temporary nature of the enhancements combined with the indirect hydrological pathway and significant dilution potential of the system ensure that there will be no significant effect to the trophic structure or water quality of the SPA. All of the developments within the receiving environment are also small in scale with negligible effects to water quality and therefore there are no in combination effects observed.</p>		
000204	Lambay Island SAC	7.88	Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Grey Seal (<i>Halichoerus grypus</i>) [1364] Harbour Seal (<i>Phoca vitulina</i>) [1365]	<p>The threats to the site identified by the NPWS in the standard data form relate to agricultural practices, urbanisation, commercialisation and fishing. Reef systems and seals are sensitive to hydrological condition, disturbance by human activities, fishing/fishing gear, pollution, prey availability/trophic structure. Sea cliffs are sensitive to erosion, invasive species and local effects such as trampling.</p> <p>The only pathways for effect to the sensitive receptors of the SAC are indirect hydrological links. Construction phase effects such as dust are known to persist over a short distance (less than 1km), all other effects from the sites are identified to be localised. The site is 685 m from the Turvey River and flows into the Malahide Estuary.</p> <p>The indirect hydrological links and the small-scale temporary nature of the enhancements ensure that there are no significant risks to the water quality of Malahide SAC. The projects identified in the surrounding area are also small scale and were subject to their own AA processes (see below for details). Therefore, these effects are determined to be negligible.</p> <p>The small-scale temporary nature of the enhancements combined with the indirect hydrological pathway and significant dilution potential of the system ensure that there will be no significant effect to the trophic structure or water quality of the SAC. All of the developments within the receiving environment are also small in scale with negligible effects to water quality and therefore there are no in combination effects observed.</p>	No	No
004069	Lambay Island SPA	7.88	Fulmar (<i>Fulmarus glacialis</i>) [A009] Cormorant (<i>Phalacrocorax carbo</i>) [A017] Shag (<i>Phalacrocorax aristotelis</i>) [A018] Greylag Goose (<i>Anser anser</i>) [A043] Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183] Herring Gull (<i>Larus</i>	<p>The threats to the site identified by the NPWS in the standard data form relate to agricultural practices, water sports and shipping. The species are sensitive to direct disturbance through noise pollution, human disturbance, hydrological condition and prey availability/trophic structure.</p> <p>The only pathways for effect to the sensitive receptors of the SPA are indirect hydrological links. Construction phase effects such as dust are known to persist over a short distance (less than 1km), all other effects from the sites are identified to be localised. The site is 685 m from the Turvey River and flows into the Malahide Estuary.</p> <p>The indirect hydrological links and the small-scale temporary nature of the enhancements</p>	No	No

