Screening Report for Appropriate Assessment of mixed-use development, Clongriffin, Dublin 13

prepared by OPENFIELD Ecological Services
for Gerard Gannon Properties

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1.0 INTRODUCTION

1.1 About OPENFIELD Ecological Services

OPENFIELD Ecological Services is headed by Pádraic Fogarty who has worked for over 20 years in the environmental field and in 2007 was awarded an MSc from Sligo Institute of Technology for research into Ecological Impact Assessment (EcIA) in Ireland. Pádraic has a primary degree in Analytical Science from DCU, and diplomas in Field Ecology (UCC), Environment and Geography (Open University) and Environmental Protection (IT Sligo). Since its inception in 2007 OPENFIELD has carried out numerous EcIAs for Environmental Impact Assessment (EIA), Appropriate Assessment under the EU Habitats Directive, as well as individual planning applications. Pádraic is a full member of the Institute of Environmental Management.

1.2 Protection of biodiversity

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

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

In Europe, the main policy instruments for conserving biodiversity have been the Birds Directive of 1979 and the Habitats Directive of 1992, which are transposed into Irish law through the European Union (Natural Habitats) Regulations SI94/1997 (as amended by SI233/1998 & SI378/2005). This legislation requires member states to designate areas of their territory that are important for certain listed habitats and species other than birds in the case of the Habitats Directive, and species or significant gatherings of birds in the case of the Birds Directive. These areas are known as Special Areas of Conservation (SAC) and Special Protection Areas (SPA) respectively. Together SACs and SPAs form the Natura 2000 network of protected sites. Unlike traditional nature reserves or national parks, Natura 2000 areas 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 'favourable conservation status' exists for their SACs and SPAs including that Article 6(3) of the Habitats Directive is met. Article 6(3) requires that an 'appropriate assessment' (AA) be carried out for those areas 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 area. However, where this is not the case, a preliminary screening must first be carried out to determine whether or not the full AA is required.

1.3 Purpose of this Report

This document provides for a screening of a mixed-use development in Clongriffin, Dublin 13, and its potential effects in relation to Natura 2000 sites (SACs and SPAs). The project is described thus, as per the planning application:

The lands subject to this application form part of a wider masterplan development proposal for Clongriffin which provides for a total of 1,950 residential units and c.22,727.5sq.m. of commercial development. The masterplan lands are divided into three separate planning applications, in accordance with the legislative provisions of the SHD process, such that two of which are SHD applications whilst the third application is being lodged to Dublin City Council.

The proposed 1,950 residential units and c.22,727.5 sq.m. are provided across 15 no. Blocks (Blocks 3, 4, 5, 6, 8, 11, 13, 14, 15, 17, 25, 26, 27, 28 & 29) which range in height and with a mix of 715 no. 1 bed units, 49 no. studios, 1,073 no. 2 bed units and 113 no. three bed units. Of the 1,950 units proposed, 1,130 units are proposed as Build to Rent units with 820 units proposed as Build To Sell/ Social/Private Tenure units. The overall 3 no. applications also provide for 22,727.5 sq.m. of commercial development including c. 30 no. retail units, 10 floors of offices, 1 no. community room, 1 no. men's shed, 3 no. creche facilities, 1 no. 8 screen cinema, 1 no. commercial gym, 7 no. cafes/ restaurants, in addition to the 4,335.1 sq.m. of residential support amenities/facilities (e.g. residents meeting rooms, resident's gym, resident's cinema room, etc.) proposed across all blocks. The development also includes car parking, bicycle parking, landscaping including playgrounds, public open space parks, utilisation of existing infrastructure and all associated works necessary to facilitate the development.

This document will assess whether effects to the Natura 2000 network are likely occur as a result of the operation phase of this project (there will be no construction phase). It will determine whether these effects are likely to be significant, and if so, will recommend appropriate mitigation measures.

1.4 Methodology

The assessment was carried out in accordance with the following methodologies and guidelines:

1. '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, 2001). Annex 2 of this document sets out an assessment template that is used in this report.
2. 'Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities' (DOEHLG 2009).

Note: Reference from this point forth to the 'site' indicates the development site and not the SAC or SPA.

In accordance with the above-mentioned guidance notes, the following steps are followed:

Step 1: Analysis of the SAC/SPA
This involves assessing the current status of the SAC/SPA and underlying trends affecting it. This is done through a combination of literature review, site survey, and consultation with relevant stakeholders where necessary.

Step 2: Analysis of the proposed development
Identifying aspects of the project that may affect the SAC/SPA

Step 3: Analysis of other plans and projects
Identifying aspects of other plans or projects that may act 'in combination' with the proposed development to affect the integrity of the SAC/SPA

Step 4: Determination of significance
Determination whether any of these effects, either alone or in combination with other plans and projects, will be significant.

The AA process is an iterative one where the report actively identifies potential effects, the project is then modified to avoid or mitigate these effects, and then the new project design is re-assessed until such point as no significant effects are predicted to occur. It is important to note that any AA, or screening for AA, is carried out by the competent authority (in this case Fingal Council) and this screening report has been prepared in order to aid that decision.

2.0 Step 1 – Analysis of the Natura 2000 network

2.1 Site location and extent

The development site is located to the west of the Dublin to Belfast railway line and to the north of Dublin City. This location is shown in figure 1 which also shows its position in relation to nearby water courses.

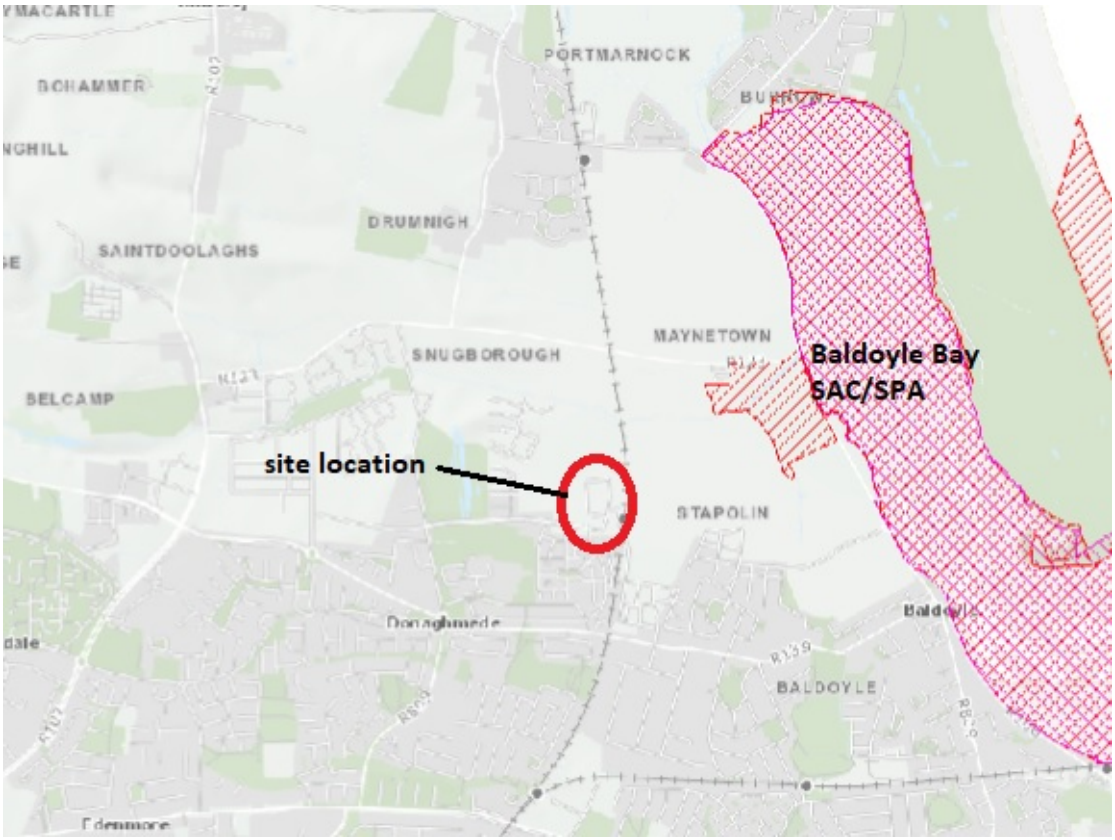

Figure 1 – Location of development site at Clongriffin (red circle) showing proximity to Natura 2000 areas. SACs are shown in tan while SPAs are shown in lime green (from www.npws.ie)

There is no prescribed radius around a site for determining what Natura 2000 sites should be studied. This is determined by the zone of influence of the project although a preliminary radius of 2km is usually examined (IEA, 1995). Figure 1 shows this area and as can be seen there are number of Natura 2000 sites within this approximate radius. Water courses drain to Baldoyle Bay, which is a SPA and SAC. In addition to these European designations Baldoyle Bay is also recognised as a wetland of international importance under the RAMSAR Convention (site 25/10/88). It is also a proposed Natural Heritage Area, a designation under national legislation.

EPA mapping shows that the Mayne River flows a short distance to the north of the site boundary and this discharges into Baldoyle Bay. The site is within an area which has seen extensive residential development in recent years and this can be seen in recent aerial photography as shown in figure 2.

A site visit was carried out for this study on October 11th 2018. Habitats are described here in accordance with standard classifications (Fossitt, 2000). All areas are composed of a combination of **spoil and bare ground – ED2** and **recolonising bare**

ground – ED3. This is characteristic of highly disturbed ground and is not of high ecological value or in any way associated with habitats or species for which SACs or SPAs are normally designated.

There are no alien invasive plant species as listed on Schedule 3 of SI No. 477 of 2011. There are no water courses or drainage ditches which could provide direct pathway to the Mayne River.

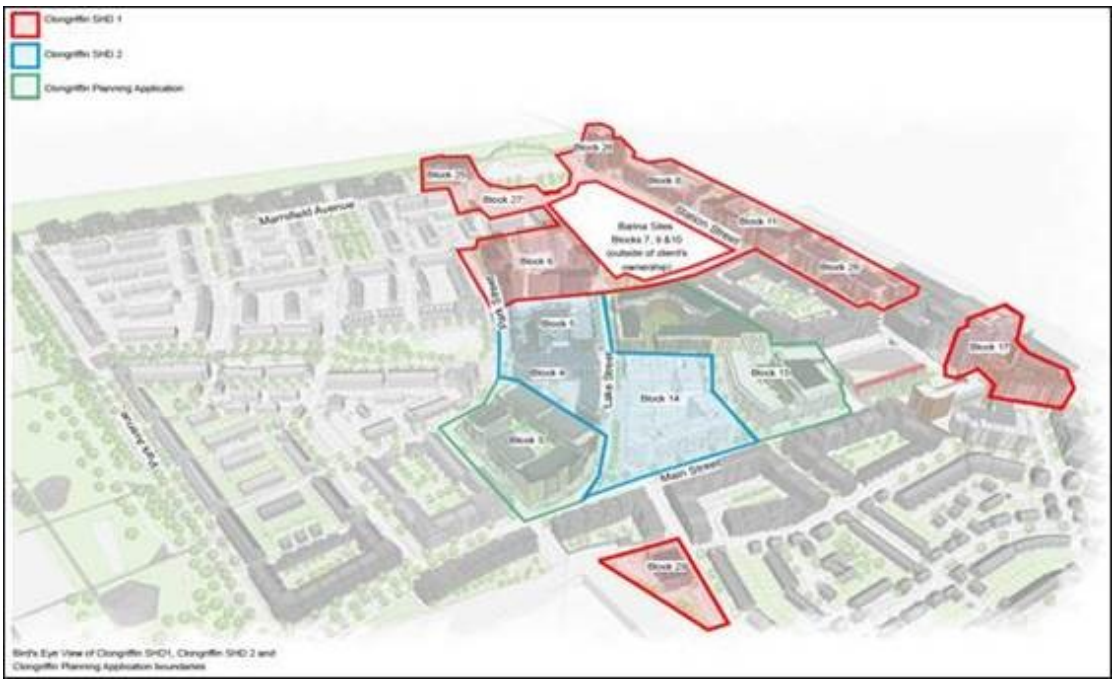

Figure 2 – Indicative location and extent of the Clongriffin site. The boundary of the Baldoyle Bay SAC and SPA is approximately 1.2km to the east at its nearest point.

2.2 Natura 2000 Sites

The SAC and SPA in Baldoyle are connected to the project via the Mayne River. Wastewater from the development will pass to the municipal sewer for Dublin City at Ringsend, and the point of discharge from this facility is also within a number of SACs and SPAs in Dublin Bay.

2.2.1 Baldoyle Bay SAC (code: 0199)

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

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

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

Code	Habitats
1140	Mudflats and sandflats not covered by seawater at low tide
1310	Salicornia and other annuals colonizing mud and sand
1330	Atlantic salt meadows
1410	Mediterranean salt meadows

- **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 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 alien invasive Cordgrass *Spartina anglica.* Erosion can be destructive but in many cases this is a natural process.
- **Atlantic and Mediterranean salt meadows (1330 & 1410)**: these are intertidal habitats that differ somewhat in their vegetation composition. They are dynamic habitats that depend upon processes of erosion, sedimentation and colonisation by a typical suite of salt-tolerant organisms. The main pressures are invasion by the non-native *Spartina anglica* and overgrazing by cattle and sheep.

2.2.2 Baldoyle Bay SPA (site codes: 4016)

Estuarine habitats are some of the most productive in the world and the nutrients that are deposited here fuel primary and secondary production (levels in the food chain) that in turn provide food for internationally significant numbers of wintering birds (Little, 2000). It had a mean of 5,780 birds between the winters of 2006/07 and 2010/11 (Crowe et al., 2012). Specifically it has a number of species which are

'features of interest' of the SPA, along with 'wetlands and waterbirds'. Table 2 details these.

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

Species		Status[1]
Branta bernicula hrota	Light-bellied brent goose	Amber
Charadrius hiaticula	Ringed plover	Green
Limosa lapponica	Bar-tailed godwit	Amber
Pluvialis apricaria	Golden plover	Red
Pluvialis squatarola	Grey plover	Amber
Tadorna tadorna	Shelduck	Amber
Wetlands & Waterbirds		

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

2.2.3 Natura areas in Dublin Bay

The South Dublin Bay and River Tolka Estuary SPA (site code: 4024); and the South Dublin Bay SAC (0210) are considered to fall within the zone of influence as they are within the hydrological catchment of the site.

Table 3 – Features of interest for the South Dublin Bay & River Tolka Estuary SPA (EU code in square parenthesis)

South Dublin Bay and Tolka Estuary SPA
Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]
Oystercatcher (*Haematopus ostralegus*) [A130]
Ringed Plover (*Charadrius hiaticula*) [A137]
Grey Plover (*Pluvialis squatarola*) [A140]
Knot (*Calidris canutus*) [A143]
Sanderling (*Calidris alba*) [A144]
Dunlin (*Calidris alpina*) [A149]

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

Bar-tailed Godwit (*Limosa lapponica*) [A157]
Redshank (*Tringa totanus*) [A162]
Black-headed Gull (*Croicocephalus ridibundus*) [A179]
Roseate Tern (*Sterna dougallii*) [A192]
Common Tern (*Sterna hirundo*) [A193]
Arctic Tern (*Sterna paradisaea*) [A194]
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. 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 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.

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 4 shows the most recent count data available[2].

Table 4 – 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 one qualifying interest which is mudflats and sandflats not covered by seawater at low tide. Tidal mudflats (habitat code: 1140) 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. At a national scale, it is assessed as of 'intermediate' status (NPWS, 2013).

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 5. 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 5 – Qualifying interests for the North Dublin Bay SAC

Habitat/Species	Status[3]
Mudflats and sandflats not covered by seawater at low tide	Intermediate
Salicornia and other annuals colonizing mud and sand	Intermediate
Atlantic salt meadows	Intermediate
Mediterranean salt meadows	Intermediate
Annual vegetation of drift lines	Intermediate
Embryonic shifting dunes	Intermediate
Shifting dunes along the shoreline with Ammophila arenaria (white dunes)	Intermediate
Fixed coastal dunes with herbaceous vegetation (grey dunes)	Bad
Humid dune slacks	Intermediate

[2] https://f1.caspio.com/dp.asp?AppKey=f4db3000060acbd80db9403f857c

[3] NPWS. 2013. *The Status of EU Protected Habitats and Species in Ireland.* Habitat Assessments Volume 2. Version 1.0. Unpublished Report, National Parks & Wildlife Services. Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.

Petalophyllum ralfsii Petalwort	Good

- **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 been 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.

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.

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 qualifying interests in the South Dublin Bay other than mudflats, generic conservation objectives are available and are stated as:

To maintain or restore the favourable conservation condition of the Annexed habitats for which the SAC 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.

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).

2.3 Literature Review

As can be seen from figures 1 and 2, the site is not located within or directly adjacent to any area designated for nature conservation. It is situated approximately 2.1km from the boundary of the Baldoyle Bay SAC and SPA. The site is situated within the catchment of the Mayne River, which flows approximately 280m to the north of the boundary.
The River Mayne is a relatively short water course that rises to the east of Dublin airport and enters the Irish Sea at Baldoyle. The Environmental Protection Agency maintains one monitoring station, at the Wellfield Bridge, and here ecological conditions were most recently (2016) assessed as 'poor'. Under the Water Framework Directive the overall status of the Mayne catchment has been assessed as of 'poor' status. This indicates point or diffuse pollution sources, or other ecological problems such as obstructions. The ecological quality of the transitional water body at Baldoyle Bay has been assessed as 'eutrophic', indicting 'bad' status. Dublin Bay is currently assessed as 'good status'.

2.4 Consultation

Because of the low ecological sensitivity of this site no third-party consultation was carried out.

2.5 Trends affecting the SAC/SPA

There are no management plans for the designated areas in Baldoyle Bay however some work has been done to determine the site-specific trends or threats to their conservation status.

Tables 6 & 7 shows the most recent bird count data from Baldoyle Bay and these show that while numbers fluctuate from one year to the next, positive or negative trends are not clear. These data are likely to mask variations between species present and as table 2 shows there are a number of species here that are of high and medium conservation concern (red and amber lists). However a link between water quality and bird numbers cannot be established. In fact, the discharge of nutrient effluent from artificial fertilisers and poorly treated sewage can promote primary production that in turn provides food for wintering and resident birds in bays and estuaries (Nairn & O'Halloran eds., 2012).

Table 6 – Bird count data from the winters of 2005/06 – 2009/10 (Crowe et al., 2011; Boland & Crowe, 2006)

01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11
8,891	6,825	4,290	4,626	4,196	5,927	5,544	5,766	5,884	-

Table 7– Baldyole Bay bird count data (Irish Wetland Bird Survey)

Year	2010/11	2011/12	2012/13	2013/14	2014/15	Mean
Number	N/A	N/A	N/A	6,459	3,994	5,227

The status of features of interest in the Bladoyle Bay SPA has been assessed (NPWS, 2012c). Of those species with unfavourable status in the SPA, Ringed Plover and Bar-tailed Godwit have exhibited losses at Baldoyle Bay while the national population remains stable or has increased. It is therefore reasonable to assume that local factors are leading to declines. The NPWS list a number of factors that may be contributing to this including human disturbance (walkers with or without dogs) and nutrient enrichment (pollution). The latter effect is exhibited by algal mats, typically Sea-lettuce Ulva sp. which covers the sediment surface at low tide. This is good for those species which feed on Sea-lettuce but bad for those which cannot reach their favoured prey under the mats.

Water quality in the catchment is monitored by the Environmental Protection Agency (EPA) which maintains a regular assessment programme. At the monitoring point along the Mayne, which enters Baldoyle Bay, site water quality has most recently been determined to be 'poor status'. Meanwhile the trophic status of Baldoyle Bay has been assessed as 'eutrophic' (from www.epa.ie).

Pollution may be a factor in the poor status of Bar-tailed Godwit and Ringed Plover at Baldoyle Bay due to reasons already described.

3.0 Step 2 – Analysis of the Project

This application is for the construction of a mixed-use development along with all associated services as described under section 1.3.

The construction phase will see site preparation followed by a construction phase using standard building materials.

There is currently no attenuation of surface water and rain falling on the site percolates to the ground. The subject lands are served by an existing storm water drainage system approved and constructed under the Clongriffin parent planning Reg. Ref. 0132/02. The surface water sewers constructed under the parent planning permission discharge to the attenuation pond at the northeast of the Clongriffin scheme before discharging to the Mayne River at a controlled rate of 249 l/s, as permitted under the parent planning permission.

Foul and surface drainage infrastructure will be entirely separate. 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. Irish Water, the authority in charge of the wastewater treatment network, has prioritised the enhancement of the Ringsend plant in its Proposed Capital Investment Programme 2014-2016. In February 2018 Irish Water announced proposals to upgrade the Ringsend plant and apply for planning permission for a new plant in north County Dublin. This will see improved treatment standards and will increase network capacity by 50%, with a target completion date of 2023.

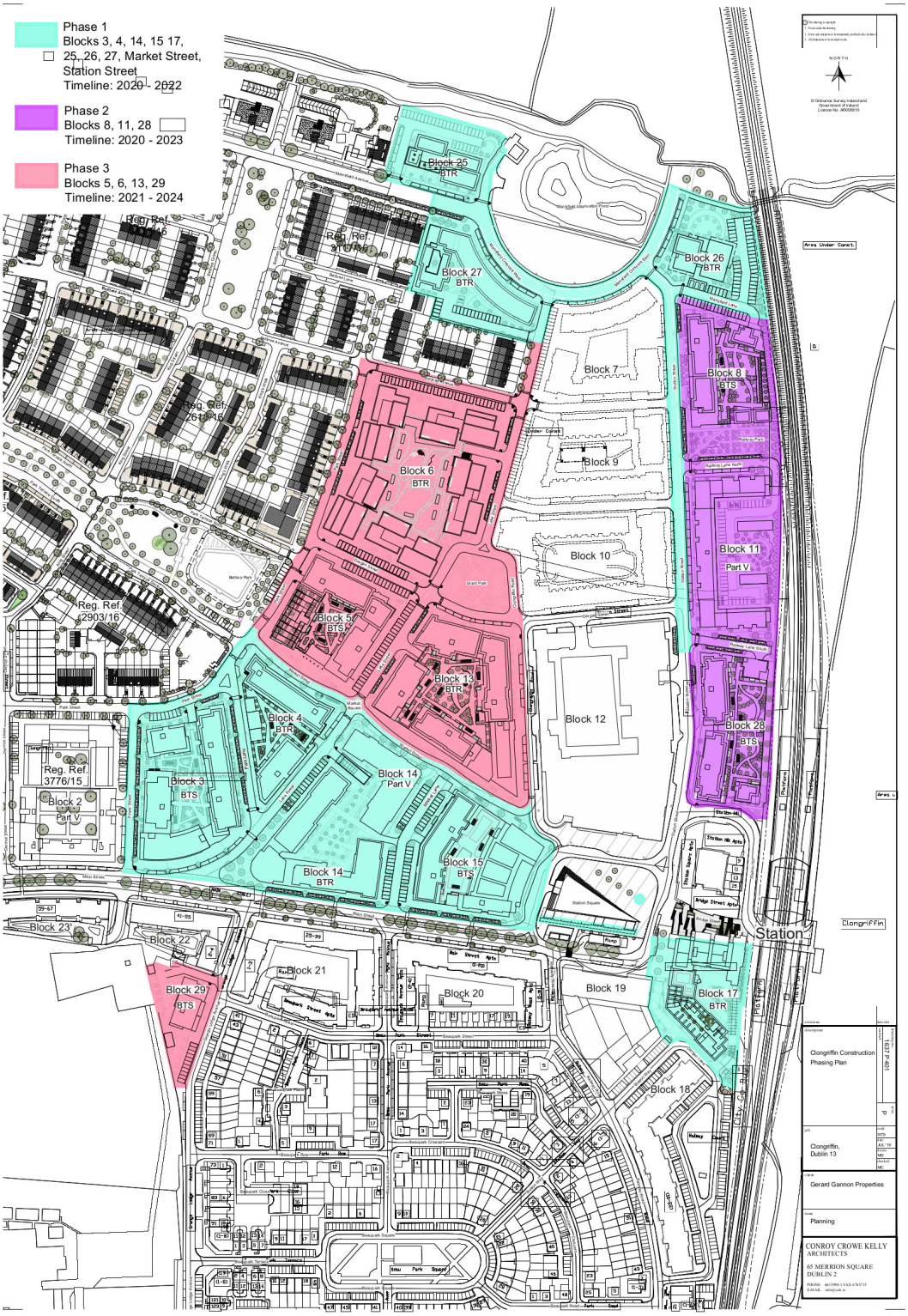

Figure 3 – Proposed development layout

4.0 Step 3 – Analysis of Other Plans and Projects

Individual impacts from one-off developments or plans may not in themselves be significant. However, these may become significant when combined with similar, multiple impacts elsewhere. These are sometimes known as cumulative impacts but in AA terminology are referred to as 'in combination' effects.

In terms of the conservation objectives of the SACs and SPAs identified in section 2.2, maintaining the extent and condition of important habitats and species populations is vital.

The catchment of the Mayne River has been substantially transformed in the past 15-20 years from farmland to built development. The area is currently a combination of open park spaces, with significant built development including residential and retail uses.

The cumulative effects of this type of urban growth can arise from replacing permeable ground with hard surfaces. This can result in increased risk of flooding and deterioration of water quality, primarily from the run-off of particulate matter and hydrocarbon residues (Mason, 1996). To combat this effect the Greater Dublin Strategic Drainage Study was published in 2005. This aims to ensure that new developments integrate sustainable drainage systems (SUDS) to maintain natural, or 'green field' rates of surface water run-off while also improving water quality in rivers. This development is fully complaint with these SUDS principles. As there will be no change in the extent of hard surfacing, this development will result in a slight positive impact to surface water.

The first River Basin Management Plan (RBMP) was published under the EU's Water Framework Directive in 2010. This set out to attain 'good ecological status' of all water bodies by 2027 at the latest. It included a 'programme of measures' that was to address point or diffuse pressures on water quality. The Mayne River is currently assessed as 'poor' while Baldoyle Bay is 'eutrophic'. Under the second RBMP 2018-2021 the Mayne River is identified as one of 190 'priority areas for action'.

This project can be seen in combination with continued suburban style development in Clongriffin (and indeed across the Dublin region). This is planned for under relevant development plans, such as the Dublin City Development Plan 2016-2022. The planning authority has carried out an AA and concluded that the implementation of this plan would not result in significant effects to Natura 2000 areas.

The growth of population in the Dublin area is placing pressure on wastewater treatment infrastructure and plans are underway to increase capacity at Ringsend as well as development new treatment facilities in the north of the county, as detailed in the Fingal County Development Plan. Current compliance issues are not believed to be resulting in significant effects to Natura 2000 areas in Dublin Bay.

5.0 Step 4: Determination of Significance

5.1 Impact prediction

Under Article 6 of the Habitats Directive the term 'significance' is taken to mean an effect on the SAC or SPA as measured against the relevant conservation objective. Unlike Environmental Impact Assessment for instance, there are no degrees of significance and where an effect is determined to be significant mitigation or avoidance measures must be considered.

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

The subject site is not located within, or directly adjacent to any SAC or SPA. However a pathway for impacts exists via surface water to the Baldoyle Bay SAC/SPA and wastewater to Natura 2000 areas in Dublin Bay.

The development will not result in direct impacts to habitats within any designated area, either through habitat removal or disturbance.

Site specific conservation objectives have been set for the SAC and SPA in both Baldoyle Bay and Dublin Bay. None of these objectives relates to water quality. Pollution is in any case undesirable and this development should not infringe upon efforts to enhance water quality under the Water Framework Directive.

Following on from steps 1 – 3 of this process a number of specific impacts are considered:

5.1.1 Habitat loss

This development is will not result in the loss of semi-natural habitats connected to Natura 2000 areas.

5.1.2 Habitat disturbance

No habitats will be disturbed within or directly connected to Natura 2000 areas.

Indirect disturbance via amenity pressures on coastal areas is unlikely to arise from this project due to the nature of the works and their distance to Natura areas.

5.1.4 Pollution during normal operation

The use of accepted SUDS techniques in the design of the project has ensured that negative effects to water quality cannot arise from surface water run-off. Even in the absence of these measures, significant effects are not likely to arise as sediment is not a pollutant in a coastal/intertidal context. Bays and estuaries rely on vast quantities of sediment for the normal functioning.

There is a pathway from the site wastewater water flows to Dublin Bay via the Ringsend wastewater treatment plant. 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. Indeed water quality in the bay is currently assessed as 'good'.

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.

5.1.5 Abstraction

The Liffey Lower WMU states that 100% of its catchment is affected by abstraction. Freshwater for this development originates from the reservoirs along the River Liffey in Co. Kildare, which are also located at Leixlip. There is no pathway between this abstraction point and any Natura 2000 area. As such water that is abstracted for this plant cannot impact upon Natura areas. This impact is therefore not significant.

5.1.6 Light and noise

The project will result in no additional noise or artificial lighting and given the urban context of this development, this impact can be considered to be not significant.

6.0 Conclusion and Finding of No Significant Effects

This proposed development is not located within or directly adjacent to any SAC or SPA but pathways do exist to a number of these areas. An assessment of the aspects of this project has shown that significant negative effects are not likely to occur to these areas either alone or in combination with other plans and projects.

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