APPROPRIATE ASSESSMENT SCREENING REPORT

FOR

PROPOSED RESIDENTIAL DEVELOPMENT

AT

LANDS AT FOSTERSTOWN NORTH, DUBLIN ROAD / R132, SWORDS, CO. DUBLIN

ON BEHALF OF

J. MURPHY (DEVELOPMENTS) LIMITED

Prepared by
Enviroguide Consulting

Dublin
3D Core C, Block 71, The Plaza,
Park West, Dublin 12

Kerry
19 Henry Street
Kenmare, Co. Kerry

Wexford
M10, Wexford Enterprise
Centre, Strandfield Business
Park, Rosslare Road, Wexford

www.enviroguide.ie
info@enviroguide.ie
+353 1 565 4730

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1 INTRODUCTION

1.1 Background

Enviroguide Consulting was commissioned J. Murphy (Developments) Limited to undertake a screening for Appropriate Assessment in relation to a proposed residential development on a site at Fosterstown North, Dublin Road / R132, Swords, Co. Dublin. The purpose of this report is to provide information for the relevant competent authority to enable it to undertake Stage 1 Appropriate Assessment Screening in respect of the Proposed Development.

1.2 Relevant Legislation

1.2.1 Legislative Background

Member States are required to designate Special Areas of Conservation (SACs) and Special Protected Areas (SPAs) under the EU Habitats and Birds Directives, respectively. SACs and SPAs are collectively known as Natura 2000 or 'European Sites'. An 'Appropriate Assessment' (AA) is a required assessment to determine the likelihood of significant impacts, based on best scientific knowledge, of any plans or projects on European Sites. A screening for AA determines whether a plan or project, either alone or in combination with other plans and projects, is likely to have significant effects on a European Site, in view of its conservation objectives.

This AA Screening has been undertaken to determine the potential for significant effects on nearby Sites with European conservation designations (i.e., Natura 2000 Sites). The purpose of this assessment is to determine, the appropriateness, or otherwise, of the Proposed Development in the context of the conservation objectives of such sites.

1.2.2 Legislative Context

The Habitats Directive (92/43/EEC) seeks to conserve natural habitats and wild fauna and flora by the designation of SACs and the Birds Directive (2009/147/EC) seeks to protect birds of special importance by the designation of SPAs. The Habitats Directive has been transposed into Irish law through the EC (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011). It is the responsibility of each member state to designate SPAs and SACs, both of which will form part of Natura 2000, a network of protected sites throughout the European Community.

An Appropriate Assessment is required under Article 6 of the Habitats Directive where a project or plan may give rise to significant effects upon a European Site, and paragraphs 3 and 4 state that:

6(3) Any plan or project not directly connected with or necessary to the management of the site ***but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site****, in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.*

6(4) If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.

The current assessment was conducted within this legislative framework and the published DEHLG (2009) guidelines. As outlined in these, it is the responsibility of the proponent of the project to provide a comprehensive and objective Screening for Appropriate Assessment, which can then be used by the competent authority in order to conduct the Appropriate Assessment (DEHLG, 2009).

1.2.3 Stages of AA

An Appropriate Assessment Screening Report (the "**Screening Report**") has been prepared which considers whether the Proposed Development is likely to have a significant effect on any European Site and whether a Stage 2 Appropriate Assessment is required.

The AA process is a four-stage process, with issues and tests at each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

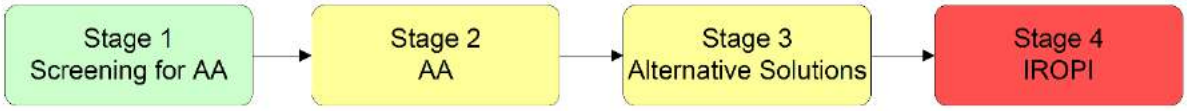

Figure 1. The four stages of the Appropriate Assessment Process (DEHLG, 2010).

The four stages of an AA can be summarised as follows:

- Stage 1: *Screening*. The first stage of the AA process is to determine whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a European Site in view of its conservation objectives.
- Stage 2: *Natura Impact Statement (NIS)*. The second stage of the AA process assesses the impact of the proposal (either alone or in combination with other projects or plans) on the integrity of the European Site, with respect to the conservation objectives of the site and its ecological structure and function. A Natura Impact Statement containing a professional, scientific examination of the proposal is required and includes any mitigation measure to avoid, reduce or offset negative effects.
- Stage 3: *Assessment of alternative solutions*. If the outcome of Stage 2 is negative, i.e., adverse effects on the sites cannot be scientifically ruled out, despite mitigation, the plan or project should proceed to Stage 3 or be abandoned. This stage examines alternative solutions to the proposal.

- Stage 4: *Assessment where no alternative solutions exist and where adverse impacts remain.* The final stage is the main derogation process examining whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project to adversely affect a European Site, where no less damaging solution exists.

The purpose of Stage 1, the Screening Stage, is to determine the necessity or otherwise for a NIS. Screening for AA examines the likely effects of a project or plan alone and in combination with other projects or plans, upon a European Site, in light of the site's Conservation Objectives and considers whether it can be objectively concluded that these effects will not be significant.

If it is determined during the screening stage that the proposal may have a significant effect on a European Site, in light of its Qualifying Interests/Conservation Objectives, then a NIS will need to be prepared.

2 METHODOLOGY

2.1 Screening Steps

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

- *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities.* (Department of Environment, Heritage and Local Government, 2010 revision);
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities.* Circular NPW 1/10 & PSSP 2/10;
- *Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission, 2001);
- *Communication from the Commission on the precautionary principle* (European Commission, 2000);
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* (European Commission, 2019).
- *Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC* Brussels, 28.9.2021 C (European Commission, 2021); and,
- *Appropriate Assessment Screening for Development Management, OPR Practice Note PN01,* (Office of the Planning Regulator, March 2021)

This Screening for AA, or Stage 1 of AA, has been undertaken in accordance with the European Commission Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC (EC, 2021). Screening for AA involves the following:

- Establish whether the project or plan is necessary for the management of a European Site.
- Description of the project or plan.

- Identification of all European Sites potentially affected.
- Identification and description of individual and cumulative effects likely to result from the project or plan.
- Assessment of the significance of the effects identified on European Sites.
- Exclusion of European Sites where it can be objectively concluded that there will be no significant effects.

This Stage 1 Screening examines whether the Proposed Development, alone or in combination with other plans and projects, is likely to have significant effects on a European Site in view of its conservation objectives, and whether a Stage 2 Assessment is required.

2.2 Desk Study

A desk study was carried out to collate available information on the Site's natural environment. This study comprised a review of a wide range of available publications, datasets and resources, including the following sources:

- National Parks and Wildlife Service (NPWS) datasets.
- Geological Survey Ireland (GSI) online datasets and mapping.
- Environmental Protection Agency (EPA) mapping and datasets.
- National Biodiversity Data Centre (NBDC) online mapping and species records.
- OSI aerial imagery and Discovery Series mapping.
- Satellite imagery from various sources and dates (Google, Digital Globe, Bing).
- The Status of EU Protected Habitats in Ireland (NPWS).

For a complete list of the specific documents consulted as part of this assessment, see Section References.

2.3 Field Surveys

2.3.1 Ecological Surveys

The Site was visited by Enviroguide Consulting on multiple occasions between the 18th October 2019 and the 23rd March 2022. The Site was surveyed for any potentially important ecological receptors and/or potential impact pathways, to inform the completion of this AA Screening Report. The full suite of surveys conducted at the Site are listed below, the majority of which are relevant to and addressed in the EIAR Biodiversity chapter that accompanies this application under separate cover.

Table 1. Dates of ecological surveys carried out at the Site of the Proposed Development.

Ecological Survey	Survey Dates
Habitat/flora & Invasive flora surveys	18th October 2019, 23rd March 2022.
Mammal surveys	18th October 2019, 23rd March 2022.
Breeding bird survey	3rd March 2022, 23rd March 2022.

Amphibian walkover survey	23rd March 2022
Potential bat roost and habitat suitability survey	27th September 2021
Bat dusk activity survey	27th September 2021

2.3.1.1 Wintering Waterfowl/shorebird surveys

A series of monthly vantage point surveys was carried out throughout the winter period of October 2020 to March 2021, to provide a comprehensive summary of the usage of the Site by SCI species for nearby SPAs. A total of 6 days of survey were carried out at the Site over the course of the 2020/21 winter, as detailed in Table 2 below.

A further three visits were conducted between January and March 2022 to confirm conditions at the Site had not changed (27/01/2022, 03/03/2022 & 23/03/2022). No SCI species were recorded utilising the Site during these visits.

Table 2. Winter Bird Survey dates at the Site of the Proposed Development over winter 2020/21

Winter Bird survey Dates
October 28th 2020
December 2nd 2020
December 16th 2020
January 12th 2021
February 2nd 2021
March 16th 2021

The survey methodology was as followed:

- Each survey day either commenced at dawn and continued for 6 hours or commenced 6 hours prior to dusk and ended at dusk. These timings were alternated each survey day to capture any possible temporal trends in the usage of the lands by SCI species.
- Each day, prior to the commencement of the survey, the lands were walked and checked for any obvious evidence of SCI species usage e.g., Light-bellied Brent Goose (LBBG) droppings.
- Each hour the Site was walked and observed for a period of approx. 20 mins with any SCI species activity on, or in flight over the Site recorded.
- All waterfowl and shorebird species that were observed visiting the Site or flying overhead were recorded, as were any other species of note e.g., rare passerines etc.

The full Wintering Waterfowl/Shorebird Report can be seen in Appendix I of this report.

2.4 Assessment of Impacts

Once the potential impacts that may arise from the proposal are identified, the significance of these is assessed using key indicators listed below. This assessment framework is taken from the best practice guidelines issued by the European Commission, "*Assessment of plans and projects significantly affecting Natura 2000 sites – Methodological guidance*" (EC, 2001).:

- Habitat loss or alteration.
- Habitat/species fragmentation.
- Disturbance and/or displacement of species.
- Changes in population density.
- Changes in water quality and resource.

The following terms are defined when quantifying duration (EPA, 2017):

Table 3. Definition of Durations (EPA, 2017).

Description of Duration	Corresponding Time Frame
Momentary Effects	Effects lasting from seconds to minutes
Brief Effects	Effects lasting less than a day
Temporary Effects	Effects lasting less than a year
Short-term Effects	Effects lasting one to seven years.
Medium-term Effects	Effects lasting seven to fifteen years.
Long-term Effects	Effects lasting fifteen to sixty years
Permanent Effects	Effects lasting over sixty years
Reversible Effects	Effects that can be undone, for example through remediation or restoration
Frequency of Effects	Describe how often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually)

The criteria for assessing the significance of the predicted likely effects are given below in Table 3.

Table 4. Impact Significance Criteria (EPA, 2017).

Significance of Effects	Definition

Imperceptible	An effect capable of measurement but without significant consequences.
Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
Slight Effects	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate Effects	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
Significant Effects	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment

3 STAGE 1 SCREENING

3.1 Management of European Sites

The construction of the proposed residential development at Fosterstown, Swords (the Project) is not directly connected with, or necessary to the management of European Sites in Co. Dublin or elsewhere. There are no European Sites located either within or immediately adjacent to the Site of the Proposed Development.