Site Code	Site Name	Distance (km)	Qualifying features (QIs/SCIs)	Characterization of Potential Effects ³	Potential Significant Effects	Potential In-Combination Effects
			<i>argentatus</i> [A184] Kittiwake (<i>Rissa tridactyla</i>) [A188] Guillemot (<i>Uria aalge</i>) [A199] Razorbill (<i>Alca torda</i>) [A200] Puffin (<i>Fratercula arctica</i>) [A204]	<p>ensure that there are no significant risks to the water quality of Malahide SPA. The projects identified in the surrounding area are also small scale and were subject to their own AA processes (see below for details). Therefore, these effects are determined to be negligible.</p> <p>The small-scale temporary nature of the enhancements combined with the indirect hydrological pathway and significant dilution potential of the system ensure that there will be no significant effect to the trophic structure or water quality of the SPA. All of the developments within the receiving environment are also small in scale with negligible effects to water quality and therefore there are no in combination effects observed.</p>		
004117	Ireland's Eye SPA	9.78	Cormorant (<i>Phalacrocorax carbo</i>) [A017] Herring Gull (<i>Larus argentatus</i>) [A184] Kittiwake (<i>Rissa tridactyla</i>) [A188] Guillemot (<i>Uria aalge</i>) [A199] Razorbill (<i>Alca torda</i>) [A200]	<p>The threats to the site identified by the NPWS in the standard data form relate to recreational activities such as walking and fishing. The species are sensitive to direct disturbance through direct disturbance through noise pollution, human disturbance, hydrological condition and prey availability/trophic structure.</p> <p>The only pathways for effect to the sensitive receptors of the SPA are indirect hydrological links. Construction phase effects such as dust are known to persist over a short distance (less than 1km), all other effects from the sites are identified to be localised. The site is 685 m from the Turvey River and flows into the Malahide Estuary.</p> <p>The indirect hydrological links and the small-scale temporary nature of the enhancements ensure that there are no significant risks to the water quality of Malahide SPA. The projects identified in the surrounding area are also small scale and were subject to their own AA processes (see below for details). Therefore, these effects are determined to be negligible.</p> <p>The small-scale temporary nature of the enhancements combined with the indirect hydrological pathway and significant dilution potential of the system ensure that there will be no significant effect to the trophic structure or water quality of the SPA. All of the developments within the receiving environment are also small in scale with negligible effects to water quality and therefore there are no in combination effects observed.</p>	No	No
004122	Skerries Island SPA	10.12	Cormorant (<i>Phalacrocorax carbo</i>) [A017] Shag (<i>Phalacrocorax aristotelis</i>) [A018] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Purple Sandpiper (<i>Calidris maritima</i>) [A148] Turnstone (<i>Arenaria interpres</i>) [A169] Herring Gull (<i>Larus</i>	<p>The threats to the site identified by the NPWS in the standard data form relate to human disturbance such as walking. The species are sensitive to direct disturbance through noise pollution, human disturbance, hydrological condition and prey availability/trophic structure.</p> <p>The only pathways for effect to the sensitive receptors of the SPA are indirect hydrological links. Construction phase effects such as dust are known to persist over a short distance (less than 1km), all other effects from the sites are identified to be localised. The site is 685 m from the Turvey River and flows into the Malahide Estuary.</p> <p>The indirect hydrological links and the small-scale temporary nature of the enhancements ensure that there are no significant risks to the water quality of Malahide SPA. The</p>	No	No

Site Code	Site Name	Distance (km)	Qualifying features (QIs/SCIs)	Characterization of Potential Effects ³	Potential Significant Effects	Potential In-Combination Effects
			<i>argentatus</i>) [A184]	<p>projects identified in the surrounding area are also small scale and were subject to their own AA processes (see below for details). Therefore, these effects are determined to be negligible.</p> <p>The small-scale temporary nature of the enhancements combined with the indirect hydrological pathway and significant dilution potential of the system ensure that there will be no significant effect to the trophic structure or water quality of the SPA. All of the developments within the receiving environment are also small in scale with negligible effects to water quality and therefore there are no in combination effects observed.</p>		
002193	Ireland's Eye SAC	10.21	Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]	<p>The threats to the site identified by the NPWS in the standard data form relate to recreational activities, fire and a lack of grazing. Sea cliffs and stony bank vegetation are sensitive to erosion, invasive species and local effects such as trampling and coastal defences.</p> <p>There are no sources for effect to the terrestrial habitats of the SAC. The only pathways for effect to the sensitive receptors of the SAC are indirect hydrological links. Construction phase effects such as dust are known to persist over a short distance (less than 1km), all other effects from the sites are identified to be localised. The site is 685 m from the Turvey River and flows into the Malahide Estuary.</p> <p>The indirect hydrological links and the small-scale temporary nature of the enhancements ensure that there are no significant risks to the water quality of Malahide SAC. The projects identified in the surrounding area are also small scale and were subject to their own AA processes (see below for details). Therefore, these effects are determined to be negligible.</p> <p>The small-scale temporary nature of the enhancements combined with the indirect hydrological pathway and significant dilution potential of the system ensure that there will be no significant effect to the trophic structure or water quality of the SAC. All of the developments within the receiving environment are also small in scale with negligible effects to water quality and therefore there are no in combination effects observed.</p>	No	No
004041	Rockabill SPA	10.86	Purple Sandpiper (<i>Calidris maritima</i>) [A148] Roseate Tern (<i>Sterna dougallii</i>) [A192] Common Tern (<i>Sterna hirundo</i>) [A193] Arctic Tern (<i>Sterna paradisaea</i>) [A194]	<p>The threats to the site identified by the NPWS in the standard data form relate to water sports, and transport/communication. The species are sensitive to direct disturbance through direct disturbance through noise pollution, human disturbance, hydrological condition and prey availability/trophic structure.</p> <p>The only pathways for effect to the sensitive receptors of the SPA are indirect hydrological links. Construction phase effects such as dust are known to persist over a short distance (less than 1km), all other effects from the sites are identified to be localised. The site is 685 m from the Turvey River and flows into the Malahide Estuary.</p> <p>The indirect hydrological links and the small-scale temporary nature of the enhancements ensure that there are no significant risks to the water quality of Malahide SPA. The</p>	No	No

