

Screening Report for Appropriate Assessment of development at Mount St. Mary's, Dundrum Road, Dublin 14

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, however this was not achieved. 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' however none of these targets were achieved. In December 2022, the Kunming-Montreal Global biodiversity framework was agreed with the headline of 'living in harmony with nature'. This has set ambitious goals to not only protect, but restore, nature, including by protecting 30% of land and sea by 2030.

In 2023 the Irish Government is expected to incorporate the goals set out in this framework, along with its commitments to the conservation of biodiversity under national and EU law, in the fourth national biodiversity action plan.

The main policy instruments for conserving biodiversity in Ireland have been the Birds Directive of 1979 and the Habitats Directive of 1992. 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. 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" (EC, 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.

Sections 177U and 177V of the Planning and Development Act 2000 sets out the purpose of AA Screening is 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 1 AA Screening is that:

The competent authority shall determine that an appropriate assessment 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 test at stage 2 (Appropriate Assessment) is:

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, where this is not the case, a preliminary screening must first be carried out to determine whether or not a full AA is required. This screening is carried out by Dun Laoghaire Rathdown County Council.

Screening for Appropriate Assessment

Article 6(3) of the Habitats Directive states:

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

The purpose of Stage 1 Screening for Appropriate Assessment is to determine whether it is necessary to carry out a Stage 2 full Appropriate Assessment (AA).

Section 177U(1) provides that a screening for appropriate assessment of a proposed development 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.

Section 177U(4) provides that the competent authority shall determine that an appropriate assessment 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.

Dun Laoghaire Rathdown County Council's determination as to whether an Appropriate Assessment is required must be made on the basis of objective information and must be recorded.

Where an Appropriate Assessment is required, an applicant for planning permission must prepare and submit a Natura Impact Statement.

This Appropriate Assessment Screening Report (AASR) has been prepared in accordance with the provisions of Article 6(3) of the Habitats Directive and Section 177U of the 2000 Act.

The Purpose of this document

This document provides a screening report of a proposed development at Mount St. Marys' Dundrum Road, Dublin 14, and its potential effects in relation to Natura 2000 sites (SACs and SPAs).

Under the Planning and Development Act 2000 (as amended), and the Birds and Natural Habitats Regulations 2011, the planning authority cannot grant planning permission where significant effects may arise to a Natura 2000 site. In order to make that decision the development must be screened for AA. This report provides the necessary information to allow Dun Laoghaire Rathdown County Council to carry out this screening.

About OPENFIELD Ecological Services

OPENFIELD Ecological Services is headed by Pádraic Fogarty who has worked for 25 years in the environmental field and in 2007 was awarded an MSc from Sligo Institute of Technology for research into Ecological Impact Assessment (EclA) in Ireland. Since its inception in 2007 OPENFIELD has carried out numerous EclAs for Environmental Impact Assessment (EIA), Appropriate Assessment in accordance with the EU Habitats Directive, as well as individual planning applications. Pádraic is a full member of the Institute of Environmental Management and Assessment (IEMA).

Guidance

This AA Screening Report has been undertaken in accordance with the following guidance:

- *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities*. (Department of Environment, Heritage and Local Government, 2010 revision);
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities*. Circular NPW 1/10 & PSSP 2/10;
- *Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission, 2001);
- *Communication from the Commission on the precautionary principle* (European Commission, 2000); and,
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* (European Commission, 2019).
- *Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission, 2021).

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 this 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 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 Site

This process identifies the conservation aspects of the site and determines whether negative impacts can be expected 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 or not must be measured against the conservation objectives for the Natura area in question.

If this analysis shows that significant effects are likely then a full AA will be required.

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

Mitigation measures cannot be taken into account in an AA screening assessment

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 (EC, 2000):

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 development will consist of 129 no. residential units together with associated infrastructure including open space and car/cycle parking and is a mixture of duplexes and apartments in 3 no. buildings ranging in height from two to part six stories.

The site location is shown in figures 1 and 2 while the proposed layout is given in figure 3.

The main phases of this project include:

- Site clearance and preparation.
- A construction phase using standard building materials.
- Construction will include a new surface water drainage infrastructure and connection to electricity and wastewater networks.
- An operation phase whereby the buildings will be occupied.

