APPROPRIATE ASSESSMENT SCREENING REPORT

FOR

SHD Residential Development

AT

Balscadden, Howth,

Co. Dublin.

ON BEHALF OF

Balscadden GP3 Ltd

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

Client	Balscadden GP3 Ltd.
Project Title	SHD Residential Development
Document Title	Appropriate Assessment Screening Report

Revision	Status	Author(s)	Reviewed	Approved	Issue Date
00	Draft for internal Review	Siobhan Atkinson *Ecologist*	Colin Lennon *Technical Director*	-	-
01	Draft for Client	Siobhan Atkinson *Ecologist*	Colin Lennon *Technical Director*	Colin Lennon *Technical Director*	19/07/2021
02	Draft for Client	Siobhan Atkinson *Ecologist*	Colin Lennon *Technical Director*	Colin Lennon *Technical Director*	29/07/2021
03	Final	Siobhan Atkinson *Ecologist*	Colin Lennon *Technical Director*	Colin Lennon *Technical Director*	09/08/2021
04	Draft for Client	Siobhan Atkinson *Senior Ecologist*	Colin Lennon *Technical Director*	Colin Lennon *Technical Director*	04/03/2022
05	Final	Siobhan Atkinson *Senior Ecologist*	Colin Lennon *Technical Director*	Colin Lennon *Technical Director*	14/03/2022

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1 INTRODUCTION

1.1 Background

Enviroguide Consulting was commissioned by Balscadden GP3 Ltd. to prepare an Appropriate Assessment Screening Report in relation to the Proposed SHD Residential Development at Balscadden, Howth, Co. Dublin.

1.2 Legislative Background

The Habitats Directive (92/43/EEC) seeks to conserve natural habitats and wild fauna and flora by the designation of Special Areas of Conservation (SACs) and the Birds Directive (2009/147/EC) seeks to protect birds of special importance by the designation of Special Protection Areas (SPAs). SACs and SPAs are collectively known as Natura 2000 or European sites. It is the responsibility of each member state to designate SPAs and SACs. SACs are selected for the conservation of Annex I habitats (including priority types which are in danger of disappearance) and Annex II species (other than birds). SPAs are selected for the conservation of Annex I birds and other regularly occurring migratory birds and their habitats. The annexed habitats and species for which each site is selected correspond to the qualifying interests of the sites; from these the conservation objectives of the site are derived.

An 'Appropriate Assessment' (AA) is an assessment required prior to the grant of planning permission to determine whether a plan or project, based on best scientific knowledge, will have an adverse effect on the integrity of a European site, either alone or in combination with other plans and projects. It is required for any plan or project not directly connected with or necessary to the management of a site but likely to have a significant effect on it. Accordingly, 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.

A competent authority must determine that an Appropriate Assessment is required in respect of any European site where, following screening, it cannot be excluded that the plan or project will have a significant effect on the European site, in view of its conservation objectives.

This AA Screening Report has been undertaken to determine whether the Proposed Development is likely to have a significant effect, alone or in combination with other plans and projects, on any European site, in view of their conservation objectives.

1.2.1 Legislative Context

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. Paragraph 3 states 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."

These obligations in relation to Appropriate Assessment have been implemented in Ireland under Part XAB of the Planning and Development Act 2000, as amended ("the 2000 Act"), and in particular Section 177U and Section 177V thereof. The relevant provisions of Section 177U in relation to AA screening have been set out below:

"***177U.—*** *(1) A screening for appropriate assessment of a draft Land use plan or application for consent for proposed development shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that Land use plan or proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site.*

(2)…

(3)…

(4) The competent authority shall determine that an appropriate assessment of a draft Land use plan or a proposed development, as the case may be, is required if it cannot be excluded, on the basis of objective information, that the draft Land use plan or proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site.

(5) The competent authority shall determine that an appropriate assessment of a draft Land use plan or a proposed development, as the case may be, is not required if it can be excluded, on the basis of objective information, that the draft Land use plan or proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site."

This Appropriate Assessment Screening Report has been prepared in order to inform An Bord Pleanála Appropriate Assessment Screening in accordance with the requirements of the Planning and Development Act, 2000.

1.2.2 Stages of AA

This Appropriate Assessment Screening Report (the "**Screening Report**") has been prepared by Enviroguide Consulting. It considers whether the Proposed Development is likely to have a significant effect on a 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.

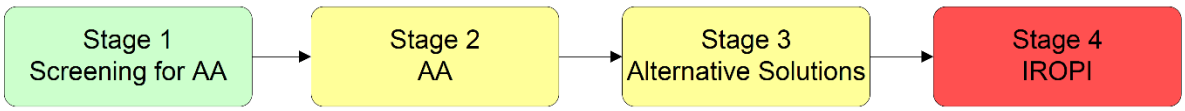

FIGURE 1. THE FOUR STAGES OF THE APPROPRIATE ASSESSMENT PROCESS (DEHLG, 2010).

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

- Stage 1 *Screening* addresses:
  - whether a plan or project is directly connected to or necessary for the management of the site, or
  - 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: *Appropriate Assessment (AA).* The second stage of the AA requires the competent authority to determine whether the project or plan (either alone or in combination with other projects or plans) will have an adverse effect on the integrity of the European site, having regard to the conservation objectives of the site and its ecological structure and function. The developer must provide a Natura Impact Statement (NIS) to the competent authority to inform the AA, which is a statement, for the purposes of Article 6 of the Habitats Directive, of the implications of a proposed development, on its own or in combination with other plans or projects, for one or more than one European site, in view of the conservation objectives of the site or sites. It must include a report of a scientific examination of evidence and data, carried out by competent persons to identify and classify any implications for one or more than one European site in view of the conservation objectives of the site or sites. The competent authority must consult with the public in relation to any plan or project that requires AA. If the competent authority determines that the plan or project would have an adverse effect on the integrity of any European site, it can only grant consent after proceeding through steps 3 and 4.
- Stage 3: *Assessment of alternative solutions*. If the outcome of Stage 2 is negative i.e., adverse impacts to 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.

2 METHODOLOGY

2.1 Guidance

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 (European Commission, 2021)* and,
- *Appropriate Assessment Screening for Development Management, OPR Practice Note PN01, Office of the Planning Regulator March 2021*

2.2 Screening Steps

Screening for AA involves the following steps:

- Establish whether the plan or project is directly connected with or necessary for the management of a European site;
- Description of the plan or project and the description and characterisation of other projects or plans that in combination have the potential for having significant effects on the European site;
- Identification of European sites potentially affected;
- Identification and description of potential effects on the European site;
- Assessment of the likely significance of the effects identified on the European site; and
- Exclusion of sites where it can be objectively concluded that there will be no significant effects.

2.3 Desk Study

A desktop study was carried out to collate and review available information, datasets and documentation sources relevant for the completion of this Screening Report. The desktop study relied on the following sources:

- Information on the network of European sites, boundaries, qualifying interests and conservation objectives, obtained from the National Parks and Wildlife Service (NPWS) at *www.npws.ie;*
- Text summaries of the relevant European sites taken from the respective Standard Data Forms and Site Synopses available at *www.npws.ie;*
- Information on species records and distributions, obtained from the National Biodiversity Data Centre (NBDC) at *www.maps.biodiversityireland.ie*;
- Information on waterbodies, catchment areas and hydrological connections obtained from the Environmental Protection Agency (EPA) at *www.gis.epa.ie;*

- Information on bedrock, groundwater, aquifers and their statuses, obtained from Geological Survey Ireland (GSI) at *www.gsi.ie*;
- Satellite imagery and mapping obtained from various sources and dates including Google, Digital Globe, Bing and Ordnance Survey Ireland;
- Information on the existence of permitted developments, or developments awaiting decision, in the vicinity of the Proposed Development from Fingal County Council;
- Previous ecological assessments of the Site and environs carried out by Altemar (2019a and 2019b).

For a complete list of the specific documents consulted as part of this assessment, see *Section 5 References*.

2.4 Field surveys

Expert Ornithologist Eric Dempsey carried out a breeding bird survey of the Site on the 27nd July 2021. Flightline surveys were carried out at the Site of the Proposed Development between the 13th of November 2020 and 30th March 2021, and between the 25th November 2021 and 8th March 2022 by Enviroguide Consulting. The objective of these surveys was to determine the composition, numbers, frequency and heights of species in passage over the Site of the Proposed Development, if any, in order to inform decisions on potential disturbance to flight-lines of birds commuting to/from roost sites and/or between feeding sites as a result of the construction of the Proposed Development. Each survey day commenced at either dawn or 6 hours prior to dusk and continued for a minimum of 15-minute intervals every hour for 6 hours. Surveys were concentrated at dawn and dusk to gather information on potential flight-lines of birds commuting to/from roost sites and/or between feeding sites. A total of 180 fifteen minute to 1-hour observations were undertaken from a pre-determined vantage point over a total of 30 days throughout the 2020/21 and 2021/22 survey periods (Table 1). The full report is available in Appendix II.

A habitat survey was undertaken on the 16th August 2021. Habitats were identified and classified according to Fossitt (2000) and Smith et al. (2011). Mammal surveys of the Site were carried out in conjunction with the habitat and bird surveys. The Site was assessed for the presence of invasive plant species during the habitat surveys undertaken on the 16th of August 2021. Bat surveys were carried out between the 12th and 25th of August 2021. Refer to the Biodiversity Chapter within the EIAR accompanying this application for further information regarding the ecology of the Site.

TABLE 1. SUMMARY OF ECOLOGICAL SURVEYS CARRIED OUT AT THE SITE.

Survey	Survey Date(s)	Surveyor
Habitat and Flora Surveys	16th August 2021	Enviroguide Consulting
Non-volant Mammal Surveys	16th August 2021	Enviroguide Consulting
Bat Surveys	12th to 25th August 2021	Dr Tina Aughney
Breeding Bird Surveys	27nd July 2021	Eric Dempsey
Flight-Line Bird Surveys	13th and 25th November 2020 9th and 16th December 2020 6th, 13th, 20th, 26th January 2021 3rd, 10th, 17th, 24th February 2021	Enviroguide Consulting

	3rd, 12th, 19th, 30th March 2021 25th November 2021 2nd,14th, 28th December 2021 4th, 13th, 17th, 27th January 2022 2nd, 8th, 17th, 23rd February 2022 1st,8th March 2022	

2.5 Assessment of Significant Effects

The potential for significant effects that may arise from the Proposed Development was considered through the use of key indicators, namely:

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

In addition, information pertaining to the conservation objectives of the European sites, the ecology of the designated habitats and species and known or perceived sensitivities of the habitats and species were considered.

3 STAGE 1 SCREENING

3.1 Management of European Sites

The Proposed Development is not directly connected with or necessary to the management of European sites.

3.2 Description of Proposed Development

3.2.1 Site location

The Site occupies an area of approximately 1.43 hectares (ha) and is located within Howth village. The Site lies immediately south of the Martello Town, to the west of Balscadden Road and to the east of Abbey Street. The Site comprises areas of scrub, hardstanding and an abandoned warehouse.

3.2.2 Description of Development

The Proposed Development relates to lands located to the south of the Martello Tower on Balscadden Road & the former Baily Court Hotel, Main Street, Howth, County Dublin. The Development will consist of the demolition of existing structures on the proposed site including the disused sports building and the former Baily Court Hotel buildings and the construction of a residential development set out in 4 no. residential blocks, ranging in height from 2 to 5 storeys to accommodate 180 no. apartments with associated internal residential tenant amenity and external courtyards and roof terraces, 1 no. retail unit and 2 no. café/retail units. The site will accommodate car parking spaces at basement level and bicycle parking spaces at basement and surface level. Landscaping will include new linear plaza which will create a

new pedestrian link between Main St and Balscadden Rd to include the creation of an additional 2 no. new public plazas and also maintains and upgrades the pedestrian link from Abbey Street to Balscadden Road below the Martello Tower. Please see the accompanying Statutory Notices for a more detailed description.

