APPROPRIATE ASSESSMENT SCREENING REPORT

FOR

PROPOSED RESIDENTIAL DEVELOPMENT

AT

ST. PAUL'S COLLEGE, SYBIL HILL, RAHENY, DUBLIN 5

September 2019

ON BEHALF OF

CREKAV TRADING GP LIMITED

Prepared by
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1 INTRODUCTION

1.1 Background

Enviroguide Consulting were commissioned by Crekav Trading GP Limited to carry out an Appropriate Assessment Screening in relation to a proposed Strategic Housing Development (SHD) at St. Paul's, Raheny, Dublin 5, Co. Dublin. The purpose of this report is to provide information for the relevant competent authority to carry out the screening for Appropriate Assessment. This report should be read in conjunction with the planning application documentation submitted as part of this SHD application.

1.1.1 Site Specific background

The proposed development site at St. Pau'sl Raheny was the subject of previous SHD application which was granted by An Bord Pleanala on 3rd April 2018 (Planning Reference: 300559-18). This grant was subsequently judicially reviewed, remitted back to the Board and refused on 11th September 2018 (Planning Reference: 302225-18).

During the time that elapsed between the original grant of permission to the judicial review and subsequent refusal of permission and the decision by the owner to submit a new application and given that the sports clubs had vacated the site in 2017, there was no management carried out on the site other than to construct a fence around the site for safety and security reasons. This has resulted in grass growth and a consequent habitat change from Amenity Grassland (GA2) to Dry Meadows and Grassy Verges (GS2).

Previous application documents and data have been used in relation to this SHD application, in addition to site specific surveys undertaken in the in-term time (2018 / 2019) to date. This AA Screening has determined the baseline from site surveys undertaken from January 2015 to September 2019.

1.2 Relevant Legislation

1.2.1 Legislative Background

Member States are required to designate Special Areas of Conservation (SACs) and Special Protected Areas (SPAs) under the EU Habitats and Birds Directives, respectively. SACs and SPAs are collectively known as Natura 2000 sites. An 'Appropriate Assessment' (AA) is a required assessment to determine the likelihood of significant impacts, based on best scientific knowledge, of any plans or projects on Natura 2000 sites. A screening for AA determines whether a plan or project, either alone or in combination with other plans and projects, is likely to have significant effects on a Natura 2000 site, in view of its conservation objectives. This follows the decision of the Courts of Justice of the European Union (CJEU) which held that '*'any plan or project not directly connected with or necessary to the management of the site is to be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives if it cannot be excluded, on the basis of objective information, that it will have a significant effect on that site, either individually or in combination with other plans or projects."* (Case C-127/02, Judgement dated 7 September 2004, para 44).

This AA Screening has been undertaken to determine the potential for significant impacts on relevant Natura 2000 sites. The purpose of this assessment is to determine, the appropriateness, or otherwise, of the proposed development in the context of the conservation objectives of such sites.

1.2.2 Legislative Context

The Habitats Directive (92/43/EEC) seeks to conserve natural habitats and wild fauna and flora by the designation of SACs and the Birds Directive (79/409/EEC) seeks to protect birds of special importance by the designation of SPAs. It is the responsibility of each member state to designate SPAs and SACs, both of which will form part of Natura 2000, a network of protected sites throughout the European Community.

An Appropriate Assessment is required under Article 6 of the Habitats Directive where a project or plan may give rise to significant effects upon a Natura 2000 Site, and paragraphs 3 and 4 state that:

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

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

This AA Screening Report was conducted within this legislative framework and the published Department of Environment, Heritage and Local Government 2009 guidelines - "Appropriate Assessment of Plans & Projects - Guidance for Planning Authorities". The directives are transposed into Irish legislation by the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) and the Planning and Development Act 2000 (as amended).

As specified in these Regulations, it is the responsibility of the proponent of the project to provide a comprehensive and objective Appropriate Assessment Screening Report, which can then be used by the competent authority in order to conduct the Appropriate Assessment Screening. (DEHLG, 2009). This Appropriate Assessment Screening report is being provided in anticipation that the planning authority will require information from the applicant to carry out the screening.

1.2.3 Stages of AA

This Appropriate Assessment Screening Report (the "**Screening Report**") has been prepared by Enviroguide Consulting. It considers whether it can be excluded on the basis of objective information that the proposed development will have an effect on any Natura 2000 site, individually or together with other plans and projects.

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

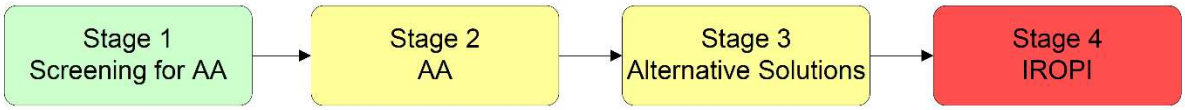


FIGURE 1. THE FOUR STAGES OF THE APPROPRIATE ASSESSMENT PROCESS (DEHLG, 2010).

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

- Stage 1: *Screening*. The first stage of the AA process is to determine whether it can be excluded on the basis of objective information that the proposed development will have an effect on any Natura 2000 site, individually or together with other plans and projects. It should be noted that measures intended to avoid or reduce the harmful effects of a proposed development on a Natura 2000 site are not taken into account at this stage and that such measures are referred to in the AA Screening Report as ''mitigation measures''. See People Over Wind (CJEU, Case 323/17 dated 12 April 2018, para 40).
- Stage 2: *Natura Impact Statement (NIS)*. The second stage of the AA process assesses the impact of the project or plan (either alone or in combination with other projects or plans) on the integrity of the Natura 2000 site, with respect to the conservation objectives of the site and its ecological structure and function. A Natura Impact Statement containing a professional scientific examination of the project or plan is required and includes any mitigation measures to avoid, reduce or offset negative impacts.
- 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 Natura 2000 site, where no less damaging solution exists.

The purpose of Stage 1, the Screening Stage is to determine the necessity or otherwise for an NIS. Screening for AA examines the likely effects of a project or plan alone, and in combination with other projects or plans, upon a Natura 2000 site, and considers whether it can be objectively excluded that on the basis of objective information that the proposed development

will have a significant effect on any Natura 2000 site, individually or together with other plans and projects.

If it cannot be excluded during the screening stage that the proposal will have a significant effect on a Natura 2000 site, then a NIS will need to be prepared.

2 METHODOLOGY

2.1 Screening Steps

This AA Screening Report has been undertaken in accordance with the European Commission Methodological Guidance on the provision of Article 6(3) and 6(4) of the 'Habitats' Directive 92/43/EEC (EC, 2001) and the European Commission Guidance 'Managing Natura 2000 sites' (EC, 2018). Screening for AA involves the following:

- Establish whether the plan is directly connected with or necessary for the management of a Natura 2000 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 Natura 2000 site;
- Identification of Natura 2000 sites potentially affected;
- Identification and description of potential effects on the Natura 2000 site and assessment of the likely significance of the impacts identified on the Natura 2000 site; and
- Exclusion of sites where it can be objectively concluded that there will be no significant effects.

This AA Screening Report examines whether any potential effects upon a Natura 2000 site will be significant and determines whether the AA process for the proposed development at St. Paul's College, Sybil Hill, Raheny, Dublin 5 alone and in combination with other developments in the area requires to proceed to a Stage 2 Appropriate Assessment. It is noted that any effect on the integrity or conservation objectives of a site is significant (see Sweetman v ABP – C258/11 dated 11 April 2013 where the destruction of 1.47 hectares of limestone pavement out of a total of 85 hectares was deemed to have an adverse effect on the site's integrity.)

2.2 Desk Study

A desktop study was carried out to collate and review available information, datasets and documentation sources relevant for the completion of the Screening Report. The desktop study, completed between September 2018 and September 2019, relied on the following sources:

- Information on the network of Natura 2000 sites, relevant boundaries, qualifying interests and conservation objectives, obtained from the National Parks and Wildlife Service (NPWS) at *www.npws.ie*;
- Text summaries of the relevant Natura 2000 sites taken from the respective Standard Data Forms and Site Synopsises available at *www.npws.ie*;
- Information on species records and distributions, obtained from the National Biodiversity Data Centre (NBDC) at *maps.biodiversityireland.ie*;

- Information on waterbodies, catchment areas and hydrological connections obtained from the Environmental Protection Agency (EPA) online map application [Available at https://gis.epa.ie/EPAMaps/];
- Information on bedrock, groundwater, aquifers and their statuses, obtained from Geological Survey Ireland (GSI) [Available at: https://www.gsi.ie/en-ie/data-and-maps;
- Satellite imagery and map information obtained from:
    - Google maps [Available at: https://www.google.com/maps]
    - *Bing maps* layer accessed through the EPA online map application [Available at: https://gis.epa.ie/EPAMaps/]
    - *Open Street maps* layer accessed through the EPA online map application [Available at: https://gis.epa.ie/EPAMaps/]
    - *Ordinance Survey Ireland (OSI)* map layers accessed through National Biodiversity Data Centre (NBDC) *Biodiversity Maps* application [Available at: https://maps.biodiversityireland.ie/Map]
    - *ArcGIS Pro* base-map imagery from *ESRI's ArcGIS Pro* mapping software for PC;
- Information on the existence of permitted development, or developments awaiting decision, in the vicinity of the proposed development from Dublin City Council, available at *www.dublincity.ie*;
- Information on the extent, nature and location of the proposed development, provided by the applicant and their design team. All of this information is submitted with the application;
- Information on the construction methods to be followed as part of the proposed development obtained from the Construction Management Plan submitted with this application;
- Information on the potential for flood events at the proposed development site, informed by the Flood Risk Assessment submitted with this application and reference to the County Development Plan Flood Risk Assessment;
- Information on the use of *ex-situ* inland feeding sites in Dublin by Light-bellied Brent Geese LBBG) for the seasons 2016/17, 2015/16, 2014/15, 2013/14 and 2012/13 taken from data provided in Scott Cawley Ltd. (2017a);
- Information on the usage of St. Paul's by Light-bellied Brent Geese, Curlew, Black-headed Gull, Black-tailed Godwit and Oystercatcher taken from data provided by Crekav Trading Ltd. for wintering bird surveys completed by Scott Cawley Ltd. in 2015/16 and 2016/17 in respect of the previous Strategic Housing Development application at the proposed site; and
- Information on the use of *ex-situ* inland feeding sites in Dublin by Light-bellied Brent Geese taken from data provided in Benson (2009).
- Information on the usage of St. Paul's by Light-bellied Brent Geese, Curlew, Black-headed Gull, Black-tailed Godwit and Oystercatcher taken from data obtained for wintering bird surveys completed by Enviroguide Consulting in 2018/19 in respect of the current Strategic Housing Development application at the proposed site

The following guidance documents were consulted and followed in the completion of this Appropriate Assessment Screening Report:

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

- 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); and
- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC (European Commission, 2018).

A comprehensive list of all the specific documents and information sources consulted in the completion of this report is provided in Section 5 References.

The following planning and policy documents were reviewed as part of the cumulative impact assessment contained in this report:

- Fingal Development Plan 2017 - 2023;
- Fingal Heritage Plan 2018 – 2023;
- Fingal Biodiversity Action Plan 2018 -2023;
- Dublin City Development Plan 2016 - 2022;
- Dublin City Biodiversity Action Plan 2015 - 2020;
- Dublin City Parks Strategy 2017-2022;
- Dún Laoghaire-Rathdown County Council County Development Plan 2016 - 2022; and
- South Dublin County Council Development Plan 2016 - 2022.

2.3 Site Specific Surveys

2.3.1 Wintering Bird Surveys

A comprehensive suite of wintering bird surveys (WBS) has been undertaken in relation to the proposed development between 2015 and 2019. Surveys carried out for the 2015/16 and 2016/17 winter seasons were completed by Scott Cawley Ltd., in respect to a previous planning application at the proposed development site. Survey in 2018/19 were undertaken by Enviroguide as part of this SHD application.

2.3.1.1 Wintering Bird Surveys 2015/16 & 2016/17

A range of wintering bird surveys was undertaken by Scott Cawley Ltd during the 2015/16 and 2016/17 seasons in respect of a previous planning application at the proposed development site. For comprehensive details on the survey methodology utilised see Scott Cawley Ltd. (2017a).