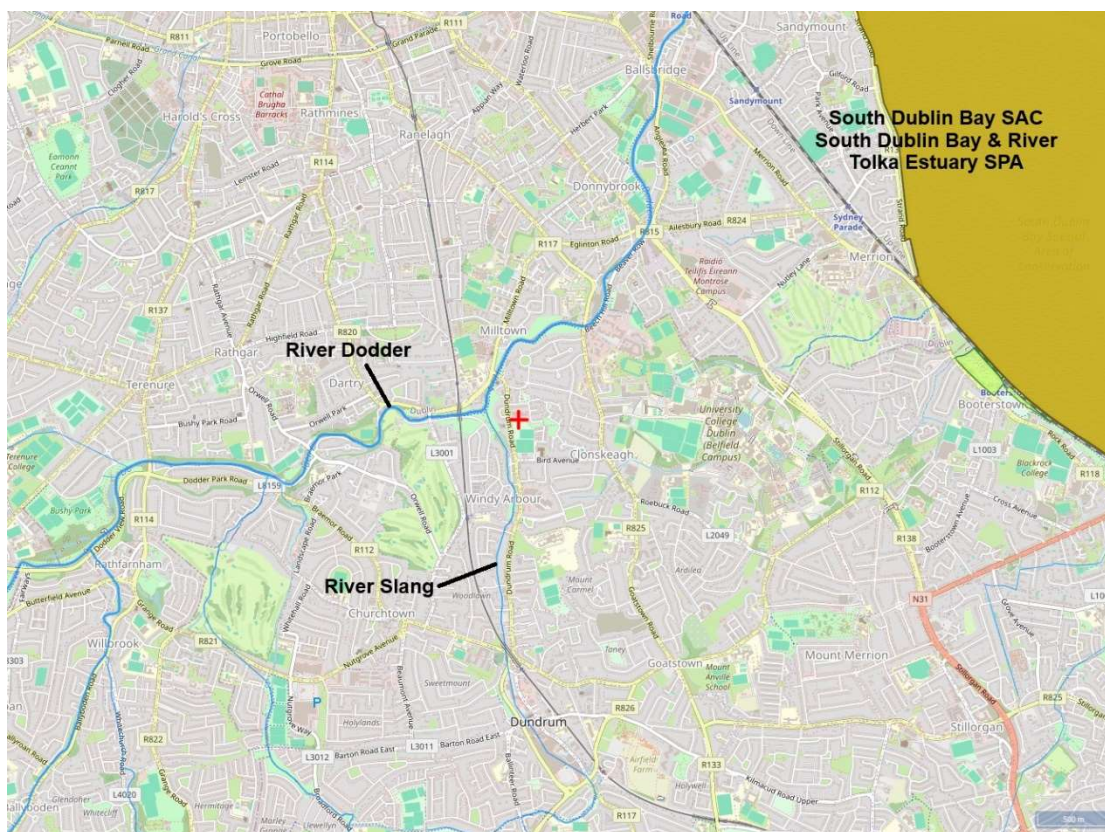


Figure 1 – Site location (red cross) showing proximity to local water courses and Natura 2000 sites (www.epa.ie).

The development site is not located within or directly adjacent to any Natura 2000 site (SAC or SPA). This part of south Dublin is a built-up residential zone and is predominantly composed of artificial surfaces although parks and gardens provide some semi-natural habitat. Mapping from the Environmental Protection Agency (EPA) shows that the lands are close to the River Dodder, which flows c. 160m to the north-west, and the River Slang, a tributary of the River Dodder, which flows c.130m to the west at their nearest points. The River Slang at this point is culverted under the public park before its confluence with the Dodder. Neither the River Slang nor the River Dodder is subject to any Natura 2000 designation. The River Dodder enters the River Liffey Estuary at Grand Canal Dock and at this point the Liffey is not subject to any Natura 2000 designation.

The boundary of the South Dublin Bay SAC and the South Dublin Bay and River Tolka Estuary SPA lies approximately 2.8km to the east of the development boundary as the crow flies. The intervening land is densely built-up and urbanised in nature.