3.2.2.1 *Construction Phase*

The following is extracted from the Outline Construction Management Plan (Waterman Moylan, 2021).

The following outlines the construction phase sequence of works:

- Demolition of the existing EDROS Building & former Baily Court Hotel.
- Removal of site vegetation and installation of site set-up.
- Installation of temporary silt trench to eastern boundary to protect Howth Head SAC/pNHA and Howth Head Coast SPA as required under the Preliminary Environmental Management Plan
- Provision of a temporary piling mat and berms between levels.
- Secant piled walls installed to allow for the bulk excavation and reduced level dig.
- Temporary works installed to temporarily restrain the secant piled walls during excavation.
- Basement battered open-cut excavation to the North and East boundaries with a safe angle of repose.
- Installation of the building raft foundation and basement retaining walls.
- Tower crane installation for the construction of the building frame.
- Bottom-up construction sequence of the floor slabs and vertical elements.
- Elements of the building frame may be premanufactured off site in precast construction for speed of construction, less formworks and on-site waste.
- Temporary scaffolding may be required around each building during the construction of the building envelope.
- Elements of the building facade may be premanufactured off site using modular construction for speed of construction and less on-site waste.

3.2.2.2 *Proposed Foul and Surface Water Networks*

The following is extracted from the Engineering Assessment Report (Waterman Moylan, 2021).

It is proposed to discharge wastewater from the site by gravity to the existing foul water sewer in Main Street. Irish Water issued a Confirmation of Feasibility letter for the proposal on 3rd August 2021 (reference number CDS21002487). The letter notes that connection to the existing wastewater network is feasible subject to upgrade works. The required upgrades comprise approximately 100m of network extension, from the site to the existing 300mm sewer in Abbey Street. This upgrade is not currently on Irish Water's investment plan, and the applicant will therefore be required to fund the upgrade works.

A Statement of Design Acceptance (dated 14th February 2022) has also been received from Irish Water for the Proposed Development.

It is proposed to discharge surface water from the site by gravity to the existing surface water sewer in Main Street.

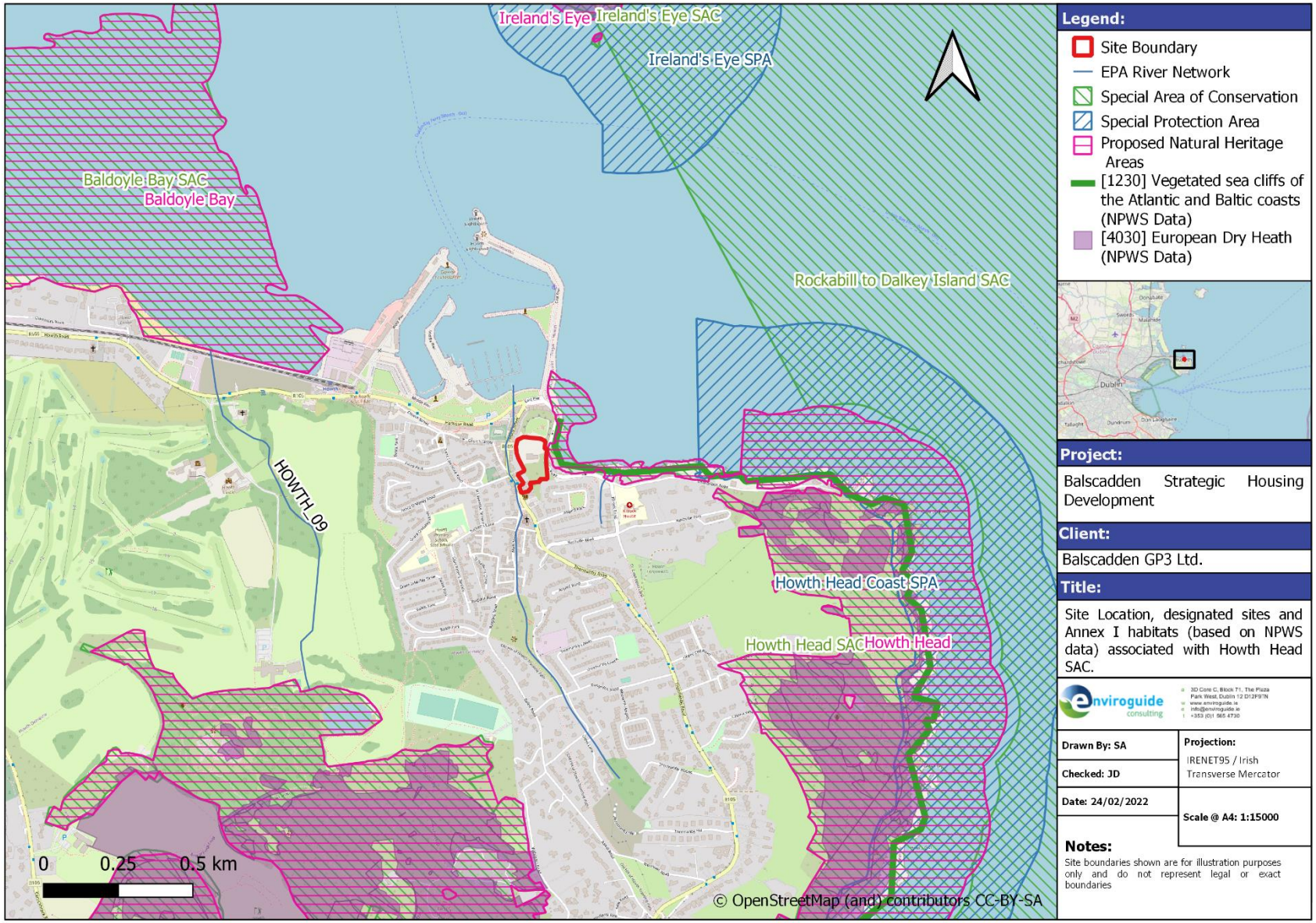

FIGURE 2. SITE LOCATION

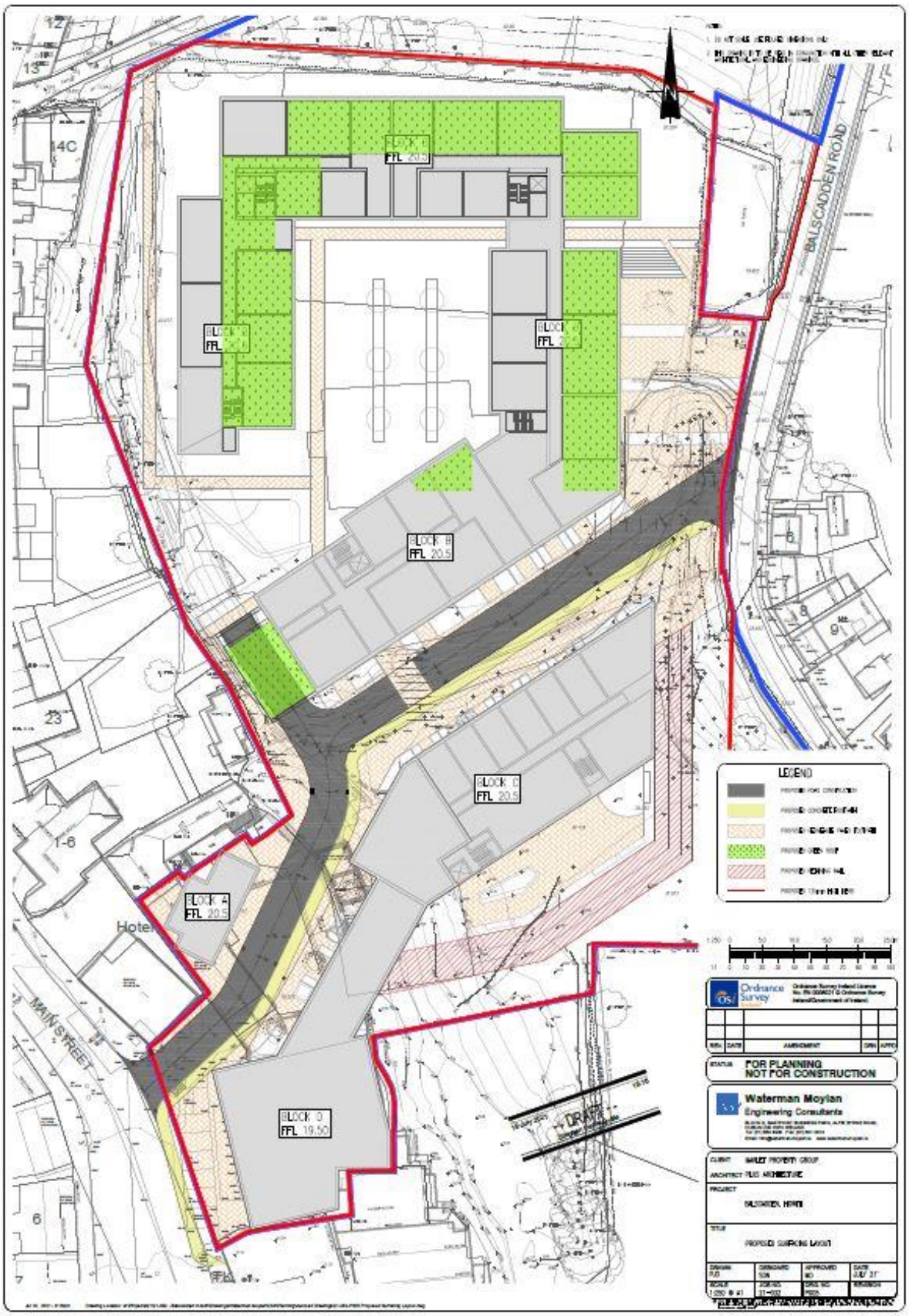

FIGURE 3. PROPOSED SURFACING LAYOUT (WATERMAN MOYLAN, 2021).

3.3 Existing Environment

3.3.1 Geology, Hydrology and Hydrogeology

The Site of the Proposed Development is within the Liffey and Dublin Bay catchment and Mayne_SC_010 sub catchment (EPA, 2021).

A small stream (Gray's Brook Stream, IE_EA_09H230880) is located approx. 20-25m to the west of the Site. This stream rises on Thornamby Hill and flows in a northerly direction towards Howth Harbour. The stream appears to enter a culvert at Balglass Road, and flows through this culvert along Main Street and Abbey Street before discharging into Howth Harbour. A second, very short coastal stream is located approx. 155-160m to the east of the Site (Coolcur Brook Stream, IE_EA_09H230880). The Water Framework Directive status of these streams is "unassigned".

The Site of the Proposed Development is situated on the Dublin (IE_EA_G_008) groundwater body. Two bedrock aquifer types and a fault line are in the Site area. The bedrock aquifer at the north of the Site is a *Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones.* The bedrock aquifer to the south of the Site is a *Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones* (GSI, 2021). The groundwater rock units underlying the aquifer are classified as *Dinantian Lower Impure Limestones* and *Cambrian Metasediments*. The level of vulnerability to groundwater contamination from human activities is *High* at the western boundary of the Site, *Extreme* within the centre and east of the Site and *X – Rock at or Near the Surface* at the eastern boundary of the Site.

The subsoil is predominately *man made*, with a small area of *Bedrock at Surface* to the east of the Site (EPA, 2021). The soil is predominantly *urban* (GSI, 2021).

3.3.2 Habitats and Fauna

3.3.2.1 *General Site Assessment*

The main ecological value of the Development Site is the value of the semi natural habitats at the Site (dry meadows and grassy verges and scrub) to local passerine bird populations as nesting and foraging habitat and as foraging and commuting habitat for bat species. In addition, two fox dens were recorded at the Site, and the Site potentially has suitable habitat for the common lizard and small non-volant mammals.

