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Appropriate Assessment Screening & Natura Impact Statement - Information for a Stage 1 (AA Screening) and Stage 2 (Natura Impact Statement) AA for a proposed development at Baldoyle-Stapolin Growth Area 3, Baldoyle, Dublin 13.

19th July 2021

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: The Shoreline Partnership

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Introduction

The following Appropriate Assessment (AA) (Screening Stage) and Natura Impact Statement has been prepared by **Altemar Ltd.** at the request of The Shoreline Partnership. The project relates to an application for permission for a proposed development at Baldoyle-Stapolin Growth Area 3, Baldoyle, Dublin 13.

An Appropriate Assessment is an assessment of the potential effects of a proposed project or plan, on its own, or in combination with other plans or projects, on one or more NATURA 2000 sites. Natura 2000 sites are those sites designated as Special Areas of Conservation (SAC) or Special Protection Areas (SPA).

This AA Screening and Natura Impact Statement examines whether the plan or project, either alone, or in combination with other plans and projects, in the view of best scientific knowledge and in view of the sites' conservation objectives, will adversely affect the integrity of the European sites.

Altemar Ltd.

Since its inception in 2001, Altemar has been delivering ecological and environmental services to a broad range of clients. Operational areas include: residential; infrastructural; renewable; oil & gas; private industry; Local Authorities; EC projects; and, State/semi-State Departments. Bryan Deegan, the managing director of Altemar, is an Environmental Scientist and Marine Biologist with 26 years' experience working in Irish terrestrial and aquatic environments, providing services to the State, Semi-State and industry. He is currently contracted to Inland Fisheries Ireland as the sole "External Expert" to environmentally assess internal and external projects. He is also chair of an internal IFI working group on environmental assessment. Bryan Deegan (MCIEEM) holds a MSc in Environmental Science, BSc (Hons.) in Applied Marine Biology, NCEA National Diploma in Applied Aquatic Science and a NCEA National Certificate in Science (Aquaculture). Bryan Deegan carried out all elements of this Appropriate Assessment Screening.

Background to the Appropriate Assessment

The Habitats Directive (92/43/EEC), together with the Birds Directive (2009/1477/EC), forms the cornerstone of European nature conservation policy. The Directive protects over 1000 animals and plant species and over 200 *"habitat types"* which are of European importance. In the Directive, Articles 3 to 9 provide the legislative means to protect habitats and species of European Community interest through the establishment and conservation of an EU-wide network of conservation sites (NATURA 2000).

These are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Birds Directive. Article 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect NATURA 2000 sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment:

"Any plan or project not directly connected with or necessary to the management of the [NATURA 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans and projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implication for the site and subject to the provisions of paragraph 4, the component 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."

Furthermore, as outlined in the EC guidance document on Article 6(4) (January 2007)[1]:

"Appropriate assessments of the implications of the plan or project for the site concerned must precede its approval and take into account the cumulative effects which result from the combination of that plan or project with other plans or projects in view of the site's conservation objectives. This implies that all aspects of the plan or project which can, either individually or in combination with other plans or projects, affect those objectives must be identified in the light of the best scientific knowledge in the field.

Assessment procedures of plans or projects likely to affect NATURA 2000 sites should guarantee full consideration of all elements contributing to the site integrity and to the overall coherence of the network, both in the definition of the baseline conditions and in the stages leading to identification of potential impacts, mitigation measures and residual impacts. These determine what has to be compensated, both in quality and quantity. Regardless of whether the provisions of Article 6(3) are delivered following existing environmental impact assessment procedures or other specific methods, it must be ensured that:

- *Article 6(3) assessment results allow full traceability of the decisions eventually made, including the selection of alternatives and any imperative reasons of overriding public interest.*
- *The assessment should include all elements contributing to the site's integrity and to the overall coherence of the network as defined in the site's conservation objectives and Standard Data Form, and be based on best available scientific knowledge in the field. The information required should be updated and could include the following issues:*
    - *Structure and function, and the respective role of the site's ecological assets;*
    - *Area, representativity and conservation status of the priority and nonpriority habitats in the site;*
    - *Population size, degree of isolation, ecotype, genetic pool, age class structure, and conservation status of species under Annex II of the Habitats Directive or Annex I of the Birds Directive present in the site;*
    - *Role of the site within the biographical region and in the coherence of the NATURA 2000 network; and,*

[1] European Commission. (2007).Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission.

- *Any other ecological assets and functions identified in the site.*

- *It should include a comprehensive identification of all the potential impacts of the plan or project likely to be significant on the site, taking into account cumulative impacts and other impacts likely to arise as a result of the combined action of the plan or project under assessment and other plans or projects.*
- *The assessment under Article 6(3) applies the best available techniques and methods, to estimate the extent of the effects of the plan or project on the biological integrity of the site(s) likely to be damaged.*
- *The assessment provides for the incorporation of the most effective mitigation measures into the plan or project concerned, in order to avoid, reduce or even cancel the negative impacts on the site.*
- *The characterisation of the biological integrity and the impact assessment should be based on the best possible indicators specific to the NATURA 2000 assets which must also be useful to monitor the plan or project implementation."*

Methodology

This Appropriate Assessment screening was 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), Part XAB of the Planning and Development Act 2000, as amended, in addition to the December 2009 publication from the Department of Environment, Heritage and Local Government; 'Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities' and the European Communities (Birds and Natural Habitats) Regulations 2011 and the provision of Article 6 of the Habitats Directive 92/43/EEC (European Commission, 21 November 2018).

In order to comply with the above Guidelines and legislation, this Appropriate Assessment Screening and Natura Impact Statement must be structured as follows:

1) Screening Stage

   - Description of the proposed project or plan;
   - Identification of NATURA 2000 sites potentially affected;
   - Identification and description of individual in combination effects likely to result from the proposed project;
   - Assessment of the likely significance of the effects identified above. Exclusion of sites where it can be objectively concluded that there will be no likely significant effects; and,
   - Conclusions.

2) Appropriate Assessment (Natura Impact Statement)

   • Description of the NATURA 2000 sites that will be considered further;
   • Identification and description of potential adverse impacts on the conservation objectives of these sites likely to occur from the project or plan;
   • Identification and description of in combination effects likely to result from other plans and projects;
   • Mitigation Measures that will be implemented to avoid, reduce or remedy any such potential adverse impacts;
   • Assessment as to whether, following the implementation of the proposed mitigation measures, it can be concluded, beyond all reasonable scientific doubt, that there will be no adverse impact on the integrity of the relevant European Site in light of its conservation objectives"; and,
   • Conclusions.

Stage 1 Screening Assessment

Management of the Site

The plan or project is not directly connected with, or necessary to the management of NATURA 2000 sites.

Description of the Proposed Project

The Shoreline Partnership intend to apply to An Bord Pleanála for a 10 year planning permission for a strategic housing development at a site of c. 6.89 ha at lands at Baldoyle/Stapolin, referred to as GA03 Lands in the Baldoyle-Stapolin Local Area Plan 2013 (as extended) and which from part of the wider landholding of lands formerly known as the Coast, Baldoyle, Dublin 13. The lands are bound by the Dublin-Belfast / DART train line to the west, existing and proposed residential areas to the south and east, and future Racecouse Park to the north.

The proposed development will consist of the development of 1,221 no. residential apartment/duplex dwellings in 11 no. blocks ranging in height from 2 to 15 storeys and including for residential tenant amenity, restaurant/cafe, crèche, car and bicycle parking and public realm, over a site area of c. 6.89 ha.

1. The proposed residential development will consist of 1,221 no residential apartment/duplex dwellings (1 no. Studio, 503 No. 1-Bed, 636 No. 2-Bed, 80 No. 3-Bed) set out as follows:
    - Blocks E1, ranging in height from 6 to 8 storeys, providing 157 no. apartment units with proposed balconies, and solar panels at roof level.
    - Blocks E2, at 6 storeys, providing 68 no. apartment units with proposed balconies, and solar panels at roof level.
    - Blocks E3, at 6 storeys, providing 45 no. apartment units with proposed balconies, and external roof terrace and solar panels at roof level.
    - Blocks E4, at 5 storeys, providing 36 no. apartment units with proposed balconies, and external roof terrace and solar panels at roof level.
    - Blocks F1, ranging in height from 2 to 5 storeys providing 91 no. apartment units with proposed balconies, and solar panels at roof level.
    - Blocks F2, ranging in height from 2 to 6 storeys providing 122 no. apartment units with proposed balconies, and solar panels at roof level.
    - Blocks G1, ranging in height from 5 to 10 storeys providing 169 no. apartment units with proposed balconies, and solar panels at roof level.
    - Blocks G2, ranging in height from 5 to 10 storeys providing 175 no. apartment units with proposed balconies, and solar panels at roof level.
    - Blocks G3, at 15 storeys, providing 124 no. apartment units with proposed balconies, and solar panels at roof level.
    - Blocks G4, at 7 storeys, providing 60 no. apartment units with proposed balconies, and solar panels at roof level.
    - Blocks G5, ranging in height from 5 to 10 storeys providing 173 no. apartment units with proposed balconies, and solar panels at roof level.
    - Residential Tenant Amenity Facilities of c.2,301.m located in Blocks E3, E4, G3, G4 & G5 and external communal amenity space of c.10,793 sq.m provided at ground, podium and terrace levels throughout the scheme.
2. A crèche of c.452 sq.m in addition to outdoor play space of c.123 sq.m. is proposed in the ground floor of Block G4 and 1 no. restaurant/cafe units of c.205 sq.m is proposed on the ground floor of Block E3. Total non-residential uses is c.785 sq.m
3. Car Parking is provided in a mix of undercroft for Blocks E1-E2, F1 and F2 and at basement level for Blocks G1-G3 and G4-G5 with a total parking of 632 spaces for residential units with 33 spaces at surface level for residential use and 8 spaces (4 staff in G4/G5 and 4 drop off) associated with the proposed crèche. 2016 cycle parking spaces are provided for residents and 312 for visitor and commercial uses, in secure locations and within the public realm throughout the scheme.

4. A new central public space between Blocks E1-E2 and E3 and E4 and a new linear space between Blocks G2-G3 and G4-G5 provides pedestrian and cycle connectivity from Longfield Road to the proposed future Racecourse Park to the north is provided.
5. Proposed new bus, cycle, pedestrian and taxi ramp to the south of the site and north of Stapolin Square providing access from Longfield Road to Clongriffin Train Station.
6. The development will also provide for all associated ancillary site development infrastructure including: ESB sub-stations, bin stores, plant rooms, public lighting, new watermain connection to the north and foul and surface water drainage; internal roads & footpaths; site landscaping, including boundary treatments; associated scheme signage, and all associated engineering and site works necessary to facilitate the development.

The proposed scheme is designed to integrate with and continue both the existing permitted development on the southern GA01 lands (as permitted under FCC Reg. Ref. F16A/0412, ABP Reg. Ref. ABP-248970 and as amended under F20A/0258 and F21A/0046), and the current proposed alterations to the GA01 Lands (currently subject to a separate Strategic Housing Development Application Reg. Ref.: TA06F.310418) for which an overall total of 981 units are either under construction or proposed. The infrastructure and road elements of the F16A/0412, ABP Reg. Ref. ABP-248970 (and as amended under F20A/0258 and F21A/0046) have commenced, along with 99 housing units at Blocks C4, C5 and C6, which will provide for both services and roads connectivity to the GA03 Lands along, and as proposed extended, Longfield Road.

Figure 1. Site outline and location

Figure 2. Site outline


SITE BOUNDARY
WETLANDS UNDER CONSTRUCTION AS PER PLANNING REG. REF: F16A/0412, ABP REG. REF: ABP-248970, AS AMENDED BY F20A/0559 AND F21A/0046
Thick Overgrown Vegetation
GA02
GA02
GA1 SUBJECT TO SEPARATE PLANNING APPLICATION
GA1 SUBJECT TO SEPARATE PLANNING APPLICATION
PLANNING DRAWING.
NOT FOR CONSTRUCTION.
ALL LEVELS GIVEN ARE RELATIVE TO ORDNANCE DATUM.
DRAWING HAS BEEN ISSUED FOR INFORMATION PURPOSES ONLY AND MUST NOT BE USED FOR CONSTRUCTION UNDER ANY CIRCUMSTANCES
NOTES
1. For setting out refer to Architect's drawings.
2. This drawing to be read in conjunction with all other Architectural and Engineering drawings and all other relevant drawings and Specifications.
3. DO NOT SCALE THIS DRAWING. Use figured dimensions only.
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5. Ordnance Survey Ireland Licence Number EN 0074021
Rev No. P1 Date 01.03.2021 REVISION NOTE Site Layout Revised Drn. By JS Chkd. By OS
Architect Henry J. Lyons
Project GA03 Project Shoreline, Baldoyle.
Title OVERALL SITE LAYOUT
Dwg. No. BD-CSC-ZZ-G3-DR-C-0100
Date 13.10.2020 Drn by JS Chkd by NB Apprd by OS Scale 1:1000 @A1 Revision P1
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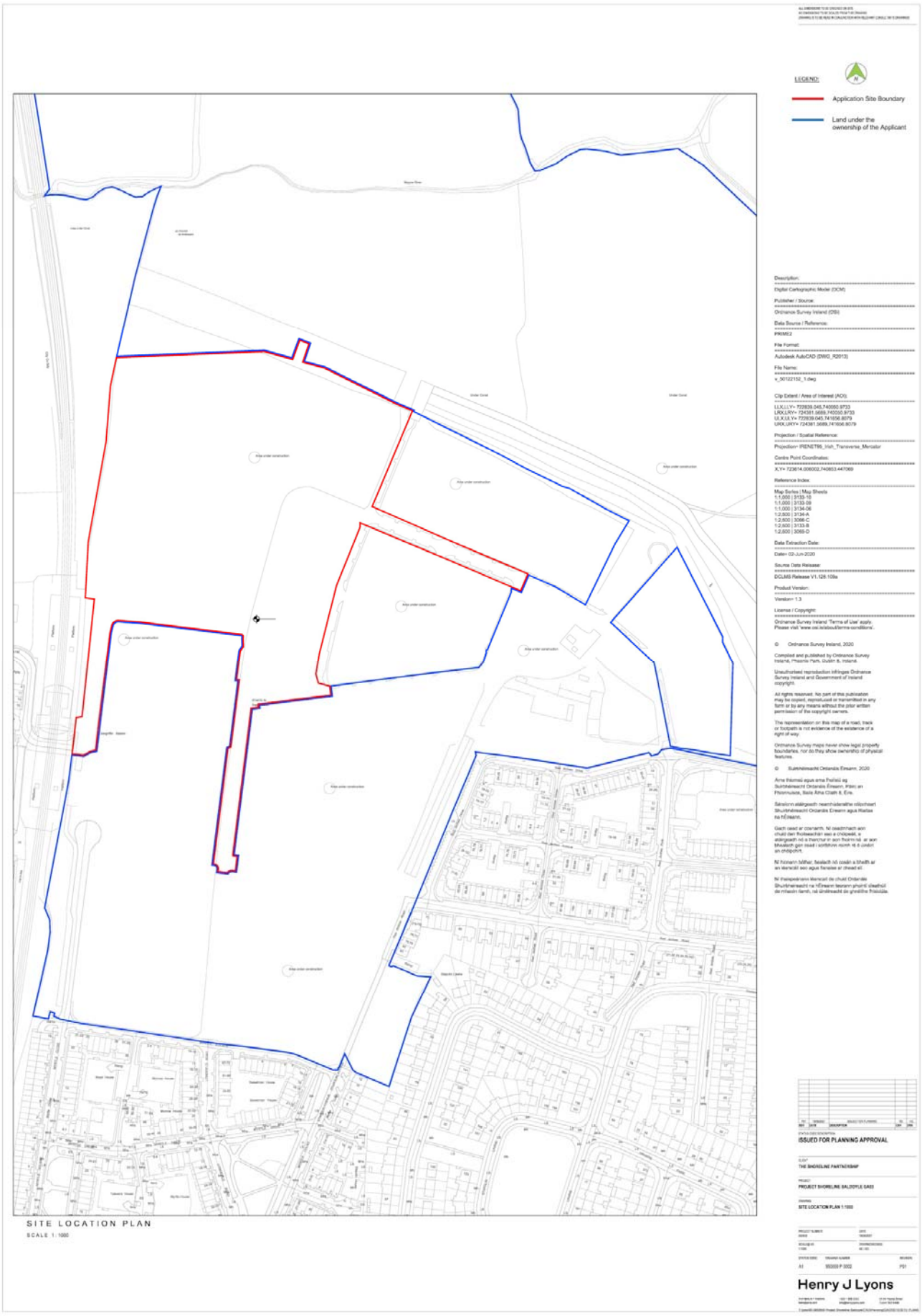


Figure 4. Site Location Map

Figure 5. Combined GA1 & GA3 Masterplan)

1 **Elevation AA**
1 : 500

2 **Elevation BB**
1 : 500

3 **Elevation CC**
1 : 500

4 **Elevation DD**
1 : 500

ISSUED FOR PLANNING APPROVAL

The Shoreline Partnership

PROJECT SHORELINE BALDOYLE GA03

Proposed GA03 Site Sections and elevations (A,B,C,D) with Permitted GA01 scheme

A1 888-HJL-A-0030 P1

Henry J Lyons

Figure 6. Proposed Site Sections)

Drainage

An Engineering Services Report has been prepared by CS Consulting Engineers to accompany this planning application. The proposed drainage strategy for this development site is outlined below.

Foul Drainage

In terms of the existing foul infrastructure on the subject site, the report states the following:

'*There is an existing 375mm diameter foul sewer that runs in a northern direction to the south east of the site (along Stapolin Avenue). This infrastructure was installed by previous developers to serve the entire LAP lands.*

Downstream, this existing 375mm foul sewer discharges to an existing foul pump station located on the north side of Stapolin Haggard. The foul pumping station discharges via a 300mm rising main to the North Fringe Foul Sewer, that runs around the north / north eastern boundary of the site approximately 150m away from the pump station. The pump station currently serves the existing Myrtle and Red Arches Developments and serves the developments contained within planning permission Reg. Ref. F16A/0412 ABP Ref. 248970 (and as amended under F20A/0258 and F21A/0046).

In addition to the 375mm foul sewer referred to above, there is already an existing foul drainage network located within the development lands, however due to its poor condition it is not intended to make use of the existing network (not in use within the application lands) and therefore it is proposed to remove the existing foul sewers within the development site.'

In terms of the proposed foul drainage arrangements for the development site, the report outlines the following:

'*The proposed development will require a new separate drainage network to collect and convey the effluent generated by the proposed development. The drainage network for the proposed development has been designed in accordance with:*

- *The Regional Code of Practice Drainage Works,*
- *The Greater Dublin Strategic Drainage Study,*
- *Irish Water Code of Practice for Wastewater Infrastructure.*

The drainage network for the development will be in accordance with Part H of the Building Regulations and to the requirements and specifications set out in the Irish Water Code of Practice for Wastewater.'

'A Pre-Connection Enquiry was submitted to Irish Water based on the foul flows for the proposed development and we received a favourable response.'

'All foul effluent generated from the proposed development shall be collected in separate foul pipes and flow under gravity, to the existing 375mm diameter foul sewer in the north east corner of the development via a new connection. The foul drainage network has been modelled using Windes Microdrainage.'

'*In relation to the existing north fringe drain to the north of the site. The proposed development will be in excess of 10m from the edge of the existing pipe, allowing a min 20m wide easement over the pipe. We note the 450 diameter main is further north of the development and the watermain is in excess of 15m from the proposed development. CS have engaged with IW on this issue, and they have noted to CS that once we are within the COP from IW they have no comment. With regards to the buffer and landscaping above the pipe no alterations of levels are being proposed*.'

Storm Water Infrastructure

In terms of the existing storm water infrastructure on the subject site, the report outlines the following:

'*At present there is an existing 1350mm stormwater culvert traversing the subject site along the line of Longfield Road, flowing south to north. This culvert is a diversion of a culvert which previously ran along the western boundary of the development lands.*

In addition, there is an existing 1050mm stormwater pipe running from south to north along the line of Stapolin Avenue, which discharges into the Mayne River. Based on the previous planning applications in the vicinity of the site this pipe has been constructed by previous developers at a low level so that it can pass below the North Fringe Sewer. The depth of this pipe and associated outfall is approximately 2m below the existing ground level as it passes through to the flood plain further north. The pipe serves the existing developments constructed to date and discharges directly to the Mayne River.

It is noted that there is an existing stormwater drainage network located in the vicinity of the subject site, however due to its condition and levels it is not intended to make use of the existing network and therefore it is proposed to be removed and a new network constructed in its place.'

In terms of the proposed storm water arrangements for the development site, the report outlines the following:

'In accordance with Section 4.3 of Appendix 1 of the Baldoyle-Stapolin Local Area Plan, the site is located adjacent to the tidal estuary at Baldoyle and as there is no downstream development before out falling to the Irish Sea, the development site is not required to provide full attenuation for the 100 year return storm as per the requirements in Section 6.6, Volume 2, of the GDSDS. In addition the lands discharge into salt wetlands which are the flood estuary of the Mayne River and extend over approximately 40 hectares (100 year flood plain). Therefore, the principal issue, is the quality of water discharging from the LAP lands and not the quantity of water being discharged to the estuary

It is the requirement of the LAP that a wetland is installed within the flood plain, just beyond the line of the existing North Fringe foul sewer to provide the required water quality treatment for this and future developments within the LAP. This wetland and its corresponding upstream surface water network were granted based on the planning permission Reg. Ref. F16A/0412 ABP Ref. 248970 (and as amended under F20A/0258 and F21A/0046) and are under construction.

All water from the proposed development will discharge to this wetland before discharging to the Mayne River floodplain over a spillway/weir. The wetland will serve as the final water quality treatment for the proposed development of Growth Area 3 (Plus GA1 and GA2). It has been sized to cater for a treatment volume based on 15mm rainfall over 100% of the impermeable site areas and this will be retained in a permanent pool area of the wetland at all times.

The wetland will incorporate a sediment forebay to serve as a 'first flush' collector of the majority of silt not removed by SuDS features upstream. The construction of an independent sediment for-bay ensures the remainder of the wetland is not disturbed during maintenance when silt build-up is removed from the fore-bay.

The shape and orientation of the permitted wetland has been designed to maximise the quantity of treatment provided, with a length to width ratio in excess of 3:1, allowing sediments to settle along its length. A varying width has been chosen to encourage diversity of plants and wildlife, while ensuring there are no stagnant areas and that the total volume is available to provide water quality treatment. Details of the planting/landscaping of the wetland are as outlined in the landscape documents that formed the grant of permission Reg. Ref. F16A/0412 ABP Ref. 248970 (and as amended under F20A/0258 and F21A/0046). In summary, the original topsoil with seed-bank of calcareous grassland and wetland species will be replaced to allow self-seeding and natural establishment of the wetland. These works will be carried out under direction and supervision of ecologist/landscape architect who will identify the source material area and oversee the works.

The permitted wetland has commenced construction and by excavating the existing ground level to provide the storage volume required. The permanent pool level will be set to approximate the existing ground level. The wetland will be surrounded by a small 300mm high embankment to cater for fluctuations in water level and to ensure flows are directed over the control weir/spillway.

The GDSDS requires that a "treatment volume" (Vt) be provided in order to prevent any pollutants or sediments discharging into river systems, additionally a 'treatment train' stormwater runoff management system is required. According to CIRIA document C753 the following treatment train approach is necessary:

The treatment volume was calculated as 1860m3 and is based on treatment 15mm of rainfall depth from the runoff from impermeable areas. This will be provided by the constructed wetland.'

'All run-off areas will pass through the required number of interception stages prior to discharging to the downstream outfall. Interception methods are listed in the section on SuDS with final treatment provided by the wetland.

As previously mentioned, it is not proposed to connect any surface water generated by the development to the existing culverts referred to earlier as they pass under the existing North Fringe Sewer. It is proposed to connect the proposed development to the new surface water network granted under F16A/0412 ABP Ref. 248970 (and as amended under F20A/0258 and F21A/0046) that shall cross above the North Fringe Sewer under approval with Irish Water to ensure all surface water generated by the proposed development will pass through the wetland and overspill a weir/spillway into the Mayne River Floodplain.

As informed based on the planning permission Reg. Ref. F16A/0412 ABP Ref. 248970 (and as amended under F20A/0258 and F21A/0046), for the adjacent GA1 development to the south, the permitted wetland has been sized to serve Growth Areas 1 and 2 of the Local Area Plan in addition to Growth Area 3 as proposed.'

'In addition an overflow flood route is provided within the road network designed to cater for storms higher than that of a 100year event or if a blockage occurs in the network due to poor maintenance. The road network has been designed to guide excess stormwater away from building structures and flow towards green/landscaped areas where it can pond and dissipate to ground once the storm event ceases.'

Proposed SuDS Measures

In relation to the proposed SuDS measures to be implemented into the drainage strategy for the development site, the report outlines the following:

'*The second aspect of the storm water drainage network is to improve the quality of the storm water leaving the site. There are a number of water saving systems and SuDS measures that will be put in place to achieve this aim.*

The proposed SuDS features shall consist of:

a) *Constructed Wetland - Shallow ponds and marshy areas with a high concentration of aquatic vegetation. The wetland will detain flows for an extended period allowing sediments to settle and to remove contaminants by facilitating adhesion to vegetation and aerobic decomposition. Located within existing Mayne River floodplain, prior to discharge to the floodplain*

b) *Bio-retention Areas: Shallow landscaped depressions which are under-drained with engineered soils and enhanced vegetation and planting on the surface which manage and treat runoff, at source, and promote biodiversity development. Located generally at suitable low points along roads in lieu of gullies throughout the applicant lands.*

c) *Green Roofs: Green roofs provide ecological, aesthetic and amenity benefits and intercept and retain rainfall, at source, reducing the volume of runoff and attenuation peak flows. Green roofs absorb most of the rainfall that they receive during ordinary events and they will only contribute to attenuation of flows for larger events.*

   All green roof systems across the development shall be ultimately designed by a specialist post planning. It will be responsibility of the green roof specialist to design the system in accordance with all relevant building regulations including liaising with the architect to provide sufficient gullies, downpipes and overflow pipe systems to the proposed roof of the apartment block. It is envisaged, that rainwater gullies or outlets shall be provided at roof level at sub-surface level to the green roof system. These gullies/outlets shall channel excess runoff to the drainage network of the apartment block, where it shall eventually discharge to the external surface water network of the development. Overflow pipes and associated downpipes shall be provided along the parapet of the roof to cater for extreme storm events,

when the green roof system is saturated as well as catering for potential blockages to the normal drainage outlets. This is standard practice to any roof design.

100mm deep Sedum green roof systems are proposed to the apartment buildings located to the west of Longfield Road in the north west of the applicant lands. Please see drawings BD-CSC-ZZ-G3-DR-C-0106 that indicates the locations of the green roof systems on the apartment blocks across the development site. Please refer to ***Appendix F*** *for the Bauder Sedum Green Roof System.*

As indicated on the drawings, the total roof area to the apartment blocks is approximately 18,133sqm. The total green roof area being provided across the apartment blocks is 9,611 sqm, which equates to 53% of the total roof area.'

d) *'Permeable Paving: These systems are used 'source control' method in managing surface water runoff. Water is managed and dealt with on-site without piping off to storage tanks or surface water treatment systems. Surface water discharge is managed to ensure that risk of contamination or pollution are mitigated. Permeable Paving systems filter contaminants by microbial action. There is no requirement for additional filtering/polishing with Permeable Paving in normal use. It is proposed to construct all on street parking spaces to the development with permeable paving systems.*

e) *Integrated tree pits.'*

Flood Risk Assessment

A Flood Risk Assessment report has been prepared by JBA Consulting to accompany this planning application. The report concludes:

'*It is proposed to develop a residential development in Baldoyle, Co. Dublin. The scheme forms a continuation of existing residential development to the south. The site is currently classified as greenfield.*

The River Mayne is the main river waterbody in the study area and is tidally influenced. The Baldoyle Estuary is located to the east of the site.

Review of the historic flood information does not provide any evidence of flooding at the site. The nearest flood event is situated along Coast Road,600m east of the site.

Review of the FEM FRAM predictive flood maps confirms that the majority of the site is not at risk of flooding. A small section of the site along the northern boundary is situated in Flood Zone B. Itis not proposed to place residential properties in this area, however some infilling will be undertaken as part of the landscape works

To appraise the potential impacts of the infilling on flood risk elsewhere in the catchment, a site specific flood model has been developed that modelled a range of fluvial and tidal events. The results confirm that a section of the site along its northern boundary is located in Flood Zone B. The proposed infilling will result in the loss of approx. 10m^3 due to the shallow depths encountered. It is noted that the flood mechanism in this area is identified as flow conveyance rather than purely flood storage.

The main design event selected is the 0.5% AEP HEFS tidal event as the HEFS tidal events provide the maximum flood levels onsite and significantly higher than the fluvial equivalent. The tidal HEFS levels are not impacted by the sluice gate, Coast Road elevation or flood duration.

A range of model scenarios were developed to assess the impact on flood risk downstream due to the proposed infilling. The results confirm that during all flood events there is no increase in flood levels downstream of the site. This is due to the minimal loss of storage in comparison to the wider flood plain. Regardless of the lack of negative impact, additional storage of 60m^3 has been provided in lands directly adjacent to the proposed infilling.

Outside of the main flood events, the site has also been assessed for the potential impacts of climate change and residual risks. As part of the climate change assessment, a 30% increase in fluvial flows and 1m in tidal levels have been in incorporated into the 1%/0.5% and 0.1% AEP events respectively. The results confirm that the proposed residential development will not be impacted from any of the modelled flood events up to the 0.1% AEP HEFS tidal scenario.

The minimum residential FFL provided onsite is 6mOD while the minimum basement entrance level provided is 4.5mOD. Based on the design flood event (0.5% AEP HEFS tidal), a freeboard of 1.8mand 0.3m has been provided respectively. This FFL also protects the development from the predicted 0.1% AEP HEFS tidal event.

In summary all residential properties are located in Flood Zone C and are protected from inundation up to the 0.1% AEP HEFS tidal event. The proposed infilling does not have a negative impact on flood levels downstream without mitigation.

Considering the above, the Flood Risk Assessment was undertaken in accordance with 'The Planning System and Flood Risk Management' guidelines. The FRA is in agreement with the core principles contained within the Planning Guidelines.'

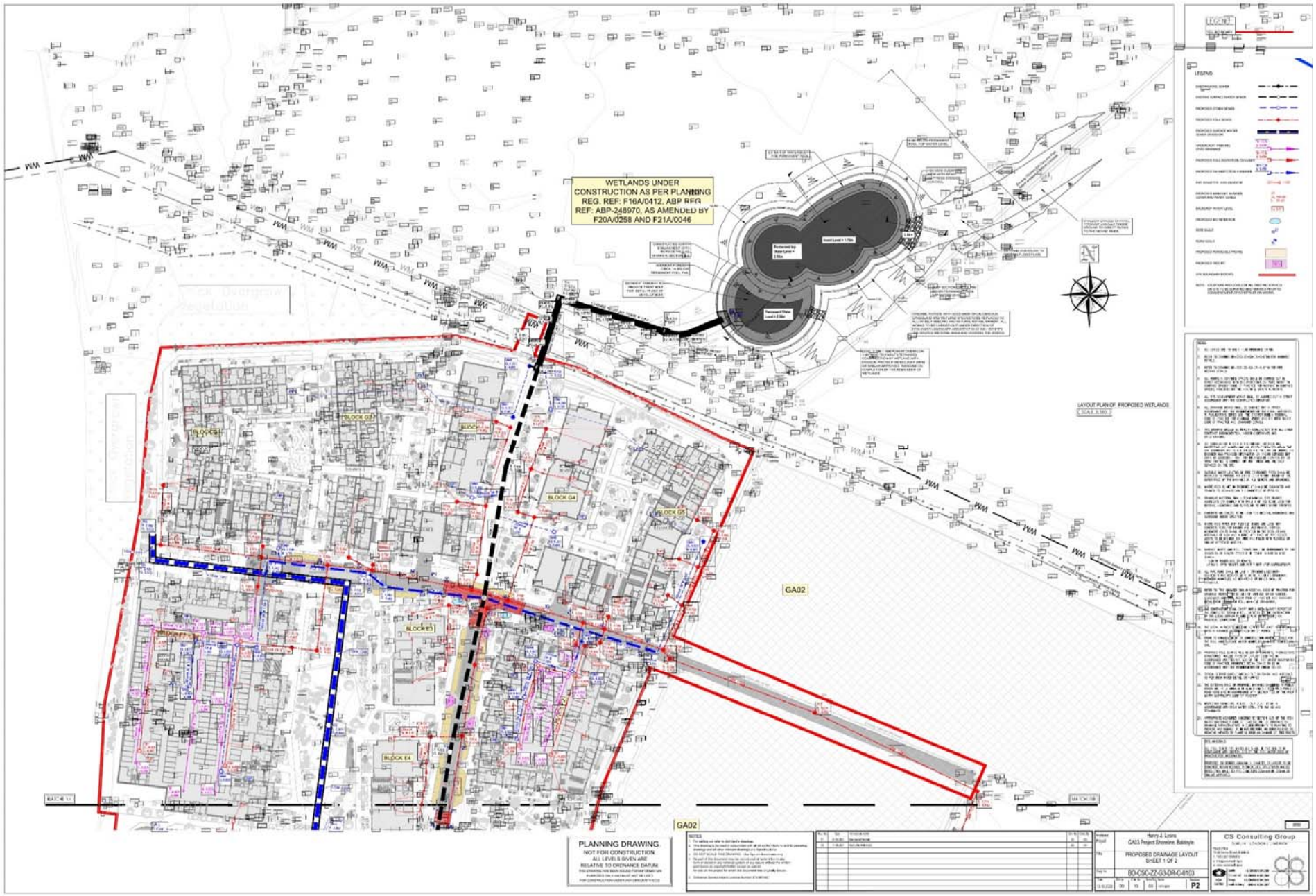


Figure 7a. Proposed Drainage Layout – sheet 1)

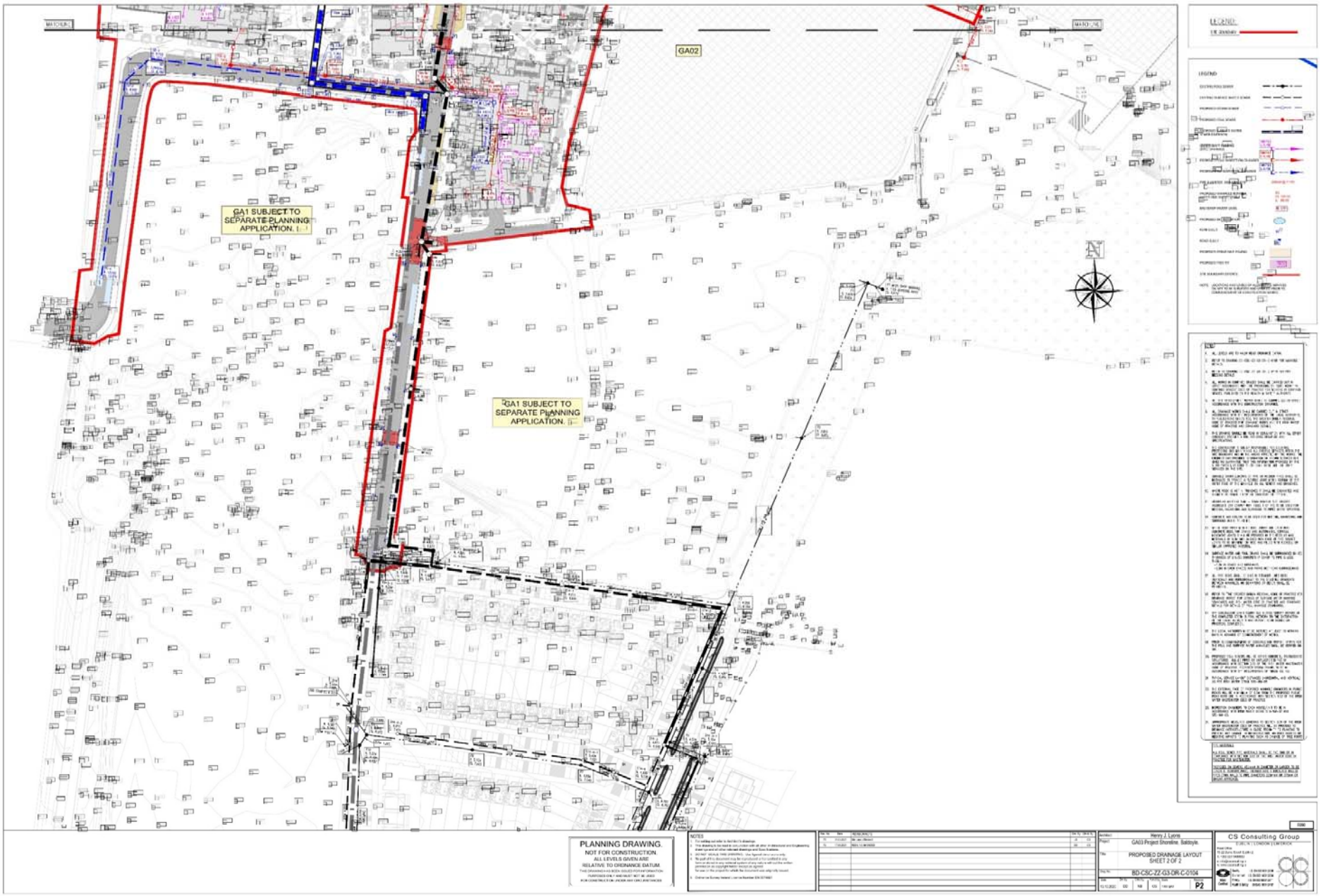


Figure 7b. Proposed Drainage Layout – sheet 2)

Identification of Relevant Natura 2000 Sites

The proposed works are not located within a NATURA 2000 site. The NATURA 2000 sites within 15 kilometres of the subject site and those with a direct/indirect pathway beyond 15km (none) are detailed in Table 1 and Figures 8 and 9. Their qualifying interests and the potential impact of the works on these qualifying interests are found in Tables 2 & 3. There is no direct or indirect pathway to Natura 2000 sites beyond 15km. No European Sites outside of the 15km zone of influence could be impacted by the proposed development

The proposed development site is located within a densely populated and developed area. There is a direct hydrological pathway to Baldoyle Bay SAC and SPA via the proposed surface water drainage strategy. Surface water will be directed to a wetland installed within the Mayne River floodplain, located just beyond the line of the existing North Fringe foul sewer. This wetland and its corresponding upstream surface water network were granted planning permission under Planning Ref. F16A/0412 and is currently under construction. Surface water will then discharge to Mayne River floodplain over a spillway/weir. The River Mayne ultimately outfalls to Baldoyle Bay (Figure 21). Given the close proximity of the proposed development site to the River Mayne (120m) and the proposed discharge of surface water drainage to the Mayne River floodplain, it is considered that there is the potential for downstream impacts on the qualifying interests of Baldoyle Bay SAC and SPA. There is also an indirect hydrological pathway to marine-based Natura 2000 sites via the proposed foul and surface water drainage networks. Foul wastewater will discharge to an existing public foul wastewater network. Foul wastewater will then be treated within the Irish Water network . As outlined previously, it is proposed to discharge surface water into the River Mayne after attenuation within a wetland installed into the floodplain of the River Mayne. As the River Mayne outfalls to Baldoyle Bay, there is an direct hydrological connection to Natura 2000 sites located within the Irish Sea. However, given the minimum distance to Natura 2000 sites (1.8km, excluding Baldoyle Bay SAC & SPA) across an expansive marine environment within the Irish Sea, any pollutants or silt will settle, be dispersed or diluted.

Further, there is a risk of heightened noise disturbance levels that could impact on the protected bird species located in Baldoyle Bay SPA. The proposed works are located 615m from the Baldoyle Bay SPA. McCarthy Keville O'Sullivan (MKO) was appointed to carry out bird survey works at Baldoyle, during the period from December 2019 to March 2020 inclusive. A summary of this report is seen in Appendix I. Following the precautionary principle, screening of all Natura 2000 sites within 15km and those with a direct/indirect pathway beyond 15km is carried out.

Table 1. Proximity to designated sites of conservation importance

NATURA 2000 Site	Code	Distance	Direct Hydrological / Biodiversity Connection
Special Areas of Conservation			
Baldoyle Bay SAC	IE0000199	235 m	**Yes**
North Dublin Bay SAC	IE0000206	1.8 km	No
Malahide Estuary SAC	IE0000205	3.4 km	No
Howth Head SAC	IE0000202	4.4 km	No
Rockabill to Dalkey Island SAC	IE0003000	4.8 km	No
Ireland's Eye SAC	IE0002193	4.8 km	No
South Dublin Bay SAC	IE0000210	6.8 km	No
Rogerstown Estuary SAC	IE0000208	10 km	No
Lambay Island SAC	IE0000204	11.6 km	No
Special Protection Areas			
Baldoyle Bay SPA	IE0004016	615 m	**Yes**
North Bull Island SPA	IE0004006	1.8 km	No
Malahide Estuary SPA	IE0004025	4.1 km	No
Ireland's Eye SPA	IE0004117	4.6 km	No
South Dublin Bay and River Tolka Estuary SPA	IE0004024	5.1 km	No
Howth Head Coast SPA	IE0004113	5.9 km	No
Rogerstown Estuary SPA	IE0004015	9.8 km	No
Lambay Island SPA	IE0004069	11.5 km	No
Dalkey Islands SPA	IE0004172	13.9 km	No

Table 2 provides an overview of the initial screening of Natura 2000 sites within 15km of the proposed development that have been screened 'IN'.

Table 3 provides an overview of the initial screening of NATURA 2000 sites within 15km of the subject site and those with a direct/indirect pathway that have been screened out.

A distance of 15km was selected due to the proximity of the proposed project to various waterbodies and/or pathways. However, as instream works are proposed this assessment includes sites with a direct/indirect pathway beyond 15km (Figures 8 to 10).

Table 2. Initial screening of NATURA 2000 sites within 15km and NATURA 2000 sites with potential of hydrological connection to the proposed development – Screened IN (NIS Required)

NATURA Code	Name	Screened IN/OUT	Details/Reason
Special Areas of Conservation			
IE0000199	Baldoyle Bay SAC	**IN**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Mudflats and sandflats not covered by seawater at low tide [1140] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Mediterranean salt meadows (*Juncetalia maritimi*) [1410] **Potential Impact** The proposed development is 235m from this SAC. There is a direct hydrological pathway to Baldoyle Bay SAC via the Mayne River and the SAC is in proximate to the development. There is potential for pollutants to enter the Mayne River which is directly linked to the SAC. Mitigation measures are required to protect the Features of Interest of the SAC. **Stage 2 AA is Required.**
Special Protection Areas			
IE0004016	Baldoyle Bay SPA	**IN**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Shelduck (*Tadorna tadorna*) [A048] Ringed Plover (*Charadrius hiaticula*) [A137] Golden Plover (*Pluvialis apricaria*) [A140] Grey Plover (*Pluvialis squatarola*) [A141] Bar-tailed Godwit (*Limosa lapponica*) [A157] Wetland and Waterbirds [A999] **Potential Impact** The proposed development site is 615m from this SPA. McCarthy Keville O'Sullivan (MKO) was appointed to carry out bird survey works at Baldoyle, during the period from December 2019 to March

			2020 inclusive. A summary of the Wintering Bird Survey is seen in Appendix I. The full report is seen in Appendix 8.1 of the EIAR. As outlined in the MKO report: *'the proposed development area is not within the Baldoyle Bay SPA, however given the proximity of the SPA to the development, there is potential for impacts to result during construction and operational phases of the proposed development. These potential impacts could include:* *• Loss of roosting habitat within/along the boundary of the redline at the mouth of the Mayne River.* (This line is the ownership line not the project red line). *• Disturbance during construction works and the operational phase to Special Conservation Interest of the SPA including through movement of machinery, personnel, noise, vibration and/or noise associated with domestic dwellings.* *• Pollution of surface water through accidental spillage or discharge of polluting substances, or via elevated suspended solids and siltation through run-off to watercourses.* *The maximum likely distance at which disturbance will impact SCIs from the Baldoyle Bay SPA is 300m (Cutts et al., 2013). The magnitude of this impact and its potential significance will require further consideration at the assessment stage of any future planning application.* *The proposed housing scheme may result in disturbance of SCI's of the adjacent SPA. However, it is likely that habituation will occur to this new source of disturbance given that the SCIs of the SPA are already accustomed to the disturbance associated with Baldoyle village and existing surrounding housing developments. This should be considered in further detail at the assessment stage of any future planning application*.' There is a direct hydrological pathway to Baldoyle Bay SPA through the Mayne River and the SPA is in proximate to the development. There is potential for pollutants to reduce water quality within wetlands proximate to the SPA, or enter the Mayne River which is directly linked to the SPA. Mitigation measures are required to protect the qualifying interests of the SPA. As outlined in the MKO Wintering Bird Survey (Summary in Appendix I) "*Disturbance during construction works and the operational phase to Special Conservation Interest of the SPA including through movement of machinery, personnel, noise, vibration and/or noise associated with domestic dwellings*." Disturbance could potentially lead to the displacement of the qualifying interests within the SPA. Noise mitigation measures are outlined in the EIAR. **Stage 2 AA is Required.**

Table 3. Initial screening of NATURA 2000 sites within 15km and NATURA 2000 sites beyond 15km with potential of hydrological connection to the proposed development – Screened OUT

NATURA Code	Name	Screened IN/OUT	Details/Reason
Special Areas of Conservation			
IE0000206	North Dublin Bay SAC	**OUT**	**Conservation Objectives** To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. **Qualifying Interest** Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Mediterranean salt meadows (*Juncetalia maritimi*) [1410] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] Humid dune slacks [2190] Petalwort (*Petalophyllum ralfsii*) [1395] **Potential Impact** The proposed development is located over 1.8 km from the SAC. There is no direct hydrological pathway to the SAC. There is an indirect hydrological pathway to this SAC via the proposed foul and surface water drainage networks. Foul wastewater will discharge to an existing public foul network located in the north-east corner of the subject site. Foul wastewater will then be treated along the public network. Surface water will be directed to a wetland installed within the Mayne River floodplain, located just beyond the line of the existing North Fringe foul sewer. Surface water will then discharge to Mayne River floodplain over a spillway/weir after attenuation. As the Mayne River ultimately outfalls to Baldoyle Bay, there is an indirect hydrological pathway to this SAC. However, given the distance along this pathway to the SAC (1.8km), any pollutants or silt within the surface water will settle, be dispersed, or diluted within the marine environment. The indirect hydrological pathway of surface water will not impact on the conservation objectives of this SAC. Impacts caused by the proposed development, in the absence of any mitigation measures, would be expected to be localised to the immediate environs of the site, Mayne River and Baldoyle Bay. No impacts on the qualifying interests of this Natura 2000 site are foreseen. **No significant effects are likely**.
IE0000205	Malahide Estuary SAC	**OUT**	**Conservation Objectives** To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.

			Qualifying Interests Mudflats and sandflats not covered by seawater at low tide [1140] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Mediterranean salt meadows (*Juncetalia maritimi*) [1410] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] **Potential Impact** The proposed development is located 3.4 km from the SAC. There is no direct hydrological pathway to the SAC. There is an indirect hydrological pathway to this SAC via the proposed foul and surface water drainage networks. Foul wastewater will discharge to an existing public foul network located in the north-east corner of the subject site. Foul wastewater will then be treated along the public network. Surface water will be directed to a wetland installed within the Mayne River floodplain, located just beyond the line of the existing North Fringe foul sewer. Surface water will then discharge to Mayne River floodplain over a spillway/weir after attenuation. As the Mayne River ultimately outfalls to Baldoyle Bay, there is an indirect hydrological pathway to this SAC. However, given the distance along this pathway to the SAC (3.4km), any pollutants or silt within the surface water will settle, be dispersed, or diluted within the marine environment. The indirect hydrological pathway of surface water will not impact on the conservation objectives of this SAC. Impacts caused by the proposed development, in the absence of any mitigation measures, would be expected to be localised to the immediate environs of the site, Mayne River and Baldoyle Bay. No impacts on the qualifying interests of this Natura 2000 site are foreseen. **No significant effects are likely**.
IE0000202	Howth Head SAC	**OUT**	**Conservation Objectives** To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. **Qualifying Interests** (1230) Vegetated sea cliffs of the Atlantic and Baltic coasts (4030) European dry heaths **Potential Impact** The proposed development is over 4.4 km from the SAC. There is no direct hydrological pathway to the SAC. There is an indirect hydrological pathway to this SAC via the proposed foul and surface water drainage networks. Foul wastewater will discharge to an existing public foul network located in the north-east corner of the subject site. Foul wastewater will then be treated along the public network. Surface water will be directed to a wetland installed within the Mayne River floodplain, located just beyond the line of the existing

			North Fringe foul sewer. Surface water will then discharge to Mayne River floodplain over a spillway/weir after attenuation. As the Mayne River ultimately outfalls to Baldoyle Bay, there is an indirect hydrological pathway to this SAC. However, given the distance along this pathway to the SAC (4.4km), any pollutants or silt within the surface water will settle, be dispersed, or diluted within the marine environment. The indirect hydrological pathway of surface water will not impact on the conservation objectives of this SAC. Impacts caused by the proposed development, in the absence of any mitigation measures, would be expected to be localised to the immediate environs of the site, Mayne River and Baldoyle Bay. No impacts on the qualifying interests of this Natura 2000 site are foreseen. **No significant effects are likely.**
IE0002193	Ireland's Eye SAC	**OUT**	**Conservation Objectives** To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. **Qualifying Interest** 1220 Perennial vegetation of stony banks. 1230 Vegetated sea cliffs of the Atlantic and Baltic coasts. **Potential Impact** The proposed development is located 4.8 km from the SAC. There is no direct hydrological pathway to the SAC. There is an indirect hydrological pathway to this SAC via the proposed foul and surface water drainage networks. Foul wastewater will discharge to an existing public foul network located in the north-east corner of the subject site. Foul wastewater will then be treated along the public network. Surface water will be directed to a wetland installed within the Mayne River floodplain, located just beyond the line of the existing North Fringe foul sewer. Surface water will then discharge to Mayne River floodplain over a spillway/weir after attenuation. As the Mayne River ultimately outfalls to Baldoyle Bay, there is an indirect hydrological pathway to this SAC. However, given the distance along this pathway to the SAC (4.8 km), any pollutants or silt within the surface water will settle, be dispersed, or diluted within the marine environment. The indirect hydrological pathway of surface water will not impact on the conservation objectives of this SAC. Impacts caused by the proposed development, in the absence of any mitigation measures, would be expected to be localised to the immediate environs of the site, Mayne River and Baldoyle Bay. No impacts on the qualifying interests of this Natura 2000 site are foreseen. **No significant effects are likely.**
IE0003000	Rockabill to Dalkey Island SAC	**OUT**	**Conservation Objectives** To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.

			Qualifying Interests 1170 Reefs 1351 Harbour porpoise *Phocoena phocoena* **Potential Impact** The proposed development is located 4.8 km from the SAC. There is no direct hydrological pathway to the SAC. There is an indirect hydrological pathway to this SAC via the proposed foul and surface water drainage networks. Foul wastewater will discharge to an existing public foul network located in the north-east corner of the subject site. Foul wastewater will then be treated along the public network. Surface water will be directed to a wetland installed within the Mayne River floodplain, located just beyond the line of the existing North Fringe foul sewer. Surface water will then discharge to Mayne River floodplain over a spillway/weir after attenuation. As the Mayne River ultimately outfalls to Baldoyle Bay, there is an indirect hydrological pathway to this SAC. However, given the distance along this pathway to the SAC (4.8km), any pollutants or silt within the surface water will settle, be dispersed, or diluted within the marine environment. The indirect hydrological pathway of surface water will not impact on the conservation objectives of this SAC. Impacts caused by the proposed development, in the absence of any mitigation measures, would be expected to be localised to the immediate environs of the site, Mayne River and Baldoyle Bay. No impacts on the qualifying interests of this Natura 2000 site are foreseen. **No significant effects are likely.**
IE0000210	South Dublin Bay SAC	**OUT**	**Conservation Objectives** To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in South Dublin Bay SAC, which is defined by the following list of targets: • The permanent habitat area is stable or increasing, subject to natural processes. • Maintain the extent of the *Zostera* –dominated community, subject to natural processes. • Conserve the high quality of the Zostera –dominated community, subject to natural processes • Conserve the following community type in a natural condition: Fine sands with *Angulus tenuis* community complex. **Qualifying Interest** Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] Salicornia and other annuals colonising mud and sand [1310] Embryonic shifting dunes [2110] **Potential Impact** The proposed development is located over 6.8 km from the SAC. There is no direct hydrological pathway to the SAC.

			There is an indirect hydrological pathway to this SAC via the proposed foul and surface water drainage networks. Foul wastewater will discharge to an existing public foul network located in the north-east corner of the subject site. Foul wastewater will then be treated along the public network. Surface water will be directed to a wetland installed within the Mayne River floodplain, located just beyond the line of the existing North Fringe foul sewer. Surface water will then discharge to Mayne River floodplain over a spillway/weir after attenuation. As the Mayne River ultimately outfalls to Baldoyle Bay, there is an indirect hydrological pathway to this SAC. However, given the distance along this pathway to the SAC (6.8km), any pollutants or silt within the surface water will settle, be dispersed, or diluted within the marine environment. The indirect hydrological pathway of surface water will not impact on the conservation objectives of this SAC. Impacts caused by the proposed development, in the absence of any mitigation measures, would be expected to be localised to the immediate environs of the site, Mayne River and Baldoyle Bay. No impacts on the qualifying interests of this Natura 2000 site are foreseen. **No significant effects are likely.**
IE0000208	Rogerstown Estuary SAC	**OUT**	**Conservation Objectives** To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. **Qualifying Interests** Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Mediterranean salt meadows (*Juncetalia maritimi*) [1410] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] **Potential Impact** The proposed development is located 10 km from the SAC. No potential impact is foreseen. There is no direct hydrological pathway to the SAC. There is an indirect hydrological pathway to this SAC via the proposed foul and surface water drainage networks. Foul wastewater will discharge to an existing public foul network located in the north-east corner of the subject site. Foul wastewater will then be treated along the public network. Surface water will be directed to a wetland installed within the Mayne River floodplain, located just beyond the line of the existing North Fringe foul sewer. Surface water will then discharge to Mayne River floodplain over a spillway/weir after attenuation. As the Mayne River ultimately outfalls to Baldoyle Bay, there is an indirect hydrological pathway to this SAC. However, given the

			distance along this pathway to the SAC (10km), any pollutants or silt within the surface water will settle, be dispersed, or diluted within the marine environment. The indirect hydrological pathway of surface water will not impact on the conservation objectives of this SAC. Impacts caused by the proposed development, in the absence of any mitigation measures, would be expected to be localised to the immediate environs of the site, Mayne River and Baldoyle Bay. No impacts on the qualifying interests of this Natura 2000 site are foreseen. **No significant effects are likely.**
IE0000204	Lambay Island SAC	**OUT**	**Conservation Objectives** To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. **Qualifying Interests** 1170 Reefs 1230 Vegetated sea cliffs of the Atlantic and Baltic coasts 1364 Grey seal (*Halichoerus grypus*) 1365 Harbour seal (*Phoca vitulina*) **Potential Impact** The proposed development is 11.6 km from the Ireland's Eye SAC. There is no direct hydrological pathway to the SAC. There is an indirect hydrological pathway to this SAC via the proposed foul and surface water drainage networks. Foul wastewater will discharge to an existing public foul network located in the north-east corner of the subject site. Foul wastewater will then be treated along the public network. Surface water will be directed to a wetland installed within the Mayne River floodplain, located just beyond the line of the existing North Fringe foul sewer. Surface water will then discharge to Mayne River floodplain over a spillway/weir after attenuation. As the Mayne River ultimately outfalls to Baldoyle Bay, there is an indirect hydrological pathway to this SAC. However, given the distance along this pathway to the SAC (11.6km), any pollutants or silt within the surface water will settle, be dispersed, or diluted within the marine environment. The indirect hydrological pathway of surface water will not impact on the conservation objectives of this SAC. Impacts caused by the proposed development, in the absence of any mitigation measures, would be expected to be localised to the immediate environs of the site, Mayne River and Baldoyle Bay. No impacts on the qualifying interests of this Natura 2000 site are foreseen. **No significant effects are likely.**
Special Protection Areas			
IE0004006	North Bull Island SPA	**OUT**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall

			maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Shelduck (*Tadorna tadorna*) [A048] Teal (*Anas crecca*) [A052] Pintail (*Anas acuta*) [A054] Shoveler (*Anas clypeata*) [A056] Oystercatcher (*Haematopus ostralegus*) [A130] Golden Plover (*Pluvialis apricaria*) [A140] Grey Plover (*Pluvialis squatarola*) [A141] Knot (*Calidris canutus*) [A143] Sanderling (*Calidris alba*) [A144] Dunlin (*Calidris alpina*) [A149] Black-tailed Godwit (*Limosa limosa*) [A156] Bar-tailed Godwit (*Limosa lapponica*) [A157] Curlew (*Numenius arquata*) [A160] Redshank (*Tringa totanus*) [A162] Turnstone (*Arenaria interpres*) [A169] Black-headed Gull (*Chroicocephalus ridibundus*) [A179] Wetland and Waterbirds [A999] **Potential Impact** The proposed development is 1.8 km from the North Bull Island SPA. There is no direct hydrological connection from the site to this SPA. There is an indirect hydrological pathway to this SPA via the proposed foul and surface water drainage networks. Foul wastewater will discharge to an existing public foul network located in the north-east corner of the subject site. Foul wastewater will then be treated along the public network. Surface water will be directed to a wetland installed within the Mayne River floodplain, located just beyond the line of the existing North Fringe foul sewer. Surface water will then discharge to Mayne River floodplain over a spillway/weir after attenuation. As the Mayne River ultimately outfalls to Baldoyle Bay, there is an indirect hydrological pathway to this SPA. However, given the minimum distance along this pathway to the SPA (1.8km), any pollutants or silt within the surface water will settle, be dispersed, or diluted within the marine environment. The indirect hydrological pathway of surface water will not impact on the conservation objectives of this SPA. Given that this SPA is located 1.8 km from the proposed development site, it is unlikely that heightened noise levels during construction and operation will impact on the designated qualifying interests of this site. Impacts caused by the proposed development in the absence of any mitigation measures, would be expected to be localised to the immediate environs of the site, Mayne River and Baldoyle Bay. No impacts on the qualifying interests of this Natura 2000 site are foreseen. **No significant effects are likely.**
IE0004025	Malahide Estuary SPA	**OUT**	**Conservation Objectives**

			The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Great Crested Grebe (*Podiceps cristatus*) [A005] Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Shelduck (*Tadorna tadorna*) [A048] Pintail (*Anas acuta*) [A054] Goldeneye (*Bucephala clangula*) [A067] Red-breasted Merganser (*Mergus serrator*) [A069] Oystercatcher (*Haematopus ostralegus*) [A130] Golden Plover (*Pluvialis apricaria*) [A140] Grey Plover (*Pluvialis squatarola*) [A141] Knot (*Calidris canutus*) [A143] Dunlin (*Calidris alpina*) [A149] Black-tailed Godwit (*Limosa limosa*) [A156] Bar-tailed Godwit (*Limosa lapponica*) [A157] Redshank (*Tringa totanus*) [A162] Wetland and Waterbirds [A999] **Potential Impact** The proposed development is 4.1 km from the Malahide Estuary SPA. There is no direct hydrological connection from the site to this SPA. There is an indirect hydrological pathway to this SPA via the proposed foul and surface water drainage networks. Foul wastewater will discharge to an existing public foul network located in the north-east corner of the subject site. Foul wastewater will then be treated along the public network. Surface water will be directed to a wetland installed within the Mayne River floodplain, located just beyond the line of the existing North Fringe foul sewer. Surface water will then discharge to Mayne River floodplain over a spillway/weir after attenuation. As the Mayne River ultimately outfalls to Baldoyle Bay, there is an indirect hydrological pathway to this SPA. However, given the minimum distance along this pathway to the SPA (4.1km), any pollutants or silt within the surface water will settle, be dispersed, or diluted within the marine environment. The indirect hydrological pathway of surface water will not impact on the conservation objectives of this SPA. Given that this SPA is located 4.1 km from the proposed development site, it is unlikely that heightened noise levels during construction and operation will impact on the designated qualifying interests of this site. Impacts caused by the proposed development in the absence of any mitigation measures, would be expected to be localised to the immediate environs of the site, Mayne River and Baldoyle Bay. No impacts on the qualifying interests of this Natura 2000 site are foreseen. **No significant effects are likely.**
IE0004117	Ireland's Eye SPA	**OUT**	**Conservation Objectives**

			To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: **Qualifying Interests** A017 Cormorant (*Phalacrocorax carbo*) A184 Herring Gull (*Larus argentatus*) A188 Kittiwake (*Rissa tridactyla*) A199 Guillemot (*Uria aalge*) A200 Razorbill (*Alca torda*) **Potential Impact** The proposed development is 4.6 km from the Ireland's Eye SPA. This SPA for coastal species, is surrounded by the marine environment and there is no direct hydrological connection from the proposed development to this SPA. There is an indirect hydrological pathway to this SPA via the proposed foul and surface water drainage networks. Foul wastewater will discharge to an existing public foul network located in the north-east corner of the subject site. Foul wastewater will then be treated along the public network. Surface water will be directed to a wetland installed within the Mayne River floodplain, located just beyond the line of the existing North Fringe foul sewer. Surface water will then discharge to Mayne River floodplain over a spillway/weir after attenuation. As the Mayne River ultimately outfalls to Baldoyle Bay, there is an indirect hydrological pathway to this SPA. However, given the minimum distance along this pathway to the SPA (4.6km), any pollutants or silt within the surface water will settle, be dispersed, or diluted within the marine environment. The indirect hydrological pathway of surface water will not impact on the conservation objectives of this SPA. Given that this SPA is located 4.6 km from the proposed development site, it is unlikely that heightened noise levels during construction and operation will impact on the designated qualifying interests of this site. Impacts caused by the proposed development in the absence of any mitigation measures, would be expected to be localised to the immediate environs of the site, Mayne River and Baldoyle Bay. No impacts on the qualifying interests of this Natura 2000 site are foreseen. **No significant effects are likely**
IE0004024	South Dublin Bay and River Tolka Estuary SPA	**OUT**	**Conservation Objectives** To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. **Qualifying Interests** Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Oystercatcher (*Haematopus ostralegus*) [A130] Ringed Plover (*Charadrius hiaticula*) [A137] Grey Plover (*Pluvialis squatarola*) [A141] Knot (*Calidris canutus*) [A143] Sanderling (*Calidris alba*) [A144] Dunlin (*Calidris alpina*) [A149]

			Bar-tailed Godwit (*Limosa lapponica*) [A157] Redshank (*Tringa totanus*) [A162] Black-headed Gull (*Chroicocephalus ridibundus*) [A179] Roseate Tern (*Sterna dougallii*) [A192] Common Tern (*Sterna hirundo*) [A193] Arctic Tern (*Sterna paradisaea*) [A194] Wetland and Waterbirds [A999] **Potential Impact** The proposed development is located 5.1 km from this SPA. There is no direct hydrological connection from the site to this SPA. There is an indirect hydrological pathway to this SPA via the proposed foul and surface water drainage networks. Foul wastewater will discharge to an existing public foul network located in the north-east corner of the subject site. Foul wastewater will then be treated along the public network. Surface water will be directed to a wetland installed within the Mayne River floodplain, located just beyond the line of the existing North Fringe foul sewer. Surface water will then discharge to Mayne River floodplain over a spillway/weir after attenuation. As the Mayne River ultimately outfalls to Baldoyle Bay, there is an indirect hydrological pathway to this SPA. However, given the minimum distance along this pathway to the SPA (5.1km), any pollutants or silt within the surface water will settle, be dispersed, or diluted within the marine environment. The indirect hydrological pathway of surface water will not impact on the conservation objectives of this SPA. Given that this SPA is located 5.1 km from the proposed development site, it is unlikely that heightened noise levels during construction and operation will impact on the designated qualifying interests of this site. Impacts caused by the proposed development in the absence of any mitigation measures, would be expected to be localised to the immediate environs of the site, Mayne River and Baldoyle Bay. No impacts on the qualifying interests of this Natura 2000 site are foreseen. **No significant effects are likely.**
IE0004113	Howth Head Coast SPA	**OUT**	**Conservation Objectives** To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. **Qualifying Interests** A188 Kittiwake (*Rissa tridactyla*) **Potential Impact** The proposed development is 5.9 km from the Howth Head Coast SPA. This SPA is for Kittiwake and there is no direct hydrological connection from the proposed development to this SPA. There is an indirect hydrological pathway to this SPA via the proposed foul and surface water drainage networks. Foul wastewater will discharge to an existing public foul network

			located in the north-east corner of the subject site. Foul wastewater will then be treated along the public network. Surface water will be directed to a wetland installed within the Mayne River floodplain, located just beyond the line of the existing North Fringe foul sewer. Surface water will then discharge to Mayne River floodplain over a spillway/weir after attenuation. As the Mayne River ultimately outfalls to Baldoyle Bay, there is an indirect hydrological pathway to this SPA. However, given the minimum distance along this pathway to the SPA (5.9km), any pollutants or silt within the surface water will settle, be dispersed, or diluted within the marine environment. The indirect hydrological pathway of surface water will not impact on the conservation objectives of this SPA. Given that this SPA is located 5.9 km from the proposed development site, it is unlikely that heightened noise levels during construction and operation will impact on the designated qualifying interests of this site. Impacts caused by the proposed development in the absence of any mitigation measures, would be expected to be localised to the immediate environs of the site, Mayne River and Baldoyle Bay. No impacts on the qualifying interests of this Natura 2000 site are foreseen. **No significant effects are likely.**
IE0004015	Rogerstown Estuary SPA	**OUT**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Greylag Goose (*Anser anser*) [A043] Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Shelduck (*Tadorna tadorna*) [A048] Shoveler (*Anas clypeata*) [A056] Oystercatcher (*Haematopus ostralegus*) [A130] Ringed Plover (*Charadrius hiaticula*) [A137] Grey Plover (*Pluvialis squatarola*) [A141] Knot (*Calidris canutus*) [A143] Dunlin (*Calidris alpina*) [A149] Black-tailed Godwit (*Limosa limosa*) [A156] Redshank (*Tringa totanus*) [A162] Wetland and Waterbirds [A999] **Potential Impact** The proposed development is 9.8 km from the Rogerstown Estuary SPA. There is no direct hydrological connection from the site to this SPA. There is an indirect hydrological pathway to this SPA via the proposed foul and surface water drainage networks. Foul wastewater will discharge to an existing public foul network located in the north-east corner of the subject site. Foul wastewater will then be treated along the public network. Surface water will be directed to a wetland installed within the Mayne River floodplain, located just beyond the line of the existing

			North Fringe foul sewer. Surface water will then discharge to Mayne River floodplain over a spillway/weir after attenuation. As the Mayne River ultimately outfalls to Baldoyle Bay, there is an indirect hydrological pathway to this SPA. However, given the minimum distance along this pathway to the SPA (9.8km), any pollutants or silt within the surface water will settle, be dispersed, or diluted within the marine environment. The indirect hydrological pathway of surface water will not impact on the conservation objectives of this SPA. Given that this SPA is located 9.8 km from the proposed development site, it is unlikely that heightened noise levels during construction and operation will impact on the designated qualifying interests of this site. Impacts caused by the proposed development in the absence of any mitigation measures, would be expected to be localised to the immediate environs of the site, Mayne River and Baldoyle Bay. No impacts on the qualifying interests of this Natura 2000 site are foreseen. **No significant effects are likely.**
IE0004069	Lambay Island SPA	**OUT**	**Conservation Objectives** To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. **Qualifying Interests** A009 Fulmar (*Fulmarus glacialis)* A017 Cormorant (*Phalacrocorax carbo*) A018 Shag (*Phalacrocorax aristotelis*) A043 Greylag Goose (*Anser anser*) A183 Lesser Black-backed Gull (*Larus fuscus*) A184 Herring Gull (*Larus argentatus*) A188 Kittiwake (*Rissa tridactyla*) A199 Guillemot (*Uria aalge*) A200 Razorbill (*Alca torda*) A204 Puffin (*Fratercula arctica*) **Potential Impact** The proposed development is 11.5 km from the Lambay Island SPA. No impact on the qualifying interests of this SPA is foreseen. This SPA is for coastal birds and there is no direct hydrological connection from the proposed development to this SPA. There is an indirect hydrological pathway to this SPA via the proposed foul and surface water drainage networks. Foul wastewater will discharge to an existing public foul network located in the north-east corner of the subject site. Foul wastewater will then be treated along the public network. Surface water will be directed to a wetland installed within the Mayne River floodplain, located just beyond the line of the existing North Fringe foul sewer. Surface water will then discharge to Mayne River floodplain over a spillway/weir after attenuation. As the Mayne River ultimately outfalls to Baldoyle Bay, there is an indirect hydrological pathway to this SPA. However, given the minimum distance along this pathway to the SPA (11.5km), any pollutants or silt within the surface water will settle, be dispersed,

			or diluted within the marine environment. The indirect hydrological pathway of surface water will not impact on the conservation objectives of this SPA. Given that this SPA is located 11.5 km from the proposed development site, it is unlikely that heightened noise levels during construction and operation will impact on the designated qualifying interests of this site. Impacts caused by the proposed development in the absence of any mitigation measures, would be expected to be localised to the immediate environs of the site, Mayne River and Baldoyle Bay. No impacts on the qualifying interests of this Natura 2000 site are foreseen. **No significant effects are likely.**
IE0004172	Dalkey Islands SPA	**OUT**	**Conservation Objectives** To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. **Qualifying Interests** Roseate Tern (*Sterna dougallii*) [A192] Common Tern (*Sterna hirundo*) [A193] Arctic Tern (*Sterna paradisaea*) [A194] **Potential Impact** The proposed development is 13.9 km from the Dalkey Islands SPA. No impact on the qualifying interests of this SPA is foreseen. This SPA is for coastal birds and there is no direct hydrological connection from the proposed development to this SPA. There is an indirect hydrological pathway to this SPA via the proposed foul and surface water drainage networks. Foul wastewater will discharge to an existing public foul network located in the north-east corner of the subject site. Foul wastewater will then be treated along the public network. Surface water will be directed to a wetland installed within the Mayne River floodplain, located just beyond the line of the existing North Fringe foul sewer. Surface water will then discharge to Mayne River floodplain over a spillway/weir after attenuation. As the Mayne River ultimately outfalls to Baldoyle Bay, there is an indirect hydrological pathway to this SPA. However, given the minimum distance along this pathway to the SPA (13.9km), any pollutants or silt within the surface water will settle, be dispersed, or diluted within the marine environment. The indirect hydrological pathway of surface water will not impact on the conservation objectives of this SPA. Given that this SPA is located 13.9 km from the proposed development site, it is unlikely that heightened noise levels during construction and operation will impact on the designated qualifying interests of this site. Impacts caused by the proposed development in the absence of any mitigation measures, would be expected to be localised to the immediate environs of the site, Mayne River and Baldoyle Bay. No impacts on the qualifying interests of this Natura 2000 site are foreseen. **No significant effects are likely.**

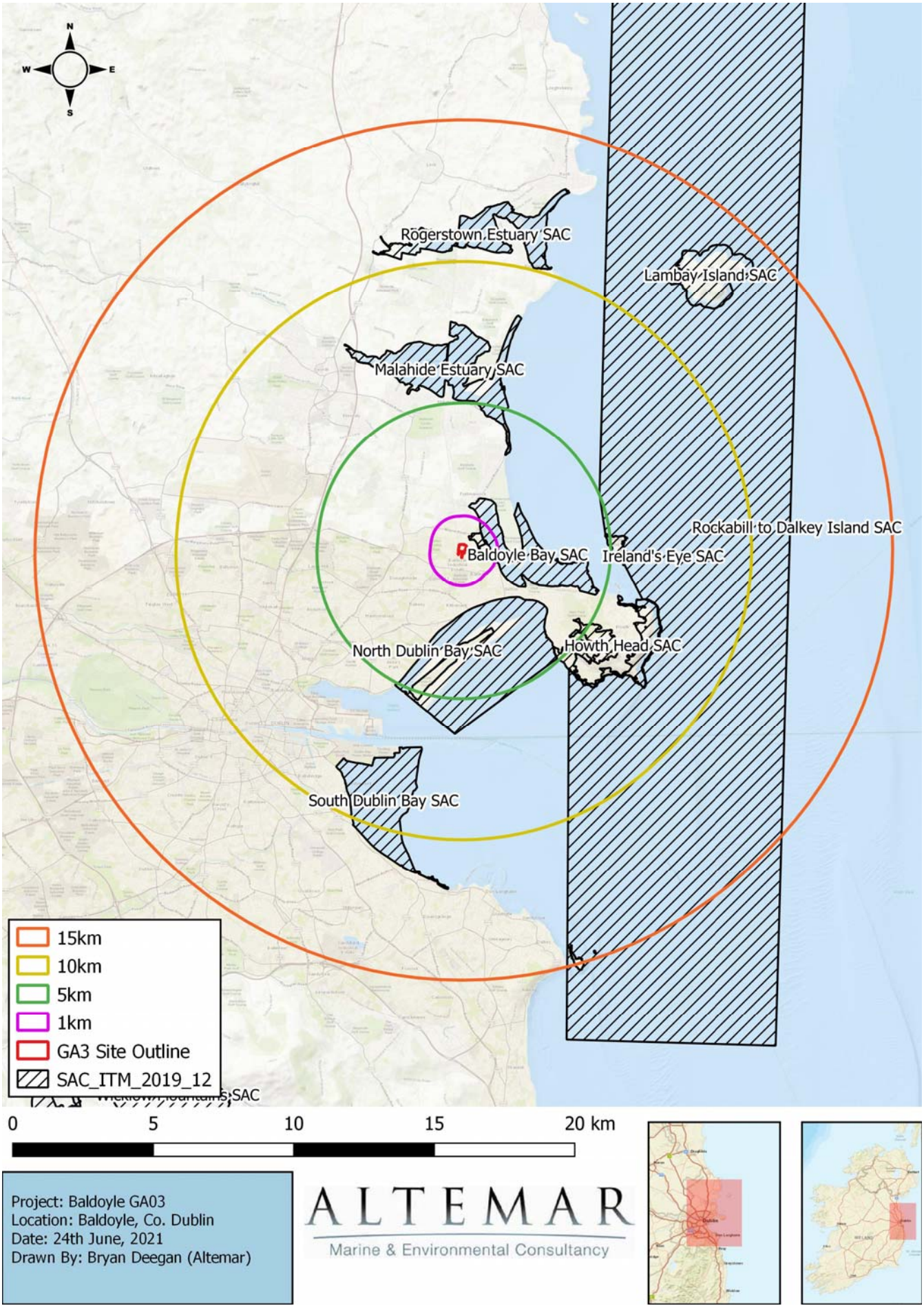
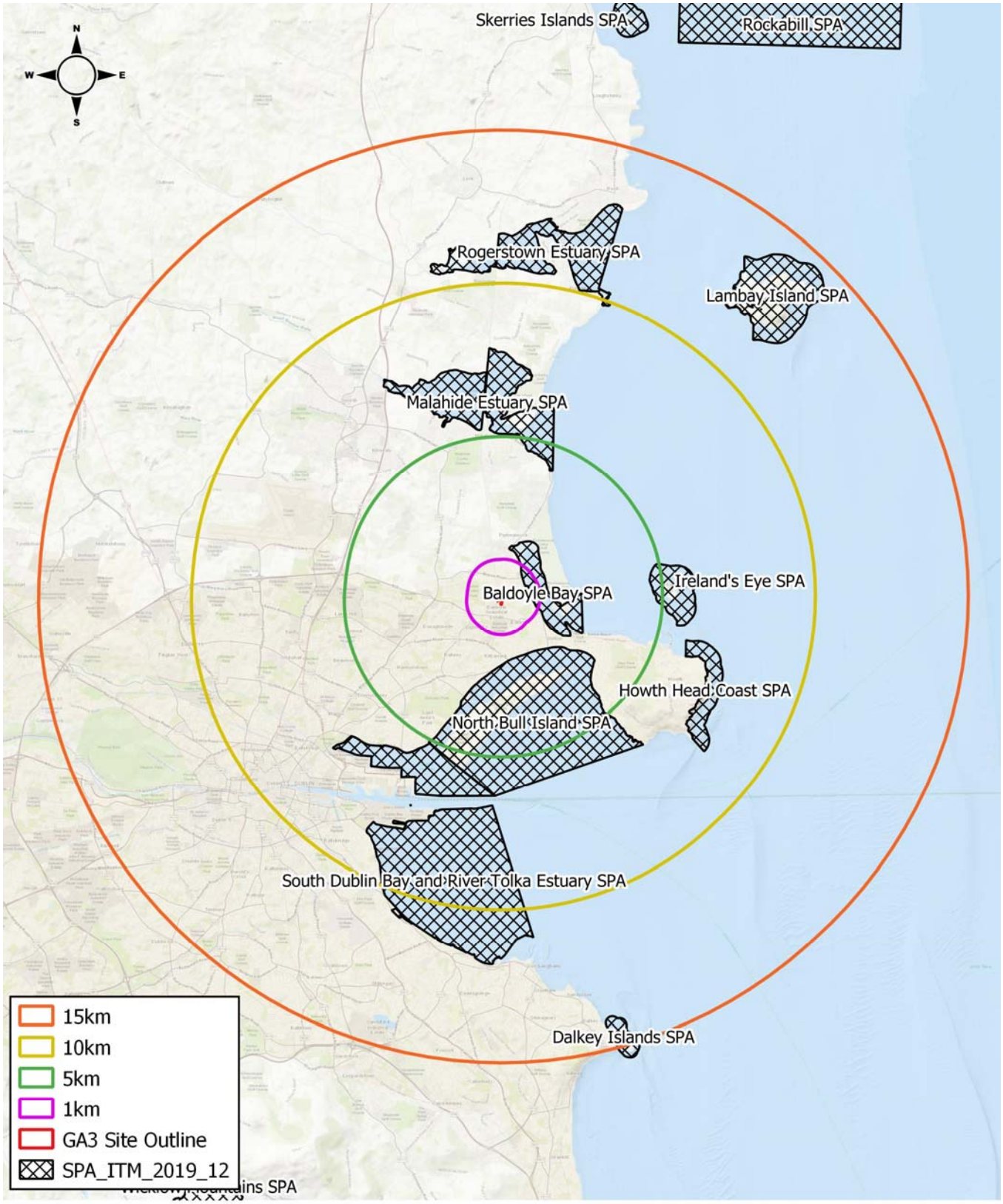


Figure 3. Special Areas of Conservation located within 15km of the proposed development



Project: Baldoyle GA03
Location: Baldoyle, Co. Dublin
Date: 24th June, 2021
Drawn By: Bryan Deegan (Altemar)

ALTEMAR
Marine & Environmental Consultancy

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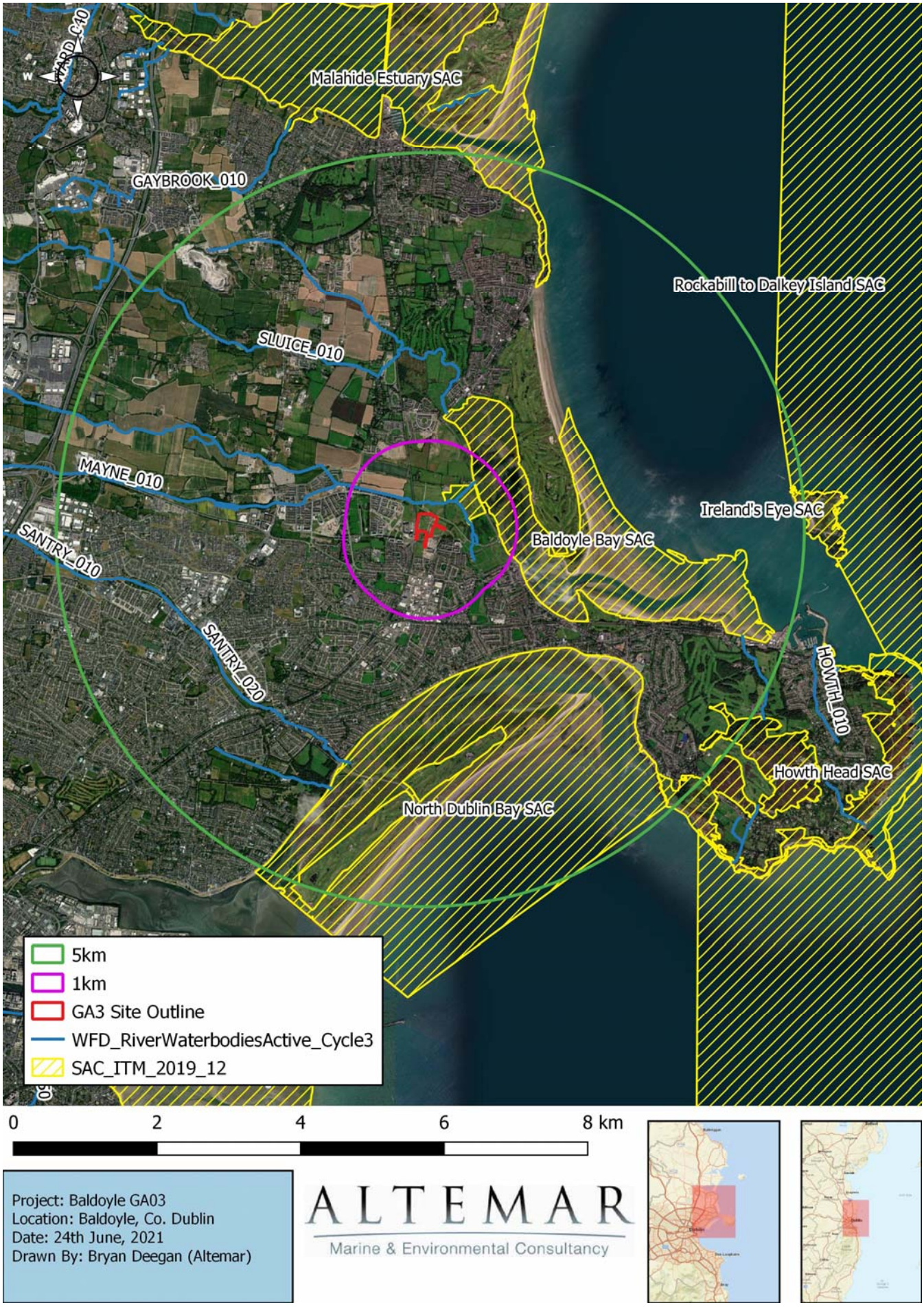

Figure 5. Watercourses & SACs within 5 km of the proposed development

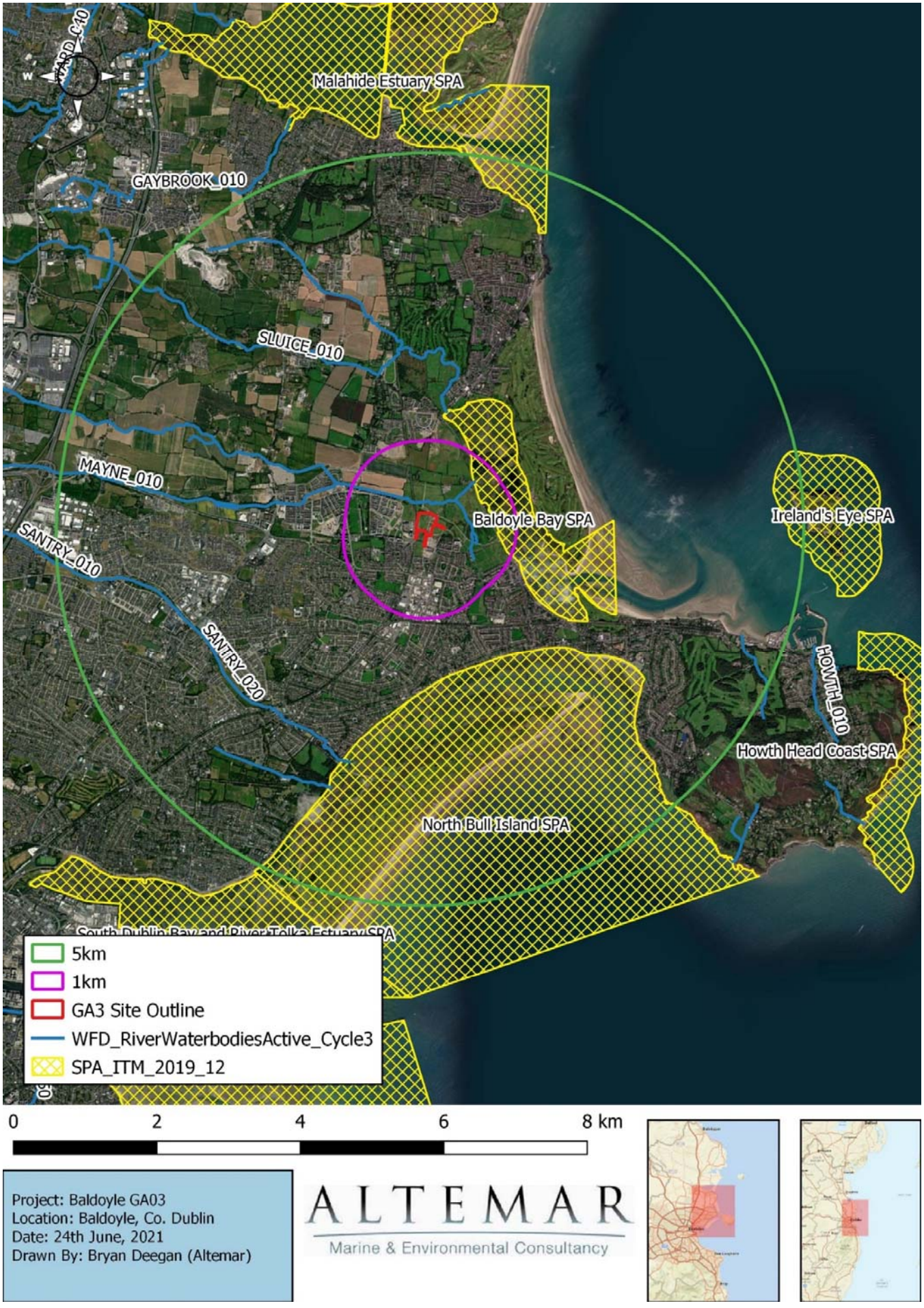

Figure 11. Watercourses & SPAs within 5 km of the proposed development

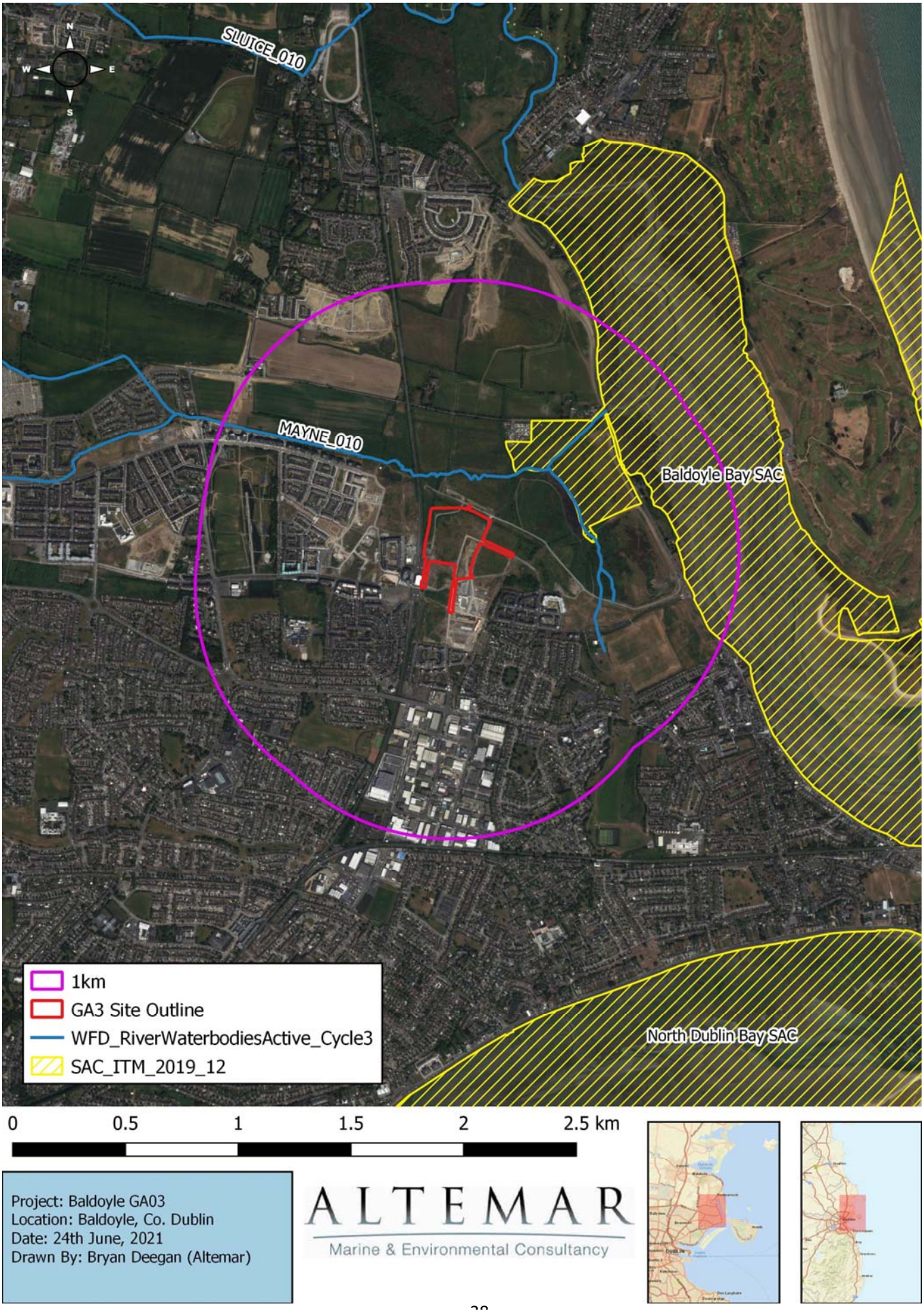

Figure 63. Watercourses & SACs within 1 km of the proposed development

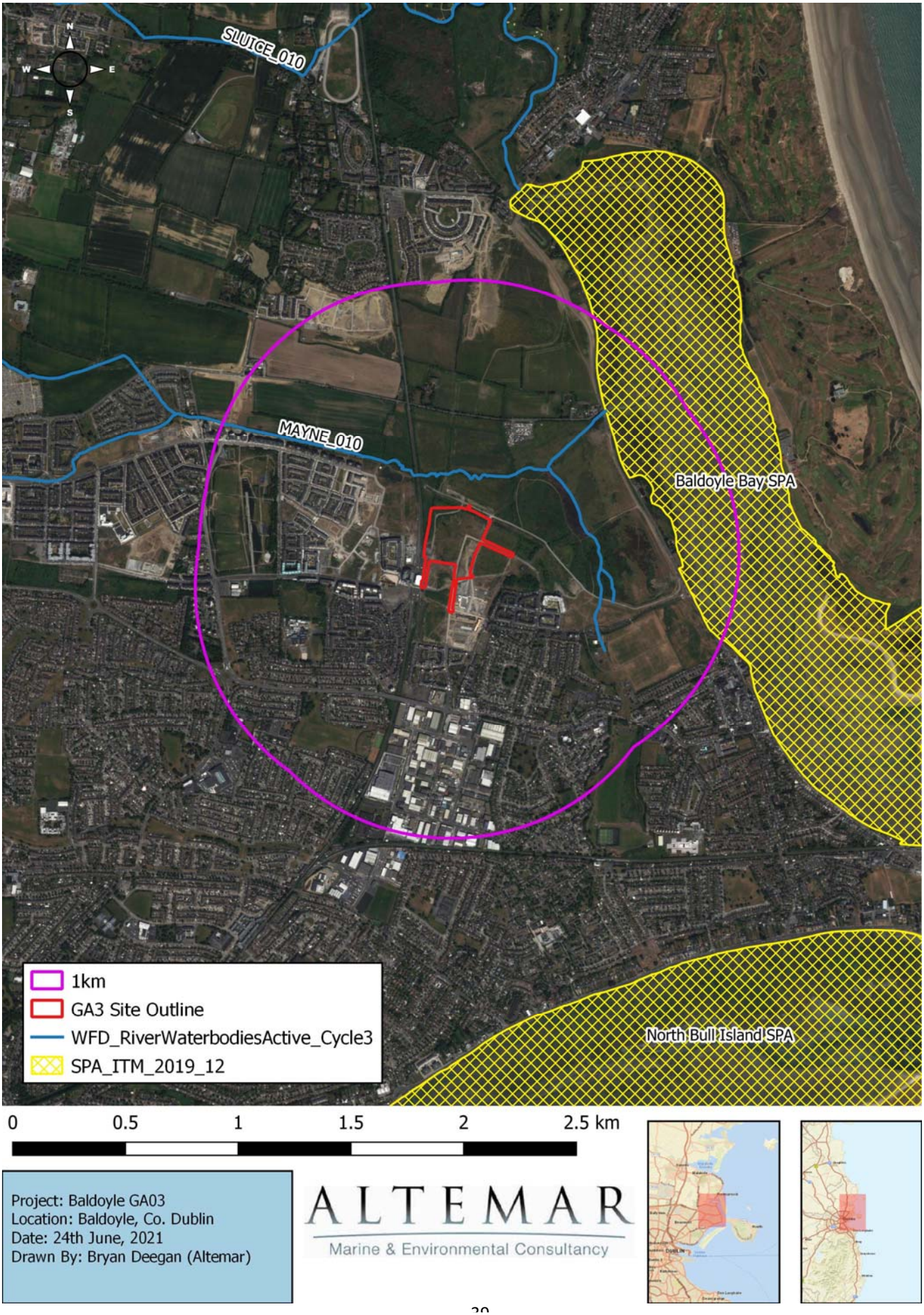

Figure 74. Watercourses & SPAs within 1 km of the proposed development

In-Combination Effects

The following is a list of planning applications as identified on the Department of Housing, Local Government and Heritage's 'National Planning Application Database' portal[2]:

Table 4. In combination effects evaluated.

Ref. No.	Address	Proposal
F21A/0046	Lands at Baldoyle (Formerly known as the Coast, Dublin 13)	The site is bounded to north by undeveloped lands, to the south by the residential development of Myrtle, to the east by residential development of Red Arches, and to the west by undeveloped lands and the Dublin - Belfast railway line. The development consists of minor alterations to permitted residential development, as permitted under F16A/0412, ABP Ref: PL06F.248970 as amended under F20A/0258. The proposed alterations relate to Blocks B3, B4,C3, C4 and C5 only and relate to either: Proposed alterations to some of the permitted Unit Types in respect of their external design which relates primarily to roof and porch design as well as external finishes, minor internal reconfiguration and removal or alteration of permitted solar panels. The introduction of new Unit Types in place of permitted units. This is set out in respect of each block as follows : Block B3 - To the east of the Block, the replacement of the permitted 1 no Unit Type G, 7 no. Unit Type D and 1 no. Unit Type E with 9 no. Unit Type P. Block B4- to the east side of the Block, replacement of the permitted 1 no. Unit Type G, 7 No. Unit Type D and 1 no. Unit Type E, 1 no. Unit Type A and 1 no. Unit Type B with 9 no. Unit Type P. Block C3 to the west and centre of the block replacement and alteration of the permitted 2 no. Unit Type M, 8 no. Unit Type A and 6 no. Unit Type D with 18 no. revised unit Type B. To the east of the block the replacement of 2 no. Unit Type E with 2 no. revised unit Type D and the alteration of the 5 no. Unit Type E to revised unit Type E Block C4- To the west of the block the alteration of the permitted 2 no. Unit Type N and 4 no. Unit Type K to 2 no. revised unit Type N and 4 no. Revised Unit Type K. Block C5- to the west of the block the alteration of the permitted 2 no. Unit Type N and 4 no. revised Unit Type K. In total 38 permitted units are being altered with external changes and 33 no. units are replacing Type 38 no. permitted units. This proposed replacement and alteration of permitted unit types results in a reduction in permitted units by 5. Permission is also sought for the resultant increase in car-parking from 98 permitted spaces to 122 spaces relating to the subject units and for the alterations to permitted landscaping as a result of the proposed development.
F20A/0258	Lands at Baldoyle (Formerly known as the Coast, Dublin 13)	Minor alterations to permitted residential development, as permitted under F16A/0412, ABP Re. Ref; PL06F.248970. The prposed alterations relate to Blocks C4, C5 and D1 only and primarily relate to the alteration of external finishes and material of permitted housing units including the: Omission of permitted fireplaces and chimneys; Alterations to permitted fenestration including vertical frame sections, transoms and mullions, of windows and doors to front and rear of houses; Alteration of permitted rear flat roof to pitched roof on Building Types A & D; removal of permitted decorative balustrades; Alterations of the permitted brickwork finish to the rear and side elevations of the houses with a render finish; Alteration of permitted bin stores to include brick finishes; Removal of permitted

[2] https://housinggovie.maps.arcgis.com/apps/webappviewer/index.html?id=9cf2a09799d74d8e9316a3d3a4d3a8de

		solar panels from Building Types A,B,D,E,F G and alterations of permitted solar panels on Building Types K & N.
F19A/0461	Myrtle Grange Road Baldoyle	**Primary School:** Three storey 16 classroom Primary School building in Baldoyle (Roll Number 20519G), including a two classroom SEN base. The design also includes a general-purpose hall, support teaching spaces and ancillary accommodation, external junior play areas, secure SEN hard and soft play area and a sensory garden. The proposed project also incorporates associated car parking, access road, pedestrian access, bicycle lane, construction of 2 no. external ball courts, landscaping, connection to public services and all associated site works
F16A/0412	The Coast, Baldoyle, Dublin 13.	550 no. residential units (379 no. apartments and 171 no. houses) and a village centre comprising C.1,585sq. m. of commercial floor space laid out in 13 no. blocks (Blocks A1, A2, A3, B1, B2, B3, B4, C1, C2, C3, C4, C5 and D1) ranging in height from two storeys to six storeys as follows: Blocks A1, A2 and A3 will consist of 3 no. six storey buildings (c. 30.05m OD to roof level with an overall height of c. 33.90 OD to include lift overrun) comprising 195 no. residential units (5 no. 1-bed apartment, 162 no. 2-bed apartments, and 28 no. 3-bed apartments) at first to fifth floor level, c.1,585 sq.m. of commercial floor area at ground floor level comprising a convenience outlet (c. 493sq.m.), cafe (c. 200sq.m.), 4 no. retail units (c. 88sq.m., 99sq.m., 99 sq.m. and 90sq.m.), a crèche (c. 516sq.m.) with outdoor play area (c. 183sq.m.) and shared car park also at ground floor level with two associated communal courtyard areas at first floor level above a podium. Block B1 will consist of a four storey building over basement car park (c. 21.6m OD to roof level with an overall height of c. 25m OD to include lift overrun) comprising 82 no. residential units (3 no. 1-bed apartments, 75 no. 2-bed apartments, and 4 no. 3-bed apartments); Blocks B1 and B2 include a shared central communal courtyard area over a shared basement car park and a community room (c. 78sq.m.) in the entrance pavilion to the basement. Block B2 will consist of 3 no. three storey terraces over basement car park comprising 24 no. residential units (12 no. own door 2-bed apartments and 12 no. own door 2-bed duplex apartments). Block B3 will consist of 1 no. two storey terrace and 3 no. three storey terraces comprising 32 no. residential units (11 no. 3-bed terraced houses and 21 no. 4-bed terraced houses). Block B4 will consist of 2 no. two storey terraces and 1 no. three storey terrace comprising 25 no. residential units (16 no. 3-bed terraced houses and 9 no. 4-bed terraced houses). Block C1 will consist of 3 no. three storey terraces comprising 32 no. residential units (16 no. 2-bed own door apartments and 16 no. 2-bed own door duplex apartments). Block C2 will consist of 1 no. two storey terrace and 2 no. three storey terraces comprising 35 no. residential units (9 no. 2-bed own door apartments, 9 no. 2-bed own door duplex apartments, 10 no. 3-bed terraced houses and 7 no. 4-bed terraced houses.

		Block C3 will consist of 1 no. two storey terrace and 2 no. three storey terraces comprising 29 no. residential units (11 no. 3-bed houses and 18 no. 4-bed houses). Block C4 will consist of 2 no. two storey terraces and 2 no. three storey terraces comprising 47 no. residential units (5 no. 1-bed own door apartments, 2 no. 2-bed own door apartments, 5 no. 2-bed own door duplex apartments, 2 no. 3-bed own door duplex apartments, 24 no. 3-bed terraced houses and 9 no. 4-bed terraced houses). Block C5 will consist of 2 no. two storey terraces and 2 no. three storey terraces comprising 37 no. residential units (5 no. 1-bed own door apartments, 2 no. 2-bed own door apartments, 5 no. 2-bed own door duplex apartments, 2 no. 3-bed own door duplex apartments, 14 no. 3-bed terraced houses, and 9 no. 4-bed terraced houses). Block D1 will consist of 12 no. two storey 3-bed semi-detached houses. All apartments and duplex apartments have private terraces or balconies and private communal amenity areas. The proposed development will also include 896 no. residential (including visitor) car parking spaces, 62 no. commercial car parking spaces, 551 no. residential bicycle spaces and 13 no. commercial bicycle spaces; pedestrian, vehicular and bicycle access will be via the existing Longfield Road and Red Arches Road and the proposed internal road network comprising Stapolin Avenue, Ireland's Eye Avenue and smaller access roads; construction access will be via existing haul road from the Coast Road; landscaping works including Stapolin Square (c. 0.4ha) which will provide access to Clongriffin Train Station via a series of terraces, steps and slopes, a range of public open spaces including pocket parks and amenity spaces, the largest of which will be Stapolin Haggard (c. 1.57ha); public lighting; a wetland area (c. 0.4ha.) for water quality treatment associated with the proposed development; all associated ancillary facilities including 8 no. ESB substations, switch rooms, refuse storage, water storage tanks and plant; and all associated site development works including the removal of existing roads and infrastructure where required and demolition of existing temporary lift and stair enclosure and associated infrastructure to Clongriffin Train Station. The subject site of C 15.89ha comprised Growth Area 1 of the Baldoyle-Stapolin Local Area Plan 2013-2019. This application is accompanied by an Environmental Impact Statement (E.I.S.)
F11A/0290 (/E1), PL06F.239732		Regents Park Development Ltd. were granted permission on appeal on 11th April 2013 and given a further extension of duration of permission in 2018 (FCC Reg. Ref. F11A/0290/E1) on lands at Growth Area 2 (GA02), as per Baldoyle-Stapolin Local Area Plan. FCC initially refused the application however An Bord Pleanála subsequently granted permission following appeal. The development entailed 400 no. dwelling units, 3 no. retail units, a crèche, surface and basement level car parking, landscaping and all associated works.
Baldoyle – Stapolin Local Area		The GA3 site forms part of a wider RA zoning as set out in the Baldoyle – Stapolin Local Area Plan 2013. Build-out of the remainder of the LAP – including the GA1 project – as well as further potential future residential and landscape / amenity works as indicated in the

Plan 2013 (extended)		LAP. As outlined in the LAP '*The Vision for Baldoyle-Stapolin is to create a place to live that is appealing, distinctive and sustainable, with minimal impact on the surrounding environment and the coast. It is envisaged that Baldoyle-Stapolin will develop as a sustainable community comprised of new homes, community, leisure and educational facilities based around an identifiable and accessible new village centre which will form the heart of the area. With a range of different sizes and types of homes, as well as integrated amenities and excellent public transport, this will be a fledgling neighbourhood with a varied social mix and will embody the principles of sustainability, sustainable communities and inclusiveness.*' Baldoyle-Stapolin and the surrounding areas have a natural environment which incorporates both nationally and internationally important sites in terms of wildlife and habitats. The challenges in Baldoyle-Stapolin are how to balance the development of a compact urban area with approaches which work effectively with nature. This will be achieved by adopting an overarching Green Infrastructure Strategy centred around - Protecting, Creating, Enhancing and Connecting the natural environment within and surrounding the LAP lands. The Green Infrastructure Strategy will seek to maintain habitats and species within the Baldoyle Bay SPA and SAC at favourable conservation condition and ensure the ecological integrity of Baldoyle Bay. It will seek to develop Racecourse Park within the Baldoyle-Stapolin LAP lands and the open space areas within the Portmarnock LAP lands to the north, as Ecological Buffer Zones, which will help protect the ecological integrity of the neighbouring nationally and internationally designated sites by providing suitable habitat for key species such as birds while minimising the impacts of adjacent residential land uses. In addition to the conservation of existing designated sites and habitats the LAP will seek to create ecological networks within the LAP lands consisting of green spaces / stepping stones, corridors and links that will provide opportunities to improve linkages, for both the residents of the area and local wildlife, between the Baldoyle-Stapolin LAP lands, the neighbouring LAP lands at Portmarnock South and Clongriffin and the surrounding green belt areas. As part of the Green Infrastructure Strategy it is envisaged that Sustainable urban Drainage System (SuDS) measures will be incorporated throughout the LAP lands in both the public and private realms to reduce the risk of flooding on site and to help to improve the quality of the water being discharged to the Mayne River, and ultimately to Baldoyle Bay, thus helping to ensuring compliance with the Water Framework Directive (WFD).
Stapolin Growth Area 1, Baldoyle, Co. Dublin.		The Shoreline Partnership have applied for planning permission for a residential development at Stapolin Growth Area 1, Baldoyle, Co. Dublin. The proposed development will consist of alterations to the development permitted within Growth Area No. 1 (GA1) of the Baldoyle - Stapolin Local Area Plan 2013-2019, under FCC Reg. Ref. F16A/0412, ABP Reg. Ref. ABP-248970 (as amended by F20A/0258 and F21A/0046). The existing permission provides for 544 no. residential units (385 no. apartments and 159 no. houses), residential tenant amenities, village centre and crèche laid out in 13 no. blocks (identified as A1, A2, A3,

		B1, B2, B3, B4, C1, C2, C3, C4, C5, D1) ranging in height from two-storeys to six-storeys, with associated pedestrian, vehicular and bicycle access, car and bicycle parking, landscape works and open spaces, including Stapolin Square and Stapolin Haggard, pocket parks, communal courtyards; surface water attenuation wetland; and associated ancillary services and works on an overall site of 15.89 hectares (ha). A number of elements of the existing permitted development have been constructed / will be constructed in accordance with the current grant of permission (as previously amended), including: • Surface water attenuation wetlands and associated upstream surface water network; • Ninety-nine units in permitted Blocks C4, C5 and D1 (identified as Block C6 under amendments F20A/0258 and F21A/0046); • The open space referred to as the Haggard Park ('Stapolin Haggard'); • Demolition of existing temporary lift and stair enclosure and associated infrastructure to Clongriffin Train Station; • Road infrastructure (except where within the application boundary and requiring to be locally altered for proposed Project); and • Utilities infrastructure (except where within the application boundary and requiring to be locally altered for proposed Project). Given that they are already constructed or are under construction, the area of the surface water wetlands and associated upstream surface water network, and the area of Blocks C4, C5, C6 (latter formerly D1) are excluded from the subject planning application. The Haggard Open Space will be provided in accordance with the current grant of permission and as such is also exclusion from the planning area. The proposed Project will provide for 882 no. new residential dwellings (747 no. apartments, 135 no. houses), residential tenant amenities, village centre, and crèche, laid out in 15 no. blocks (identified as: A1, A2, A3, B1, B2, B3, B4, C1, C1A, C2, C2A, C3, D1, D2, D3) ranging in height from two-storeys to 15-storeys, with associated pedestrian, vehicular and bicycle access, car and bicycle parking, public realm and open space, including an enlarged Stapolin Square, landscape and associated ancillary services and works over a total Site area of c. 9.1ha, of which the development area is c. 8.89ha. As well as excluding some previously permitted areas (as above), the red line boundary for this application extends beyond the red line of the previously permitted development to provide for the full extent of Stapolin Square, new access to Clongriffin Station through the Square, new apartment blocks D1, D2, D3 to the north of Stapolin Square, and

		a bus ramp to Clongriffin Station. The red line boundary of this application also extends north to provide for a 300mm watermain connection to the existing watermain in the parklands to the north. A Natura Impact Statement has been prepared by Altemar Ltd. to accompany the planning application outlined above. Following the implementation of mitigation measures, this report concludes the following: '*On the basis of the content of this report, the competent authority is enabled to conduct an assessment for Appropriate Assessment and consider whether, in view of best scientific knowledge and in view of the conservation objectives of the relevant European sites, the Proposed Development, individually or in combination with other plans or projects is likely to have a significant effect on any European site.* ***No significant effects are likely on Natura 2000 sites, their features of interest or conservation objectives. The proposed project will not will adversely affect the integrity of European sites.'***

Given this, it is considered that in combination effects with other existing and proposed developments in proximity to the application area would be unlikely, neutral, not significant and localised. It is concluded that no significant effects on Natura 2000 sites will be seen as a result of the proposed development alone or combination with other projects.

No projects in the vicinity of the proposed development would be seen to have a significant in combination effect on Natura 2000 sites.

Appropriate Assessment Screening Conclusions

An initial screening of the proposed works, using the precautionary principle (without the use of any standard construction phase controls or mitigation measures) and the Source/Pathway/Receptor links between the proposed works and Natura 2000 sites with the potential to result in significant effects on the conservation objectives and features of interest of the Natura 2000 sites was carried out in Tables 2 and 3. Based on best scientific knowledge and objective information and assessment, the possibility of significant effects caused by the proposed project was excluded for the following Natura 2000 sites within 15km in addition to sites beyond 15km with a direct/indirect pathway:

Special Areas of Conservation

- IE0000206 North Dublin Bay SAC
- IE0000205 Malahide Estuary SAC
- IE0000202 Howth Head SAC
- IE0002193 Ireland's Eye SAC
- IE0003000 Rockabill to Dalkey Island SAC
- IE0000210 South Dublin Bay SAC
- IE0000208 Rogerstown Estuary SAC
- IE0000204 Lambay Island SAC

Special Protection Areas

- IE0004006 North Bull Island SPA
- IE0004025 Malahide Estuary SPA
- IE0004117 Ireland's Eye SPA
- IE0004024 South Dublin Bay and River Tolka Estuary SPA
- IE0004113 Howth Head Coast SPA
- IE0004015 Rogerstown Estuary SPA
- IE0004069 Lambay Island SPA
- IE0004172 Dalkey Islands SPA

The project is limited in scale and extent and the potential zone of influence is restricted to the immediate vicinity of the proposed development. However, in the absence of mitigation measures there is potential for silt laden material to enter the watercourse and impact on local biodiversity and Natura 2000 sites immediately downstream from the works.

Acting on a strictly precautionary basis, an NIS is required in respect of the effects of the project on the Baldoyle Bay SAC and Baldoyle Bay SPA because it cannot be excluded on the basis of best objective scientific information following screening, in the absence of control or mitigation measures that the plan or project, individually and/or in combination with other plans or projects, will have a significant effect on the named European Site/s.

An NIS or Stage 2 Appropriate Assessment is not required for the effects of the project on all other listed Natura sites above because it can be excluded on the basis of the best objective scientific information following screening that the plan or project, individually and/or in combination with other plans or projects, will have a significant effect on the European Site/s.

A Natura Impact Statement is required for the proposed development.

Stage 2: Natura Impact Statement

A Natura Impact Statement (NIS) is Stage 2 of the Appropriate Assessment process. In the case of the proposed development at Baldoyle-Stapolin Growth Area 3, Baldoyle, Co. Dublin, acting on a strictly precautionary basis, an NIS is required in respect of the effects of the project on the Baldoyle Bay SAC and Baldoyle Bay SPA (due to the potential for downstream impacts during construction and operation), because it cannot be excluded on the basis of best objective scientific information, in the absence of control or mitigation measures, following screening that the plan or project, individually and/or in combination with other plans or projects, will have a significant effect on the named European Site/s.

A Stage 2 Appropriate Assessment or NIS is not required for the effects of the project on all other listed Natura sites within, and sites beyond, 15km because, it can be excluded, on the basis of the best objective scientific information following screening, that the plan or project, individually and/or in combination with other plans or projects, will have not a significant effect on the European Site/s.

The NIS evaluates the potential for direct, indirect effects, alone or in combination with other plans and projects having taken into account the use of mitigation measures. The NIS is informed by the accompanying Biodiversity Chapter and CEMP including the proposed mitigation measures that are outlined to reduce the potential effects of the proposed project on species/habitats of conservation importance and the surrounding environment.

A further review of the Conservation Objectives and features of interest is necessary to determine if significant effects are likely to impact the Baldoyle Bay SAC and Baldoyle Bay SPA.

Baldoyle Bay SAC (Site code: 000199)

Baldoyle Bay SAC is located 235m from the planning boundary. The proposed development is directly hydrologically connected to Baldoyle Bay SAC via the proposed surface water drainage strategy. Surface water will be directed to a wetland installed within the Mayne River floodplain, located just beyond the line of the existing North Fringe foul sewer. This wetland and its corresponding upstream surface water network were granted planning permission under Planning Ref. F16A/0412 and is currently under construction. Surface water will then discharge to the River Mayne after attenuation in the wetland. The River Mayne ultimately outfalls to Baldoyle Bay (Figure 21).

Site-specific data

As outlined in the Baldoyle Bay SAC Site Synopsis (NPWS, Version date 12.08.2013):

'*Baldoyle Bay SAC extends from just below Portmarnock village to the west pier at Howth in Co. Dublin. It is a tidal estuarine bay protected from the open sea by a large sand-dune system. Two small rivers, the Mayne and the Sluice, flow into the bay.*

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; [1310] Salicornia Mud; [1330] Atlantic Salt Meadows and; [1410] Mediterranean Salt Meadows.

Large areas of intertidal flats are exposed at low tide at this site. 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 (Enteromorpha spp. and Ulva lactuca).

The sediments have a typical macrofauna, with Lugworm (Arenicola marina) dominating the sandy flats. The tubeworm Lanice conchilega is present in high densities at the low tide mark and the small gastropod Hydrobia ulvae occurs in the muddy areas, along with the crustacean Corophium volutator.

Areas of saltmarsh occur near Portmarnock Bridge and at Portmarnock Point, with narrow strips along other parts of the estuary. Species such as glassworts (Salicornia spp.), Sea-purslane (Halimione portulacoides), Sea Plantain

(Plantago maritima) and Sea Rush (Juncus maritimus) are found here. Portmarnock Spit formerly had a welldeveloped sand dune system but this has been largely replaced by golf courses and is mostly excluded from the site. A few dune hills are still intact at Portmarnock Point, and there are small dune hills east of Cush Point and below the Claremont Hotel. These are mostly dominated by Marram (Ammophila arenaria), though Lymegrass (Leymus arenarius) is also found.

The site includes a brackish marsh along the Mayne River. Soils here have a high organic content and are poorly drained, and some pools occur. Rushes (Juncus spp.) and salt tolerant species such as Common Scurvygrass (Cochleria officinalis) and Greater Sea-spurrey (Spergularia media) are typical of this area. Knotted Hedgeparsley (Torilis nodosa), a scarce plant in eastern Ireland, has been recorded here, along with Brackish Water-crowfoot (Ranunculus baudotti), a species of brackish pools and ditches which has declined in most places due to habitat loss. Two plant species, legally protected under the Flora (Protection) Order, 1999, occur in the Mayne marsh, Borrer's Saltmarsh-grass (Puccinellia fasciculata) and Meadow Barley (Hordeum secalinum).

Baldoyle Bay is an important bird site for wintering waterfowl and the inner part of the estuary is a Special Protection Area under the E.U. Birds Directive as well as being a Statutory Nature Reserve. Internationally important numbers of Pale-bellied Brent Goose (418) and nationally important numbers of two Annex I Birds Directive species - Golden Pover (1,900) and Bar-tailed Godwit (283) - have been recorded. Four other species also reached nationally important numbers: Shelduck (147), Pintail (26), Grey Plover (148) and Ringed Plover (218) - all figures are average peaks for four winters 1994/95 to 1997/1998. Breeding wetland birds at the site include Shelduck, Mallard and Ringed Plover. Small numbers of Little Tern, a species listed on Annex I of the E.U. Birds Directive, have bred on a few occasions at Portmarnock Point but not since 1991.

The area surrounding Baldoyle Bay is densely populated and so the main threats to the site include visitor pressure, disturbance to wildfowl and dumping. In particular, the dumping of spoil onto the foreshore presents a threat to the value of the site.

Baldoyle Bay is a fine example of an estuarine system. It contains four habitats listed on Annex I of the E.U. Habitats Directive, and supports two legally protected plant species. The site is also an important bird area and part of it is a Special Protection Area under the E.U. Birds Directive, as well as being a Statutory Nature Reserve. It supports internationally important numbers of Brent Goose and nationally important numbers of six other bird species, including two Annex I Birds Directive species.'

The Qualifying Interests (QI) (Features of Interest) and the National conservation status of the QI for Baldoyle Bay SAC are seen in Table 5.

***Table 5**. Qualifying Interests, Conservation Status, Management Objectives, Conditions underpinning site integrity for Baldoyle Bay SAC.*

Qualifying Interests, Conservation Status, Management Objectives, Conditions underpinning site integrity for relevant European sites		
Natura 2000 Site Name & Code	**Qualifying Interests**	**Current Conservation Status & Trend**
Baldoyle Bay SAC	Mudflats and sandflats not covered by seawater at low tide [1140] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Mediterranean salt meadows (*Juncetalia maritimi*) [1410]	**Inadequate** **Favourable** **Inadequate** **Inadequate**

The Conservation Objectives and overall status of species and habitats in Baldoyle Bay SAC are as follows[3] [4]:

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

[4]NPWS (2012) Baldoyle Bay SAC (site code: 199) Conservation objectives supporting document -Marine Habitats

'*Objective: To maintain the favourable conservation condition of Mudflats and sandflats (Figure 15) not covered by seawater at low tide in Baldoyle Bay SAC, which is defined by the following list of attributes and targets.*

Target 1. The permanent habitat area is stable or increasing, subject to natural processes.

This target refers to activities or operations that propose to permanently remove habitat from a site, thereby reducing the permanent amount of habitat area. It does not refer to long or short-term disturbance of the biology of a site.

Target 2. Conserve the following community types in a natural condition:

- *Fine sand dominated by Angulus tenuis community complex; 257ha (Figure 16).*
- *Estuarine sandy mud with Pygospio elegans and Tubificoides benedii community complex; 152ha (Figure 8).*
- *Significant continuous or ongoing disturbance of communities should not exceed an approximate area of 15% of the interpolated area of each community type, at which point an inter - Departmental management review is recommended prior to further licensing of such activities.*
- *Proposed activities or operations that cause significant disturbance to communities but may not necessarily represent a continuous or ongoing source of disturbance over time and space may be assessed in a context - specific manner giving due consideration to the proposed nature and scale of activities during the reporting cycle and the particular resilience of the receiving habitat in combination with other activities within the designated site*.'

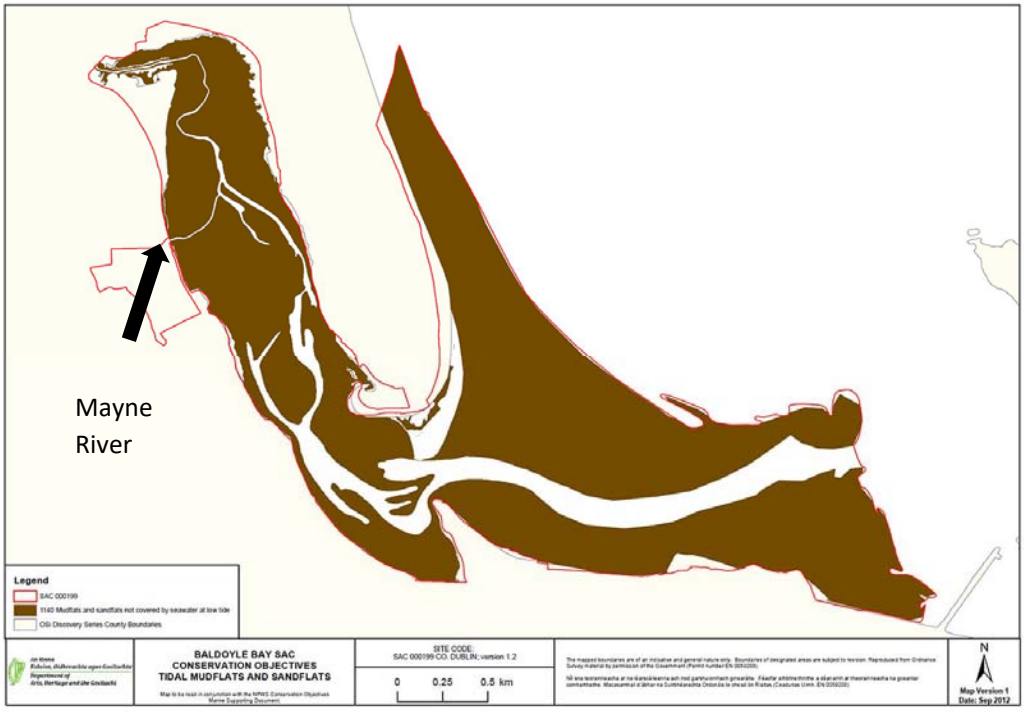

Figure 15. Distribution of Mudflats and Sandflats not covered by seawater at low tide in Baldoyle Bay SAC

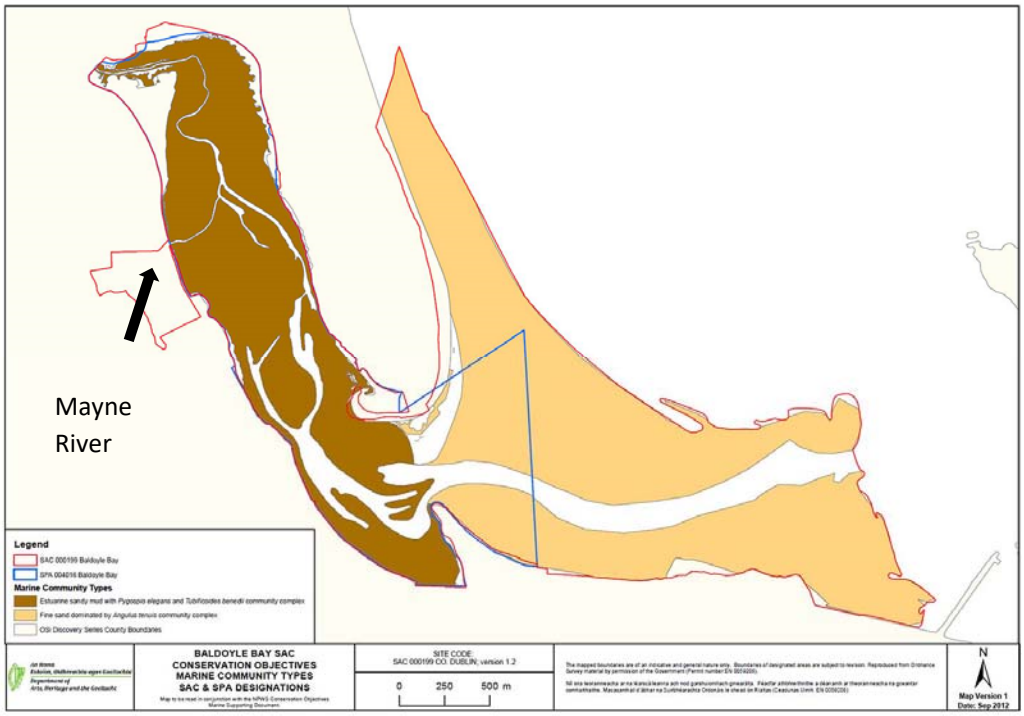

Figure 16. Distribution of marine community types in Baldoyle Bay SAC & Baldoyle Bay SPA

As outlined in the Conservation objectives supporting document – coastal habitats (NPWS, 2012):

'*Baldoyle Bay SAC (site code: 199) is designated for a range of coastal habitats, including saltmarsh. The following three coastal habitats are included in the qualifying interests for the site (* denotes a priority habitat):*

- *Salicornia and other annuals colonising mud and sand (1310)*
- *Atlantic salt meadows (Glauco-Puccinellietalia maritimae) (ASM) (1330)*
- *Mediterranean salt meadows (Juncetalia maritimi) (MSM) (1410)*

These saltmarsh habitats are found in close association with each other.

The following habitats were recorded during the Coastal Monitoring Project (Ryle et al. 2009,) [5] *but they are not listed in the qualifying interests for the site:*

- *Annual vegetation of drift lines (1210)*
- *Embryonic shifting dunes (2110)*
- *Shifting dunes along the shoreline with Ammophila arenaria (white dunes) (2120)*
- *Fixed coastal dunes with herbaceous vegetation (grey dunes) (2130)**
- *Humid dune slacks (2190)'*

Within Baldoyle Bay SAC, there are five main areas of saltmarsh and Atlantic salt meadow (ASM) is the dominant saltmarsh habitat type (Figure 17). As outlined in NPWS 2012:

[5] Ryle, T., Murray, A., Connolly, K. and Swann, M. (2009). Coastal Monitoring Project 2004-2006. Unpublished report to the National Parks and Wildlife Service, Dublin.

'*The main area occurs in the north-west corner of the estuary to the south of the estuarine river channel. This area contains the largest area of ASM and contains a band of MSM on its landward side. There is extensive Spartina sward formation on the seaward side, along the river channel and into the estuary.*

There are several patches of Salicornia habitat located on both sides, towards the lower end of the estuary. ASM habitat dominates the older area and is covered by spring tides in Baldoyle Estuary. The MSM habitat is characterised by clumps of sea rush (Juncus maritimus) and is found in small scattered clumps along the landward side of most of the saltmarsh (McCorry, 2007) [6].

The target is that there should be no decline or change in the distribution of these saltmarsh habitats, unless it is the result of natural processes, including erosion, accretion and succession'.

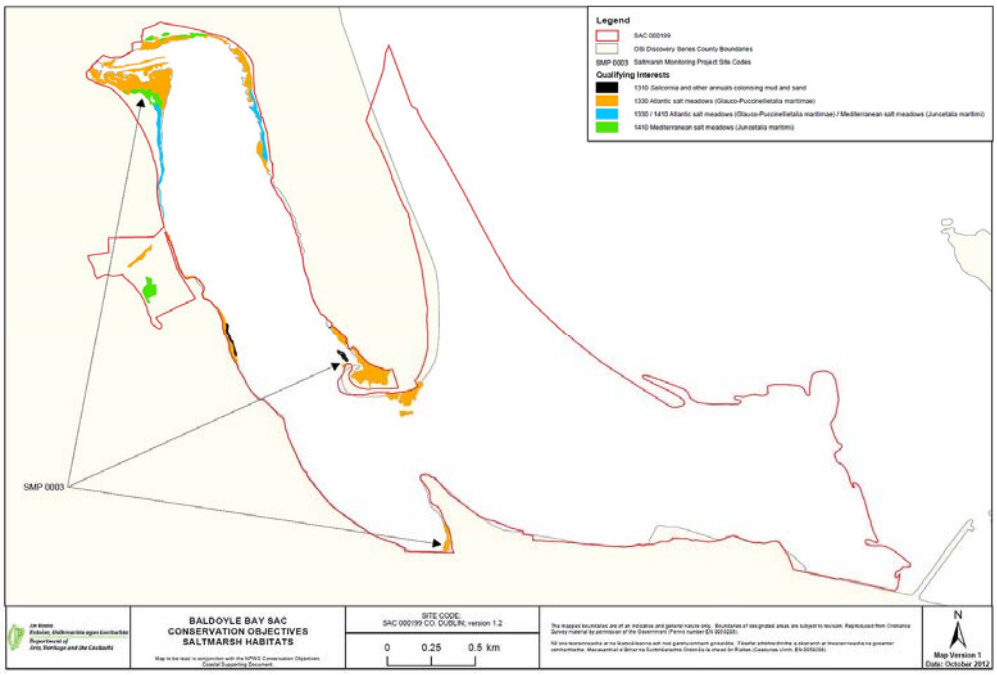

Figure 17. *Saltmarsh habitats found in Baldoyle Bay SAC*

The attribute, measure and target of the site-specific Conservation Objectives for Baldoyle Bay SAC are seen in Table 6.

Table 6. Attribute, measure and target of the site conservation objectives for Baldoyle Bay SAC

Attribute	Measure	Target
Salicornia and other annuals colonising mud and sand [1310] (Restore the favourable conservation condition)		
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession
Habitat distribution	Occurrence	No decline, or change in habitat distribution, subject to natural processes
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain, or where necessary restore, natural circulation of sediments and organic matter, without any physical obstructions
Physical structure: creeks and pans	Occurrence	Maintain creek and pan structure, subject to natural processes, including erosion and succession
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime

[6] McCorry, M. (2007). Saltmarsh Monitoring Project 2006. Unpublished report to the National Parks and Wildlife Service, Dublin.

Attribute	Measure	Target
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within sward
Vegetation structure: vegetation cover	Percentage cover at a representative number of monitoring stops	Maintain more than 90% of area outside creeks vegetated
Vegetation composition: typical species and subcommunities	Percentage cover	Maintain the presence of species-poor communities listed in SMP (McCorry and Ryle, 2009)
Vegetation structure: negative indicator species- *Spartina anglica*	Hectares	No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%
Atlantic salt meadows (Glauco-Puccinellietalia maritimae [1330] (Maintain the favourable conservation condition)		
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession
Habitat distribution	Occurrence	No decline, or change in habitat distribution, subject to natural processes
Habitat distribution	Occurrence	No decline, or change in habitat distribution, subject to natural processes
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain natural circulation of sediments and organic matter, without any physical obstructions
Physical structure: creeks and pans	Occurrence	Maintain creek and pan structure, subject to natural processes, including erosion and succession
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
Vegetation structure:vegetation height	Centimetres	Maintain structural variation within sward
Vegetation structure: vegetation cover	Percentage cover at a representative number of monitoring stops	Maintain more than 90% of area outside creeks vegetated
Vegetation composition: typical species and subcommunities	Percentage cover at a representative number of monitoring stops	Maintain the presence of species-poor communities listed in SMP (McCorry and Ryle, 2009)
Vegetation structure: negative indicator species - *Spartina anglica*	Hectares	No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%
Mediterranean salt meadows (Juncetalia maritimi) [1410] (Maintain the favourable conservation condition)		
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession
Habitat distribution	Occurrence	No decline, or change in habitat distribution, subject to natural processes
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain natural circulation of sediments and organic matter, without any physical obstructions

Attribute	Measure	Target
Physical structure: creeks and pans	Occurrence	Maintain creek and pan structure, subject to natural processes, including erosion and succession
Physical structure:flooding regime	Hectares flooded; frequency	Maintain natural tidal regime
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within sward
Vegetation structure: vegetation cover	Percentage cover at a representative number of monitoring stops	Maintain more than 90% of area outside creeks vegetated
Vegetation composition: typical species and subcommunities	Percentage cover at a representative number of monitoring stops	Maintain the presence of species-poor communities listed in SMP (McCorry and Ryle, 2009)
Vegetation structure: negative indicator species - Spartina anglica	Hectares	No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%

Baldoyle Bay SPA (Site code: 004016)

Baldoyle Bay SPA is located 615m from the planning boundary. The proposed development is directly hydrologically connected to Baldoyle Bay SPA via the proposed surface water drainage strategy. Surface water will be directed to a wetland installed within the Mayne River floodplain, located just beyond the line of the existing North Fringe foul sewer. This wetland and its corresponding upstream surface water network were granted planning permission under Planning Ref. F16A/0412 and is currently under construction. Surface water will then discharge to the River Mayne after attenuation in the wetland. The River Mayne ultimately outfalls to Baldoyle Bay (Figure 21).

Further, given the proximity of the planning boundary to the SPA (615m), there the potential for significant impacts on the bird species protected within the SPA resulting from heightened noise levels during construction and operational phases of development.

Site-specific data

As outlined in the Baldoyle Bay SPA Site Synopsis (NPWS, Version date 25.03.2014):

'*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.'

The Special Conservation Interests (SCIs) for the Baldoyle Bay SPA and the National conservation status of the QI are seen in Table 7.

***Table 7**. Special Conservation Interests (SCIs) for Baldoyle Bay SPA and National status*

Qualifying Interests, Conservation Status, Management Objectives, Conditions underpinning site integrity for relevant European sites		
Natura 2000 Site Name & Code	**Qualifying Interests**	**Current Conservation Status & Trend**
Baldoyle Bay SPA	Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Shelduck (*Tadorna tadorna*) [A048] Ringed Plover (*Charadrius hiaticula*) [A137] Golden Plover (*Pluvialis apricaria*) [A140] Grey Plover (*Pluvialis squatarola*) [A141] Bar-tailed Godwit (*Limosa lapponica*) [A157] Wetland and Waterbirds [A999]	**Amber** **Amber** **Green** **Red** **Amber** **Amber** N/A

The status of qualifying interest species listed for Baldoyle Bay SPA are as follows[7]:

- *'During winter the site regularly supports 1% or more of the biogeographic population of Light-bellied Brent Geese (Branta bernicla hrota). The mean peak number of this species within the SPA during the baseline period (1995/96 – 1999/00) was 726 individuals.*
- *During winter the site regularly supports 1% or more of the all-Ireland population of Ringed Plover (Charadrius hiaticula). The mean peak number of this species within the SPA during the baseline period (1995/96 – 1999/00) was 223 individuals.*

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

- *During winter the site regularly supports 1% or more of the all – Ireland population of Bar-tailed Godwit (Limosa lapponica). The mean peak number of this Annex I species within the SPA during the baseline period (1995/96 – 1999/00) was 353 individuals.*'

The current population data for waterbirds of Special Conservation Interest in Baldoyle SPA is outlined in the NPWS[7].

'*Non - breeding waterbirds have been counted at Baldoyle Bay each winter as part of the Irish Wetland Bird Survey (I-WeBS) since the survey commenced in 1994/95. The site was counted once in 1994/95; otherwise the core survey months (September to March inclusive) were covered in all seasons. The core count period covers the main wintering period when many species occur in their largest concentrations, but also the autumn and spring passage periods when total waterbird numbers may be enhanced by staging/stopover birds.*

Baldoyle SPA is an important feeding and roosting resource for Light-bellied Brent Geese, a listed Special Conservation Interest (SCI) species for the site. However, the same geese also utilise other locations that are outside of the SPA but may be inside or outside of the I-WeBS count boundary. These areas, which provide feeding resources for the geese, are largely amenity grasslands and/or agricultural fields. Bird counts for species of conservation importance are seen in Table 8.

Table 8. Bird counts of species of conservation importance in Baldoyle Bay

	Light-bellied Brent Geese	Ringed Plover	Bar-tailed Godwit	Shelduck	Golden Plover	Grey Plover
(1995/96 - 1999/00)	726 (i)	223 (n)	353 (n)	147 (n)	2,120 (n)	200 (n)
(2005/06 - 2009/10)	874 (i)	122	134	290 (n)	914	96 (n

(i) denotes numbers of international importance; (n) denotes numbers of all-Ireland importance.

Additional Special Conservation Interests for Baldoyle Bay SPA are as follows:

- *During winter the site regularly supports 1% or more of the all –Ireland population of Shelduck (Tadorna tadorna). The mean peak number of this species within the SPA during the baseline period (1995/96 –1999/00) was 147 individuals.*
- *During winter the site regularly supports 1% or more of the all – Ireland population of Golden Plover (Pluvialis apricaria). The mean peak number of this Annex I species within the SPA during the baseline period (1995/96 – 1999/00) was 2,120 individuals.*
- *During winter the site regularly supports 1% or more of the all - Ireland population of Grey Plover (Pluvialis squatarola). The mean peak number of this species within the SPA during the baseline period (1995/96 – 1999/00) was 200 individuals.*
- *The wetland habitats contained within Baldoyle Bay SPA are identified of conservation importance for non – breeding (wintering) migratory waterbirds. Therefore, the wet land habitats are considered to be an additional Special Conservation Interest.*

The Conservation Objectives of Baldoyle Bay SPA are as follows[8]:

'*Objective 1 is 'To maintain the favourable conservation condition of the non - breeding waterbird Special Conservation Interest species listed for Baldoyle Bay SPA'. This objective is defined by the following attributes and targets:*

- *To be favourable, the long-term population trend for each Special Conservation Interest species of waterbirds should be stable or increasing;*

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

- *Waterbird populations are deemed to be unfavourable when they have declined by 25% or more, as assessed by the most recent population trend analysis.*
- *To be favourable, there should be no significant decrease in the range, timing or intensity of use of areas by the waterbird species of Special Conservation Interest, other than that occurring from natural patterns of variation.*

The factors that can adversely affect the achievement of Objective 1 include:

- ***Habitat modification:** Activities that modify discreet areas or the overall habitat(s) within the SPA in terms of how one or more of the listed species use the site (e.g. as a feeding resource) could result in the displacement of these species from areas within the SPA and/or a reduction in their numbers.*
- ***Disturbance:** Anthropogenic disturbance that occurs in or near the site and is either singular or cumulative in nature could result in the displacement of one or more of the listed waterbird species from areas within the SPA, and /or a reduction in their numbers.*
- ***Ex-situ factors:** Several of the listed waterbird species may at times use habitats situated within the immediate hinterland of the SPA or in areas outside of the SPA but ecologically connected to it. The reliance on these habitats will vary from species to species and from site to site. Significant habitat changes or increased levels of disturbance within these areas could result in the displacement of one or more of the listed waterbird species from areas within the SPA, and/or a reduction in their numbers.*

Objective 2 is 'To maintain the favourable conservation condition of the wetland habitat at Baldoyle Bay SPA as a resource for the regularly - occurring migratory waterbirds that utilise it.' This objective is defined by the following attributes and targets:

- *To be favourable, the permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 263 ha, other than that occurring from natural patterns of variation. The boundary of Baldoyle Bay SPA was defined to include the primary wetland habitats of this site. Objective 2 seeks to maintain the permanent extent of these wetland habitats, which constitute an important resource for regularly-occurring migratory waterbirds. The wetland habitats can be categorised into three broad types: subtidal; intertidal; and supratidal. Over time and though natural variation these subcomponents of the overall wetland complex may vary due to factors such as changing rates of sedimentation, erosion etc. Waterbird species may use more than one of the habitat types for different reasons (behaviours) throughout the tidal cycle.*
- *Subtidal areas refer to those areas contained within the SPA that lie below the mean low water mark and are predominantly covered by marine water. Tidal rivers, creeks and channels are included in this category. For Baldoyle Bay SPA this broad category is estimated to be 34 ha. Subtidal areas are continuously available for benthic and surface feeding ducks (e.g. Wigeon) and piscivorous/other water birds. Various waterbirds roost in subtidal areas. The relatively low proportion of subtidal habitat is due to the fact that this SPA is designated primarily for birds using intertidal habitats.*
- *The intertidal area is defined, in this context, as the area contained between the mean high-water mark and the mean low water mark. For Baldoyle Bay SPA this is estimated to be 164 ha. When exposed or partially exposed by the tide, intertidal habitats provide important foraging areas for many species of waterbirds, especially wading birds, as well as providing roosting/loafing areas. When the intertidal area is inundated by the tide it becomes available for benthic and surface feeding ducks and piscivorous/other waterbirds. During this tidal state this area can be used by various waterbirds as a loafing/roosting resource. The supratidal category refers to areas that are not frequently inundated by the tide (i.e. occurring above the mean high watermark) but contain shoreline and coastal habitats and can be regarded as an integral part of the shoreline.*
- *For Baldoyle Bay SPA this is estimated to be 65 ha. Supratidal areas are used by a range of waterbird species as a roosting resource as well as providing feeding opportunities for some species. The maintenance of the 'quality' of wetland habitat lies outside the scope of Objective 2."*

  The maintenance of the 'quality' of wetland habitat lies outside the scope of Objective 2. However, for the species of Special Conservation Interest, the scope of Objective 1 covers the need to maintain, or improve where appropriate, the different properties of the wetland habitats contained within the SPA.'

The attribute, measure and target of the site-specific conservation Objectives for Baldoyle Bay SPA are seen in Table 9.

Table 9. Attribute, measure and target of the site conservation objectives for Baldoyle Bay SPA.

Attribute	Measure	Target
A046 Brent Goose (*Branta bernicla hrota*), A048 Shelduck (*Tadorna tadorna*), A137 Ringed Plover (*Charadrius hiaticula*), A140 Golden Plover (*Pluvialis apricaria*), A141 Grey Plover (*Pluvialis squatarola*), A157 Bar-tailed Godwit (*Limosa lapponica*), A999 Wetlands.		
Population trend	Percentage change	Long term population trend stable or increasing
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing and intensity of use of areas by all of the above-named species, other than that occurring from natural patterns of variation
Wetlands [A999] (Maintain the favourable conservation condition)		
Habitat area	Hectares	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 263ha, other than that occurring from natural patterns of variation

Analysis of the Potential Impacts on the Baldoyle Bay SAC and Baldoyle Bay SPA.

The proposed development will involve the removal of existing internal habitats on site, the construction of a housing development and the discharge of surface water to the existing attenuation pond which discharges to the Mayne River. Noise will be generated on site during construction and operation. These impacts have the potential impact the conservation objectives of Baldoyle Bay SAC and Baldoyle Bay SPA.

Construction Impacts

The construction of the proposed development, would potentially impact on the existing ecology of the site and the surrounding area. These potential construction impacts would include impacts that may arise during the site clearance, re-profiling of the site and the building phases of the proposed development. The potential impacts are outlined in Table 10.

Construction phase mitigation measures are required on site particularly as there are proposals to discharge surface water to the existing attenuation pond with potential for downstream impacts on the River Mayne and Natura 2000 sites. There is potential for silt laden runoff, dust or contamination to enter surface water network and with potential for downstream impacts.

Designated Natura 2000 Sites

The proposed development is not within a designated conservation site. A direct pathway exists via surface water to Natura 2000 sites (Baldoyle Bay SAC and Baldoyle Bay SPA) downstream from the proposed development site via the River Mayne. The construction of the proposed development would potentially impact on the watercourse through silt laden runoff and pollution. In addition, noise would be generated during the construction phase and there is potential for pollution during the operation phase. These potential construction impacts on Natura 2000 sites are seen in Table 10. Runoff during site clearance, re-profiling, the construction and operation of project elements including the drainage network, could enter the Mayne River which leads to the Natura 2000 sites. Compliance with the Water Pollution Acts and monitoring would be seen as the primary method of ensuring no

significant impact on designated conservation sites. Mitigation measures are required to ensure that the proposed development will not impact on the conservation objectives of the Natura 2000 sites within Baldoyle Bay.

Ecology

The impact of the development during construction phase will be a loss of existing habitats and species. During the site visit no flora, bird or terrestrial mammal species of conservation importance were recorded on site or in NPWS or NBDC records. Small mammals such as long-tailed field mouse, house mouse, brown rat are likely to be present. No evidence of mammal activity or badger setts were noted. Frogs and reptiles were not observed on site; however, given the presence of the stream and drainage ditches, frogs may be present. The common lizard may occur on site but was not observed. Some mortality may occur of species that are not of conservation significance during construction. A pre construction monitoring survey will be required for frogs on site.

Operational Impacts

Once constructed all onsite drainage will be connected to separate foul and surface water systems. Surface water runoff will comply with SUDS and will discharge to the existing attenuation pond that leads to the Mayne River. Mitigation measures will be required to ensure that water quality is maintained prior to discharging to watercourses.

Mitigation Measures and Monitoring

Construction and operational mitigation will be incorporated into the proposed development project to minimise the potential negative impacts within the Zone of Influence (ZoI) including the Mayne River and downstream Natura 2000 sites (Table 11).

Designated Conservation Sites within 15km

As the main potential vector for impacts to Natura 2000 sites would be seen to be via the surface water connection and the Mayne River, no additional controls are required besides those outlined below, during the construction and operational phases of the development, to mitigate against potential negative impacts on designated conservation sites. The mitigation has been designed to ensure that the project will comply with the Water Pollution Acts and standard County Council and Inland Fisheries Ireland conditions in relation to construction and drainage operations. All construction and operational phase controls outlined will be followed.

Table 10. Potential for adverse effects on the qualifying interests and conservation objectives of Natura 2000 sites		
Natura 2000 Site & Site Code	Qualifying Interests	Potential for Adverse Effects
Baldoyle Bay SAC	Mudflats and sandflats not covered by seawater at low tide [1140] [1310] Salicornia and other annuals colonising mud and sand [1330] Atlantic salt meadows (*Glauco - Puccinellietalia maritimae*) [1410] Mediterranean salt meadows (*Juncetalia maritimi*)	Works on site, dust and surface water runoff on site during construction or operation may lead to silt or contaminated materials from site entering the attenuation pond and Mayne River. Concrete, silt or pollution could enter the watercourse during enabling works including, site clearance, reprofiling and dewatering of foundations, if required during construction. If on-site concrete production is required or cement works are carried out in the vicinity of drains there is potential for contamination of the watercourse. The use of plant and machinery, as well as the associated temporary storage of construction materials, oils, fuels and chemicals in addition to exporting materials offsite could lead to pollution on site or in adjacent watercourses. The storage of topsoil or works onsite could lead to dust, soil or silt laden runoff entering adjacent watercourses. The use of haul roads could lead to silt laden runoff or dust with downstream effects on the SAC. Contaminated wastewater from onsite toilets, could cause localised pollution. Given the nature of the works, all of these effects would be expected to be localised in nature restricted to the immediate vicinity of the site and would have little effect on Natura 2000 sites. However, without the presence of mitigation measures there is a potential for downstream effects if significant quantities of pollution or silt were introduced into the attenuation pond, leading to the Baldoyle Bay SAC. Given the nature of the potential effects outlined above, and the presence of saltmarsh at the mouth of the Mayne River, the proposed project could impact on the: 1) Habitat area, Community distribution of Mudflats and sandflats not covered by seawater at low tide [1140] 2) Habitat area, Habitat distribution, Physical structure: sediment supply, Physical structure: creeks and pans, Physical structure: flooding regime, Vegetation structure: zonation, Vegetation structure: vegetation height, Vegetation structure: vegetation cover, Vegetation composition: typical species and subcommunities, Vegetation structure: negative indicator species-*Spartina anglica* of *Salicornia* and other annuals colonising mud and sand [1310]. 3) Habitat area, Habitat distribution, Physical structure: sediment supply, Physical structure: creeks and pans, Physical structure: flooding regime, Vegetation structure: zonation, Vegetation structure: vegetation height, Vegetation structure: vegetation cover, Vegetation composition: typical species and subcommunities, Vegetation structure: negative indicator species –1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) 4) Habitat area, Habitat distribution, Physical structure: functionality sediment supply, Vegetation structure: zonation, Vegetation composition: plant health of fore dune grasses, Vegetation composition: typical species and subcommunities Vegetation composition: negative indicator species of 1410 Mediterranean salt meadows (*Juncetalia maritimi*) The mitigation measures outlined will be carried out to ensure that no silt or pollution enters the Mayne River from the construction or operation phases of the proposed project and create localised pollution. However, the level of effect on Baldoyle Bay SAC, without the use of mitigation measures, is not deemed to be significant due to the presence of existing pond on site with a sediment forebay, which will enable settlement of particulates. In the event of a pollution incident, it would be expected to be small e.g. maximum capacity of truck/digger fuel tank. However, by following the precautionary principal mitigation measures will be in place.

Baldoyle Bay SPA	A046 Brent Goose (*Branta bernicla hrota*) A048 Shelduck (*Tadorna tadorna*) A137 Ringed Plover (*Charadrius hiaticula*) A140 Golden Plover (*Pluvialis apricaria*) A141 Grey Plover (*Pluvialis squatarola*) A157 Bar-tailed Godwit (*Limosa lapponica*) A999 Wetlands.	Works on site, dust and surface water runoff on site during construction may lead to silt or contaminated materials from site entering the attenuation pond and Mayne River. Concrete, silt or pollution could enter the watercourse during enabling works including, site clearance, reprofiling and dewatering of foundations, if required during construction. If on-site concrete production is required or cement works are carried out in the vicinity of drains there is potential for contamination of the watercourse. The use of plant and machinery, as well as the associated temporary storage of construction materials, oils, fuels and chemicals could lead to pollution on site or in adjacent watercourses. The storage of topsoil or works onsite could lead to dust, soil or silt laden runoff entering adjacent watercourses. The use of haul roads could lead to silt laden runoff or dust with downstream effects on the SPA. Noise would be generated by the construction which may cause disturbance to the qualifying interests. However as outlined in Appendix I '*The maximum likely distance at which disturbance will impact SCIs from the Baldoyle Bay SPA is 300m (Cutts et al., 2013*).' It should be noted that baseline noise environment includes the busy R106 that links Portmarnock to Howth, which is between the proposed development and the SPA and within zone C in relation Aircraft Noise (≥ 54dB and < 63dB LAeq, $_{16hr}$ and ≥ 48dB and < 55dB L_{night}). Based on Noise assessment (AWN Consulting Ltd. EIAR Chapter 12) the loudest Construction Noise Level at the SPA boundary from the construction works would be 41db. A detailed measurement exercise was undertaken by Xodus Group (Postlethwaite and Stephenson, 2012) of noise levels at the Pyewipe mudflats during piling for the new Grimsby River Terminal. The general conclusions from the Xodus Group report included the following: *'Noise from the construction site as a whole (not just piling) caused about 1% of the total disturbances observed during construction activities, when measured as the number of birds disturbed. Disturbances to large number of birds at any one time were caused by raptors (mainly peregrine), aircraft and helicopters. Noise levels up to 81 dB LAmax F,in some cases, caused no disturbance during percussive piling.* • *Level 1 disturbances (heads up alert) were observed to occur in the noise level range of 66 to 83 dB LAmax Ffor percussive piling.* • *Level 2 disturbances (short walk or swim from the source of noise) were observed to occur in the range 68 –81 dB LAmax Ffor percussive piling.* • *As no Level 3 (short flight) or Level 4 (flight out of area) noise related disturbances were observed, a percussive piling noise level greater than 83 dB LAmax F would be expected to be required to instigate a flight response.* *A percussive piling noise level less than 66 dB LAmax Fgave rise to no noise disturbance.'* As outlined by RPS (2018) in their Review of Effects of Construction Noise on Birds in SSSI near Springs Road Exploratory Wellsite in discussing Postlethwaite and Stephenson (2012) it was stated that '*Whilst it was not possible to provide evidence of habituation to percussive piling noise from this study, the Level 1 disturbances generally indicated that where noise is not perceived as a threat, the disturbance is temporary*.' Given the nature of the works, all of these effects would be expected to be localised in nature restricted to the immediate vicinity of the site and would have little effect on Natura 2000 sites. However, without the presence of mitigation measures there is a potential for downstream effects if significant quantities of pollution or silt were introduced into the attenuation pond, leading to the Baldoyle Bay SPA.

		Birds from the SPA could potentially use the attenuation pond on site and be impacted. Significant quantities of silt could impact on the infauna and diet of birds within the SPA and the A999 Wetlands. Given the nature of the potential effects outlined above, the proposed project could affect the: 1. Distribution and Range, timing and intensity of use of areas of the SPA for Light-bellied Brent Goose (*Branta bernicla hrota*) [A046], Shelduck (*Tadorna tadorna*) [A048], Ringed Plover (*Charadrius hiaticula*) [A137], Golden Plover (*Pluvialis apricaria*) [A140], Grey Plover (*Pluvialis squatarola*) [A141], Bar-tailed Godwit (*Limosa lapponica*) [A157]. The area of Wetlands [A999] Mitigation measures are required to limit the effect of the project on the qualifying interests of the proposed development site.

Table 11. Mitigation Measures

Sensitive Receptors	Potential Impacts on SPA & SAC	Mitigation Measures to Prevent Impacts on River Boyne and River Blackwater SAC and the River Boyne and River Blackwater SPA
Baldoyle Bay SAC Baldoyle Bay SPA	• Habitat degradation • Dust deposition • Pollution • Silt ingress from site runoff • Downstream impacts • Negative impacts on aquatic and bird fauna. • Disturbance.	**Construction** <u>Contamination of watercourses leading to Natura 2000 Sites</u> • Appointment of an ecologist to oversee enabling works and the implementation of mitigation measures outlined. • Staging of project to reduce risks to watercourses from contamination • Control of Water during Construction • Earthwork operations will be carried out such that surfaces, as they are being raised, shall be designed with adequate drainage, falls and profile to control run-off and prevent ponding and flowing. • Sealing of drainage ditches at the most downstream element prior to the watercourse, with a tall 45 degree sloped earth and batted back bund prior to site clearance and reprofiling. • Any discharges to the watercourse during construction must be discussed with the ecologist and undergo desilting and petrochemical interception. • Should discharges be required to the watercourse the drainage network and attenuation must be implemented at initial stages. Discharges of desilted water from the site should be made to the attenuation system so that the hydrobrake and interceptor are in place during any discharges. • Local watercourses must be protected from dust, silt and contaminated surface water throughout the works. • Local silt traps established throughout site as discussed with the ecologist. • Mitigation measures on site include dust control, stockpiling away from watercourse and drains • Stockpiling of loose materials will be kept to a minimum of 20m from watercourses and drains. • Stockpiles and runoff areas following clearance will have suitable barriers to prevent runoff of fines into the drainage system and watercourses. • Fuel, oil and chemical storage will be sited within a bunded area. The bund will be at least 50m away from drains, ditches or the watercourse, excavations and other locations where it may cause pollution. • Bunds will be kept clean and spills within the bund area will be cleaned immediately to prevent groundwater contamination. Any water-filled excavations, including the attenuation tank during construction, that require pumping will

		not directly discharge to the stream. Prior to discharge of water from excavations adequate filtration will be provided to ensure no deterioration of water quality. • Stockpiles and runoff areas following clearance will have suitable barriers to prevent runoff of fines into the drainage system and watercourses. • Fuel, oil and chemical storage will be sited within a bunded area. A risk based approach will be taken. • Bunds will be kept clean and spills within the bund area will be cleaned immediately to prevent groundwater contamination. • During the construction works silt traps will be put in place in the vicinity of all runoff channels the stream to prevent sediment entering the watercourse. • Petrochemical interception and bunds in refuelling area • Planting in the vicinity of the stream crossings should be put in place as soon as possible to allow biodiversity corridors to establish. • On-site inspections will be carried out by project ecologist during enabling works and until drainage connection is complete. • Maintenance of any drainage structures (e.g. de-silting operations) must not result in the release of contaminated water to the surface water network. • No entry of solids or concrete to the associated stream or drainage network during the connection of pipework <u>Air & Dust</u> • The pro-active control of fugitive dust will ensure prevention of significant emissions arising, rather than a less effective attempt to control them once they have been released. • Hard surface roads will be swept to remove mud and aggregate materials from their surface while any un-surfaced roads will be restricted to essential site traffic. • Any road that has the potential to give rise to fugitive dust must be regularly watered, as appropriate, during dry and / or windy conditions. • Vehicles exiting the Site shall make use of a wheel wash facility where appropriate, prior to entering onto public roads. • Vehicles using site roads will have their speed restricted, and this speed restriction must be enforced rigidly. On any un-surfaced site road, this will be 20kph, and on hard surfaced roads as site management dictates. • Public roads outside the Site will be regularly inspected for cleanliness and cleaned as necessary. • Material handling systems and Site stockpiling of materials will be designed and laid out to minimise exposure to wind. Water misting or sprays will be used as required if particularly dusty activities are necessary during dry or windy periods. • During movement of materials both on and off-site, trucks will be stringently covered with tarpaulin at all times. Before entrance onto public roads, trucks will be adequately inspected to ensure no potential for dust emissions. • Dust may enter the onsite watercourse via air or surface water with potential downstream impacts. Mitigation measures will be carried out reduce dust emissions to a level that avoids the possibility of adverse effects on the onsite watercourse. The main activities that may give rise to dust emissions during construction include the following: • Excavation of material;

		• Materials handling and storage; • Movement of vehicles (particularly HGV's) and mobile plant. • Contaminated surface runoff • Trucks leaving the site with excavated material will be covered so as to avoid dust emissions along the haulage routes. • Speed limits on site (15kmh) to reduce dust generation and mobilisation. • The stream is to be protected from dust on site. This may require additional measures in the vicinity of the bridge (east of the site) if this road is used for machinery e.g. placing of terram/protective material over the stream. • Regular inspections of the site and boundary should be carried out to monitor dust, records and notes on these inspections should be logged. • Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken. • Make the complaints log available to the local authority when asked. • Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the log book. <u>Monitoring</u> • Undertake daily on-site and off-site inspection, where receptors are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces within 100 m of site boundary, integrity of the silt control measures, with cleaning and / or repair to be provided if necessary. • Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible. • Fully enclose specific operations where there is a high potential for dust production and the site is active for an extensive period. • Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below. • Cover, seed or fence stockpiles to prevent wind whipping. • Hard surface roads will be swept to remove mud and aggregate materials from their surface while any un-surfaced roads will be restricted to essential site traffic. • Any road that has the potential to give rise to fugitive dust will be regularly watered, as appropriate, during dry and/or windy conditions. • Maintain a vegetated strip and vehicle exclusion zone between the works and the onsite watercourse in consultation with the project ecologist. • Regular inspection of surface water run-off and any sediment control measures e.g. silt traps will be carried out during the Construction Phase. Regular auditing of construction / mitigation measures will be undertaken e.g. concrete pouring, refuelling in designated areas etc. • Weather conditions will be considered when planning construction activities to minimise the risk of run-off from the Site and the suitable distance of topsoil piles from surface water drains will be maintained.

		Measures Specific to Earthworks • Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable. • Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable. • Only remove the cover in small areas during work and not all at once. • During dry and windy periods, and when there is a likelihood of dust nuisance, a bowser will operate to ensure moisture content is high enough to increase the stability of the soil and thus suppress dust. • Due to the proximity of the onsite watercourse an ecologist will oversee works in particular the excavation of material from the perimeter of the site. • The Contractor will be required to consult with an ecologist prior to the beginning of works to identify any additional measures that may be appropriate and/or required. <u>Storage/Use of Materials, Plant & Equipment</u> • Materials, plant and equipment shall be stored in the proposed site compound location; • Plant and equipment will not be parked within 50m of the onsite watercourse at the end of the working day; • Hazardous liquid materials or materials with potential to generate run-off shall not be stored within 50m of the onsite watercourse. • All oils, fuels and other hazardous liquid materials shall be clearly labelled and stored in an upright position in an enclosed bunded area within the proposed development site compound. The capacity of the bunded area shall conform with EPA Guidelines – hold 110% of the contents or 110% of the largest container whichever is greater; • Fuel may be stored in the designated bunded area or in fuel bowsers located in the proposed compound location. Fuel bowsers shall be double skinned and equipped with certificates of conformity or integrity tested, in good condition and have no signs of leaks or spillages; • Waters collected in drip trays must be assessed prior to discharge. If classified as contaminated, they shall be disposed by a permitted waste contractor in accordance with current waste management legal and regulatory requirements; • All persons working will receive work specific induction in relation to material storage arrangements and actions to be taken in the event of an accidental spillage. Daily environmental toolbox talks / briefing sessions will be conducted for all persons working to outline the relevant environmental control measures and to identify any environment risk areas/works. <u>Noise</u> With regard to Construction Phase activities, best practice control measures for noise and vibration from construction sites are found within BS 5228 (2009 +A1 2014) Code of Practice for Noise and Vibration Control on Construction and Open Sites Parts 1 and 2. Whist construction noise and vibration impacts are expected to vary during the Construction Phase depending on the distance between the activities and noise sensitive buildings, the appointed Contractor will ensure that all best practice noise and vibration control methods will be used, as necessary in order to ensure impacts at off-site NSLs are minimised. The best practice measures set out in BS 5228-1 and BS 5228-2 includes guidance on several aspects of construction site mitigation measures, including, but not limited to: • selection of quiet plant;

		• noise control at source; • screening; and • liaison with the public. Construction Phase noise monitoring will be undertaken at periodic sample periods at the nearest noise sensitive locations to the works to check compliance with the construction noise criterion. Noise monitoring should be conducted in accordance with the International Standard ISO 1996: 2017: Acoustics – Description, measurement and assessment of environmental noise. **Operation** During the Operational Phase of the proposed Project there is limited potential for Site activities to impact on the geological and hydrogeological environment of the area. However, hydrocarbon interception will be put in place.

Adverse Effects on the conservation objectives of Natura 2000 sites likely to occur from the project (post mitigation)

A robust series of mitigation measures will be carried out. These have been developed by a multidisciplinary project team. These would ensure that water entering the Mayne River, is clean and uncontaminated, that dust and noise levels are controlled on site and that operational measures are in place to prevent pollution. Early implementation of ecological supervision on site at initial mobilisation and enabling works is seen as an important element to the project, particularly in relation to the implementation of surface water runoff mitigation.

With the successful implementation of the outlined mitigation measures, no significant impacts are foreseen from the construction or operation of the proposed project. Residual impacts of the proposed project will be localised to the immediate vicinity of the proposed works. The construction and operational mitigation proposed for the development satisfactorily addresses the potential impacts on designated conservation sites through the application the construction and operational phase controls as outlined above. In particular, mitigation measures to ensure compliance with Water Pollution Acts and prevent silt, dust and pollution entering the River Mayne will satisfactorily address the potential impacts on downstream biodiversity and Natura 2000 sites. No significant adverse impacts on the conservation objectives of Natura 2000 sites are likely following the implementation of the mitigation measures outlined above.

In-combination Effects

The proposed development site is located within a suburban and developed environment. Construction on this site will create localised light, dust and noise disturbance with potential for downstream impacts.

The following is a list of planning applications as identified on the Department of Housing, Local Government and Heritage's 'National Planning Application Database' portal[9]:

Table 12. In combination effects evaluated.

Ref. No.	Address	Proposal
F21A/0046	Lands at Baldoyle (Formerly known as the Coast, Dublin 13)	The site is bounded to north by undeveloped lands, to the south by the residential development of Myrtle, to the east by residential development of Red Arches, and to the west by undeveloped lands and the Dublin - Belfast railway line. The development consists of minor alterations to permitted residential development, as permitted under F16A/0412, ABP Ref: PL06F.248970 as amended under F20A/0258. The proposed alterations relate to Blocks B3, B4,C3, C4 and C5 only and relate to either: Proposed alterations to some of the permitted Unit Types in respect of their external design which relates primarily to roof and porch design as well as external finishes, minor internal reconfiguration and removal or alteration of permitted solar panels. The introduction of new Unit Types in place of permitted units. This is set out in respect of each block as follows : Block B3 - To the east of the Block, the replacement of the permitted 1 no Unit Type G, 7 no. Unit Type D and 1 no. Unit Type E with 9 no. Unit Type P. Block B4- to the east side of the Block, replacement of the permitted 1 no. Unit Type G, 7 No. Unit Type D and 1 no. Unit Type E, 1 no. Unit Type A and 1 no. Unit Type B with 9 no. Unit Type P. Block C3 to the west and centre of the block replacement and alteration of the permitted 2 no. Unit Type M, 8 no. Unit Type A and 6 no. Unit Type D with 18 no. revised unit Type B. To the east of the block the replacement of 2 no. Unit Type E with 2 no. revised unit Type D and

[9] https://housinggovie.maps.arcgis.com/apps/webappviewer/index.html?id=9cf2a09799d74d8e9316a3d3a4d3a8de

		the alteration of the 5 no. Unit Type E to revised unit Type E Block C4- To the west of the block the alteration of the permitted 2 no. Unit Type N and 4 no. Unit Type K to 2 no. revised unit Type N and 4 no. Revised Unit Type K. Block C5- to the west of the block the alteration of the permitted 2 no. Unit Type N and 4 no. revised Unit Type K. In total 38 no. permitted units are being altered with external changes and 33 no. units are replacing Type 38 no. permitted units. This proposed replacement and alteration of permitted unit types results in a reduction in permitted units by 5. Permission is also sought for the resultant increase in car-parking from 98 permitted spaces to 122 spaces relating to the subject units and for the alterations to permitted landscaping as a result of the proposed development.
F20A/0258	Lands at Baldoyle (Formerly known as the Coast, Dublin 13)	Minor alterations to permitted residential development, as permitted under F16A/0412, ABP Re. Ref; PL06F.248970. The prposed alterations relate to Blocks C4, C5 and D1 only and primarily relate to the alteration of external finishes and material of permitted housing units including the: Omission of permitted fireplaces and chimneys; Alterations to permitted fenestration including vertical frame sections, transoms and mullions, of windows and doors to front and rear of houses; Alteration of permitted rear flat roof to pitched roof on Building Types A & D; removal of permitted decorative balustrades; Alterations of the permitted brickwork finish to the rear and side elevations of the houses with a render finish; Alteration of permitted bin stores to include brick finishes; Removal of permitted solar panels from Building Types A,B,D,E,F G and alterations of permitted solar panels on Building Types K & N.
F19A/0461	Myrtle Grange Road Baldoyle	**Primary School:** Three storey 16 classroom Primary School building in Baldoyle (Roll Number 20519G), including a two classroom SEN base. The design also includes a general-purpose hall, support teaching spaces and ancillary accommodation, external junior play areas, secure SEN hard and soft play area and a sensory garden. The proposed project also incorporates associated car parking, access road, pedestrian access, bicycle lane, construction of 2 no. external ball courts, landscaping, connection to public services and all associated site works
F16A/0412	The Coast, Baldoyle, Dublin 13.	550 no. residential units (379 no. apartments and 171 no. houses) and a village centre comprising C.1,585sq. m. of commercial floor space laid out in 13 no. blocks (Blocks A1, A2, A3, B1, B2, B3, B4, C1, C2, C3, C4, C5 and D1) ranging in height from two storeys to six storeys as follows: Blocks A1, A2 and A3 will consist of 3 no. six storey buildings (c. 30.05m OD to roof level with an overall height of c. 33.90 OD to include lift overrun) comprising 195 no. residential units (5 no. 1-bed apartment, 162 no. 2-bed apartments, and 28 no. 3-bed apartments) at first to fifth floor level, c.1,585 sq.m. of commercial floor area at ground floor level comprising a convenience outlet (c. 493sq.m.), cafe (c. 200sq.m.), 4 no. retail units (c. 88sq.m., 99sq.m., 99 sq.m. and 90sq.m.), a crèche (c. 516sq.m.) with outdoor play area (c. 183sq.m.) and shared car park also at ground floor level with two associated communal courtyard areas at first floor level above a podium. Block B1 will consist of a four storey building over basement car park (c. 21.6m OD to roof level with an overall height of c. 25m OD to include lift overrun) comprising 82 no. residential units (3 no. 1-bed apartments, 75 no. 2-bed apartments, and 4 no. 3-bed apartments);

		Blocks B1 and B2 include a shared central communal courtyard area over a shared basement car park and a community room (c. 78sq.m.) in the entrance pavilion to the basement. Block B2 will consist of 3 no. three storey terraces over basement car park comprising 24 no. residential units (12 no. own door 2-bed apartments and 12 no. own door 2-bed duplex apartments). Block B3 will consist of 1 no. two storey terrace and 3 no. three storey terraces comprising 32 no. residential units (11 no. 3-bed terraced houses and 21 no. 4-bed terraced houses). Block B4 will consist of 2 no. two storey terraces and 1 no. three storey terrace comprising 25 no. residential units (16 no. 3-bed terraced houses and 9 no. 4-bed terraced houses). Block C1 will consist of 3 no. three storey terraces comprising 32 no. residential units (16 no. 2-bed own door apartments and 16 no. 2-bed own door duplex apartments). Block C2 will consist of 1 no. two storey terrace and 2 no. three storey terraces comprising 35 no. residential units (9 no. 2-bed own door apartments, 9 no. 2-bed own door duplex apartments, 10 no. 3-bed terraced houses and 7 no. 4-bed terraced houses. Block C3 will consist of 1 no. two storey terrace and 2 no. three storey terraces comprising 29 no. residential units (11 no. 3-bed houses and 18 no. 4-bed houses). Block C4 will consist of 2 no. two storey terraces and 2 no. three storey terraces comprising 47 no. residential units (5 no. 1-bed own door apartments, 2 no. 2-bed own door apartments, 5 no. 2-bed own door duplex apartments, 2 no. 3-bed own door duplex apartments, 24 no. 3-bed terraced houses and 9 no. 4-bed terraced houses). Block C5 will consist of 2 no. two storey terraces and 2 no. three storey terraces comprising 37 no. residential units (5 no. 1-bed own door apartments, 2 no. 2-bed own door apartments, 5 no. 2-bed own door duplex apartments, 2 no. 3-bed own door duplex apartments, 14 no. 3-bed terraced houses, and 9 no. 4-bed terraced houses). Block D1 will consist of 12 no. two storey 3-bed semi-detached houses. All apartments and duplex apartments have private terraces or balconies and private communal amenity areas. The proposed development will also include 896 no. residential (including visitor) car parking spaces, 62 no. commercial car parking spaces, 551 no. residential bicycle spaces and 13 no. commercial bicycle spaces; pedestrian, vehicular and bicycle access will be via the existing Longfield Road and Red Arches Road and the proposed internal road network comprising Stapolin Avenue, Ireland's Eye Avenue and smaller access roads; construction access will be via existing haul road from the Coast Road; landscaping works including Stapolin Square (c. 0.4ha) which will provide access to Clongriffin Train Station via a series of terraces, steps and slopes, a range of public open spaces

		including pocket parks and amenity spaces, the largest of which will be Stapolin Haggard (c. 1.57ha); public lighting; a wetland area (c. 0.4ha.) for water quality treatment associated with the proposed development; all associated ancillary facilities including 8 no. ESB substations, switch rooms, refuse storage, water storage tanks and plant; and all associated site development works including the removal of existing roads and infrastructure where required and demolition of existing temporary lift and stair enclosure and associated infrastructure to Clongriffin Train Station. The subject site of C 15.89ha comprised Growth Area 1 of the Baldoyle-Stapolin Local Area Plan 2013-2019. This application is accompanied by an Environmental Impact Statement (E.I.S.)
F11A/0290 (/E1), PL06F.239732		Regents Park Development Ltd. were granted permission on appeal on 11th April 2013 and given a further extension of duration of permission in 2018 (FCC Reg. Ref. F11A/0290/E1) on lands at Growth Area 2 (GA02), as per Baldoyle-Stapolin Local Area Plan. FCC initially refused the application however An Bord Pleanála subsequently granted permission following appeal. The development entailed 400 no. dwelling units, 3 no. retail units, a crèche, surface and basement level car parking, landscaping and all associated works.
Baldoyle – Stapolin Local Area Plan 2013 (extended)		The GA3 site forms part of a wider RA zoning as set out in the Baldoyle – Stapolin Local Area Plan 2013. Build-out of the remainder of the LAP – including the GA1 project – as well as further potential future residential and landscape / amenity works as indicated in the LAP. As outlined in the LAP '*The Vision for Baldoyle-Stapolin is to create a place to live that is appealing, distinctive and sustainable, with minimal impact on the surrounding environment and the coast. It is envisaged that Baldoyle-Stapolin will develop as a sustainable community comprised of new homes, community, leisure and educational facilities based around an identifiable and accessible new village centre which will form the heart of the area. With a range of different sizes and types of homes, as well as integrated amenities and excellent public transport, this will be a fledgling neighbourhood with a varied social mix and will embody the principles of sustainability, sustainable communities and inclusiveness.*' Baldoyle-Stapolin and the surrounding areas have a natural environment which incorporates both nationally and internationally important sites in terms of wildlife and habitats. The challenges in Baldoyle-Stapolin are how to balance the development of a compact urban area with approaches which work effectively with nature. This will be achieved by adopting an overarching Green Infrastructure Strategy centred around - Protecting, Creating, Enhancing and Connecting the natural environment within and surrounding the LAP lands. The Green Infrastructure Strategy will seek to maintain habitats and species within the Baldoyle Bay SPA and SAC at favourable conservation condition and ensure the ecological integrity of Baldoyle Bay. It will seek to develop Racecourse Park within the Baldoyle-Stapolin LAP lands and the open space areas within the Portmarnock LAP lands to the north, as Ecological Buffer Zones, which will help protect the ecological integrity of the neighbouring nationally and internationally designated sites by providing suitable habitat for key species such as birds while minimising the impacts of adjacent residential land uses. In addition to the conservation of existing designated sites and habitats the LAP will seek to create ecological

		networks within the LAP lands consisting of green spaces / stepping stones, corridors and links that will provide opportunities to improve linkages, for both the residents of the area and local wildlife, between the Baldoyle-Stapolin LAP lands, the neighbouring LAP lands at Portmarnock South and Clongriffin and the surrounding green belt areas. As part of the Green Infrastructure Strategy it is envisaged that Sustainable urban Drainage System (SuDS) measures will be incorporated throughout the LAP lands in both the public and private realms to reduce the risk of flooding on site and to help to improve the quality of the water being discharged to the Mayne River, and ultimately to Baldoyle Bay, thus helping to ensuring compliance with the Water Framework Directive (WFD).
Stapolin Growth Area 1, Baldoyle, Co. Dublin.		The Shoreline Partnership have applied for planning permission for a residential development at Stapolin Growth Area 1, Baldoyle, Co. Dublin. The proposed development will consist of alterations to the development permitted within Growth Area No. 1 (GA1) of the Baldoyle - Stapolin Local Area Plan 2013-2019, under FCC Reg. Ref. F16A/0412, ABP Reg. Ref. ABP-248970 (as amended by F20A/0258 and F21A/0046). The existing permission provides for 544 no. residential units (385 no. apartments and 159 no. houses), residential tenant amenities, village centre and crèche laid out in 13 no. blocks (identified as A1, A2, A3, B1, B2, B3, B4, C1, C2, C3, C4, C5, D1) ranging in height from two-storeys to six-storeys, with associated pedestrian, vehicular and bicycle access, car and bicycle parking, landscape works and open spaces, including Stapolin Square and Stapolin Haggard, pocket parks, communal courtyards; surface water attenuation wetland; and associated ancillary services and works on an overall site of 15.89 hectares (ha). A number of elements of the existing permitted development have been constructed / will be constructed in accordance with the current grant of permission (as previously amended), including: • Surface water attenuation wetlands and associated upstream surface water network; • Ninety-nine units in permitted Blocks C4, C5 and D1 (identified as Block C6 under amendments F20A/0258 and F21A/0046); • The open space referred to as the Haggard Park ('Stapolin Haggard'); • Demolition of existing temporary lift and stair enclosure and associated infrastructure to Clongriffin Train Station; • Road infrastructure (except where within the application boundary and requiring to be locally altered for proposed Project); and • Utilities infrastructure (except where within the application boundary and requiring to be locally altered for proposed Project).

		Given that they are already constructed or are under construction, the area of the surface water wetlands and associated upstream surface water network, and the area of Blocks C4, C5, C6 (latter formerly D1) are excluded from the subject planning application. The Haggard Open Space will be provided in accordance with the current grant of permission and as such is also exclusion from the planning area. The proposed Project will provide for 882 no. new residential dwellings (747 no. apartments, 135 no. houses), residential tenant amenities, village centre, and crèche, laid out in 15 no. blocks (identified as: A1, A2, A3, B1, B2, B3, B4, C1, C1A, C2, C2A, C3, D1, D2, D3) ranging in height from two-storeys to 15-storeys, with associated pedestrian, vehicular and bicycle access, car and bicycle parking, public realm and open space, including an enlarged Stapolin Square, landscape and associated ancillary services and works over a total Site area of c. 9.1ha, of which the development area is c. 8.89ha. As well as excluding some previously permitted areas (as above), the red line boundary for this application extends beyond the red line of the previously permitted development to provide for the full extent of Stapolin Square, new access to Clongriffin Station through the Square, new apartment blocks D1, D2, D3 to the north of Stapolin Square, and a bus ramp to Clongriffin Station. The red line boundary of this application also extends north to provide for a 300mm watermain connection to the existing watermain in the parklands to the north. A Natura Impact Statement has been prepared by Altemar Ltd. to accompany the planning application outlined above. Following the implementation of mitigation measures, this report concludes the following: '*On the basis of the content of this report, the competent authority is enabled to conduct an assessment for Appropriate Assessment and consider whether, in view of best scientific knowledge and in view of the conservation objectives of the relevant European sites, the Proposed Development, individually or in combination with other plans or projects is likely to have a significant effect on any European site.* ***No significant effects are likely on Natura 2000 sites, their features of interest or conservation objectives. The proposed project will not will adversely affect the integrity of European sites.'***

Given this, it is considered that in combination effects with other existing and proposed developments in proximity to the application area would be unlikely, neutral, not significant and localised. It is concluded that no significant effects on Natura 2000 sites will be seen as a result of the proposed development alone or combination with other projects.

No projects in the vicinity of the proposed development would be seen to have a significant in combination effect on Natura 2000 sites.

Conclusion

In a strict application of the precautionary principle, it has been concluded that mitigation measures were required to prevent impacts on Baldoyle Bay SAC and Baldoyle SPA. Impacts are likely from the proposed works in the absence of mitigation measures, primarily as a result of direct hydrological connection to the site via the River Mayne, which is currently connected to the site via existing attenuation pond. As a result, there is potential for downstream impacts from the project during site clearance, enabling, construction, landscaping and drainage works. In addition, the proximity of the proposed works to the Natura 2000 sites could lead to dust and noise entering the SPA and impacting on the Qualifying interests. For this reason, a NIS was carried out to assess whether the proposed project, either alone or in combination with other plans or projects, in view of best scientific knowledge and in view of the sites' conservation objectives, will adversely affect the integrity of the European Site. All other Natura 2000 sites were screened out at initial screening.

Construction on this site will create localised light and noise disturbance. This would not impact Natura 2000 sites.

Mitigation measures will be in place to ensure there are no significant impacts on the River Mayne that leads to conservation sites. A project ecologist will be appointed to oversee works in relation to the enabling works and the implementation of mitigation measures as outlined on site. The implementation of mitigation measures outlined, which will be followed, will be sufficient to prevent adverse effects on the integrity of Natura 2000 sites.

Following the implementation of the mitigation measures outlined, the construction and presence of this development would not be deemed to have a significant impact on the integrity of Natura 2000 sites. No significant impacts are likely on Natura 2000 sites, alone in combination with other plans and projects based on the implementation of standard construction phase mitigation measures.

This report presents an Appropriate Assessment Screening and NIS for the proposed development. It outlines the information required for the competent authority to screen for appropriate assessment and to determine whether or not the proposed development, either alone or in combination with other plans or projects, in view of best scientific knowledge and in view of the sites' conservation objectives, will adversely affect the integrity of the European site.

On the basis of the content of this report, the competent authority is enabled to conduct an Appropriate Assessment and consider whether, either alone or in combination with other plans or projects, in view of best scientific knowledge and in view of the sites' conservation objectives, will adversely affect the integrity of the European site.

No significant effects are likely on Natura 2000 sites, their features of interest or conservation objectives. The proposed project will not will adversely affect the integrity of European sites.

Data used for the AA Screening/NIS Assessment

NPWS site synopses and Conservation objectives of sites within 15km were examined. Natura 2000 sites beyond 15km have no direction connection to the proposed development site. The most recent SAC and SPA boundary shapefiles were downloaded and overlaid on Bing road map and satellite imagery. Several site visits were carried out to determine if the site contained possible threats to a NATURA 2000 site or any NATURA 2000 species or habitats.

References

The following references were used in the preparation of this AA screening report.

1. Department of Environment Heritage and Local Government Circular NPW 1/10 and PSSP 2/10 on Appropriate Assessment under Article 6 of the Habitats Directive – Guidance for Planning Authorities March 2010.

2. Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities, Department of the Environment, Heritage and Local Government 2009; www.npws.ie/publications/archive/NPWS_2009_AA_Guidance.pdf
3. Managing NATURA 2000 Sites: the provisions of Article 6 of the Habitats Directive 92/43/EEC, European Commission 2000; ec.europa.eu/environment/nature/Natura2000/management/docs/art6/provision_of_art6_en.pdf
4. 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; ec.europa.eu/environment/nature/Natura2000management/docs/art6/Natura_2000_assess_en.pdf
5. Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission; ec.europa.eu/environment/nature/Natura2000/management/docs/art6/guidance_art6_4_en.pdf
6. Guidance document on the implementation of the birds and habitats directive in estuaries and coastal zones with particular attention to port development and dredging; ec.europa.eu/environment/nature/Natura2000/management/docs/guidance_doc.pdf
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8. NPWS (2012) Conservation Objectives: Baldoyle Bay SAC 000199. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
9. NPWS (2013) Conservation Objectives: North Dublin Bay SAC 000206. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
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11. NPWS (2016) Conservation Objectives: Howth Head SAC 000202. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.
12. NPWS (2017) Conservation Objectives: Ireland's Eye SAC 002193. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.
13. NPWS (2013) Conservation Objectives: Rockabill to Dalkey Island SAC 003000. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
14. NPWS (2013) Conservation Objectives: South Dublin Bay SAC 000210. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
15. NPWS (2013) Conservation Objectives: Rogerstown Estuary SAC 000208. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
16. NPWS (2013) Conservation Objectives: Lambay Island SAC 000204. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
17. NPWS (2013) Conservation Objectives: Baldoyle Bay SPA 004016. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
18. NPWS (2015) Conservation Objectives: North Bull Island SPA 004006. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
19. NPWS (2013) Conservation Objectives: Malahide Estuary SPA 004025. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
20. NPWS (2021) Conservation objectives for Ireland's Eye SPA [004117]. Generic Version 8.0. Department of Housing, Local Government and Heritage.
21. NPWS (2021) Conservation objectives for Howth Head Coast SPA [004113]. Generic Version 8.0. Department of Housing, Local Government and Heritage.
22. NPWS (2015) Conservation Objectives: South Dublin Bay and River Tolka Estuary SPA 004024. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
23. NPWS (2013) Conservation Objectives: Rogerstown Estuary SPA 004015. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
24. NPWS (2021) Conservation objectives for Lambay Island SPA [004069]. Generic Version 8.0. Department of Housing, Local Government and Heritage.
25. NPWS (2021) Conservation objectives for Dalkey Islands SPA [004172]. Generic Version 8.0. Department of Housing, Local Government and Heritage.

Appendix I Summary of the Wintering Bird Survey /Baldoyle Bay SPA

McCarthy Keville O'Sullivan (MKO) was appointed to carry out bird survey works at Baldoyle, during the period from December 2019 to March 2020 inclusive. The survey site covered the entire Stapolin Area covering approximately 50.7 ha in area and is located between Clongriffin Dart Station to the west and the Coast Road to the east Figure AI-I. The MKO report describes the ornithological survey methods and also contains information compiled during the desktop study. Particular attention has been paid to species of conservation importance and identified target species (Figure 9). As outlined in the MKO report '*the proposed development area is not within the Baldoyle Bay SPA, however given the proximity of the SPA to the development, there is potential for impacts to result during construction and operational phases of the proposed development. These potential impacts could include:*

- *Loss of roosting habitat within/along the boundary of the redline at the mouth of the Mayne River.* (This line is the ownership line not the project red line; see Figure 8).
- *Disturbance during construction works and the operational phase to Special Conservation Interest of the SPA including through movement of machinery, personnel, noise, vibration and/or noise associated with domestic dwellings.*
- *Pollution of surface water through accidental spillage or discharge of polluting substances, or via elevated suspended solids and siltation through run-off to watercourses.*
- *The maximum likely distance at which disturbance will impact SCIs from the Baldoyle Bay SPA is 300m (Cutts et al., 2013). The magnitude of this impact and its potential significance will require further consideration at the assessment stage of any future planning application.*

The proposed housing scheme may result in disturbance of SCI's of the adjacent SPA. However, it is likely that habituation will occur to this new source of disturbance given that the SCIs of the SPA are already accustomed to the disturbance associated with Baldoyle village and existing surrounding housing developments. This should be considered in further detail at the assessment stage of any future planning application.

A wide range of environmental factors are required to support water bird species including good water quality and clarity and a good supply of food resources. Thus, water quality impacts resulting from the proposed development (i.e. during the construction and operational phases) could result in a reduction in the availability of suitable habitat for water bird species. The effect of such a reduction in water quality has the potential to be ecologically significant. However, it is likely that best practice design and mitigation can be implemented that would avoid or reduce such impacts. This should be considered in greater detail at the assessment stage of any future planning application.'

It should be noted that the proposed development at GA3 is 615m from the Baldoyle Bay SPA (at its closest) and therefore disturbance from the proposed works would not be expected. Snipe (*Gallinago gallinago*) has amber conservation status and has been noted within GA3. This species is not a qualifying interest of Baldoyle Bay SPA. Grey Heron (*Ardea cinerea* - green conservation status) and Herring Gull (*Larus argentatus* - red conservation status) have also been observed on-site. Neither species are recognised as a qualifying interest of Baldoyle Bay SPA. No works are proposed in the vicinity of the Mayne River where roosting habitat was noted. However, there is potential pollution of surface water through accidental spillage or discharge of polluting substances, or via elevated suspended solids and siltation through run-off to watercourses. Mitigation measures will be required.

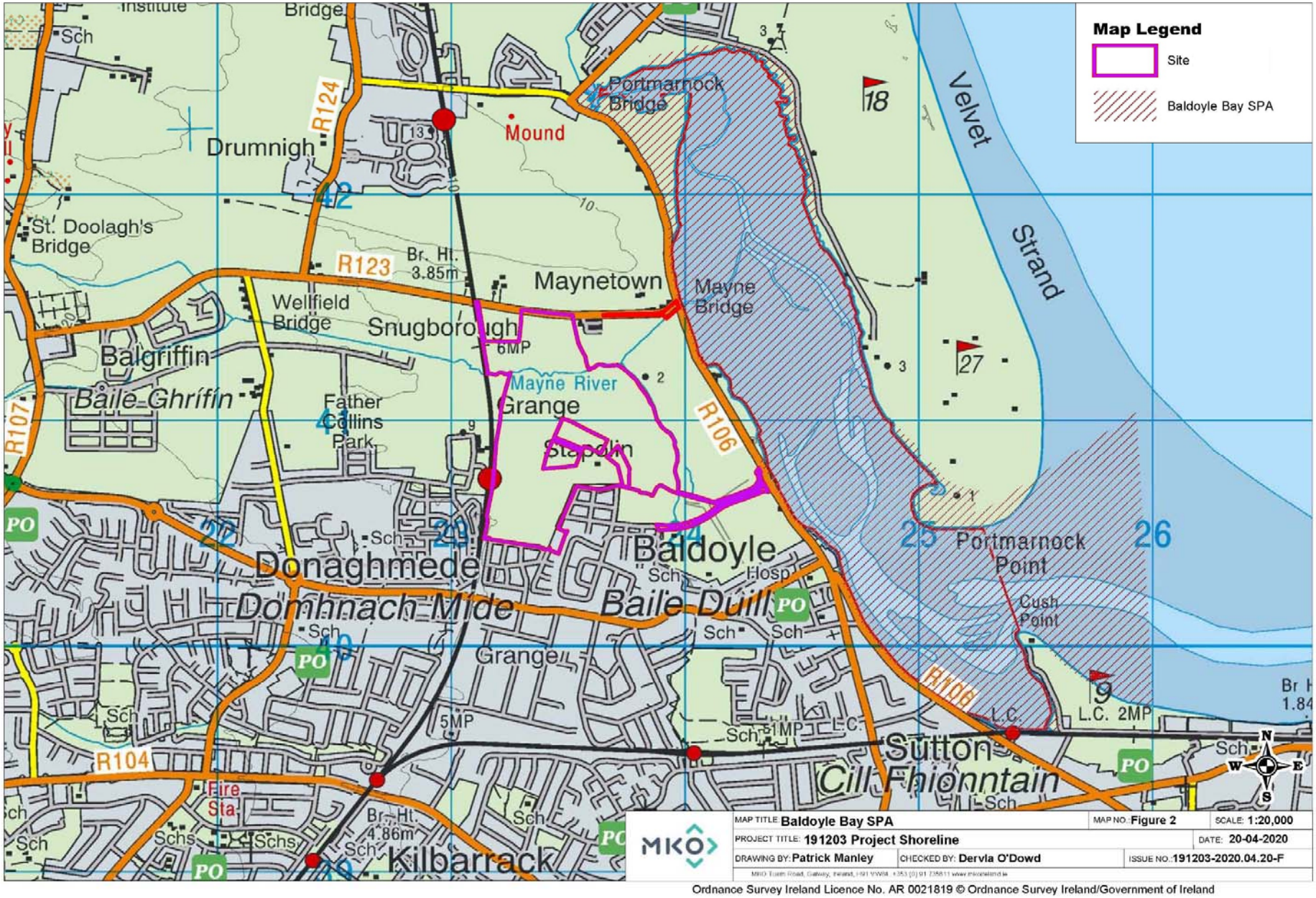

Figure AI.I MKO Wintering Bird Survey within the Wider Site Ownership line (purple).

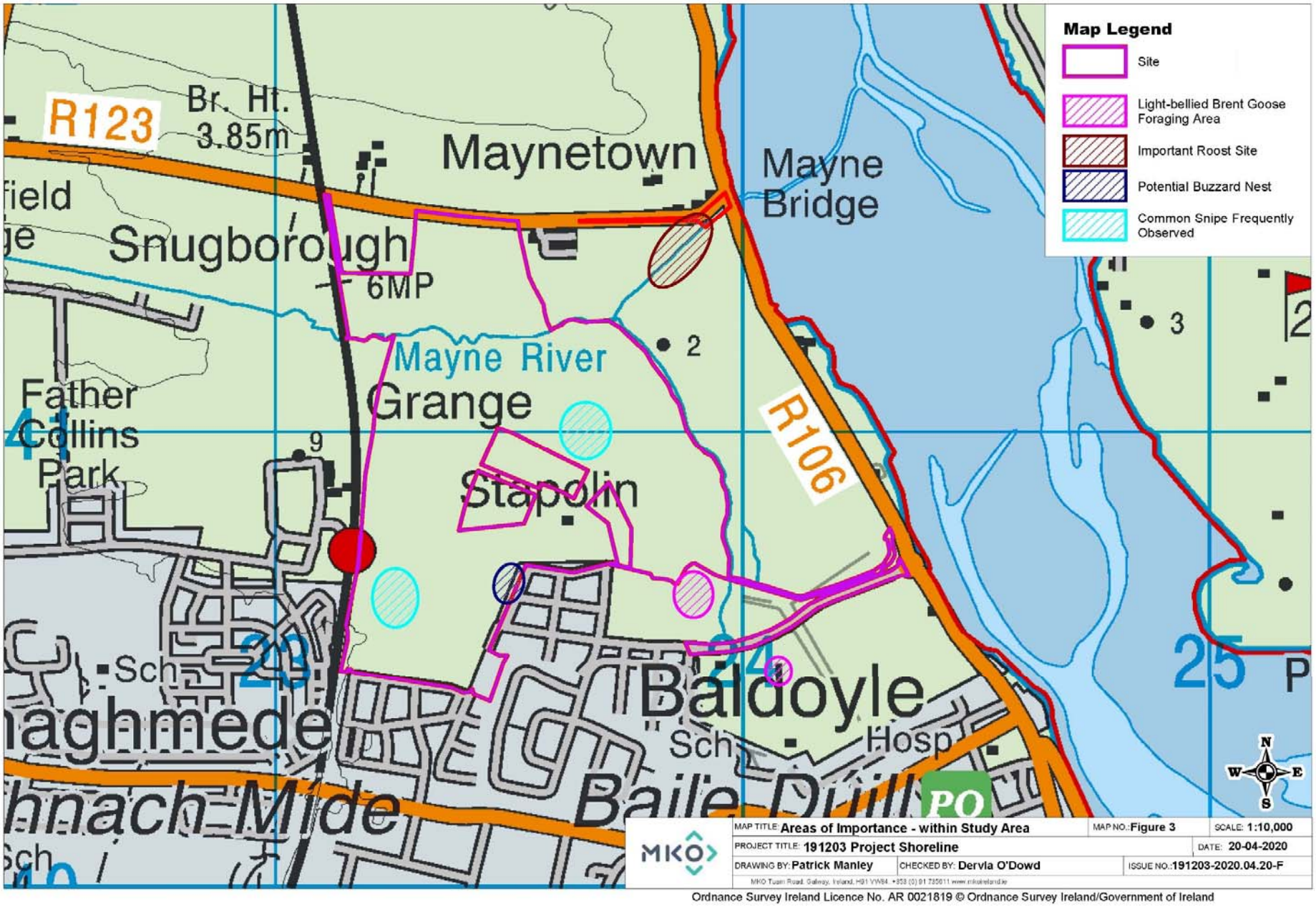

Figure AI-II. Areas of importance within the Wider Site Ownership line (purple). (Note 76nipe in GA3 Area (Not a qualifying interest of Baldoyle Bay SPA. (amber listed)