Screening Report for Appropriate Assessment of residential development at Fortunestown Lane and Garter Lane, Saggart, Co. Dublin

Compiled by OPENFIELD Ecological Services

Pádraic Fogarty, MSc MIEMA

for Greenacre Residential DAC



www.openfield.ie

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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 \in 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 is currently in preparation.

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.

The Purpose of this document

This document provides for the screening of a proposed development at Fortunestown, Co. Dublin. The development is described this, as per the planning application:

This project relates to a proposed residential development (on a site measuring c. 24ha) divided into two phases. Phase 1 covers the majority of the site (c. 19ha) and will comprise of the following:

- 526no. dwelling units in a mix of two, three and four bed terraced and duplex units, ranging in height from 2 to 3 storeys;
- A district park in the northern part of the site adjacent to Bianconi Avenue and neighbourhood and pocket parks integrated within the site layout;
- Vehicular access off Garter Lane and Fortunestown Lane including upgrading of the existing roundabout, at south-east corner of the site off Fortunestown Lane, to a signalised junction;
- A public plaza leading to the Saggart Luas stop (interim design).

Permission is also sought for all ancillary site and development works associated with the above, including enabling works and temporary construction works (accommodation; site compounds and access routes; boundary fencing etc.).

A future application will be made for development of the remaining southern portion of the site (c. 5ha) adjacent to Fortunestown Lane / Luas line. This will bring the overall quantum of residential units to c. 950no. dwellings, with access to be provided via the routes proposed under Phase 1.

The Phase 2 application will also include the detailed design for the public plaza adjacent to the Saggart Luas stop – this will replace the interim design proposed in Phase 1. In the short-term, pending approval for development on the Phase 2 site, the site will be levelled, grassed and enclosed by fencing.

This document will assess whether effects to the Natura 2000 network are likely to occur as a result of this project in accordance with Article 6(3) of the Habitats Directive and the Planning and Development Acts. It will conclude whether or not a 'full' AA is required. It should be noted that any screening for AA, or full AA, is undertaken by the competent authority, in this case South Dublin County Council.

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. Since its inception in 2007 OPENFIELD has carried out numerous EcIAs 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).

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.

Guidance from the Department of the Environment, Heritage and Local Government 'Appropriate Assessment of Plans and Projects in Ireland' (2009) is also referred to.

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

Step 1: Management of the Natura 2000 site

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

Step 2: Description of the Project

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

Step 3: Characteristics of the Natura 2000 Sites

This process identifies the conservation aspects of the Natura 2000 site and determines whether negative impacts can be expected as a result of the project. 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 effects are likely to occur. 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 2000 area in question.

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

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 any SAC or SPA and so Step 1 as outlined above is not relevant.



Brief description of the proposed project

Figure 1 – Site location showing approximate 2km radius. Note there are no Natura 2000 areas in this view (from <u>www.npws.ie</u>)

The subject site is located in Fortunestown which is located in the western portion of County Dublin and less than 1km east of the village of Saggart. The subject lands are currently unused and are surrounded on all sides by built development including residential homes, roads and the Luas line. Historic mapping shows that this general area was in agricultural use until relatively recently however significant land use change has occurred since the 1990s (www.osi.ie). OSI and EPA maps show water courses running along both the eastern and western boundaries. To the east this is named as the Corbally Stream and the site is in the catchment of the Camac River. The Camac is a tributary of the River Liffey which in turn enters the Irish Sea at Dublin Bay. Dublin Bay is subject to a number of Natura 2000 designations.

The lands were visited as part of this study on April 4th 2017. This is within the optimal period for general habitat survey and all habitats were identifiable to Fossitt level 3. Of key importance is that linkages between the site and Natura 2000 areas be identified and in this regard a full assessment was possible. The site was surveyed in accordance with best practice standards (Smith et al., 2010) and habitats were classified in accordance with standard methodology (Fossitt, 2000).