The development site was surveyed for this study on July 31st 2024. Habitats are described here in accordance with standard classifications (Fossitt, 2000).

The development site is located within the grounds of the existing Mount St. Mary's school and is surrounded to the north, east and west by buildings and urban infrastructure such as roads. To the south lie the grounds of CUS rugby fields.

The development lands themselves are centred on a field of **dry meadow – GS1** with abundant grasses such as Cock's-foot *Dactylis glomerata*, Creeping Bent *Agrostis capillaris* and Common Couch *Elytrigia repens* along with Creeping Thistle *Cirsium arvense*, Nettle *Urtica dioica* and Cow Parsley *Anthriscus sylvestris*.

To the east of this there is a small area of **amenity grassland – GA2** with occasional trees including Eucalyptus *Eucalyptus sp.*, Sycamore *Acer pseudoplatanus* and Whitebeam *Sorbus sp.* There is a small expanse of **artificial surface – BL3** in this area also.

The southern boundary is marked by a **treeline – WL2** which is composed of widely spaced, mid-aged Lime *Tilia sp.*, Cherry *Prunus sp.* and Aspen *Populus tremula*.

A treeline to the west and north is composed of tall Ash *Fraxinus excelsior*, Birch *Betula sp.*, Scots Pine *Pinus sylvestris*, Cherry, Eucalyptus and Lime and is accompanied by a broad band of Bramble *Rubus fruticosus agg.* **scrub – WS1**.

To the north of this treeline there is a small grove of **scattered trees – WD5** with Sycamore, Horse Chestnut *Aesculus hippocastanum* and Lime.

There are no plant species growing on the site which are listed in SI No. 477 of 2011 as alien invasive.

There are no water courses, wet ditches, bodies of open water or habitats that could be described as wetlands.

The development site is surrounded on all sides by built development and transport arteries which are accompanied by a high level of human disturbance from noise and artificial light sources.

Habitats on the development site provide some refuge for common species which are habituated to human disturbance and highly modified habitats however they are not associated with any which are listed as of high conservation value (i.e. Annex I Habitats Directive).

Habitats on the site are not suitable wintering/wading/wetland birds which may be associated with coastal Natura 2000 sites.

Currently there is no attenuation of rain run-off. In accordance with the Greater Dublin Strategic Drainage Study this project will incorporate sustainable drainage systems (SUDS) that will maintain the quality and quantity of run-off at the 'greenfield' rate. According to the Civil Planning Report prepared for this development application by Tent Engineers:

All proposed drainage is designed and detailed in accordance with the GSDSDS Regional Drainage Policies Technical Document – Volume 2, BRE Digest 365 - Soakaway Design Manual and The SUDS Manual - Ciria C753. [...]

The following Sustainable Urban Drainage Systems have been incorporated:

- (a) Green roof (interception storage)*
- (b) Blue roof (attenuation storage)*
- (c) Permeable surface (reduced run-off)*
- (d) Aco-Drains (surface water drainage)*
- (e) Tree Pits (attenuation storage)*
- (f) Soakaway (absorption & attenuation)*
- (g) Petrol Interceptor (environmental)*
- (h) French Drain (infiltration & transportation)*

Green Blue roofs have been incorporated following the 'Green & Blue Roof Guide 2021'.

SUDS are standard measures in all new developments and are not included here to avoid or reduce an effect to a Natura 2000 site. This is confirmed in the judgment recently issued from the ECJU (Case C-721/21, Eco Advocacy CLG v An Bord Pleanála) which confirms that where standard measures are included in the application they cannot be considered as mitigation in an AA context.

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. The Ringsend plant is licenced to discharge treated effluent by the EPA (licence number D0034-01) and is managed by Uisce Éireann. 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 2022, the most recent available, indicated that there were a number of exceedences of the emission limit. 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. Works are currently underway on the first phase with a target completion date of 2023. According to the Uisce Éireann website "When all the proposed works are complete in 2025, the Ringsend WwTP will be able to treat wastewater for up to 2.4 million population equivalent while meeting the required standards."

There are no other discharges from this operation. Fresh water supply for the development will be via a mains supply. This may originate in the Poulaphouca Reservoir, which is designated as an SPA.

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



Figure 2 – Existing site layout



Figure 3 – Proposed layout plan

Pathway Analysis

Although the River Dodder flows c.160m to the north-west, and the River Slung flows c.130m to the west, there is no natural, surface hydrological pathway from the development site to these water courses. Natural hydrological pathways are highly modified in nature due to urbanisation, soil sealing and the installation of public sewers.

There is an indirect pathway to Dublin Bay and the River Dodder via the foul sewer/Ringsend wastewater treatment plant and surface sewers respectively.

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 are consequently pathways to a number of Natura 2000 sites. There are indirect 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) the North Dublin Bay SAC (site code: 0206), the North-West Irish Sea SPA (site code: 4236) and the Poulaphouca Reservoir SPA (site code: 4063), from which drinking water supply for this development may originate, is also considered to fall within the zone of influence of this project.

There are no terrestrial or hydrological, direct or indirect, pathways from the development site to any other Natura 2000 site.

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

This is referred to as the source-pathway-receptor model. Following the pathway analysis, the following Natura 2000 sites are assessed in detail:

North Dublin Bay SAC/North Bull Island SPA

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 1. 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 1 – Qualifying interests for the North Dublin Bay SAC

Code	Habitat/Species	Status
1140	Mudflats and sandflats not covered by seawater at low tide	Inadequate
1310	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	Good

- **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.

Site specific conservation objectives are available for this SAC (NPWS, 2013b) and are summarised as:

Atlantic/Mediterranean Salt Meadows (1330/1410)

Maintain habitat area and distribution including physical structure (sediment supply, creeks and pans, flooding regime). Maintain vegetation structure as measured by vegetation height, vegetation cover, typical species and sub-communities. Absences of the invasive *Spartina anglica*.

Annual vegetation of drift lines (code: 1210)

Habitat areas stable or increasing subject to natural variation; no decline in habitat distribution; maintain physical and vegetation structure without any physical obstructions, maintain vegetation structure and composition subject to natural variations.

Embryonic shifting dunes (code: 2110)

Habitat areas stable or increasing subject to natural variation; no decline in habitat distribution; maintain physical and vegetation structure without any physical obstructions, maintain vegetation structure and composition subject to natural variations.

Salicornia and other annuals colonising mud and sand (code: 3110)

Habitat area stable or increasing; no decline in habitat distribution; maintain physical and vegetation structure.

Fixed Coastal Dunes/Shifting Dunes (2130/2120)

Maintain habitat area and distribution including physical structure (functionality and sediment supply, percentage of bare ground, sward height). Maintain vegetation structure as measured by zonation, vegetation cover, typical species and sub-communities. Absences of the invasive *Hippophae rhamnoides*.

Humid dune slacks (code: 2190)

Area increasing, subject to natural processes including erosion and succession; No decline or change in habitat distribution, subject to natural processes; Maintain the natural circulation of sediment and organic matter, without any physical obstructions; Maintain natural hydrological regime; Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession; Bare ground should not exceed 5% of dune slack habitat, with the exception of pioneer slacks which can have up to 20% bare ground; Maintain structural variation within

sward; Maintain range of subcommunities with typical species; Maintain less than 40% cover of creeping willow (*Salix repens*); Negative indicator species (including non-natives) to represent less than 5% cover.

Petalwort *Petalophyllum ralfsii* (code: 1395)

No decline in known populations. No decline in population, estimated at 5,824 thalli. No decline in area of suitable habitat. Maintain hydrological conditions; maintain open, low vegetation, with a high percentage cover of bryophytes (small acrocarps and liverwort turf) and bare ground.

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 2 lists its features of interest

Table 2 – Features of interest for the North Bull Island SPA

North Bull Island SPA	National Status
Light-bellied Brent Goose <i>Branta bernicla hrota</i>	Amber (Wintering)
Oystercatcher <i>Haematopus ostralegus</i>	Red (Breeding & Wintering)
Teal <i>Anas crecca</i>	Amber (Breeding & Wintering)
Pintail <i>Anas acuta</i>	Amber (Wintering)
Shoveler <i>Anas clypeata</i>	Amber (Wintering)
Shelduck <i>Tadorna tadorna</i>	Amber (Breeding & Wintering)
Golden Plover <i>Pluvialis apricaria</i>	Red (Breeding & Wintering)
Grey Plover <i>Pluvialis squatarola</i>	Red (Wintering)
Knot <i>Calidris canutus</i>	Red (Wintering)
Sanderling <i>Calidris alba</i>	Green (Wintering)
Dunlin <i>Calidris alpina</i>	Red (Breeding & Wintering)
Black-tailed Godwit <i>Limosa limosa</i>	Red (Wintering)
Bar-tailed Godwit <i>Limosa lapponica</i>	Red (Wintering)
Curlew <i>Numenius arquata</i>	Red (Breeding & Wintering)
Redshank <i>Tringa totanus</i>	Red (Breeding & Wintering)
Turnstone <i>Arenaria interpres</i>	Amber (Wintering)
Black-headed Gull <i>Larus ridibundus</i>	Amber (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.

Site specific conservation objectives have been published for this SPA (NPWS, 2015a) and are similar for each bird species. They can be summarised as:

Birds (similar for all species)

Long term population trend stable or increasing; there should be no significant decrease in the numbers or range of areas used by waterbird species, other than that occurring from natural patterns of variation

Wetlands

The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 1,713 hectares, other than that occurring from natural patterns of variation

The South Dublin Bay and Tolka Estuary SPA (side code: 4024)

This SPA 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 3 shows the most recent count data available¹.

Table 3 – Mean count of birds species (qualifying interests of SPAs) for Dublin Bay from the Irish Wetland Birds Survey (IWeBS) from 2010 - 2020

Species	Mean
Light-bellied Brent Goose	3,453
Sanderling	500
Dunlin	5,951
Knot	5,093
Black-headed Gull	3,340
Ringed Plover	176
Oystercatcher	3,419
Bar-tailed Godwit	1,965
Grey Plover	328
Roseate Tern	0
Common Tern	23
Arctic Tern	0
Redshank	2,050
Teal	1,335
Pintail	184
Shoveler	101

¹ <https://c0amf055.caspio.com/dp/f4db30005dbe20614b404564be88>

Black-tailed Godwit	2,038
Curlew	882
Turnstone	272

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 4 – Qualifying interests 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]
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]

Site specific conservation objectives have been published for this SPA (NPWS, 2015b) and are similar for each bird species. They can be summarised as:

Birds (similar for all species)

Long term population trend stable or increasing; there should be no significant decrease in the numbers or range of areas used by waterbird species, other than that occurring from natural patterns of variation

Wetlands

The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 2,192 hectares, other than that occurring from natural patterns of variation

The South Dublin Bay SAC

This SAC is concentrated on the intertidal area of Sandymount Strand (NPWS, 2015d). 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. The overall status of the habitat is inadequate and declining due to pollution from agriculture, forestry, wastewater sources and marine aquaculture.
- **Salicornia mudflats (1310)**: This is a pioneer saltmarsh community and so is associated with intertidal areas. It is dependant 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 invasive Cordgrass *Spartina anglica*. Erosion can be destructive but in many cases this is a natural process.

Site specific conservation objectives have been set out for mudflats in this SAC (NPWS, 2013c) and 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 other qualifying interests, only generic conservation objectives are available.

The North-West Irish Sea SPA (site code: 4236)

This is a large SPA that was designated in July 2023 and extends for 2,333km² from Dublin Bay in the south to the southern tip of Dundalk Bay in the north. It encompasses marine and coastal areas while bordering a number of other SPAs in this region.

Table 5 – Qualifying interests for the North-West Irish Sea SPA (EU code in square parenthesis)

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

Conservation objectives for this SPA have been published (NPWS, 2023).

Birds (similar for all species)

no significant decline in the breeding/non-breeding population; maintain sufficient number of locations, area, and availability (in terms of timing and intensity of use) of suitable habitat to support the population; maintain sufficient number of locations, area of suitable habitat and available forage biomass to support the population target; ensure that the intensity, frequency, timing and duration of disturbance occurs at levels that do not significantly impact the achievement of targets for population size and spatial distribution; ensure that the number, location, shape and area of barriers do not significantly impact the site population's access to the SPA or other ecologically important sites outside the SPA.