Four bat species were recorded at the Site. The Proposed Development Site is used as a foraging and commuting habitat for local bat populations. However, the level of bat activity and the number of bat encounters do not indicate that the Proposed Development Site is an important area for local bat populations. No badger signs (setts, latrines, snuffle holes) were recorded at the Site. However, common and widespread species are likely to occur at the Site including hedgehog, pygmy shrew and the common lizard. All these species are protected under the Wildlife Act, and impacts upon these species are fully assessed and mitigated in the Biodiversity Chapter of the EIAR accompanying this application.

The common and widespread sycamore *Acer pseudoplatanus* and Butterfly Bush *Buddleia davidii* were recorded throughout the Site during the walk over survey carried out on the 16th August 2021. No invasive flora listed on Schedule III of the *European Communities (Birds and Natural Habitats) Regulations* 2011 (SI 477 of 2011, as amended) were recorded.

Altemar (2019) detected Three Cornered Leek *Allium triquetrum* at the Site on the slopes facing the Baily Court Hotel during their Site surveys. This species is listed in Schedule III of the *European Communities (Birds and Natural Habitats) Regulations* 2011 (SI 477 of 2011, as amended). No other invasive species listed on Schedule III of the above-mentioned regulations were found at the Site by Altemar (2019). It is likely that Three Cornered Leek was not re-found in the August 2021 surveys as this species flowers early in the year with plants dying back completely by June and July[1].

Overall, the Proposed Development Site has been evaluated as of *Local value (lower value)* having regard for the conservation evaluation scheme (NRA 2009) as a site "*containing small areas of semi-natural habitat that are of some local importance to wildlife*". Refer to the Biodiversity Chapter within the EIAR accompanying this application for further information regarding the ecology of the Site.

3.3.2.2 *Flight-Line Surveys*

The results of flight-line surveys at the Proposed Development Site demonstrate that the Site is not situated on an important flight path for any 'at risk' Special Conservation Interest (SCI) species. A single incidence of an 'at risk' SCI species was recorded flying over the Site during the 2020/21 survey season. On the 6th January 2021, a single Curlew *Numenius arquata* was recorded flying over the Site. The Curlew was flying due west, approximately 40m over the Site (Figure 2). Similarly, a single incidence of Oystercatcher *Haematopus ostralegus* flying over the Site was recorded on 4th January 2022. The Oystercatcher was flying north-east, approximately 75-100m over the Site.

TABLE 2. SUMMARY OF THE RESULTS OF 'AT RISK' SPECIES RECORDED IN-FLIGHT OVER THE SITE OF THE PROPOSED DEVELOPMENT DURING THE FLIGHT-LINE SURVEYS CARRIED OUT IN WINTER 2020/21 AND WINTER 2021/22.

Date	Species	Peak count	Estimated height over Site	Estimated duration over Site
2020/2021 Survey Season				
6th January 2021	Curlew (*Numenius arquata*)	1	40 m	4 seconds
3rd March 2021	Mallard *(Anas platyrhynchos)*	3	40 m	6 seconds
2021/2022 Survey Season				
2nd December 2021	Heron (*Ardea cinerea*)	1	75-100 m	22 seconds
14th December 2021	Heron (*Ardea cinerea*)	1	75 m	19 seconds
28th December 2021	Heron (*Ardea cinerea*)	2	75-100 m	10 – 14 seconds

[1] https://species.biodiversityireland.ie/profile.php?taxonId=28150&taxonDesignationGroupId=26#Species_Biology

4th January 2022	Oystercatcher (*Haematopus ostralegus*)	1	75-100 m	10 seconds
2nd February 2022	Heron (*Ardea cinerea*)	1	75-100 m	14 seconds

Gulls (mostly Herring Gull *Larus argentatus* and Black-headed Gull *Larus ridibundus* and occasionally Greater Black-backed Gull *Larus marinus*) were frequently observed flying over the Site lands. However, as gulls are classed as 'low' collision risk species due to their superior manoeuvrability when flying they were therefore not considered for this survey.

Overall frequencies of at-risk SCI species recorded in-flight over the Site were low with Oystercatcher and Curlew recorded once throughout all the flightline surveys carried out.

3.4 Identification of Relevant European Sites

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. 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.

The methodology used to identify relevant European sites comprised the following:

- Use of up-to-date GIS spatial datasets for European designated sites and water catchments – downloaded from the NPWS website (www.npws.ie) and the EPA website (www.epa.ie) to identify European sites which could potentially be affected by the Proposed Development;
- The catchment data were used to establish or discount potential hydrological connectivity between the Project Boundary and any European sites.
- All European sites within the zone of influence (within 15km of the Proposed Development Site) were identified and are shown in Figure 4.
- The potential for connectivity with European sites at distances greater than 15km from the Proposed Development was also considered in this initial assessment. In this case, there is no potential connectivity between the Proposed Development Site and European sites located at a distance greater than 15km from the Proposed Development based on the S-P-R model.

- Table 3 provides details of all relevant European sites as identified in the preceding steps. The potential for pathways between European sites and the Proposed Development Site was assessed on a case-by-case basis using the Source-Pathway-Receptor framework as per the OPR Practice Note PN01 (March 2021). Pathways considered included:

    a. Direct pathways (e.g., proximity (i.e., location within the European site), water bodies, air (for both air emissions and noise impacts).

    b. Indirect pathways (e.g., disruption to migratory paths, 'Sightlines' where noisy or intrusive activities may result in disturbance to shy species.

- The site synopses and conservation objectives of these sites, as per the NPWS website (www.npws.ie), were consulted and reviewed at the time of preparing this report.

- There is absolutely no reliance placed in this Appropriate Assessment Screening Report on measures intended to avoid/reduce harmful effects on the European sites.

The result of this preliminary screening concluded that there is a total of nine SACs and nine SPAs located within the 15km ZOI of the Proposed Development Site. The distances to each site listed are taken from the nearest possible point of the Proposed Development Site boundary to the nearest possible point of each European site.

Potential pathways between the Proposed Development Site and eight European sites within the ZOI were identified. The European sites linked to the Proposed Development include:

- Howth Head SAC (000202)
- Rockabill to Dalkey Island SAC (003000)
- Baldoyle Bay SAC (000199)
- North Dublin Bay SAC (000206)
- Howth Head Coast SPA (004113)
- Ireland's Eye SPA (004117)
- North Bull Island SPA (004006)
- South Dublin Bay and River Tolka Estuary SPA (004024)

TABLE 3. EUROPEAN SITES WITHIN THE 15KM PRECAUTIONARY ZONE OF INFLUENCE OF THE PROPOSED DEVELOPMENT AND POTENTIAL PATHWAYS BETWEEN THEM.

Site Name & Site Code	Qualifying Interests (*= priority habitats)	Distance to Site (as the crow flies)	Connections (Source- Pathway- Receptor)
Special Areas of Conservation (SAC)			
Howth Head SAC (000202)	[1230] Vegetated sea cliffs of the Atlantic and Baltic coasts; [4030] European dry heaths	Adjacent to Site boundary	**Yes** - Potential for impacts on SAC identified due to proximity (land pathway) and hydrological pathways: • Possible increased footfall and visitor numbers within Howth Head SAC, and the potential resulting habitat loss/alteration/erosion, as a result of the increase in local population numbers because of the proposed development. • Possible impacts due to emissions of dust, pollutants and/or vibrations emitted from the Site during the Construction Phase. • Possible discharge of surface waters or groundwater containing sediment, silt, oils and/or other pollutants during the construction phase of the Proposed Development into the SAC. • Possible spread of invasive alien plant species into the SAC from the Site.
Rockabill to Dalkey Island SAC (003000)	[1170] Reefs; [1351] Harbour Porpoise (*Phocoena phocoena*)	0.8 km	**Yes -** Potential for impacts on SAC identified due to potential hydrological pathway (over land or via surface water infrastructure): • Possible discharge of surface waters containing sediment, silt, oils and/or other pollutants during the construction phase of the Proposed Development into the SACs. **No other pathways between the Site and the European site exists:** The intervening distance between the Site and the SAC is sufficient to exclude the possibility of significant effects on the SAC arising from: emissions of noise, dust, pollutants and/or vibrations emitted from the Site during the Construction Phase; increased traffic volumes during the Construction and Operational Phase and associated emissions; potential increased lighting emitted from the Site during Construction and Operational Phase; and increased human presence at the Site during Construction and Operational Phase.
Baldoyle Bay SAC (000199)	[1140] Tidal Mudflats and Sandflats; [1310] Salicornia Mud; [1330] Atlantic Salt Meadows; [1410] Mediterranean Salt Meadows	0.7 km	

Site Name & Site Code	Qualifying Interests (*= priority habitats)	Distance to Site (as the crow flies)	Connections (Source- Pathway- Receptor)
North Dublin Bay SAC (000206)	[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	2.4 km	**Yes** – Potential impacts on SACs identified due to weak hydrological pathway: • Discharge of wastewater via Ringsend WWTP which ultimately discharges to Dublin Bay **No other pathways between the Site and the European sites exists:** The intervening distance between the Site and the SACs is sufficient to exclude the possibility of significant effects on the SACs arising from: emissions of noise, dust, pollutants and/or vibrations emitted from the Site during the Construction Phase; increased traffic volumes during the Construction and Operational Phase and associated emissions; potential increased lighting emitted from the Site during Construction and Operational Phase; and increased human presence at the Site during Construction and Operational Phase.
South Dublin Bay SAC (000210)	[1140] Tidal Mudflats and Sandflats; [1210] Annual vegetation of drift lines; [1310] Salicornia and other annuals colonising mud and sand; [2110] Embryonic shifting dunes	8.5 km	
Ireland's Eye SAC (002193)	[1220] Perennial vegetation of stony banks; [1230] Vegetated sea cliffs of the Atlantic and Baltic coasts	1.3 km	**None** – These sites are remote from the Proposed Development and there is an insignificant hydrological pathway to the SACs located within the Irish Sea via surface water run-off and wastewater from the Site. • The hydrological pathway via the surface water sewerage system is insignificant given the considerable open marine water buffer between the Site of the Proposed Development and the SACs over which any potential surface water discharges containing sediment, silt and/or pollutants arising from the Construction Phase of the Proposed Development would become diluted to non-discernible levels. Foul water from the Site will be treated at Ringsend Wastewater Treatment Plant. The discharge point of the WWTP is remote of the SACs listed here.
Malahide Estuary SAC (000205)	[1140] Mudflats and sandflats not covered by seawater at low tide; [1310] Salicornia and other annuals colonising mud and sand; [1320] Spartina swards (Spartinion maritimae); [1330] Atlantic salt meadows (Glauco-Puccinellietalia maritimae); [1410] Mediterranean salt meadows (Juncetalia maritimi); [2120] Shifting dunes along the shoreline with Ammophila arenaria (white dunes); [2130] Fixed coastal dunes with herbaceous vegetation (grey dunes)*	6.5 km	
Lambay Island SAC (000204)	[1170] Reefs; [1230] Vegetated sea cliffs of the Atlantic and Baltic coasts; [1364] Grey seal *Halichoerus grypus*; [1365] Harbour *seal Phoca vitulina*	10.8 km	

Site Name & Site Code	Qualifying Interests (*= priority habitats)	Distance to Site (as the crow flies)	Connections (Source- Pathway- Receptor)
Rogerstown Estuary SAC (000208)	[1130] Estuaries; [1140] Mudflats and sandflats not covered by seawater at low tide; [1310] Salicornia and other annuals colonising mud and sand; [1330] Atlantic salt meadows (Glauco-Puccinellietalia maritimae); [1410] Mediterranean salt meadows (Juncetalia maritimi); [2120] Shifting dunes along the shoreline with Ammophila arenaria (white dunes); [2130] Fixed coastal dunes with herbaceous vegetation (grey dunes)*	12.0 km	• Furthermore, the intervening distances between the Site and the SACs are sufficient to exclude the possibility of significant effects on the SACs arising from: emissions of noise, dust, pollutants and/or vibrations emitted from the Site during the Construction Phase; increased traffic volumes during the Construction and Operational Phase and associated emissions; potential increased lighting emitted from the Site during Construction and Operational Phase; and increased human presence at the Site during Construction and Operational Phase.
Special Protected Area (SPA)			
Howth Head Coast SPA (004113)	[A188] Kittiwake *Rissa tridactyla*	0.5 km	**Yes** - Potential for impacts on SPA identified due to proximity (land pathway) and a hydrological pathway (over land or via surface water infrastructure): • Possible increased footfall and visitor numbers within Howth Head SAC/Howth Head Coast SPA, and the potential resulting disturbance to Kittiwake. • Possible impacts due to emissions of noise, dust, pollutants emitted from the Site during the Construction Phase. • Possible discharge of surface waters containing sediment, silt, oils and/or other pollutants during the construction phase of the Proposed Development into the SPA. **No other pathways between the Site and the European site exists:** The Site does not provide significant *ex-situ* habitat for QI/SCI species. No significant effects on SCI bird species are anticipated to arise during the operational phase. Regarding risk of collisions with site structures, Kittiwake is not considered to be an “at risk” SCI species (Appendix II).