2.3.1.2 Dublin Network Wintering Bird Surveys 2016 & 2017

A total of eight all-day wintering bird surveys for LBBG were completed in January-March 2016 and 13 all-day wintering bird surveys in January-March 2017 at St. Paul's College, North Bull Island and multiple inland feeding sites in Dublin by a team of five dedicated surveyors.

These surveys started before sunrise (to ensure that a full count of LBBG roosting at North Bull Island was completed before they started to fly inland to feed) and ended after sunset (to capture the return of birds to North Bull Island to roost). A surveyor was present at St. Paul's for the entire day to record the numbers of LBBG that utilised the playing fields as inland feeding habitat and to take note of any geese flying overhead or into adjacent lands in St. Anne's Park. Likewise, a surveyor was present on North Bull Island for the entire day (apart

from on the 31st March 2016) recording numbers of LBBG present, their exact locations and their movements inland. Three other surveyors covered an overall network of 94 other known inland feeding sites across the entire day with the aim to collect as many records of LBBG as possible. Total flock size and behavioural activities exhibited by the birds were recorded at all sites as were the codes of any ringed birds present.

In the case of the January-March 2016 surveys, the sites were initially chosen based on records described in a previous study of inland feeding sites of LBBG in Dublin (Benson, 2009). Information collected during the January-March 2016 surveys and subsequent re-sighting data reports obtained from the IBGRG highlighted a number of additional known sites that were then surveyed during the January-March 2017 surveys. In addition, following a review of aerial photography, a total of 92 sites were identified as being potential inland feeding sites for LBBG. These newly identified sites were also surveyed for LBBG as part of the January-March 2017 all-day surveys.

2.3.1.3 Wintering Bird Surveys at St. Paul's, St. Anne's Park and North Bull Island 2015/16 & 2016/17

In order to examine the relationship between the five relevant Natura 2000 sites' populations of LBBG and their usage of the proposed development site in the context of the Site Specific Conservation Objectives (SSCOs), wintering bird surveys were undertaken by a dedicated surveyor at St. Paul's, St. Anne's Park and North Bull Island over the course of two consecutive winter bird seasons: 2015-2016 and 2016-2017. A total of 23 visits were completed at each of these three sites during the 2015-2016 wintering bird season, while 21 visits were conducted at each of these three sites during the 2016-2017 wintering bird season. During the 2015-2016 season surveys, LBBG were identified using St. Paul's from November 2015 until March 2016 and as a result, the 2016-2017 season surveys commenced in November 2016, rather than September 2016.

Bird species present were identified using either an *Opticron ES 80 GA ED v3 Fieldscope* or *Opticron Imagic 8 x 42 Binoculars* (or equivalent) with reference to *Collins Bird Guide* (Svensson, 2009) to confirm identification. Codes of any ringed birds present were recorded as well as total flock size and behaviour exhibited by the birds.

For 16 of the site visits undertaken during the 2015-2017 period, surveys were conducted over the course of a full tidal cycle in Dublin Bay, commencing either at high or low tide at North Bull Island (i.e. from low tide to high tide or vice versa as dependent on tide times), which is a major roost site for LBBG in Dublin Bay (NPWS, 2014), and ending at St. Anne's Park. Lands at St. Paul's were surveyed continuously for approximately one hour, followed by the lands in St. Anne's Park. The remaining 28 site visits undertaken, during the 2015-2017 period, were conducted as part of the Dublin Network WBS, the methodology of which is described in section 2.3.1.2 above.

2.3.2 Wintering Bird Surveys 2018/19

The purpose of the wintering bird surveys undertaken in 2018/19 was to gather information in order to address the Boards reason for refusal of the previous Strategic Housing Development application (Planning Reference: 300559-18) at the proposed development site, i.e.:

- "*The Board could not be satisfied beyond a reasonable scientific doubt that the Light-bellied Brent Geese that would be displaced by the proposed development, would successfully relocate to other sites and/or that these sites would represent suitable alternatives to the subject site, which was acknowledged to be of one of eight ex-situ feeding sites of major importance in the Dublin area*."

Two distinct wintering bird surveys were undertaken in relation to the proposed development between November 2018 and April 2019:

1. Dublin Network Wintering Bird Survey
2. St. Paul's Site-Specific Wintering Bird Survey

These two surveys differed in both their purpose and methodology. The reason for this approach was to allow for direct comparisons to be made between the development site and other *ex-situ* inland feeding sites (from the Dublin Network WBS results which applied comparable survey effort to all sites), while also allowing for additional information to be collected at the proposed development site (from the separate St. Paul's Site-Specific WBS).

2.3.2.1 Dublin Network Wintering Bird Survey 2018/19

The purpose of the Dublin Network WBS was to obtain information on changes in the usage of the network of *ex-situ* inland feeding sites by SCI species in 2018/19, compared with previous seasons. The Dublin Network WBS was undertaken between November 2018 and April 2019 and consisted of nine full-day surveys[1] (sunrise to sunset) by a team of five ornithologists.

The network of *ex-situ* inland feeding sites to be surveyed was determined based on the peak counts of LBBG recorded over the most recent six seasons of available data, i.e. information presented in Scott Cawley Ltd. (2017a) for the seasons 2016/17, 2015/16, 2014/15, 2013/14 & 2012/13, and information presented in Benson (2009) for the season 2008/09. This network of sites was divided into three "priority" groups. Sites which had records of LBBG of ≥3 of the six seasons, and/or in internationally important numbers (i.e. greater than the 1% international population estimate of 400), were designated as *Priority 1*. Sites which had records of LBBG of ≤2 of the six seasons, and/or in numbers less than the 1% international estimate, were designated as *Priority 2*. Additional sites for which there were no direct records of LBBG over the six seasons of available data were designated as *Priority 3*.

This network of sites was divided into five geographically separate groups with each surveyor being assigned one group of sites for each day of surveying. Surveys were completed from dawn to dusk on each day of surveying. Each surveyor visited as many sites in their group as possible on each day, with sites being visited on more than one occasion on most surveying days, and priority given to "*Priority 1*" sites. The key survey information recorded at each site included:

- The numbers and species of all wintering birds present at the site;
- Codes of any colour ringed LBBG identified; and
- Presence/absence of geese droppings within the site.

[1] 26th November 2018; 18th December 2018; 7th January 2019; 22nd January 2019; 13th February 2019; 26th February 2019; 15th March 2019; 26th March 2019; and 9th April 2019.

Each of the five field surveyors had all of the following equipment on each day of surveying:

- Binoculars (*Vortex DiamondBack* 8x42 or equivalent);
- Telescope (*Opticron ES 80 v4* or equivalent);
- Copies of the Field Survey Form; and
- Area map covering the respective Group (1-5) of survey sites.

The number of birds present was predominantly counted using binoculars, with a telescope being used in order to identify any colour-ringed LBBG present and to record the ring combinations. All data was recorded on the field survey form.

St. Anne's Park was divided into 4no. individual *sub*-sites for the 2018/19 surveys. It was decided that the entire park was too large to be treated as one individual site, as not all sections of the park could be visible to the surveyor at any one time. The park was divided into the following four sub-sites: St. Anne's (Pitches 1-7), St. Anne's (Pitches 17-35), St. Anne's (Pitches 9-16) and St. Anne's (Southern Hill).

2.3.2.2 St. Paul's Site-Specific Wintering Bird Survey 2019

The purpose of the St. Paul's Site Specific WBS (St. Paul's SS WBS) was to determine the usage of St. Paul's by wintering SCI species during the 2018/19 season.

The surveys were completed in the form of once-weekly 2-hour visits to the St. Paul's site by one surveyor. The 2-hour surveys were completed on 14 dates[2] between January and April 2019.

The key survey information recorded during each of the 14 surveys included:

- The numbers and species of all wintering birds present at the site;
- Codes of any colour-ringed LBBG identified;
- Presence/absence of geese droppings within the site; and
- Location of any birds recorded on gridded field maps covering the proposed development site.

Each field surveyor had the following equipment on each day of surveying:

- Binoculars (Vortex *DiamondBack* 8x42);
- Telescope (*Opticron ES 80 v4*);
- Copies of the St. Paul's Field Survey Form; and
- Gridded field map of St. Paul's sites.

The number of birds present was predominantly counted using binoculars, with a telescope being used in order to identify any colour-ringed LBBG present and to record the ring combinations.

[2] 9th January 2019; 15th January 2019; 23rd January 2019; 1st February 2019; 8th February 2019; 12th February 2019; 20th February 2019; 1st March 2019; 7th March 2019; 12th March 2019; 22nd March 2019; 29th March 2019; 4th April 2019; and 12th April 2019.

3 STAGE 1 SCREENING

3.1 Management of Natura 2000 Sites

The construction and operation of the proposed residential development at St. Paul's College, Sybil Hill, Raheny, Dublin 5 (the proposed development) is not directly connected with or necessary to the management of Natura 2000 sites in Co. Dublin or elsewhere.

3.2 Description of Project

3.2.1 Project Description

The development will consist of the construction of a residential development set out in 9 no. blocks, ranging in height from 5 to 9 storeys accommodating 657 no. apartments, residential tenant amenity spaces and a crèche. At basement level the site will accommodate car parking spaces, bicycle parking, storage, services and plant areas. Landscaping will include extensive communal amenity areas, and a proposed significant area of public open space. The proposed development also includes for the widening and realignment of an existing vehicular access onto Sybil Hill Road and the demolition of an existing pre-fab building to facilitate the construction of an access road with from Sybil Hill Road between Sybil Hill House (a Protected Structure) and St Paul's College incorporating upgraded accesses to Sybil Hill House and St Paul's College and a proposed pedestrian crossing on Sybil Hill Road. The proposed development also includes for the laying of a foul water sewer in Sybil Hill Road and the routing of surface water discharge from the site via St. Anne's Park to the Naniken River and the demolition and reconstruction of existing pedestrian stream crossing in St. Anne's Park with integral surface water discharge to Naniken River.

3.2.2 Existing Environment

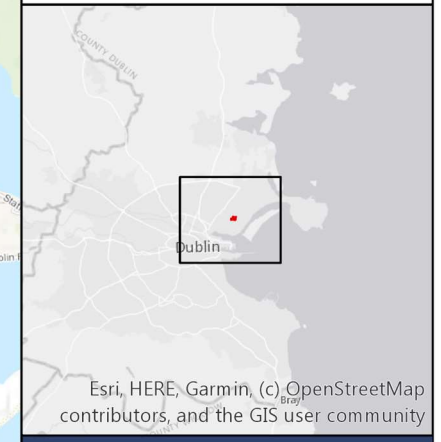
The proposed development site is located to the east of St. Paul's College and is accessed via Sybill Hill Road (R808) Raheny, Dublin 5. St. Anne's Park borders the site to the north, east and south. The site is bordered to the west by St. Paul's College, Sybil Hill House and some residential dwellings. The site covers approximately 6.4ha and is situated on land zoned as *Zone Z15: Community and Institutional Resource Lands (Education, Recreation, Community, Green Infrastructure and Health)*. The proposed site consists of a large area of amenity grassland in the form of several sports pitches located to the east of St. Pauls College and is bordered to the north, east and south by tree lines and hedgerows.

Dublin 5 and the wider area are located within the *Dublin* groundwater body. The overall status of this waterbody is recorded as *Good*. The groundwater rock units underlying the area are classified as *Dinantian Upper Impure Limestones* and the sub-soil at the site is classified as both *man-made* and *Limestone till (Carboniferous)*. The site area is located on a *locally important* aquifer with groundwater vulnerability in the area listed as *Low*. (GSI 2019).

The proposed development site is located within the Mayne River sub-catchment (*Mayne_SC_010*) and the *Santry_020* sub-basin. The Naniken river (*EPA code: 09N04*) flows approximately 100m to the north of the proposed development site, within St. Anne's Park. The watercourse flows for *c.*1.7km from where it exits the culvert under the Howth Road, to where it enters the south lagoon at North Bull Island. (EPA 2019).

