

Screening Report for Appropriate
Assessment of
Proposed Strategic Housing
Development (Alterations to Phase 1
Residential and Proposed Phase 2
Residential Development),
Frascati Centre, Frascati Road,
Blackrock, Co. Dublin (formerly known
as Frascati Shopping Centre).

Compiled by OPENFIELD Ecological Services

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Introduction

Biodiversity is a contraction of the words 'biological diversity' and describes the enormous variability in species, habitats and genes that exist on Earth. It provides food, building materials, fuel and clothing while maintaining clean air, water, soil fertility and the pollination of crops. A study by the Department of Environment, Heritage and Local Government placed the economic value of biodiversity to Ireland at €2.6 billion annually (Bullock et al., 2008) for these 'ecosystem services'.

All life depends on biodiversity and its current global decline is a major challenge facing humanity. In 1992, at the Rio Earth Summit, this challenge was recognised by the United Nations through the Convention on Biological Diversity which has since been ratified by 193 countries, including Ireland. Its goal to significantly slow down the rate of biodiversity loss on Earth has been echoed by the European Union, which set a target date of 2010 for *halting* the decline. This target was not met but in 2010 in Nagoya, Japan, governments from around the world set about redoubling their efforts and issued a strategy for 2020 called 'Living in Harmony with Nature'. In 2011 the Irish Government incorporated the goals set out in this strategy, along with its commitments to the conservation of biodiversity under national and EU law, in the second national biodiversity action plan (Dept. of Arts, Heritage and the Gaeltacht, 2011). A third plan was published in 2017.

The main legislation for conserving biodiversity in Ireland have been the Directive 2009/147//EC of the European Parliament and of the Council of November 2009 on the conservation of wild birds (Birds Directive) and Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive). Among other things, these require member states to designate areas of their territory that contain important bird populations in the case of the former; or a representative sample of important or endangered habitats and species in the case of the latter. These areas are known as Special Protection Areas (SPA) and Special Areas of Conservation (SAC) respectively. Collectively they form a network of sites across the European Union known as Natura 2000. The Birds and Habitats Directives have been transposed into Irish legislation by Pt XAB of the Planning and Development Act 2000 and the European Communities (Birds and Natural Habitats) Regulations 2011, as amended. For the purposes of this application Pt XAB of the Planning and Development Act 2000 applies. A report into the economic benefits of the Natura 2000 network concluded that "there is a new evidence base that conserving and investing in our biodiversity makes sense for climate challenges, for saving money, for jobs, for food, water and physical security, for cultural identity, health, science and learning, and of course for biodiversity itself" (EU, 2013).

Unlike traditional nature reserves or national parks, Natura 2000 sites are not 'fenced-off' from human activity and are frequently in private ownership. It is the responsibility of the competent national authority to ensure that 'good conservation status' exists for their SPAs and SACs and specifically that Article 6(3) of the Habitats Directive is met. Article 6(3) states:

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

Section 177U of the Planning and Development Act 2000 sets out the purpose of AA Screening as follows:

A screening for appropriate assessment shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site.

The test at stage 2 (Appropriate Assessment) is set out in s.177V of the Planning and Development Act 2000

Whether or not the proposed development, individually or in-combination with other plans or projects would adversely affect the integrity of a European site.

However, a preliminary screening must first be carried out to determine whether or not a full Stage II AA is required. This screening is carried out by the competent authority which in this case is An Bord Pleanála.

The Purpose of this document

This document provides for the screening of a proposed residential development at the Frascati Shopping Centre, Blackrock, Co. Dublin, and its potential effects in relation to Natura 2000 sites (SACs and SPAs). Under Pt XAB of the Planning and Development Act 2000, the competent authority cannot grant planning permission where the proposed development will adversely affect the integrity of a European site. This report provides the necessary information to allow An Bord Pleanála, competent authority, to carry out screening for AA.

Methodology

The methodology for this screening statement is clearly set out in a document prepared for the Environment DG of the European Commission entitled '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' (Oxford Brookes University, 2001). Chapter 3, part 1, of the aforementioned document deals specifically with screening while

Annex 2 provides the template for the screening/finding of no significant effects report matrices to be used.

In accordance with this guidance, the following methodology has been used to produce this screening statement:

Step 1: Management of the Natura 2000 site

This determines whether the project is necessary for the conservation management of the site in question.

Step 2: Description of the Project

This step describes the aspects of the project that may have an impact on the Natura 2000 site.

Step 3: Characteristics of the Natura Site

This process identifies the conservation objectives of the site and determines whether significance effects to Natura 2000 sites will arise as a result of the plan. This is done through a literature survey and consultation with relevant stakeholders – particularly the National Parks and Wildlife Service (NPWS). All potential effects are identified including those that may act alone or in combination with other projects or plans.

Using the precautionary principle, and through consultation and a review of published data, it is normally possible to conclude at this point whether potential impacts are likely. Deficiencies in available data are also highlighted at this stage.

Step 4: Assessment of Significance

Assessing whether an effect is significant must be made in light of the conservation objectives for that SAC or SPA.

A full AA of a proposed development is required if it cannot be excluded, on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site.

The steps are compiled into a screening matrix, a template of which is provided in Appendix II of the EU methodology.

Reference is also made to guidelines for Local Authorities from the Department of the Environment, Heritage and Local Government (DoEHLG, 2009).

A full list of literature sources that have been consulted for this study is given in the References section to this report while individual references are cited within the text where relevant.

Screening Template as per Annex 2 of EU methodology:

This plan is not necessary for the management of the site and so Step 1 as outlined above is not relevant.

Brief description of the project

The site location is shown in figures 1 and 2 while the proposed layout is given in figure 3. The project is described thus, as per the planning application:

The proposal relates to alterations to the Phase 1 permission for 45 no. apartments (Reg. Ref.: D17A/0950 & ABP Ref.: 300745-18), from second to fourth floor level of the rejuvenated Frascati Centre. The proposed development also includes the provision of 57 no. additional apartments, as an extension of the Phase 1 permission, located above the existing / permitted podium car park to the north west of the centre, as a Phase 2 residential development. The subject application therefore relates to a total of 102 no. residential units.

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The proposed alterations to the 45 no. apartments (Block A and B) and associated development, permitted under the Phase 1 residential development, includes the following:

- *Internal rationalisation of the permitted units, including changes in overall unit size and internal layouts, and associated external alterations including the provision of winter gardens.*
- *Provision of an external walkway connection between the Phase 1 and Phase 2 residential blocks at second floor level.*
- *The refuse, car and cycle parking facilities permitted at lower ground floor level will be altered to cater for the additional residential units, including the introduction of a barrier control system.*
- *The main entrance to the Phase 1 residential scheme from Frascati Road will serve both the permitted and proposed units.*
- *A concierge facility room to serve the overall residential development is proposed at second floor level near the main core of Phase 1, with an associated minor reduction in the area of the permitted communal terrace at second floor level.*
- *The communal open space for Phase 1 and 2 will be accessible to all residents.*
- *Alterations to the cycle parking provision at lower ground floor / basement level and at the first-floor level podium car park.*

The Phase 2 proposal consists of 20 no. studios, 22 no. 1 beds and 15 no. 2 beds (57 no. apartments) in three no. blocks (Block D, E & F), arranged around a central communal courtyard space, above the existing and permitted

podium car park to the north west of the centre. Block D is a five storey block, Block E is a part two to part four storey block and Block F is a part two to part three storey block, all above three levels of podium / basement car park. Balconies / winter gardens are provided to all apartments (on the north western, north eastern, south western elevations and into the internal courtyard) and access to the blocks is via stair / lift cores and an external walkway fronting the communal courtyard. A roof terrace is also proposed at fifth floor level of Block E.

The proposal includes the allocation of 57 no. car parking spaces at lower ground floor level and 214 no. bicycle parking spaces at lower ground and surface level for the 102 no. residential units. The proposal includes alterations to existing surface car parking to provide additional landscaping and bicycle spaces, a bin storage area and stair / lift cores are proposed within the existing / permitted basement / podium car parks below the Phase 2 residential units, and the proposal includes all associated ancillary site development works. The proposal also includes alterations to the location of 30 no. permitted cycle parking spaces associated with the rejuvenation of the Frascati Centre, Reg. Ref.: D14A/0134, as amended.

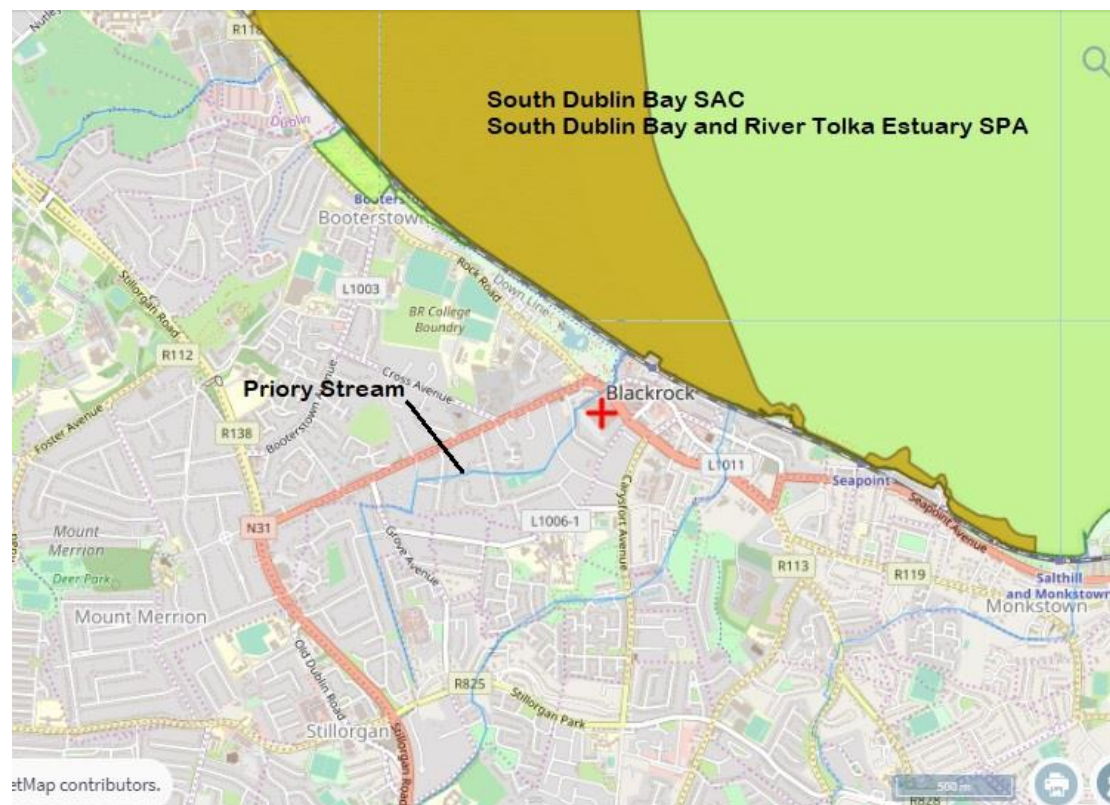


Figure 1 – Site location (red cross) (from www.npws.ie) . Magenta lines show SPA boundaries while red lines indicate SACs.

The site is not located within or directly adjacent to any Natura 2000 area (SAC or SPA). This part of south Dublin is a built-up residential and commercial zone and is predominantly composed of artificial surfaces although parks and gardens do provide some semi-natural habitat. Mapping from the Environmental Protection Agency shows that the lands are within the

catchment of no significant water course. There are a number of short water courses in this vicinity and which are likely to be culverted along significant stretches. One of these, the Priory Stream, runs under the subject site. This discharges into Dublin Bay at Blackrock Beach, c.250m to the north. Rainwater runs off hard surfaces to enter local surface drains, leading to the Priory Stream. The Brewery Stream can be found c.530m to the south-east.

A site survey was carried out in accordance with best practice guidance on habitat survey on October 17th 2018 and February 10th 2020 (Smith et al., 2011). All habitats are described here in accordance with the standard classification system (Fossitt, 2000). The surveys found that the development site is entirely composed of **Buildings and Artificial Surfaces – BL3**. Vegetation is minimal. The development lands are surrounded by roads or other artificial land uses. The survey confirmed that the Priory Stream runs entirely underground in this location.

The site is currently used as a shopping centre with large surface car parking area. Any construction and demolition waste will be removed by a licenced contractor and disposed of in accordance with the Waste Management Act.

Currently there is no attenuation of rain run-off and this enters public sewers leading to the Priory Stream. Additional SUDS measures will include a new green roof, which will help to reduce run-off rate. This is not a mitigation measure and it is permissible to take this into account at screening stage, as confirmed by the High Court in Eoin Kelly v An Bord Pleanála [2019] IEHC 84.

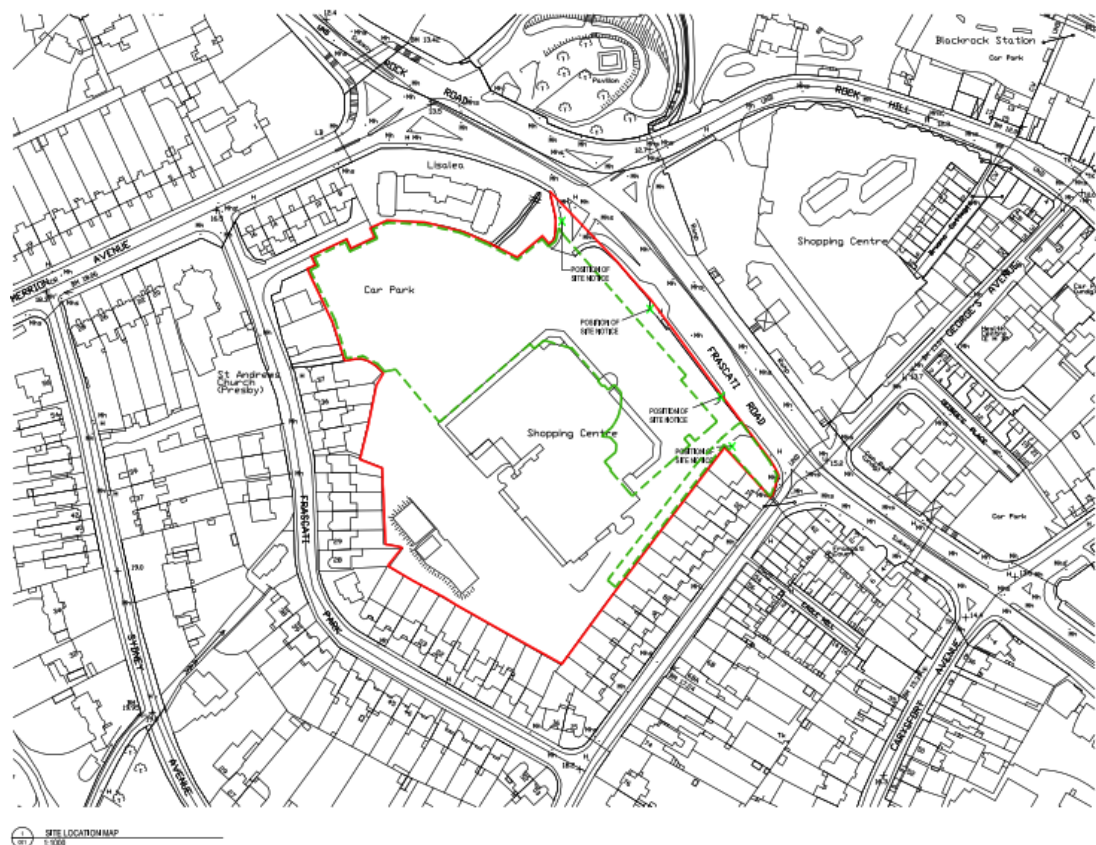


Figure 2 – Site boundary

Foul and surface drainage infrastructure will be separated up to the final point of entry to the municipal sewer. Foul effluent from the proposed development will be sent to the wastewater treatment plant at Ringsend in Dublin. Emissions from the plant are currently not in compliance with the Urban Wastewater Treatment Directive. Irish Water, the authority in charge of the wastewater treatment network received planning permission in April 2019 to increase the capacity of the plant from 1.64 million PE (population equivalent) to 2.15 million PE. This is to be done on a phase basis with a target completion date of 2022.

There are no other discharges from this operation.

A Hydrological and Hydrogeological Qualitative Risk Assessment has been prepared by AWN Consulting, which is submitted with this application from which the following extracts are taken:

The EPA (2020) on-line database indicates two watercourses (the Brewery Stream and Priory Stream) within the general area of the subject site. The Priory stream is culverted under the existing Frascati Shopping centre development...

Fresh water supply for the development will be via a mains supply. This originates in the Poulaphouca Reservoir.

There are no point air emissions from the site while some dust and noise can be expected during the construction phase.

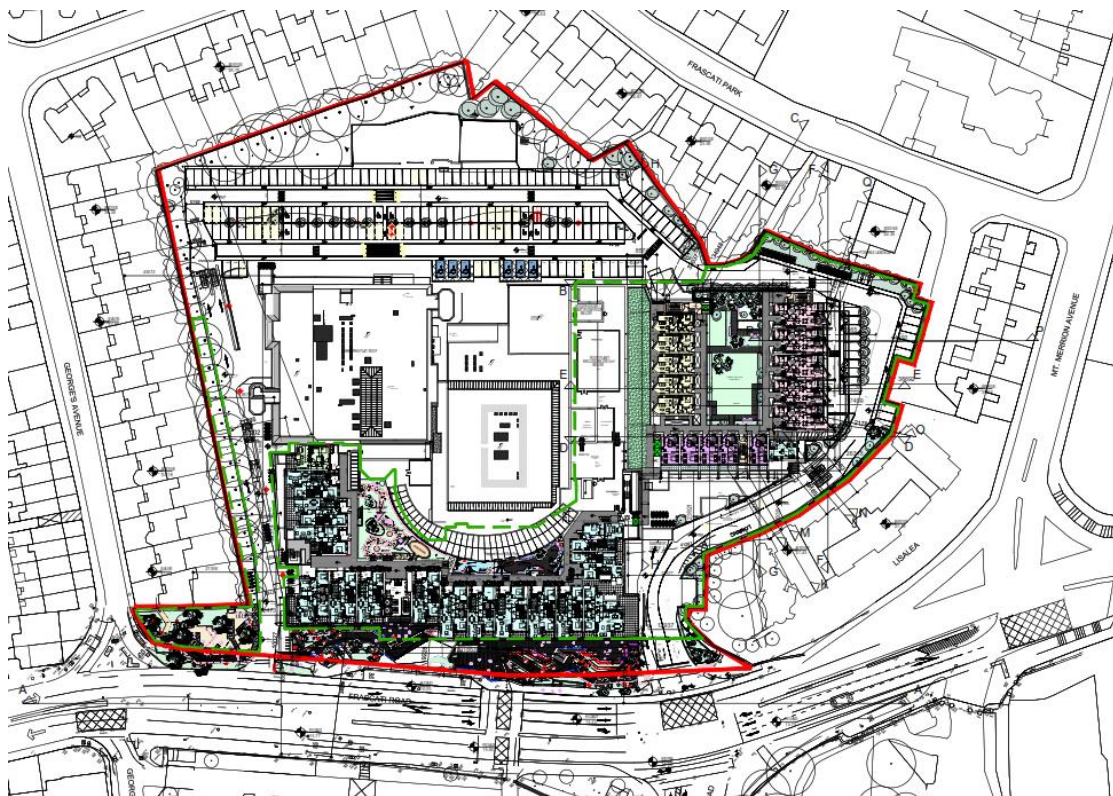


Figure 3 – Proposed layout plan

Brief description of Natura 2000 sites

In assessing the zone of influence of this project upon Natura 2000 sites the following factors must be considered:

- Potential impacts arising from the project
- The location and nature of Natura 2000 sites
- Pathways between the development and the Natura 2000 network

It has already been stated that the site is not located within or directly adjacent to any Natura 2000 area. For projects of this nature an initial 15km radius is normally examined. All Natura 2000 sites within 15km of the development site and 15km of the outfall point at Ringsend wastewater treatment plant are included in this analysis.



Figure 4 – Approximate 15km radius around the proposed development site (red circle) and the Ringsend wastewater treatment plant (green circle) (www.epa.ie).

The status of species and habitats given in the table below is based on the NPWS national assessments under Article 17 of the Habitats Directive and unless otherwise stated do not refer to the status within the SAC in question.

Baldoyle Bay SAC/SPA. c.10.8km north of the development site

This SAC (site code: 0199) is the estuary of the Sluice and the Mayne Rivers that is largely enclosed by a sand spit that stretches from Portmarnock to Howth. At low tide it has large areas of exposed mud and sediment that support rich invertebrate communities. There are a number of habitats here that are listed in the EU's Habitats Directive Annex I while there are two plants recorded from the Bay that are protected under the Flora Protection Order: Borrer's Saltmarsh-grass *Puccinellia fasciculata* and Meadow Barley *Hordeum secalinum*.

The reasons why the bay falls under the SAC designation are set out in the qualifying interests. They are either habitat types listed in Annex I or species listed in Annex II of the Habitats Directive. This information is provided by the National Parks and Wildlife Service (NPWS) and is shown in table 1 below. In this case the SAC is designated only for protected habitat types.