Site Name & Site Code	Qualifying Interests (*= priority habitats)	Distance to Site (as the crow flies)	Connections (Source- Pathway- Receptor)
Ireland's Eye SPA (004117)	[A017] Cormorant *Phalacrocorax carbo;* [A184] Herring Gull *Larus argentatus;* [A188] Kittiwake *Rissa tridactyla;* [A199] Guillemot *Uria aalge;* [A200] Razorbill *Alca torda*	0.9 km	**Yes** - Potential for impacts on SPA identified due to a hydrological pathway (over land or via surface water infrastructure): • Possible discharge of surface waters containing sediment, silt, oils and/or other pollutants during the construction phase of the Proposed Development into the SPA. **No other pathways between the Site and the European site exists:** The intervening distance between the Site and the SPA is sufficient to exclude the possibility of significant effects on the SPA arising from: emissions of noise, dust, pollutants and/or vibrations emitted from the Site during the Construction Phase; increased traffic volumes during the Construction and Operational Phase and associated emissions; potential increased lighting emitted from the Site during Construction and Operational Phase; and increased human presence at the Site during Construction and Operational Phase. The Site does not provide significant *ex-situ* habitat for QI/SCI species. No significant effects on SCI bird species are anticipated to arise during the operational phase. Overall frequencies of at-risk SCI species recorded in-flight over the Site were low with Oystercatcher and Curlew recorded once throughout all the flightline surveys carried out. The average flight height across the Site for the aforementioned species was between 40m and 100m. Given that the proposed maximum heights of structures to be built at the Site is 16.8m it is not considered that the Proposed Development will have any impact on them (Appendix II).
North Bull Island SPA (004006)	[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]	2.4 km	**Yes** – Potential impacts on SPA identified due to weak hydrological pathway:

Site Name & Site Code	Qualifying Interests (*= priority habitats)	Distance to Site (as the crow flies)	Connections (Source- Pathway- Receptor)
	Knot *Calidris canutus;* [A144] Sanderling *Calidris alba;* [A149] Dunlin *Calidris alpina alpine;* [A156] Black-tailed Godwit *Limosa limosa;* [A157] Bar-tailed Godwit *Limosa lapponica;* [A160] Curlew *Numenius arquata;* [A162] Redshank *Tringa tetanus;* [A169] Turnstone *Arenaria interpres;* [A179] Black-headed Gull *Chroicocephalus ridibundus;* [A999] Wetlands		• Discharge of wastewater via Ringsend WWTP which ultimately discharges to Dublin Bay[2] **No other pathways between the Site and the European site exists:** The intervening distances between the Site and the SPAs is sufficient to exclude the possibility of significant effects on the SPAs arising from: emissions of noise, dust, pollutants and/or vibrations emitted from the Site during the Construction Phase; increased traffic volumes during the Construction and Operational Phase and associated emissions; potential increased lighting emitted from the Site during Construction and Operational Phase; and increased human presence at the Site during Construction and Operational Phase. The Site does not provide significant *ex-situ* habitat for QI/SCI species within the Site of the Proposed Development. No significant effects on SCI bird species are anticipated to arise during the operational phase. Overall frequencies of at-risk SCI species recorded in-flight over the Site were low with Oystercatcher and Curlew recorded once throughout all the flightline surveys carried out. The average flight height across the Site for the aforementioned species was between 40m and 100m. Given that the proposed maximum heights of structures to be built at the Site is 16.8m it is not considered that the Proposed Development will have any impact on them (Appendix II).
South Dublin Bay and River Tolka Estuary SPA (004024)	[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 alpina* **;** [A157] Bar-tailed Godwit *Limosa lapponica ;* [A162] Redshank *Tringa tetanus ;* [A179] Black-headed Gull *Chroicocephalus ridibundus* **;** [A192] Roseate Tern *Sterna dougallii ;* [A193] Common Tern *Sterna hirundo* **;** [A194] Arctic Tern *Sterna paradisaea* **;** [A999] Wetlands	7.2 km	

[2] The main area of dispersal of the treated effluent from Ringsend WwTP is in the Tolka Basin and around North Bull Island. South Dublin Bay is unaffected by the effluent from the plant (Irish Water, 2018).

Site Name & Site Code	Qualifying Interests (*= priority habitats)	Distance to Site (as the crow flies)	Connections (Source- Pathway- Receptor)
Baldoyle Bay SPA (004016)	[A046] Light-bellied 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	2.8 km	**None** – These sites are remote from the Proposed Development and there is an insignificant hydrological pathway to the SPAs located within the Irish Sea via surface water run-off from the Site. • The hydrological pathway via the surface water sewerage system is insignificant given the considerable open marine water buffer between the Site of the Proposed Development and the SPAs over which any potential surface water discharges containing sediment, silt and/or pollutants arising from the Construction Phase of the Proposed Development would become diluted to non-discernible levels. Foul water from the Site will be treated at Ringsend Wastewater Treatment Plant. The discharge point of the WWTP is remote of the SPAs listed here. • The intervening distances between the Site and the SPAs are sufficient to exclude the possibility of significant effects on the SPAs arising from: emissions of noise, dust, pollutants and/or vibrations emitted from the Site during the Construction Phase; increased traffic volumes during the Construction and Operational Phase and associated emissions; potential increased lighting emitted from the Site during Construction and Operational Phase; and increased human presence at the Site during Construction and Operational Phase. • The Site does not provide significant *ex-situ* habitat for QI/SCI species within the Site of the Proposed Development. • No significant effects on SCI bird species are anticipated to arise during the operational phase. Overall frequencies of at-risk SCI species recorded in-flight over the Site were low with Oystercatcher and Curlew recorded once throughout all the flightline surveys carried out. The average flight height across the Site for the aforementioned species was between 40m and 100m. Given that the proposed maximum heights of structures to be built at the Site is 16.8m it is not considered that the
Malahide Estuary SPA (004025)	[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 alpina;* [A156] Black-tailed Godwit *Limosa limosa;* [A157] Bar-tailed Godwit *Limosa lapponica;* [A162] Redshank *Tringa tetanus;* [A999] Wetlands	7.0 km	
Lambay Island SPA (004069)	[A009] Fulmar *Fulmarus glacialis;* [A017] Cormorant *Phalacrocorax carbo;* [A018] Shag *Phalacrocorax aristotelis;* [A043] Greylag Goose *Anser answer;* [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*	10.5 km	
Rogerstown Estuary SPA	[A043] Greylag Goose *Anser answer;* [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 totanus*; [A999] Wetlands	11.5 km	
Dalkey Islands SPA (004172)	[A192] Roseate Tern *Sterna dougallii;* [A193] Common Tern *Sterna hirundo;* [A194] Arctic Tern *Sterna paradisaea*	11.9 km	

Site Name & Site Code	Qualifying Interests (*= priority habitats)	Distance to Site (as the crow flies)	Connections (Source- Pathway- Receptor)
			Proposed Development will have any impact on them (Appendix II).

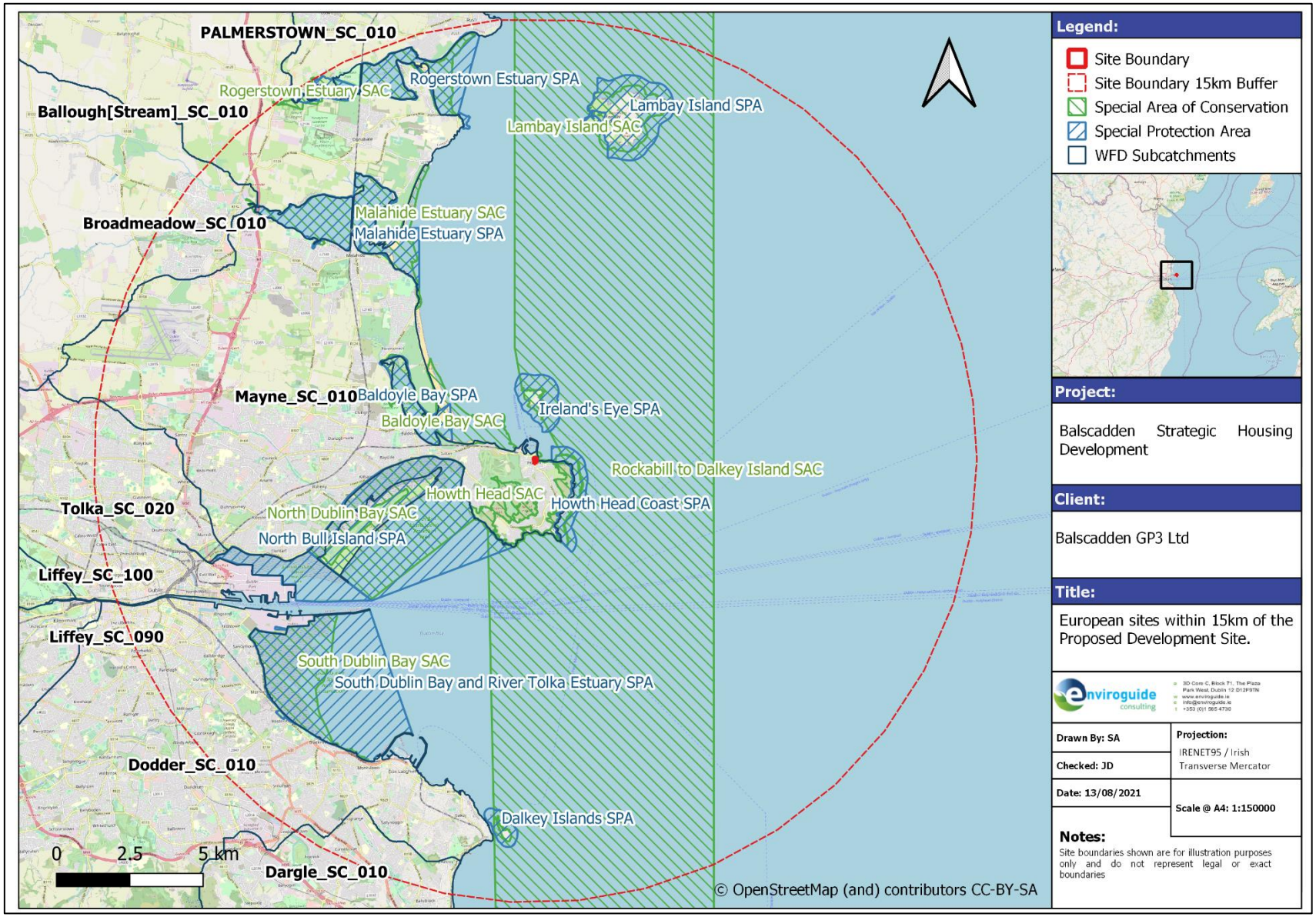

FIGURE 4. EUROPEAN SITES WITHIN 15KM OF THE PROPOSED DEVELOPMENT SITE.