The subject site is almost entirely composed of a large area of **dry meadow** – **GS2.** This is a typical habitat after the cessation of agriculture and is composed of rough grasses such as Creeping Bent *Agrostis stolonifera*, Willowherbs *Epilobium sp.*, Thistles *Cirsium sp.*, Clovers *Trifolium sp.*, Ragwort *Senecio jacobaea* etc. Rushes *Juncus sp.* are locally abundant, particularly to the north-east, but the ground is never wet underfoot. The lack of grazing is promoting the formation of **scrub** – **WS1** – an early woodland type – and this is mostly dense stands of Gorse *Ulex europaeus*. In areas near existing hedgerows however this is made up of Brambles *Rubus fruticosus agg.*, Willow *Salix sp.*, Blackthorn *Prunus spinosa* or the non-native Butterfly-bush *Buddleja davidii*.

External boundaries are highly variable. There is no boundary along the southern edge of the site. A treeline - WL2 dominated by the non-native Leyland Cypress Cuprocyparis leylandii is a feature in the south-west while north of this a hedgerow - WL1 forms the boundary with Garter's Lane. While this has some native component, with frequent Hawthorn Crataegus monogyna, lvy Hedera helix and Ash Fraxinus excelsior, it has been heavily augmented with the non-native Cherry Laurel Prunus laurocerasus and this has diminished its ecological value. A recently planted hedgerow can be found along Bianconi Avenue and this is mostly made up of younger specimens of Alder Alnus glutinosa. The eastern boundary in contrast is an established treeline - WL2 which marks the original field boundary. There are frequent mature Beech Fagus sylvestris along with Hawthorn, Oak Quercus sp., Elm Ulmus glabra with a ground flora that includes Primrose Primula vulgaris, Dog Violet Viola riviniana, Hart's Tongue Asplenium scolopendrium, and False Brome Brachypodium sylvaticum. Following accepted methodologies, the hedgerows on this site are of 'lower significance' while the treeline is of 'higher significance' (Foulkes et al., 2013).

Despite appearing on maps there is no evidence of a water course along the western boundary. It may be that this was originally a field drain which has since dried up. The Corbally Stream is culverted under Fortunestown Lane and flows north along the mature treeline (this is not the route shown on OSI/EPA maps). At a point approximately 150m south of Bianconi Drive it enters a culvert. This is a short distance from the N7 primary road (Naas dual carriageway) and presumably it is culverted under this large road also. Where it is open the stream the heavily shaded and fast flowing and so is an **eroding river – FW1.**



Figure 2 – Indicative site boundary (in red line) and habitats (aerial photo from www.bing.com).

There are no plant species on the site that are considered rare or endangered. There are no examples of any habitat listed on Annex I of the Habitats Directive or habitats suitable for species listed on Annex II. Monitoring by Inland Fisheries Ireland do not record Atlantic Salmon *Salmo salar* from the Camac although they are present along the River Liffey¹. The most recent fish sampling on the Camac, from 2011, indicated that there are populations of Brown Trout *Salmo trutta* and Three-spined Stickleback *Gasterosteus aculaetus*.

¹ www.wfdfish.ie

The subject proposal is for the construction and operation of a residential development with internal road access, parking spaces, and all associated services including connections to vital infrastructure. Figure 3 shows the proposed site layout.



Figure 3 – Proposed site layout

The site will be levelled and any construction and demolition waste will be removed by a licenced contractor.

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. 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. It is believed to be currently finalising proposals to increase the capacity of the plant from 1.64 million PE (population equivalent) to 2.15 million PE, with a target completion date of 2020.

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.

Currently there is no attenuation of rain run-off and this is likely to soak through open ground or enter the Corbally Stream. 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. The surface water strategy for the development will discharge run-off to the existing stream that runs along the eastern boundary. The surface water drainage system will collect storm-water run-off generated from the proposed residential development using traditional pipe-work and manholes laid along the main access roads collecting run-off from impermeable road surfaces via gullies and adjoining areas. SUDS will also be incorporated for reducing run-off volumes and improving run-off water quality. Attenuation will be provided in the form of a Linear Detention Basin situated in the proposed district park area in the north-east area. Surface water discharge rates from the site's main collection network will be controlled by a Hydrobrake flow control device at the attenuation storage area before discharging to the stream at the north-east corner. There is expected to be no change to the quantity or quality of run-off from the site due to these measures.

Post-construction the site is to be landscaped with a variety of native trees and new amenity open space.