3.2 Description of Project

3.2.1 Brief Project Description

The Proposed Development comprises a Strategic Housing Development of 645 no. residential units (comprising of 208 no. 1 bedroom units, 410 no. 2 bedroom units, and 27 no. 3 bedroom units), in 10 no. apartment buildings, with heights ranging from 4 no. storeys to 10 no. storeys, including undercroft / basement levels (for 6 no. buildings). The proposals include 1 no. community facility in Block 1, 1 no. childcare facility in Block 3, and 5 no. commercial units (for Class 1-Shop, or Class 2- Office / Professional Services or Class 11-Gym or Restaurant / Café use, including ancillary takeaway use) in Blocks 4 and 8. The proposal includes all associated and ancillary development.

Please refer to the public notices for a detailed description of the Proposed Development.

3.2.2 Construction Phase

3.2.2.1 Construction Phase Surface Water

A Construction Environmental Management Plan (CEMP) has been prepared by Waterman Moylan Consulting Engineers Ltd., (WM) which details the surface water management measures that will be in place for the duration of the proposed works. The measures included within this report are consistent with those described in the Natura Impact Statement (NIS) and EIAR Biodiversity Chapter that accompany this application under separate covers.

3.2.3 Operational Phase

3.2.3.1 Operational Surface Water

The Site currently drains to the Gaybrook Stream along its northern boundary. According to the Engineering Assessment Report (EAR) prepared by WM, Operational Phase surface water for the Proposed Development will be discharged at a restricted rate to this watercourse mimicking the existing greenfield run-off rates. Attenuation will be provided to restrict surface water runoff from to the equivalent of the existing greenfield runoff rate.

A suite of SUDS measures will treat surface water flows prior to their being discharged to the Gaybrook Stream. However, these measures are not relied upon in any way as mitigation measures in this appropriate assessment screening. Furthermore, the absence of these SUDS measures in the Proposed Development design would not change the conclusions of this appropriate assessment screening in any way.

These measures will consist of filter drains, green roofs, permeable surfacing, detention basins, and an attenuation tank in the basement together with flow control devices and a petrol interceptor to treat run-off and remove pollutants to improve quality, restrict outflow and control quantity.

Strict separation of surface water and wastewater will be implemented within the Proposed Development.

3.2.3.2 Operational Foul Water

An updated Confirmation of Feasibility was received from Irish Water on 17 February 2021 which confirmed that the Proposed Development can be facilitated subject to sewer infrastructure upgrades. This system will discharge to the Swords Wastewater Treatment Plant (WWTP). The Swords WWTP was recently upgraded to increase treatment capacity from a population equivalent of 60,000 to a population equivalent of 90,000. The upgraded treatment plant will protect and improve quality of receiving waters at the inner Broadmeadow Estuary, using tertiary treatment by filtration, and disinfection using ultra-violet treatment and allow for population growth and economic development.

3.3 Existing Environment

The Site of the Proposed Development is located within the townland of Fosterstown North in Swords, Co. Dublin; *ca.*1.5km north of Dublin airport, and *ca.* 1.2km south of Swords Castle and Swords town centre. The M1 Motorway passes *ca.*1.5km to the east of the proposed site, while the R132 Swords bypass is located approximately 170m to the north-east. The lands are bounded along their entire eastern edge by the existing R132.There is currently an agricultural access to the lands from the R132.

The Site area measures *ca*.4.4ha and is bordered to the south and west by residential areas, while across the road to the east lies a section of agricultural land which separates the Site from the Airside Retail Park. The Site's northern boundary is abounded by the *Gaybrook stream (North)* waterway with grass fields located beyond this waterway.

3.3.1 Geology & Hydrogeology

Fosterstown North is located within the *Swords* groundwater body. The overall status of this waterbody is recorded as *Good*. The groundwater rock units underlying the area are classified as *Dinantian Lower Impure Limestones,* while sub-soil at the site is classified as *Till derived from limestones* to the west and south of the site; *Gravels derived from Limestones* to the north-east; and a band of *Alluvium* running along the northern boundary, tracing the path of the *Gaybrook stream (North)* waterway. The site area is located on a *Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones* with groundwater vulnerability in the area listed as *Low.*

3.3.2 Hydrology

The Site of the Proposed Development is located within the *Broadmeadows_SC_010* sub-catchment and the *Ward_040* sub-basin. The closest waterbody to the project site, as mapped by the EPA, is the *Swords_Glebe* watercourse (EPA Code: 08S17) which runs *ca.*325m from the site's northern boundary. This watercourse flows for approximately 665m before linking up with the larger Ward River (EPA Code: 08W01) to the north-east. This watercourse flows another *ca.*2km before joining the *Broadmeadow 08* (EPA Code: 08B02), entering the Malahide estuary to the north a further *ca.*770m downstream. The EPA does not have any operational monitoring stations on the *Swords_Glebe* itself but does have a station *Ward_Br at SW end of Swords (Well rd Br)* (RS08W010500) on the Ward River approximately 885m from the proposed site's northern boundary. The most recent Q-value recorded at the station was *3*, with a Q-value status of *Poor*.

Another waterway, the *Gaybrook Stream (North),* is visible along the Site's northern boundary on the *OpenStreet maps* base-map via the EPA Online map resource (EPA, 2022). Although it is not recognised by EPA surface water feature demarcation in the above online resource, this waterway is in fact present running along the Site's northern boundary. On the aforementioned *OpenStreet maps* base-map the *Gaybrook Stream (North)* can be seen to run *ca.*1.3km to the east before it disappears. Although we cannot trace its full length it is assumed that this waterway joins up with the nearby waterbody of the same name the GAYBROOK (EPA code: 08G08); which runs parallel to it, *ca.*250m to the south of the point the *Gaybrook Stream (North)* disappears. The GAYBROOK waterbody then runs a further *ca*.3.3km from this point to where it enters the Malahide Estuary to the north-east.

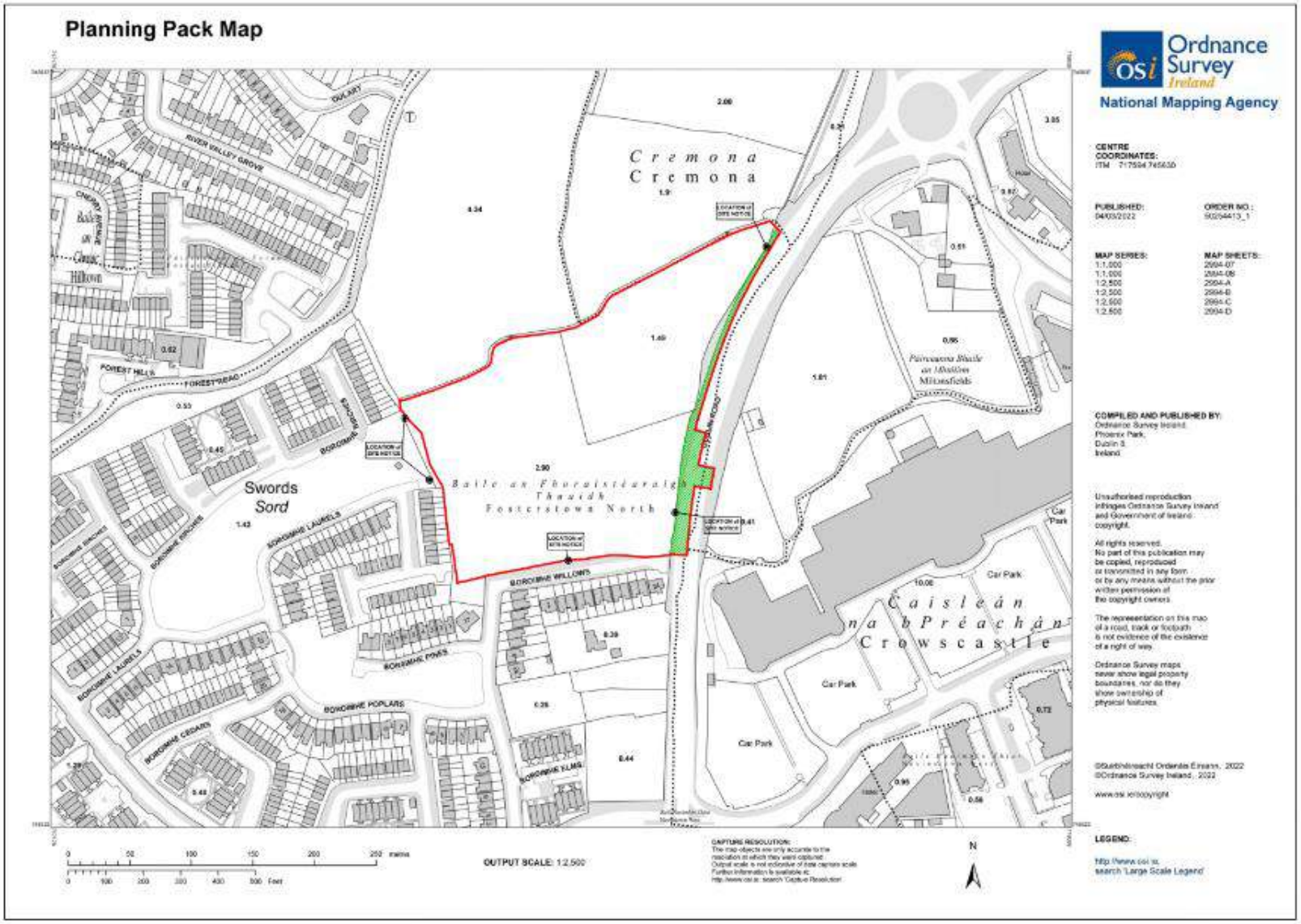

Figure 2. Site Location (Adapted from PCOT Drawing PL-21-001)

Figure 3. Proposed Site Layout (Adapted from PCOT Drawing PL-21-01)

3.4 Identification of Relevant European Sites

In order to identify the European Sites that potentially lie within the Zone of Influence (ZOI) of the Proposed Development, a Source-Path-Receptor method (S-P-R) was adopted, as described in '*OPR Practice Note PN01 - Appropriate Assessment Screening for Development Management'* (OPR, 2021), a practice note produced by the Office of the Planning Regulator, Dublin. This note was published to provide guidance on screening for appropriate assessment (AA) during the planning process, and although it focuses on the approach a planning authority should take in screening for AA, the methodology is also readily applied in the preparation of Appropriate Assessment Screening Reports such as this.

The guidance document published by the Department of Housing, Planning and Local Government (then DEHLG) '*Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities'* (2009) recommends an arbitrary distance of 15km as the precautionary ZOI for a plan or project being assessed for likely significant effects on European Sites, stating however that this should be evaluated on a case-by-case basis.

As such, the 15km ZOI is used in this report as an initial starting point for collating European Sites for AA screening. In some cases, Sites located beyond this distance will also be included if deemed to fall within the potential ZOI of the Proposed Development. In the case of this Proposed Development no European Sites located outside of this initial 15km buffer were deemed to fall within its ZOI.

The Source-Path-Receptor method was then applied to the European Sites located within 15km of the Proposed Development (and those outside of this distance where applicable), to screen out those sites where no impact pathway exists linking them to the Site of Proposed Development (See Table 6). Where a potential impact pathway exists, European Sites will be assessed further and a recommendation on the need for Stage 2 Appropriate Assessment will be made if required.

Nine SACs and eight SPAs were identified within a 15km radius of the Site. The site name, corresponding code and qualifying interests are detailed in Table 5 below. The distances to each site listed below are taken from the nearest possible point of the Proposed Development Site boundary to the nearest possible point of each European Site.

Table 5. European Sites within a 15km radius of the Proposed Development

Site Code	Site Name	Qualifying Interests	Distance to Site
Special Areas of Conservation (SAC)			
000205	Malahide Estuary SAC	- [1140] Tidal Mudflats and Sandflats - [1310] Salicornia Mud - [1330] Atlantic Salt Meadows - [1410] Mediterranean Salt Meadows - [2120] Marram Dunes (White Dunes) - [2130] Fixed Dunes (Grey Dunes)*	2.3km
000208	Rogerstown Estuary	- [1130] Estuaries	5.9km

	SAC	- [1140] Tidal Mudflats and Sandflats - [1310] Salicornia Mud - [1330] Atlantic Salt Meadows - [1410] Mediterranean Salt Meadows - [2120] Marram Dunes (White Dunes) - [2130] Fixed Dunes (Grey Dunes)*	
000199	Baldoyle Bay SAC	- [1140] Tidal Mudflats and Sandflats - [1310] Salicornia Mud - [1330] Atlantic Salt Meadows - [1410] Mediterranean Salt Meadows	6.5km
000206	North Dublin Bay SAC	- [1140] Tidal Mudflats and Sandflats - [1210] Annual Vegetation of Drift Lines - [1310] Salicornia Mud - [1330] Atlantic Salt Meadows - [1410] Mediterranean Salt Meadows - [2110] Embryonic Shifting Dunes - [2120] Marram Dunes (White Dunes) - [2130] Fixed Dunes (Grey Dunes)* - [2190] Humid Dune Slacks - [1395] Petalwort (*Petalophyllum ralfsii*)	8.9km
003000	Rockabill to Dalkey Island SAC	- [1170] Reefs - [1351] Harbour Porpoise (*Phocoena phocoena*)	10.3km
002193	Ireland's Eye SAC	- [1220] Perennial Vegetation of Stony Banks - [1230] Vegetated Sea Cliffs	11.3km
000202	Howth Head SAC	- [1230] Vegetated Sea Cliffs - [4030] Dry Heath	11.9km
000210	South Dublin Bay SAC	- [1140] Tidal Mudflats and Sandflats - [1210] Annual vegetation of drift lines - [1310] Salicornia and other annuals colonising mud and sand - [2110] Embryonic shifting dunes	12.3km
000204	Lambay Island SAC	- [1170] Reefs - [1230] Vegetated Sea Cliffs - [1364] Grey Seal (*Halichoerus grypus*) - [1365] Common (Harbour) Seal (*Phoca vitulina*)	13.4km
Special Protection Areas (SPA)			
004025	Malahide Estuary SPA	- [A005] Great Crested Grebe (*Podiceps cristatus*) - [A046] Brent Goose (*Branta bernicla hrota*) - [A048] Shelduck (*Tadorna tadorna*) - [A054] Pintail (*Anas acuta*) - [A067] Goldeneye (*Bucephala clangula*) - [A069] Red-breasted Merganser (*Mergus serrator*) - [A130] Oystercatcher (*Haematopus ostralegus*) - [A140] Golden Plover (*Pluvialis apricaria*) - [A141] Grey Plover (*Pluvialis squatarola*) - [A143] Knot (*Calidris canutus*) - [A149] Dunlin (*Calidris alpina alpine*)	2.3km

		- [A156] Black-tailed Godwit (*Limosa limosa*) - [A157] Bar-tailed Godwit (*Limosa lapponica*) - [A162] Redshank (*Tringa tetanus*) - [A999] Wetlands	
004015	Rogerstown Estuary SPA	- [A043] Greylag Goose (*Anser anser*) - [A046] Brent Goose (*Branta bernicla hrota*) - [A048] Shelduck (*Tadorna tadorna*) - [A056] Shoveler (*Anas clypeata*) - [A130] Oystercatcher (*Haematopus ostralegus*) - [A137] Ringed Plover (*Charadrius hiaticula*) - [A141] Grey Plover (*Pluvialis squatarola*) - [A143] Knot (*Calidris canutus*) - [A149] Dunlin (*Calidris alpina alpina*) - [A156] Black-tailed Godwit (*Limosa limosa*) - [A162] Redshank (*Tringa tetanus*) - [A999] Wetlands	6.3km
004016	Baldoyle Bay SPA	- [A046] Brent Goose (*Branta bernicla hrota*) - [A048] Shelduck (*Tadorna tadorna*) - [A137] Ringed Plover (*Charadrius hiaticula*) - [A140] Golden Plover (*Pluvialis apricaria*) - [A141] Grey Plover (*Pluvialis squatarola*) - [A157] Bar-tailed Godwit (*Limosa lapponica*) - [A999] Wetlands	6.5km
004006	North Bull Island SPA	- [A046] Light-bellied Brent Goose (*Branta bernicla hrota*) - [A048] Shelduck (*Tadorna tadorna*) - [A052] Teal (*Anas crecca*) - [A054] Pintail (*Anas acuta*) - [A056] Shoveler (*Anas clypeata*) - [A130] Oystercatcher (*Haematopus ostralegus*) - [A140] Golden Plover (*Pluvialis apricaria*) - [A141] Grey Plover (*Pluvialis squatarola*) - [A143] Knot (Calidris canutus) - [A144] Sanderling (*Calidris alba*) - [A149] Dunlin (*Calidris alpina*) - [A156] Black-tailed Godwit (*Limosa limosa*) - [A157] Bar-tailed Godwit (*Limosa lapponica*) - [A160] Curlew (*Numenius arquata*) - [A162] Redshank (*Tringa totanus*) - [A169] Turnstone (*Arenaria interpres*) - [A179] Black-headed Gull (*Chroicocephalus ridi-bundus*) - [A999] Wetland and Waterbirds	8.8km
004024	South Dublin Bay and River Tolka Estuary SPA	- [A046] Light-bellied Brent Goose (*Branta bernicla hrota*) - [A130] Oystercatcher (*Haematopus ostralegus*) - [A137] Ringed Plover (*Charadrius hiaticula*) - [A141] Grey Plover (*Pluvialis squatarola*) - [A143] Knot (*Calidris canutus*) - [A144] Sanderling (*Calidris alba*) - [A149] Dunlin (*Calidris alpina*) - [A157] Bar-tailed Godwit (*Limosa lapponica*)	9.4km

		- [A162] Redshank (*Tringa totanus*) - [A179] Black-headed Gull (*Chroicocephalus ridi-bundus*) - [A192] Roseate Tern (*Sterna dougallii*) - [A193] Common Tern (*Sterna hirundo*) - [A194] Arctic Tern (*Sterna paradisaea*) - [A999] Wetland and Waterbirds	
04117	Ireland's Eye SPA	- [A017] Cormorant (*Phalacrocorax carbo*) - [A184] Herring Gull (*Larus argentatus*) - [A188] Kittiwake *Rissa tridactyla*) - [A199] Guillemot (*Uria aalge*) - [A200] Razorbill (*Alca torda*)	11km
004113	Howth Head Coast SPA	- [A188] Kittiwake (*Rissa tridactyla*)	13km
004069	Lambay Island SPA	- [A009] Fulmar (*Fulmarus glacialis*) - [A017] Cormorant (*Phalacrocorax carbo*) - [A018] Shag (*Phalacrocorax aristotelis*) - [A043] Greylag Goose (*Anser anser*) - [A183] Lesser Black-backed Gull (*Larus fuscus*) - [A184] Herring Gull (*Larus argentatus*) - [A188] Kittiwake (*Rissa tridactyla*) - [A199] Guillemot (*Uria aalge*)	13.4km

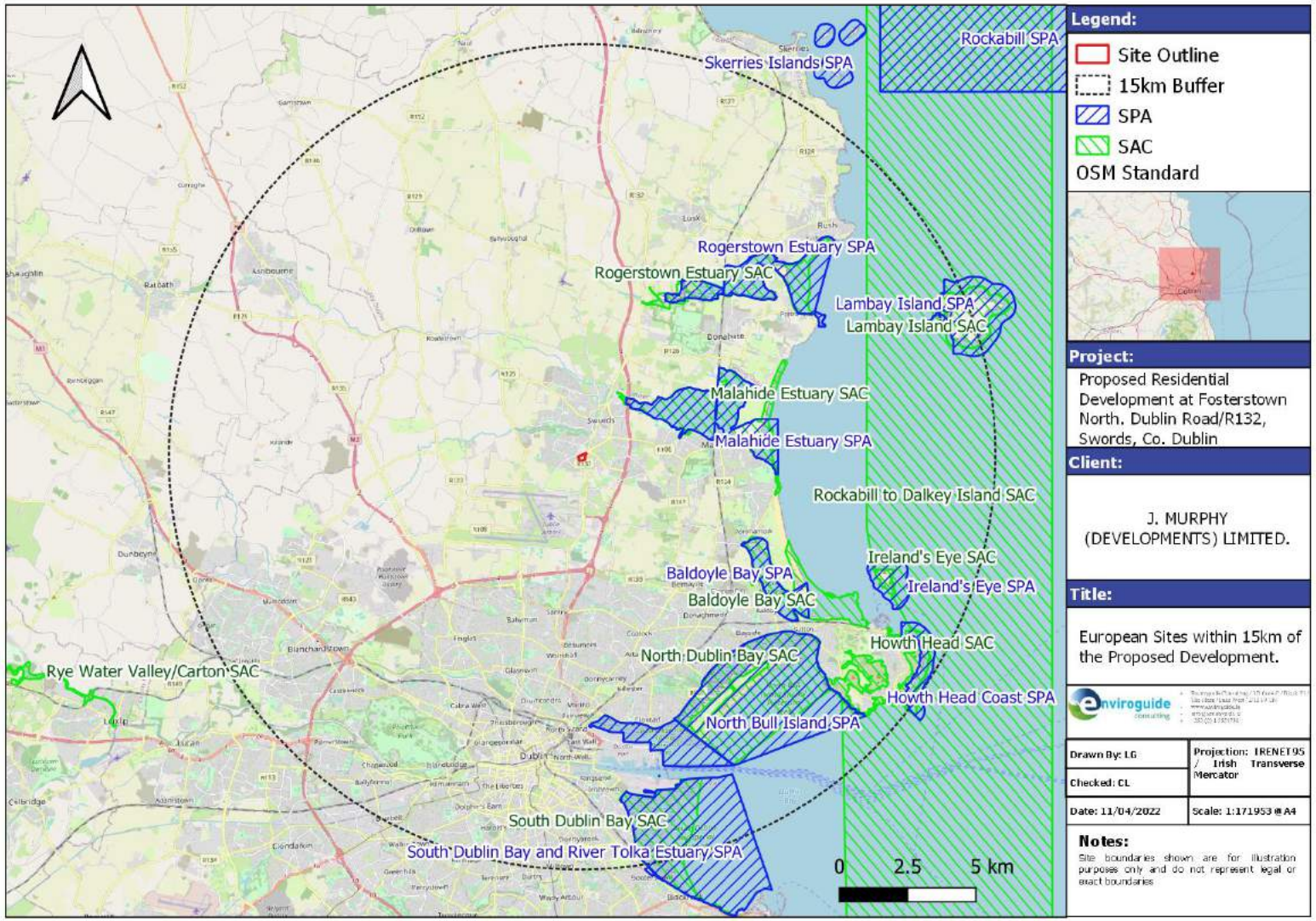

Figure 4. European Sites within 15km of the Proposed Development.

3.4.1 Source-Pathway-Receptor Assessment

Table 4 below details the screening out of European Sites within the 15km precautionary ZOI that do not maintain an impact pathway with the Proposed Development. Those European Sites where potential impact pathways have been identified are assessed in further detail in this report.

Table 6. Assessment of nearby European Sites for potential impact pathways using the Source-Pathway-Receptor method.

European Site	Distance from Proposed Development	Presence of Impact Pathway	Assessed further in Screening
Special Areas of Conservation (SAC)			
000205 Malahide Estuary SAC	2.3km Northeast	**Yes** Hydrological connections exists between the Site and the SAC via: i) The Gaybrook Stream, which runs along the Site's northern boundary and outflows at Malahide Estuary ca.3.4 km east of the Site as the GAYBROOK water course (EPA, 2022 ii) Operational foul waters will be treated at Swords WwTP (D0024) and discharged into Malahide Estuary.	Yes
000208 Rogerstown Estuary SAC	5.9km Northeast	**No** There are no impact pathways present between the Proposed Development and the habitats and species listed for these SACs. The SACs are located at considerable distances from the Proposed Development and are separated by a significant marine buffer. No hydrological connectivity exists.	No
000199 Baldoyle Bay SAC	6.5km Southeast		No
000206 North Dublin Bay SAC	8.9km South-east		No
003000 Rockabill to Dalkey Island SAC	10.3km East		No
002193 Ireland's Eye SAC	11.3km Southeast		No

European Site	Distance from Proposed Development	Presence of Impact Pathway	Assessed further in Screening
000202 Howth Head SAC	11.9km Southeast		No
000210 South Dublin Bay SAC	12.3km South		No
000204 Lambay Island SAC	13.4km Northeast		No
Special Protection Areas (SPA)			
004025 Malahide Estuary SPA	2.3km Northeast	**Yes** Hydrological connections exists between the Site of the Proposed Development and the SPA via: i) The Gaybrook Stream, which runs along the Site's northern boundary and outflows at Malahide Estuary ca.3.4 km east of the Site as the GAYBROOK water course (EPA, 2022). ii) Operational foul waters will be treated at Swords WwTP (D0024) and discharged into Malahide Estuary. It is noted that the Site does not provide any *ex-situ* habitat for any of the waterbird/seabird species listed as SCIs for this SPA, as supported by the results of Winter Bird Surveys of the Site (See section 3.5.2.1 for further detail). The Site is comprised of arable stubble field, scrub and hardstanding.	Yes
004015 Rogerstown Estuary SPA	6.3km Northeast	**No** There are no impact pathways present between the Proposed Development and these SPAs. The SPAs are located at considerable distances from the Proposed Development and are separated by a significant marine buffer. No hydrological connectivity exists. The Site of the Proposed Development provides no *ex-situ* habitat for any of the waterbird/seabird species listed as SCIs for these SPAs, as supported by the results of Winter Bird Surveys of the Site (See	No
004016 Baldoyle Bay SPA	6.5km Southeast		No
004006 North Bull Island SPA	8.8km Southeast		No

European Site	Distance from Proposed Development	Presence of Impact Pathway	Assessed further in Screening
004024 South Dublin Bay and Ricer Tolka Estuary SPA	9.4km South	section 3.5.2.1 for further detail). The Site is comprised of arable stubble field, scrub and hardstanding.	No
004117 Ireland's Eye SPA	11km Southeast		No
004113 Howth Head SPA	13km Southeast		No
004069 Lambay Island SAC	13.4km Northeast		No

3.4.2 Results of Source-Pathway-Receptor Assessment

Two European Sites: Malahide Estuary SAC & Malahide Estuary SPA, have been identified as having source-pathway-receptor connections with the Proposed Development; via the Gaybrook Stream, which outflows into the Malahide Estuary ca.3.4km east of the Site, and via treated foul water discharges from Swords WwTP. These two European Sites are therefore considered to fall within the ZOI of the Proposed Development and they are assessed further in this screening report.

All other European Sites screened out in Table 6 above, due to a lack of any source-pathway-receptor connection with the Proposed Development, do not have the potential to be significantly affected by said development, and thus, do not require further consideration in this report.

The Site of the Proposed Development supports no suitable *ex-situ* habitat for SCI bird species listed for any of the SPAs located within the precautionary ZOI of the Site. Furthermore, it is not deemed to be located in proximity to any important *ex-situ* feeding sites; being located within a built-up residential area. The Proposed Development consists of structures of max 10 storeys in height and will not pose any risk of collisions to any bird species, as described in further detail in the Biodiversity Chapter which accompanies this application under separate cover.

3.5 Assessment of Likely Significant Effects

A European Site will only be at risk from likely significant effects where the Source-Pathway-Receptor link exists between the Proposed Development and the European Site. As such, the remainder of this AA Screening report will focus on the European Sites for which a S-P-R link was identified, namely:

- Malahide Estuary SAC
- Malahide Estuary SPA

Information sources (e.g., NPWS Conservation Objectives and associated supporting documents) available on the above European Sites identified to lie within the precautionary zone of influence (ZOI) of the Proposed Development were reviewed and assessed, to establish whether the construction and operational phases of the Proposed Development have the potential to have likely significant effects on any of the qualifying interests and/or conservation objectives of said sites. The following elements of the Proposed Development were assessed for their potential to cause likely significant effects:

Construction Phase

- Surface water run-off containing silt, sediments and/or other pollutants into the Gaybrook Stream waterway.
- Transport of invasive plant species from the Site to downstream via the Gaybrook Stream .
- Waste Generation during the construction phase comprising soils, construction and demolition wastes.
- Increased noise, dust and/or vibrations as a result of construction activity.
- Increased dust and air emissions from construction traffic.
- Increased lighting in the vicinity as a result of construction activity.

Operational Phase

- Proposed treated surface water discharge from the Proposed Development to the receiving drainage network.
- Foul water from the Proposed Development leading to increased loading on receiving wastewater treatment plant.
- Flooding events at the Site of the Proposed Development.
- Increased lighting in the vicinity emitted from the Proposed Development.
- Increased human presence in the vicinity as a result of the Proposed Development.

The potential for likely significant effects resulting from the Proposed Development was determined based on a range of key indicators (as per EC, 2001), including:

- Habitat loss or alteration.
- Habitat/species fragmentation.
- Disturbance and/or displacement of species.
- Changes in population density.
- Changes in water quality and resource.

3.5.1 Habitat Loss or Alteration

The Proposed Development is not located within or adjacent to any European Site, and therefore, there will be no direct loss or alteration of habitat in any European Site as a result.

The Gaybrook Stream does provide a potential transport pathway for invasive plant species recorded at the Site to reach the Malahide Estuary. Two medium impact invasive flora were recorded at the Site during site surveys: Himalayan Honeysuckle *Leycesteria formosa* and Butterfly-bush *Buddleja davidii.* One location of each of these species was recorded along the banks of the Gaybrook Stream (See figure below). There is the potential for the dispersal of these species downstream during the proposed works in the absence of focused measures for removal and disposal.

Figure 5. Invasive species recorded at the site during Enviroguide surveys on 27/09/2021 & 23/03/2022. Pink marker = Himalayan Honeysuckle, Blue = Butterfly-bush

3.5.2 Habitat/Species Fragmentation

Habitat fragmentation has been defined as the 'reduction and isolation of patches of natural environment' (Hall et al., 1997 cited in Franklin et al., 2002) usually due to an external disturbance such that an alteration of the spatial composition of a habitat occurs that alters the habitat and 'create[s] isolated or tenuously connected patches of the original habitat' (Wiens, 1989 cited in Franklin et al., 2002). This results in spatial separation of habitat units which had previously been in a state of greater continuity.

As there will be no direct habitat loss within any European Site, it is not considered that habitat fragmentation will arise from the Proposed Development.

3.5.2.1 Results of Wintering Waterfowl/Shorebird Surveys

The following is noted with regard *ex-situ* habitat and SCI species listed for nearby SPAs:

The results of Winter bird Surveys at the Site of the Proposed Development (6 survey days) comprised of a total of 36 hourly counts between October 2020 and March 2021.

Out of a total of 36 hourly counts: 100% recorded **no SCI waterfowl/shorebird species** utilising the Site of the Proposed Development. As would be expected, based on the habitat preferences of this species (short sward grassland e.g., sports pitches), no Light-bellied Brent Geese were recorded utilising the Site of the Proposed Development, nor were any Light-bellied Brent Goose droppings; a distinctive indicator of this species' presence/usage of a site, despite thorough site walkovers carried out each day of the winter surveys.

The Site does not provide any *ex-situ* breeding, roosting, staging or foraging habitats for any of the species listed as Species of Conservation Interest (SCI) for the European Sites in question. The majority of SCI species listed for the SPAs in question are coastal/marine species whose foraging/roosting habitat are confined to these coastal habitats (e.g., divers, ducks, wader species). A further three visits were conducted between January and March 2022 (27/01/2022, 03/03/2022 & 23/03/2022) which confirmed conditions at the Site had not changed in this regard.

For species that are known to utilise farmland/arable fields as foraging habitats; such as Black-tailed Godwit, Greylag Goose, Golden Plover, Oystercatcher and Curlew; it is deemed that the Site of the Proposed Development does not represent suitable *ex-situ* feeding/roosting habitat. This is due in-part to the isolated nature of the Site as a singular arable stubble field, in dense urban surroundings. Considering the abundance of considerably more suitable agricultural lands that surround the Malahide and Rogerstown Estuaries (e.g., those described in Roe & Lovatt, 2009) and that are located within the intervening lands separating the Site of the Proposed Development from the other relevant SPAs within the 15km Zone of Influence (ZOI) i.e., North Bull Island SPA, Baldoyle Bay SPA, South Dublin & River Tolka Estuary SPA and Lambay Island SPA; the Site's urban location and proximity to several busy roads and large residential areas renders it largely unsuitable for the above species.

It is therefore concluded that there will be no loss of any *ex-situ* foraging/roosting habitat, to any of the SCI species listed for the relevant SPAs; as a result of the Proposed Development.

3.5.3 Disturbance and/or Displacement of Species

The closest European Site to the Proposed Development that has a faunal species listed as a qualifying interest is the Malahide Estuary SPA, located *ca.*2.3km to the north-east.

The Proposed Development does not have the capacity to cause any significant disturbance and/or displacement to species within any European Site due to: the intervening distance between the project location and the nearest European Site; and the fact that the Site of the Proposed Development also does not provide any *ex-situ* breeding, roosting, staging or foraging habitats for any of the species listed as SCI species for said sites.

3.5.4 Changes in Population Density

It is not expected that the Proposed Development will cause any reduction in the baseline population of species associated with any European Site.

3.5.5 Changes in Water Quality and Resource

One potential impact pathway exists in the form of a hydrological connection between the Site of the Proposed Development and the Malahide Estuary SAC/SPA through the Gaybrook Stream watercourse, which runs along the Site's northern boundary.

It is concluded that, in the absence of mitigation measures or further analysis, the possibility of significant changes in water quality and resource; and associated potential negative effects on some or all of the qualifying interests of the Malahide Estuary SAC and SPA cannot be excluded.

3.5.5.1 Swords WwTP

Foul waters from the Proposed Development will discharge off site to the existing foul water network, eventually being treated at Swords WwTP prior to outflow to the Malahide Estuary. Therefore, there is an indirect hydrological link between the Site and The Malahide Estuary SAC and SPA via discharges from the above WwTP during the Operational Phase.

The potential for foul waters generated at the Site of the Proposed Development to reach the above European Sites and cause significant effects during the Operational Phase is deemed to be negligible due to the following:

- The Swords WwTP was identified by the EPA as being compliant with the Emission Limit Values (ELVs) as set out in the Wastewater Discharge Licence, according to the 2020 Annual Environmental Report (AER) prepared by Irish Water for this facility (Irish Water, 2021).
- The WwTP was upgraded in 2016, increasing its capacity from 60,000 PE to 90,000 PE (Murphygroup.com). According to the 2020 AER (Irish Water, 2021), the facility has surplus organic capacity of 11,391 PE remaining and will not be exceeded within the next three years.

Table 7. Identification and assessment of likely significant effects on European Sites within the precautionary ZOI of the Proposed Development

European Site	Potential for Likely Significant Effects
Special Areas of Conservation (SAC)	
000205 Malahide Estuary SAC	**Possible significant effects on this SAC are envisaged due to:** **The presence of a hydrological connection with the Site of the Proposed Development.** - The Gaybrook Stream forms a hydrological link between the Site and this SAC. - In the absence of mitigation there is the potential for contaminants and sediments associated with the Construction Phase of the Proposed Development to enter the stream and make their way to the SAC; possibly resulting in significant adverse effects on the QI habitats listed for this European Site.
Special Protection Area (SPA)	
004025 Malahide Estuary SPA	**Possible significant effects on this SPA are envisaged due to:** **The presence of a hydrological connection with the Site of the Proposed Development.** - The Gaybrook Stream forms a hydrological link between the Site and this SPA. - In the absence of mitigation there is the potential for contaminants and sediments associated with the Construction Phase of the Proposed Development to enter the stream and make their way to the SPA; possibly resulting in significant adverse effects on the SCIs listed for this European Site.
Is mitigation/ further assessment required to rule out any significant likely effects on the above European Sites based on the impact pathways identified above?	
Yes	- Yes, further assessment and mitigation is required to ensure that no likely significant effects arise at the European Sites in question. However, mitigation measures were not considered at screening stage and it was deemed necessary to move to Stage II AA.

Table 8. Summary of the potential for likely significant effects on European Sites identified as maintaining a S-P-R linkage with the Proposed Development, using key indicators.

Site	Habitat Loss / Alteration	Habitat or Species Fragmentation	Disturbance and/or Displacement of Species	Changes in Population Density	Changes in Water Quality and/or Resource	Stage 2 AA Required
(000205) Malahide Estuary SAC	**Yes**	No	No	No	**Yes**	**YES**
(004025) Malahide Estuary SPA	**Yes**	No	No	No	**Yes**	**YES**

3.6 Potential for In-combination Effects

3.6.1 Existing Granted Developments

A search of planning applications located within the vicinity of the Site of the Proposed Development was conducted using online planning resources such as the National Planning Application Database (NPAD) (MyPlan.ie). Any planning applications listed as granted or decision pending from within the last five years were assessed for their potential to act in-combination with the Proposed Development and cause likely significant effects on the relevant European Sites. Long-term developments granted outside of this time period were also considered where applicable.

- Ref: ABP 308366-20; MKN Property Group; Fosterstown North and Cremona, Forest Road, Swords, Co. Dublin; Grant Perm. w Conditions: 03/02/2021.

  Description: *278 no. residential units (apartments) no. houses, 216 no. apartments, 52 no. duplexes), childcare facility, retail unit and associated site works.* Distance from Proposed Development: *ca*.100m

- Ref: F16A/0324; LIDL Ireland GmbH; Dublin Road, Swords, Co. Dublin; Granted: 18/10/2016 by Fingal County Council.

  Description: *Amendments to ABP Ref. PL06F.244562 (and Fingal County Council Ref. F14A/0492) (1) retention permission of works to create and completion of an ESB substation building at the southern boundary of the site which also results in the loss of two parking spaces immediately north of the sub-station; (2) Planning permission for amendments to the permitted development to include: (a) south west elevation - additional glazing and finishes; (b) north west elevation - change to finishes and new car*

park entrance portico with safety signage; (c) south east elevation - additional windows and doors and change of finish materials (d) north east elevation - change of finish materials and inclusion of concrete wall. Adjustments to lift core extends above the level roof at the rear of the store. Reconfiguration of space within the premises offices and storage areas. Replacement of the permitted concrete acoustic wall to the west of the food-store to a timber acoustic fence. All other site development works and any other associated ancillary works. Distance from Proposed Development: *ca*.10m.

- Ref: F19A/0103; Board of Management of Colaiste Choilm; Colaiste Choilm CBS, Dublin Road, Swords, Co. Dublin; Granted: 29/05/2019 by Fingal County Council. Description: *Alterations to existing school building including removal of the existing roofs, raising walls as necessary and construction of a new roof and associated site works*. Distance from Proposed Development: ca.95m.
- Ref: F08A/1057/E1; Chartered Land Ltd; Pavilions Shopping Centre, Malahide Road And, No's 9, 10 & 11 Dublin Road, Swords, Co Dublin; Granted: 14/01/2016 by Fingal County Council.

  Description: *A 7-year permission for development at this site. The Proposed Development comprises the construction of Pavilions Phase 3, a mixed-use town centre development amounting to c.272,637 sq.m. total Gross Floor Area (GFA) and accommodated in buildings ranging in height from 3 to 10 storeys over three levels of enclosed basement car parking, with an associated network of open, sheltered and enclosed streets and spaces.* (Full description at http://planning.fingalcoco.ie/swiftlg/apas/run/WPHAPPDETAIL.DisplayURL?theApnID=F08A/1057/E1). Distance from Proposed Development: *ca.*335m.
- Ref: F18A/0198; MSD International GmbH; Drynam Road, Barrysparks, Commons East, Crowcastle, Swords, Co. Dublin. Granted: 17/07/2018 by Fingal County Council.

  Description: *Development at an existing pharmaceutical manufacturing facility (approximately 13.4 hectares). The development consists of the construction of a biopharmaceutical manufacturing campus with a total additional floor area of 12,046 square metres and specifically provides for:- (a) the conversion of an existing warehouse building to a biopharmaceutical manufacturing processes building which will require internal alterations, extension and modifications to the existing elevations; (b) the conversion of an existing manufacturing building to a central utilities and laboratory building requiring internal alterations, extension and modifications to the elevations including the addition of 3 no. flue stacks (to a maximum height of 18.68 metres); (c) construction of a two-storey quality control laboratory and single-storey with mezzanine warehouse building; (d) extension of the existing central spine corridor to provide connectivity to the new laboratory and warehouse buildings, including provision of new staff entrance; (e) demolition of existing utilities plant and buildings comprising 2 no. boiler rooms, compressor room, electrical room, generator compound, water tank and pump house, and 2 no. store buildings; (f) provision of new logistics yard and new ancillary external utilities yard comprising 2 no. electrical switch room buildings, water pump and treatment building, bunded water tank, bunded gas and diesel storage tanks, 3 no. emergency generators and waste water management facility; (g) installation of mechanical plant to the roof of the existing administration, laboratory and canteen building (h) all ancillary site works including diversion and partially reopening of the*

existing culverted stream within the site; underground services; surface water attenuation tank; modifications to the internal road network, modifications to existing car parking including removal of 212 spaces; 2 no. new bicycle shelters; lighting; CCTV; soft and hard landscaping. An Environmental Impact assessment Report (EIAR, formerly known as and EIS) and Natura Impact Statement (NIS) have been prepared and will be submitted to the Planning Authority with the application. The EIAR and NIS will be available for inspection or purchase at a fee not exceeding the reasonable cost of making a copy during office hours at the offices of the Planning Authority. The Proposed Development is for the purposes of an activity requiring an application to the Environmental Protection Agency for a licence under the Industrial Emissions Directive. Distance from Proposed Development: *ca.*1.1km

- Ref: F18A/0376; Tesco Ireland Ltd; Tesco Holywell Centre, Junction of the R125 and the Holywell Link Road, Swords, Co. Dublin; Granted: 02/10/2018 by Fingal County Council.

  Description: *The development will consist of an extension (458 sq.m gross) to the existing local community and commercial facilities to include a café unit of 173 sq.m. gross and 2 no. retail/retail service units (100 sq.m & 102 sq.m. gross) at ground floor level, a management suite and staff facilities (58 sq.m. gross) at first floor level, circulation areas and screened roof mounted plant provided in a new block to the west of the existing local facilities. Planning permission is also required for all ancillary site services, landscaping and site development works.* Distance from Proposed Development: *ca.*900m.

- Ref: F18A/0426; Tesco Ireland Ltd; Tesco Holywell Centre, Junction of the R125 and the Holywell Link Road, Swords, Co. Dublin; Granted: 06/03/2019 by Fingal County Council.

  Description: *The provision of an extension of 750 sq.m. gross floor area (500 sq.m. net) to the existing licenced Tesco food store. The development also includes the provision of additional ancillary car parking to the north of the existing car park as well as all site services, landscaping and site development works. Add Info received 21st December 2018.* Distance from Proposed Development: *ca.*900m.

- Ref: F17A/0392; October Management Ltd; Holywell, Marshallstown, Swords, Co Dublin; Granted: 01/02/2018 by Fingal County Council.

  Description: Permission *for a proposed roundabout and access road to serve proposed commercial development lands including associated services. Add Info rec'd 27th November 2017.* Distance from Proposed Development: *ca.*1km.

- Ref: F18A/0601; Department of Education and Skills; Lands adjacent to Feltrim Road, Drinan, Swords, Co Dublin; Granted: 23/01/2019 by Fingal County Council.

  Description: *Permission for the construction of a new three storey post primary school building (Malahide-Portmarnock ET (RN68308L)), associated car parking, access road, construction of external ball courts, landscaping, connection to public services and all associated site works.* Distance from Proposed Development: *ca.* 1.7km.

No developments with the potential to result in likely significant in-combination effects to any European Site were identified. The majority of applications in the vicinity of the Site are for domestic extensions and revisions to existing private dwellings. The Proposed Development will not contribute to any cumulative impacts involving other developments in the area. Any combined impacts relating to Construction Phase overlap of the adjacent development to the

north (Ref: ABP 308366-20), should it occur, (e.g., noise, dust etc.) would be short-term and localised in nature and would not have the potential to affect any European Sites due to the intervening distances involved.

3.6.2 Relevant Plans and Policies

In addition, the following Policies and Plans were reviewed and considered for possible in-combination effects with the Proposed Development.

- Fingal Development Plan 2017 - 2023
- Fingal Heritage Plan 2018 - 2023
- Dublin City Biodiversity Action Plan 2015 - 2020

It is noted that there is potential for proposed plans and projects within the Fingal Development Plan 2017 - 2023 land area, to have cumulative, negative impacts on conditions in Dublin Bay and other coastal areas, via rivers, other surface water features, and foul waters treated at wastewater treatment facilities. However, the core strategy, policies and objectives of the Fingal Development Plan have been developed to anticipate and avoid the need for developments that would be likely to significantly affect the integrity of any European Site. Furthermore, such developments are required to conform to the relevant regulatory provisions for the prevention of pollution, nuisance or other environmental effects likely to significantly affect the integrity of European Sites.

3.6.2.1 Increased Loading on Swords WwTP

As stated in section 3.5.5.1, the potential for foul waters generated at the Site of the Proposed Development to reach the above European Sites and cause significant effects during the Operational Phase is deemed to be negligible due to the following:

- The Swords WwTP was identified by the EPA as being compliant with the Emission Limit Values (ELVs) as set out in its Wastewater Discharge Licence, according to the 2020 Annual Environmental Report (AER) prepared by Irish Water for this facility (Irish Water, 2021).
- The WwTP was upgraded in 2016, increasing its capacity from 60,000 PE to 90,000 PE (Murphygroup.com). According to the 2020 AER (Irish Water, 2021), the facility has surplus organic capacity of 11,391 PE remaining and will not be exceeded within the next three years.

As such, it is not envisaged that the Proposed Development has the potential to act in combination with other developments and lead to overloading at Swords WwTP based on its current treatment capacity.

Therefore, upon examination of the above listed plans and projects within the general vicinity of the Proposed Development it is concluded that there is **no possibility for any significant cumulative effects** on European Sites involving the Proposed Development.

4 CONCLUDING STATEMENT

The Proposed residential development at a site at Fosterstown North, Dublin Road / R132, Swords, Co. Dublin has been assessed for its potential to result in likely significant effects on European Sites, with the following factors considered:

- the nature, size and location of the Proposed Development and possible impacts arising from the associated construction works and its operational lifetime.
- the potential for in-combination effects alongside other plans and projects leading to effects on European Sites.
- the qualifying interests and conservation objectives of all relevant European Sites.

In conclusion, upon the examination, analysis, and evaluation of the relevant information, and in applying the precautionary principle; it is concluded by the authors of this report that, on the basis of objective information, the possibility that the Proposed Development will have a significant effect on the following European Sites, noted to be linked by a Source-Pathway-Receptor impact pathway, cannot be excluded; due to the presence of a hydrological connection with the Site of the Proposed Development:

- Malahide Estuary SAC [000205]
- Malahide Estuary SPA [004025]

As such, a Stage 2 Appropriate Assessment has been carried out of the Proposed Development. A Natura Impact Statement (NIS) has been prepared and accompanies this application under separate cover.

5 REFERENCES

Chivers, L., Lundy, M., Colhoun, K., Newton, S., Houghton, J. & Reid, N. (2012). Foraging trip time-activity budgets and reproductive success in the black-legged kittiwake. Mar Ecol Prog Ser 456: 269–277.

DEHLG. (2010). Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities. Department of Environment, Heritage and Local Government.

DHPLG. (2018). River Basin Management Plan for Ireland 2018-2021. Department of Housing, Planning and Local Government.

Environmental Protection Agency. (2002). Guidelines on information to be contained in Environmental Impact Statements. Environmental Protection Agency, Ireland.

Environmental Protection Agency. (2017). Guidelines on information to be contained in Environmental Impact Assessment Reports (Draft). Environmental Protection Agency, Ireland.

Environmental Protection Agency. (2022). EPA online map application [ONLINE] Available at https://gis.epa.ie/EPAMaps/ [Accessed: March 2022].

European Commission. (2000) Communication from the Commission on the precautionary principle.

European Commission. (2001). Assessment of plans and projects significantly affecting Natura 2000 sites - Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. European Communities, Luxembourg.

European Commission. (2019). Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC. European Communities, Luxembourg.

European Commission. (2021). Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC Brussels, 28.9.2021 C. European Communities, Luxembourg.

Fossitt, J. A. (2000). A Guide to Habitats in Ireland. Kilkenny: The Heritage Council.

Franklin, A. N. (2002). What is Habitat Fragmentation? Studies in Avian Biology, 20-29.

GDSDS (2005). Greater Dublin Strategic Drainage Study – Final Strategy Report. Document Ref: GDSDS/NE02057/035C. ONLINE. Available at: http://www.greaterdublindrainage.com/gdsds/ .

GSI. (2003). Dublin GWB: Summary of Initial Characterisation. Geological Survey Ireland, Department of Communications, Climate Action and Environment.

GSI. (2022). Geological Survey Ireland Spatial Resources. [ONLINE]. Available at: https://dcenr.maps.arcgis.com/apps/MapSeries/index.html?appid=a30af518e87a4c0ab2fbde2aaac3c228 [Accessed: March 2022].

Irish Water. (2018). Ringsend Wastewater Treatment Plant Upgrade Project Environmental Impact Assessment Report.

Irish Water. (2020). Swords WwTP D0024-01 Annual Environmental Report. ONLINE. Available at: https://www.water.ie/__uuid/e2a591b2-5070-402c-b040-5330ab3b9c74/d0024-01_2020_aer-1.pdf

NPWS. (2010). Circular NPW 1/10 & PSSP 2/10. Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Department of Environment, Heritage and Local Government.

NPWS (2011a). Site Synopsis: Ireland's Eye SPA (004117). National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. 14.12.2011

NPWS (2011b). Site Synopsis: Howth Head Coast SPA (004113). National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. 6.12.2011

NPWS (2011c). Site Synopsis: Lambay Island SPA (004069). National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. 14.12.2011

NPWS (2012). Conservation Objectives: Baldoyle Bay SAC (000199). Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013a). Site Synopsis: Rogerstown Estuary SAC (000208). National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. 000208_Rev13.Doc

NPWS (2013b). Site Synopsis: Baldoyle Bay SAC (000199). National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. 000199_Rev13.Doc

NPWS (2013c). Site Synopsis: North Dublin Bay SAC (000206). National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. 000206_Rev13.Doc

NPWS (2013d). Site Synopsis: Howth Head SAC (000202). National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. 000202_Rev13.Doc

NPWS (2013e). Site Synopsis: Malahide Estuary SPA (004025). National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. 23.8.2013

NPWS (2013f). Conservation Objectives: Malahide Estuary SPA (004025). Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013g). Conservation Objectives: Rogerstown Estuary SPA (004015). Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013h). Conservation Objectives: Baldoyle Bay SPA (004016). Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013i). Conservation Objectives: Malahide Estuary SAC (000205). Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013j). Conservation Objectives: Rogerstown Estuary SAC (000208). Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013k). Conservation Objectives: North Dublin Bay SAC (000206). Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013l). Conservation Objectives: Rockabill to Dalkey Island SAC (003000). Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013m). Conservation Objectives: South Dublin Bay SAC (000210). Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013n). Conservation Objectives: Lambay Island SAC (000210). Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2014a). Site Synopsis: Rockabill to Dalkey Island SAC (003000). National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. 003000_Rev13.Doc

NPWS (2014b). Site Synopsis: Ireland's Eye SAC (002193). National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. 002193_Rev13.Doc

NPWS (2014c). Site Synopsis: Rogerstown Estuary SPA (004015). National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. 25.3.2014

NPWS (2014d). Site Synopsis: Baldoyle Bay SPA (004016). National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. 25.3.2014

NPWS (2014e). Site Synopsis: North Bull Island SPA (004006). National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. 25.3.2014

NPWS (2014f). Site Synopsis: Lambay Island SAC (000204). National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. 000204_Rev13.Doc

NPWS (2015a). Site Synopsis: South Dublin Bay and River Tolka Estuary SPA (004024). National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. 30.5.2015

NPWS (2015b). Site Synopsis: South Dublin Bay SAC (000210). National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. 000210_Rev15.Docx

NPWS (2015c). Conservation Objectives: North Bull Island SPA (004006). Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2015d). Conservation Objectives: South Dublin Bay and River Tolka SPA (004024). Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2016). Conservation Objectives: Howth Head SAC (000202). Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2017a). Site Synopsis: Malahide Estuary SAC (000205). National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. 000205_rev17.docx

NPWS (2017b). Conservation Objectives: Ireland's Eye SAC (002193). Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2018). Generic Conservation Objectives. Version 6.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2022a) Conservation objectives for Ireland's Eye SPA [004117]. Generic Version 9.0. Department of Housing, Local Government and Heritage.

NPWS (2022b) Conservation objectives for Howth Head Coast SPA [004113]. Generic Version 9.0. Department of Housing, Local Government and Heritage.

NPWS (2022c) Conservation objectives for Lambay Island SPA [004069]. Generic Version 9.0. Department of Housing, Local Government and Heritage.

Office of the Planning Regulator (OPR) (2021). *OPR Practice Note PN01 - Appropriate Assessment Screening for Development Management.* Dublin.

Parnell, J: Curtis, T; and Cullen, E. (2012). Webb's an Irish Flora. Hardback, 8th Ed. (March 2012), Trinity College Dublin.

Reid, N., Hayden, B., Lundy, M.G., Pietravalle, S., McDonald, R.A. & Montgomery, W.I. (2013) National Otter Survey of Ireland 2010/12. Irish Wildlife Manuals No. 76. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.

Roe J. & Lovatt, J. (2009) Wintering bird survey of the lands surrounding the Broadmeadows/Swords Estuary January – March 2009. Report for Fingal County Council. Draft 2. May 2009.

Smith, G.F., O'Donoghue, P, O'Hora K., and Delaney, E. (2010). Best Practice Guidance for Habitat Survey and Mapping. Published by the Heritage Council.

APPENDIX I – WINTERING WATERFOWL/SHOREBIRD SURVEY REPORT

Winter Waterfowl/Shorebird Survey Results 2020 - 2021

AT

LANDS AT FOSTERSTOWN NORTH, DUBLIN ROAD / R132, SWORDS, CO. DUBLIN

ON BEHALF OF

J. MURPHY (DEVELOPMENTS) LIMITED

Prepared by
Enviroguide Consulting

Dublin
3D Core C, Block 71, The Plaza, Park West, Dublin 12

Kerry
19 Henry Street
Kenmare, Co. Kerry

Wexford
M10, Wexford Enterprise Centre, Strandfield Business Park, Rosslare Road, Wexford

www.enviroguide.ie
info@enviroguide.ie
+353 1 565 4730

DOCUMENT CONTROL SHEET

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Project Title	Proposed Residential Development at Lands at Fosterstown North, Dublin Road / R132, Swords, Co. Dublin
Document Title	Winter Waterfowl/Shorebird Survey Results 2020 - 2021

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4.0	Final	Liam Gaffney *Senior Ecologist*	-	-	12/04/2022

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1 INTRODUCTION

Enviroguide Consulting were commissioned by J. Murphy (Developments) Limited to carry out a series of wintering waterfowl and shorebird surveys in relation to a Proposed Development at lands at Fosterstown North, Dublin Road / R132, Swords, Co. Dublin.

2 QUALITY ASSURANCE AND COMPETENCE

Synergy Environmental Ltd., T/A Enviroguide Consulting, is wholly Irish Owned multi-disciplinary consultancy specialising in the areas of the Environment, Waste Management and Planning. All our consultants carry scientific or engineering qualifications and have a wealth of experience working within the Environmental Consultancy sectors.

Professional memberships include the Chartered Institution of Wastes Management (CIWM), the Irish Environmental Law Association and Chartered Institute of Ecology and Environmental Management (CIEEM).

All surveying and reporting have been carried out by qualified and experienced ecologists and environmental consultants. Liam Gaffney has a B.Sc. in Zoology (Hons) and a M.Sc. (Hons) in Wildlife Conservation and Management, from University College Dublin, and a wealth of experience in desktop research, literature scoping-review, and report writing, as well as practical field experience (Habitat surveys, Invasive species surveys, Wintering bird surveys, large mammals, fresh water macro-invertebrates etc.). Liam has extensive experience in compiling Biodiversity Chapters of EIARs, EcIAs, AA screening and NIS reports, and in the overall assessment of potential impacts to ecological receptors from a range of developments. Liam is also a Qualifying member of CIEEM, the Chartered Institute of Ecology and Environmental Management.

3 BACKGROUND

The purpose of this report is to provide a robust evidenced based assessment of whether the Site of the Proposed Development is, or has the potential to be, in its current state, utilised as *ex-situ* feeding/roosting grounds by species of wintering shorebird and waterfowl listed as Special Conservation Interest (SCI) species for nearby Special Protection Areas (SPAs).

Member States are required to designate SPAs under the EU Birds Directives (79/409/EEC), to provide protection for bird species of special conservation importance. These sites along with Special Areas of Conservation (SACs) are collectively known as European Sites, or Natura 2000 sites, and form part of Natura 2000, a network of protected sites located throughout the European Community. Figure 1 below shows the SPAs that are considered as part of this assessment. These Sites are included in this assessment due to their proximity to the Site of the Proposed Development. It is unlikely that SCI bird species from other SPAs, located at greater distances from the Site of the Proposed Development than these SPAs, would rely on the Site as an important *ex-situ* resource.

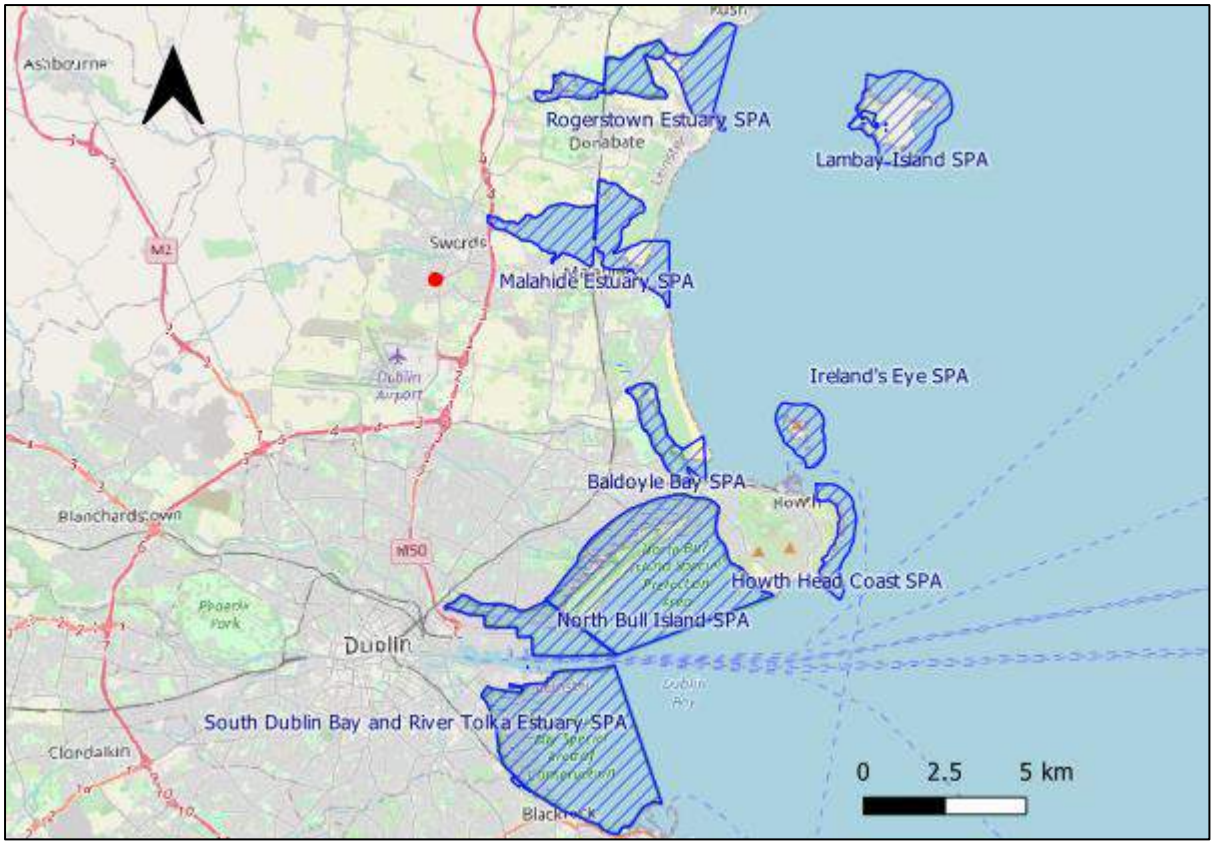

*Figure 1. Special Protection Areas (**SPAs**) (in blue) located within proximity to the Site of the Proposed Development (**red marker**) (QGIS imagery).*

3.1 Qualifying Interests

The species listed as SCIs for the above European sites are listed in Table 1 below.

Table 1. Bird species of Special Conservation Interest listed for nearby SPAs.

Special Protection Area (SPA)			
Site Code	**Site Name**	**Qualifying Interests**	**Distance to Site**
004025	Malahide Estuary SPA	- [A005] Great Crested Grebe (*Podiceps cristatus*) - [A046] Brent Goose (*Branta bernicla hrota*) - [A048] Shelduck (*Tadorna tadorna*) - [A054] Pintail (*Anas acuta*) - [A067] Goldeneye (*Bucephala clangula*) - [A069] Red-breasted Merganser (*Mergus serrator*) - [A130] Oystercatcher (*Haematopus ostralegus*) - [A140] Golden Plover (*Pluvialis apricaria*) - [A141] Grey Plover (*Pluvialis squatarola* - [A143] Knot (*Calidris canutus*) - [A149] Dunlin (*Calidris alpina alpine*) - [A156] Black-tailed Godwit (*Limosa limosa*) - [A157] Bar-tailed Godwit (*Limosa lapponica*) - [A162] Redshank (*Tringa tetanus*) - [A999] Wetlands	2.3km

004015	Rogerstown Estuary SPA	- [A043] Greylag Goose (*Anser anser*) - [A046] Brent Goose (*Branta bernicla hrota*) - [A048] Shelduck (*Tadorna tadorna*) - [A056] Shoveler (*Anas clypeata*) - [A130] Oystercatcher (*Haematopus ostralegus*) - [A137] Ringed Plover (*Charadrius hiaticula*) - [A141] Grey Plover (*Pluvialis squatarola*) - [A143] Knot (*Calidris canutus*) - [A149] Dunlin (*Calidris alpina alpina*) - [A156] Black-tailed Godwit (*Limosa limosa*) - [A162] Redshank (*Tringa tetanus*) - [A999] Wetlands	6.3km
004016	Baldoyle Bay SPA	- [A046] Brent Goose (*Branta bernicla hrota*) - [A048] Shelduck (*Tadorna tadorna*) - [A137] Ringed Plover (*Charadrius hiaticula*) - [A140] Golden Plover (*Pluvialis apricaria*) - [A141] Grey Plover (*Pluvialis squatarola*) - [A157] Bar-tailed Godwit (*Limosa lapponica*) - [A999] Wetlands	6.5km
004006	North Bull Island SPA	- [A046] Light-bellied Brent Goose (*Branta bernicla hrota*) - [A048] Shelduck (*Tadorna tadorna*) - [A052] Teal (*Anas crecca*) - [A054] Pintail (*Anas acuta*) - [A056] Shoveler (*Anas clypeata*) - [A130] Oystercatcher (*Haematopus ostralegus*) - [A140] Golden Plover (*Pluvialis apricaria*) - [A141] Grey Plover (*Pluvialis squatarola*) - [A143] Knot (Calidris canutus) - [A144] Sanderling (*Calidris alba*) - [A149] Dunlin (*Calidris alpina*) - [A156] Black-tailed Godwit (*Limosa limosa*) - [A157] Bar-tailed Godwit (*Limosa lapponica*) - [A160] Curlew (*Numenius arquata*) - [A162] Redshank (*Tringa totanus*) - [A169] Turnstone (*Arenaria interpres*) - [A179] Black-headed Gull (*Chroicocephalus ridibundus*) - [A999] Wetland and Waterbirds	8.8km
004024	South Dublin Bay and River Tolka Estuary SPA	- [A046] Light-bellied Brent Goose (*Branta bernicla hrota*) - [A130] Oystercatcher (*Haematopus ostralegus*) - [A137] Ringed Plover (*Charadrius hiaticula*) - [A141] Grey Plover (*Pluvialis squatarola*) - [A143] Knot (*Calidris canutus*) - [A144] Sanderling (*Calidris alba*) - [A149] Dunlin (*Calidris alpina*) - [A157] Bar-tailed Godwit (*Limosa lapponica*) - [A162] Redshank (*Tringa totanus*) - [A179] Black-headed Gull (*Chroicocephalus ridibundus*) - [A192] Roseate Tern (*Sterna dougallii*) - [A193] Common Tern (*Sterna hirundo*)	9.4km

		- [A194] Arctic Tern (*Sterna paradisaea*) - [A999] Wetland and Waterbirds	
04117	Ireland's Eye SPA	- [A017] Cormorant (*Phalacrocorax carbo*) - [A184] Herring Gull (*Larus argentatus*) - [A188] Kittiwake *Rissa tridactyla*) - [A199] Guillemot (*Uria aalge*) - [A200] Razorbill (*Alca torda*)	11km
004113	Howth Head Coast SPA	- [A188] Kittiwake (*Rissa tridactyla*)	13km
004069	Lambay Island SPA	- [A009] Fulmar (*Fulmarus glacialis*) - [A017] Cormorant (*Phalacrocorax carbo*) - [A018] Shag (*Phalacrocorax aristotelis*) - [A043] Greylag Goose (*Anser anser*) - [A183] Lesser Black-backed Gull (*Larus fuscus*) - [A184] Herring Gull (*Larus argentatus*) - [A188] Kittiwake (*Rissa tridactyla*) - [A199] Guillemot (*Uria aalge*) - [A200] Razorbill (*Alca torda*) - [A204] Puffin (*Fratercula arctica*)	13.4km

Out of the above SCI species there are 9 waterfowl/shore-bird species that can be sometimes associated with agricultural fields and grasslands. Those species are:

- Light-bellied Brent Goose (*Branta bernicla hrota*),
- Greylag Goose (*Anser anser*)
- Oystercatcher (*Haematopus ostralegus*),
- Curlew (*Numenius arquata*)
- Black-tailed Godwit (*Limosa limosa*)
- Golden Plover (*Pluvialis apricaria*)
- Herring Gull (*Larus argentatus*)
- Lesser Black-backed Gull (*Larus fuscus*)
- Black-headed Gull (*Chroicocephalus ridibundus*)

These species are the main focus of this winter waterfowl/shorebird assessment, as the majority of SCI species listed for the SPAs in question are coastal/marine species whose foraging/roosting habitat are confined to these coastal habitats (e.g., divers, ducks, wader species).

4 EXISTING ENVIRONMENT

The Site of the Proposed Development is located within the townland of Fosterstown North in Swords, Co. Dublin; *ca.*1.5km north of Dublin airport, and *ca.* 1.2km south of Swords Castle and Swords town centre. The M1 Motorway passes *ca.*1.5km to the east of the Site, while the R132 Swords bypass is located approximately 170m to the north-east. The lands are bound along their entire eastern edge by the existing R132.There is currently an agricultural access to the lands from the R132.

The Site of the Proposed Development has an area of *ca*.4.6ha and is bordered to the south and west by residential areas, while across the road to the east lies a section of agricultural land which separates the Site from the Airside Retail Park. The Site's northern boundary is bound by the *Gaybrook stream (North)* waterway with grassland fields located beyond this waterway.

The Site comprises an arable field i.e., ploughed earth with crop stubble and recolonising arable weed species. The lands to the north of the Site consist of unmanaged, high-sward rank grassland with thick scrubby hedgerows and treelines along the field margins. The drainage ditch which holds the Gaybrook Stream runs along the Site's northern boundary; west to east and is enveloped in thick encroaching scrub and hedgerow/treelines along the entirety of its length.

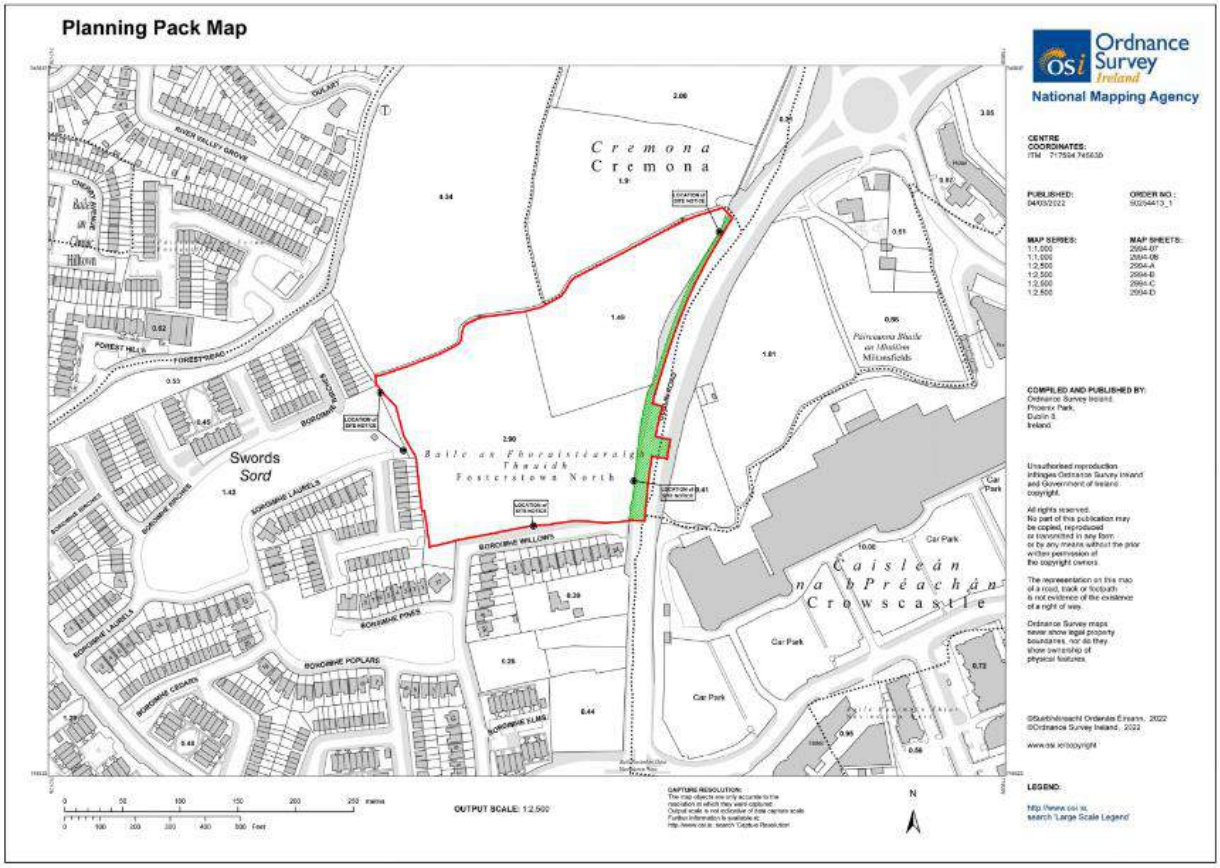

Figure 2. The location and outline of the Site of the Proposed Development (Adapted from PCOT Drawing PL-21-001).

5 METHODOLOGY

5.1 Habitat suitability Assessment

Prior to commencement of surveys, a site walkover was conducted by Liam Gaffney, Enviroguide Senior Ecologist, and an initial assessment was made on the quality of the lands with regard to their *ex-situ* potential. Based on this assessment the methodology for the survey was designed with a view to providing the scientific data necessary to ascertain with confidence the level of usage of the Site lands by SCI bird species.

5.2 Limitations & Constraints

No limitations or constraints were encountered during this assessment.

5.3 Survey Methodology

A series of monthly vantage point surveys was carried out throughout the winter period of October 2020 to March 2021, to provide a comprehensive summary of the usage of the Site by SCI species. A total of 6 days of survey were carried out at the Site, as detailed in Table 2 below.

A further three visits were conducted between January and March 2022 (27/01/2022, 03/03/2022 & 23/03/2022) which confirmed conditions at the Site had not changed since the 2020/21 surveys.

Table 2. Winter Bird Survey dates at the subject lands over winter 2020/21

Winter Bird survey Dates
October 28th 2020
December 2nd 2020
December 16th 2020
January 12th 2021
February 2nd 2021
March 16th 2021

The survey methodology was as followed:

- Each survey day either commenced at dawn and continued for 6 hours or commenced 6 hours prior to dusk and ended at dusk. These timings were alternated each survey day to capture any possible temporal trends in the usage of the lands by SCI species.
- Each day, prior to the commencement of the survey, the lands were walked and checked for any obvious evidence of SCI species usage e.g., Light-bellied Brent Goose (LBBG) droppings.
- Each hour the Site was walked and observed for a period of approx. 20 mins with any SCI species activity on, or in flight over the Site recorded.
- All waterfowl and shorebird species that were observed visiting the Site or flying over-head were recorded, as were any other species of note e.g., rare passerines etc.

5.4 Enviroguide Team

Liam Gaffney (Enviroguide Senior Ecologist/ Ornithologist) carried out the surveys and reporting for this project.

All surveys were undertaken using:

- Optricon 8x42 binoculars (or equivalent)
- Optricon 20x Telescope (or equivalent)
- Agreed survey methodology.
- Field notebook.

6 SURVEY RESULTS

6.1 Survey Results

6.1.1 Ex-situ usage

The results of Winter bird Surveys at the Site of the Proposed Development (6 survey days) comprised of a total of 36 hourly counts between October 2020 and March 2021.

Out of a total of 36 hourly counts: 100% recorded **no SCI waterfowl/shorebird species** utilising the Site of the Proposed Development. As would be expected no Light-bellied Brent Geese were recorded utilising the lands in question, nor were any LBBG droppings, a distinctive indicator of this species' presence/usage of a site, despite thorough site walkovers carried out each day of the winter surveys. Common species observed foraging on the southern arable field comprised Hooded crow (*Corvus cornix*), Wood Pigeon (*Columba palumbus*), Goldfinch (*Carduelis carduelis*), Meadow Pipit (*Anthus pratensis*), and Mistle Thrush (*Turdus viscivorus*).

Of general interest were the following observations:

- A single Snipe (*Gallinago gallinago*) was flushed on two survey days (02/12/2020 and 02/02/2021) in the eastern portion of the southern arable field. Individual Snipe were also recorded flying over the sight on several survey days.
- 10 Yellowhammer (*Emberiza citrinella*) were recorded on February 2nd,2021 perched along the hedgerow that runs along the Gaybrook Stream.

A further three visits of the Site were conducted between January and March 2022 (27/01/2022, 03/03/2022 & 23/03/2022) which confirmed conditions at the Site had not changed, with limited suitable habitat for the SCI species present and no ex-situ usage observed.

6.1.2 Fly overs

Out of a total of 36 hourly counts: 100% recorded **no SCI waterfowl/shorebird species** in flight over the Site.

Records of slight interest are highlighted below, although no species of note were recorded over the Site lands.

- Buzzards were recorded on each survey day; either calling, in flight, or perched in mature trees located in the centre of the lands. A peak of 4 birds was recorded on March 16th, 2021 soaring above the arable field at height (ca.100m).

- Individual Snipe were recorded in flight over the arable lands on two occasions (28/10/2020 and 16/12/2020) at heights of ca.30-40m.

The occasional Herring Gull (*Larus argentatus*) was the most common shore bird observed flying at height over the Site lands, along with other common species such as Hooded crow, Wood Pigeon, and smaller hedgerow species.

7 CONCLUSIONS

Results of 36 hours of winter bird surveys carried out over 6 days across the 2020/2021 winter season indicate that there was no usage of the Site of the Proposed Development by species listed as of Special Conservation Interest for the relevant SPAs.

The initial assessment of the quality and composition of the habitats present at the Site confirmed that it is largely unsuitable as an *ex-situ* feeding/roosting resource for the aforementioned SCI species i.e., geese, waders, and shorebirds. The nature of the site being an arable stubble field provides little potential feeding resource for the above groups, of which the majority favour open, green spaces with short grass swards; such as those of playing pitches, maintained greens and golf courses.

It is therefore concluded that there will be no loss of any *ex-situ* foraging/roosting habitat, to any of the SCI species listed for the relevant SPAs, as a result of the Proposed Developments.

Based on initial site assessment/observations, expert opinion, and the findings of the surveys; it is our considered professional opinion that the Site of the Proposed Development is not currently, and will not in the future, be utilised in any significant manner by SCI species listed for the relevant SPAs. Therefore, it is deemed that the Proposed Development will not have any significant adverse effects on these species in terms of *ex-situ* habitat loss, or flight-line obstruction, going forward.

8 REFERENCES

Fossitt, J. A. (2000). A Guide to Habitats in Ireland. Kilkenny: The Heritage Council.

NPWS (2013a). Conservation Objectives: Malahide Estuary SPA (004025). Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013b). Conservation Objectives: Rogerstown Estuary SPA (004015). Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013c). Conservation Objectives: Baldoyle Bay SPA (004016). Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2015a). Conservation Objectives: North Bull Island SPA (004006). Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2015b). Conservation Objectives: South Dublin Bay and River Tolka SPA (004024). Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2022a) Conservation objectives for Ireland's Eye SPA [004117]. Generic Version 9.0. Department of Housing, Local Government and Heritage

NPWS (2022b) Conservation objectives for Howth Head Coast SPA [004113]. Generic Version 9.0. Department of Housing, Local Government and Heritage.

NPWS (2022c) Conservation objectives for Lambay Island SPA [004069]. Generic Version 9.0. Department of Housing, Local Government and Heritage.

Roe J. & Lovatt, J. (2009) Wintering bird survey of the lands surrounding the Broadmeadows/Swords Estuary January – March 2009. Report for Fingal County Council. Draft 2. May 2009.