Table 1 – Qualifying interests for the Baldoyle Bay SAC (from NPWS)

Code	Habitats	Status
1140	Mudflats and sandflats	Inadequate
1310	Salicornia and other annuals colonizing mud and sand	Favourable
1330	Atlantic salt meadows	Inadequate
1410	Mediterranean salt meadows	Inadequate

- Tidal mudflats (1140). This is an intertidal habitat characterised by fine silt and sediment. Most of the area in Ireland is of favourable status however water quality and fishing activity, including aquaculture, are negatively affecting some areas.
- Salicornia mudflats (1310): This is a pioneer saltmarsh community and so is associated with intertidal areas. It is dependent upon a supply of fresh, bare mud and can be promoted by damage to other salt marsh habitats. It is chiefly threatened by the advance of the alien invasive Cordgrass *Spartina anglica*. Erosion can be destructive but in many cases this is a natural process.
- Atlantic and Mediterranean salt meadows (1330 & 1410): these are intertidal habitats that differ somewhat in their vegetation composition. They are dynamic habitats that depend upon processes of erosion, sedimentation and colonisation by a typical suite of salt-tolerant organisms. The main pressures are invasion by the non-native *Spartina anglica* and overgrazing by cattle and sheep.

The Baldoyle Bay SPA (site codes: 4016) is composed of estuarine habitats. They are some of the most productive in the world and the nutrients that are deposited here fuel primary and secondary production (levels in the food chain) that in turn provide food for internationally significant numbers of wintering birds (Little, 2000). It had a mean of 5,780 birds between the winters of 2006/07 and 2010/11 (Crowe et al., 2012). Specifically, it has a number of species which are 'features of interest' of the SPA, along with 'wetlands and waterbirds'. Table 2 details these.

Table 2 – Features of Interest for the Baldoyle Bay SPA (from NPWS)

Species	National Status ¹	SPA Status ²
<i>Branta bernicula hrota</i> Light-bellied brent goose	Amber (Wintering)	Favourable
<i>Charadrius hiaticula</i> Ringed plover	Green	Intermediate unfavourable
<i>Limosa lapponica</i> Bar-tailed godwit	Amber (Wintering)	Highly unfavourable
<i>Pluvialis apricaria</i> Golden plover	Red (Breeding & Wintering)	Unfavourable
<i>Pluvialis squatarola</i> Grey plover	Amber (Wintering)	Unfavourable
<i>Tadorna Tadorna</i> Shelduck	Amber (Breeding & Wintering)	Favourable
Wetlands & Waterbirds		

- **Light-bellied Brent Goose.** There has been a 67% increase in the distribution of this goose which winters throughout the Irish coast. The light-bellied subspecies found in Ireland breeds predominantly in the Canadian Arctic.
- **Ringed Plover.** This bird is a common sight around the Irish coast where it is resident. They breed on stony beaches but also, more recently, on cut-away bog in the midlands.
- **Bar-tailed Godwit.** These wetland wading birds do not breed in Ireland but are found throughout the littoral zone during winter months. They prefer estuaries where there are areas of soft mud and sediments on which to feed.
- **Golden Plover.** In winter these birds are recorded across the midlands and coastal regions. They breed only in suitable upland habitat in the north-west. Wintering abundance in Ireland has changed little in recent years although it is estimated that half of its breeding range has been lost in the last 40 years.

¹ Birds of Conservation Concern in Ireland. Colhoun & Cummins, 2013

² Conservation Objectives Supporting Document. Version 1. National Parks & Wildlife Service. 2012.

- **Grey Plover.** These birds do not breed in Ireland but winter throughout coastal estuaries and wetlands. Its population and distribution is considered to be stable.
- **Shelduck.** The largest of our ducks, Shelduck both breed and winter around the coasts with some isolate stations inland. Its population and range are considered stable.

Of those species with unfavourable status in the SPA, Ringed Plover and Bar-tailed Godwit have exhibited losses at Baldoyle Bay while the national population remains stable or has increased. It is therefore reasonable to assume that local factors are leading to declines. The NPWS list a number of factors that may be contributing to this including human disturbance (walkers with or without dogs) and nutrient enrichment (pollution). The latter effect is exhibited by algal mats, typically Sea-lettuce *Ulva* sp. which covers the sediment surface at low tide. This is good for those species which feed on Sea-lettuce but bad for those which cannot reach their favoured prey under the mats.

North Dublin Bay SAC/North Bull Island SPA. c.5.6km north of the development site

The North Dublin Bay SAC (site code: 0206) is focussed on the sand spit on the North Bull island. The qualifying interests for it are shown in table 3. The status of the habitat is also given and this is an assessment of its range, area, structure and function, and future prospects on a national level and not within the SAC itself.

Table 3 – Qualifying interests for the North Dublin Bay SAC

Code	Habitat/Species	Status
1140	Mudflats and sandflats not covered by seawater at low tide	Inadequate
1320	Salicornia and other annuals colonizing mud and sand	Favourable
1330	Atlantic salt meadows	Inadequate
1410	Mediterranean salt meadows	Inadequate
1210	Annual vegetation of drift lines	Inadequate
2110	Embryonic shifting dunes	Inadequate
2120	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)	Inadequate
2130	Fixed coastal dunes with herbaceous vegetation (grey dunes)	Bad
2190	Humid dune slacks	Inadequate
1395	<i>Petalophyllum ralfsii</i> Petalwort	Favourable

- **Annual vegetation of drift lines (1210)** This habitat of the upper shore is characterised by raised banks of pebbles and stones. They are inhabited by a sparse but unique assemblage of plants, some of which are very rare. The principle pressures are listed as gravel extraction, the building of pipelines and coastal defences.
- **Embryonic shifting dunes (2110)**. As their name suggests these sand structures represent the start of a sand dune's life. Perhaps only a meter high they are a transient habitat, vulnerable to inundation by the sea, or developing further into white dunes with Marram Grass. They are threatened by recreational uses, coastal defences, trampling and erosion.
- **Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) (2120)**. These are the second stage in dune formation and depend upon the stabilising effects of Marram Grass. The presence of the grass traps additional sand, thus growing the dunes. They are threatened by erosion, climate change, coastal flooding and built development.
- **Fixed coastal dunes with herbaceous vegetation (grey dunes) (2130 – priority habitat)**. These are more stable dune systems, typically located on the landward side of the mobile dunes. They have a more or less permanent, and complete covering of vegetation, the quality of which depends on local hydrology and grazing regimes. They are the most endangered of the dune habitat types and are under pressure from built developments such as golf courses and caravan parks, over-grazing, under-grazing and invasive species.
- **Humid dune slacks (2190)**. These are wet, nutrient enriched (relatively) depressions that are found between dune ridges. During winter months or wet weather these can flood and water levels are maintained by a soil layer or saltwater intrusion in the groundwater. There are found around the coast within the larger dune systems.
- **Petalwort (1395)**. There are 30 extant populations of this small green liverwort, predominantly along the Atlantic seaboard but also with one in Dublin. It grows within sand dune systems and can attain high populations locally.

The North Bull Island SPA (site code: 0206) is largely coincident with the North Dublin Bay SAC with the exception of the terrestrial portion of Bull Island. Table 4 lists its features of interest.

Table 4 – Features of interest for the North Dublin Bay SPA

North Bull Island SPA	National Status
Light-bellied Brent Goose <i>Branta bernicla hrota</i>	Amber (Wintering)
Oystercatcher <i>Haematopus ostralegus</i>	Amber (Breeding & Wintering)
Teal <i>Anas crecca</i>	Amber (Breeding & Wintering)
Pintail <i>Anas acuta</i>	Red (Wintering)
Shoveler <i>Anas clypeata</i>	Red (Wintering)
Shelduck <i>Tadorna tadorna</i>	Amber (Breeding & Wintering)

Golden Plover <i>Pluvialis apricaria</i>	Red (Breeding & Wintering)
Grey Plover <i>Pluvialis squatarola</i>	Amber (Wintering)
Knot <i>Calidris canutus</i>	Amber (Wintering)
Sanderling <i>Calidris alba</i>	Green (Wintering)
Dunlin <i>Calidris alpina</i>	Red (Breeding & Wintering)
Black-tailed Godwit <i>Limosa limosa</i>	Amber (Wintering)
Bar-tailed Godwit <i>Limosa lapponica</i>	Amber (Wintering)
Curlew <i>Numenius arquata</i>	Red (Breeding & Wintering)
Redshank <i>Tringa totanus</i>	Red (Breeding & Wintering)
Turnstone <i>Arenaria interpres</i>	Green (Wintering)
Black-headed Gull <i>Larus ridibundus</i>	Red (Breeding)
Wetlands & Waterbirds	

- **Oystercatcher.** Predominantly coastal in habit Oystercatchers are resident birds whose numbers continue to expand in Ireland.
- **Teal.** In winter this duck is widespread throughout the country. Land use change and drainage however have contributed to a massive decline in its breeding range over the past 40 years.
- **Pintail.** Dabbling duck wintering on grazing marshes, river floodplains, sheltered coasts and estuaries. It is a localised species and has suffered a small decline in distribution in Ireland for unknown reasons.
- **Shoveler.** Favoured wintering sites for this duck are inland wetlands and coastal estuaries. While there have been local shifts in population and distribution, overall their status is stable in Ireland.
- **Knot.** These small wading birds do not breed in Ireland but gather in coastal wetlands in winter. Their numbers have increased dramatically since the mid-1990s although the reasons for this are unclear.
- **Sanderling.** This small bird breeds in the high Arctic and winters in Ireland along sandy beaches and sandbars. Its wintering distribution has increased by 21% in the previous 30 years.
- **Dunlin.** Although widespread and stable in number during the winter season, the Irish breeding population has collapsed by nearly 70% in 40 years. Breeding is now confined to just seven sites in the north and west as habitat in former nesting areas has been degraded.
- **Black-tailed Godwit.** Breeding in Iceland these waders winter in selected sites around the Irish coast, but predominantly to the east and southern halves. Their range here has increase substantially of late.
- **Curlew.** Still a common sight during winter at coastal and inland areas around the country it breeding population here has effectively collapsed.

Their habitat has been affected by the destruction of peat bogs, afforestation, farmland intensification and land abandonment. Their wintering distribution also appears to be in decline.

- **Redshank.** Once common breeders throughout the peatlands and wet grasslands of the midlands Redshanks have undergone a 55% decline in distribution in the past 40 years. Agricultural intensification, drainage of wetlands and predation are the chief drivers of this change.
- **Turnstone.** This winter visitor to Irish coasts favours sandy beaches, estuaries and rocky shores. It is found throughout the island but changes may be occurring due to climate change.
- **Black-headed Gull.** Widespread and abundant in winter these gulls are nevertheless considered to be in decline. The reasons behind this are unclear but may relate to the loss of safe nesting sites, drainage, food depletion and increase predation.

