

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 Stapolin Growth Area 1, Baldoyle, Co. Dublin.



31st May 2021

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On behalf of: The Shoreline Partnership

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1. Introduction

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 (Special Areas of Conservation (SAC) or Special Protection Areas (SPA)). Therefore the proposed development at Stapolin Growth Area 1, Baldoyle, Co. Dublin (Figures 1 & 2). As outlined in NPWS (2009) a NIS *“comprises a comprehensive ecological impact assessment of a plan or project; it examines the direct and indirect impacts that the plan or project might have on its own or in combination with other plans and projects, on one or more Natura 2000 sites in view of the sites’ conservation objectives.”* The following NIS is carried out in compliance with to section 177T of the Planning and Development Act, 2000 as amended.

The development will consist of alterations to the development permitted within Growth Area No. 1 (GA1) of the Baldoyle - Stapolin Local Area Plan 2013-2019 (as extended), 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 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 (Figure 3).

A direct source-pathway-receptor link exists with the proposed project and previously permitted attenuation ponds which are connected to the River Mayne and to the Baldoyle Bay SAC and Baldoyle SPA. The attenuation pond will be in place prior to the commencement of the proposed development and mitigation measures are necessary during the construction of the proposed project to prevent downstream impacts. .

This AA Screening and Natura Impact Statement examines whether the 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.

Background to 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 is the managing director of Altemar. He is an environmental scientist and aquatic biologist with 20 years' experience working in Irish terrestrial and aquatic environments, providing services to the State, Semi-State and industry. 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 is currently developing in-house AA, EIA and environmental assessment procedures and acts as an independent “Environmental Expert” for Inland Fisheries Ireland. Bryan carried out all elements of this Natura Impact Statement.

2. Background to the Appropriate Assessment

The Habitats Directive 92/43/EEC (together with the Birds Directive (2009/1477/EC)) forms the cornerstone of Europe's 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."

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,*
 - *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."*

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; For example, the methodology in this report draws on, and has evolved from European Commission Guidance (EC, 2001; and updated drafts in April 2015 and November 2018), Irish guidance from the Department of Environment, Heritage and Local Government (DoEHLG, 2010)

3. Stages of the Appropriate Assessment

This Appropriate Assessment screening was undertaken having regard to, inter alia 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 as amended 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, the Appropriate Assessment process 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 effects likely to result from the proposed project;
 - Identification and description of in combination effects likely to result from other plans and projects;
 - 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.

4. Stage 1: Screening Stage Assessment

Management of the Site

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

Description of the Proposed Project

The development will consist of alterations to the development permitted within Growth Area No. 1 (GA1) of the Baldoyle (Figures 1 & 2) - 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.

Therefore, the permitted development provides for 544 no. residential units of which, 99 no. are already constructed or are under construction. The proposed Project increases the balance of permitted residential units from 445 no. units to 882 no. units, an increase of 437 no. residential units, on a slightly extended developable area (Figures 3 & 4). The landscape plan is seen in Figure 5. Elevations are seen in Figures 6 & 7.

An Environmental Impact Assessment Report and an outline Construction Environmental Management Plan accompany this AA screening / NIS, data from which were used to inform the AA Screening / NIS.



0 0.5 1 1.5 2 2.5 3 km

Project: Stapolin GA1
 Location: Baldoyle, Co. Dublin
 Date: 14th May, 2021
 Drawn By: Bryan Deegan (Altamar)

ALTEMAR
 Marine & Environmental Consultancy



Figure 1. Site Outline on satellite imagery (Source: Bing)





Figure 3. Proposed site masterplan

Henry J Lyons
Architectural Services - 402.183.1000 10000 104th Avenue, Suite 100, Omaha, NE 68134

PLANNING

DATE: 10/1/2023
SCALE: 1"=100'-0"
DRAWN: JHL
CHECKED: JHL
DATE: 10/1/2023

PROJECT: THE SHORELINE PARTNERSHIP
PROJECT_SHORELINE_GA01
BALDOYLE

PROPOSED
SITE LAYOUT PLAN 1

ST P0007 GA01 P01

LEGEND:
[Red Line] Planning Application Site Boundary
[Yellow Line] Potential Future Land Use
[Orange Line] Erosion Expansion Boundary

NOTES:
1. THIS PLAN IS FOR PLANNING PURPOSES ONLY.
2. THE PLANNING APPLICATION IS SUBJECT TO THE REVIEW AND APPROVAL OF THE CITY OF BALDOYLE.
3. THE PLANNING APPLICATION IS SUBJECT TO THE REVIEW AND APPROVAL OF THE CITY OF BALDOYLE.



Figure 5. Proposed landscape masterplan



Figure 6. North Elevation (Block A)

There is a direct pathway from the proposed development site to the Baldoyle Bay SAC and Baldoyle Bay SPA via the existing surface water network and the Mayne River. As a result, particular attention is made in the following sections to the proposed drainage strategy. Full details of the proposed drainage can be seen in the Cronin & Sutton Consulting Engineers (CS Consulting) Engineering Services Report

Drainage

Cronin & Sutton Consulting Engineers (CS Consulting) have been commissioned by The Shoreline Partnership to prepare an Engineering Services Report to accompany the planning application.

Existing Storm Water Infrastructure

“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 culvert running from south to north along the line of Stapolin Avenue, which discharges into the Mayne River. Based on the previous planning application for the subject site (Fingal County Council Planning Application F16A/0412), this culvert has been constructed by previous developers at a low level so that it can pass below the North Fringe Sewer located approximately 200m north of the proposed development. The depth of this outfall is approximately 2m below the existing ground level as it passes through to the flood plain further north. The culvert 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 within the subject site, however due to its poor condition 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.”

Proposed Storm Water Arrangements

“It is a 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 water quality treatment for this and future development. This wetland and its corresponding upstream surface water network was granted under planning reference F16A/0412 and its construction is to commence shortly.”

The total treatment volume is as follows:

- *Growth Areas 1, 2 and 3 = $797m^3 + 755m^3 = 1552m^3$*
- *Wetland volume to be approximately = $1860m^3$
(as granted under planning permission F16A/0412)*

“All run-off areas will pass through the required number of treatment stages prior to discharging to the downstream outfall. Treatment methods are listed in the section on SuDS with final treatment provided by the constructed wetland, explained further forward.

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 that shall cross above the North Fringe Sewer 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.”

“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 from the grant of permission F16A/0412. In summary, the original topsoil with seed-bank of calcareous grassland and wetland species will be replaced to allow selfseeding 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 wetland will be constructed by excavating the existing ground level to provide the storage volume required. Investigations on site have determined that the material on site is not suitable for lining. It is imperative that the structural stability of the wetland is maintained and as such it will be lined with an impermeable liner. 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 use of Suds features as part of this development will include swales / bio-retention areas, permeable paving, green roofs, and rainwater butts that will provide infiltration and evaporation as much as physical possible and optimise retention time. Relatively small volumes of rainwater collected on the respective SuDS devices will enter the public sewer network during typical low intensity storms. This is because the proposed SuDS measures will retain rainwater until it is either used via evapotranspiration in the green areas or reused within the development via the rainwater harvesting system. The SuDS processes decrease the impact of the development on the receiving environment by providing amenity and biodiversity in many cases.

Proposed SuDS Measures

In order to comply with the The Greater Dublin Strategic Drainage Study, SuDS measures are proposed for the development. As outlined in the Engineering Services Report “*All run-off areas will pass through the required number of treatment stages prior to discharging to the downstream outfall. Treatment methods are listed in the section on SuDS with final treatment provided by the wetland, explained further forward.*”

“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) Rainwater ‘butts’- rain which falls first on to roof areas shall be collected in a water storage unit, to allow for re-use for landscaping purposes to reduce the reliance on the potable water network. Rainwater butts will be provide to all single houses only.*
- c) Swales: shallow drainage channels covered in grass which can treat, convey and attenuate runoff, at source, and can infiltrate to the ground where the subgrade is suitable. Swales also can promote biodiversity. Swales are located adjacent to the roads of Stapolin Avenue and Stapolin Road.*
- d) Bio-retention Areas: Shallow landscaped depressions which are underdrained 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.*
- e) 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. Additionally, green roofs treat surface water through removal of atmospherically deposited urban pollutants. 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 refer to **Appendix B** for the Bauder Sedum Green Roof System*
- f) Permeable Paving: These systems are used ‘source control’ method in managing surface water runoff. Water is managed and dealt with onsite 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 parking spaces to the development with permeable paving systems.*

The combination of the above noted elements shall allow the proposed development to adhere to the principles of sustainable drainage practices while enhancing overall storm water quality.”

Foul Water Infrastructure

Existing Foul Infrastructure

There is an existing 375mm diameter foul sewer that runs in a northern direction along the eastern boundary of the site (Stapolin Avenue). This infrastructure was installed by previous developers to serve the entire LAP lands and extends upstream in a southerly direction serving the Myrtle development.

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.

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 and therefore it is proposed to remove the existing foul sewers within the development site.

Proposed Foul Drainage Arrangements

“The proposed development will require a new separate drainage network to collect and convey the effluent generated by the proposed development.” “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 proposed foul water drainage infrastructure and routing plan is shown on [drawings BD-CSC-ZZ-XX-DR-C-0003 and BD-CSC-ZZ-XX-DR-C-0004] included with this submission and the proposed connection to the Irish Water Network can be accommodated.

Identification of NATURA 2000 sites/species potentially affected.

The proposed development site is not within a NATURA 2000 site. Given the fact that the proposed development has a direct pathway and connectivity to Natura 2000 sites via the previously granted surface water network, all NATURA 2000 sites within 15km were investigated (Table 1). Natura 2000 sites beyond 15 km do not have a direct pathway to the proposed site and no significant effects are foreseen on, or impacts are foreseen on the integrity of, these sites. SAC's and SPA's within 15km of the proposed development and watercourses within 5km can be seen in Figures (6 & 7) and (8 & 9) respectively. Satellite imagery and watercourses show the proximity of the proposed development to the Mayne River, Baldoyle Bay SAC (Figure 10) and Baldoyle Bay SPA (Figure 10).

As can be seen from Figures 10 and 11 the Baldoyle Bay SAC and Baldoyle Bay SPA Natura 2000 sites are proximate to the proposed project. There is a direct pathway to the Mayne River via surface water drainage wetlands (to be constructed). The Mayne River flows directly into the Baldoyle Bay SAC and Baldoyle Bay SPA. In order to determine if an impact on Natura 2000 sites is likely to be significant, the project must be assessed against the conservation objectives of each of the NATURA 2000 sites. This screening is carried out in Table 2. It should be noted that there is no direct pathway to sites beyond 15km and no significant affects are likely on these sites beyond 15km.

Table 1. Natura 2000 Sites within 15km of the proposed works.

Site code	Type	Site name	Distance from the planning boundary
IE0004016	SPA	Baldoyle Bay SPA	700m
IE0004025	SPA	Broadmeadow Swords Estuary SPA/ Malahide Estuary SPA	4.4 km
IE0004006	SPA	North Bull Island SPA	1.8 km
IE0004015	SPA	Rogerstown Estuary SPA	10.0 km
IE0004024	SPA	South Dublin Bay and River Tolka Estuary SPA	5.5 km
IE0004117	SPA	Ireland's Eye SPA	4.6 km
IE0004113	SPA	Howth Head Coast SPA	6.0 km
IE0004069	SPA	Lambay Island SPA	11.6 km
IE0004172	SPA	Dalkey Islands SPA	14.0 km
IE0000199	SAC	Baldoyle Bay SAC	400m
IE0000206	SAC	North Dublin Bay SAC	1.6 km
IE0000205	SAC	Malahide Estuary SAC	3.8 km
IE0000210	SAC	South Dublin Bay SAC	6.8 km
IE0003000	SAC	Rockabill to Dalkey Island SAC	6.0 km
IE0002193	SAC	Ireland's Eye SAC	4.9 km
IE0000202	SAC	Howth Head SAC	4.5 km
IE0000208	SAC	Rogerstown Estuary SAC	10.5 km
IE0000204	SAC	Lambay Island SAC	10.9 km

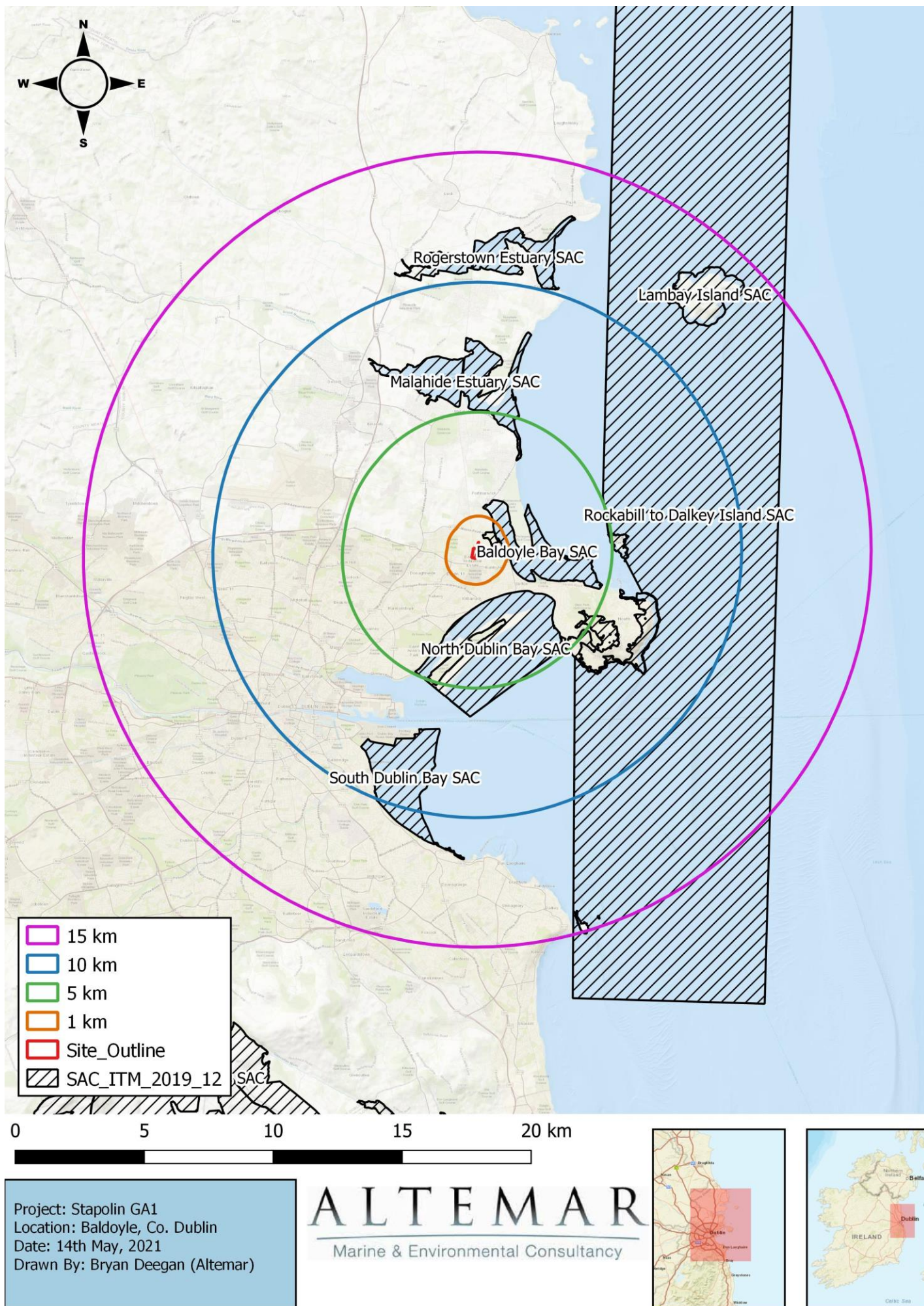
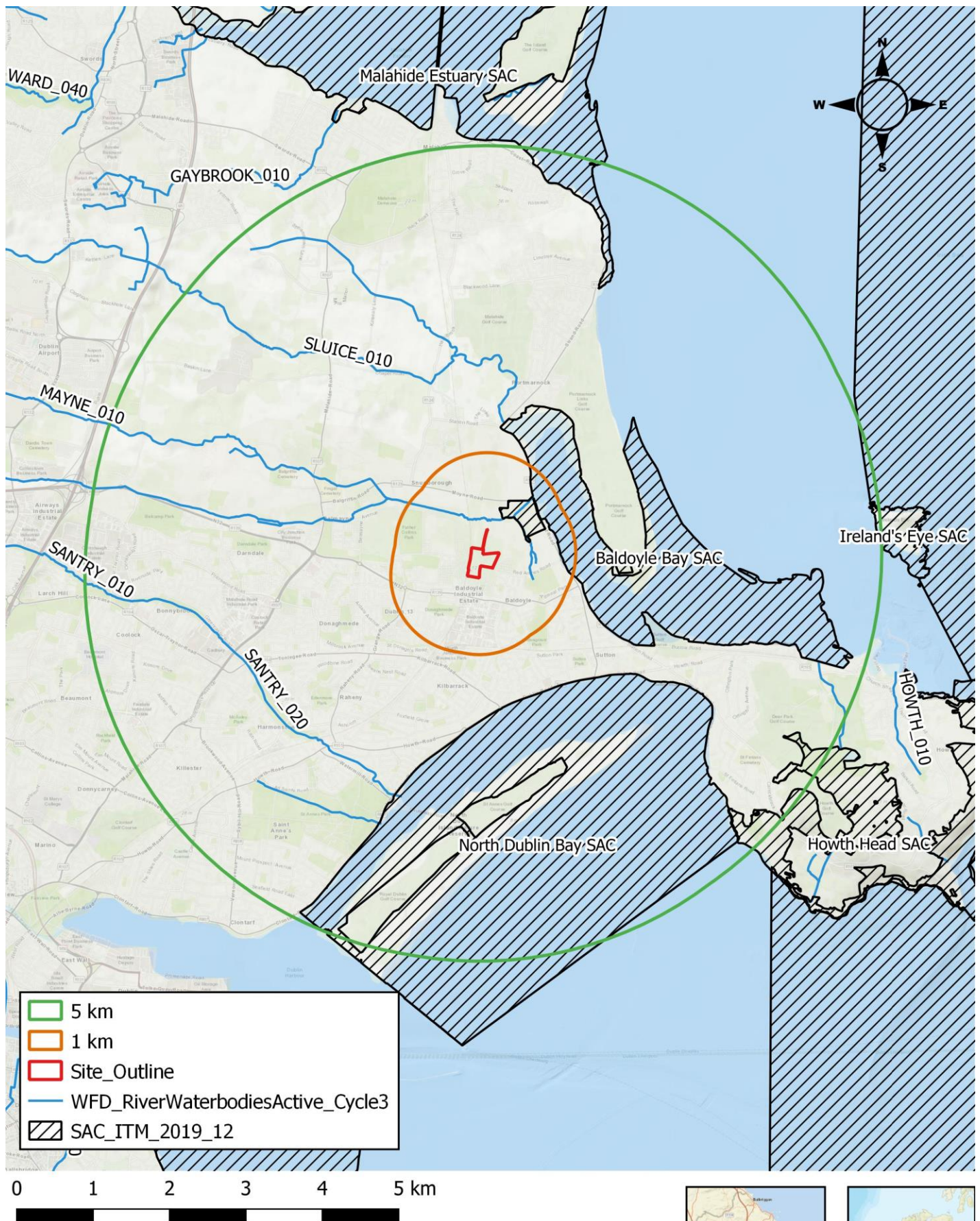


Figure 6. Special Areas of Conservation within 15km of the proposed development



Project: Stapolin GA1
 Location: Baldoye, Co. Dublin
 Date: 14th May, 2021
 Drawn By: Bryan Deegan (Altamar)

ALTEMAR
 Marine & Environmental Consultancy

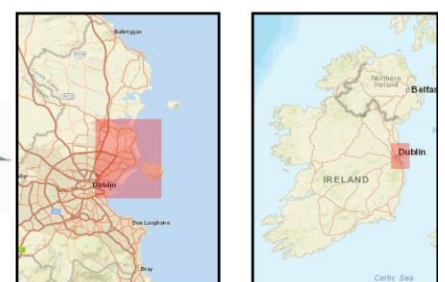
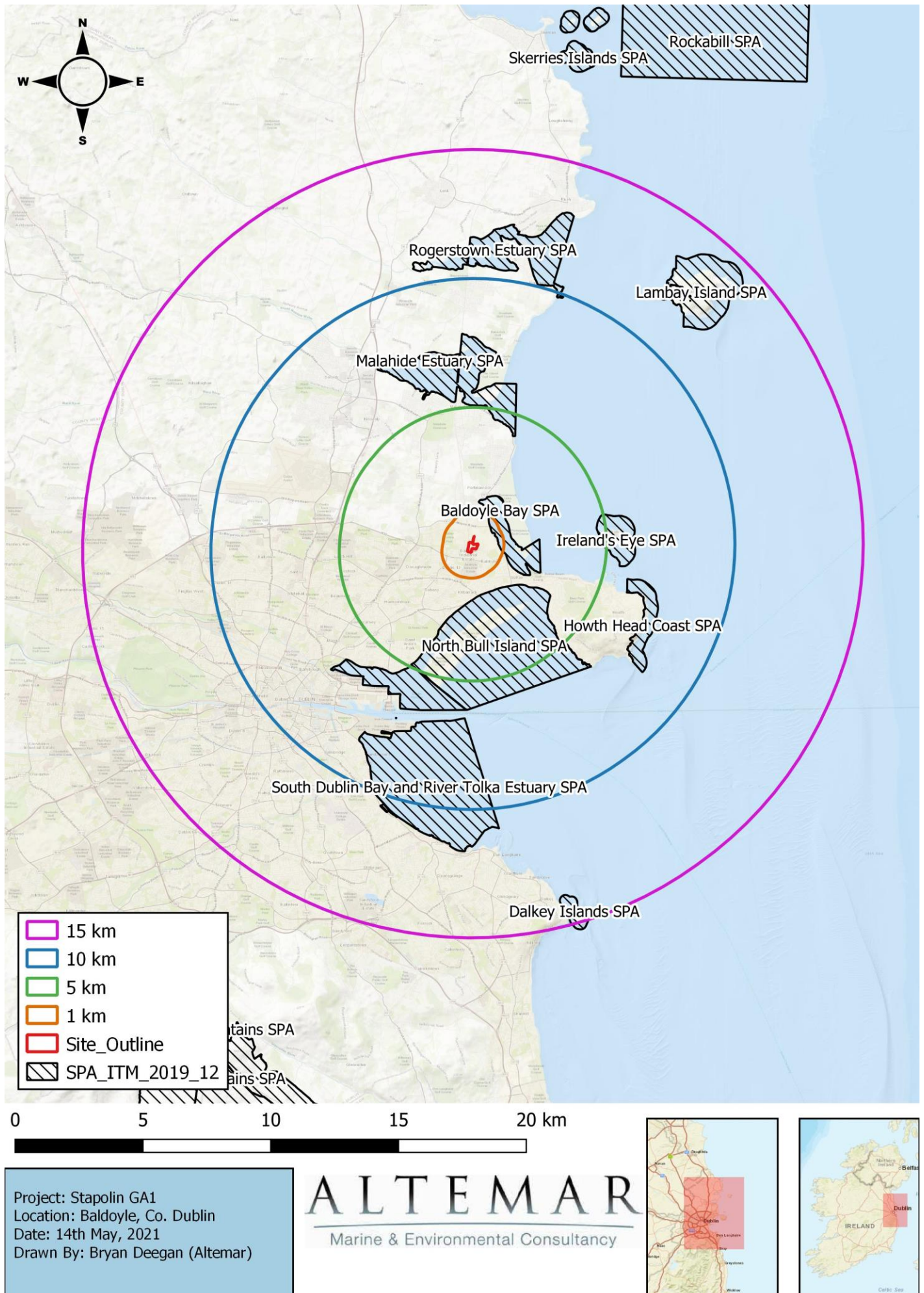


Figure 7. Special Areas of Conservation & watercourses located within 5km of the proposed development



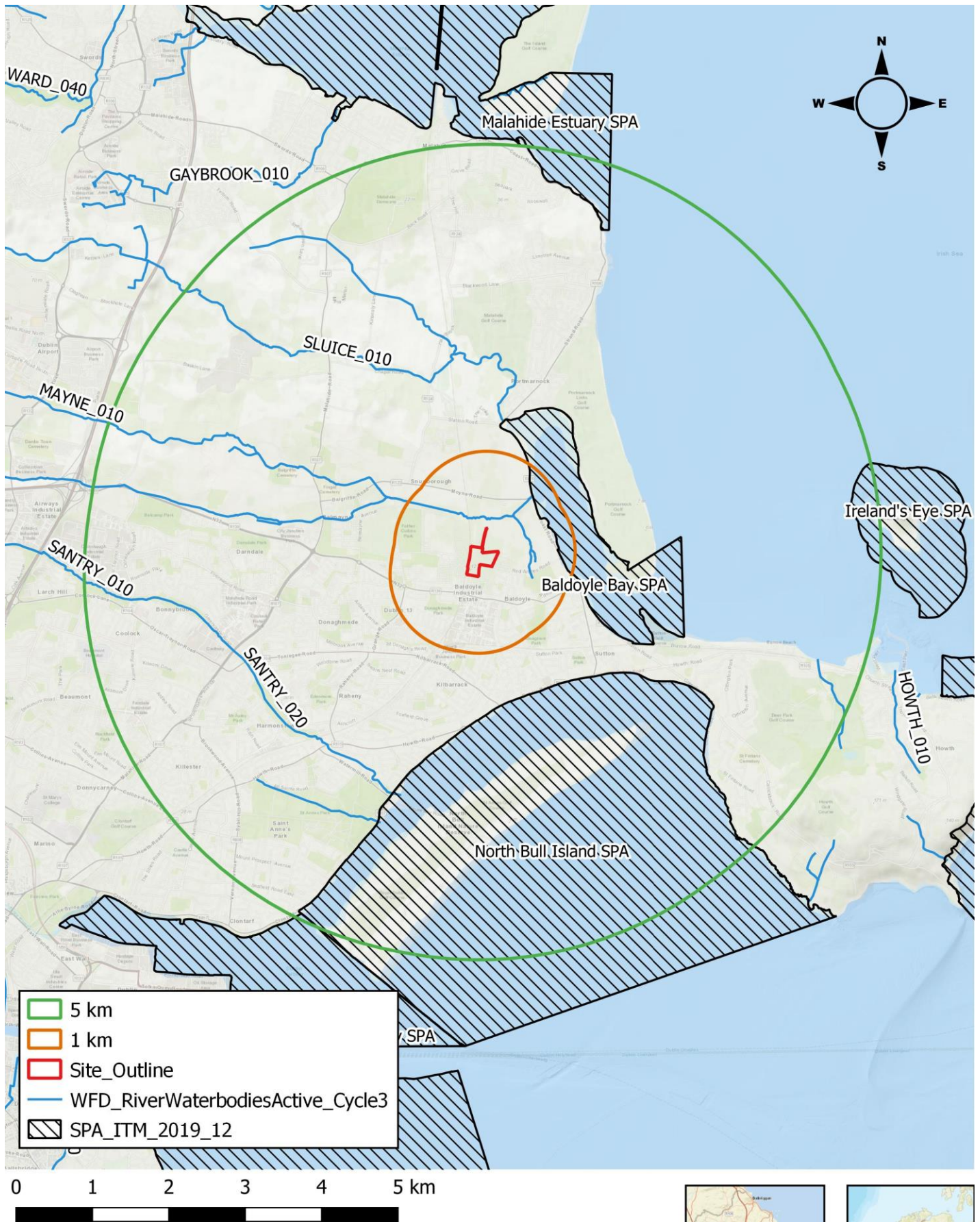


Figure 9. Special Protection Areas and watercourses located within 5km of the proposed development.



Figure 10. Special Areas of Conservation and watercourses within the vicinity of the proposed works.



Figure 11. Special Protection Areas and watercourses within the vicinity of the proposed works.

Table 2. Initial screening of NATURA 2000 sites within 15km of the proposed development

a) Special Protection Areas

Natura Code	Name	Details/Reason
IE0004016	Baldoyle Bay SPA	<p>Conservation Objectives</p> <p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.</p> <p>Qualifying Interests</p> <p>A046 Brent Goose (<i>Branta bernicla brota</i>)</p> <p>A048 Shelduck (<i>Tadorna tadorna</i>)</p> <p>A137 Ringed Plover (<i>Charadrius hiaticula</i>)</p> <p>A140 Golden Plover (<i>Pluvialis apricaria</i>)</p> <p>A141 Grey Plover (<i>Pluvialis squatarola</i>)</p> <p>A157 Bar-tailed Godwit (<i>Limosa lapponica</i>)</p> <p>A999 Wetlands.</p> <p>Source/Pathway/Receptor links between the works and the Natura 2000 site, with the potential to result in significant adverse effects.</p> <p>The proposed development site is 700m 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 “<i>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:</i></p> <ul style="list-style-type: none"> • <i>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).</i> • <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.</i> • <i>Pollution of surface water through accidental spillage or discharge of polluting substances, or via elevated suspended solids and siltation through run-off to watercourses.</i> <p><i>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.</i></p> <p><i>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.”</i></p> <p>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) “<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</i></p>

Natura Code	Name	Details/Reason
		<p><i>with domestic dwellings.</i>” Disturbance could potentially lead to the displacement of the qualifying interests within the SPA. Noise mitigation measures are outlined in the EIAR.</p> <p>Stage 2 AA is Required.</p>
IE0004025	Broadmeadow Swords Estuary SPA/ Malahide Estuary SPA	<p>Conservation Objectives</p> <p>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.</p> <p><i>Objective 1:</i> To maintain the favourable conservation condition of the waterbird Special Conservation Interest species listed for Malahide Estuary SPA.</p> <p><i>Objective 2:</i> To maintain the favourable conservation condition of the wetland habitat at Malahide Estuary SPA as a resource for the regularly -occurring migratory waterbirds that utilise it.</p> <p>Qualifying Interests</p> <p>A005 Great Crested Grebe (<i>Podiceps cristatus</i>)</p> <p>A046 Brent Goose (<i>Branta bernicla brota</i>)</p> <p>A048 Shelduck (<i>Tadorna tadorna</i>)</p> <p>A054 Pintail (<i>Anas acuta</i>)</p> <p>A067 Goldeneye (<i>Bucephala clangula</i>)</p> <p>A069 Red-breasted Merganser (<i>Mergus serrator</i>)</p> <p>A130 Oystercatcher (<i>Haematopus ostralegus</i>)</p> <p>A140 Golden Plover (<i>Pluvialis apricaria</i>)</p> <p>A141 Grey Plover (<i>Pluvialis squatarola</i>)</p> <p>A143 Knot (<i>Calidris canutus</i>)</p> <p>A149 Dunlin (<i>Calidris alpina alpina</i>)</p> <p>A156 Black-tailed Godwit (<i>Limosa limosa</i>)</p> <p>A157 Bar-tailed Godwit (<i>Limosa lapponica</i>)</p> <p>A162 Redshank (<i>Tringa tetanus</i>)</p> <p>A999 Wetlands</p> <p>Source/Pathway/Receptor links between the works and the Natura 2000 site, with the potential to result in significant adverse effects.</p> <p>The proposed development is 4.4 km from the Broadmeadow Swords Estuary SPA / Malahide Estuary SPA. There is no direct hydrological pathway from the site to this SPA. There is a potential indirect pathway via the marine environment. However, due to the distance via the indirect pathway (e.g. surface/foul water networks) any pollutants or silt will be dispersed, settle or be diluted on the open marine environment. Foul water from the development will be processed in the existing Ringsend Treatment works. Irish water has confirmed that the “proposed connection to the Irish Water network(s) can be facilitated.” The indirect pathway of surface water or, foul water to Ringsend will not result in a significant effect on the Natura 2000 site.</p> <p>Impacts caused by the project, in the absence of mitigation measures, would be expected to be localised to the immediate environs of Baldoyle Bay, due to the connection to the Mayne River via the existing attenuation on site. Mitigation would not be seen to be necessary for the protection of this SPA</p>

Natura Code	Name	Details/Reason
		<p>as there is no direct pathway. No impacts on the qualifying interests of this Natura 2000 site are foreseen.</p> <p>No significant effects are likely.</p>
IE0004006	North Bull Island SPA	<p>Conservation Objective</p> <p>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.</p> <p>Qualifying Interests</p> <p>A046 Light-bellied Brent Goose (<i>Branta bernicla brota</i>)</p> <p>A048 Shelduck (<i>Tadorna tadorna</i>)</p> <p>A052 Teal (<i>Anas crecca</i>)</p> <p>A054 Pintail (<i>Anas acuta</i>)</p> <p>A056 Shoveler (<i>Anas chapeata</i>)</p> <p>A130 Oystercatcher (<i>Haematopus ostralegus</i>)</p> <p>A140 Golden Plover (<i>Pluvialis apricaria</i>)</p> <p>A141 Grey Plover (<i>Pluvialis squatarola</i>)</p> <p>A143 Knot (<i>Calidris canutus</i>)</p> <p>A144 Sanderling (<i>Calidris alba</i>)</p> <p>A149 Dunlin (<i>Calidris alpina alpina</i>)</p> <p>A156 Black-tailed Godwit (<i>Limosa limosa</i>)</p> <p>A157 Bar-tailed Godwit (<i>Limosa lapponica</i>)</p> <p>A160 Curlew (<i>Numenius arquata</i>)</p> <p>A162 Redshank (<i>Tringa tetanus</i>)</p> <p>A169 Turnstone (<i>Arenaria interpres</i>)</p> <p>A179 Black-headed Gull (<i>Chroicocephalus ridibundus</i>)</p> <p>A999 Wetlands</p> <p>Source/Pathway/Receptor links between the works and the Natura 2000 site, with the potential to result in significant adverse effects.</p> <p>The proposed development is 1.8 km from the North Bull Island SPA. There is no direct hydrological pathway from the site to this SPA. There is a potential indirect pathway via the marine environment. However, due to the distance via the indirect pathway (e.g. surface/foul water networks) any pollutants or silt will be dispersed, settle or be diluted on the open marine environment. Foul water from the development will be processed in the existing Ringsend Treatment works. Irish water has confirmed that the “proposed connection to the Irish Water network(s) can be facilitated.” The indirect pathway of surface water or, foul water to Ringsend will not result in a significant effect on the Natura 2000 site.</p> <p>Impacts caused by the project, in the absence of mitigation measures, would be expected to be localised to the immediate environs of Baldoyle Bay, due to the connection to the Mayne River via the existing attenuation on site. Mitigation would not be seen to be necessary for the protection of this SPA as there is no direct pathway. No impacts on the qualifying interests of this Natura 2000 site are foreseen.</p> <p>No significant effects are likely.</p>

Natura Code	Name	Details/Reason
IE0004015	Rogerstown Estuary SPA	<p>Conservation Objective</p> <p>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.</p> <p>Qualifying Interests</p> <p>A043 Greylag Goose (<i>Anser anser</i>) A046 Brent Goose (<i>Branta bernicla brota</i>) A048 Shelduck (<i>Tadorna tadorna</i>) A056 Shoveler (<i>Anas chrypeata</i>) A130 Oystercatcher (<i>Haematopus ostralegus</i>) A137 Ringed Plover (<i>Charadrius hiaticula</i>) A141 Grey Plover (<i>Pluvialis squatarola</i>) A143 Knot (<i>Calidris canutus</i>) A149 Dunlin (<i>Calidris alpina alpina</i>) A156 Black-tailed Godwit (<i>Limosa limosa</i>) A162 Redshank (<i>Tringa tetanus</i>) A999 Wetlands</p> <p>Source/Pathway/Receptor links between the works and the Natura 2000 site, with the potential to result in significant adverse effects.</p> <p>The proposed development is 10.0 km from the Rogerstown Estuary SPA. There is no direct hydrological pathway from the site to this SPA. There is a potential indirect pathway via the marine environment. However, due to the distance via the indirect pathway (e.g. surface/foul water networks) any pollutants or silt will be dispersed, settle or be diluted on the open marine environment. Foul water from the development will be processed in the existing Ringsend Treatment works. Irish water has confirmed that the “proposed connection to the Irish Water network(s) can be facilitated.” The indirect pathway of surface water or, foul water to Ringsend will not result in a significant effect on the Natura 2000 site.</p> <p>Impacts caused by the project, in the absence of mitigation measures, would be expected to be localised to the immediate environs of Baldoyle Bay, due to the connection to the Mayne River via the existing attenuation on site. Mitigation would not be seen to be necessary for the protection of this SPA as there is no direct pathway. No impacts on the qualifying interests of this Natura 2000 site are foreseen.</p> <p>No significant effects are likely.</p>
IE0004024	South Dublin Bay and River Tolka Estuary SPA	<p>Conservation Objectives</p> <p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.</p> <p>Features of Interest</p> <p>Light-bellied Brent Goose (<i>Branta bernicla brota</i>) Oystercatcher (<i>Haematopus ostralegus</i>) Ringed Plover (<i>Charadrius hiaticula</i>) Grey Plover (<i>Pluvialis squatarola</i>) Knot (<i>Calidris canutus</i>) Sanderling (<i>Calidris alba</i>)</p>

Natura Code	Name	Details/Reason
		<p>Dunlin (<i>Calidris alpina</i>) Bar-tailed Godwit (<i>Limosa lapponica</i>) Redshank (<i>Tringa totanus</i>) Black-headed Gull (<i>Croicocephalus ridibundus</i>) Roseate Tern (<i>Sterna dougallii</i>) Common Tern (<i>Sterna hirundo</i>) Arctic Tern (<i>Sterna paradisaea</i>) Wetlands & Waterbirds</p> <p>Source/Pathway/Receptor links between the works and the Natura 2000 site, with the potential to result in significant adverse effects.</p> <p>The proposed development is located 5.5 km from this SPA. There is no direct hydrological pathway from the site to this SPA. There is a potential indirect pathway via the marine environment. However, due to the distance via the indirect pathway (e.g. surface/foul water networks) any pollutants or silt will be dispersed, settle or be diluted on the open marine environment. Foul water from the development will be processed in the existing Ringsend Treatment works. Irish water has confirmed that the “proposed connection to the Irish Water network(s) can be facilitated.” The indirect pathway of surface water or, foul water to Ringsend will not result in a significant effect on the Natura 2000 site.</p> <p>Impacts caused by the project, in the absence of mitigation measures, would be expected to be localised to the immediate environs of Baldoyle Bay, due to the connection to the Mayne River via the existing attenuation on site. Mitigation would not be seen to be necessary for the protection of this SPA as there is no direct pathway. No impacts on the qualifying interests of this Natura 2000 site are foreseen.</p> <p>No significant effects are likely.</p>
IE0004117	Ireland's Eye SPA	<p>Conservation Objective</p> <p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:</p> <p>Qualifying Interests</p> <p>A017 Cormorant (<i>Phalacrocorax carbo</i>) A184 Herring Gull (<i>Larus argentatus</i>) A188 Kittiwake (<i>Rissa tridactyla</i>) A199 Guillemot (<i>Uria aalge</i>) A200 Razorbill (<i>Alca torda</i>)</p> <p>Source/Pathway/Receptor links between the works and the Natura 2000 site, with the potential to result in significant adverse effects.</p> <p>The proposed development is 4.6 km from the Ireland's Eye SPA There is no direct hydrological pathway from the site to this SPA. There is a potential indirect pathway via the marine environment. However, due to the distance via the indirect pathway (e.g. surface/foul water networks) any pollutants or silt will be dispersed, settle or be diluted on the open marine environment. Foul water from the development will be processed in the existing Ringsend Treatment works. Irish water has confirmed that the “proposed connection to the Irish Water network(s) can be facilitated.” The indirect pathway of surface water or, foul water to Ringsend will not result in a significant effect on the Natura 2000 site.</p>

Natura Code	Name	Details/Reason
		<p>Impacts caused by the project, in the absence of mitigation measures, would be expected to be localised to the immediate environs of Baldoyle Bay, due to the connection to the Mayne River via the existing attenuation on site. Mitigation would not be seen to be necessary for the protection of this SPA as there is no direct pathway. No impacts on the qualifying interests of this Natura 2000 site are foreseen.</p> <p>No significant effects are likely</p>
IE0004113	Howth Head Coast SPA	<p>Conservation Objective</p> <p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA</p> <p>Qualifying Interests</p> <p>A188 Kittiwake (<i>Rissa tridactyla</i>)</p> <p>Source/Pathway/Receptor links between the works and the Natura 2000 site, with the potential to result in significant adverse effects.</p> <p>The proposed development is 6.0 km from the Howth Head Coast SPA. There is no direct hydrological pathway from the site to this SPA. There is a potential indirect pathway via the marine environment. However, due to the distance via the indirect pathway (e.g. surface/foul water networks) any pollutants or silt will be dispersed, settle or be diluted on the open marine environment. Foul water from the development will be processed in the existing Ringsend Treatment works. The indirect pathway of surface water or, foul water to Ringsend will not result in a significant effect on the Natura 2000 site.</p> <p>Impacts caused by the project, in the absence of mitigation measures, would be expected to be localised to the immediate environs of Baldoyle Bay, due to the connection to the Mayne River via the existing attenuation on site. Mitigation would not be seen to be necessary for the protection of this SPA as there is no direct pathway. No impacts on the qualifying interests of this Natura 2000 site are foreseen.</p> <p>No significant effects are likely.</p>
IE0004069	Lambay Island SPA	<p>Conservation Objective</p> <p>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.</p> <p>Qualifying Interests</p> <p>A009 Fulmar (<i>Fulmarus glacialis</i>)</p> <p>A017 Cormorant (<i>Phalacrocorax carbo</i>)</p> <p>A018 Shag (<i>Phalacrocorax aristotelis</i>)</p> <p>A043 Greylag Goose (<i>Anser anser</i>)</p> <p>A183 Lesser Black-backed Gull (<i>Larus fuscus</i>)</p> <p>A184 Herring Gull (<i>Larus argentatus</i>)</p> <p>A188 Kittiwake (<i>Rissa tridactyla</i>)</p> <p>A199 Guillemot (<i>Uria aalge</i>)</p> <p>A200 Razorbill (<i>Alca torda</i>)</p> <p>A204 Puffin (<i>Fratercula arctica</i>)</p>

Natura Code	Name	Details/Reason
		<p>Source/Pathway/Receptor links between the works and the Natura 2000 site, with the potential to result in significant adverse effects.</p> <p>The proposed development is 11.6 km from the Lambay Island SPA. There is no direct hydrological pathway from the site to this SPA. There is a potential indirect pathway via the marine environment. However, due to the distance via the indirect pathway (e.g. surface/foul water networks) any pollutants or silt will be dispersed, settle or be diluted on the open marine environment. Foul water from the development will be processed in the existing Ringsend Treatment works. Irish water has confirmed that the “<i>proposed connection to the Irish Water network(s) can be facilitated.</i>” The indirect pathway of surface water or, foul water to Ringsend will not result in a significant effect on the Natura 2000 site.</p> <p>Impacts caused by the project, in the absence of mitigation measures, would be expected to be localised to the immediate environs of Baldoyle Bay, due to the connection to the Mayne River via the existing attenuation on site. Mitigation would not be seen to be necessary for the protection of this SPA as there is no direct pathway. No impacts on the qualifying interests of this Natura 2000 site are foreseen.</p> <p>No significant effects are likely.</p>
IE004172	Dalkey Islands SPA	<p>Conservation Objectives</p> <p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.</p> <p>Features of Interest</p> <p>A192 Roseate Tern (<i>Sterna dougallii</i>) A193 Common Tern (<i>Sterna hirundo</i>) A194 Arctic Tern (<i>Sterna paradisaea</i>)</p> <p>Source/Pathway/Receptor links between the works and the Natura 2000 site, with the potential to result in significant adverse effects.</p> <p>The proposed development site is located approximately 14 km from the Dalkey Islands SPA. There is no direct hydrological pathway from the site to this SPA. There is a potential indirect pathway via the marine environment. However, due to the distance via the indirect pathway (e.g. surface/foul water networks) any pollutants or silt will be dispersed, settle or be diluted on the open marine environment. Foul water from the development will be processed in the existing Ringsend Treatment works. Irish water has confirmed that the “proposed connection to the Irish Water network(s) can be facilitated.” The indirect pathway of surface water or, foul water to Ringsend will not result in a significant effect on the Natura 2000 site.</p> <p>Impacts caused by the project, in the absence of mitigation measures, would be expected to be localised to the immediate environs of Baldoyle Bay, due to the connection to the Mayne River via the existing attenuation on site. Mitigation would not be seen to be necessary for the protection of this SPA as there is no direct pathway. No impacts on the qualifying interests of this Natura 2000 site are foreseen.</p> <p>No significant effects are likely.</p>

b) Special Areas of Conservation

Natura Code	Name	Details/Reason
IE0000199	Baldoye Bay SAC	<p>Conservation Objectives</p> <p>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.</p> <p>Qualifying Interests</p> <p>1310 Salicornia and other annuals colonising mud and sand</p> <p>1330 Atlantic salt meadows (<i>Glauco - Puccinellietalia maritimae</i>)</p> <p>1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</p> <p>Source/Pathway/Receptor links between the works and the Natura 2000 site, with the potential to result in significant adverse effects.</p> <p>The proposed development is 400m from this SAC. There is a direct hydrological pathway to Baldoye 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.</p> <p>Stage 2 AA is Required.</p>
IE0000205	Malahide Estuary SAC	<p>Conservation Objectives</p> <p>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.</p> <p>Qualifying Interests</p> <p>1140 Mudflats and sandflats not covered by seawater at low tide.</p> <p>1310 Salicornia and other annuals colonising mud and sand</p> <p>1320 <i>Spartina</i> swards (<i>Spartinion maritimae</i>)</p> <p>1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)</p> <p>1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</p> <p>2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)</p> <p>2130 Fixed coastal dunes with herbaceous vegetation (grey dunes).</p> <p>Source/Pathway/Receptor links between the works and the Natura 2000 site, with the potential to result in significant adverse effects.</p> <p>The proposed development is located 3.8km from the SAC. There is no direct hydrological pathway from the site to this SAC. There is a potential indirect pathway via the marine environment. However, due to the distance via the indirect pathway (e.g. surface/foul water networks) any pollutants or silt will be dispersed, settle or be diluted on the open marine environment. Foul water from the development will be processed in the existing Ringsend Treatment works. Irish water has confirmed that the “<i>proposed connection to the Irish Water network(s) can be facilitated.</i>” The indirect pathway of surface water or, foul water to Ringsend will not result in a significant effect on the Natura 2000 site.</p> <p>Impacts caused by the project, in the absence of mitigation measures, would be expected to be localised to the immediate environs of Baldoye Bay, due to the connection to the Mayne River via the existing attenuation</p>

Natura Code	Name	Details/Reason
		<p>on site. Mitigation would not be seen to be necessary for the protection of this SAC as there is no direct pathway. No impacts on the qualifying interests of this Natura 2000 site are foreseen.</p> <p>No significant effects are likely.</p>
IE0000206	North Dublin Bay SAC	<p>Conservation Objectives</p> <p>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.</p> <p>Qualifying Interest</p> <p>1140 Mudflats and sandflats not covered by seawater at low tide</p> <p>1210 Annual vegetation of drift lines</p> <p>1310 Salicornia and other annuals colonising mud and sand</p> <p>1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)</p> <p>1395 Petalwort <i>Petalophyllum ralfsii</i></p> <p>1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</p> <p>2110 Embryonic shifting dunes</p> <p>2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)</p> <p>2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)</p> <p>2190 Humid dune slacks</p> <p>Source/Pathway/Receptor links between the works and the Natura 2000 site, with the potential to result in significant adverse effects.</p> <p>The proposed development is located over 1.6 km from the SAC. There is no direct hydrological pathway from the site to this SAC. There is a potential indirect pathway via the marine environment. However, due to the distance via the indirect pathway (e.g. surface/foul water networks) any pollutants or silt will be dispersed, settle or be diluted on the open marine environment. Foul water from the development will be processed in the existing Ringsend Treatment works. Irish water has confirmed that the “<i>proposed connection to the Irish Water network(s) can be facilitated.</i>” The indirect pathway of surface water or, foul water to Ringsend will not result in a significant effect on the Natura 2000 site.</p> <p>Impacts caused by the project, in the absence of mitigation measures, would be expected to be localised to the immediate environs of Baldoyle Bay, due to the connection to the Mayne River via the existing attenuation on site. Mitigation would not be seen to be necessary for the protection of this SAC as there is no direct pathway. No impacts on the qualifying interests of this Natura 2000 site are foreseen.</p> <p>No significant effects are likely.</p>
IE0000208	Rogerstown Estuary SAC	<p>Conservation Objectives:</p> <p>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.</p> <p>Qualifying Interests</p> <p>1130 Estuaries</p> <p>1140 Mudflats and sandflats not covered by seawater at low tide</p>

Natura Code	Name	Details/Reason
		<p>1310 Salicornia and other annuals colonising mud and sand</p> <p>1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)</p> <p>1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</p> <p>2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)</p> <p>2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)</p> <p>Source/Pathway/Receptor links between the works and the Natura 2000 site, with the potential to result in significant adverse effects.</p> <p>The proposed development is located 10.5 km from the SAC. There is no direct hydrological pathway from the site to this SAC. There is a potential indirect pathway via the marine environment. However, due to the distance via the indirect pathway (e.g. surface/foul water networks) any pollutants or silt will be dispersed, settle or be diluted on the open marine environment. Foul water from the development will be processed in the existing Ringsend Treatment works. Irish water has confirmed that the “<i>proposed connection to the Irish Water network(s) can be facilitated.</i>” The indirect pathway of surface water or, foul water to Ringsend will not result in a significant effect on the Natura 2000 site.</p> <p>Impacts caused by the project, in the absence of mitigation measures, would be expected to be localised to the immediate environs of Baldoyle Bay, due to the connection to the Mayne River via the existing attenuation on site. Mitigation would not be seen to be necessary for the protection of this SAC as there is no direct pathway. No impacts on the qualifying interests of this Natura 2000 site are foreseen.</p> <p>No significant effects are likely.</p>
IE0000210	South Dublin Bay SAC	<p>Conservation Objectives</p> <p>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:</p> <ul style="list-style-type: none"> • The permanent habitat area is stable or increasing, subject to natural processes. • Maintain the extent of the <i>Zostera</i> –dominated community, subject to natural processes. • Conserve the high quality of the <i>Zostera</i> –dominated community, subject to natural processes • Conserve the following community type in a natural condition: Fine sands with <i>Angulus tenuis</i> community complex. <p>Feature of Interest</p> <p>1140 Mudflats and sandflats not covered by seawater at low tide</p> <p>Source/Pathway/Receptor links between the works and the Natura 2000 site, with the potential to result in significant adverse effects.</p> <p>The proposed development is located over 6.8km from the SAC. There is no direct hydrological pathway from the site to this SAC. There is a potential indirect pathway via the marine environment. However, due to the distance via the indirect pathway (e.g. surface/foul water networks) any pollutants or silt will be dispersed, settle or be diluted on the open marine environment. Foul water from the development will be processed</p>

Natura Code	Name	Details/Reason
		<p>in the existing Ringsend Treatment works. Irish water has confirmed that the “<i>proposed connection to the Irish Water network(s) can be facilitated.</i>” The indirect pathway of surface water or, foul water to Ringsend will not result in a significant effect on the Natura 2000 site.</p> <p>Impacts caused by the project, in the absence of mitigation measures, would be expected to be localised to the immediate environs of Baldoyle Bay, due to the connection to the Mayne River via the existing attenuation on site. Mitigation would not be seen to be necessary for the protection of this SAC as there is no direct pathway. No impacts on the qualifying interests of this Natura 2000 site are foreseen.</p> <p>No significant effects are likely.</p>
IE0003000	Rockabill to Dalkey Island SAC	<p>Conservation Objectives:</p> <p>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.</p> <p>Qualifying Interests</p> <p>1170 Reefs</p> <p>1351 Harbour porpoise <i>Phocoena phocoena</i></p> <p>Source/Pathway/Receptor links between the works and the Natura 2000 site, with the potential to result in significant adverse effects.</p> <p>The proposed development is located 6.0 km from the SAC. There is no direct hydrological pathway from the site to this SAC. There is a potential indirect pathway via the marine environment. However, due to the distance via the indirect pathway (e.g. surface/foul water networks) any pollutants or silt will be dispersed, settle or be diluted on the open marine environment. Foul water from the development will be processed in the existing Ringsend Treatment works. Irish water has confirmed that the “<i>proposed connection to the Irish Water network(s) can be facilitated.</i>” The indirect pathway of surface water or, foul water to Ringsend will not result in a significant effect on the Natura 2000 site.</p> <p>Impacts caused by the project, in the absence of mitigation measures, would be expected to be localised to the immediate environs of Baldoyle Bay, due to the connection to the Mayne River via the existing attenuation on site. Mitigation would not be seen to be necessary for the protection of this SAC as there is no direct pathway. No impacts on the qualifying interests of this Natura 2000 site are foreseen.</p> <p>No significant effects are likely.</p>
IE0002193	Ireland's Eye SAC	<p>Conservation Objectives:</p> <p>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.</p> <p>Qualifying Interest</p> <p>1220 Perennial vegetation of stony banks.</p> <p>1230 Vegetated sea cliffs of the Atlantic and Baltic coasts.</p> <p>Source/Pathway/Receptor links between the works and the Natura 2000 site, with the potential to result in significant adverse effects.</p>

Natura Code	Name	Details/Reason
		<p>The proposed development is located 4.9km from the SAC. There is no direct hydrological pathway from the site to this SAC. There is a potential indirect pathway via the marine environment. However, due to the distance via the indirect pathway (e.g. surface/foul water networks) any pollutants or silt will be dispersed, settle or be diluted on the open marine environment. Foul water from the development will be processed in the existing Ringsend Treatment works. Irish water has confirmed that the <i>“proposed connection to the Irish Water network(s) can be facilitated.”</i> The indirect pathway of surface water or, foul water to Ringsend will not result in a significant effect on the Natura 2000 site.</p> <p>Impacts caused by the project, in the absence of mitigation measures, would be expected to be localised to the immediate environs of Baldoyle Bay, due to the connection to the Mayne River via the existing attenuation on site. