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Natura Impact Statement
Proposed Development (Equinix
DB8)

R K D

On behalf of
RKD Architects Ltd.

Profile Park, Co. Dublin



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Natura Impact Statement
Proposed Development (Equinix DB8)
RKD Architects Ltd.
Profile Park, Co. Dublin

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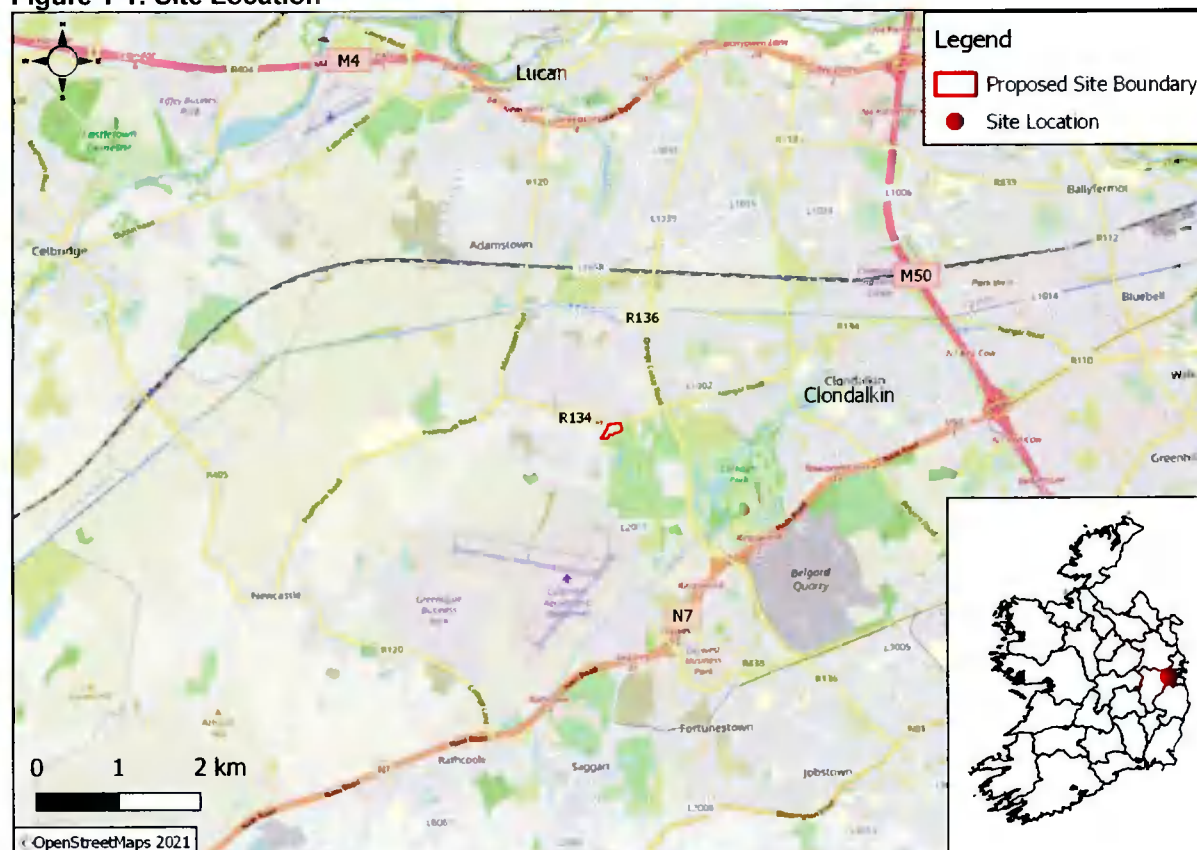
1 INTRODUCTION

1.1 Background

Malone O'Regan Environmental (MOR) were commissioned by RKD Architects Ltd on behalf of Equinix (Ireland) Ltd. to undertake an Appropriate Assessment, to assess the potential adverse effects, if any, for the construction of a proposed data centre and all ancillary works (the 'Proposed Development'), at Profile Park, Kilcarbery, Dublin, Co. Dublin (OS Reference O 04052 30807) on nearby sites with European conservation designations (i.e. Natura 2000 sites).

The location of the proposed development ('the Site') is shown in Figure 1-1.

Figure 1-1: Site Location



1.2 Statement of Authority

The report was approved by Mr. Dyfrig Hubble, Principal Ecologist. Dyfrig is a full member of the Chartered Institute of Ecology and Environmental Management. Dyfrig has over 15 years' experience working in the ecological consultancy sector, including habitat appraisals, specialist species-specific surveys, ecological assessments and appraisals including Appropriate Assessments.

1.3 Regulatory Context

This Natura Impact Statement (NIS) was prepared in accordance with Article 33 of the Planning and Development Regulations 2001 and in compliance with the following legislation:

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna better known as "The Habitats Directive" provides the framework for legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of community interest through the

establishment and conservation of an EU-wide network of sites known as Natura 2000. These are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/EEC as amended 2009/149/EC) (better known as "The Birds Directive").

Article 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect Natura 2000 sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment (now termed Natura Impact Statement):

"Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans and projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implication for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public"

The Habitats Directive promotes a hierarchy of avoidance, mitigation and compensatory measures. First, the project should aim to avoid any negative impacts on European sites by identifying possible impacts early in the planning stage and designing the project in order to avoid such impacts. Second, mitigation measures should be applied, if necessary, during the Appropriate Assessment (AA) process to the point, where no adverse impacts on the site(s) remain. If the project is still likely to result in adverse effects, and no further practicable mitigation is possible, it is rejected. If no alternative solutions are identified and the project is required for imperative reasons of overriding public interest (IROPI test) under Article 6 (4) of the Habitats Directive, then compensation measures are required for any remaining adverse effect.

1.4 Stages of the Appropriate Assessment

There are four distinct stages to undertaking an AA as outlined in current EU and DOEHLG guidance:

Stage 1: Screening

This process identifies the potential impacts of a plan or project on a Natura site, either alone or in combination with other plans and projects and considers whether these impacts are likely to be significant. If potentially significant impacts are identified the plan or project cannot be screened out and must proceed to Stage 2.

Stage 2: Appropriate Assessment

Where potentially significant impacts are identified, an assessment of the potential mitigation of those impacts is required; this stage considers the appropriateness of those mitigation measures in the context of maintaining the integrity of the Natura 2000 sites. If potential significant impacts cannot be eliminated with appropriate mitigation measures, the assessment must proceed to Stage 3.

Stage 3: Assessment of Alternatives Solutions

This process examines alternative ways to achieve the objectives of the plan or project that avoid adverse impacts on the integrity of the Natura 2000 site if mitigation measures are deemed insufficient.

Stage 4: Imperative Reasons of Overriding Public Interest (IROPI)

Assessment where no alternative solution exists for a plan or project and where adverse impacts remain. This includes an assessment of compensatory measures, where in the case of projects or plans, can be considered necessary for IROPI.

This report has been prepared to inform the planning authority with regard to Stage 1 (Screening) and Stage 2 (Appropriate Assessment) of the proposed development through the research and interpretation of available scientific, geographic and engineering knowledge. The report seeks to determine whether the installation of the proposed development will, on its own or in combination with other plans/projects have a significant effect on Natura 2000 sites within a defined radius of the subject Site.

2 METHODOLOGY

2.1 Desk Based Study

A desk-based review of information sources was completed, which included the following:

- The National Parks and Wildlife Service (NPWS) website was consulted to obtain the most up to date detail on conservation objectives for the Natura 2000 sites relevant to this assessment (NPWS, 2021);
- The National Biodiversity Data Centre (NBDC) website was consulted with regard to species distributions within 2km of the Site (NBDC, 2021); and,
- The EPA Envision website was consulted to obtain details about watercourses in the vicinity of the Site (EPA, 2021).

2.2 Field Based Studies

Habitat surveys were undertaken on November 6th 2020 by two (2No.) suitably qualified MOR Ecologists, with an up survey being completed on the 7th of June 2021. These surveys aimed to assess the extent and quality of habitats present on the Site and to identify any potential ecological receptors.

The assessment was extended to also identify the potential for these habitats to support other features of nature conservation importance, such as species afforded legal protection under either Irish or European legislation.

2.2.1 Protected / Notable Species

In addition, as part of the overall Biodiversity assessment for the Site, an assessment was carried out of the potential for the Site to support any other species considered to be of value for biodiversity, including those that were identified as occurring locally through the desktop study.

This information was used as part of the NIS to inform the assessment of potential adverse effects on both Annex I/II Species and Annex I Habitats identified as part of the study.

2.3 Survey Limitations

No Survey Limitations were encountered.

2.4 Consultation

Consultation was undertaken as part of the design phase and initial assessment of the Site and a pre-planning meeting was held on the 1st of April 2021 with South Dublin County Council.

The consultation and information provided was used to inform and refine the scope of the assessment undertaken and to develop appropriate mitigation measures for the proposed development, where necessary.

The key requirement in relation to biodiversity was to maintain a landscape buffer between the Site and the drainage ditch network.

3 DESCRIPTION OF THE PROJECT

3.1 Site Context

The Site is located within the townlands of Ballybane, Dublin 22, in the Profile Park business park. The Site of the proposed development is ca. 2.649 hectares (ha). Under the South Dublin County Development Plan 2016-2022, the Site is zoned under objective EE which aims to, 'provide for enterprise and employment related uses.'

The Site is accessed from the existing Site entrance on the Profile Park Road, which borders the western Site Boundary, via the R134 Regional Road that runs parallel to the northern Site boundary.

The Site currently comprises a construction compound, and disturbed ground and spoil heaps, which are currently overgrown with vegetation. A drainage ditch runs along the southern and eastern Site boundary adjacent to a mature hedgerow / treeline. The Baldonnell Stream is located within close proximity to the southwest corner of the Site. The Grange Castle Golf Club borders the southern and eastern Site boundaries.

3.2 Watercourses within the Vicinity of the Site

The Site is situated within the Liffey and Dublin Bay Catchment [Catchment_ID: 09] and the Liffey_SC_090 subcatchment [Subcatchment_ID: 09_15] (EPA, 2021).

There is one hydrological feature of note within the vicinity of the Site. The Baldonnell Stream is located adjacent to the southwestern corner of the Site.

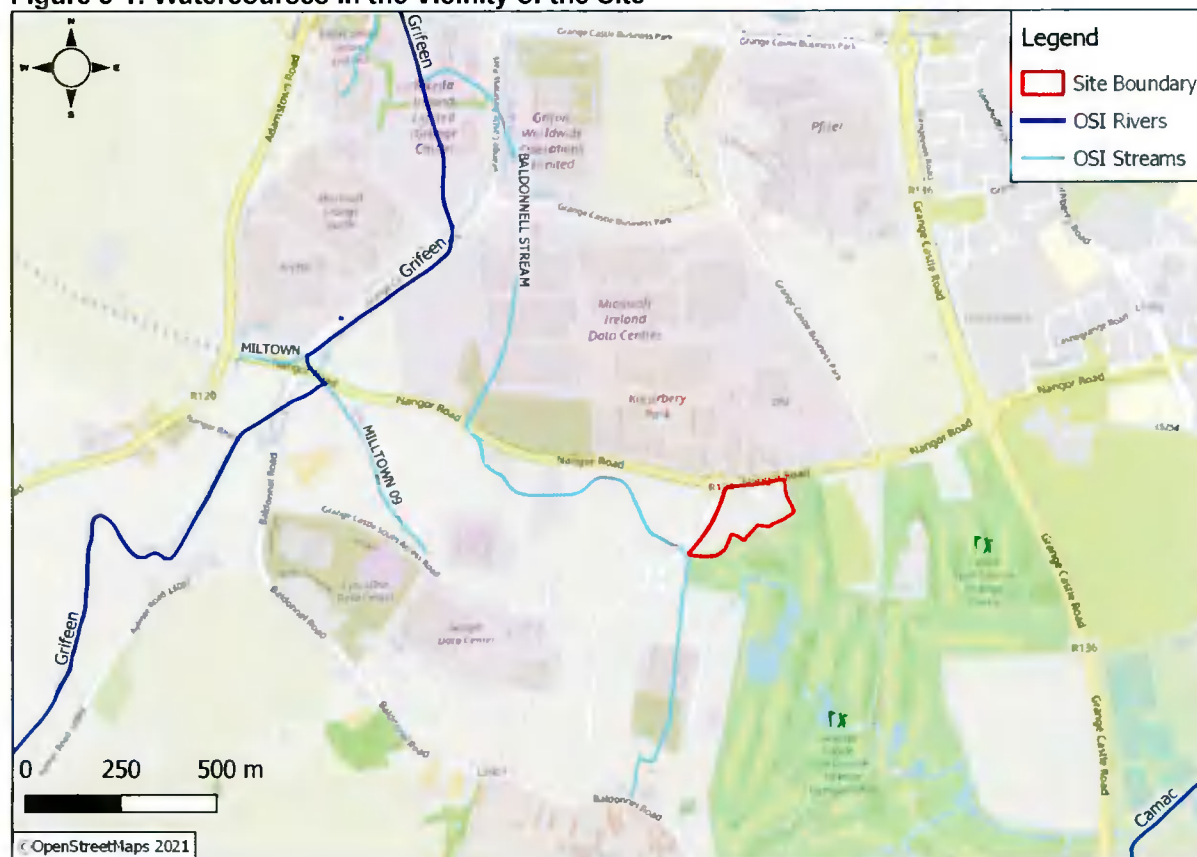
The Baldonnell Stream is a tributary to the Grifeen River and flows in a north / north-westerly direction for ca. 1.9km prior to discharging into the river. The Grifeen River flows in a northerly direction for ca. 4.2km from this convergence point, crossing under the Grand Canal through a siphon system, before discharge into the River Liffey at the Lucan Weir.

The River Liffey flows for ca. 21.1km from the weir before discharging into Dublin Bay. Dublin Bay is located 27.2km downstream of the Site and forms part of the South Dublin Bay SAC, the South Dublin Bay and River Tolka Estuary SPA, the North Dublin Bay SAC and the North Bull Island SPA.

According to the EPA 2013-2018 water monitoring events, the most up-to-date data at the time of writing this report, the Baldonnell Stream, the Grifeen River and the section of the River Liffey where the Grifeen River joins have 'good' water quality status but their risk of not achieving a high water quality status is currently under 'review' (EPA, 2021). However, further downstream (ca. 6.8km from the Site) the River Liffey is considered to be 'at risk' with an unassigned water quality (EPA, 2021).

The waterbodies within the vicinity of the Site are presented in Figure 3-1 below.

Figure 3-1: Watercourses in the Vicinity of the Site



3.3 Drainage Ditch

A drainage ditch borders the southern and eastern boundary of the proposed development. The majority of this drainage ditch is dry; however, the western section of this ditch, where it discharges into the Baldonnell Stream, was wet at the time of Survey.

3.4 Proposed Development

The proposed development will consist of the following:

- Construction of a 3 storey (part 4 storey) data centre known as 'DB8.' The total gross floor area excluding hot air plenums and external staircase is ca.9,601m². The overall height of the data centre ranges from ca.16m to ca.20m to roof level and ca.20m to ca.24m including roof top plant, flues and lift overrun. This building will include:
 - Data halls,
 - Electrical / plant rooms,
 - Offices,
 - Lobbies,
 - Ancillary staff areas including breakrooms and toilets,
 - Stores,
 - Stair/lift cores throughout and photovoltaic panels at roof level.
- Provision of 5No. external generators, 8No. fuel tanks and ancillary plant contained within a plant yard to the north of DB8;

- Provision of a water tank plant room, air cooled chillers and ancillary plant contained within a chiller plant yard to the south of DB8;
- Provision of a sprinkler pump room (ca.23m²), 2No. sprinkler tanks (ca.12m high each), heat recovery plant room (ca.17m²), ESB substation (ca.44m²), waste/bin stores (ca.52m²). Total floor area of ancillary structures and plant (ca.303m²);
- Provision of a delivery yard and loading bays, 64No. car parking spaces, 5No. motorcycle spaces, bicycle shelter serving 14No. spaces, smoke shelter, internal access roads and footpaths, vehicular and pedestrian access to the west from Falcon Avenue and closure of an existing vehicular entrance from Falcon Avenue;
- All associated Site development works, services provision, drainage works including attenuation, landscape and boundary treatment works including berming, hedgerow protection areas and security fencing;

It should be noted that no buildings are proposed above the existing ESB wayleave or the SDCC watermain wayleave to the west and north of the Site. Also the area to the southwest of the Site is reserved for a future data centre, which will be subject to a separate application to South Dublin County Council;

3.4.1 Drainage

3.4.1.1 Surface Water

All stormwater from the roof and yard areas will be directed via rainwater pipes into an onsite recirculation system. The outflow from this system will be connected into the surface water drainage network collecting run-off from the road areas and will be discharged into a proposed attenuation pond and 3No. below ground storage tanks, refer to Drawing No.DB080-PIN-00-ZZ-DR-C-PLAN-1205-P02.

Prior to reaching the proposed attenuation pond, stormwater from the carpark and access roads will be directed through porous asphalt into a series of onsite gullies and channels which will drain into below ground gravity sewers via an appropriately sized and approved petrol interceptor.

A hydro brake will ensure that water discharging to the drainage ditches surrounding the Site will be kept to green-field runoff rates. The engineering report confirms that this ditch network has capacity to accommodate the proposed discharge from the Site.

3.4.1.2 Foul Drainage

It is proposed to discharge foul water from the proposed development via a 225mm gravity foul sewer outfall at the end of a 100mm pumped main. This drainage infrastructure will connect into the existing 225mm spur connection on the Profile Park sewer line. Foul drainage from this point will be directed to the mains sewer. According to the Engineers Report, the existing foul sewer reticulation network has adequate capacity to cater for the proposed effluent discharge and there are no known issues within the existing drainage infrastructure.

No process water is associated with the normal operation of the Proposed Development.

3.4.2 External Lighting

External lighting will be provided outside the main structures and within the car-parking areas. A lighting plan has been submitted as part of the overall planning application.

3.4.3 Landscaping

The Proposed Development design includes for boundary landscaping works. The proposed layout masterplan, reference DB080-RKD-00-ZZ-DR-A-SITE-1020, presents both boundary and internal Site breakout landscaping works.

3.5 Construction Procedures

During the construction phase, the methods of working will comply with all relevant legislation and best practice guidelines in reducing the environmental adverse effects of the works. Although construction phase adverse effects are generally of a short-term duration and are localised in nature, the adverse effects will be reduced as far as practicable through compliance with current construction industry guidelines.

A Construction Environmental Management Plan (CEMP) has been prepared and submitted as part of this application for the proposed works. The following Construction Industry Research and Information Association (CIRIA) guidance has been referred to and will be adhered to during the construction phase of the project to prevent water pollution:

- C532 – Control of Water Pollution from Construction, Guidance for Consultants and Contractors (CIRIA, 2011);
- CIRIA C741- Environmental Good Practice on Site (4th edition) (CIRIA, 2015);
- Guidance for the Treatment of Bats Prior to the Construction of National Road Schemes (NRA, 2006); and,
- Guidance for the Treatment of Badgers Prior to the Construction of National Road Schemes (NRA, 2006).
- Guidelines on the Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads (NRA, 2010); and,
- All works will be undertaken in accordance with the 'Requirements for the Protection of Fisheries Habitat during Construction and Development' (Inland Fisheries Ireland , 2016).

A temporary construction compound will be set up within the northern section of the Site away from the Baldonnell stream.

It is envisaged that the construction works will commence in Q4 2021 and take approximately 26 months to complete.

Works will be limited to:

- Monday - Friday 07:00 hours – 19:00 hours
- Saturday 07:00 hours – 14:00 hours
- Sundays and Public Holidays Closed

An Ecological Clerk of Works (ECoW) will be appointed to the project and will inspect the Site in advance of works commencing and will undertake monthly Site inspections during the works as well as being present during any works adjacent to or near any waterbodies or the trees lines to ensure that they will be completed in line with the mitigation measures detailed within the CEMP.

4 IDENTIFICATION OF NATURA 2000 SITES

In accordance with the European Commission Methodological Guidance (European Commission, 2002) a list of European sites that can be potentially affected by the proposed development has been compiled. Guidance for Planning Authorities prepared by the Department of Environment Heritage and Local Government (DoEHLG, 2009) states that defining the likely zone of impact for the screening and the approach used will depend on the nature, size, location and the likely effects of the project. The key variables determining whether or not a particular Natura 2000 site is likely to be negatively affected by a project are: the physical distance from the project to the site; the presence of impact pathways; the sensitivities of the ecological receptors; and, the potential for in-combination effects.

Adopting the precautionary principle, all SAC and SPA sites within a 15km radius of the proposed development Site have been considered (Refer to Figure 4-1).

Seven (7No.) Natura 2000 designated sites were identified within 15km of the Site (Figure 4-2, Table 4-1).

Figure 4-1 Natura 2000 Sites within 15km

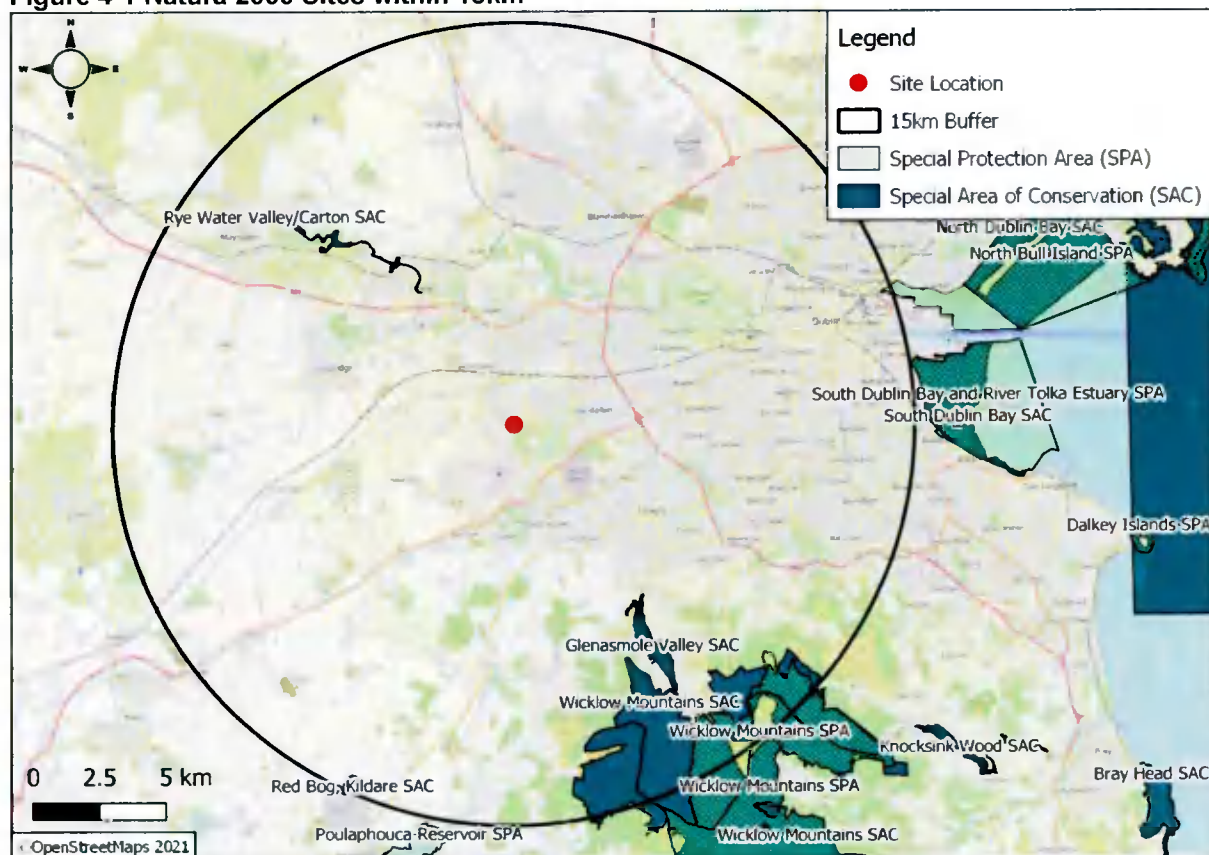


Table 4-1 Natura 2000 Designated Sites within 15km of the Site

Site Name	Code	Distance (km)	Direction from the Site
Special Areas of Conservation (SAC)			
Glenasmole Valley	001209	7.9km	SE
Wicklow Mountains	002122	9.7km	SE
Rye Water Valley / Carton	001398	6.0km	NW

Site Name	Code	Distance (km)	Direction from the Site
Red Bog, Kildare	000397	14.4km	SW
South Dublin Bay	000210	15km	E
Special Protection Area (SPA)			
Wicklow Mountains	004040	12.7km	SE
South Dublin Bay and River Tolka Estuary	004024	14.7km	E

The Site is not located within or directly adjacent to any Natura 2000 sites, however, the boundaries of the five (5No.) SACs and two (2 No.) SPAs are located within 15km from the Site.

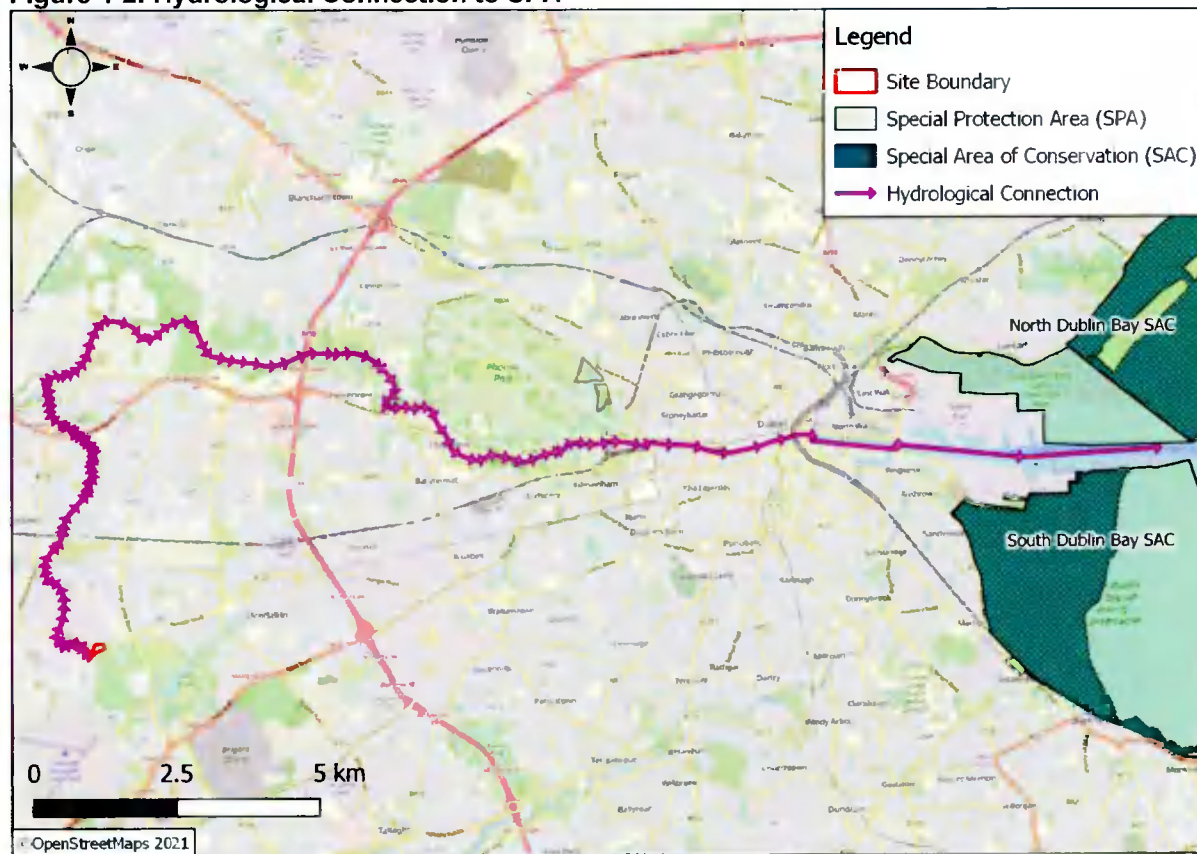
Given the distance, intervening lands and lack of impact pathways between the Site and the Glenasmole Valley SAC, Wicklow Mountains SAC, Rye Water Valley / Carton SAC, Red Bog, Kildare SAC and the Wicklow Mountains SPA, these Natura 2000 sites have been screened out from further consideration.