At its nearest point the **Poulaphouca Reservoir SPA** (site code: 4063) is located approximately 22km from the site of the proposed development. Its 'features of interest' include the Greylag Goose *Anser anser* and the Lesser Black-backed Gull *Larus fuscus*.

Only generic conservation objectives for this SPA have been published, which are "To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA" (NPWS, 2022).

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.

The development site is composed of highly modified habitats with which are of local value to biodiversity. It is located in a built-up area of Dublin city and is close to the River Dodder and the River Slang which lead to the River Liffey and Dublin Bay. It is connected to a number of Natura 2000 sites 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 or, with some exceptions, by 2027 at the latest. This includes estuarine waters and Dublin Bay was originally located within the Eastern River Basin District under the first River Basin Management Plan (RBMP) published in 2009 to address pollution issues. The River Dodder and the River Slang (water body code: IE_EA_09D010900) are both assessed under the WFD 2016-2021 reporting period as 'moderate'.

The point at which the River Dodder enters the Liffey Estuary (water body code: IE_EA_090_0300) water status is also 'moderate' while Dublin Bay (water body code: IE_EA_090_0000) the coastal waters are 'good status'.

Meanwhile the River Tolka Estuary (water body code: IE_EA_090_0200) is 'poor status'. These classifications indicate that water quality in estuarine waters are not currently meeting the requirements of the WFD.

In 2018 a second RBMP was published which highlighted 190 'priority areas for action' where resources are to be focused over the 2018-2021 period. The Rivers Dodder and Tolka are among these areas although the specific actions to be undertaken to achieve 'good status' are not available. A third RBMP was published in 2024.

Of the species listed in table 1 eleven: Curlew, Dunlin, Redshank, Shoveler, Oystercatcher, Grey Plover, Knot, Golden Plover, Bar-tailed Godwit, Black-tailed Godwit and Black-headed Gull are listed as of high conservation concern, and on BirdWatch Ireland's red list (Gilbert et al., 2021).

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 assessment. 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]. [...]

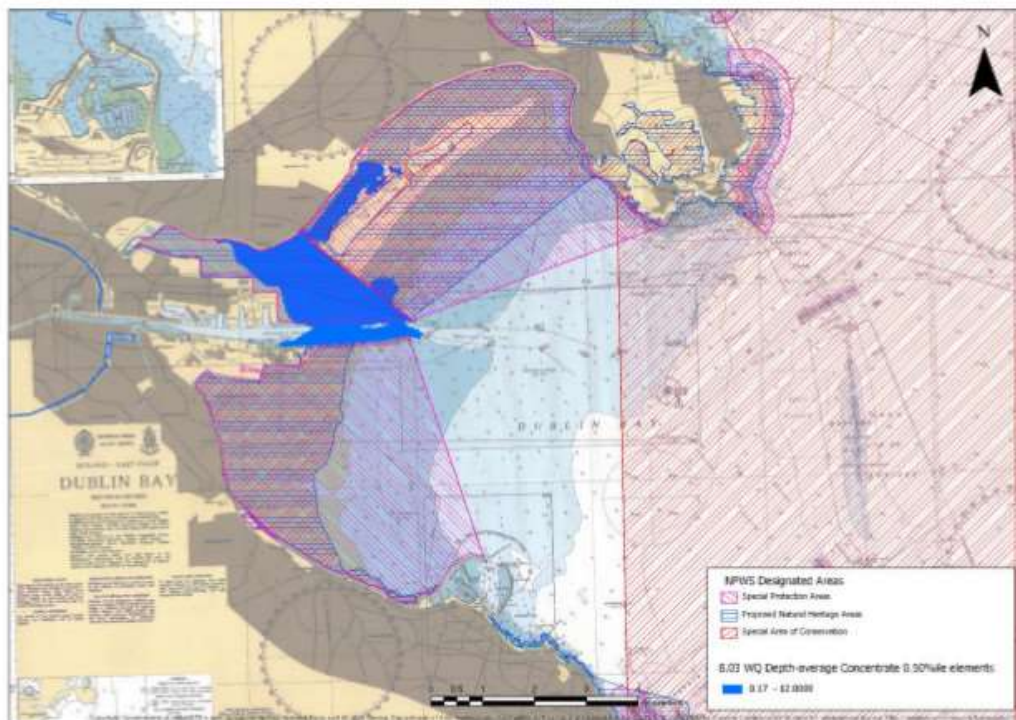


Figure 5-16: Extent of the Zone of Influence (in blue) of the effluent from the Proposed WwTP Component on the predicted modelled output for Winter depth averages 50%ile for Dissolved Inorganic Nitrogen (DIN)

Figure 4 – Extract from the EIA prepared by Irish Water (2018) showing the zone of influence of the Ringsend WWTP outfall pipe.

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 4. Works on the upgrade are currently underway.

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.

Habitat loss

The development site is approximately 2.8km from the boundary of the nearest Natura 2000 site: South Dublin Bay and River Tolka estuary SPA/SAC. The intervening land is occupied by urban development and transport links. Because of the distance separating these areas there is no pathway for loss or disturbance of habitats in any Natura 2000 site, or other semi-natural habitats that may act as ecological corridors or stepping stones for important species associated with the qualifying interests of Natura 2000 sites.

No significant effects are likely to arise to Natura 2000 sites from this source.

Habitat disturbance/Ex-situ impacts

The development site is located in a heavily urbanised environment close to significant noise and artificial light sources such as roads. This development cannot contribute to potential disturbance impacts to species or habitats for which Natura 2000 sites have been designated.

The proposed development will not result in a collision risk for bats or birds.

The development site provides no suitable habitat for wintering wetland or wading birds which may be qualifying interests of coastal Natura 2000 sites. No ex-situ impacts to Natura 2000 sites can arise.

Hydrological pathways

There is a pathway from the development site to Dublin Bay via the Ringsend wastewater treatment plant during operation.

- **Pollution during operation – surface water**

A new drainage network is to be installed that complies with SUDS principles and this will ensure that no change to the quantity or quality of run-off will arise. SUDS are standard measures which are included in all development projects and are not proposed here to avoid or reduce an effect to a Natura 2000 site. In this case SUDS are not mitigation measures in an AA context. In this way, there will be no effect to surface water leaving the development site and entering the River Dodder.

No significant effects are likely to arise to Natura 2000 sites from this source.

- **Pollution during operation - wastewater**

There is an indirect pathway between the development site and Natura 2000 sites in Dublin Bay.

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 are not significant as there is no evidence that pollution through nutrient input is affecting the conservation objectives of any of the Natura 2000 sites in Dublin Bay.

No significant effects are likely to arise to Natura 2000 sites from this source.

- **Pollution during construction**

During the site clearance and construction phases it is not likely that sediment or other construction pollutants could enter the River Dodder or the River Slang as there are no pathways to these water courses. Even in the unlikely event that such pollutants did enter either of the rivers, the distance to Natura 2000 sites following this pathway is over 6km and this is too far for any measurable effect to arise within Natura 2000 sites.

Furthermore, sediment is not a pollutant in coastal habitats where huge amounts of sediment and mud are required for the functioning of mudflat habitats.

No significant effects are likely to arise to Natura 2000 sites from this source.

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?

Implementation of the WFD will result in continued improvements to water quality in water bodies leading to, or adjoining, the Irish Sea. The status of coastal water in the Dublin Bay is currently ‘good’.

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. There can be no negative impact to surface water quality leaving the site due to the attenuation measures which are planned.

In 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.

Residential projects that may be planned or under construction have similar characteristics to the proposed development in that they involve a construction and an operational phase, which have hydrological connections to the River Dodder and Natura 2000 sites in Dublin Bay. In particular, potential effects to Natura 2000 sites include pollution during the construction phase and additional loading to the foul sewer leading to the Ringsend wastewater treatment plant. These potential effects have been examined in this AA Screening Report and were found to be not likely to result in any significant effects to Natura 2000 sites.

There are no plans or projects which can act in combination with this development which can give rise to significant effect to Natura 2000 sites within the zone of influence.

Conclusion and Finding of No Significant Effects

No significant effects are likely to arise from this project to any Natura 2000 site.

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.

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 on the basis of the best scientific knowledge available.

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