Legend

Site Outline



Project

Proposed Residential Development at St. Paul's College, Sybil Hill, Raheny, Dublin 5

Client

CREKAV TRADING GP LIMITED

Title

Figure 2: Site Location

enviroguide consulting
a: 3D Core C, Block 71, The Plaza Park West, Dublin 12 D12F9TN
w: www.enviroguide.ie
e: info@enviroguide.ie
t: +353 (0)1 565 4730

Drawn by: LG	**Projection:** IRENET95 Irish Transverse Mercator
Checked : JD	
Date: 09/09/2019	**Scale:** 1:45,015 @A4

Notes:

Site boundaries shown are for illustration purposes only and do not represent legal or exact boundaries.

Legend

Site Outline

Project

Proposed Residential Development at St. Paul's College, Sybil Hill, Raheny, Dublin 5

Client

CREKAV TRADING GP LIMITED

Title

Figure 3: Site Layout

enviroguide consulting
a 3D Core C, Block 71, The Plaza Park West, Dublin 12 D12F9TN
w www.enviroguide.ie
e info@enviroguide.ie
t +353 (0)1 565 4730

Drawn by: LG	**Projection:** IRENET95 Irish Transverse Mercator
Checked : JD	
Date: 09/09/2019	**Scale:** 1:3,097 @A4

Notes:

Site boundaries shown are for illustration purposes only and do not represent legal or exact boundaries.

3.3 Identification of Relevant Natura 2000 Sites

In order to identify potentially affected Natura 2000 sites using the guidelines set out by DEHLG (2009), the precautionary principle was adopted and all SPAs, and SACs within a 15km distance radius of the proposed development were included in the zone of influence (ZOI). Natura 2000 sites outside of this 15km radius are either;

(a) located a considerable physical distance inland; This intervening distance is considered sufficient in order 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 phases and associated emissions; potential increased lighting emitted from the site during construction and operational phases; and increased human presence at the site during construction and operational phases or

(b) located within different surface water catchment zones to the proposed development. This marine buffer is considered sufficient in order to exclude the possibility of significant effects on sites outside this radius (and within this radius) arising from potential surface water discharges containing sediment, silts and/or pollutants into the Naniken river during the construction and/or operational phases of the proposed development. There is a large marine water buffer that exists between the outflow of the Naniken river and these Natura 2000 sites over which any sediment and/or pollutants released during the construction of operation phases would be diluted to non-discernible levels.

Eight SACs and eight SPAs are located within the precautionary ZOI of the proposed development site. The name of each site, corresponding code and qualifying interests are detailed in Table 1 below. The distances to each site listed below are taken from the nearest possible point of the proposed development site boundary to nearest possible point of each Natura 2000 site.

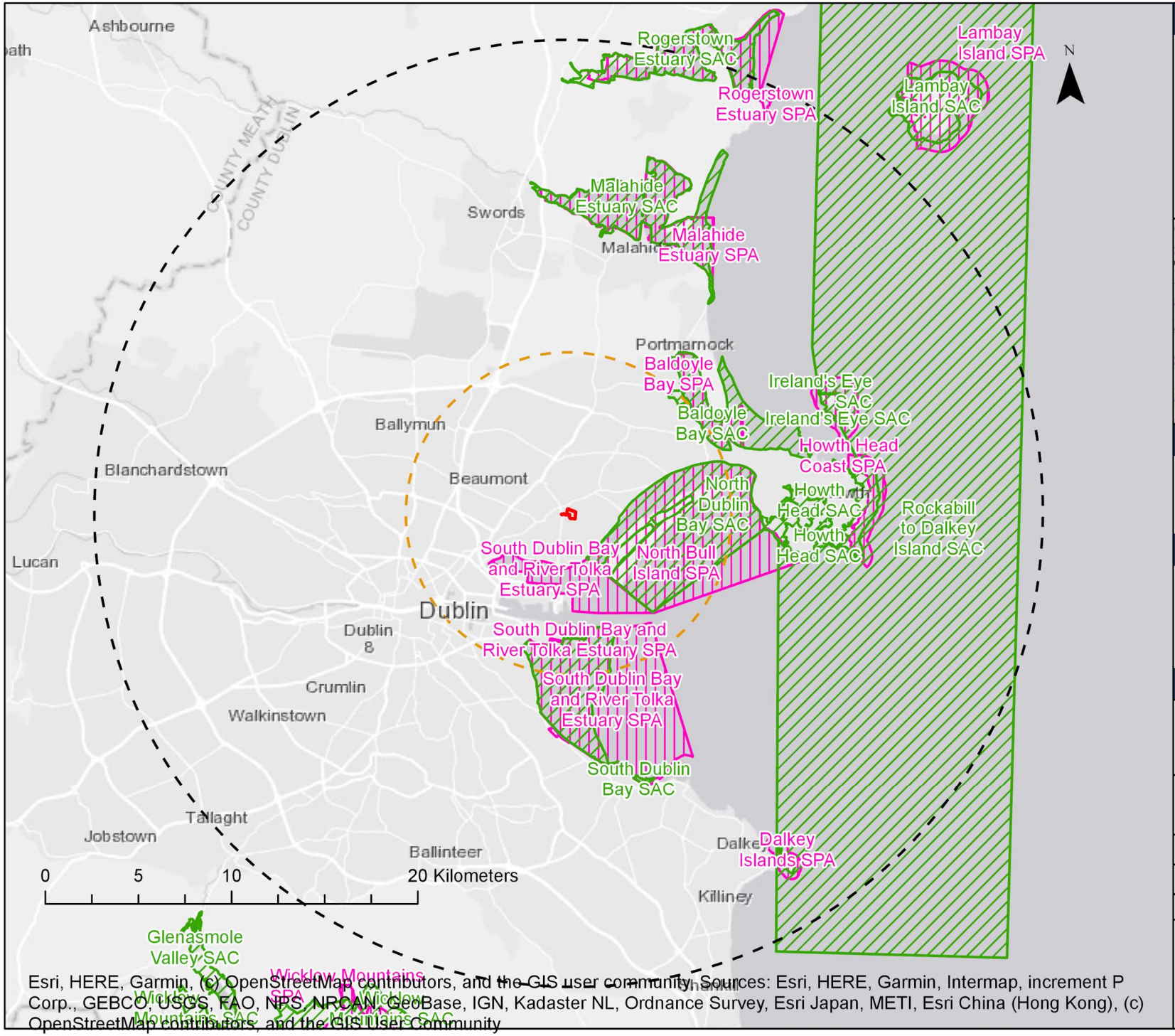
TABLE 1. NATURA 2000 SITES WITHIN THE PRECAUTIONARY ZONE OF INFLUENCE OF THE PROPOSED DEVELOPMENT SITE.

Site Code	Site Name	Qualifying Interests	Distance to Site
Special Areas of Conservation (SAC)			
000206	North Dublin Bay SAC	- [1140] Tidal Mudflats and Sandflats - [1210] Annual Vegetation of Drift Lines - [1310] Salicornia Mud - [1330] Atlantic Salt Meadows - [1410] Mediterranean Salt Meadows - [2110] Embryonic Shifting Dunes - [2120] Marram Dunes (White Dunes) - [2130] Fixed Dunes (Grey Dunes)* - [2190] Humid Dune Slacks - [1395] Petalwort (*Petalophyllum ralfsii*)	1.15km

000210	South Dublin Bay SAC	- [1140] Tidal Mudflats and Sandflats - [1210] Annual vegetation of drift lines - [1310] *Salicornia* and other annuals colonising mud and sand - [2110] Embryonic shifting dunes	3.51km
000199	Baldoyle Bay SAC	- [1140] Tidal Mudflats and Sandflats - [1310] *Salicornia* Mud - [1330] Atlantic Salt Meadows - [1410] Mediterranean Salt Meadows	4.62km
000202	Howth Head SAC	- [1230] Vegetated Sea Cliffs - [4030] Dry Heath	5.92km
003000	Rockabill to Dalkey Island SAC	- [1170] Reefs - [1351] Harbour Porpoise (*Phocoena phocoena*)	6.57km
000205	Malahide Estuary SAC	- [1140] Tidal Mudflats and Sandflats - [1310] *Salicornia* Mud - [1330] Atlantic Salt Meadows - [1410] Mediterranean Salt Meadows - [2120] Marram Dunes (White Dunes) - [2130] Fixed Dunes (Grey Dunes)*	7.78km
002193	Ireland's Eye SAC	- [1220] Perennial Vegetation of Stony Banks - [1230] Vegetated Sea Cliffs	8.54km
000208	Rogerstown Estuary SAC	- [1130] Estuaries - [1140] Tidal Mudflats and Sandflats - [1310] *Salicornia* Mud - [1330] Atlantic Salt Meadows - [1410] Mediterranean Salt Meadows - [2120] Marram Dunes (White Dunes) - [2130] Fixed Dunes (Grey Dunes)*	13.48km
Special Protection Areas (SPA)			
004006	North Bull Island SPA	- [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*) [wintering] - [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]	1.13km

		- [A162] Redshank (*Tringa totanus*) [wintering] - [A169] Turnstone (*Arenaria interpres*) [wintering] - [A179] Black-headed Gull (*Chroicocephalus ridibundus*) [wintering] - [A999] Wetland and Waterbirds	
004024	South Dublin Bay and River Tolka Estuary SPA	- [A046] Light-bellied Brent Goose (*Branta bernicla hrota*) [wintering] - [A130] Oystercatcher (*Haematopus ostralegus*) [wintering] - [A137] Ringed Plover (*Charadrius hiaticula*) [wintering] - [A141] Grey Plover (*Pluvialis squatarola*) [wintering] - [A143] Knot (*Calidris canutus*) [wintering] - [A144] Sanderling (*Calidris alba*) [wintering] - [A149] Dunlin (*Calidris alpina*) [wintering] - [A157] Bar-tailed Godwit (*Limosa lapponica*) [wintering] - [A162] Redshank (*Tringa totanus*) [wintering] - [A179] Black-headed Gull (*Chroicocephalus ridibundus*) [wintering] - [A192] Roseate Tern (*Sterna dougallii*) [passage] - [A193] Common Tern (*Sterna hirundo*) [breeding] [passage] - [A194] Arctic Tern (*Sterna paradisaea*) [breeding [passage] - [A999] Wetland and Waterbirds	1.36km
004016	Baldoyle Bay SPA	- [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	4.75km
004117	Ireland's Eye SPA	- [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]	8.37km
004025	Malahide Estuary SPA	- [A005] Great Crested Grebe (*Podiceps cristatus*) [wintering] - [A046] Light-bellied Brent Goose (*Branta bernicla hrota*) [wintering] - [A048] Shelduck (*Tadorna tadorna*) [wintering] - [A054] Pintail (*Anas acuta*) [wintering] - [A067] Goldeneye (*Bucephala clangula*) [wintering]	8.76km

		- [A069] Red-breasted Merganser (*Mergus serrator*) [wintering] - [A130] Oystercatcher (*Haematopus ostralegus*) [wintering] - [A140] Golden Plover (*Pluvialis apricaria*) [wintering] - [A141] Grey Plover (*Pluvialis squatarola*) [wintering] - [A143] Knot (*Calidris canutus*) [wintering] - [A149] Dunlin (*Calidris alpina*) [wintering] - [A156] Black-tailed Godwit (*Limosa limosa*) [wintering] - [A157] Bar-tailed Godwit (*Limosa lapponica*) [wintering] - [A162] Redshank (*Tringa totanus*) [wintering] - [A999] Wetland and Waterbirds	
004113	Howth Head Coast SPA	- [A188] Kittiwake (*Rissa tridactyla*) [breeding]	8.82km
004172	Dalkey Islands SPA	- [A192] Roseate Tern (*Sterna dougallii*) [passage] [breeding] - [A193] Common Tern (*Sterna hirundo*) [passage] [breeding] - [A194] Arctic Tern (*Sterna paradisaea*) [passage] [breeding]	12.02km
004015	Rogerstown Estuary SPA	- [A043] Greylag Goose (*Anser anser*) [wintering] - [A046] Light-bellied Brent Goose (*Branta bernicla hrota*) [wintering] - [A048] Shelduck (*Tadorna tadorna*) [wintering] [breeding] - [A056] Shoveler (*Anas clypeata*) [wintering] - [A130] Oystercatcher (*Haematopus ostralegus*) [wintering] - [A137] Ringed Plover (*Charadrius hiaticula*) [wintering] - [A141] Grey Plover (*Pluvialis squatarola*) [wintering] - [A143] Knot (*Calidris canutus*) [wintering] - [A149] Dunlin (*Calidris alpina*) [wintering] - [A156] Black-tailed Godwit (*Limosa limosa*) [wintering] [passage] - [A162] Redshank (*Tringa totanus*) [wintering] - [A999] Wetland and Waterbirds	13.70km



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Legend

- Site boundary
- 15km radius
- 5km radius
- Special Area of Conservation
- Special Protection Areas

Project

Appropriate Assessment Screening Report for development at St. Paul's, Raheny, Dublin 5

Client

CREKAV TRADING GP LIMITED

Title

Figure 4: Natura 2000 sites within 15km of the proposed development

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Drawn by: DW	Projection: WGS 1984 Web Mercator Auxiliary Sphere
Checked : JD	
Date: 16/04/2019	Scale: 1:275,000 @A4

Notes:
Site boundaries shown are for illustration purposes only and do not represent legal or exact boundaries.

3.4 Identification and Assessment of Potential Impacts

Information available on the Natura 2000 sites within the identified precautionary zone of influence was reviewed and assessed in order to establish whether it can be excluded on the basis of objective information that the construction and operation of the proposed development will have an effect on any Natura 2000 site, individually or together with other plans and projects.

The identification of likely significant effects on Natura 2000 sites considered all potential linkages from both the construction and operational phases of the proposed development. The following elements of the proposed development were assessed for their potential for likely significant effects on Natura 2000 sites.

- **Construction Phase** (estimated duration: 48 months)
  - Surface water run-off containing silt, sediments and/or other pollutants into the Naniken river;
  - 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;
  - Increased human presence in the vicinity as a result of construction activity;
  - Habitat loss within the site as a result of the construction of the proposed development;
  - Potential for the spread of invasive species during construction activity; and
  - Demolition of existing site structures.

- **Operational Phase** (estimated duration: indefinite)
  - Surface water run-off containing silt, sediments and/or other pollutants into the Naniken river;
  - Surface water drainage from proposed development site;
  - Increased noise during the operational phase;
  - Dust and air emissions from increased traffic volumes;
  - Increased lighting in the vicinity emitted from the proposed development;
  - Increased human presence in the vicinity as a result proposed residential development; and
  - Increased wastewater being sent to Ringsend Wastewater Treatment Plant during the operational phase of the proposed development.

The features of the proposed development that have the potential to directly or indirectly impact on the qualifying interests and/or conservation objectives of the 8 SACs and 8 SPAs that are located within the precautionary zone of influence (15km) of the proposed development site are detailed in Table 2. This assessment framework is taken from the best practice guidelines issued by the European Commission, "Assessment of plans and projects significantly affecting Natura 2000 sites – Methodological guidance" (EC, 2001).

TABLE 2. IDENTIFICATION AND ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS ON NATURA 2000 SITES WITHIN THE PRECAUTIONARY ZONE OF INFLUENCE OF THE PROPOSED DEVELOPMENT.

Natura 2000 Site	Potential for Likely Significant Effects on Natura 2000 Site	Further Assessment Required
Special Areas of Conservation (SAC)		
North Dublin Bay SAC	**Potential for likely significant effects on SAC due to:** **Possible discharge/run-off of surface waters containing sediment, silt, oils and/or other pollutants during the construction phase of the proposed development into the Naniken river.** - The Naniken river (EPA code: 09N04) flows approximately 100m to the north of the proposed development site, within St. Anne's Park. The watercourse flows for *c*.1.7km from where it exits the culvert under the Howth Road, to where it enters the South Lagoon at North Bull Island and subsequently forms a hydrological connection with the SAC. There is a potential for surface waters containing silt, oils and or other pollutants generated during the construction phase of the proposed development to enter the Naniken river and subsequently the SAC. It is therefore concluded that, in the absence of mitigation measures or further analysis, the possibility of significant effects on some or all of the qualifying interests of North Dublin Bay SAC cannot be excluded in view of the relevant conservation objectives.	**Yes**
	No possibility of likely significant effects on SAC due to: **The insignificant increase in the loading at Ringsend Wastewater Treatment Plant as a result of the proposed development.** The increase of a maximum load of 1314 Population Equivalent (PE) at the facility as a result of the proposed development, assuming each PE unit was not previously supported by the WwTP, is considered to be an insignificant increase in terms of the overall scale of the facility. This potential maximum increased load of 1314 PE does not have the capacity to alter the effluent released from the WwTP to such an extent as to result in likely significant effects on this SAC. In addition, upgrade works are currently on-going at Ringsend WwTP to increase the capacity of the facility from 1.6 million PE to 2.4 million PE.	

	This will result in an overall reduction in the final effluent discharge of a number of parameters from the facility including BOD, suspended soils, ammonia, DIN and MRP. (Irish Water, 2018).	
South Dublin Bay SAC	**Potential for likely significant effects on SAC due to:** **Possible discharge/run-off of surface waters containing sediment, silt, oils and/or other pollutants during the construction phase of the proposed development into the Naniken river.** - The Naniken river (EPA code: 09N04) flows approximately 100m to the north of the proposed development site, within St. Anne's Park. The watercourse flows for *c*.1.7km from where it exits the culvert under the Howth Road, to where it enters the South Lagoon at North Bull Island and subsequently forms a hydrological connection with the SAC. There is a potential for surface waters containing silt, oils and or other pollutants generated during the construction phase of the proposed development to enter the Naniken river and subsequently the SAC. It is therefore concluded that, in the absence of mitigation measures or further analysis, the possibility of significant effects on some or all of the qualifying interests of South Dublin Bay SAC cannot be excluded in view of the relevant conservation objectives.	**Yes**
	No possibility of likely significant effects on SAC due to: **The insignificant increase in the loading at Ringsend Wastewater Treatment Plant as a result of the proposed development.** The increase of a maximum load of 1314 Population Equivalent (PE) at the facility as a result of the proposed development, assuming each PE unit was not previously supported by the WwTP, is considered to be an insignificant increase in terms of the overall scale of the facility. This potential maximum increased load of 1314 PE does not have the capacity to alter the effluent released from the WwTP to such an extent as to result in likely significant effects on this SAC. In addition, upgrade works are currently on-going at Ringsend WwTP to increase the capacity of the facility from 1.6 million PE to 2.4 million PE by 2028. This will result in an overall reduction in the final effluent discharge of a number of parameters from the facility including BOD, suspended soils, ammonia, DIN and MRP.(Irish Water, 2018).	

Baldoyle Bay SAC	**No possibility of likely significant effects on SAC due to:** **The intervening minimum distance of *c.*4.7km between the proposed development and the SAC.** - This intervening distance is considered sufficient in order 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 phases and associated emissions; potential increased lighting emitted from the site during construction and operational phases; and increased human presence at the site during construction and operational phases. **Both the intervening downstream distance of *c.*1.7km between where the Naniken river passes within *c.*100m of the proposed development site to where the watercourse outflows to the South Lagoon at North Bull Island and the considerable marine buffer / dilution factor that exists between the outflow of the Naniken river and the SAC.** - This buffer is considered sufficient in order to exclude the possibility of significant effects on the SAC arising from potential surface water discharges containing sediment, silts and/or pollutants into the Naniken river during the construction and/or operational phases of the proposed development. There is a large marine water buffer that exists between the outflow of the Naniken river and the SAC over which any sediment and/or pollutants released during the construction of operation phases would be diluted to non-discernible levels. (see O'Higgins & Wilson 2005) **The insignificant increase in the loading at Ringsend Wastewater Treatment Plant as a result of the proposed development.** - The increase of a maximum load of 1314 Population Equivalent (PE) at the facility as a result of the proposed development, assuming each PE unit was not previously supported by the WwTP, is considered to be an insignificant increase in terms of the overall scale of the facility. This potential maximum increased load of 1314 PE does not have the capacity to alter the effluent released from the WwTP to such an extent as to result in likely significant effects on this SAC. In addition, upgrade works are currently on-going at Ringsend WwTP to increase the capacity of the facility from 1.6 million PE to 2.4 million PE by 2028. This will result in an overall reduction in the final effluent discharge of a number of parameters from the facility including BOD, suspended soils, ammonia, DIN and MRP (Irish Water, 2018).	No
Howth Head SAC	**No possibility of likely significant effects on SAC due to:** **The intervening minimum distance of *c.*5.9km between the proposed development and the SAC.** - This intervening distance is considered sufficient in order 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 phases and associated emissions; potential increased lighting emitted from the site during construction and operational phases; and increased human presence at the site during construction and operational phases.	No

	The lack of any identified hydrological connections between the proposed development and the SAC. - The proposed development is located within a different surface water catchment zone to the SAC and there is no pathway for any potential surface water discharges containing sediment, silts and/or pollutants during the construction and/or operational phases of the proposed development.	
Rockabill to Dalkey Island SAC	**No possibility of likely significant effects on SAC due to:** **The intervening minimum distance of *c.*6.6km between the proposed development and the SAC.** - This intervening distance is considered sufficient in order 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 phases and associated emissions; potential increased lighting emitted from the site during construction and operational phases; and increased human presence at the site during construction and operational phases. **Both the intervening downstream distance of *c.*1.7km between where the Naniken river passes within *c.*100m of the proposed development site to where the watercourse outflows to the South Lagoon at North Bull Island and the considerable marine buffer / dilution factor that exists between the outflow of the Naniken river and the SAC.** - This buffer is considered sufficient in order to exclude the possibility of significant effects on the SAC arising from potential surface water discharges containing sediment, silts and/or pollutants into the Naniken river during the construction and/or operational phases of the proposed development. There is a large marine water buffer that exists between the outflow of the Naniken river and the SAC over which any sediment and/or pollutants released during the construction of operation phases would be diluted to non-discernible levels. **The insignificant increase in the loading at Ringsend Wastewater Treatment Plant as a result of the proposed development.** - The increase of a maximum load of 1314 Population Equivalent (PE) at the facility as a result of the proposed development, assuming each PE unit was not previously supported by the WwTP, is considered to be an insignificant increase in terms of the overall scale of the facility. This potential maximum increased load of 1314 PE does not have the capacity to alter the effluent released from the WwTP to such an extent as to result in likely significant effects on this SAC. In addition, upgrade works are currently on-going at Ringsend WwTP to increase the capacity of the facility from 1.6 million PE to 2.4 million PE by 2028. This will result in an overall reduction in the final effluent discharge of a number of parameters from the facility including BOD, suspended soils, ammonia, DIN and MRP (Irish Water, 2018).	No

Malahide Estuary SAC	**No possibility of likely significant effects on SAC due to:** **The intervening minimum distance of *c.*7.9km between the proposed development and the SAC.** - This intervening distance is considered sufficient in order 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 phases and associated emissions; potential increased lighting emitted from the site during construction and operational phases; and increased human presence at the site during construction and operational phases. **Both the intervening downstream distance of *c.*1.7km between where the Naniken river passes within *c.*100m of the proposed development site to where the watercourse outflows to the South Lagoon at North Bull Island and the considerable marine buffer / dilution factor that exists between the outflow of the Naniken river and the SAC.** - This buffer is considered sufficient in order to exclude the possibility of significant effects on the SAC arising from potential surface water discharges containing sediment, silts and/or pollutants into the Naniken river during the construction and/or operational phases of the proposed development. There is a large marine water buffer that exists between the outflow of the Naniken river and the SAC over which any sediment and/or pollutants released during the construction of operation phases would be diluted to non-discernible levels. **The insignificant increase in the loading at Ringsend Wastewater Treatment Plant as a result of the proposed development.** - The increase of a maximum load of 1314 Population Equivalent (PE) at the facility as a result of the proposed development, assuming each PE unit was not previously supported by the WwTP, is considered to be an insignificant increase in terms of the overall scale of the facility. This potential maximum increased load of 1314 PE does not have the capacity to alter the effluent released from the WwTP to such an extent as to result in likely significant effects on this SAC. In addition, upgrade works are currently on-going at Ringsend WwTP to increase the capacity of the facility from 1.6 million PE to 2.4 million PE by 2028. This will result in an overall reduction in the final effluent discharge of a number of parameters from the facility including BOD, suspended soils, ammonia, DIN and MRP (Irish Water, 2018).	No
Ireland's Eye SAC	**No possibility of likely significant effects on SAC due to:** **The intervening minimum distance of *c.*8.6km between the proposed development and the SAC.** - This intervening distance is considered sufficient in order 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 phases and associated emissions; potential increased lighting emitted from the site during construction and operational phases; and increased human presence at the site during construction and operational phases.	No