3.5 Identification and Assessment of Likely Significant Effects

3.5.1 Conservation objectives

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them.

Site specific conservation objectives (SSCO) have been compiled for several of the European sites. Site-specific conservation objectives aim to define favourable conservation condition for habitats or species at a site.

Generic conservation objectives have also been compiled for several of the European sites. These are based on maintaining/restoring the favourable conservation condition of the habitats and species for which sites are selected.

The maintenance of habitats and species within European sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are 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
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long- term basis as a viable component of its natural habitats
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis

3.5.2 Assessment of Likely Significant Effects

The conservation objectives of the European sites within the zone of influence were reviewed and assessed in order to establish whether the construction and operation of the Proposed Development has the potential to have a negative impact on any of the qualifying interests and/or conservation objectives listed for the site.

The assessment framework is taken from the best practice guidelines issued by the European Commission, i.e., “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”.

The potential for significant effects resulting from the Proposed Development during the Construction and Operational Phases was determined based on a range of indicators, including:

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

The following elements of the Proposed Development were considered for their potential for likely significant effects on European sites.

- **Construction Phase** (estimated duration: approx. 28 months)
  - Uncontrolled releases of silt, sediments and/or other pollutants to air due to earthworks
  - Surface water run-off containing silt, sediments and/or other pollutants into nearby waterbodies;
  - Surface water run-off containing silt, sediments and/or other pollutants into the local groundwater;
  - Waste generation during the Construction Phase comprising soils, construction and demolition wastes
  - Accidental spread of invasive alien plant species;
  - 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** (estimated duration: indefinite)
  - Surface water drainage from the Site of the Proposed Development;
  - Foul water from the Proposed Development leading to increased loading on wastewater treatment plants
  - Increased lighting in the vicinity emitted from the Proposed Development; and
  - Increased human presence in the vicinity as a result of the Proposed Development.

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:

- Howth Head SAC (000202)
- Rockabill to Dalkey Island SAC (003000)
- Baldoyle Bay SAC (000199)
- North Dublin Bay SAC (000206)
- Howth Head Coast SPA (004113)
- Ireland's Eye SPA (004117)
- North Bull Island SPA (004006)
- South Dublin Bay and River Tolka Estuary SPA (004024)

3.5.2.1 *Habitat Loss and Alteration*

The Proposed Development is adjacent to the boundary of Howth Head SAC (Howth Head SAC is approximately 10 metres east of the Site at the closest point). There will be no direct loss or alteration of habitat as a result of the Proposed Development. However, there is potential for impacts on Howth Head SAC due to the excavation, demolition and construction

works associated with the Proposed Development, as well as haulage routes which could pass through the SAC. These activities could result in localised dust deposition and traffic emissions within the SAC.

Given the proximity of the Proposed Development Site to Howth Head SAC, there is a slight risk that invasive alien plant species within the Site (Sycamore *Acer pseudoplatanus*, Butterfly Bush *Buddleia davidii* and Three Cornered Leek *Allium triquetrum*) could spread to the SAC as a result of soil disturbance and clearance activities at the Site.

Howth Head SAC contains a number of popular walking trails, namely the Cliff Path Loop. Erosion caused as a result of walking and horse-riding activities is highlighted in the Site Synopsis for this SAC (NPWS, 2013). The Proposed Development will result in an increase of a potential c. 320 inhabitants in the local area (based on Fingal County Council population estimates (for open space requirements), Table 4). This increase in population has the potential to increase recreational users within the SAC which could result in further erosion of habitats listed as qualifying interests for this SAC, namely vegetated sea cliffs and dry heath.

TABLE 4. ESTIMATED NUMBER OF INHABITATS AT THE PROPOSED DEVELOPMENT. HERE, POPULATION EQUIVALENT IS FOR OPEN SPACE REQUIREMENTS.

Apt type	no.	Population Equivalent	Population Estimate
Studio	4	1.5	6
1-bed	62	1.5	93
2-bed	89	1.5	133.5
3-bed	25	3.5	87.5
Total	180		**320**

3.5.2.2 *Habitat / Species Fragmentation*

As there will be no direct habitat loss within any European sites, no habitat fragmentation will arise as a result of the Proposed Development.

3.5.2.3 *Changes in Water Quality and Resource*

There are two potential hydrological pathways linking surface water discharges from the Site to Howth Head SAC (000202), Rockabill to Dalkey Island SAC (003000), Baldoyle Bay SAC (000199), Ireland's Eye SPA (004117) and Howth Head Coast SPA (004113). The first is via a surface water sewer located on Abbey St. to the west of the Site, and the second is via the gullies located on Balscadden Road to the east of the Site. It is noted that a clarification was requested by Fingal Co. Co. for a previous application (SHD00419, application date: 4th November 2019) at the Proposed Development Site regarding the drainage network within Howth Village. The following was requested "*clarification should be provided on where specifically the drainage network in Howth village discharges to, or at least clarification of whether this discharges into any part of the Howth Head SAC or any other European site*". In response to this request, Irish Water drawings were consulted and a CCTV survey on all the gullies on Balscadden Road at and downhill of the proposed development (SHD00419) was carried out in August 2019. The Irish Water drawings indicated that there was no surface water sewer on Balscadden Road. According to the CCTV survey, the gullies drained eastwards towards Balscadden Bay and Howth Head SAC. The main series of 4 no. gullies drained (29m) to the base of the steps at the beach in Balscadden Bay and not across the terrestrial habitat (Altemar, 2019).

Given the extent of groundworks required for the Proposed Development coupled with the existing groundwater vulnerability at the Site, hydrogeological links via groundwater potentially exist between the Site and Howth Head Coast SAC.

Therefore, in the absence of standard, appropriate mitigation measures, there is potential for sediments/pollutants from the Site to enter Howth Head SAC and Howth Head Coast SPA via surface water run-off and/or groundwater flows during the Construction and/or Operational Phases of the Proposed Development. This could result in impacts on water quality in these sites.

However, the likelihood of significant effects on Rockabill to Dalkey Island SAC, Baldoyle Bay SAC and Ireland's Eye SPA arising from surface and ground water discharges during the Construction and Operational Phases can be excluded due to:

- The intervening distances between the Site and the European sites;
- The considerable open marine water buffer between the Site and the European sites;
- Low volume of any surface water run-off relative to the volume of the receiving marine environment in the Irish Sea;
- The level of mixing, dilution and dispersion of any surface and/or ground water run-off/discharges in the receiving marine environment prior to reaching the European Sites.

The potential for foul waters generated at the Site of the Proposed Development to reach European sites within Dublin Bay (North Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA) and cause significant effects, during the Operational Phase, is negligible due to:

- The completion of the first phase of upgrade works to Ringsend WWTP, which increased the capacity of the facility by 400,000 P.E. in December 2021.
- It is considered that effects on marine biodiversity and the European sites within Dublin Bay from the current operation of Ringsend WwTP are unlikely (see section 3.5.2.6 for more details).

3.5.2.4 *Disturbance and / or Displacement of Species*

Petalwort *Petalophyllum ralfsii* and Harbour Porpoise *Phocoena phocoena* are the only species listed as qualifying interests for the SACs linked to the Site. Impacts to Petalwort can be ruled out as there is no hydrological connection or alternative pathway between the Site and Petalwort, which grows on North Bull Island. As noted above, given the potential for dilution in the marine environment, it is considered that any effects due to surface water run-off on Rockabill to Dalkey Island SAC (and therefore Harbour Porpoise within it) would not be significant.

There are no species listed as qualifying interests for any other SAC linked to the Site.

Howth Head Coast SPA is located in close proximity to the Proposed Development Site (<0.5 km). The potential negative impact of unmitigated surface water discharges to Balscadden Bay could cause disturbance and/or displacement of this species.

Howth Head contains a number of popular walking trails, namely the Cliff Path Loop. The Proposed Development will result in an increase of a potential c. 320 inhabitants in the local area. This increase in population has the potential to increase recreational users of Howth

Head and this increase could result in the disturbance of the SCI species listed for this SPA (i.e., Kittiwake).

Given the separation distance (**0.5 km**) between Howth Head Coast SPA and the Site, disturbance impacts due to noise or dust on this SPA are deemed to be not significant. Noise emissions from equipment associated with the Proposed Development are predicted to be between 62dB and 37dB at 250m according to *Chapter 9 - Noise and Vibration* of the EIAR accompanying this application. According to Cutts, Hemmingway and Spencer (2013) sudden noises of 55-60dB (at the bird) and continuous/repetitive noises 60-72dB (at the bird) can result in *moderate* disturbance effects. As the above predicted noise emissions are within the range for **moderate** effects at **250m** it can be concluded with certainty that significant effects on Kittiwake within Howth Head Coast SPA due to noise disturbance will not occur. Dust generation during the Construction Phase has the potential to impact habitats within several hundred metres of the Proposed Development Site. Whereas construction dust tends to be deposited within 200m of a construction site, the majority of the deposition occurs within the first 50m. According to Chapter 8 Air Quality & Climate and Microcliate of the EIAR, "*in order to account for a worst-case scenario, the Proposed Development can be considered moderate in scale due to the size of the Site and the duration of construction activities. Therefore, it can be assumed that there is potential for significant dust soiling 50m from the Site*". It is acknowledged that standard mitigation measures are taken into consideration in determining the potential distance for significant effects as per Chapter 8 Air Quality & Climate and Microcliate of the EIAR. However, given the distance (**0.5 km**) between the Site and Howth Head Coast SPA, significant effects due to dust deposition on species within this SPA will not occur (in the absence of mitigation measures).

No significant effects on bird species are anticipated to arise during the operational phase. Overall frequencies of at-risk SCI species recorded in-flight over the Site were low with Oystercatcher and Curlew recorded once throughout all the flightline surveys carried out. The average flight height across the Site for the aforementioned species was between 40m and 100m. Given that the proposed maximum heights of structures to be built at the Site is 16.8m it is not considered that the Proposed Development will have any impact on them.

Operational Phase surface water discharges will be clean roof water as well as run-off from car parking areas, which could contain hydrocarbons from a car leak or suspended sediment. However, this effect would not be a regular occurrence (it may not occur at all) and given the low volume of any surface water run-off relative to the volume of the receiving marine environment in the Irish Sea and the potential for mixing, dilution and dispersion of any surface water run-off/discharges in the receiving marine environment, impacts on the SCI species within Ireland's Eye SPA due to Operational Phase surface water discharges would *not be significant.*

For reasons outlined in section 3.5.2.3 above, it is deemed that there will be no significant effect on any SCI associated with North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA due to discharges from Ringsend WWTP.

3.5.2.5 *Changes in Population Density*

The Proposed Development will not result in any changes in the population density of any species associated with a European site.

3.5.2.6 *Potential for In-combination Effects*

Existing Planning Permissions

A search of planning applications located within c.150m of the Site of the Proposed Development was conducted using online planning resources such as the National Planning Application Database (NPAD) (MyPlan.ie) and Fingal Co. Co.'s Planning Application Map. In addition, a search for any large-scale residential developments on the Howth Peninsula was carried out. 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.