The Site is hydrologically connected to the South Dublin Bay SAC, the South Dublin Bay and River Tolka Estuary SPA via the Baldonnell Stream which discharges into the Grifeen River, the River Liffey and eventually drains into Dublin Bay, refer to Figure 4-2. It should also be noted that North Dublin Bay SAC and North Bull Island SPA form part of Dublin Bay and are located ca.19km NE of the Site.

Although the South Dublin Bay SAC is also located downstream and within 15km of the Site, it is not considered that this Natura 2000 site could be affected by the proposed development considering the Great South Wall separates any water discharging into Dublin Port from the South Dublin Bay Annex I Habitats. Therefore, any pollutants in the bay would have to circumvent the breakwater and travel through a considerable expanse of open water to reach this Natura 2000 site. A similar breakwater in the form of North Bull Wall protects the North Dublin Bay SAC and North Bull Island SPA from potential pollutants. Therefore, these Natura 2000 sites have been screened out from further consideration.

However, areas of wetland habitat that make up the South Dublin Bay and River Tolka Estuary SPA are found on the Liffey side of the Great South Wall and the North Bull Wall and therefore could be affected by a major pollution event (albeit unlikely considering the Site is ca. 27.2km upstream). Given this hydrological connection to the South Dublin Bay and River Tolka Estuary SPA, this Natura 2000 site will be given further consideration to assess potential impacts resulting from the proposed development.

Figure 4-2: Hydrological Connection to SPA



4.1 South Dublin Bay and River Tolka Estuary SPA (Site Code:004024)

The South Dublin Bay and River Tolka Estuary SPA comprises a substantial part of Dublin Bay. It includes the intertidal area between the River Liffey and Dun Laoghaire, and the estuary of the River Tolka to the north of the River Liffey, as well as Booterstown Marsh. A portion of the shallow marine waters of the bay is also included.

This SPA is an important site for wintering waterfowl being an integral part of the internationally important Dublin Bay complex. This site supports internationally important populations of Light-bellied Brent Goose and nationally important numbers of Oystercatcher, Ringed Plover, Grey Plover, Knot, Sanderling, Dunlin, Bar-tailed Godwit, Redshank and Black-headed Gull and also supports populations of Great Crested Grebe, Curlew and Turnstone.

This site is a significant site for wintering gulls, with a nationally important population of Black-headed Gull, and also Common Gull and Herring Gull. Also, this site is selected for designation for its autumn tern populations: Roseate Tern, Common Tern and Arctic Tern.

Table 4-2: Qualifying Annex I Species of Birds for South Dublin Bay and River Tolka Estuary SPA

Species Names	Scientific Name	Code
Light-bellied Brent Goose	<i>Branta bernicla hrota</i>	A046
Oystercatcher	<i>Haematopus ostralegus</i>	A130
Ringed Plover	<i>Charadrius hiaticula</i>	A137
Grey Plover	<i>Pluvialis squatarola</i>	A141

Species Names	Scientific Name	Code
Knot	<i>Calidris canutus</i>	A143
Dunlin	<i>Calidris alpina</i>	A149
Bar-tailed Godwit	<i>Limosa lapponica</i>	A157
Redshank	<i>Tringa totanus</i>	A162
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	A179
Roseate Tern	<i>Sterna dougallii</i>	A192
Common Tern	<i>Sterna hirundo</i>	A193
Arctic Tern	<i>Sterna paradisaea</i>	A194
Wetland and Waterbirds		A999

4.2 Conservation Objectives of Natura 2000 Sites

European and national legislation places a collective obligation on Ireland and its citizens to maintain a favourable conservation status at areas designated as candidate Special Areas of Conservation. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

According to the EU Habitats Directive, favourable conservation status of a habitat is achieved when:

- Its natural range, and area it covers within that range, is stable or increasing;
- 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 as defined below.

The favourable conservation status of a species is achieved when:

- Population data on the species concerned indicate that it is maintaining itself;
- The natural range of the species is neither being reduced or 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.

Conservation objectives for all identified Natura 2000 SAC Sites are as follows:

'To maintain or restore the favourable conservation condition of the Annex I habitat(s) and the Annex II species for which the SAC has been selected.'

The full reports for the conservation objectives for the South Dublin Bay and River Tolka Estuary SPA¹ can be found on the NPWS website.

¹ [NPWS Conservation Objectives: South Dublin Bay and River Tolka Estuary SPA](#)

5 STUDY RESULTS

5.1 Desk Based Study

Table 5-1 provides a summary of designated species records of the South Dublin Bay and River Tolka Estuary SPA that occur within a 2km grid square of the Site boundary (NBDC, 2021).

Table 5-1: Designated Species under the South Dublin Bay and River Tolka Estuary that occur within 2km of the Site

Common Name	Scientific Name	Date of last record	Designation
Designated Bird Species			
Black-headed Gull	<i>Larus ridibundus</i>	31/12/2011	Code: A179 Wildlife Acts 1976 / 2000 Birds of Conservation Concern Red List
Wetland and Waterbirds (A999)			
Common Coot	<i>Fulica atra</i>	28/07/2016	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Amber List
Great Black-backed Gull	<i>Larus marinus</i>	31/12/2011	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Amber List
Lesser Black-backed Gull	<i>Larus fuscus</i>	31/12/2011	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Amber List
Little Grebe	<i>Tachybaptus ruficollis</i>	31/12/2011	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Amber List
Mallard	<i>Anas platyrhynchos</i>	31/12/2011	Wildlife Acts 1976 / 2000 EU Birds Directive Annex II Section I and Annex III and Section I Bird Species
Mute Swan	<i>Cygnus olor</i>	31/12/2011	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Amber List
Tufted Duck	<i>Aythya fuligula</i>	31/12/2011	Wildlife Acts 1976 / 2000 EU Habitats Directive Annex II Section I and Annex III and Section II Bird Species Birds of Conservation Concern Amber List
Great Black-backed Gull	<i>Larus marinus</i>	31/12/2011	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Amber List
Lesser Black-backed Gull	<i>Larus fuscus</i>	31/12/2011	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Amber List

5.2 Habitat Survey

The habitats described below were classified under Fossitt's: *A Guide to Habitats in Ireland* (Fossitt, 2000) and are all located within the Site.

Site Context and Surrounding Habitats

The Site is situated within the Profile Park business park. The Site is bordered by the R134 regional road to the north, the Profile Park Road to the west and the Grange Castle Golf Club to the south and east.

The Site is comprised primarily of a construction compound, disturbed ground and spoil heaps, which have grown over with vegetation. There is also a drainage ditch and hedgerow bordering the southern and eastern Site boundary, separating the Site from the golf course.

A description of the habitats and features of ecological significance are outlined below, and their distribution is illustrated in Figure 5-1.

Artificial Surfaces (BL3)

Artificial surfaces are located within the north-western portion of the Site, there is also a smaller area of compacted ground located in the north-eastern portion of the Site. These areas of artificial surfaces comprise of hard standing and bare ground. There is limited vegetation growth within these areas given the nature of these habitats and recent disturbances at the Site.

Recolonising Bare Ground (ED3)

Areas of recolonising bare ground were noted throughout the Site. The overall Site had been previously disturbed and currently vegetation growth has reclaimed these areas.

The recolonising vegetation includes perennial ryegrass (*Lolium perenne*), Yorkshire fog (*Holcus lanatus*), cocksfoot (*Dactylis glomerata*), creeping buttercup (*Ranunculus repens*), lady's thumb (*Persicaria maculosa*), nettle (*Urtica dioica*), dandelion (*Taraxacum vulgaria*), common hogweed (*Heracleum sphondylium*), prickly sowthistle (*Sonchus asper*), ragwort (*Senecio jacobaea*), ribwort plantain (*Plantago lanceolata*), coltsfoot (*Tussilago farfara*), rush species (*Juncus spp.*), bramble (*Rubus fruticosus*), hedge bindweed (*Calystegia sepium*), daisy (*Bellis perennis*), common vetch (*Vicia sativa*), European beech saplings (*Fagus sylvatica*), ground ivy (*Glechoma hederacea*), bitterweet (*Solanum dulcamara*), poppy (*Papaver rhoeas*), fringed willowherb (*Epilobium ciliatum*), sun spurge (*Euphorbia helioscopia*), common fumitory (*Fumaria officinalis*), shepherd's purse (*Capsella bursa-pastoris*), cutleaf geranium (*Geranium dissectum*) and shortpod mustard (*Hirschfeldia incana*).

Spoil and Bare Ground (ED2)

Spoil heaps are located within the central portion of the Site and were classified as spoil and bare ground. Also, areas of bare ground were identified within the centre of the spoil heaps and along the northern Site boundary, which seems to act as an access track between the construction compounds.

Species identified within this habitat include fringed willowherb, bramble, poppy, hedge bindweed, ground ivy, nettle, creeping buttercup, wild mustard (*Sinapis arvensis*), butterfly bush (*Buddleja davidii*), willow saplings (*Salix spp.*), elder saplings (*Sambucus nigra*) and rushes (*Juncus spp.*).

Hedgerow / Treeline (WL1 / WL2)

The eastern and southern Site boundary are made up of a mature hedgerow / treeline. This habitat is comprised of predominantly ash (*Fraxinus excelsior*), hawthorn (*Crataegus monogyna*), holly (*Ilex aquifolium*), sycamore (*Acer pseudoplatanus*) and willow.

Brambles (*Rubus fruticosus*) and nettles (*Urtica dioica*) are frequent in the understorey layer throughout. Ivy (*Hedera hibernica*) is common both in the trees and in the ground layers. An array of herbaceous species was recorded in the ground layer of the hedgerows, including ground ivy, common vetch, creeping buttercup and willow herb.

Drainage Ditches (FW4)

A drainage ditch borders the Site along the southern and eastern Site boundary. The drainage ditch discharges into the Baldonnell Stream in the south-western corner of the Site.

At the time of the survey, the western section of the drainage ditch along the southern Site boundary was wet and there was a steady flow of water towards the Baldonnell Stream. There seemed to be a connection from the Grange Castle Golf Course discharging into this drainage ditch as well. The drainage ditch along the southern Site boundary is steep sided.

approximately 0.5-1m deep. This section of the drainage ditch was heavily shaded by the hedgerow / treeline.

However, the section of the drainage ditch along the eastern Site boundary was drier and there was no discernible flow of water. The drainage ditch along this section was also shallower, only 0.5m deep at its deepest point.

The species identified growing along the sides of the drainage ditches included ivy, bramble, fringed willowherb, common hogweed and butterfly bush. Floating plants within the drainage ditch included common duckweed (*Lemna minor*) and watercress (*Nasturtium officinale*).

The drainage ditch is currently fenced off with a silt fence, however, the fences are currently in disrepair and as such are not effective.

Surface Water Ponds

Surface water ponds were noted throughout the Site. These temporary shallow wet areas were dominated by rushes, broadleaf cattail (*Typha latifolia*) and algae.

Figure 5-1: Habitat Map



6 STAGE 1 SCREENING: IDENTIFICATION OF POTENTIAL ADVERSE EFFECTS

Potential adverse effects, if any, on the South Dublin Bay SAC or South Dublin Bay and River Tolka Estuary SPA were considered further in this section. The key output of this stage of the assessment is the identification of the types of threats to the integrity of the Natura 2000 sites that may arise as a result of implementing the proposed development.

A number of factors were examined at this stage and dismissed due to the very low risk associated with them. Tables 6-1 and 6-2 present further details and rationale of the screening assessment undertaken for each of the qualifying interests of the Natura 2000 sites identified as having the potential to be adversely affected.

These factors were screened in or out, based on whether or not it was concluded that they are likely to be affected by the proposed development if no mitigation measures were applied, and if progression to Stage 2 is required. The rationale for these conclusions is based on results from the aforementioned desk study, literature search and field survey results.

Table 6-1 Screening Assessment: Annex II Species – South Dublin Bay and River Tolka Estuary SPA

Qualifying Feature of Interest	Baseline	Potential Significant Effects	Screening Rational	Screening conclusion
Light-bellied Brent Goose	<p>The NBDC holds no records of this species within a 2km grid square of the Site (NBDC, 2021).</p> <p>The onsite habitats are considered to be of limited value for this species.</p>	<p>Effects associated with pollution during the construction and operational phases</p>	<p>It is considered highly unlikely that the works will have any significant direct or indirect negative effects on this species during either the construction or operational phase of the proposed development.</p> <p>This is based on the fact that this species are not known to occur within the area and it is considered highly unlikely that the habitats within the Site itself are of significant importance for this species as they comprise of disturbed and recolonising ground.</p> <p>Although the Site is located ca.27.2km upstream of the SPA, this bird species may utilise the wider river network including the River Liffey and the Grifeen River. Therefore, should a major pollution event occur and effect the water quality of local watercourses or further downstream in the SPA, this could adversely affect the foraging habitat of Light-bellied Brent Geese.</p> <p>Therefore, a precautionary approach has been taken and mitigation measures as well as best practice guidance will be implemented during the construction works to protect local water quality and the water quality of the river network further downstream.</p> <p>Further assessment is therefore required for this species.</p>	Screened in
Oystercatcher	<p>The NBDC holds no records of this species within a 2km grid square of the Site (NBDC, 2021).</p> <p>The onsite habitats are considered to be of limited value for this species.</p>	As above	As above as per Light Bellied Brent Goose	Screened in
Ringed Plover	<p>The NBDC holds no records of this species within a 2km grid square of the Site (NBDC, 2021).</p>	As above	As above per Light Bellied Brent Goose	Screened in

Qualifying Feature of Interest	Baseline	Potential Significant Effects	Screening Rational	Screening conclusion
	The onsite habitats are considered to be of limited value for this species.			
Grey Plover	The NBDC holds no records of this species within a 2km grid square of the Site (NBDC, 2021). The onsite habitats are considered to be of limited value for this species.	As above	As above per Light Bellied Brent Goose	Screened in.
Knot	The NBDC holds no records of this species within a 2km grid square of the Site (NBDC, 2021). The onsite habitats are considered to be of limited value for this species.	As above	As above per Light Bellied Brent Goose	Screened in.
Dunlin	The NBDC holds no records of this species within a 2km grid square of the Site (NBDC, 2021). The onsite habitats are considered to be of limited value for this species.	As above	As above per Light Bellied Brent Goose	Screened in.
Bar-tailed Godwit	The NBDC holds no records of this species within a 2km grid square of the Site (NBDC, 2021). The onsite habitats are considered to be of limited value for this species.	As above	As above per Light Bellied Brent Goose	Screened in.
Redshank	The NBDC holds no records of this species within a 2km grid square of the Site (NBDC, 2021). The onsite habitats are considered to be of limited value for this species.	As above	As above per Light Bellied Brent Goose	Screened in.

Qualifying Feature of Interest	Baseline	Potential Significant Effects	Screening Rational	Screening conclusion
Black-headed Gull	The NBDC holds records of this species within 2km of the Site, however, there are no records of this species within 1km of the Site and it is not considered that the onsite habitats are of value to this species (NBDC, 2021).	As above	As above per Light Bellied Brent Goose	Screened in.
Roseate Tern	The NBDC holds no records of this species within a 2km grid square of the Site (NBDC, 2021). The onsite habitats are considered to be of limited value for this species.	As above	As above per Light Bellied Brent Goose	Screened in.
Common Tern	The NBDC holds no records of this species within a 2km grid square of the Site (NBDC, 2021). The onsite habitats are considered to be of limited value for this species.	As above	As above per Light Bellied Brent Goose	Screened in.
Wetland and Waterbirds	A number of wetland and waterbirds have been recorded within 2km of the Site including the common coot, great black-backed gull, little grebe, mallard, mute swan, tufted duck, great black-backed gull and the lesser black-backed gull (NBDC, 2021). However, none of these bird species have been recorded within 1km of the Site (NBDC, 2021) and it is not considered that the habitats onsite are significant to wetland or waterbirds.	As above	As above per Light Bellied Brent Goose	Screened in.

7 STAGE 2: ASSESSMENT OF POTENTIAL ADVERSE EFFECTS

This section provides recommendations for measures which will mitigate against potential adverse effects of the proposed works on qualifying habitats and species throughout the duration of the project. The following effects, which have the potential to adversely affect the conservation objectives of the identified Natura 2000 sites, were considered:

- Potential impairment of water quality during construction phase; and,
- Potential impairment of water quality during the operational phase.

7.1 Potential Impairment of Water Quality during Construction

As the proposed development is located adjacent to the Baldonnell stream and given the drainage ditch bordering the Site which discharges into this waterbody, potential runoff of pollutants / sediments during construction could adversely affect the water quality within this stream and downstream in the Grifeen River and the River Liffey. A deterioration in water quality has the potential to adversely affect protected species and their habitats within the South Dublin Bay and River Tolka Estuary SPA.

Potential pollutants resulting from the construction of the proposed development include suspended solids, cementitious materials, silt and hydrocarbon leaks or spills. Sediment / silt have the potential to clog fish gills, degrade spawning habitats and cover / smother aquatic plants. The potential release of these pollutants would result in decreased food availability and therefore, could indirectly affect designated bird species by impacting their food supply. In addition, should hydrocarbons enter the river network, there is potential that the chemical balance of the river network could change which would be toxic for fish and other wildlife.

However, it is considered highly unlikely that any construction work pollutants could impact on the water quality of the South Dublin Bay and River Tolka Estuary SPA based on the following:

- The localised nature of the proposed development works;
- There will be no direct discharges to surface water or groundwater during the construction phase of the development; and,
- The distance separating the Sites (ca.27.2km downstream), along with eighteen (18No.) tributaries between the Site and the SPA.

It is reasonable to assume that if any pollutants did enter the drainage ditches bordering the Site or the Baldonnell Stream, they would either dilute within the river network or settle to the bottom of the subsequent waterbodies over the 27.2km distance.

However, taking a precautionary approach to ensure that the works do not have an impact on local surface waterbodies, the wider river network and therefore on species designated under the South Dublin Bay and River Tolka Estuary SPA, measures will be put in place in accordance with best practice guidance to avoid impacts on these receptors.

Sediment control measures will be put in place to prevent suspended solids in runoff from entering the drainage network bordering the Site and ensure works are in line with the IFI guidelines. These measures will include the following:

- Silt traps will be placed on all outflows from the Site;
- A silt fence will be erected below along the south and east boundaries;
- Existing vegetation will be retained where possible;
- The working area will be clearly defined, and construction activities will be carefully planned to minimise ground disturbance; and,

- Runoff will be diverted away from stripped areas.

Figure 7-1: Proposed Silt Fence Locations during Construction



The following best practice guidelines will be followed, which are based on Inland Fisheries Ireland (IFI, 2016) and National Roads Authority (NRA, 2005) guidance documents:

- Construction stage works will be undertaken in accordance with an approved CEMP;
- Weather conditions will be considered when planning construction activities to minimise risk of runoff from Site;
- All materials shall be stored at the main contractor compound and transported to the works zone immediately prior to construction;
- Any chemical / oils to be stored onsite will be placed within a bund on an area of hardstanding to ensure there is no seepage of pollutants into groundwater or surface water;
- All bunds will have the capacity of the largest tank volume plus 10 percent, at a minimum, with additional capacity to hold 30mm of rainfall;
- Prior to any works commencing, all construction equipment will be checked to ensure that they are mechanically sound, to avoid leaks of oil, fuel, hydraulic fluids and grease;
- Preventative maintenance and relevant maintenance logs will be kept for all onsite plant and equipment;
- Excavations will be left open for minimal periods to avoid acting as a conduit for surface water flows;
- Any pouring of concrete will only be carried out in dry weather. Washout of concrete trucks will not be permitted on the Site;

- Washouts of equipment used for concrete operations will be done either offsite or within a designated washout area, which will comprise a container that will capture the washout material / water for reused or disposal offsite;
- Any spillage of cementitious materials will be cleaned-up immediately;
- Steel tanks will be protected from corrosion;
- All drainage from bund areas must be directed to secure containment prior to suitable disposal;
- Fuel will be delivered onsite by a dedicated tanker or in a delivery bowser dedicated to that purpose;
- The Appointed Contactor will put in place a specific, step-by-step refuelling procedure which will be communicated to all relevant employees onsite;
- All valves should be of steel construction and the open and close positions should be clearly marked;
- Fuels, lubricants and hydraulic fluids for equipment used in the construction Site will be carefully handled to avoid spillage, properly secured against unauthorised access or vandalism, and provided with spill containment according to current best practice;
- Vehicle or equipment maintenance work will be carried out in a designated area on the Site. In the event that refuelling is required outside this area a spill tray will be employed during the refuelling operation;
- No surface water runoff will be discharged onto public roads, foul sewers or adjacent property;
- In order to prevent potential water pollution risk when drainage lines are in place but not fully commissioned, no discharges to the surface water drainage system at the Site will be made until all drains are fully connected to the proposed and approved petrol interceptor; and,
- Measures will be implemented to minimise waste and ensure correct handling, storage and disposal of waste.

The proposed measures to remove the risk from potential contamination and emergency procedures to be implemented in the event of an accidental release or spill of potentially contaminating substances are outlined below.

These procedures will be communicated to all relevant Site staff. At a minimum the following measures will be in place:

- Adequate spill kits including absorbent booms and other absorbent material will be maintained onsite;
- Any spillage of cementitious materials will be cleaned-up immediately;
- All contractor workers will be appropriately trained in the use of spill kits; and,
- Any sediments impacted by contamination will be excavated and stored in appropriate sealed containers for disposal offsite in accordance with all relevant waste management legislation.

Therefore, it is considered that with the implementation of above-mentioned mitigation measures there will be no adverse effects on the water quality to the nearby watercourses and that the construction activity at the Site will not cause any adverse effects to qualifying species of the South Dublin Bay and River Tolka Estuary SPA.

7.2 Potential Impairment of Water Quality during Operation

The additional built structures onsite will result in an increase in storm water runoff. However, as the proposed drainage system will utilise an approved petrol interceptor, attenuation pond and hydrobrake, as described in Section 3.4.1.1, it is not considered that the proposed development will have any adverse effects on water quality within the Baldonnell Stream, Grifteen river or further downstream in the South Dublin Bay and River Tolka Estuary SPA.

Furthermore, during the operational phase of the proposed development, foul drainage will connect into the existing Profile Park infrastructure as described in Section 3.4.1.2. No alterations to this approved system are proposed.

It should be noted that 8No. fuel tanks, with a capacity of 75m³, will be installed and utilised onsite during the operational phase of the proposed development. These tanks will be double skinned and have a minimum of 10% additional capacity. In addition, these tanks will be stored on an area of hardstanding and will be protected by a wall to the north. There is also a dedicated refuelling point for these tanks, which is located within an area of hardstanding. All relevant personnel will be trained in the prevention and control of spillages. This training will include the correct use of spill kits. Spill kits will be located at various locations around the facility.

It can be concluded that following the implementation of the above mitigation measures, no adverse effects upon the integrity, designated habitats or species of the South Dublin Bay and River Tolka Estuary SPA or any other Natura 2000 sites will occur as a result of the construction or operational phase of the proposed development.

7.3 Analysis of 'In-Combination' Effects

The Habitats Directive requires competent authorities to make an appropriate assessment of any plan or project which is likely to have a significant effect alone or in-combination with other plans and projects.

Due to the large size of the South Dublin Bay and River Tolka Estuary SPA and its position at the mouth of the local river network, there are numerous projects and activities which have the potential to affect the conservation interests of this SPA. However, the project alone is unlikely to have any direct or indirect significant effects on any Natura 2000 sites with the implementation of specific / precautionary mitigation measures. Additionally, any future development of adjoining lands will be subject to the mandatory planning process which takes account of all relevant nature conservation legislation inclusive of the appropriate assessment process.

The majority of planning applications within the vicinity of the Site are for retention or have already undergone construction. Therefore, it is not considered that any in-combination effects will occur.

Moffash Ltd. received planning consent for the construction of a Distribution Warehouse Building and associated works in Profile Park, ca.180m west of the Site in 2020 (Planning reference: SD20A/0124). This planning application was subject to an Appropriate Assessment. Therefore, as part of the planning process, this development was assessed for potential adverse effects to Natura 2000 sites and the accompanying report concluded that the proposed Distribution Warehouse will not have a significant effect on any habitats or species designated as conservation interests for any Natura 2000 sites. As the construction works for this project and the proposed development will be contained within a localised area and given the distance downstream to the nearest Natura 2000 sites, it is not envisaged that these projects will lead to any in-combination effects, should they occur at the same time.

Taking the above into account, and considering the nature of the proposed development within an area zoned under objective EE: 'to provide for enterprise and employment related uses,'

adherence to the mitigation measures listed within this NIS, the best practice measures that will be implemented during both the construction and operational phase of the proposed development, it is concluded there will not be any significant in-combination contribution by the project to possible adverse effects on the South Dublin Bay and River Tolka Estuary SPA or any other Natura 2000 site and that it will not cause any adverse effect on the integrity of any European site in combination with other plans and projects.

8 CONCLUSIONS

A detailed assessment of the layout and nature of the proposed development, the construction methods to be employed and the overall activities that will occur at the Site during construction and operation has been carried out and the potential for adverse effects on Natura 2000 sites and qualifying features of interest within a 15km radius of the Site has been examined in detail.

The Site is not located within or directly adjacent to any Natura 2000 sites, however, the boundaries of the five (5No.) SACs and two (2 No.) SPAs are located within 15km from the Site.

Six (6No.) Sites were screened out given the lack of impact pathways and the distance separating the Site from the Natura 2000 sites - Glenasmole Valley SAC, Wicklow Mountains SAC, Rye Water Valley / Carton SAC, Red Bog, Kildare SAC and the Wicklow Mountains SPA.

The Site is hydrologically connected to the South Dublin Bay SAC, the South Dublin Bay and River Tolka Estuary SPA via the Baldonnell Stream which discharges into the Grifeen River, the River Liffey and eventually drains into Dublin Bay. North Dublin Bay SAC and North Bull Island SPA also form part of Dublin Bay and are located ca, 19km northeast of the Site.

However, South Dublin Bay SAC, North Dublin Bay SAC, and the North Bull Island SPA were screened out due to the presence of the Great South Wall and the North Bull Wall which separate any water discharging into Dublin Port from the respective Natura Sites.

Of the Natura 2000 sites identified within a 15km radius, the South Dublin Bay and River Tolka Estuary SPA was taken forward for further detailed consideration due to its hydrological connection to the Site and its position to the west of the breakwaters mentioned above. It is considered reasonable to conclude that the proposed development will not result in any adverse effects on the basis that all recommended specific mitigation measures will be implemented. Specifically, the proposed construction works will be undertaken to avoid impairment to water quality.

In terms of significance with regard to adverse effects on Natura 2000 sites, the NPWS Guidance (2009) uses an EC definition as follows:

“Any element of a plan or project that has the potential to affect the conservation objectives of a Natura 2000 Site, including its structure and function, should be considered significant (EC, 2006)”.

It can be concluded that the proposed development and all associated Site works, alone or in combination with other projects, will not adversely affect the integrity, and conservation status of any of the qualifying interests of the South Dublin Bay and River Tolka Estuary SPA or any other Natura 2000 sites.

Accordingly, progression to Stage 3 of the Appropriate Assessment process (i.e. Assessment of Alternatives Solutions) is not considered necessary.

9 REFERENCES

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