	The lack of any identified hydrological connections between the proposed development and the SAC. - The proposed development is located within a different surface water catchment zone to the SAC and there is no pathway for any potential surface water discharges containing sediment, silts and/or pollutants during the construction and/or operational phases of the proposed development.	
Rogerstown Estuary SAC	**No possibility of likely significant effects on SAC due to:** **The intervening minimum distance of *c.*13.6km between the proposed development and the SAC.** - This intervening distance is considered sufficient in order 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 phases and associated emissions; potential increased lighting emitted from the site during construction and operational phases; and increased human presence at the site during construction and operational phases. **Both the intervening downstream distance of *c.*1.7km between where the Naniken river passes within *c.*100m of the proposed development site to where the watercourse outflows to the South Lagoon at North Bull Island and the considerable marine buffer / dilution factor that exists between the outflow of the Naniken river and the SAC.** - This buffer is considered sufficient in order to exclude the possibility of significant effects on the SAC arising from potential surface water discharges containing sediment, silts and/or pollutants into the Naniken river during the construction and/or operational phases of the proposed development. There is a large marine water buffer that exists between the outflow of the Naniken river and the SAC over which any sediment and/or pollutants released during the construction of operation phases would be diluted to non-discernible levels. **The insignificant increase in the loading at Ringsend Wastewater Treatment Plant as a result of the proposed development.** - The increase of a maximum load of 1314 Population Equivalent (PE) at the facility as a result of the proposed development, assuming each PE unit was not previously supported by the WwTP, is considered to be an insignificant increase in terms of the overall scale of the facility. This potential maximum increased load of 1314 PE does not have the capacity to alter the effluent released from the WwTP to such an extent as to result in likely significant effects on this SAC. In addition, upgrade works are currently on-going at Ringsend WwTP to increase the capacity of the facility from 1.6 million PE to 2.4 million PE by 2028. This will result in an overall reduction in the final effluent discharge of a number of parameters from the facility including BOD, suspended soils, ammonia, DIN and MRP (Irish Water, 2018).	No

Special Protection Areas (SPA)		
North Bull Island SPA	**Potential for likely significant effects on SPA due to:** **Possibility of disturbance and/or displacement of qualifying interests during the construction and operational phases of the proposed development, which encompasses a known *ex-situ* feeding site for qualifying interests of this SPA (Benson, 2009; NPWS, 2014a & Scott Cawley Ltd., 2017a).** - The construction and operation of the proposed development have the potential to cause disturbance and/or displacement to qualifying interests of this SPA which have been recorded at the St. Paul's site (i.e. Light-bellied Brent Goose, Curlew, Oystercatcher, Black-tailed Godwit, and Black-headed Gull) due to the alteration and resulting loss of *c.*6ha from a known *ex-situ* inland feeding site as a result of the proposed development. **Possible discharge/run-off of surface waters containing sediment, silt, oils and/or other pollutants during the construction phase of the proposed development into the Naniken river.** - The Naniken river (EPA code: 09N04) flows approximately 100m to the north of the proposed development site, within St. Anne's Park. The watercourse flows for *c.*1.7km from where it exits the culvert under the Howth Road, to where it enters the South Lagoon at North Bull Island and subsequently forms a hydrological connection with the SPA. There is a potential for surface waters containing silt, oils and or other pollutants generated during the construction phase of the proposed development to enter the Naniken river and subsequently the SPA. It is therefore concluded that, in the absence of mitigation measures or further analysis, the possibility of significant effects on some or all of the qualifying interests of North Bull Island SPA cannot be excluded in view of the relevant conservation objectives.	**Yes**
South Dublin Bay and River Tolka Estuary SPA	**Potential for likely significant effects on SPA due to:** **Possibility of disturbance and/or displacement of qualifying interests during the construction and operational phases of the proposed development, which encompasses a known *ex-situ* feeding site for qualifying interests of this SPA (Benson, 2009; NPWS, 2014a & Scott Cawley Ltd., 2017a).** - The construction and operation of the proposed development have the potential to cause disturbance and/or displacement to qualifying interests of this SPA which have been recorded at the St. Paul's site (i.e. Light-bellied Brent Goose and Oystercatcher) due to the alteration and resulting loss of *c.*6ha from a known *ex-situ* inland feeding site as a result of the proposed development.	**Yes**

	Possible discharge/run-off of surface waters containing sediment, silt, oils and/or other pollutants during the construction phase of the proposed development into the Naniken river. - The Naniken river (EPA code: 09N04) flows approximately 100m to the north of the proposed development site, within St. Anne's Park. The watercourse flows for *c*.1.7km from where it exits the culvert under the Howth Road, to where it enters the South Lagoon at North Bull Island and subsequently forms a hydrological connection with the SPA. There is a potential for surface waters containing silt, oils and or other pollutants generated during the construction phase of the proposed development to enter the Naniken river and subsequently the SPA. It is therefore concluded that, in the absence of mitigation measures or further analysis, the possibility of significant effects on some or all of the qualifying interests of South Dublin Bay and River Tolka Estuary SPA cannot be excluded in view of the relevant conservation objectives.	
Baldoyle Bay SPA	**Potential for likely significant effects on SPA due to:** **Possibility of disturbance and/or displacement of qualifying interests during the construction and operational phases of the proposed development, which encompasses a known *ex-situ* feeding site for qualifying interests of this SPA (Benson, 2009; NPWS, 2014a & Scott Cawley Ltd., 2017a).** - The construction and operation of the proposed development have the potential to cause disturbance and/or displacement to qualifying interests of this SPA which have been recorded at the St. Paul's site (i.e. Light-bellied Brent Goose) due to the alteration and resulting loss of *c*.6ha from a known *ex-situ* inland feeding site as a result of the proposed development. It is therefore concluded that, in the absence of mitigation measures or further analysis, the possibility of significant effects on some or all of the qualifying interests of Baldoyle Bay SPA cannot be excluded in view of the relevant conservation objectives.	**Yes**
Ireland's Eye SPA	**No possibility of likely significant effects on SPA due to:** **The intervening minimum distance of *c*.8.4km between the proposed development and the SPA.** - This intervening distance is considered sufficient in order 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 phases and associated emissions; potential increased lighting emitted from the site during construction and operational phases; and increased human presence at the site during construction and operational phases.	No

	Both the intervening downstream distance of *c.*1.7km between where the Naniken river passes within *c.*100m of the proposed development site to where the watercourse outflows to the South Lagoon at North Bull Island and the considerable marine buffer / dilution factor that exists between the outflow of the Naniken river and the SPA. - This buffer is considered sufficient in order to exclude the possibility of significant effects on the SPA arising from potential surface water discharges containing sediment, silts and/or pollutants into the Naniken river during the construction and/or operational phases of the proposed development. There is a large marine water buffer that exists between the outflow of the Naniken river and the SPA over which any sediment and/or pollutants released during the construction of operation phases would be diluted to non-discernible levels. **The insignificant increase in the loading at Ringsend Wastewater Treatment Plant as a result of the proposed development.** - The increase of a maximum load of 1314 Population Equivalent (PE) at the facility as a result of the proposed development, assuming each PE unit was not previously supported by the WwTP, is considered to be an insignificant increase in terms of the overall scale of the facility. This potential maximum increased load of 1314 PE does not have the capacity to alter the effluent released from the WwTP to such an extent as to result in likely significant effects on this SPA. In addition, upgrade works are currently on-going at Ringsend WwTP to increase the capacity of the facility from 1.6 million PE to 2.4 million PE by 2028. This will result in an overall reduction in the final effluent discharge of a number of parameters from the facility including BOD, suspended soils, ammonia, DIN and MRP (Irish Water, 2018). **The lack of suitable habitat for qualifying interests of the SPA within, or within close proximity, to the proposed development.** - The proposed development site is primarily composed of managed and unmanaged amenity grassland. These are not suitable breeding, roosting, staging or foraging habitats for any of the 5 species listed as qualifying interests of this SPA.	
Malahide Estuary SPA	**Potential for likely significant effects on SPA due to:** **Possibility of disturbance and/or displacement of qualifying interests during the construction and operational phases of the proposed development, which encompasses a known *ex-situ* feeding site for qualifying interests of this SPA (Benson, 2009; NPWS, 2014a & Scott Cawley Ltd., 2017a).** - The construction and operation of the proposed development have the potential to cause disturbance and/or displacement to qualifying interests of this SPA which have been recorded at the St. Paul's site (i.e. Light-bellied Brent Goose, Oystercatcher and Black-tailed Godwit) due to the alteration and resulting loss of *c.*6ha from a known *ex-situ* inland feeding site as a result of the proposed development.	**Yes**

	It is therefore concluded that, in the absence of mitigation measures or further analysis, the possibility of significant effects on some or all of the qualifying interests of Malahide Estuary SPA cannot be excluded in view of the relevant conservation objectives.	
Howth Head Coast SPA	**No possibility of likely significant effects on SPA due to:** **The intervening minimum distance of *c.*8.8km between the proposed development and the SPA.** - This intervening distance is considered sufficient in order 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 phases and associated emissions; potential increased lighting emitted from the site during construction and operational phases; and increased human presence at the site during construction and operational phases. **Both the intervening downstream distance of *c.*1.7km between where the Naniken river passes within *c.*100m of the proposed development site to where the watercourse outflows to the South Lagoon at North Bull Island and the considerable marine buffer / dilution factor that exists between the outflow of the Naniken river and the SPA.** - This buffer is considered sufficient in order to exclude the possibility of significant effects on the SPA arising from potential surface water discharges containing sediment, silts and/or pollutants into the Naniken river during the construction and/or operational phases of the proposed development. There is a large marine water buffer that exists between the outflow of the Naniken river and the SPA over which any sediment and/or pollutants released during the construction of operation phases would be diluted to non-discernible levels. **The insignificant increase in the loading at Ringsend Wastewater Treatment Plant as a result of the proposed development.** - The increase of a maximum load of 1314 Population Equivalent (PE) at the facility as a result of the proposed development, assuming each PE unit was not previously supported by the WwTP, is considered to be an insignificant increase in terms of the overall scale of the facility. This potential maximum increased load of 1314 PE does not have the capacity to alter the effluent released from the WwTP to such an extent as to result in likely significant effects on this SPA. In addition, upgrade works are currently on-going at Ringsend WwTP to increase the capacity of the facility from 1.6 million PE to 2.4 million PE by 2028. This will result in an overall reduction in the final effluent discharge of a number of parameters from the facility including BOD, suspended soils, ammonia, DIN and MRP (Irish Water, 2018). **The lack of suitable habitat for qualifying interests of the SPA within, or within close proximity, to the proposed development.** - The proposed development site is primarily composed of managed and unmanaged amenity grassland. These are not suitable breeding, roosting, staging or foraging habitats for qualifying interests of this SPA. Kittiwake (*Rissa tridactyla*)	No

	are pelagic surface feeders (Chivers et. al, 2012) and are therefore not considered to be at risk of disturbance/displacement as a result of the proposed development.	
Dalkey Islands SPA	**No possibility of likely significant effects on SPA due to:** **The intervening minimum distance of *c.*12.0km between the proposed development and the SPA.** - This intervening distance is considered sufficient in order 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 phases and associated emissions; potential increased lighting emitted from the site during construction and operational phases; and increased human presence at the site during construction and operational phases. **Both the intervening downstream distance of *c.*1.7km between where the Naniken river passes within *c.*100m of the proposed development site to where the watercourse outflows to the South Lagoon at North Bull Island and the considerable marine buffer / dilution factor that exists between the outflow of the Naniken river and the SPA.** - This buffer is considered sufficient in order to exclude the possibility of significant effects on the SPA arising from potential surface water discharges containing sediment, silts and/or pollutants into the Naniken river during the construction and/or operational phases of the proposed development. There is a large marine water buffer that exists between the outflow of the Naniken river and the SPA over which any sediment and/or pollutants released during the construction of operation phases would be diluted to non-discernible levels. **The insignificant increase in the loading at Ringsend Wastewater Treatment Plant as a result of the proposed development.** - The increase of a maximum load of 1314 Population Equivalent (PE) at the facility as a result of the proposed development, assuming each PE unit was not previously supported by the WwTP, is considered to be an insignificant increase in terms of the overall scale of the facility. This potential maximum increased load of 1314 PE does not have the capacity to alter the effluent released from the WwTP to such an extent as to result in likely significant effects on this SPA. In addition, upgrade works are currently on-going at Ringsend WwTP to increase the capacity of the facility from 1.6 million PE to 2.4 million PE by 2028. This will result in an overall reduction in the final effluent discharge of a number of parameters from the facility including BOD, suspended soils, ammonia, DIN and MRP (Irish Water, 2018). **The lack of suitable habitat for qualifying interests of the SPA within, or within close proximity, to the proposed development.**	No