The **South Dublin Bay and Tolka Estuary SPA, c.220m north of the development site** (side code: 4024) is largely coincident with the South Dublin Bay SAC boundary with the exception of the Tolka Estuary. These designations encompass all of the intertidal areas in Dublin Bay from south of Bull Island to the pier in Dun Laoghaire. Wintering birds in particular are attracted to these areas in great number as they shelter from harsh conditions further north and avail of the available food supply within sands and soft sediments. Table 6 lists the features of interest.

- **Light-bellied Brent Goose.** There has been a 67% increase in the distribution of this goose which winters throughout the Irish coast. The light-bellied subspecies found in Ireland breeds predominantly in the Canadian Arctic.
- **Sanderling.** This small bird breeds in the high Arctic and winters in Ireland along sandy beaches and sandbars. Its wintering distribution has increased by 21% in the previous 30 years.
- **Dunlin.** Although widespread and stable in number during the winter season, the Irish breeding population has collapsed by nearly 70% in 40 years. Breeding is now confined to just seven sites in the north and west as habitat in former nesting areas has been degraded.
- **Knot.** These small wading birds do not breed in Ireland but gather in coastal wetlands in winter. Their numbers have increased dramatically since the mid-1990s although the reasons for this are unclear.
- **Black-headed Gull.** Widespread and abundant in winter these gulls are nevertheless considered to be in decline. The reasons behind this are unclear but may relate to the loss of safe nesting sites, drainage, food depletion and increase predation.
- **Ringed Plover.** This bird is a common sight around the Irish coast where it is resident. They breed on stony beaches but also, more recently, on cut-away bog in the midlands.
- **Oystercatcher.** Predominantly coastal in habit Oystercatchers are resident birds whose numbers continue to expand in Ireland.
- **Bar-tailed Godwit.** These wetland wading birds do not breed in Ireland but are found throughout the littoral zone during winter months. They

prefer estuaries where there are areas of soft mud and sediments on which to feed.

- **Grey Plover.** These birds do not breed in Ireland but winter throughout coastal estuaries and wetlands. Its population and distribution is considered to be stable.
- **Roseate Tern.** This tern breeds at only a few stations along Ireland's east coast. Most of these are in decline although at Dublin their colony is increasing.
- **Common Tern.** This summer visitor nests along the coast and on islands in the largest lakes. Its breeding range has halved in Ireland since the 1968-1972 period.
- **Arctic Tern.** These long-distance travellers predominantly breed in coastal areas of Ireland. They have suffered from predation by invasive mink and are declining in much of their range.
- **Redshank.** Once common breeders throughout the peatlands and wet grasslands of the midlands Redshanks have undergone a 55% decline in distribution in the past 40 years. Agricultural intensification, drainage of wetlands and predation are the chief drivers of this change.

Bird counts from BirdWatch Ireland are taken from Dublin Bay as a whole and are not specific to any particular portion of the Bay. Dublin Bay is recognised as an internationally important site for water birds as it supports over 20,000 individuals. Table 5 shows the most recent count data available³.

Table 5 – Annual count data for Dublin Bay from the Irish Wetland Birds Survey (IWeBS)

Year	2010/11	2011/12	2012/13	2013/14	2014/15	Mean
Count	27,931	30,725	30,021	35,878	33,486	31,608

There were also internationally important populations of particular birds recorded in Dublin Bay (i.e. over 1% of the world population): Light-bellied brent geese *Branta bernicula hrota*; Black-tailed godwit *Limosa limosa*; Knot *Calidris canutus* and Bar-tailed godwit *L. lapponica*.

Table 6 – Features of interest for the South Dublin Bay & River Tolka Estuary SPA (EU code in square parenthesis)

South Dublin Bay and Tolka Estuary SPA
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>) [A140]
Knot (<i>Calidris canutus</i>) [A143]
Sanderling (<i>Calidris alba</i>) [A144]

³ <https://f1.caspio.com/dp.asp?AppKey=f4db3000060acbd80db9403f857c>

Dunlin (<i>Calidris alpina</i>) [A149]
Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]
Redshank (<i>Tringa totanus</i>) [A162]
Black-headed Gull (<i>Croicocephalus ridibundus</i>) [A179]
Roseate Tern (<i>Sterna dougallii</i>) [A192]
Common Tern (<i>Sterna hirundo</i>) [A193]
Arctic Tern (<i>Sterna paradisaea</i>) [A194]
Wetlands & Waterbirds [A999]

The **South Dublin Bay SAC, c. 220m north of the development site** (side code: 0210; approximately 800m from the site) is concentrated on the intertidal area of Sandymount Strand. It has four qualifying interests: 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) and Embryonic shifting dunes (2110).

- **Annual vegetation of drift lines (1210)** This habitat of the upper shore is characterised by raised banks of pebbles and stones. They are inhabited by a sparse but unique assemblage of plants, some of which are very rare. The principle pressures are listed as gravel extraction, the building of pipelines and coastal defences.
- **Embryonic shifting dunes (2110).** As their name suggests these sand structures represent the start of a sand dune's life. Perhaps only a meter high they are a transient habitat, vulnerable to inundation by the sea, or developing further into white dunes with Marram Grass. They are threatened by recreational uses, coastal defences, trampling and erosion.
- **Tidal mudflats (1140).** This is an intertidal habitat characterised by fine silt and sediment. Most of the area in Ireland is of favourable status however water quality and fishing activity, including aquaculture, are negatively affecting some areas.
- **Salicornia mudflats (1310):** This is a pioneer saltmarsh community and so is associated with intertidal areas. It is dependent upon a supply of fresh, bare mud and can be promoted by damage to other salt marsh habitats. It is chiefly threatened by the advance of the alien invasive Cordgrass *Spartina anglica*. Erosion can be destructive but in many cases this is a natural process.

Howth Head SAC and Howth Head Coast SPA. c.9.5km north-east of the development site

The Howth Head SAC (site code: 0202) is designed for two qualifying interests: vegetated sea cliffs and dry heath.

- **Vegetated sea cliffs (1230)** These coastal habitats can be composed of hard or soft material which in turn influences the rate at which erosion occurs. Vegetation can be sparse but composed of a variety of specially adapted species. It is nationally assessed as of intermediate status.
- **Dry heath (4030)**: This is a community of heather shrubs that occurs on well-drained, acidic, nutrient-poor mineral or peaty soils. Pressures on this habitat arise from high levels of sheep grazing, as well as afforestation, mining and quarrying. Unregulated burning is also identified as an important threat to the structure of this habitat. It is nationally assessed as of bad status.

Howth Head is also a pNHA and is home to a number of threatened plant species as well as locally rare or noteworthy habitats, such as patches of blanket bog. Site specific conservation objectives have been published for this SAC. These include maintaining the habitat extent, condition, vegetation composition, and community diversity for the two habitats listed as qualifying interests.

The Howth Head Coast SPA (code: 4133) is home to large colonies of breeding seabirds, particularly Kittiwake, the SPAs only feature of interest. These vocal seagulls spend most of their time at sea, returning to favoured coastal sites for breeding. Nesting is on suitable rocky cliffs around the Irish coast. These Irish colonies are considered stable (Balmer et al., 2013).

Rockabill to Dalkey Island SAC (site code: 0300). c.6.8km east of the development site.

This is a recently designated off-shore (i.e. marine) SAC. It has two qualifying interests which are reefs and Harbour Porpoise *Phocoena phocoena*. Conservation objectives for this SAC have been published to maintain or restore the area of habitat and status of the population to 'favourable conservation status'.

- Reefs can be intertidal or subtidal features and are characterised by hard or rocky substrates. The main pressures that have been identified by the NPWS are commercial fishing, aquaculture, water pollution and commercial/recreational uses of the marine environment. Nationally their status is assessed as 'bad' (NPWS, 2013).
- Harbour porpoise This is the smallest cetacean species regularly occurring in Irish waters. It is commonly found in residential pods close to the shore and it is not considered threatened in Irish waters. Its status nationally is 'good'.

Dalkey Islands SPA c.7.2km east of the development site (site code: 4172) is protected for its breeding colonies of three tern species:

- **Roseate Tern.** This tern breeds at only a few stations along Ireland's east coast. Most of these are in decline although at Dublin their colony is increasing.
- **Common Tern.** This summer visitor nests along the coast and on islands in the largest lakes. Its breeding range has halved in Ireland since the 1968-1972 period.
- **Arctic Tern.** These long-distance travellers predominantly breed in coastal areas of Ireland. They have suffered from predation by invasive mink and are declining in much of their range.

Ireland's Eye SAC/SPA c.13.4km north of the development site

Ireland's Eye is an uninhabited island 1.5km north of Howth harbour. Its southern side is gently sloping however steep cliffs descend to the seas on its northern and eastern coasts. The thin soil and maritime influence provide habitat for an assemblage of notable plant species, including the rare Sea-Kale *Crambe maritima*. The SAC (site code: 2193) has two qualifying interests: vegetated sea cliffs and perennial vegetation of stony banks. The latter habitat is nationally of intermediate status. It is a habitat of the high tide line characterised by loose stones and shingle. It is a highly dynamic feature, being continually reshaped by tides and waves. It can be home to very rare plants and a number of coastal nesting birds. Site specific conservation objectives have been published for this SAC. These include maintaining the habitat extent, condition, vegetation composition, and community diversity for the two habitats listed as qualifying interests.

The Ireland's Eye SPA (code: 4117) is centred on the island's value as a large seabird colony. It is one of only six number of locations where Gannets *Morus bassanus* regularly breed in Ireland. The features of interest for the SPA are given in table 7.

Table 7 – Features of Interest for the Ireland's Eye SPA (from NPWS)

Species	National Status
<i>Phalacrocorax carbo</i> Cormorant	Amber (Breeding & Wintering)
<i>Larus argentatus</i> Herring Gull	Red (Breeding)
<i>Rissa tridactyla</i> Kittiwake	Amber (Breeding)
<i>Uria aalge</i> Guillemot	Amber (Breeding)
<i>Alca torda</i> Razorbill	Amber (Breeding)

- **Cormorant.** Wintering populations of this large, fish-eating bird have increased in Ireland since the early 1980s. Breeding also occurs widely along the coast and inland waterways. It is amber-listed due to a moderate decline in numbers.

- **Herring Gull.** This large gull breeds predominantly around the Irish coast and only occasionally inland. Numbers at these colonies have fallen by 60% since 1969, a decline which is attributed to a number of sources including a reduction in available food at landfill, botulism and predation.
- **Guillemot.** This member of the auk family is found only near land during the breeding season. They nest on suitable rocky outcrops and cliffs where there is protection from predators. The population at four of Ireland's largest colonies is estimated to have increased by 22% over the past decade.
- **Razorbill.** This member of the auk family breeds exclusively at suitable coastal sites, where there are rocky cliffs to provide protection from predators. Indications are that populations at Irish colonies are stable.