Site Code	Site Name	Distance (km)	Qualifying features (QIs/SCIs)	Characterization of Potential Effects ³	Potential Significant Effects	Potential In-Combination Effects
				<p>projects identified in the surrounding area are also small scale and were subject to their own AA processes (see below for details). Therefore, these effects are determined to be negligible.</p> <p>The small-scale temporary nature of the enhancements combined with the indirect hydrological pathway and significant dilution potential of the system ensure that there will be no significant effect to the trophic structure or water quality of the SPA. All of the developments within the receiving environment are also small in scale with negligible effects to water quality and therefore there are no in combination effects observed.</p>		
004006	North Bull Island SPA	11.03	Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Shelduck (<i>Tadorna tadorna</i>) [A048] Teal (<i>Anas crecca</i>) [A052] Pintail (<i>Anas acuta</i>) [A054] Shoveler (<i>Anas clypeata</i>) [A056] Oystercatcher (<i>Haematopus ostralegus</i>) [A130] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Grey Plover (<i>Pluvialis squatarola</i>) [A141] Knot (<i>Calidris canutus</i>) [A143] Sanderling (<i>Calidris alba</i>) [A144] Dunlin (<i>Calidris alpina</i>) [A149] Black-tailed Godwit (<i>Limosa limosa</i>) [A156] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Curlew (<i>Numenius arquata</i>) [A160] Redshank (<i>Tringa totanus</i>) [A162] Turnstone (<i>Arenaria</i>)	<p>The standard data form identifies the threats and pressures to the site relate to recreational use, bait-digging and pathways/walking trail development. The species are sensitive to direct disturbance through noise pollution, human disturbance <i>e.g.</i> dog-walking, hydrological condition and prey availability/trophic structure.</p> <p>The only pathways for effect to the sensitive receptors of the SPA are indirect hydrological links. Construction phase effects such as dust are known to persist over a short distance (less than 1km), all other effects from the sites are identified to be localised. The site is 685 m from the Turvey River and flows into the Malahide Estuary.</p> <p>The indirect hydrological links and the small-scale temporary nature of the enhancements ensure that there are no significant risks to the water quality of Malahide SPA. The projects identified in the surrounding area are also small scale and were subject to their own AA processes (see below for details). Therefore, these effects are determined to be negligible.</p> <p>The small-scale temporary nature of the enhancements combined with the indirect hydrological pathway and significant dilution potential of the system ensure that there will be no significant effect to the trophic structure or water quality of the SPA. All of the developments within the receiving environment are also small in scale with negligible effects to water quality and therefore there are no in combination effects observed.</p>	No	No