	- The proposed development site is primarily composed of managed and unmanaged amenity grassland. These are not suitable breeding, roosting, staging or foraging habitats for qualifying interests of this SPA. The proposed development does not encompass any recorded breeding, feeding or staging sites for common, arctic or roseate tern.	
Rogerstown Estuary SPA	**Potential for likely significant effects on SPA due to:** **Possibility of disturbance and/or displacement of qualifying interests during the construction and operational phases of the proposed development, which encompasses a known *ex-situ* feeding site for qualifying interests of this SPA (Benson, 2009; NPWS, 2014a & Scott Cawley Ltd., 2017a).** - The construction and operation of the proposed development have the potential to cause disturbance and/or displacement to qualifying interests of this SPA which have been recorded at the St. Paul's site (i.e. Light-bellied Brent Goose, Oystercatcher and Black-tailed Godwit) due to the alteration and resulting loss of *c*.6ha from a known *ex-situ* inland feeding site as a result of the proposed development. It is therefore concluded that, in the absence of mitigation measures or further analysis, the possibility of significant effects on some or all of the qualifying interests of Rogerstown Estuary SPA cannot be excluded in view of the relevant conservation objectives.	**Yes**

3.4.1 In-combination Effects

The following permitted, or in-progress, developments within the vicinity of the proposed development were reviewed and considered for possible in-combination effects with the proposed development. Projects relating to extensions / alterations to existing individual residential dwellings have not been included as these projects are not considered to be of sufficient scale in order to act in-combination with the proposed development.

- **2857/18** (MKN Developments Limited) - Amendments to the permitted development (Reg. Ref. 4242/15; and as amended by Reg. Ref. 2977/17)
  - 2977/17 (MKN Developments Limited) - Amendments to the permitted development (Reg. Ref. 4242/15)
  - 4242/15 (MKN Developments Limited) - Planning permission for development at this site 0.68 hectares site at No. 1, 1A and 1B (and lands to the rear of same) Sybil Hill Road, Raheny, Dublin 5. The construction phase of this development is likely to be completed prior to the commencement of this facility and will therefore not have any impact in relation to demolition activities or discharges to water. The operational phase of this development is not expected to have any impact on Natura 2000 sites. The assessments in table 2 equally apply to this development and this site does not meet the criteria to act as an ex-situ feeding site for species of conservation interest from the SPAs under consideration.
- **3415/18** (Raheny GAA Club) - The development will consist of (i) Change of use for part of ground floor from existing clubhouse facilities to a cafe with associated external terraced seating area; (ii) change of use of existing balcony/terraced area at first floor level to new toilet facilities for lounge and bar; (iii) change of use of existing gym room at first floor level to new function room with bar facilities; (iv) introduction of recessed terraced area to front elevation which currently forms part of lounge area at first floor level; (v) including all associated additional windows and site works. This is a small development which will be of short duration for the construction phase and is sufficiently distant from the proposed St. Pauls development that the operational phase will not have any impact.
- **4231/18** (Executive Committee Raheny United FC) - Proposed first & ground floor extension to rear. This is the same as above.

The closest relevant project to the proposed development is the *Ardilaun Court* development (Reg. Ref. 2857/18) located *c.*80m to the northwest. This development is currently under construction and it is expected that this development will be completed prior to the potential commencement of the proposed development.

The proposed upgrade and extension to the Ringsend Wastewater Treatment Plant (planning reference 301798) will have a positive in-combination effect in that it will reduce the risk of impact on marine Natura 2000 sites. This project will see an increase of capacity from1.6 million PE to 2.4 PE by 2028 and the use of Aerobic Granular Sludge (AGS) technology which is an advanced nutrient removal technology that is a further development of the activated sludge process. This treatment process will consistently produce high-quality treated wastewater which can be safely discharged into Dublin Bay. (source Irish Water)

4 CONCLUSION

This Stage 1 AA Screening has been undertaken so as to ensure that the competent authority is enabled to make an informed Screening Decision whether it can be excluded on the basis of objective information that the proposed development will have an effect on any Natura 2000 site, individually or together with other plans and projects.

Based on the location, nature and duration of the proposed development and the zone of impact of potential effects, this screening assessment has concluded that the only pathways resulting in connectivity between the proposed development and Natura 2000 sites are:

- The possibility of discharge/run-off of surface waters containing sediment, silt, oils and/or other pollutants during the construction phase of the proposed development into the Naniken river, which subsequently discharges into North Bull Island's South Lagoon, and which has the potential to impact relevant qualifying interests; and
- The loss of a known *ex-situ* inland feeding site for Light-bellied Brent Goose, Curlew, Oystercatcher, Black-tailed Godwit and Black-headed Gull (Benson, 2009; NPWS, 2014a & Scott Cawley Ltd., 2017a) as a result of the construction and operation of the proposed development, which has the potential to impact relevant qualifying interests.

It has therefore been concluded on the basis of objective information that the possibility of significant effects from the proposed development on the following Natura 2000 sites cannot be ruled out the details of which are set out in Table 2:

- North Dublin Bay SAC [000206]
- South Dublin Bay SAC [000210]
- North Bull Island SPA [004006]
- South Dublin Bay and River Tolka Estuary SPA [004024]
- Baldoyle Bay SPA [004016]
- Malahide Estuary SPA [004025]
- Rogerstown Estuary SPA [004015]

Having ascertained during the AA Screening that it is not possible to exclude, as a matter of scientific certainty that the proposed development will have an effect on any Natura 2000 site, individually or together with other plans and projects a NIS has been prepared as a precautionary measure to inform and assist the competent authority in carrying out its AA

All impacts which can be screened out during this Stage 1 AA Screening have been so screened and only those which could not be screened out have been carried through to the Stage 2 assessment.

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APPENDIX 1

Site Synopses

1. North Dublin Bay SAC 000206
2. South Dublin Bay SAC 000210
3. North Bull Island SPA 004006
4. Rogerstown Estuary SPA 000415
5. Baldoyle Bay SPA 000416
6. South Dublin Bay and River Tolka SPA 004024
7. Malahide Estuary SPA 000425

SITE SYNOPSIS

Site Name: North Dublin Bay SAC

Site Code: 000206

This site covers the inner part of north Dublin Bay, the seaward boundary extending from the Bull Wall lighthouse across to the Martello Tower at Howth Head. The North Bull Island is the focal point of this site.

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):

[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*)

North Bull Island is a sandy spit which formed after the building of the South Wall and Bull Wall in the 18th and 19th centuries. It now extends for about 5 km in length and is up to 1 km wide in places. A well-developed and dynamic dune system stretches along the seaward side of the island. Various types of dunes occur, from fixed dune grassland to pioneer communities on foredunes. Marram Grass (*Ammophila arenaria*) is dominant on the outer dune ridges, with Lyme-grass (*Leymus arenarius*) and Sand Couch (*Elymus farctus*) on the foredunes. Behind the first dune ridge, plant diversity increases with the appearance of such species as Wild Pansy (*Viola tricolor*), Kidney Vetch (*Anthyllis vulneraria*), Common Bird's-foot-trefoil (*Lotus corniculatus*), Common Restharrow (*Ononis repens*), Yellow-rattle (*Rhinanthus minor*) and Pyramidal Orchid (*Anacamptis pyramidalis*). In these grassy areas and slacks, the scarce Bee Orchid (*Ophrys apifera*) occurs.

About 1 km from the tip of the island, a large dune slack with a rich flora occurs, usually referred to as the 'Alder Marsh' because of the presence of Alder trees (*Alnus glutinosa*). The water table is very near the surface and is only slightly brackish. Saltmarsh Rush (*Juncus maritimus*) is the dominant species, with Meadowsweet (*Filipendula ulmaria*) and Devil's-bit Scabious (*Succisa pratensis*) being frequent. The orchid flora is notable and includes Marsh Helleborine (*Epipactis palustris*), Common

Twayblade (*Listera ovata*), Autumn Lady's-tresses (*Spiranthes spiralis*) and Marsh Orchids (*Dactylorhiza* spp.).

Saltmarsh extends along the length of the landward side of the island. The edge of the marsh is marked by an eroding edge which varies from 20 cm to 60 cm high. The marsh can be zoned into different levels according to the vegetation types present. On the lower marsh, Glasswort (*Salicornia europaea*), Common Saltmarsh-grass (*Puccinellia maritima*), Annual Sea-blite (*Suaeda maritima*) and Greater Sea-spurrey (*Spergularia media*) are the main species. Higher up in the middle marsh Sea Plantain (*Plantago maritima*), Sea Aster (*Aster tripolium*), Sea Arrowgrass (*Triglochin maritima*) and Thrift (*Armeria maritima*) appear. Above the mark of the normal high tide, species such as Common Scurvygrass (*Cochlearia officinalis*) and Sea Milkwort (*Glaux maritima*) are found, while on the extreme upper marsh, the rushes *Juncus maritimus* and *J. gerardi* are dominant. Towards the tip of the island, the saltmarsh grades naturally into fixed dune vegetation.

The habitat 'annual vegetation of drift lines' is found in places, along the length of Dollymount Strand, with species such as Sea Rocket (*Cakile maritima*), Oraches (*Atriplex* spp.) and Prickly Saltwort (*Salsola kali*).

The island shelters two intertidal lagoons which are divided by a solid causeway. The sediments of the lagoons are mainly sands with a small and varying mixture of silt and clay. The north lagoon has an area known as the "*Salicornia* flat", which is dominated by *Salicornia dolichostachya*, a pioneer glasswort species, and covers about 25 ha. Beaked Tasselweed (*Ruppia maritima*) occurs in this area, along with some Narrow-leaved Eelgrass (*Zostera angustifolia*). Dwarf Eelgrass (*Z. noltii*) also occurs in Sutton Creek. Common Cordgrass (*Spartina anglica*) occurs in places but its growth is controlled by management. Green algal mats (*Enteromorpha* spp., *Ulva lactuca*) cover large areas of the flats during summer. These sediments have a rich macrofauna, with high densities of Lugworms (*Arenicola marina*) in parts of the north lagoon. Mussels (*Mytilus edulis*) occur in places, along with bivalves such as *Cerastoderma edule*, *Macoma balthica* and *Scrobicularia plana*. The small gastropod *Hydrobia ulvae* occurs in high densities in places, while the crustaceans *Corophium volutator* and *Carcinus maenas* are common. The sediments on the seaward side of North Bull Island are mostly sands. The site extends below the low spring tide mark to include an area of the sublittoral zone.

Three rare plant species which are legally protected under the Flora (Protection) Order, 1999 have been recorded on the North Bull Island. These are Lesser Centaury (*Centaurium pulchellum*), Red Hemp-nettle (*Galeopsis angustifolia*) and Meadow Saxifrage (*Saxifraga granulata*). Two further species listed as threatened in the Red Data Book, Wild Clary/Sage (*Salvia verbenaca*) and Spring Vetch (*Vicia lathyroides*), have also been recorded. A rare liverwort, *Petalophyllum ralfsii,* was first recorded from the North Bull Island in 1874 and has recently been confirmed as still present. This species is of high conservation value as it is listed on Annex II of the E.U. Habitats Directive. The North Bull is the only known extant site for the species in Ireland away from the western seaboard.

North Dublin Bay is of international importance for waterfowl. During the 1994/95 to 1996/97 period the following species occurred in internationally important numbers (figures are average maxima): Brent Goose 2,333; Knot 4,423; Bar-tailed Godwit 1,586. A further 14 species occurred in nationally important concentrations - Shelduck 1505; Wigeon 1,166; Teal 1,512; Pintail 334; Shoveler 239; Oystercatcher 2,190; Ringed Plover 346; Grey Plover 816; Sanderling 357; Dunlin 6,238; Black-tailed Godwit 156; Curlew 1,193; Turnstone 197 and Redshank 1,175. Some of these species frequent South Dublin Bay and the River Tolka Estuary for feeding and/or roosting purposes (mostly Brent Goose, Oystercatcher, Ringed Plover, Sanderling and Dunlin).

The tip of the North Bull Island is a traditional nesting site for Little Tern. A high total of 88 pairs nested in 1987. However, nesting attempts have not been successful since the early 1990s. Ringed Plover, Shelduck, Mallard, Skylark, Meadow Pipit and Stonechat also nest. A well-known population of Irish Hare is resident on the island

The invertebrates of the North Bull Island have been studied and the island has been shown to contain at least seven species of regional or national importance in Ireland (from the Orders Diptera, Hymenoptera and Hemiptera).

The main land uses of this site are amenity activities and nature conservation. The North Bull Island is the main recreational beach in Co. Dublin and is used throughout the year. Much of the land surface of the island is taken up by two golf courses. Two separate Statutory Nature Reserves cover much of the island east of the Bull Wall and the surrrounding intertidal flats. The site is used regularly for educational purposes. North Bull Island has been designated a Special Protection Area under the E.U. Birds Directive and it is also a statutory Wildfowl Sanctuary, a Ramsar Convention site, a Biogenetic Reserve, a Biosphere Reserve and a Special Area Amenity Order site.

This site is an excellent example of a coastal site with all the main habitats represented. The site holds good examples of nine habitats that are listed on Annex I of the E.U. Habitats Directive; one of these is listed with priority status. Several of the wintering bird species have populations of international importance, while some of the invertebrates are of national importance. The site contains a numbers of rare and scarce plants including some which are legally protected. Its proximity to the capital city makes North Dublin Bay an excellent site for educational studies and research.

SITE SYNOPSIS

Site Name: South Dublin Bay SAC

Site Code: 000210

This site lies south of the River Liffey in Co. Dublin, and extends from the South Wall to the west pier at Dun Laoghaire. It is an intertidal site with extensive areas of sand and mudflats. The sediments are predominantly sands but grade to sandy muds near the shore at Merrion Gates. The main channel which drains the area is Cockle Lake.

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):

[1140] Tidal Mudflats and Sandflats
[1210] Annual vegetation of drift lines
[1310] Salicornia and other annuals colonising mud and sand
[2110] Embryonic shifting dunes

The bed of Dward Eelgrass (*Zostera noltii*) found below Merrion Gates is the largest stand on the east coast. Green algae (*Enteromorpha* spp. and *Ulva lactuca*) are distributed throughout the area at a low density. Fucoid algae occur on the rocky shore in the Maretimo to Dún Laoghaire area. Species include *Fucus spiralis, F. vesiculosus, F. serratus, Ascophyllum nodosum* and *Pelvetia canaliculata.*

Several small, sandy beaches with incipient dune formation occur in the northern and western sectors of the site, notably at Poolbeg, Irishtown and Merrion/ Booterstown. The formation at Booterstown is very recent. Drift line vegetation occurs in association with the embryonic and incipient fore dunes. Typically drift lines occur in a band approximately 5 m wide, though at Booterstown this zone is wider in places. The habitat occurs just above the High Water Mark and below the area of embryonic dune. Species present are Sea Rocket (*Cakile maritima*), Frosted Orache (*Atriplex laciniata*), Spear-leaved Orache (*A. prostrata*), Prickly Saltwort (*Salsola kali*) and Fat Hen (*Chenopodium album*). Also occurring is Sea Sandwort (*Honkenya peploides*), Sea Beet (*Beta vulgaris* subsp. *maritima*) and Annual Sea-blite (*Suaeda maritima*). A small area of pioneer saltmarsh now occurs in the lee of an embryonic sand dune just north of Booterstown Station. This early stage of saltmarsh development is here characterised by the presence of pioneer stands of glassworts (*Salicornia* spp.) occurring below an area of drift line vegetation. As this is of very recent origin, it covers a small area but ample areas of substrate and shelter are available for the further development of this habitat.

Lugworm (*Arenicola marina*), Cockles (*Cerastoderma edule*) and annelids and other bivalves are frequent throughout the site. The small gastropod *Hydrobia ulvae* occurs on the muddy sands off Merrion Gates.

South Dublin Bay is an important site for waterfowl. Although birds regularly commute between the south bay and the north bay, recent studies have shown that certain populations which occur in the south bay spend most of their time there. The principal species are Oystercatcher (1215), Ringed Plover (120), Sanderling (344), Dunlin (2628) and Redshank (356) (average winter peaks 1996/97 and 1997/98). Up to 100 Turnstones are usual in the south bay during winter. Brent Goose regularly occur in numbers of international importance (average peak 299). Bar-tailed Godwit (565), a species listed on Annex I of the E.U. Birds Directive, also occur.

Large numbers of gulls roost in South Dublin Bay, e.g. 4,500 Black-headed Gulls in February 1990; 500 Common Gulls in February 1991. It is also an important tern roost in the autumn, regularly holding 2000-3000 terns including Roseate Terns, a species listed on Annex I of the E.U. Birds Directive. South Dublin Bay is largely protected as a Special Protection Area.

At low tide the inner parts of the south bay are used for amenity purposes. Bait-digging is a regular activity on the sandy flats. At high tide some areas have wind-surfing and jet-skiing.

This site is a fine example of a coastal system, with extensive sand and mudflats, and incipient dune formations. South Dublin Bay is also an internationally important bird site.

SITE SYNOPSIS

SITE NAME: NORTH BULL ISLAND SPA

SITE CODE: 004006

This site covers all of the inner part of north Dublin Bay, with the seaward boundary extending from the Bull Wall lighthouse across to Drumleck Point at Howth Head. The North Bull Island sand spit is a relatively recent depositional feature, formed as a result of improvements to Dublin Port during the 18th and 19th centuries. It is almost 5 km long and 1 km wide and runs parallel to the coast between Clontarf and Sutton. Part of the interior of the island has been converted to golf courses.

Saltmarsh extends along the length of the landward side of the island and provides the main roost site for wintering birds in Dublin Bay. The island shelters two intertidal lagoons which are divided by a solid causeway. These lagoons provide the main feeding grounds for the wintering waterfowl. The sediments of the lagoons are mainly sands with a small and varying mixture of silt and clay. Green algal mats (*Ulva* spp.) are a feature of the flats during summer. These sediments have a rich macro-invertebrate fauna, with high densities of Lugworm (*Arenicola marina*) and Ragworm (*Hediste diversicolor*).

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Light-bellied Brent Goose, Shelduck, Teal, Pintail, Shoveler, Oystercatcher, Golden Plover, Grey Plover, Knot, Sanderling, Dunlin, Black-tailed Godwit, Bar-tailed Godwit, Curlew, Redshank, Turnstone and Black-headed Gull. The site is also of special conservation interest for holding an assemblage of over 20,000 wintering waterbirds. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

The North Bull Island SPA is of international importance for waterfowl on the basis that it regularly supports in excess of 20,000 waterfowl. The site supports internationally important populations of three species, Light-bellied Brent Goose (1,548), Black-tailed Godwit (367) and Bar-tailed Godwit (1,529) - all figures are mean peaks for the five winters between 1995/96 and 1999/2000. The site is one of the most important in the country for Light-bellied Brent Goose. A further 14 species have populations of national importance – Shelduck (1,259), Teal (953), Pintail (233), Shoveler (141), Oystercatcher (1,784), Grey Plover (517), Golden Plover (2,033), Knot (2,837), Sanderling (141), Dunlin (4,146), Curlew (937), Redshank (1,431), Turnstone (157) and Black-headed Gull (2,196). The populations of Pintail and Knot are of particular note as they comprise 14% and 10% respectively of the all-Ireland population totals. Other species that occur regularly in winter include Grey Heron, Little Egret, Cormorant, Wigeon, Goldeneye, Red-breasted Merganser, Ringed Plover and Greenshank. Gulls are a feature of the site during winter and, along with the nationally important population of Black-headed Gull (2,196), other species that occur include Common Gull (332) and Herring Gull (331). While some of the birds

also frequent South Dublin Bay and the River Tolka Estuary for feeding and/or roosting purposes, the majority remain within the site for much of the winter. The wintering bird populations have been monitored more or less continuously since the late 1960s and the site is now surveyed each winter as part of the larger Dublin Bay complex.

The North Bull Island SPA is a regular site for passage waders, especially Ruff, Curlew Sandpiper and Spotted Redshank. These are mostly observed in single figures in autumn but occasionally in spring or winter.

The site formerly had an important colony of Little Tern but breeding has not occurred in recent years. Several pairs of Ringed Plover breed, along with Shelduck in some years. Breeding passerines include Skylark, Meadow Pipit, Stonechat and Reed Bunting. The island is a regular wintering site for Short-eared Owl, with up to 5 present in some winters.

The North Bull Island SPA is an excellent example of an estuarine complex and is one of the top sites in Ireland for wintering waterfowl. It is of international importance on account of both the total number of waterfowl and the individual populations of Light-bellied Brent Goose, Black-tailed Godwit and Bar-tailed Godwit that use it. Also of significance is the regular presence of several species that are listed on Annex I of the E.U. Birds Directive, notably Golden Plover and Bar-tailed Godwit, but also Ruff and Short-eared Owl. North Bull Island is a Ramsar Convention site, and part of the North Bull Island SPA is a Statutory Nature Reserve and a Wildfowl Sanctuary.

25.3.2014

SITE SYNOPSIS

SITE NAME: ROGERSTOWN ESTUARY SPA

SITE CODE: 004015

Rogerstown Estuary is situated about 2 km north of Donabate in north County Dublin. It is a relatively small, funnel shaped estuary separated from the sea by a sand and shingle peninsula; the site extends eastwards to include an area of shallow marine water. The estuary receives the waters of the Ballyboghil and Ballough rivers and has a wide salinity range, from near full seawater to near full freshwater. The estuary is divided by a causeway and narrow bridge, built in the 1840s to carry the Dublin-Belfast railway line. At low tide extensive intertidal sand and mud flats are exposed and these provide the main food resource for the wintering waterfowl that use the site. The intertidal flats of the estuary are mainly of sands, with soft muds in the north-west sector and along the southern shore. Associated with these muds are stands of Common Cord-grass (*Spartina anglica*). Green algae (mainly *Ulva* spp.) are widespread and form dense mats in the more sheltered areas. The intertidal vascular plant Beaked Tasselweed (*Ruppia maritima*) grows profusely in places beneath the algal mats and is grazed by herbivorous waterfowl (notably Light-bellied Brent Goose and Wigeon). Salt marsh fringes parts of the estuary, especially its southern shores. Common plant species of the saltmarsh include Sea Rush (*Juncus maritimus*), Sea Purslane (*Halimione portulacoides*) and Common Saltmarsh-grass (*Puccinellia maritima*).

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Greylag Goose, Light-bellied Brent Goose, Shelduck, Shoveler, Oystercatcher, Ringed Plover, Grey Plover, Knot, Dunlin, Black-tailed Godwit and Redshank. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

Rogerstown Estuary is an important winter waterfowl site and supports a population of Light-bellied Brent Goose of international importance (1,069) - all counts are mean peaks over the five winters 1995/96 – 1999/2000. A further 10 species have populations of national importance as follows: Greylag Goose (160), Shelduck (773), Shoveler (59), Oystercatcher (1,345), Ringed Plover (188), Grey Plover (229), Knot (2,454), Dunlin (2,745), Black-tailed Godwit (195) and Redshank (490). The Greylag Geese are part of a larger population which spends most of the winter on Lambay Island. Other species which occur regularly include Wigeon (358), Teal (346), Mallard (214), Red-breasted Merganser (30), Golden Plover (1,059) Lapwing (2,129), Sanderling (50), Curlew (505) and Turnstone (77). Large numbers of gulls including Herring Gull, Great Black-backed Gull and Black-headed Gull are attracted to the area, partly due to the presence of an adjacent local authority landfill site. Little Egret, a species which has recently colonised Ireland, also occurs at this site.