The **Glenasmole Valley SAC** (code: 1209), **c.13.5km south-west of the development site**, is the flooded valley of the Dodder river, dammed to provide drinking water for the city of Dublin, and covering an area of nearly 150ha. Woodland has developed around its margins while species-rich grassland is to be found on some of its slopes. A number of rare plants species, including a variety of orchids, are to be found here.

The SAC is designated only for protected habitat types and these are given in table 8.

Table 8 – Qualifying interests for the Glenasmole Valley SAC (from NPWS)

Code	Habitats	Status
6210	Orchid rich grassland/Calcareous grassland	Bad
6410	Molinea meadows	Bad
7220	Petrifying springs (priority habitat)	Inadequate

- **Orchid-rich grassland (6210)** This is a species rich grassland habitat found on well drained calcareous soils. It must be important for orchids in order to fall into this category. While there is evidence that an increased occurrence of flooding on some sites may be having a detrimental effect the principle threats listed are from agricultural intensification and 'stock feeding', i.e. overgrazing.
- **Molinea meadows (6410)** *Molinea caerulea*, the Purple Moor-grass, is typically associated with upland peatland habitats but this habit type occurs on lowland sites associated with traditional agricultural practices. The main threats that it faces are associated with changes in land use, e.g. land abandonment or intensification.
- **Petrifying Springs (7220):** These are very localised habitats that arise from the precipitation of excess calcium carbonate in supersaturated running water. They are associated with characteristic bryophytes. They are vulnerable to changes in water quality, flow regime and intensification of land use practices (NPWS, 2013). Determining if significant effects are likely to occur to any of these SACs or SPAs must be measured against their 'conservation objectives'. Specific conservation objectives have been

set for all of these areas with the exception of the Poulaphouca Reservoir. Generic conservation objectives have been published by the NPWS and are stated as.

Knocksink Wood SAC (site code: 0725), **c.10.2km south of the development site**

This important woodland site is located near Enniskerry, Co. Wicklow and is within the valley of the Glencullen River. It has mature stands of Oak forest with two important habitats at a European level: alluvial wet woodland, and petrifying springs; both listed on Annex I of the Habitats Directive. The Wood is also of note for its bird and mammal fauna and its particularly rich community of invertebrates.

Knocksink is a National Nature Reserve and so is of significance for a range of wildlife as well as being of amenity value. It should be reiterated that the AA process strictly looks at potential effects to the SAC in light of the conservation objectives which have been set.

Table 9 – Qualifying interests for the Knocksink Wood SAC (from NPWS)

Code	Habitats/Species	Status
7220	Petrifying springs	Inadequate
21E0	Alluvial forests	Bad

- **Alluvial Wet Woodland (91E0 – priority habitat):** This is a native woodland type that occurs on heavy soils, periodically inundated by river water but which are otherwise well drained and aerated. The main pressures are identified as alien invasive species, undergrazing and overgrazing. Pollution from agricultural land may also be significant.
- **Petrifying Springs (7220 – priority habitat):** These are very localised habitats that arise from the precipitation of excess calcium carbonate in supersaturated running water. They are associated with characteristic bryophytes. They are vulnerable to changes in water quality, flow regime and intensification of land use practices.
- **Old Oak Woodlands (91A0):** This native woodland type is typified by Sessile Oak *Quercus patrea*, Holly *Ilex aquifolium* and Hard Fern *Blechnum spicant*. Its range is much reduced from historic levels while the principle threats are alien invasive species and overgrazing by deer but also cattle, goats and sheep.

Ballyman Glen SAC (site code: 0713), **c.11km south of the development site**

This internationally important site consists of wet fen vegetation with petrifying springs. These are rare habitats in Dublin and this site is noted for its particularly rich diversity of orchids and sedges. Its qualifying interests are shown in table 10.

Table 10 – Qualifying interests for the Ballyman Glen SAC (from NPWS)

Code	Habitats/Species	Status
7220	Petrifying springs	Inadequate
7230	Alkaline fen	Bad

- **Alkaline Fens (7230):** Threats of ‘high importance’ are groundwater abstractions, land reclamation, diffuse groundwater pollution, land abandonment/under-grazing. These fen systems are often a complex mosaic of habitats, with tall sedge beds, reedbeds, wet grasslands, springs and open-water often co-occurring at a given fen site. Their integrity is reliant upon a stable, high water table; calcareous/low-nutrient water supply; and controlled mowing and/or grazing.

Wicklow Mountains SAC & SPA (site codes: 2122 & 4040), **c.14.8km south of the development site**

Wicklow Mountains is a large area and is designated as both an SAC and SPA as well as being a National Park. It is an upland area underlain with granite and is an important amenity and recreational area, as well as being of high conservation value. Its qualifying interests are shown in table 11 while its ‘features of interest’ are given as Merlin *Falco columbarius* (breeding) and Peregrine *Falco peregrinus* (breeding).

Table 11 – Qualifying interests for the Wicklow Mountains SAC (site code: 4040)

Habitats	Status
Active Blanket bog	Bad
Atlantic wet heath	Bad
European dry heath	Bad
Old oak woodland	Bad
Siliceous rocky slopes	Inadequate
Calcareous rocky slopes	Inadequate
Siliceous scree	Inadequate
Alpine and Boreal heath	Bad
Natural dystrophic lakes	Inadequate
Oligotrophic lakes	Inadequate
Species rich <i>Nardus</i> grassland	Bad
Calaminarian Grassland	Inadequate
Otter	Favourable

- **Active Blanket Bog (7130)** This is a very widespread habitat in Ireland found on uplands and lowlands along the Atlantic seaboard. Active blanket bog is peat forming, principally indicating the presence of *Sphagnum* sp. mosses but also other species. Degraded bog, where there is now forestry or bare peat, are excluded as they are not considered ‘active’.

- **Atlantic wet heath (4010)** This is a heather dominant habitat that is intermediate between dry heath and blanket bog, and is frequently found in association with these two. Grazing and trampling by sheep is identified as the greatest threat to the status of the habitat but non-native invasive species such as *Rhododendron* and the moss *Campylopus introflexus* also impact negatively upon the habitat.
- **Dry heath (4030):** This is a community of heather shrubs that occurs on well-drained, acidic, nutrient-poor mineral or peaty soils. Pressures on this habitat arise from high levels of sheep grazing, as well as afforestation, mining and quarrying. Unregulated burning is also identified as an important threat to the structure of this habitat.
- **Alpine and Boreal Heath (4060)** This habitat occurs on exposed mountain tops with acid substrate where stunted growths of heather are found. It is also found in the Burren, Co. Clare at low altitudes.
- **Siliceous Scree (8110)** This is a mountainous habitat characterised by expanses of shattered siliceous rock from small, mobile stones to stable boulders. Vegetation is sparse and frequently dominated by moss or lichen communities.
- **Calcareous or Siliceous Rocky Slopes (8210 & 8220)** These are vertical or near vertical slopes of calcareous or siliceous rock with cracks and fissures that are home to unique communities of plants. Climate change is considered to be the greatest threat where specialist arctic-alpine plants are to be found.
- **Upland Oligotrophic lakes (3130).** These are naturally low nutrient status lakes that in Ireland are associated with expanses of blanket bog. They are threatened by eutrophication (excessive input of nutrients) and peatland drainage.
- **Dystrophic lakes (3160)** These are naturally low oxygen, nutrient poor, acid lakes that occur in association with peatland habitats. They have low species diversity but some of these species are uniquely associated with this habitat.
- **Camalinarian Grassland (6130).** This unusual grassland community is found in Ireland on the sites of previous extraction works such as old mines. Certain bryophyte and vascular plants, including some notable rarities, thrive in conditions of high heavy metal concentrations, such as copper, lead or zinc.
- **Otter (1355)** This aquatic mammal lives its entire life in and close to wet places, including rivers, lakes and coastal areas. They will feed on a wide variety of prey items. Despite local threats from severe pollution incidents and illegal fishing, its population is considered stable and healthy, and so is assessed as being of 'good' status.

Bray Head SAC (site code: 0714), **c.13.4km south-east of the development site.** This coastal site encompasses the high plateaux between the towns of Bray and Greystones. Much of this habitat consists of dry heath along with dry calcareous grassland, which are important for their vegetation communities. The coastal cliffs provide habitat for significant numbers of sea birds, particularly during the breeding season, as well as Peregrine *Falco peregrinus*, which is listed under Annex I of the Birds Directive. Bray Head

falls within the Natura 2000 network of European sites due to two habitat types: vegetated sea cliffs (code 1230), and dry heath (code 4030). The 'site synopsis' states "the heath and grassland habitats at this site are threatened by reclamation for agriculture and also by frequent burning. The site is a popular recreational area and is especially used by walkers".

- **Vegetated sea cliffs (1230)** These coastal habitats can be composed of hard or soft material which in turn influences the rate at which erosion occurs. Vegetation can be sparse but composed of a variety of specially adapted species.
- **Dry heath (4030):** This is a community of heather shrubs that occurs on well-drained, acidic, nutrient-poor mineral or peaty soils. Pressures on this habitat arise from high levels of sheep grazing, as well as afforestation, mining and quarrying. Unregulated burning is also identified as an important threat to the structure of this habitat.

At its nearest point the **Poulaphouca Reservoir SPA** (site code: 4063), **c.25.5km west of the development site**, is located approximately 25km from the site of the proposed development. Its 'features of interest' include the Greylag Goose *Anser anser* and the Lesser Black-backed Gull *Chroicocephalus ridibundus*.

- **Greylag Goose.** Wintering Greylag Geese are very scattered in Ireland and occur on both coastal in inland sites. Their population has expanded greatly in their more northerly ranges (Iceland and Scotland) and this has coincided with losses elsewhere.
- **Black-headed Gull.** Widespread and abundant in winter these gulls are nevertheless considered to be in decline. The reasons behind this are unclear but may relate to the loss of safe nesting sites, drainage, food depletion and increase predation.

Malahide Estuary SAC and SPA (code: 0205 and 4025), c.17km north of the development site

The estuary is designated for its intertidal habitats and important wintering bird population.

In addition to its Natura 2000 designations it is also a Ramsar site (Broadmeadow estuary no. 833) and a Marine Protected Area under the OSPAR Convention (site code: O-IE-0002967).

The qualifying interests for the SAC (the reasons why the site if of European value) are detailed in table 12 while the Special Conservation Interests (analogous to qualifying interests for SPAs) for the SPA are given in table 13.