Site Code	Site Name	Distance (km)	Qualifying features (QIs/SCIs)	Characterization of Potential Effects ³	Potential Significant Effects	Potential In-Combination Effects
			<i>interpres</i> [A169] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Wetland and Waterbirds [A999]			
000206	North Dublin Bay SAC	11.04	Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] Humid dune slacks [2190] Petalwort (<i>Petalophyllum ralfsii</i>) [1395]	<p>The threats to the site identified by the NPWS in the standard data form relate to pollution to surface water, urbanisation, recreational use, bait-digging and pathways/walking trail development <i>etc.</i> The terrestrial habitats are sensitive to direct land use management and the intertidal habitats are sensitive to changes in hydrological conditions. Sandy habitats are sensitive to recreational use and coastal defences.</p> <p>There are no sources for effect to the terrestrial habitats of the SAC. The only pathways for effect to the sensitive receptors of the SAC are indirect hydrological links. Construction phase effects such as dust are known to persist over a short distance (less than 1km), all other effects from the sites are identified to be localised. The site is 685 m from the Turvey River and flows into the Malahide Estuary.</p> <p>The indirect hydrological links and the small-scale temporary nature of the enhancements ensure that there are no significant risks to the water quality of Malahide SAC. The projects identified in the surrounding area are also small scale and were subject to their own AA processes (see below for details). Therefore, these effects are determined to be negligible.</p> <p>The small-scale temporary nature of the enhancements combined with the indirect hydrological pathway and significant dilution potential of the system ensure that there will be no significant effect to the trophic structure or water quality of the SAC. All of the developments within the receiving environment are also small in scale with negligible effects to water quality and therefore there are no in combination effects observed.</p>	No	No
000202	Howth Head SAC	12.37	Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] European dry heaths [4030]	<p>The threats to the site identified by the NPWS in the standard data form relate to recreational activities, human disturbance, invasive species, urbanisation <i>etc.</i> The habitats within this site are sensitive to hydrological interactions and direct land use management actions, and local effects such as trampling and burning.</p> <p>There are no sources for effect to the terrestrial habitats of the SAC. The only pathways for effect to the sensitive receptors of the SAC are indirect hydrological links. Construction phase effects such as dust are known to persist over a short distance (less than 1km), all other effects from the sites are identified to be localised. The site is 685 m from the Turvey River and flows into the Malahide Estuary.</p>	No	No

Site Code	Site Name	Distance (km)	Qualifying features (QIs/SCIs)	Characterization of Potential Effects ³	Potential Significant Effects	Potential In-Combination Effects
				<p>The indirect hydrological links and the small-scale temporary nature of the enhancements ensure that there are no significant risks to the water quality of Malahide SAC. The projects identified in the surrounding area are also small scale and were subject to their own AA processes (see below for details). Therefore, these effects are determined to be negligible.</p> <p>The small-scale temporary nature of the enhancements combined with the indirect hydrological pathway and significant dilution potential of the system ensure that there will be no significant effect to the trophic structure or water quality of the SAC. All of the developments within the receiving environment are also small in scale with negligible effects to water quality and therefore there are no in combination effects observed.</p>		
004113	Howth Head Coast SPA	12.42	Kittiwake (<i>Rissa tridactyla</i>) [A188]	<p>The threats to the site identified by the NPWS in the standard data form relate to recreational activities and fire. Kittiwakes are sensitive to noise pollution, human disturbance, hydrological condition and prey availability/trophic structure.</p> <p>The only pathways for effect to the sensitive receptors of the SPA are indirect hydrological links. Construction phase effects such as dust are known to persist over a short distance (less than 1km), all other effects from the sites are identified to be localised. The site is 685 m from the Turvey River and flows into the Malahide Estuary.</p> <p>The indirect hydrological links and the small-scale temporary nature of the enhancements ensure that there are no significant risks to the water quality of SPA. The projects identified in the surrounding area are also small scale and were subject to their own AA processes (see below for details). Therefore, these effects are determined to be negligible.</p> <p>The small-scale temporary nature of the enhancements combined with the indirect hydrological pathway and significant dilution potential of the system ensure that there will be no significant effect to the trophic structure or water quality of the SPA. All of the developments within the receiving environment are also small in scale with negligible effects to water quality and therefore there are no in combination effects observed.</p>	No	No
004024	South Dublin Bay & River Tolka SPA	14.08	Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Oystercatcher (<i>Haematopus ostralegus</i>) [A130] Ringed Plover (<i>Charadrius hiaticula</i>) [A137] Grey Plover (<i>Pluvialis squatarola</i>) [A141] Knot (<i>Calidris canutus</i>) [A143]	<p>The standard data form identifies the threats and pressures to the site relate to recreational use, bait-digging and pathways/walking trail development. The species are sensitive to direct disturbance through noise pollution, human disturbance, hydrological condition and prey availability/trophic structure.</p> <p>The only pathways for effect to the sensitive receptors of the SPA are indirect hydrological links. Construction phase effects such as dust are known to persist over a short distance (less than 1km), all other effects from the sites are identified to be localised. The site is 685 m from the Turvey River and flows into the Malahide Estuary.</p> <p>The indirect hydrological links and the small-scale temporary nature of the enhancements ensure that there are no significant risks to the water quality of Malahide SPA. The</p>	No	No