Some of the wader species also occur on passage, notably Black-tailed Godwit with numbers often exceeding 300 in April. The estuary is a regular staging post for scarce migrants, especially in autumn when Green Sandpiper, Ruff, Little Stint, Curlew Sandpiper and Spotted Redshank may be seen. Shelduck breed within the site.

Rogerstown Estuary SPA is an important link in the chain of estuaries on the east coast. It supports an internationally important population of Light-bellied Brent Goose and nationally important populations of a further 10 species. The presence of Little Egret and Golden Plover is of note as these species are listed on Annex I of the E.U. Birds Directive. Rogerstown Estuary is also a Ramsar Convention site, and part of Rogerstown Estuary SPA is designated as a Statutory Nature Reserve and a Wildfowl Sanctuary.

SITE SYNOPSIS

SITE NAME: BALDOYLE BAY SPA

SITE CODE: 004016

Baldoyle Bay, located to the north and east of Baldoyle and to the south of Portmarnock, Co. Dublin, is a relatively small, narrow estuary separated from the open sea by a large sand dune system. Two small rivers, the Mayne River and the Sluice River, flow into the inner part of the estuary.

Large areas of intertidal flats are exposed at low tide. These are mostly sands but grade to muds in the inner sheltered parts of the estuary. Extensive areas of Common Cord-grass (*Spartina anglica*) occur in the inner estuary. Both the Narrow-leaved Eelgrass (*Zostera angustifolia*) and the Dwarf Eelgrass (*Z. noltii*) are also found here. During summer, the sandflats of the sheltered areas are covered by mats of green algae (*Ulva* spp.). The sediments have a typical macrofauna, with Lugworm (*Arenicola marina*) dominating the sandy flats. Areas of saltmarsh occur near Portmarnock Bridge and at Portmarnock Point, with narrow strips found along other parts of the estuary. Species such as Glasswort (*Salicornia* spp.), Sea-purslane (*Halimione portulacoides*), Sea Plantain (*Plantago maritima*) and Sea Rush (*Juncus maritimus*) are found here.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Light-bellied Brent Goose, Shelduck, Ringed Plover, Golden Plover, Grey Plover and Bar-tailed Godwit. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

Baldoyle Bay is an important site for wintering waterfowl, providing good quality feeding areas and roost sites for an excellent diversity of waterfowl species. It supports an internationally important population of Light-bellied Brent Goose (726), and has a further five species with nationally important populations (all figures are mean peaks for the five winters 1995/96 to 1999/2000): Shelduck (147), Ringed Plover (223), Golden Plover (2,120), Grey Plover (200) and Bar-tailed Godwit (353). Other species which occur include Great Crested Grebe (42), Pintail (35), Teal (138), Mallard (46), Common Scoter (61), Oystercatcher (531), Lapwing (524), Knot (189), Dunlin (879), Black-tailed Godwit (113), Curlew (98), Redshank (224), Greenshank (11) and Turnstone (43).

Regular breeding birds include Shelduck, Mallard and Ringed Plover. In autumn, passage migrants such as Curlew Sandpiper, Spotted Redshank and Green Sandpiper are regular in small numbers. Little Egret, a species which has recently colonised Ireland, also occurs at this site.

Baldoyle Bay SPA is of high conservation importance, for supporting internationally important numbers of Light-bellied Brent Goose as well as nationally important populations of a further five species, including Golden Plover and Bar-tailed Godwit, both species that are listed on Annex I of the E.U. Birds Directive. The inner part of the site is a Statutory Nature Reserve and also designated as a wetland of international importance under the Ramsar Convention.

25.3.2014

SITE SYNOPSIS

SITE NAME: SOUTH DUBLIN BAY AND RIVER TOLKA ESTUARY SPA

SITE CODE: 004024

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

In the south bay, the intertidal flats extend for almost 3 km at their widest. The sediments are predominantly well-aerated sands. Several permanent channels exist, the largest being Cockle Lake. A small sandy beach occurs at Merrion Gates, while some bedrock shore occurs near Dun Laoghaire. The landward boundary is now almost entirely artificially embanked. There is a bed of Dwarf Eelgrass (*Zostera noltii*) below Merrion Gates which is the largest stand on the east coast. Green algae (*Ulva* spp.) are distributed throughout the area at a low density. The macro-invertebrate fauna is well-developed, and is characterised by annelids such as Lugworm (*Arenicola marina*), *Nephthys* spp. and Sand Mason (*Lanice conchilega*), and bivalves, especially Cockle (*Cerastoderma edule*) and Baltic Tellin (*Macoma balthica*). The small gastropod Spire Shell (*Hydrobia ulvae*) occurs on the muddy sands off Merrion Gates, along with the crustacean *Corophium volutator*. Sediments in the Tolka Estuary vary from soft thixotrophic muds with a high organic content in the inner estuary to exposed, well-aerated sands off the Bull Wall. The site includes Booterstown Marsh, an enclosed area of saltmarsh and muds that is cut off from the sea by the Dublin/Wexford railway line, being linked only by a channel to the east, the Nutley stream. Sea water incursions into the marsh occur along this stream at high tide. An area of grassland at Poolbeg, north of Irishtown Nature Park, is also included in the site.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Light-bellied Brent Goose, Oystercatcher, Ringed Plover, Grey Plover, Knot, Sanderling, Dunlin, Bar-tailed Godwit, Redshank, Black-headed Gull, Roseate Tern, Common Tern and Arctic Tern. The E.U. Birds Directive pays particular attention to wetlands, and as these form part of the SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

The site is an important site for wintering waterfowl, being an integral part of the internationally important Dublin Bay complex – all counts for wintering waterbirds are five year mean peaks for the period 1995/96 to 1999/2000. Although birds regularly commute between the south bay and the north bay, recent studies have shown that certain populations which occur in the south bay spend most of their time there. An internationally important population of Light-bellied Brent Goose (368) occurs regularly and newly arrived birds in the autumn feed on the Eelgrass bed at

Merrion. At the time of designation the site supported nationally important numbers of a further nine species: Oystercatcher (1,145), Ringed Plover (161), Grey Plover (45), Knot (548), Sanderling (321), Dunlin (1,923), Bar-tailed Godwit (766), Redshank (260) and Black-headed Gull (3,040). Other species occurring in smaller numbers include Great Crested Grebe (21), Curlew (127) and Turnstone (52). Little Egret, a species which has recently colonised Ireland, also occurs at this site.

South Dublin Bay is a significant site for wintering gulls, with a nationally important population of Black-headed Gull, but also Common Gull (330) and Herring Gull (348). Mediterranean Gull is also recorded from here, occurring through much of the year, but especially in late winter/spring and again in late summer into winter.

Both Common Tern and Arctic Tern breed in Dublin Docks, on a man-made mooring structure known as the E.S.B. dolphin – this is included within the site. Small numbers of Common Tern and Arctic Tern were recorded nesting on this dolphin in the 1980s. A survey in 1995 recorded nationally important numbers of Common Tern nesting here (52 pairs). The breeding population of Common Tern at this site has increased, with 216 pairs recorded in 2000. This increase was largely due to the ongoing management of the site for breeding terns. More recent data highlights this site as one of the most important Common Tern sites in the country with over 400 pairs recorded here in 2007.

South Dublin Bay is an important staging/passage site for a number of tern species in the autumn (mostly late July to September). The origin of many of the birds is likely to be the Dublin breeding sites (Rockabill and the Dublin Docks) though numbers suggest that the site is also used by birds from other sites, perhaps outside the state. This site is selected for designation for its autumn tern populations: Roseate Tern (2,000 in 1999), Common Tern (5,000 in 1999) and Arctic Tern (20,000 in 1996).

The South Dublin Bay and River Tolka Estuary SPA is of ornithological importance as it supports an internationally important population of Light-bellied Brent Goose and nationally important populations of a further nine wintering species. Furthermore, the site supports a nationally important colony of breeding Common Tern and is an internationally important passage/staging site for three tern species. It is of note that four of the species that regularly occur at this site are listed on Annex I of the E.U. Birds Directive, i.e. Bar-tailed Godwit, Common Tern, Arctic Tern and Roseate Tern. Sandymount Strand/Tolka Estuary is also a Ramsar Convention site.

30.5.2015

SITE SYNOPSIS

SITE NAME: MALAHIDE ESTUARY SPA

SITE CODE: 004025

Malahide Estuary is situated in north Co. Dublin, between the towns of Malahide and Swords. The site encompasses the estuary, saltmarsh habitats and shallow subtidal areas at the mouth of the estuary. A railway viaduct, built in the 1800s, crosses the site and has led to the inner estuary becoming lagoonal in character and only partly tidal. Much of the outer part of the estuary is well-sheltered from the sea by a large sand spit, known as "The Island". This spit is now mostly converted to golf-course. The outer part empties almost completely at low tide and there are extensive intertidal flats exposed. Substantial stands of eelgrass (both *Zostera noltii* and *Z. angustifolia*) occur in the sheltered part of the outer estuary, along with Tasselweed (*Ruppia maritima*). Green algae, mostly *Ulva* spp., are frequent on the sheltered flats. Common Cord-grass (*Spartina anglica*) is well established in the outer estuary and also in the innermost part of the site. The intertidal flats support a typical macro-invertebrate fauna, with polychaete worms (*Arenicola marina* and *Hediste diversicolor*), bivalves such as *Cerastoderma edule, Macoma balthica* and *Scrobicularia plana*, the small gastropod *Hydrobia ulvae* and the crustacean *Corophium volutator*. Salt marshes, which provide important roosts during high tide, occur in parts of the outer estuary and in the extreme inner part of the inner estuary. These are characterised by such species as Sea Purslane (*Halimione portulacoides*), Sea Aster (*Aster tripolium*), Thrift (*Armeria maritima*), Sea Arrowgrass (*Triglochin maritima*) and Common Saltmarsh-grass (*Puccinellia maritima*).

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Great Crested Grebe, Light-bellied Brent Goose, Shelduck, Pintail, Goldeneye, Red-breasted Merganser, Oystercatcher, Golden Plover, Grey Plover, Knot, Dunlin, Black-tailed Godwit, Bar-tailed Godwit and Redshank. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

This site is of high importance for wintering waterfowl and supports a particularly good diversity of species. It has internationally important populations of Light-bellied Brent Goose (1,104 individuals or 5% of the all-Ireland total) and Black-tailed Godwit (409 individuals or 2.9% of the all-Ireland total) - figures given here and below are mean peaks for the five winters 1995/96-1999/2000. Furthermore, the site supports nationally important populations of an additional 12 species: Great Crested Grebe (63), Shelduck (439), Pintail (58), Goldeneye (215), Red-breasted Merganser (99), Oystercatcher (1,360), Golden Plover (1,843), Grey Plover (201), Knot (915), Dunlin (1,594), Bar-tailed Godwit (156) and Redshank (581). The high numbers of diving ducks reflects the lagoon-type nature of the inner estuary, and this is one of the few sites in eastern Ireland where substantial numbers of Goldeneye can be found.

A range of other species occurs, including Mute Swan (37), Pochard (36), Ringed Plover (86), Lapwing (1,542), Curlew (548), Greenshank (38) and Turnstone (112).

The estuary also attracts other migrant wader species such as Ruff, Curlew Sandpiper, Spotted Redshank and Little Stint. These occur mainly in autumn, though occasionally in spring and winter.

Breeding birds of the site include Ringed Plover, Shelduck and Mallard. Up to the 1950s there was a major tern colony at the southern end of Malahide Island. Grey Herons breed nearby and feed regularly within the site.

Malahide Estuary SPA is a fine example of an estuarine system, providing both feeding and roosting areas for a range of wintering waterfowl. The lagoonal nature of the inner estuary is of particular value as it increases the diversity of birds which occur. The site is of high conservation importance, with internationally important populations of Light-bellied Brent Goose and Black-tailed Godwit, and nationally important populations of a further 12 species. Two of the species which occur regularly (Golden Plover and Bar-tailed Godwit) are listed on Annex I of the E.U. Birds Directive. Malahide Estuary (also known as Broadmeadow Estuary) is a Ramsar Convention site.

23.8.2013