Table 12 – Site qualifying interests for the Malahide estuary SAC

Aspect	Level of Protection	Status
Fixed coastal dunes with herbaceous vegetation (grey dunes) (code: 2130)	Habitats Directive Annex I priority habitat	Bad
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes') (code: 2120)	Habitats Directive Annex I	Inadequate
Salicornia and other annuals colonizing mud and sand (code: 1310)		Favourable
Mediterranean salt meadows (code: 1410)		Inadequate
Atlantic salt meadows (code: 1330)		Inadequate
Mudflats and sandflats not covered by seawater at low tide (code: 1140)		Inadequate

- **Tidal mudflats (1140)**. This is an intertidal habitat characterised by fine silt and sediment. Most of the area in Ireland is of favourable status however water quality and fishing activity, including aquaculture, are negatively affecting some areas.
- **Salicornia mudflats (1310)**: This is a pioneer saltmarsh community and so is associated with intertidal areas. It is dependent upon a supply of fresh, bare mud and can be promoted by damage to other salt marsh habitats. It is chiefly threatened by the advance of the alien invasive Cordgrass *Spartina anglica*. Erosion can be destructive but in many cases this is a natural process.
- **Atlantic and Mediterranean salt meadows (1330 & 1410)**: these are intertidal habitats that differ somewhat in their vegetation composition. They are dynamic habitats that depend upon processes of erosion, sedimentation and colonisation by a typical suite of salt-tolerant organisms. The main pressures are invasion by the non-native *Spartina anglica* and overgrazing by cattle and sheep.
- **Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) (2120)**. These are the second stage in dune formation and depend upon the stabilising effects of Marram Grass. The presence of the grass traps additional sand, thus growing the dunes. They are threatened by erosion, climate change, coastal flooding and built development.
- **Fixed coastal dunes with herbaceous vegetation (grey dunes) (2130 – priority habitat)**. These are more stable dune systems, typically located on the landward side of the mobile dunes. They have a more or less permanent, and complete covering of vegetation, the quality of which depends on local hydrology and grazing regimes. They are the most endangered of the dune habitat types and are under pressure from built developments such as golf courses and caravan parks, over-grazing, under-grazing and invasive species.

Table 13 – Special Conservation Interests for Malahide Estuary SPA

Species	National Status ⁴
<i>Anas acuta</i> Pintail	Red (Wintering)
<i>Branta bernicula hrota</i> Light-bellied brent goose	Amber (Wintering)
<i>Bucephala clangula</i> Goldeneye	Red (Wintering)
<i>Calidris alpina</i> Dunlin	Red (Breeding & Wintering)
<i>Calidris canutus</i> Knot	Amber (Wintering)
<i>Haematopus ostralegus</i> Oystercatcher	Amber (Breeding & Wintering)
<i>Limosa lapponica</i> Bar-tailed godwit	Amber (Wintering)
<i>Limosa limosa</i> Black-tailed godwit	Amber (Wintering)
<i>Mergus serrator</i> Red-breasted Merganser	Green (Breeding & Wintering)
<i>Pluvialis apricaria</i> Golden Plover	Red (Breeding & Wintering)
<i>Pluvialis squatarola</i> Grey Plover	Amber (Wintering)
<i>Podiceps cristatus</i> Great-crested Grebe	Amber (Breeding & Wintering)
<i>Tadorna tadorna</i> Shelduck	Amber (Breeding & Wintering)
<i>Tringa totanus</i> Redshank	Red (Breeding & Wintering)
Wetlands & Waterbirds	

- **Pintail.** Dabbling duck wintering on grazing marshes, river floodplains, sheltered coasts and estuaries. It is a localised species and has suffered a small decline in distribution in Ireland for unknown reasons.
- **Light-bellied Brent Goose.** There has been a 67% increase in the distribution of this goose which winters throughout the Irish coast. The light-bellied subspecies found in Ireland breeds predominantly in the Canadian Arctic.
- **Goldeneye.** This duck wintering throughout Ireland on suitable coastal areas, river valleys and wetlands. There has been an 11% contraction in its Irish wintering range since the early 1980s and a 37% decline in abundance since the 1990s.
- **Dunlin.** Although widespread and stable in number during the winter season, the Irish breeding population has collapsed by nearly 70% in 40 years. Breeding is now confined to just seven sites in the north and west as habitat in former nesting areas has been degraded.
- **Knot.** These small wading birds do not breed in Ireland but gather in coastal wetlands in winter. Their numbers have increased dramatically since the mid-1990s although the reasons for this are unclear.

⁴ Birds of Conservation Concern in Ireland. Colhoun & Cummins, 2013

- **Oystercatcher.** Predominantly coastal in habit Oystercatchers are resident birds whose numbers continue to expand in Ireland.
- **Bar-tailed Godwit.** These wetland wading birds do not breed in Ireland but are found throughout the littoral zone during winter months. They prefer estuaries where there are areas of soft mud and sediments on which to feed.
- **Black-tailed Godwit.** Breeding in Iceland these waders winter in selected sites around the Irish coast, but predominantly to the east and southern halves. Their range here has increase substantially of late.
- **Red-breasted Merganser.** A widely distributed duck in winter Red-breasted Mergansers also breed in Ireland at certain coastal and inland locations to the north and west. They have suffered small declines in both their wintering and breeding ranges and possible reasons have been cited as predation by American Mink and shooting.
- **Golden Plover.** In winter these birds are recorded across the midlands and coastal regions. They breed only in suitable upland habitat in the north-west. Wintering abundance in Ireland has changed little in recent years although it is estimated that half of its breeding range has been lost in the last 40 years.
- **Grey Plover.** These birds do not breed in Ireland but winter throughout coastal estuaries and wetlands. Its population and distribution is considered to be stable.
- **Great-crested Grebe.** These birds breed predominantly on freshwater sites north of the River Shannon while coastal areas along the east and south are used for wintering. Numbers in Ireland have decline by over 30% since the 1990s.
- **Shelduck.** The largest of our ducks, Shelduck both breed and winter around the coasts with some isolate stations inland. Its population and range is considered stable.
- **Redshank.** Once common breeders throughout the peatlands and wet grasslands of the midlands Redshanks have undergone a 55% decline in distribution in the past 40 years. Agricultural intensification, drainage of wetlands and predation are the chief drivers of this change.

Pathway Analysis

There is a direct natural hydrological connection from the site to Dublin Bay via the Priory Stream. There is also an indirect pathway through the foul sewer which includes significant dilution on route to the stormwater outfall and Ringsend WWTP respectively.

The following extract from the AWN report is set out below for ease of reference in relation to the “Assessment of Plausible Sources”:

Potential sources during both the construction and operational phases are considered. For the purposes of assessing hydrological/ hydrogeological S-P-R linkages, all potential sources of contamination are considered without taking account of any measures intended to avoid or reduce harmful effects of the proposed project (mitigation measures) i.e. a worst-case scenario.

Construction sources (short-term) and operational sources (long-term) are considered below.

Construction Phase

The following sources are considered plausible for the proposed construction site:

(i) Accidental leakage may occur from construction site equipment refuelling or leakage from a bunded fuel tank on site. As a worst-case scenario an unmitigated leak of c. 500 litres outside of the bund is considered. This would be a single short-term event. Based on the presence of 3 no. oil interceptors there is no likely emission off site to the Priory stream.

(ii) Use of wet cement is a requirement during construction. Run-off water from recent cemented areas will result in highly alkaline water with high pH. As this would only occur during phases of work this is again considered as a single short-term event rather than an ongoing event.

(iii) The proposed development has only minor earthworks, as such unmitigated run-off will only likely contain low concentration of suspended solids.

These impacts could be considered as intermittent short-term events.

Operational Phase

No additional oil storage is required during operation of the proposed development. Therefore, the only plausible leak is petrol/ diesel fuel from individual cars in basement parking areas, run-off may contain a worst-case scenario of 70 litres. The risk of a short-term release of oil is already considered under the construction scenario above i.e. without mitigation. Drainage from the car park area is through a petrol interceptor providing treatment before discharging to the sewer.

The development will be fully serviced with [separate] foul and storm sewers which will have adequate capacity for the facility as required by Irish Water licencing. Discharge from the site to the public foul sewer will be sewage and grey water. The foul discharge from the site will join the public sewer and will be treated at the Irish Water Ringsend WWTP prior to subsequent discharge to Dublin Bay. This WWTP is required to operate under an EPA licence and must meet environmental legislative requirements as set out in such licence. It is noted that an application for a new upgrade to this facility (Irish Water, 2018) has recently received planning and is expected to be fully operational with greater treatment capacity within 5 years. All [attenuated] stormwater will discharge to the public stormwater network which will ultimately discharge to Dublin Bay.

[...] Assessment of Pathways

The following pathways have been considered within this assessment with impact assessment presented in Section 3.4:

(i) The site is underlain by [generally low permeable] Granite which the GSI classifies as a Poor Aquifer (PI), i.e. Bedrock which is Generally Unproductive except for Local Zones. Flow paths are generally not connected and limited to within the upper weathered zones identified. As such any potential for off site migration through the underlying granite is considered low.

(ii) There is a hydrological linkage for construction or operational run-off from the site to the Priory Stream as stormwater discharges to this stream through the existing drainage infrastructure. This stream ultimately discharges to Dublin Bay c. 0.5 km downgradient of the site.

(iii) There is no 'direct' pathway for foul sewage to any receiving water body (as identified above). There is however an 'indirect pathway' through the public sewer which ultimately discharges to the Irish Water WWTP at Ringsend prior to final discharge to Dublin Bay post treatment.

Sampling of water quality in Dublin Bay (and presented in the Annual Environmental Report for the WWTP) indicates that the discharge from the wastewater treatment plant is having an observable effect in the 'near field' of the discharge. This includes the inner Liffey Estuary and the Tolka Estuary, but not the coastal waters of Dublin Bay. This indicates that potential effects arising from the treatment plant are confined to these areas, and that the zone of influence does not extend to the coastal waters or the Irish Sea.

There is no terrestrial or overland link to Natura 2000 sites. Therefore the zone of influence of the project encompasses a number of Natura 2000 sites where there are hydrological links. There are hydrological links to the South Dublin Bay and River Tolka Estuary SPA (site code: 4024), the South Dublin Bay SAC (site code: 0210), the North Bull Island SPA (site code: 4006) and the North Dublin Bay SAC (site code: 0206). The Poulaphouca Reservoir SPA (site code: 4063), from which drinking water supply for this development will originate, is also considered to fall within the zone of influence of this project. For reasons outlined above impacts to coastal or intertidal Natura 2000 sites beyond Dublin Bay cannot occur.

Table 14 summarises the pathway analysis where green indicates Natura 2000 sites falling within the zone of influence while yellow indicates Natura 2000 sites falling outside the zone of influence of the proposed development project.

Table 14 – Summary table of Natura 2000 sites

Natura 2000 sites found to lie within the zone of influence of the project
North Dublin Bay SAC
North Bull Island SPA
South Dublin Bay SAC
South Dublin Bay and River Tolka Estuary SPA
Poulaphouca Reservoir SPA
Natura 2000 sites examined but found not to lie within the zone of influence of the project
Baldoyle Bay SAC
Baldoyle Bay SPA
Howth Head SAC
Howth Head Coast SPA
Rockabill to Dalkey SAC
Dalkey Islands SPA
Ireland's Eye SAC
Ireland's Eye SPA
Glenasmole Valley SAC
Knocksink Wood SAC
Ballyman Glen SAC
Wicklow Mountains SAC
Wicklow Mountains SPA
Bray Head SAC
Malahide Estuary SAC
Malahide Estuary SPA

Whether any of these SACs or SPAs is likely to be affected must be measured against their 'conservation objectives'. Specific conservation objectives have been set for all of these areas with the exception of the Poulaphouca Reservoir. Generic conservation objectives have been published by the NPWS and are stated as:

To maintain or restore the favourable conservation condition of the Annexed species for which the SPA has been selected.

In a generic sense ‘favourable conservation status’ of a habitat is achieved when:

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

While the ‘favourable conservation status’ of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long - term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long - term basis.

Specific conservation objectives have been set for mudflats in the South Dublin Bay SAC (NPWS, 2013) and for all qualifying interests the North Dublin Bay SAC (NPWS, 2013). The objectives for South Dublin Bay SAC which are relevant to this study are summarised as:

Mudflats (code 1140)

Permanent habitat area stable or increasing (estimated at 720 hectares); Maintain the extent of the *Zostera*-dominated community, subject to natural processes; Conserve the high quality of the *Zostera*-dominated community, subject to natural processes; Conserve the following community type in a natural condition: Fine sands with *Angulus tenuis* community complex.

For the South Dublin Bay & Tolka Estuary SPA and the North Bull Island SPA the conservations objectives for each bird species relates to maintaining a population trend that is stable or increasing and maintaining the current distribution in time and space (NPWS, 2015a & b).

For the Poulaphouca Reservoir SPA, generic conservation objectives have been published by the NPWS and are as previously stated above (NPWS, 2020).

Data collected to carry out the assessment

Details from the NPWS site synopsis report and the most recent data from BirdWatch Ireland's Wetlands Bird Survey (IWeBS) indicate that Dublin Bay is of international importance for wintering birds meaning that it regularly holds a population of over 20,000 birds. Total counts from IWeBS are shown in table 1.

The site is entirely composed of artificial or highly modified habitats which are of negligible ecological significance. It is located in a built-up area of Dublin and is not close to any water course. It is connected to a number of Natura 2000 areas via wastewater and surface water run-off.

The EU's Water Framework Directive (WFD) stipulates that all water bodies must attain 'good ecological status' by 2015. This includes estuarine waters and Dublin Bay is located within the Eastern River Basin District. In 2009 a management plan was published to address pollution issues and includes a 'programme of measures' which must be completed. This plan was approved in 2010 (ERBD, 2010). The lower Liffey Estuary has most recently (2014) been assessed by the Environmental Protection Agency (EPA) as 'unpolluted' – a term which implies 'good status'. The coastal water beyond the estuary is also assessed as 'unpolluted' (from www.epa.ie). These classifications mean that water quality downstream of the Custom House is currently meeting the requirements of the WFD.

Of the species listed in table 2, three, the Dunlin, Redshank and Black-headed Gull are listed as of high conservation concern, and on BirdWatch Ireland's red list (Colhoun & Cummins, 2013).

- Dunlins do not breed on the east coast of Ireland while their winter range, which includes a number of coastal and wetland areas across the country, has declined by over 50% between 1994/5 and 2008/09. The reason for this decline is unclear.
- Wintering Redshank numbers in Ireland have changed little since the early 1980s while their breeding sites, based around wetlands west of the River Shannon and some eastern coastal areas, has fallen by 55% in 40 years. This can be attributed to habitat loss from agricultural intensification and drainage.
- Black-headed Gulls remain a frequent winter presence and their red listing relates to their breeding status only. This has seen a 55% decline in 40 years for reasons which are not clear but may relate to loss of nesting sites, predation, food depletion or drainage. They are not recorded as breeding in the Dublin area. (Balmer et al., 2013).

It is noted that although declines in these species cannot always be attributed to clear causes, there is no evidence that water quality issues have been a factor.

In 2020 the NPWS published a report entitled 'The monitoring and assessment of six EU Habitats Directive Annex I Marine Habitats' (Scally & Hewett, 2020). This report specifically assessed the status of the habitat: mudflats and sandflats not covered by seawater at low tide (1140) which is a qualifying interest of the North Dublin Bay SAC and the South Dublin Bay SAC. Table 22 of this report assessed the status of this habitat within both SACs as 'favourable'.

In June 2018 Irish Water applied for (and subsequently received) planning permission for works to the Ringsend Wastewater Treatment (WwTP) facility. As part of this application an Environmental Impact Assessment Report (EIAR) was submitted. Sections 5 and 6 of this EIAR related to Marine Biodiversity and Terrestrial Biodiversity respectively and each contained a section on the 'do-nothing scenario'. These review the effects to biodiversity in Dublin Bay in the absence of the upgrade works and so are relevant to this response. Extracts from these sections include:

"If the Proposed WwTP Component is not constructed, the nutrient and suspended solid loads from the plant into Dublin Bay will continue at the same levels and the impact of these loadings should maintain the same level of effects on marine biodiversity. [...]

If the status quo is maintained there will be little or no change in the majority of the intertidal faunal assemblages found in Dublin Bay which would likely continue to be relatively diverse and rich across the bay [our emphasis]. Previous studies suggest that the outer and south bays are largely unaffected by the nutrient inputs from the WwTP at Ringsend and from the Liffey and Tolka rivers. Therefore, the sandy communities found in those areas will likely remain dominated by the same assemblage of Nephthys, tellinids and other pollution-sensitive species, albeit subjected to natural spatial and seasonal variations.

However, the areas in the Tolka Estuary and North Bull Island channel will continue to be affected by the cumulative nutrient loads from the river Liffey and Tolka and the effluent from the Ringsend WwTP. These areas will likely continue to be colonised by opportunistic taxa tolerant of organic enrichment. There is a possibility that an increase in the nutrient outputs from the plant due to the operational overload and storm water discharges could result in a decline in the biodiversity of these communities as a result of low oxygen availability caused by increased organic enrichment. Considering the existing situation, it is possible that through the future oversupply of DIN to the area impacted by the existing outfall, benthic production could be adversely impacted due to hypoxic or even anoxic conditions. An increase in the cover of opportunistic macroalgae could lead to further deterioration in the lagoons in the North Bull as they add to the organic load on the benthos and further increase the BOD. These events, although localised, could deteriorate the biological status for Dublin Bay as a whole. **Nonetheless, it is unlikely, as existing historical data suggests that pollution in Dublin Bay has had little or no effect on the composition and richness of the benthic macroinvertebrate fauna** [our emphasis]. Although a localised decline could

occur, it is not envisaged to be to a scale that could pose a threat to the shellfish, fish, bird or marine mammal populations that occur in the area. (section 5.7.1) [...]

If there is no change to the treatment process at Ringsend WwTP then the terrestrial environment adjacent to the site will remain largely unchanged [our emphasis]. [...]

If the Proposed WwTP Component is not implemented, there will be little or no change in the majority of the intertidal faunal assemblages found in Dublin Bay which would likely continue to be relatively diverse and rich across the bay [...]. The sandy communities found in South Dublin Bay will likely remain dominated by the same assemblage of the polychaete worm *Nephtys caeca*, Cockle *Cerastoderma edula*, tellinids and other pollution-sensitive species, albeit subjected to natural spatial and seasonal variations. **Bird populations in these areas will be unaffected by the discharge from the WwTP** [our emphasis].

If the Proposed WwTP Component is not implemented, there is a possibility that an increase in the nutrient outputs from the plant due to operational overload and storm water discharges could result in a decline in the biodiversity of invertebrate communities in the Tolka Estuary and North Bull Island channel as a result of low oxygen availability caused by increased organic enrichment. An increase in the cover of opportunistic macroalgae could lead to further deterioration in the lagoons in the North Bull as they add to the organic load on the benthos and further increase the BOD. These events, although localised, could deteriorate the biological status for Dublin Bay as a whole. **It is unlikely that they would have any significant impact on the waterbird populations that forage on invertebrates in Dublin Bay** [our emphasis] (section 6.5.1).

A graphic from the EIAR prepared by Irish Water in 2018 showed the zone of influence of the discharge from the Ringsend WwTP and this indicated that effects from the discharge do not extend to the south side of the bay. This is reproduced in figure 5.

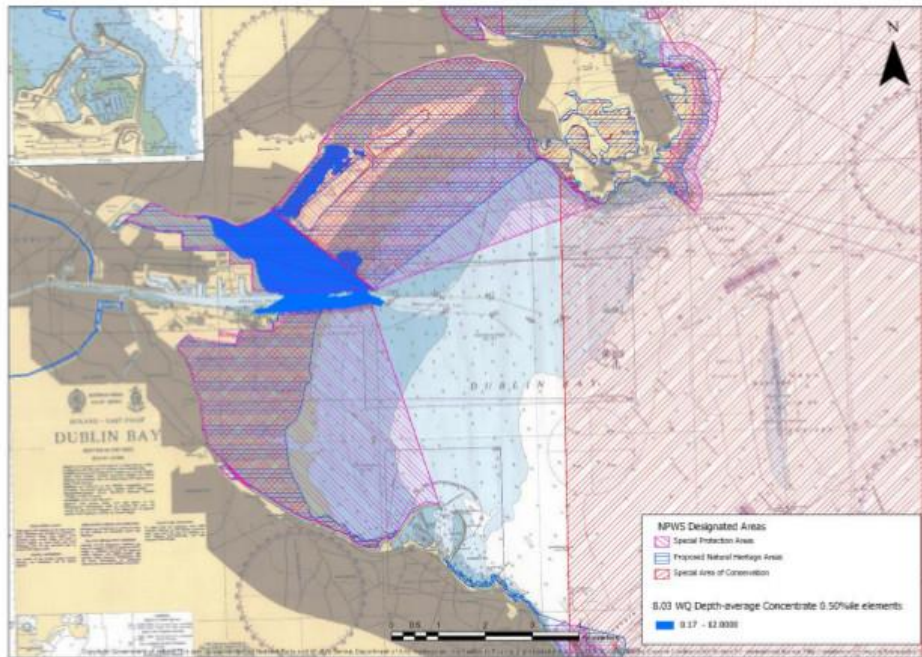


Figure 5-16: Extent of the Zone of Influence (in blue) of the effluent from the Proposed WwTP Component on the predicted modelled output for Winter depth averages 50%ile for Dissolved Inorganic Nitrogen (DIN)

Figure 5 – Extract from the EIAR prepared by Irish Water (2018) showing the zone of influence of the Ringsend WWTP outfall pipe.

The Assessment of Significance of Effects

Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 site.

In order for an effect to occur there must be a pathway between the source (the development site) and the receptor (the SAC or SPA). Where a pathway does not exist, an impact cannot occur.

The proposed development is not located within, or adjacent to, any SAC or SPA.

Habitat loss

The site is approximately 220m from the boundary of the South Dublin Bay and River Tolka estuary SPA/South Dublin Bay SAC as the crow flies and the intervening land is occupied by residential development and transport links, including the DART line. Because of the distance separating the two areas there is no pathway for loss or disturbance of habitats listed in table 1 or other semi-natural habitats that may act as ecological corridors for important species associated with the qualifying interests of the Natura 2000 sites.

Habitat disturbance/Ex-situ impacts

This development will not increase disturbance effects to birds in Dublin Bay given its distance from these sensitive areas. The intervening lands are

entirely built-up/urban in nature which are not suitable for wetland birds and so cannot contribute to any ex-situ impacts.

Hydrological pathways

There is a pathway from the site via surface and wastewater water flows to Dublin Bay via the Priory Stream and the Ringsend wastewater treatment plant respectively.

The following conclusion is taken from the Hydrological and Hydrogeological Qualitative Risk Assessment prepared by AWN Consulting:

A conceptual site model (CSM) has been prepared following a desktop review of the site and surrounding environs. Based on this CSM, plausible Source-Pathway-Receptor linkages have been assessed assuming an absence of any measures intended to avoid or reduce harmful effects of the proposed project (i.e. mitigation measures) in place at the proposed development site.

There is a direct linkage between the proposed development site to the Dublin Bay Natura 2000 site, through the Priory River and there is an indirect source pathway linkage from the proposed development site via the public sewer discharging to Ringsend WWTP.

A review of source pathway linkages concludes that the impact of storm water run-off and foul effluent from the proposed development will not result in any change to the current regime (water quality or quantity) in any of the Dublin Bay Natura 2000 Sites.

Pollution during operation - wastewater

The Ringsend plant is licenced to discharge treated effluent by the EPA (licence number D0034-01) and is managed by Irish Water. It treats effluent for a population equivalent (P.E.) on average of 1.65 million however weekly averages can spike at around 2.36 million. This variation is due to storm water inflows during periods of wet weather as this is not separated from the foul network for much of the older quarters of the city, including at the subject site. The Annual Environmental Report for 2018, the most recent available, indicated that there were a number of exceedences of the emission limit values set under the Urban Wastewater Treatment Directive and these can be traced to pulse inflows arising from wet weather. In April 2019 Irish Water was granted planning permission to upgrade the Ringsend plant. This will see improved treatment standards and will increase network capacity by 50% on a phased basis.

While the issues at Ringsend wastewater treatment plant are being dealt with in the medium term evidence suggests that some nutrient enrichment is benefiting wintering birds for which SPAs have been designated in Dublin Bay (Nairn & O'Hallaran eds, 2012). Additional loading to this plant arising from the operation of this project is not significant as evidence suggests that pollution through nutrient input is not affecting the conservation objectives of the South Dublin Bay and River Tolka Estuary SPA.

According to the AWN report:

The average daily wastewater discharge of 0.541 l/s and peak flow discharge is 3.248 l/s.

The sewage discharge will be licensed by Irish Water, collected in the public sewer and treated at Irish Water's WWTP at Ringsend prior to treated discharge to Dublin Bay. This WWTP is required to operate under an EPA licence (D0034-01) and to meet environmental legislative requirements. The plant has received planning (2019) and will be upgraded with increased treatment capacity over the next five years. The peak foul discharge calculated for the proposed development is well within the capacity of the WWTP. Even without treatment at the Ringsend WWTP, the peak effluent discharge, calculated for the proposed development, would equate to 0.012% of the licensed discharge (peak hydraulic capacity) at Ringsend WWTP and would not impact on the overall water quality within Dublin Bay and therefore would not have an impact on the current Water Body Status (as defined within the Water Framework Directive). (Note: the average effluent discharge equates to approx. 0.001% of the licensed discharge (peak hydraulic capacity) at Ringsend WWTP). Recent water quality assessment of Dublin Bay also shows that Dublin Bay on the whole, currently has an 'unpolluted' water quality status.

Discharges of wastewater from this project cannot result in significant effects to the SACs or SPAs in Dublin Bay.

Pollution during operation – surface water

As there will be no change in land use there can be no net change to the quantity or quality of surface water leaving the site. No significant effects can occur to the SAC or SPA arising from this source.

Pollution during construction

During the construction phase some sediment may enter water courses, entrained in rain run-off. However this is not considered significant given the temporary nature of this phase and given that large quantities of sediment are deposited in estuaries as part of their natural functioning.

According to the AWN Report:

Should any silt-laden stormwater from construction manage to enter the public stormwater sewer i.e. without on-site mitigation, the suspended solids will naturally settle within Priory stream or naturally settle at the point of discharge (Blackrock Beach) [...] In the event of a [theoretical] 500 litre [worst case scenario used] hydrocarbon leak, the pathway will be through the stormwater drainage infrastructure present on site. This includes 3 no. interceptors and as such there is no likely impact above water quality objectives as outlined in S.I. No. 272 of 2009/ Surface Water Amendment Regs SI No. 386 of 2015 and amendments when the receiving Priory Stream discharges to Dublin Bay. During operation, with the presence of an oil/ petrol interceptors in trafficked

areas, there is no likely impact above statutory thresholds on the Priory stream or Dublin Bay.

Based on the assessment of the possible loading of any hazardous material during construction and operation there is subsequently no potential for impact on Dublin Bay water quality status from an accidental discharge to stormwater which discharges to the Priory Stream.

There will be no significant negative effects to Natura 2000 sites during the construction phase as a result of construction pollutants, e.g. hydrocarbons or sediment. No mitigation measures are considered in arriving at this conclusion.

Dust and noise

During the construction phase it is expected that some dust emission will occur. It is difficult to quantify this but is likely to be localised and temporary in nature. Dust deposition can impact upon ecosystems through blocking the stomata of leaves, thus retarding plant growth. Research has found however that this impact is localised in nature and typically occurs where there are significant dust emissions (Bell & Treeshow, 2002). Given the distance to Natura 2000 sites and the lack of natural vegetation in the vicinity of the site, this is not considered significant.

This development cannot increase disturbance effects to birds in Dublin Bay given its distance from these sensitive areas.

Abstraction

Evidence suggests that abstraction is not affecting the conservation objectives for Greylag Geese or Black-headed Gulls at the Poulaphouca Reservoir. Nationally the Greylag Goose has undergone a significant increase over 30 years in its wintering population in Ireland. The recently published Bird Atlas 2007-11 shows that there has been a decrease in the Poulaphouca numbers however. This source suggests that the decline, which also occurred in a number of other sites in Ireland, “may be linked with a northerly redistribution of the Icelandic wintering population” (Balmer et al., 2013).

No effects are likely to arise to the Poulaphouca Reservoir SPA arising from this project.

Are there other projects or plans that together with the project or plan being assessed could affect the site?

Eventual implementation of the WFD will result in continued improvements to water quality in Dublin Bay. Environmental water quality can be impacted by the effects of surface water run-off from areas of hard standing. These impacts are particularly pronounced in urban areas and can include pollution from particulate matter and hydrocarbon residues, and downstream erosion from accelerated flows during flood events. The latter impact is unlikely to occur in Dublin since the estuary mouth has long been channelled and defined by sea walls and other defences.

Because this development will not result in a change of land use (i.e. the site has been of hard standing for a significant period) there can be no negative impact to surface water quality.

In March 2005 the Greater Dublin Drainage Study (GDDS) was published as a policy document designed to provide for drainage infrastructure to 2030. The implementation of this policy will see broad compliance with environmental and planning requirements in an integrated manner. This is likely to result in a long-term improvement to the quality and quantity of storm water run-off in the capital. This project is compliant with the requirements of this policy.

The completion of upgrade works at Ringsend by 2022 will see greater compliance with quality standards of effluent and so an expected improvement in water quality in Dublin Bay. This project will add to the loading at the Ringsend plant however it will also reduce the volumes of surface water entering the foul sewer, one of the main contributors to overflows and compliance issues. There is no evidence that issues at the plant are resulting in negative effects to Natura 2000 sites in Dublin Bay.

The Hydrological and Hydrogeological Qualitative Risk Assessment prepared by AWN Consulting assessed the 'in combination' effects of sewage discharge to the Ringsend plant on water quality in Dublin Bay, stating:

The assessment has also considered the effect of cumulative events, such as release of sediment-laden water combined with a minor hydrocarbon leak on site. As the potential hazard loading is low and short term in nature, it is concluded that no perceptible impact on water quality at the Natura site would occur. It can also be concluded that the cumulative or in-combination effects of effluent arising from the proposed development with that of other developments discharging to Ringsend WWTP will not be significant having regard to the size of the calculated discharge loading from the proposed development.

The construction of the structural elements of the permitted Phase 1 residential development is planned to commence during Q2 of 2020. These works are expected to be largely complete prior to construction commencing for the Phase 2 residential element. This assessment and the application as a whole assess impacts associated with the construction of Phase 1 and Phase 2 residential elements concurrently and hence include for the cumulative impacts from these two phases.

The permitted upgrade works to Blackrock Shopping Centre (Planning Reg. Ref.: D17A/0644) are at an advanced stage and are expected to be largely complete once Phase 2 residential development commences on site. There are no significant cumulative impacts associated with this development,

Construction of the five-storey office development at Enterprise House, opposite Frascati Shopping Centre, (Ref.: D16A/0418 and ABP PL06D.247702, as amended under Reg. Ref.: D18A/0211) is nearing completion with remaining construction works largely associated with internal

fit out elements. There is no expected overlap between any construction phases associated with this development and the Phase 2 residential element that has potential to result in cumulative impacts in respect to this AA Screening Report.

There are no projects which in combination with this development, will give rise to significant effect to Natura areas within the zone of influence.

Conclusion and Finding of No Significant Effects

In carrying out this AA screening, mitigation measures have not been taken into account. Standard best practice construction measures which could have the effect of mitigating any effects on any European Sites have similarly not been taken into account. Whilst construction management measures are proposed for the development, this screening exercise did not take account of those measures for the purpose of avoiding and / or reducing the impacts on any European sites.

On the basis of the screening exercise carried out above, it can be concluded that the possibility of any significant impacts on any European Sites, whether arising from the project itself or in combination with other plans and projects, can be excluded beyond a reasonable scientific doubt on the basis of the best scientific knowledge available.

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