It is noted that the majority of developments within the vicinity of the Site of the Proposed Development are applications granted more than 5 years ago and that have since been completed. The larger, more recent applications are detailed below:

F18A/0023, located approximately 100m north of the Proposed Development Site: (1) Demolition of existing family dwelling (7 East Pier) and its replacement with 12 guestrooms and storage areas in a 2.5 storey building (2) Reconfiguration of the roof to the existing guesthouse (3) Reconfiguration of the existing internal layout of stairs, kitchens and stores including the installation of a lift (4) Addition of storage areas at first floor behind the restaurant (5) Addition of an extra guestroom on the flat roof above the restaurant and (6) All associated site works. (Decision: Grant Permission. Decision Date: 19/06/2018)

F19A/0405, located approximately 150m east of the Proposed Development Site: Development will consist of 1) Demolition of existing 3 storey dwelling house. 2) Construction of a new 3 storey over basement apartment development consisting of 8 no. 2 bedroom apartments. 3) New vehicular entrance, roads, footpaths, landscaping, services consisting of storm and foul water disposal, mains water supply and all associated site works. (Decision: Grant Permission. Decision date: 04/03/2020. Appeal Decision: Grant Permission. Appeal Decision Date: 26/03/2021)

SHD/009/19, located approximately 750m west of the Proposed Development Site: Demolition of all structures on site (c8,162sq.m. GFA) and excavation of a basement. The proposed development comprises of the provision of a mixed-use development of residential/retail/restaurant/cafe uses and a creche in 4 no. blocks (A to D), over part basement Blocks A, B, C and D with a height up to a maximum of seven storeys of apartments over lower ground floor and basement car parking levels (a total of eight storeys over basement level). The residential component will consist of 512 no. residential units. (Decision: Grant Permission. Decision date: 03/04/2020)

SHD/009/20, located approximately 1050m west of the Proposed Development Site: The development will consist of 162 no. residential units distributed across 3 no. blocks (A, B & C) ranging in height from 5-6 storeys, with a cumulative gross floor area (GFA) of 13,337.10 sq.m. (Decision: Grant Permission. Decision date: 21/09/2021).

The above-listed Strategic Housing Developments are accompanied by Natura Impact Statements as well as EIAR Biodiversity Chapters, which will ensure no significant negative effects on local ecology and designated sites will occur as a result of the developments. The NIS for SHD/009/19 concluded "*This Natura Impact Statement details the findings of the Stage 2 Appropriate Assessment conducted to further examine the potential direct and indirect*

impacts of the proposed development planning application at Claremont, Howth on the following Natura 2000 sites:

- *Baldoyle Bay SAC [000199]*
- *Howth Head SAC [000202]*
- *Ireland's Eye SPA [004117]*
- *North Bull Island SPA [004006]*
- *Baldoyle Bay SPA [004016]*
- *Malahide Estuary SPA [004025]*
- *Lambay Island SPA [004069]*
- *South Dublin Bay and River Tolka Estuary SPA [004024]*
- *Rogerstown Estuary SPA [004015]*

The above sites were identified by a screening exercise that assessed likely significant effects of a range of effects that may arise from the proposed development. The Appropriate Assessment investigated the potential direct and indirect impacts of the proposed works, both during construction and operation on the integrity and qualifying interests of the above Natura 2000 sites, alone and in combination with other plans and projects, taking into account the site's structure, function and conservation objectives.

Where potentially significant adverse impacts were identified, a range of mitigation and avoidance measures have been suggested to help offset them. As a result of this Appropriate Assessment it has been concluded that, ensuring the avoidance and mitigation measures are implemented as proposed, the proposed development at Claremont, Howth will not have a significant adverse impact on the above Natura 2000 sites."

The NIS for SHD/009/20 concluded *"It has been objectively concluded by Scott Cawley Ltd., following an examination, analysis and evaluation of the relevant information, including in particular the nature of the predicted impacts from the proposed development, that the proposed development will not adversely affect (either directly or indirectly) the integrity of any European site, either alone or in combination with other plans or projects*."

The Biodiversity Chapter of SHD/009/19 concludes "*It is considered that, provided mitigation measures proposed are carried out in full, there will not be any significant negative impact to any valued habitats, designated sites or individual or group of species as a result of the Proposed Development.*" Similarly, the Biodiversity Chapter of SHD/009/20 concludes with the full and successful implementation of the mitigation measures outlined in the chapter, no long-term significant residual impacts are predicted on any ecological receptors. The Chapter also concludes "*As there are no residual impacts predicted for European sites, nationally designated sites, habitats, bats, terrestrial mammals (excluding bats), breeding birds or wintering birds, there is no potential for them to act in combination with any other plans or projects to form cumulative effects*".

Following a review of the above listed projects it can be concluded that there is no potential for cumulative impacts with the above listed projects on any designated European sites as a

result of disturbance/displacement of species, changes in population density, impacts on water quality and habitat fragmentation. However, the potential impact of an increase in footfall within Howth Head SAC and Howth Head Coast SPA arising as a result of the Proposed Development in combination with large scale residential developments granted permission in Howth (i.e. SHD/009/20 and SHD/009/19) needs to be assessed further, and the potential for significant effects cannot be ruled out.

Relevant Policies and Plans

The following policies and plans were reviewed and considered for possible in-combination effects with the Proposed Development.

- Fingal Biodiversity Action Plan 2010 - 2015
- Fingal Development Plan 2018-2023

The Fingal Biodiversity Action Plan is set out to protect and improve biodiversity, and as such will not result in negative in-combination effects with the Proposed Development. The Fingal Development Plan 2017-2025 has directly addressed the protection of European sites through specific policies. Upon examination of the listed plans, it is concluded that there is no possibility for any in-combination effects between these projects and plans and the Proposed Development.

Operation of Ringsend WWTP

In June 2018 Irish Water applied for and subsequently received planning permission in 2019 for upgrade works to the Ringsend WwTP facility. The first phase of upgrade works to Ringsend WWTP was completed in December 2021, which increased the capacity of the facility by 400,000 P.E. These works, together with the further works permitted in 2019 will ultimately increase the capacity of the facility from 1.6 million PE to 2.4 million PE. This plant upgrade will result in an overall reduction in the final effluent discharge of several parameters from the facility including BOD, suspended soils, ammonia, DIN and MRP. An Environmental Impact Assessment Report (EIAR) was submitted by Irish Water as part of that application. The EIAR contains sections relating to Marine Biodiversity and Terrestrial Biodiversity, and each contains a section on the 'do-nothing scenario'. These review the effects of the WwTP on biodiversity in Dublin Bay *in the absence of the upgrade works* and so are relevant to this report.

The EIAR report acknowledges that under the do-nothing scenario "*the areas in the Tolka Estuary and North Bull Island channel will continue to be affected by the cumulative nutrient loads from the river Liffey and Tolka and the effluent from the Ringsend WwTP*", which could result in a decline in biodiversity and the deterioration of the biological status of Dublin Bay (Irish Water, 2018). Nevertheless, these negative impacts of nutrient over-enrichment are considered "*unlikely*" (Irish Water, 2018). This is because historical data suggests that pollution in Dublin Bay has had little or no effect on the composition and richness of the benthic macroinvertebrate fauna. The EIAR notes that "*although a localised decline could occur, it is not envisaged to be to a scale that could pose a threat to the shellfish, fish, bird or marine mammal populations that occur in the area*." Furthermore, the EIAR notes that significant impacts on waterbird populations foraging on invertebrates in Dublin Bay due to nutrient over-enrichment are "*unlikely*" to occur (Irish Water, 2018). What is important in the context of this AA screening report is that the do-nothing scenario predicts that nutrient and suspended solid

loads from the WwTP will "*continue at the same levels and the impact of these loadings should maintain the same level of effects on marine biodiversity*" and that "*if the* status quo *is maintained there will be little or no change in the majority of the intertidal faunal assemblages found in Dublin Bay which would likely continue to be relatively diverse and rich across the bay*."

Therefore, it can be concluded that significant effects on marine biodiversity and the European sites within Dublin Bay from the *current* operation of Ringsend WwTP are unlikely. Importantly, this conclusion is not dependent upon any future works to be undertaken at Ringsend. Thus, in the absence of any upgrading works, significant effects to European sites are not likely to arise.

On examination of the above it is considered that there are no means for the Proposed Development to act in-combination with any plans or projects, that would cause any likely significant effects on any European sites.

TABLE 5. SUMMARY OF IMPACT ASSESSMENT ON EUROPEAN SITES AS A RESULT OF THE PROPOSED DEVELOPMENT.

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	In-combination effects	Stage 2 AA Required
SAC							
Howth Head SAC (000202)	**Yes**	No	No	None	**Potential negative change**	**Yes**	**YES**
Rockabill to Dalkey Island SAC (003000)	No	No	No	None	None	None	NO
Baldoyle Bay SAC (000199)	No	No	No	None	None	None	NO
Ireland's Eye SAC (002193)	No	No	No	None	None	None	NO
North Dublin Bay SAC (000206)	No	No	No	None	None	None	NO
Malahide Estuary SAC (000205)	No	No	No	None	None	None	NO
South Dublin Bay SAC (000210)	No	No	No	None	None	None	NO
Lambay Island SAC (000204)	No	No	No	None	None	None	NO
Rogerstown Estuary SAC (000208)	No	No	No	None	None	None	NO
Special Protected Area (SPA)							
Howth Head Coast SPA (004113)	**Yes**	No	**Yes**	None	**Potential negative change**	**Yes**	**YES**
Ireland's Eye SPA (004117)	No	No	No	None	None	None	NO
North Bull Island SPA (004006)	No	No	No	None	None	None	NO
Baldoyle Bay SPA (004016)	No	No	No	None	None	None	NO
Malahide Estuary SPA (004025)	No	No	No	None	None	None	NO
South Dublin Bay and River Tolka Estuary SPA	No	No	No	None	None	None	NO
Lambay Island SPA (004069)	No	No	No	None	None	None	NO

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	In-combination effects	Stage 2 AA Required
Rogerstown Estuary SPA	No	No	No	None	None	None	NO
Dalkey Islands SPA (004172)	No	No	No	None	None	None	NO

4 APPROPRIATE ASSESSMENT SCREENING CONCLUSION

The Proposed SHD Residential Development at Balscadden, Howth, Co. Dublin has been assessed taking into account:

- the nature, size and location of the proposed works and possible impacts arising from the construction works.
- the qualifying interests and conservation objectives of the European sites.
- the potential for in-combination effects arising from other plans and projects.

In conclusion, upon the examination, analysis and evaluation of the relevant information and applying the precautionary principle, it is concluded by the authors of this report that, on the basis of objective information; the possibility **may be excluded** that the Proposed Development will have a significant effect on any of the European sites listed below:

- Rockabill to Dalkey Island SAC (003000)
- Baldoyle Bay SAC (000199)
- Ireland's Eye SAC (002193)
- North Dublin Bay SAC (000206)
- Malahide Estuary SAC (000205)
- South Dublin Bay SAC (000210)
- Lambay Island SAC (000204)
- Rogerstown Estuary SAC (000208)
- Ireland's Eye SPA (004117)
- North Bull Island SPA (004006)
- Baldoyle Bay SPA (004016)
- Malahide Estuary SPA (004025)
- South Dublin Bay and River Tolka Estuary SPA
- Lambay Island SPA (004069)
- Rogerstown Estuary SPA
- Dalkey Islands SPA (004172)

In carrying out this AA screening, mitigation measures have not been taken into account. Standard best practice construction measures which could have the effect of mitigating any effects on any European Sites have similarly not been taken into account.

On the basis of the screening exercise carried out above, it can be concluded, on the basis of the best scientific knowledge available, that the possibility of any significant effects on the above listed European sites, whether arising from the project itself or in combination with other plans and projects, can be excluded.