Site Code	Site Name	Distance (km)	Qualifying features (QIs/SCIs)	Characterization of Potential Effects ³	Potential Significant Effects	Potential In-Combination Effects
			Sanderling (<i>Calidris alba</i>) [A144] Dunlin (<i>Calidris alpina</i>) [A149] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Redshank (<i>Tringa totanus</i>) [A162] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Roseate Tern (<i>Sterna dougallii</i>) [A192] Common Tern (<i>Sterna hirundo</i>) [A193] Arctic Tern (<i>Sterna paradisaea</i>) [A194] Wetland and Waterbirds [A999]	<p>projects identified in the surrounding area are also small scale and were subject to their own AA processes (see below for details). Therefore, these effects are determined to be negligible.</p> <p>The small-scale temporary nature of the enhancements combined with the indirect hydrological pathway and significant dilution potential of the system ensure that there will be no significant effect to the trophic structure or water quality of the SP. All of the developments within the receiving environment are also small in scale with negligible effects to water quality and therefore there are no in combination effects observed.</p>		

3.5 Other Plans and Programmes

Article 6(3) of the Habitats Directive requires an assessment of a plan or project to consider other plans or programmes that might, in combinations with the plan or project, have the potential to adversely impact upon European sites. The characteristics of the Project are foreseen to have very low effects to any European sites. Therefore, the in-combination effects do not need to be considered, as per the CIEEM 2016 guidelines. However, following a precautionary approach relevant plans and projects have been assessed. Table 3.3 outlines projects within the surrounding area of the Proposed Site that were considered which may interact with the proposed Project to cause in-combination effects to European sites.

Table 3.3 Plans or projects within the ZOI of the proposed works that may have in-combination effect

Plan or project	Status	Overview	Possible significant effects from plan or project	Is there a risk of in-combination effects	Possible significant in-combination effects
F16A/0179	Permission Granted (18/06/16)	(A) Construction of 5 detached houses (B) New front boundary wall and railing to site set back from existing road to allow for future road widening along front of site. (C) Close existing vehicular/pedestrian entrance from Hearse Road and provide new vehicular/pedestrian access road into site at centre of new front boundary treatment. (D) all associated site development works.	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects that have negligible interactions with the environment.	No	No
F18A/0692	Additional Information Requested (04/02/2019)	Works within the curtilage of a Protected Structure comprising the extension and conversion of an existing outbuilding in order to create a domestic dwelling house and for all associated site works.	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects that have negligible interactions with the environment.	No	No
F14A/0384	Permission Granted (08/06/2015)	Alterations to previously approved F12A/0118 with a new house design comprising of a 4-bedroom detached dormer bungalow with a new double garage (102 sq.m) a new covered balcony to rear and a net increase in floor area of the new house floor plan of 116 sq.m over the existing previously granted.	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects that have negligible interactions with the environment.	No	No
F18A/0424	Application Withdrawn (12/10/2018)	A single storey detached community centre with ancillary caretaker's accommodation (1-bed residential unit) with vehicular and pedestrian access from Turvey Avenue, associated surface car parking, landscaping, boundary treatment and all associated site and engineering works necessary to facilitate the development. The site adjoins Protected Structures.	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects that have negligible interactions with the environment.	No	No
F18A/0403	Permission Refused (04/10/2018)	A residential development consisting of 4 two storey detached five-bedroom houses with vehicular and pedestrian access from Turvey Avenue, associated surface car parking, landscaping, boundary treatment and all associated site and engineering works necessary to facilitate the development. The site adjoins Protected Structures.	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects that have negligible interactions with the environment.	No	No
F15A/0181	Permission Granted (15/02/2016)	A mixed use (retail convenience foodstore, retail units and cafe/restaurant units), development in 3 blocks; construction of a public plaza development with landscaping, seating and car and bicycle parking; utilisation of existing vehicular and pedestrian access with associated widening and improvements, including provision of a right hand turn on Turvey Avenue; new internal access roundabout with associated landscaping; loading bay; landscaping; boundary treatments; and all ancillary site and engineering works necessary to facilitate the development.	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects that have negligible interactions with the environment.	No	No
F18A/0587	Additional Information Requested (11/12/2018)	Permission for a 3-storey mixed use development in lieu of the granted 2 storey office development approved under Reg. Ref. F16A/0605. The proposed development provides for 1 no. retail unit at ground floor, 1 no. office unit at first floor and 1 no. two bed apartment at second floor with associated elevational	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects that have negligible interactions with the environment.	No	No

Plan or project	Status	Overview	Possible significant effects from plan or project	Is there a risk of in-combination effects	Possible significant in-combination effects
		signage and car parking, landscaping, boundary treatment and all associated site and engineering works necessary to facilitate the development.			
F16A/0268	Permission Granted (15/12/2016)	Three 3-storey, apartment blocks comprising 51 apartment units with associated surface car and bicycle parking, new vehicular and pedestrian access off Turvey Walk with some car parking to be accessed off Turvey Walk opposite Apartment Block F of The Gallery, landscaping, bin stores, boundary treatments and all associated works necessary to facilitate the development.	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects that have negligible interactions with the environment.	No	No
F17A/0192	Permission Refused (16/01/18)	Revisions to apartment Block C of granted residential development Reg. Ref. F16A/0268 to now provide for an additional 6 units as follows: 2 no. 2 bed apartments at ground floor; 1 no. 2 bed and 1 no. 3 bed apartments at first floor; and 1 no. 2 bed and 1 no. 3 bed apartments at second floor. This provides for an overall total of 15 apartment units within Block C. Planning permission is also sought for revisions to the elevations and to the granted site layout to accommodate these 6 no. apartment units including revisions to car and bicycle parking, landscaping and boundary treatments. Permission is also sought for the utilisation of the granted vehicular and pedestrian access and all associated works necessary to facilitate the development.	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects that have negligible interactions with the environment.	No	No
F16A/0605	Permission Granted (01/02/2018)	A mixed-use development comprising 1 commercial unit with 1 retail unit at ground floor and 1 childcare facility on ground and first floor with associated elevational signage and car parking. Permission is also sought for 2 3-storey apartment blocks with roof gardens comprising 33 apartment units, all with associated car parking and bin storage, utilisation and upgrades to existing access from Turvey Avenue, landscaping, boundary treatments and all associated site and engineering works necessary to facilitate the development.	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects that have negligible interactions with the environment.	No	No
F18A/0587	Additional Information Requested (11/12/2018)	Permission for a 3-storey mixed use development in lieu of the granted 2 storey office development approved under Reg. Ref. F16A/0605. The proposed development provides for 1 no. retail unit at ground floor, 1 no. office unit at first floor and 1 no. two bed apartment at second floor with associated elevational signage and car parking, landscaping, boundary treatment and all associated site and engineering works necessary to facilitate the development.	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects that have negligible interactions with the environment.	No	No

4 Conclusion

This stage 1 screening for AA of the proposed road and footpath enhancement works at Turvey Avenue, Donabate, Co. Dublin shows that implementation of the project is not foreseen to have any likely significant effects on any European site.

There are no European sites or qualifying habitat features within 1.18 km of the proposed development site. The AA screening process has considered potential effects which may arise during the construction and operational phases as a result of the implementation of the project. There are no direct hydrological pathways between the proposed site and any European site. Therefore, given the scale of the development and distance the effects arising from these works will be negligible. Through an assessment of the pathways for effects and an evaluation of the project characteristics, taking account of the processes involved and the distance of separation from European sites, it has been evaluated that there are no likely significant adverse effects on the qualifying interests, special conservation interest or the conservation objectives of any designated European site. The ecological integrity of the European sites is not foreseen to be significantly affected by the project.

Given the nature of the development, its scale, the existing localised and temporary nature of the construction effects identified as potential sources the proposed development will not lead to a significant in-combination effect with any other plans or projects.

It is concluded that the project is not foreseen to give rise to any significant adverse effects on any designated European sites, alone or in combination with other plans or projects⁶. This evaluation is made in view of the conservation objectives of the habitats or species for which these sites have been designated. Consequently, a Stage Two is not required for the project.

⁶ Except as provided for in Section 6(4) of the Habitats Directive, viz. There must be:
a) no alternative solution available,
b) imperative reasons of overriding public interest for the plan to proceed; and
c) Adequate compensatory measures in place.