

# Screening Report for Appropriate Assessment of development at lands at the former Aldi site, Carmanhall Road, Sandyford Business District, Dublin 18

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).

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 recent 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 Directive is met. Article 6(3) requires that an 'appropriate assessment' (AA) be carried out for these sites where projects, plans or proposals are likely to have an effect. In some cases this is obvious from the start, for instance where a road is to pass through a designated 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 the Local Authority and this report can aid in that decision.

## The Purpose of this document

This document provides for the screening of a proposed residential development on the site of the former Aldi site, Carmanhall Road, Sandyford Business District, Dublin 18, and its potential effects in relation to Natura 2000 sites (SACs and SPAs). Under the Planning and Development Acts, the Local Authority cannot grant planning permission where significant effects may arise to a Natura 2000 area. In order to make that decision the development must be screened for AA. This report provides the necessary information to allow An Bord Pleanála to carry out this screening.

## 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 network.

### **Step 3: Characteristics of the Natura Site**

This process identifies the conservation aspects of the Natura 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 if necessary – 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 likely to occur must be measured against conservation objectives which have been set for that that Natura site.

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.

Reference is also made to recently published 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 proposal is for a residential development and is described thus, as per the planning application:

*The development, which will have a Gross Floor Area of 49,342 sq m will principally consist of: the demolition of the existing structures on site and the provision of a Build-to-Rent residential development comprising 564 No. apartments (46 No. studio apartments, 205 No. one bed apartments, 295 No. two bed apartments and 18 No. three bed apartments) in 6 No. blocks as follows: Block A (144 No. apartments) is part 10 to part 11 No. storeys over basement; Block B (68 No. apartments) is 8 No. storeys over basement; Block C (33 No. apartments) is 5 No. storeys over lower ground; Block D (103 No. apartments) is part 16 to part 17 No. storeys over lower ground; Block E (48 No. apartments) is 10 No. storeys over semi-basement; and Block F (168 No. apartments) is 14 No. storeys over semi basement.*

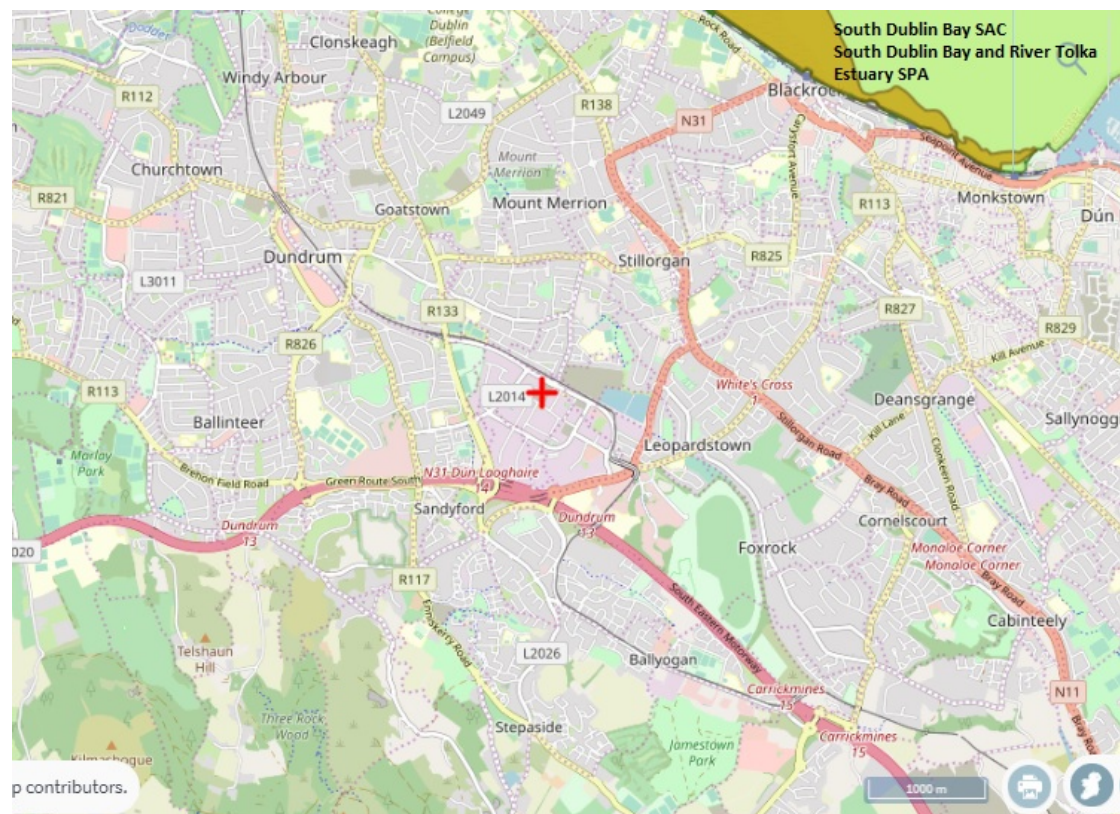
*The development provides resident amenity spaces (1,095 sq m) in Blocks A, C and D including concierge, gymnasium, lounges, games room and a panoramic function room at Roof Level of Block D; a creche (354 sq m); café (141 sq m); a pedestrian thoroughfare from Carmanhall Road to Blackthorn Drive also connecting into the boulevard at Rockbrook to the west; principal vehicular access off Carmanhall Road with servicing and bicycle access also provided off Blackthorn Drive; 285 No. car parking spaces (254 No. at basement level and 31 No. at ground level); 21 No. motorcycle spaces; set-down areas; bicycle parking; bin storage; boundary treatments; hard and soft landscaping; lighting; plant; ESB substations and switchrooms; sedum roofs; and all other associated site works above and below ground.*

The site location is shown in figures 1 - 3 while the proposed layout is given in figure 4.

It is planned to construct a residential development on the site at Sandyford Central, Dublin 18 as previously described. This will involve a construction phase to include new surface water drainage infrastructure and connection to electricity and wastewater networks.

The main phases of this project include:

- Site clearance and preparation including demolition of existing buildings.
- 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.

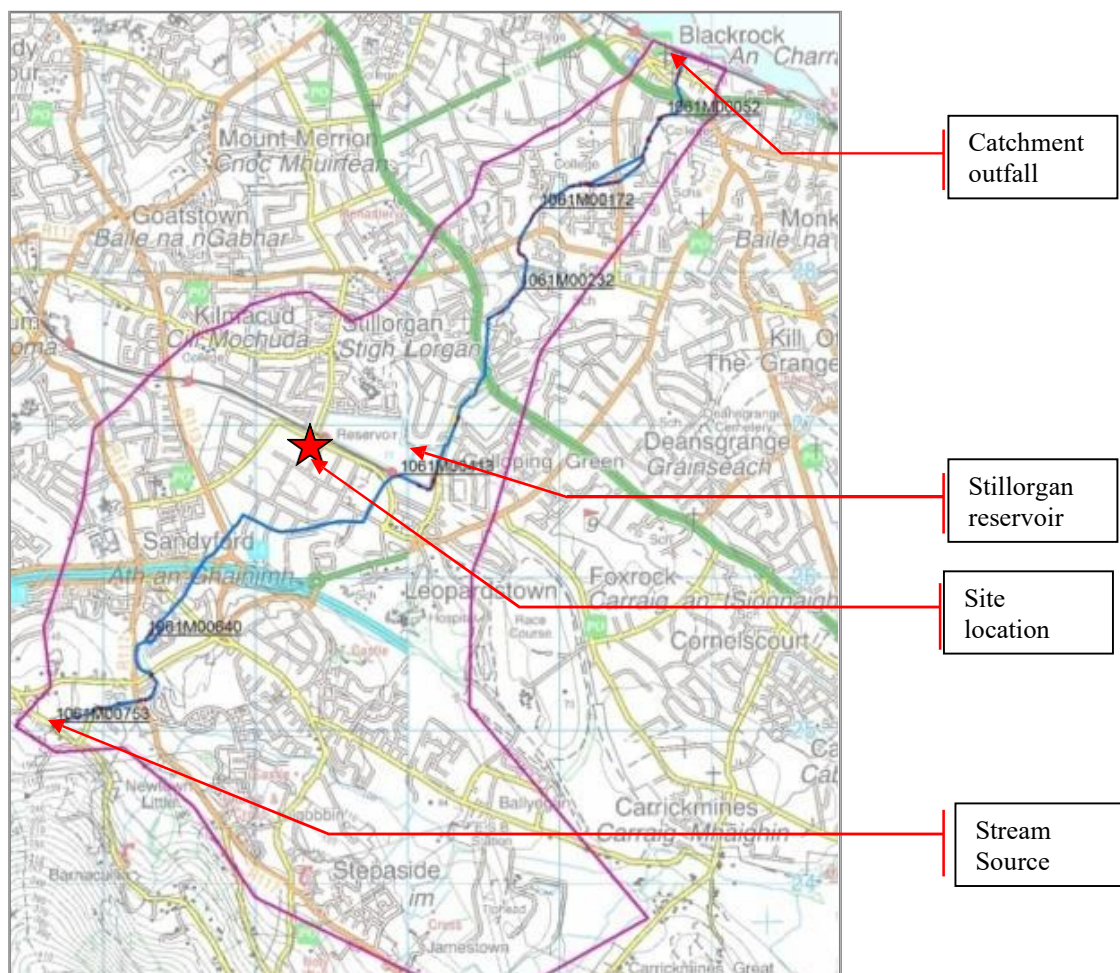


**Figure 1 – Site location (red cross) showing proximity to Natura 2000 sites. The SAC is shown in tan while the SPA, which overlaps with the SAC, is shown in lime green (from [www.epa.ie](http://www.epa.ie))**

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 OSI and EPA show that there are no water courses in the immediate vicinity of the site and it is not in the catchment of any significant river. The Carysfort Maretime stream flows a short distance to the south although it is extensively culverted. It discharges into Dublin Bay at Blackrock. This is

shown in figure 2. Rainwater run-off is presumed to soak to ground or enter Dublin Bay via surface water sewers.

The site was visited for this study on February 15<sup>th</sup> 2019 and this showed that the site is dominated by **buildings and artificial surfaces – BL3**. Within this area there are ruderal plant species such as Butterfly-bush *Buddleja davidii*, Canadian Fleabane *Conyza canadiensis*, Self-heal *Prunella vulgaris* and rough grasses. A **treeline – WL2** along the southern boundary is made up on non-native, and low biodiversity value, Leylandii Cypress *Cuprocyparis leylandii*. A **hedgerow – WL1** along eastern boundary is mostly horticultural in origin with Cotoneaster and other non-native species, as well as with occasional Alder *Alnus glutinosa*, Brambles *Rubus fruticosus agg.* and Gorse *Ulex europaeus*. An **earth bank – BL2** running across the centre of the site is grassy, with Thistles *Cirsium sp.*, Clovers *Trifolium sp.* and grasses such as Creeping Bent *Agrostis stolonifera*.



**Figure 2 – Site location and hydrological catchment**

There are no alien invasive species as listed under Schedule 3 of SI no. 477 of 2011. There are no water courses, bodies of open water or habitats which could be considered wetlands. Overall the lands can be described as being of low biodiversity value.

The lands are surrounded on all sides by built development.

Any inert 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 is likely to soak through open ground (where it exists) or enter public sewers. In accordance with the Greater Dublin Strategic Drainage Study this project will incorporate sustainable drainage systems (SUDS) that will appreciably reduce the current run-off rate. This will ensure that the flow leaving the site will be reduced to a 'greenfield rate'. The drainage system for this development will contain a range of SuDs treatment methods for surface water including green roofs, permeable paving, bio retention, swales, filter drains and treatment via open graded crush rock (OGCR) below all SUDs measures preventing materials/contaminants discharging the site. Discharge to the public surface water sewer will be via an oil/grit interceptor.



**Figure 3 – Site boundary**

Foul wastewater 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. In April 2019 Irish Water was granted planning permission for an upgrade to the Ringsend facility. This will see improved treatment standards and will increase network capacity by 50%, with a target completion date of 2023.

There are no other discharges from this operation. 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.

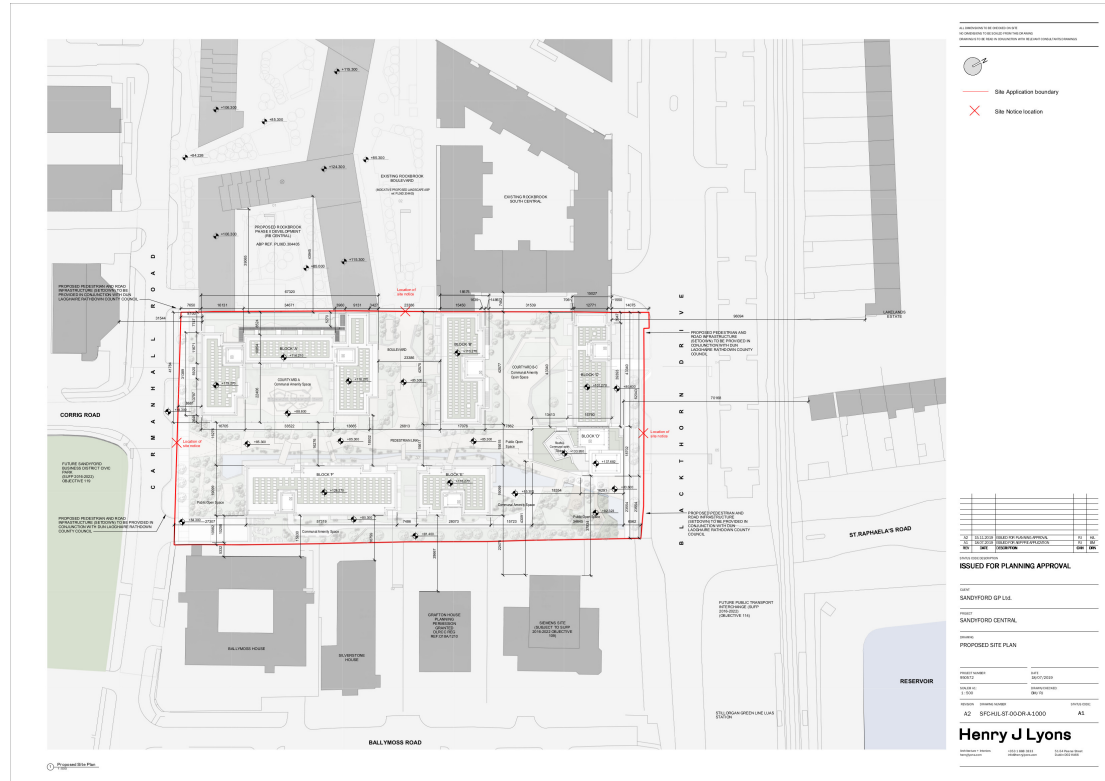


Figure 4 – Proposed layout plan



### 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 2km radius is normally examined (IEA, 1995). This is an arbitrary distance however and impacts can occur at distances greater than this. There are no Natura areas within this approximate radius. At a distance of 3.4km the **South Dublin Bay and River Tolka Estuary SPA (site code: 4024)**; and the **South Dublin Bay SAC (0210)** fall within the hydrological catchment of the site. The **North Dublin Bay SAC (site code: 0206)** and **North Bull Island SPA (site code: 4006)** are also in this region. The **Poulaphouca Reservoir SPA (site code: 4063)**, from which drinking water supply for this development will originate, is considered to fall within the zone of influence of this project. These are considered to be the only Natura 2000 areas within the zone of influence of the development as pathways do not exist to other areas.

**Table 1 – Features of interest for SPAs in Dublin Bay (EU code in square parenthesis)**

<b>North Bull Island SPA</b>	<b>South Dublin Bay and Tolka Estuary SPA</b>
Light-bellied Brent Goose ( <i>Branta bernicla hrota</i> ) [A046]	Light-bellied Brent Goose ( <i>Branta bernicla hrota</i> ) [A046]
Oystercatcher ( <i>Haematopus ostralegus</i> ) [A130]	Oystercatcher ( <i>Haematopus ostralegus</i> ) [A130]
Teal ( <i>Anas crecca</i> ) [A052]	Ringed Plover ( <i>Charadrius hiaticula</i> ) [A137]
Pintail ( <i>Anas acuta</i> ) [A054]	Grey Plover ( <i>Pluvialis squatarola</i> ) [A140]
Shoveler ( <i>Anas clypeata</i> ) [A056]	Knot ( <i>Calidris canutus</i> ) [A143]
Shelduck ( <i>Tadorna tadorna</i> ) [A048]	Sanderling ( <i>Calidris alba</i> ) [A144]
Golden Plover ( <i>Pluvialis apricaria</i> ) [A140]	Dunlin ( <i>Calidris alpina</i> ) [A149]
Grey Plover ( <i>Pluvialis squatarola</i> ) [A141]	Bar-tailed Godwit ( <i>Limosa lapponica</i> ) [A157]
Knot ( <i>Calidris canutus</i> ) [A143]	Redshank ( <i>Tringa totanus</i> ) [A162]
Sanderling ( <i>Calidris alba</i> ) [A144]	Black-headed Gull ( <i>Croicocephalus ridibundus</i> ) [A179]
Dunlin ( <i>Calidris alpina</i> ) [A149]	Roseate Tern ( <i>Sterna dougallii</i> ) [A192]

Black-tailed Godwit ( <i>Limosa limosa</i> ) [A156]	Common Tern ( <i>Sterna hirundo</i> ) [A193]
Bar-tailed Godwit ( <i>Limosa lapponica</i> ) [A157]	Arctic Tern ( <i>Sterna paradisaea</i> ) [A194]
Curlew ( <i>Numenius arquata</i> ) [A160]	Wetlands & Waterbirds [A999]
Redshank ( <i>Tringa totanus</i> ) [A162]	
Turnstone ( <i>Arenaria interpres</i> ) [A169]	
Black-headed Gull ( <i>Larus ridibundus</i> ) [A179]	
Wetlands & Waterbirds [A999]	

The **South Dublin Bay and Tolka Estuary SPA** (side code: 4024) is largely coincident with the South Dublin Bay SAC boundary with the exception of the Tolka Estuary. The **North Bull Island SPA** (site code: 0206) meanwhile is largely coincident with the North Dublin Bay SAC with the exception of the terrestrial portion of Bull Island. These designations encompass all of the intertidal areas in Dublin Bay from south of the Howth peninsula 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 1 lists the features of interest for both of the SPAs.

- **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.
- **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.
- **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.
- **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.
- **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.
- **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.

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 2 shows the most recent count data available<sup>1</sup>.

**Table 2 – 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*.

The **South Dublin Bay SAC** (side code: 0210) 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.

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.

<sup>1</sup> <https://fl.caspio.com/dp.asp?AppKey=f4db3000060acbd80db9403f857c>

**Table 3 – Qualifying interests for the North Dublin Bay SAC**

Habitat/Species	Status <sup>2</sup>
Mudflats and sandflats not covered by seawater at low tide	Inadequate
Salicornia and other annuals colonizing mud and sand	Favourable
Atlantic salt meadows	Inadequate
Mediterranean salt meadows	Inadequate
Annual vegetation of drift lines	Inadequate
Embryonic shifting dunes	Inadequate
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)	Inadequate
Fixed coastal dunes with herbaceous vegetation (grey dunes)	Bad
Humid dune slacks	Inadequate
<i>Petalophyllum ralfsii</i> Petalwort	Favourable

- **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).** 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. They 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.

At its nearest point the **Poulaphouca Reservoir SPA** (site code: 4063) is located approximately 18km 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*.

<sup>2</sup> NPWS. 2019. *The Status of EU Protected Habitats and Species in Ireland*. Habitat Assessments Volume 1: Summary Report, National Parks & Wildlife Services. Department of Culture, Heritage and the Gaeltacht, Dublin, Ireland.

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 relate to habitat area, community extent, community structure and community distribution within the qualifying interest. There is no objective in relation to water quality.

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, 2018).

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## Data collected to carry out the assessment

Aerial photography shows that habitats on the site are not associated with either intertidal species or habitats listed in table 1 or 3.

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 was located within the Eastern River Basin District in the first River Basin Management Plan (RBMP). This plan included a 'programme of measures' which was to be completed (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](http://www.epa.ie) ). The Carrickmines Stream is assessed as 'moderate'. These classifications indicate that water quality downstream of the Custom House is 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 prioritised over the 2018-2021 period. The River Dodder and the River Tolka are among these areas.

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 2.

Of the species listed in table 1 six: Curlew, Dunlin, Redshank, Pintail, Shoveler 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.
- Wintering Pintails and Shoveler are believed to be declining in Dublin Bay
- Wintering Curlew have experienced a small decline but their status is nevertheless assessed as 'favourable' (Balmer et al., 2013).

A 'supporting document' has been published by the NPWS which gives a detailed assessment of the features of interest for which SPAs in Dublin Bay have been designated (NPWS, 2014). In particular it presents information on the trends of these features and the pressures which are likely to affect these trends. It has determined that five species: Grey Plover, Shelduck, Pintail, Shoveler, Golden Plover and Black-headed Gull, are of unfavourable status while the remainder are 'favourable'. In the case of the Grey Plover it was found that its population trend is decreasing both within Dublin Bay and at an all-Ireland level. For this reason it is reasonable to assume that the factors for its decline are not unique to Dublin Bay. The Black-headed Gull population was not assessed in this way. Only for Shoveler is it considered that significant declines are being experienced due to site conditions.

Of relevance to this study this report highlights that poor water quality has long been an issue in Dublin Bay. This was manifest in macroalgal blooms of brown and green algae, particularly around Bull Island and the Tolka Estuary. Some improvements in the trophic status has occurred since the 1990s, particularly as a result of new wastewater treatment facilities at Ringsend in 2003. On-going improvements to water quality are highlighted as a potential risk to certain bird populations as a reduction in primary production (i.e. food for birds) may arise both as densities of invertebrates and algal mats is reduced.

### **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 3.4km from the boundary of the South Dublin Bay and River Tolka estuary SPA/SAC as the crow flies and the intervening land is occupied by residential development and transport links, including the DART and Luas lines. 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**

This development is unlikely to increase disturbance effects to birds in Dublin Bay given its distance from these sensitive areas.



### **Hydrological pathways**

There is a pathway from the site via surface and wastewater water flows to Dublin Bay via surface water sewers and the Ringsend wastewater treatment plant respectively. As surface water from the site does not flow to the River Tolka there is no pathway between the site and the Tolka Estuary.

### **Pollution during operation - wastewater**

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 considered to be significant based on two points:

1. There is no evidence that pollution through nutrient input is affecting the conservation objectives of the South Dublin Bay and River Tolka Estuary SPA.
2. Accepting that pollution is undesirable, regardless of the conservation objectives of the SPA, and would be contrary to the aims of the Water Framework Directive, then the upgrading works at Ringsend wastewater treatment plant will address future capacity demand.

### **Pollution during operation – surface water**

New surface water attenuation measures are designed so that there will be no net change to the quantity or quality of surface water leaving the site. These are standard design measures and are not considered to provide mitigation for any negative effect to a Natura 2000 site. The following text is taken from the Hydrology Chapter of the Environmental Impact Assessment Report:

*The existing site area is 100% impermeable surface area. The implementation of a range of SuDS methods including surface water attenuation will result in an improvement in the potential impact the surface water receiving waters being slight and long term. It is also noted discharge of runoff to ground will be facilitated as part of the SuDS strategy not to seal the interface between the SuDs components and the underlying soil (where practical / outside podium), thereby reducing discharge to surrounding watercourses and providing the natural recharge of groundwater with treated water. The proposed SUDS strategy also includes the limiting of flow from the site to Greenfield runoff levels and the storage of same within SuDs components. There will be no adverse increase in the discharge rates to receiving water bodies during and following completion of the development as there will be a decrease in surface water flows from the site and an improvement in the water quality.*

No significant effects can occur to the SAC or SPA arising from this source.

### **Pollution during construction**

During the site clearance and construction phases some sediment will become entrained in rain run-off. However this is not considered significant given its temporary nature and given that large quantities of sediment are

deposited in estuaries as part of their natural functioning. There is no direct pathway to the Carrickmines Stream.

During the construction phase it can be 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.

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

Implementation of the WFD will ensure that improvements to water quality in Dublin Bay and the River Liffey are maintained. Water quality in the River Dodder has improved in recent years and this trend is expected to continue. 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. In this case there will be minimal change to the area of hard standing, while the use of SUDS will ensure that no impacts to surface water quality/quantity will occur.

In March 2005 the Greater Dublin Drainage Study (GDDS) was published as a policy document designed to provide for future drainage infrastructure. 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.

There are no effects which could act in combination with the subject proposal to result in significant effects to Natura areas.

*List of agencies consulted*

Because of the low ecological sensitivity of this site no third parties were contacted for nature conservation observations.

Conclusion and Finding of No Significant Effects

This project has been screened for AA under the appropriate methodology. It has found that significant effects are not likely to arise, either alone or in combination with other plans or projects to any SAC or SPA.

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