However, upon examination of the relevant information including in particular the nature of the potential impact pathways associated with the Proposed Development, **the possibility cannot be excluded** that the Proposed Development will have a likely significant effect on the European sites listed below:

- Howth Head SAC (000202)
- Howth Head Coast SPA (004113)

As the likelihood of significant effects on European sites cannot be excluded a Natura Impact Statement (NIS) will be prepared for the Proposed Development. The NIS will assess the impact of the project (alone and in combination with other projects) on the integrity of the European sites, having regard to the conservation objectives of the sites. The NIS will describe proposed mitigation measures to avoid and reduce significant effects and will provide objective scientific information to enable the competent authority to carry out an Appropriate Assessment of the Proposed Development.

5 REFERENCES

Altemar (2019a). Ecological Impact Assessment (EcIA) for a strategic housing development at the Former Baily Court Hotel, Main Street, and at lands located south of the Martello Tower on Balscadden Rd., Howth, County Dublin.

Altemar (2019b). Appropriate Assessment Screening and Natura Impact Statement – Information for a Stage 1 (AA Screening) and Stage 2 (Natura Impact Statement) AA for Rennie Place SHD at the Former Baily Court Hotel, Main Street, and at lands located south of the Martello Tower on Balscadden Rd., Howth, County Dublin.

Department of the Environment, Heritage and Local Government. (2010). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. DEHLG, Dublin. (Rev. Feb 2010).

Environmental Protection Agency. (2021). Environmental Protection Agency Online Mapping [ONLINE] Available at: http://www.epa.ie/ [Accessed November 2021].

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

European Communities. (2002). 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.

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

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

Geological Survey Ireland. (2021). Geological Survey of Ireland website [ONLINE] Available at: http://www.gsi.ie/ accessed [Accessed November 2021].

Greater Dublin Strategic Drainage Study. (2005). Phase 3 - 2031 System Performance Assessment. Rathmines and Pembroke (High-Level) Catchment. Drawing number: GDSDS/MAR3079/F005/P3-003/ TILE 2.

Irish Water (2018) Ringsend Wastewater Treatment Plant Upgrade Project Environmental Impact Assessment Report. Volume 3 - Ringsend Wastewater Treatment Plant Part A: Report

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: Howth Head Coast SPA. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

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

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

NPWS (2012). Conservation Objectives: Baldoyle Bay SAC 000199. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013a). Conservation Objectives: Baldoyle Bay SPA 004016. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013b). Conservation Objectives: Lambay Island SAC 000204. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013c). Conservation Objectives: Malahide Estuary SAC 000205. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013d). Conservation Objectives: Malahide Estuary SPA 004025. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013e). Conservation Objectives: North Dublin Bay SAC 000206. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013f). Conservation Objectives: Rockabill to Dalkey Island SAC 003000. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013g). Conservation Objectives: Rogerstown Estuary SAC 000208. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013h). Conservation Objectives: Rogerstown Estuary SPA 004015. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013i). Conservation Objectives: South Dublin Bay SAC 000210. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

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

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

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

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

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

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

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

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

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

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

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

NPWS (2015a). Conservation Objectives: North Bull Island SPA 004006. Version 1.0. 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 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

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

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

NPWS (2016). Conservation Objectives: Howth Head SAC 000202. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

NPWS (2017a). Conservation Objectives: Ireland's Eye SAC 002193. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

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

NPWS (2022). Generic Conservation Objectives. Version 6.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

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

APPENDIX I - EUROPEAN SITE SYNOPSES

Site Name: Howth Head SAC

Site Code: 000202

Version Date: 12th August 2013

Howth Head is a rocky headland situated on the northern side of Dublin Bay. The peninsula is composed of Cambrian slates and quartzites, joined to the mainland by a post-glacial raised beach. Limestone occurs on the north-west side while glacial drift is deposited against the cliffs in places. The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

[1230] Vegetated Sea Cliffs

[4030] Dry Heath

A mosaic of heathland vegetation occurs on the slopes above the sea cliffs and in the area of the summit. This is dominated by Western Gorse (*Ulex gallii*), Heather (*Calluna vulgaris*), Bell Heather (*Erica cinerea*) and localised patches of Bracken (*Pteridium aquilinum*). In more open areas species such as English Stonecrop (*Sedum anglicum*), Wood Sage (*Teucrium scorodonia*) and Navelwort (*Umbilicus rupestris*) occur, along with some areas of bare rock.

The heath merges into dry grassland in places, with bent grasses (Agrostis spp.), Red Fescue (*Festuca rubra*), Cock's-foot (*Dactylis glomerata*), Yorkshire-fog (*Holcus lanatus*), Sweet Vernal-grass (*Anthoxanthum odoratum*), Lady's Bedstraw (*Galium verum*), Ribwort Plantain (*Plantago lanceolata*) and Yellow-wort (*Blackstonia perfoliata*). In the summit area there are a few wet flushes and small bogs, with typical bog species such as Bog Asphodel (*Narthecium ossifragum*) and sundews (*Drosera* spp.). Patches of scrub, mostly Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*), Willow (*Salix* spp.) and Downy Birch (*Betula pubescens*), occur in places.

The maritime flora is of particular interest as a number of scarce and local plants have been recorded, including Golden-samphire (*Inula crithmoides*), Sea Wormwood (*Artemisia maritima*), Grass-leaved Orache (*Atriplex littoralis*), Frosted Orache (*Atriplex laciniata*), Sea Spleenwort (*Asplenium marinum*), Bloody Crane's-bill (*Geranium sanguineum*), Spring Squill (*Scilla verna*), Sea Stork's-bill (*Erodium maritimum*) and three uncommon clover species: Knotted Clover (*Trifolium striatum*), Bird's-foot Clover (*T. ornithopodioides*) and Western Clover (*T. occidentalis*).

Rock outcrops which are important for lichens are distributed widely around Howth Head. The richest area for lichens appears to be around Balscadden quarries. In A number of Red Data Book plant species, the latter five of which are legally protected under the Flora (Protection) Order, 1999, have been recorded at this site - Green-winged Orchid (*Orchis morio*), Bird's-foot (*Ornithopus perpusillus*), Hairy Violet (*Viola hirta*), Rough Poppy (*Papaver hybridum*), Pennyroyal (*Mentha pulegium*), Heath Cudweed (*Omalotheca sylvatica*) and Betony (*Stachys officinalis*).

Curved Hard-grass (*Parapholis incurva*), a species which had not previously been recognized as occurring in Ireland, was found at Red Rock in 1979.

The site is of national importance for breeding seabirds. A census in 1985-87 recorded the following numbers: Fulmar (105 pairs), Shags (25 pairs), Herring Gulls (70 pairs), Kittiwake (c. 1,700 pairs), Guillemot (585 birds), Razorbill (280 birds). In 1990, 21 pairs of Black Guillemot were counted.

A number of rare invertebrates have been recorded from the site: the fly *Phaonia exoleta* (Order Diptera) occurs in the woods at the back of Deerpark and has not been seen anywhere else in Ireland, while the ground beetle *Trechus rubens* (Order Coleoptera) is found on storm beaches on the eastern cliffs. A

hoverfly, known from only a few Irish locations, *Sphaerophoria batava* (Order Diptera), is present in the heathland habitat within the site.

The main land use within the area is recreation, mostly walking and horse-riding, and this has led to some erosion within the site. Fires also pose a danger to the site. There may also be a threat in some areas from further housing development. Howth Head displays a fine range of natural habitats, including two Annex I habitats, within surprisingly close proximity to Dublin city. The site is also of scientific importance for its seabird colonies, invertebrates and lichens. It also supports populations of at least two legally protected plant species and several other scarce plants.

Site Name: Howth Head Coast SPA

Site Code: 004113

Version Date: 6th December 2011

Howth Head is a rocky headland situated on the northern side of Dublin Bay. The peninsula is composed of Cambrian rock of the Bray Group, the most conspicuous component being quartzite. The site comprises the sea cliffs extending from just east of the Nose of Howth to the tip of the Bailey Lighthouse peninsula. The marine area to a distance of 500 m from the cliff base is included within the site.

The cliffs vary from between about 60 m and 90 m in height, and in places comprise fairly sheer, exposed rock face. Here plants such as Rock Sea-spurrey (*Spergularia rupicola*), Navelwort (*Umbilicus rupestris*), Rock Samphire (*Crithmum maritimum),* English Stonecrop (*Sedum anglicum*) and Biting Stonecrop (*Sedum acre*) are found, along with a good diversity of lichen species.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for Kittiwake. A range of seabird species breed within the Howth Head SPA, including a nationally important population of Kittiwake. A census in 1999 recorded the following species: Fulmar (33 pairs), Shag (12 pairs), Herring Gull (17 pairs), Great Black-backed Gull (5 pairs), Kittiwake (2,269 pairs), Guillemot (663 pairs) and Razorbill (279 pairs). In addition, 39 individual Black Guillemot were counted within the site in May 1998.

The cliffs also support a breeding pair of Peregrine Falcon. The seabird colony at Howth Head has been monitored at intervals since the Operation Seafarer project in 1969/70.

Howth Head Coast SPA is of high ornithological importance as it supports a nationally important population of Kittiwake. It is also a traditional nesting site for Peregrine Falcon, a species that is listed on Annex I of the E.U. Birds Directive. The site is easily accessible and has important amenity and educational value due to its proximity to Dublin City.

APPENDIX II - WINTER BIRD SURVEY RESULTS

Flight-line Bird Survey 2020/21 & 2021/22

AT

Balscadden,

Howth

Co. Dublin

ON BEHALF OF

Balscadden GP3 Ltd

Prepared by
Enviroguide Consulting
Dublin
3D Core C, Block 71, The Plaza,
Park West, Dublin 12
Kerry
19 Henry Street
Kenmare, Co. Kerry
Wexford
Unit 11 Floor B
Westpoint Business Park
Clonard Road, Wexford
www.enviroguide.ie
info@enviroguide.ie
+353 1 565 4730

DOCUMENT CONTROL SHEET

Client	Balscadden GP3 Ltd
Project Title	SHD Residential Development at Balscadden, Howth.
Document Title	Bird Survey Results 2020/21 & 2021/22

Revision	Status	Author(s)	Reviewed	Approved	Issue Date
1.0	Internal Draft	Siobhan Atkinson *Ecologist*	Jim Dowdall *Director*	Jim Dowdall *Director*	29.04.2021
2.0	For Client	Siobhan Atkinson *Ecologist*	Jim Dowdall *Director*	Jim Dowdall *Director*	30.04.2021
3.0	For Client	Siobhan Atkinson *Ecologist*	Jim Dowdall *Director*	Jim Dowdall *Director*	14.03.2022

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1 INTRODUCTION

1.1 Background

Enviroguide Consulting was commissioned by by Balscadden GP3 Ltd. to carry out a series of bird flightline surveys in relation to a Proposed Strategic Housing Development at Balscadden, Howth, Co. Dublin.

Flight-line surveys were carried out at the Site of the Proposed Development between the 13th of November 2020 and 30th March 2021, and between the 25th November 2021 and 8th March 2022. The objective of these surveys was to determine the composition, numbers, frequency and heights of species in passage over the Site of the Proposed Development, if any, in order to inform decisions on potential disturbance to flight-lines of birds commuting to/from roost sites and/or between feeding sites as a result of the construction of the Proposed Development.

1.2 General Site Overview

The Site is located to the north of Howth. The Site is bounded to the east by Balscadden Road, to the west by residential dwellings and Abbey St, to the south by residential dwellings and a small semi-natural area and to the north by Howth Martello Tower. The Site is comprised of scrub, grassland, a disused warehouse and areas of hardstanding.

A number of Special Protection Areas are located within close proximity to the Proposed Development Site, namely Howth Head Coast SPA, Ireland's Eye SPA, North Bull Island SPA and Baldoyle Bay SPA (Table , Figure).

TABLE 1. SPECIAL CONSERVATION INTEREST SPECIES ASSOCIATED WITH NEARBY SPAS.

SPA	Special Conservation Interests
Ireland's Eye SPA [004117]	- [A017] Cormorant (*Phalacrocorax carbo*) [breeding] - [A184] Herring Gull (*Larus argentatus*) [breeding] - [A188] Kittiwake (*Rissa tridactyla*) [breeding] - [A199] Guillemot (*Uria aalge*) [breeding] - [A200] Razorbill (*Alca torda*) [breeding]
Howth Head Coast SPA [004113]	- [A188] Kittiwake (Rissa tridactyla)
North Bull Island SPA [004006]	- [A046] Light-bellied Brent Goose (*Branta bernicla hrota*) [wintering] - [A048] Shelduck (*Tadorna tadorna*) [wintering] - [A052] Teal (*Anas crecca*) [wintering] - [A054] Pintail (*Anas acuta*) [wintering] - [A056] Shoveler (*Anas clypeata*) [wintering] - [A130] Oystercatcher (*Haematopus ostralegus*) [winter- ing] - [A140] Golden Plover (*Pluvialis apricaria*) [wintering] - [A141] Grey Plover (*Pluvialis squatarola*) [wintering] - [A143] Knot (Calidris canutus) [wintering] - [A144] Sanderling (*Calidris alba*) [wintering] - [A149] Dunlin (*Calidris alpina*) [wintering] - [A156] Black-tailed Godwit (*Limosa limosa*) [wintering] - [A157] Bar-tailed Godwit (*Limosa lapponica*) [wintering] - [A160] Curlew (*Numenius arquata*) [wintering] - [A162] Redshank (*Tringa totanus*) [wintering] - [A169] Turnstone (*Arenaria interpres*) [wintering] - [A179] Black-headed Gull (*Chroicocephalus ridibundus*) [wintering] - [A999] Wetland and Waterbirds
Baldoyle Bay SPA [004016]	- [A046] Light-bellied Brent Goose (Branta bernicla hrota) [wintering] - [A048] Shelduck (Tadorna tadorna) [wintering] - [A137] Ringed Plover (*Charadrius hiaticula*) [wintering] - [A140] Golden Plover (*Pluvialis apricaria*) [wintering] - [A141] Grey Plover (*Pluvialis squatarola*) [wintering] - [A157] Bar-tailed Godwit (*Limosa lapponica*) [wintering] - [A999] Wetland and Waterbirds

2 METHODOLOGY

2.1 Survey Methodology

Each survey day commenced at either dawn or 6 hours prior to dusk and continued for a minimum of 15-minute intervals every hour for 6 hours. Surveys were concentrated at dawn and dusk to gather information on potential flight-lines of birds commuting to/from roost sites and/or between feeding sites. A total of 180 fifteen-minute to 1-hour observations were

undertaken from a pre-determined vantage point over a total of 30 days throughout the 2020/21 and 2021/22 survey periods (Table).

TABLE 2. SURVEY DATES FOR THE WINTER 2020/21 AND WINTER 2021/22 SURVEY SEASON

Month	Dates
November	13th, 25th
December	9th, 16th
January	6th, 13th, 20th, 26th
February	3rd, 10th, 17th, 24th
March	3rd, 12th, 19th, 30th
November	25th
December	2nd,14th, 28th
January	4th, 13th, 17th, 27th
February	2nd, 8th, 17th, 23rd
March	1st, 8th

The flight-line surveys focussed on those SCI species that are characterised as “poor” fliers and considered to be more at risk of collision (see Eirgrid, 2012). The most at-risk groups (classified as ‘medium’ and ‘high’ collision risk species) include wader species; waterfowl such as geese, swan and duck species; and some raptor species. Gulls such as Black-headed Gull, Herring Gull and Greater Black-backed Gull are classed as ‘low’ collision risk species due to their superior manoeuvrability when flying (Eirgrid, 2012).

The following information was taken for each recorded observation:

- Species;
- Number of birds;
- Flight direction;
- Estimated flight duration over the Proposed Development Site; and
- Estimated average height over the Proposed Development Site.

FIGURE 1. SITE BOUNDARY AND VANTAGE POINT LOCATION.

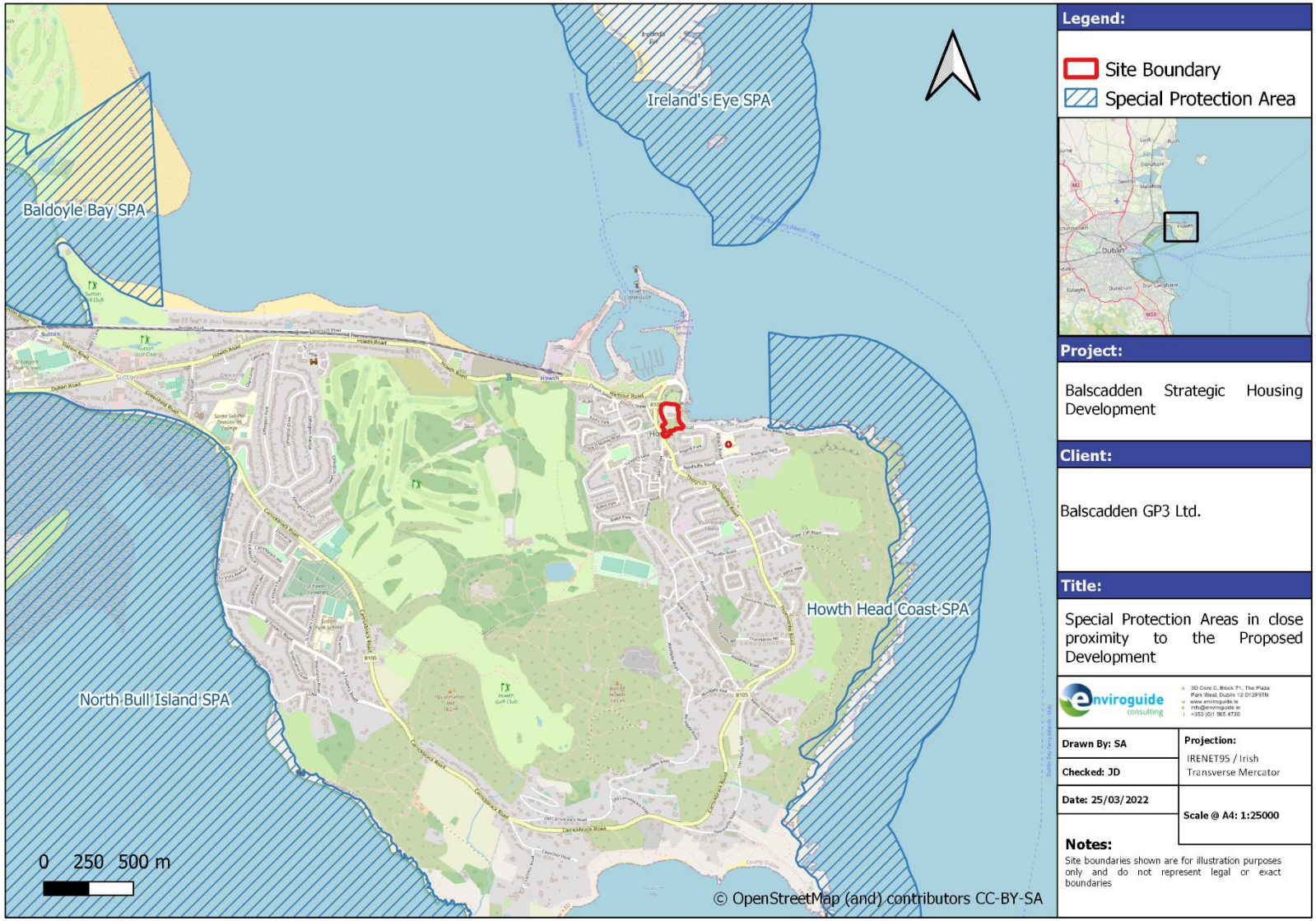

FIGURE 2. SPECIAL PROTECTION AREAS WITHIN CLOSE PROXIMITY TO THE PROPOSED DEVELOPMENT SITE.

2.2 Enviroguide Team

A team of experienced field ecologists and ornithologists were assigned and comprised of Liam Gaffney (Enviroguide Project Ecologist/ Ornithologist), Siobhán Atkinson (Enviroguide Project Ecologist/ Ornithologist) and Brian McCloskey (Enviroguide Project Ecologist/ Ornithologist).

Each has considerable experience of a range of survey methodologies and have a proven track record of producing accurate and timely survey results.

Each field ornithologist/ecologist undertook all surveys using:

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

3 SURVEY RESULTS

3.1 Survey Results

The results of flight-line surveys at the Proposed Development Site demonstrate that the Site is not situated on an important flight path for any 'at risk' Special Conservation Interest (SCI) species, with just a single incidence of an 'at risk' SCI species recorded flying over the Site in the 2020/21 survey season. On the 6th January 2021, a single Curlew *Numenius arquata* was recorded flying over the Site. The Curlew was flying due west, approximately 40m over the Site (Table). Similarly, a single incidence of Oystercatcher *Haematopus ostralegus* flying over the Site was recorded on 4th January 2022. The Oystercatcher was flying north-east, approximately 75-100m over the Site.

TABLE 3. SUMMARY OF RESULTS OF 'AT-RISK' SPECIES RECORDED IN-FLIGHT OVER SITE OF PROPOSED DEVELOPMENT DURING FLIGHT-LINE SURVEYS CARREID OUT IN WINTER 2020/21 AND WINTER 2021/22.

Species	Peak count[3]	Frequency of occurrence over two surveys seasons	Estimated height over Site[4]	Estimated duration over Site
Curlew (*Numenius arquata*)	1	0.6 % (1 of 180)	40 m	4 seconds
Mallard *(Anas platyrhynchos)*	3	0.6 % (1 of 180)	40 m	6 seconds
Heron (*Ardea cinerea*)	2	7.2% (4 of 180)	75-100 m	10-19 seconds
Oystercatcher (*Haematopus ostralegus*)	1	0.6 % (1 of 180)	75-100 m	10 seconds

[3] Peak count of individuals recorded in-flight over the Site of the Proposed Development during all 15-minute counts.
[4] Heights of recorded flights over Site have been estimated based on relative heights to existing Site structures.

Gulls (mostly Herring Gull *Larus argentatus* and Black-headed Gull *Larus ridibundus* and occasionally Greater Black-backed Gull *Larus marinus*) were frequently observed flying over the Site lands. However, as noted previously, gulls are classed as 'low' collision risk species due to their superior manoeuvrability when flying and were therefore not considered for this survey. Finally, a group of three Mallard *Anas platyrhynchos* were recorded flying over the Site on the 3rd of March 2021. The Mallard were flying approximately 40m over the Site. Heron (peak count 2) were recorded flying over the Site on the 2nd December 2021, 14th December 2021, 28th December 2021 and 2nd February 2022 at a height of 75-100m over the Site.

4 CONCLUDING STATEMENT

Results from the flight-line surveys carried out at the Site of the Proposed Development indicate that the Site is not located on an important flight-path for any at-risk commuting SCI species. Overall frequencies of at-risk SCI species recorded in-flight over the Site were low with just a single Curlew recorded flying over the Site on one occasion in winter 2020/21 and a single Oystercatcher recorded flying over the Site on one occasion in winter 2021/22.

5 REFERENCES

Eirgrid. (2012). Ecology Guidelines for Electricity Transmission Projects. A Standard Approach to Ecological Impact Assessment of High Voltage Transmission Projects.