This site is not located within any Natura 2000 area (SAC or SPA). Figure 1 shows that there are no such areas within 2km of the site. However, there is a hydrological connection between Natura 2000 areas in Dublin Bay. This places the South Dublin Bay and Tolka Estuary SPA and the South Dublin Bay SAC within the zone of influence of this project.

This development occurs in an area that is already heavily built-up and urbanised in character. Activities in the locality are of residential and transport nature and these developments are associated with a degree of noise and artificial lighting. There are no habitats on the site that are associated with habitats or species for which SACs or SPAs are generally designated. The Camac River is of fisheries value however, supporting a run of Brown Trout and other fish, according to Inland Fisheries Ireland.

Surface water run-off is to be maintained at a 'greenfield' rate. The project will not result in the loss of any high value semi-natural habitats. It will result in additional noise and artificial lighting however this cannot disturb sensitive species due to the significant separation distance to areas of conservation interest.

During the construction phase, there will be use of concrete (which is highly toxic to aquatic life) as well as the release of sediment to surface waters. These activities have the potential to temporarily threaten fish habitat.

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 area has been chosen arbitrarily however and impacts can occur at distances greater than this. The South Dublin Bay and River Tolka Estuary SPA (site code: 4024) and the South Dublin Bay SAC (0210) are both 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.

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 South Dublin Bay and Tolka Estuary SPA (side code: 4024) includes most of the intertidal areas in Dublin Bay but not including those around Bull Island. 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.

Bird counts form 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 1 shows the most recent count data available².

Table 1 – Annu	al count	data fo	r Dublin	Bay	from the	lrish	Wetland	Birds
Survey (IWeBS)							

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

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

Table 2 lists the features of interest for this SPA.

² <u>https://fl.caspio.com/dp.asp?AppKey=f4db3000060acbd80db9403f857c</u>

Species		Status ³	
Light-bellied Brent Goose	Branta bernicla hrota [A046]	Amber (Wintering)	
Oystercatcher	Haematopus ostralegus [A130]	Amber (Breeding & Wintering)	
Ringed Plover	Charadrius hiaticula [A137]	Green	
Grey Plover	Pluvialis squatarola [A140]	Amber (Wintering)	
Knot	Calidris canutus [A143]	Amber (Wintering)	
Sanderling	Calidris alba [A144]	Green	
Dunlin	Calidris alpina [A149]	Red (Breeding & Wintering)	
Bar-tailed Godwit	Limosa lapponica [A157]	Amber (Wintering)	
Redshank	Tringa totanus [A162]	Red (Breeding & Wintering)	
Black-headed Gull	Croicocephalus ridibundus [A179]	Red (Breeding)	
Roseate Tern	Sterna dougallii [A192]	Amber (Breeding)	
Common Tern	Sterna Hirundo [A193]	Amber (Breeding)	
Arctic Tern	Sterna paradisaea [A194]	Amber (Breeding)	
	Wetlands & Waterbirds [A999]		

Table 2 – Features of interest for the South Dublin Bay & Tolka Estuary SPA in (EU code in square parenthesis)

- 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.

³ Colhoun & Cummins, 2013. Birds of Conservation Concern in Ireland 2014-2019

- **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.

Whether significant effects are likely to occur to either the SAC or SPA must be measured against their 'conservation objectives'. Specific conservation objectives have been set for the SAC and SPA in Dublin Bay. In the SAC objectives relate to habitat area, community extent, community structure and community distribution within the qualifying interest (NPWS, 2013). There is no objective in relation to water quality.

For the South Dublin Bay & Tolka Estuary 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, 2015).

Data collected to carry out the assessment

A site visit found that the habitats on the site are not associated with either habitats or species listed in table 2.

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

indicate that water quality downstream of the Custom House is currently meeting the requirements of the WFD.

Water quality along the River Camac is routinely assessed by the EPA. The nearest monitoring stations to the subject site is at Baldonnell and here 'moderate' status was recorded. The Camac is a part of the Liffey Water Management Unit and one third of this river length was assessed as satisfactory (good or high) according to the Programme of Measures in the ERBD Management Plan (2010). This report suggests that pressures on water quality are from abstractions, agriculture, physical modifications and wastewater discharges. Downstream of Fortunestown the river has been classified as 'poor' or 'moderate' under the Water Framework Directive (WFD) reporting period 2010-15 (from <u>www.epa.ie</u>). These assessments are 'unsatisfactory' and so remedial measures will be required to restore 'good ecological status', something that was due by 2015.

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

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

Of relevance to this study is it noted that although declines in these species cannot always be attributed to clear causes, there is no evidence that water quality issues have been a factor. A supporting document has been published which provides greater details of the features of interest of the SPA. This shows that the majority of species are of favourable status with either stable or increasing population trends. Shelduck, Pintail, Shoveler, Golden Plover and Grey Plover are all assessed as 'unfavourable'. For most of these species the negative trends are in line with those at a national level. Only for Shoveler are trends positive elsewhere, suggesting that conditions within Dublin Bay may be responsible for the decline (NPWS, 2014).

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 directly adjacent to, any SAC or SPA.

Habitat loss

At its closest point the site is approximately 16km away (as the crow flies) from the boundary of the Natura 2000 areas within Dublin Bay. In reality however this distance is greater as the drainage pathway follows the course of streams leading to the Camac and Liffey rivers. There is no direct pathway to the Tolka estuary from this development. Because of the distance separating the site and the SPA/SAC there is no pathway for loss or disturbance of important habitats or important species associated with the features of interest of the SPA.

Pollution during construction

During construction there may be a loss of sediment to the stream which runs along the site boundary. There is also a risk that dangerous substances such as concrete, oils or greases could enter the water course. Any such effect will be temporary in nature however such pollution has the potential to affect all aquatic life for a considerable distance downstream.

While any pollution is undesirable and should be avoided, it is considered that this impact cannot result in significant effects to the SPA/SAC in Dublin Bay.

In line with best practice guidance from IFI in preventing pollution during construction works, pollution prevention measures will be undertaken, including:

1. Fuels, oils, greases and hydraulic fluids will be stored in bunded compounds well away from the watercourse. Refuelling of machinery, etc., will be carried out in off site.

2. Runoff from machine service and concrete mixing areas must not enter drains leading to the watercourse.

3. Stockpile areas for sands and gravel should be kept to minimum size, well away from drains leading to the watercourse. [bare soil should not be stored adjacent to drains or on sloping ground where there is a risk to water quality].

4. Runoff from the above should only be routed to the watercourse via suitably designed and sited settlement ponds/filter channels.

5. Settlement ponds should be inspected daily and maintained regularly.

Pollution arising from surface water during operation

There is a pathway from the site via surface water flows to the Corbally Stream and the Camac River. However, it is considered that sufficient attenuation and SUDS methods have been incorporated so that there will be no negative impact to the quality or quantity or run-off.

Pollution arising from wastewater discharge

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.

Discharges of wastewater and surface water from this project cannot result in significant effects to the SAC or SPA in Dublin Bay.

Abstraction

There is no evidence that abstraction is affecting the conservation objectives of any SAC or SPA within the zone of influence of this project, including the reservoirs at Poulaphouca.

Light and noise

The project will result in additional noise and artificial lighting however given the significant distance to Natura 2000 areas, this impact can be considered to be **not significant**.

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

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.

The EU's Water Framework Directive requires that all water bodies must attain 'good ecological status' by 2015. In 2010 a management plan was published for the ERBD and this sets out a 'Programme of Measures' that will address water quality issues in order to meet these high standards. The status of the Camac is currently unsatisfactory and a target of 2021 has been set to achieve good status.

Rainwater run-off from paved and impermeable surfaces can carry hydrocarbons and particulate matter into surface waters. These features can also accelerate the discharge of rainwater off land and so accentuate the effects of flash flooding (Mason, 1996). This impact is particularly pronounced in urban locations where significant areas can be paved or built on. As such, incremental increases in hard surfaces, such as when land use changes from agriculture to housing, can result in cumulative effects to water quality. In this case no impact from surface water is expected to occur.

Future planning in this area is provided for under the Fortunestown Local Area Plan 2012 and under which the subject lands have been zoned for residential use. This plan has been screened for AA and it was concluded that significant effects to the Natura 2000 network would not arise from its implementation.

Given that negative effects are not considered likely to arise, there are no projects, which acting in combination with the current proposal, can result in significant effects to Nature 2000 areas.

List of agencies consulted

Nature conservation observations were requested from the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. A response to this had not be received at the time of writing.

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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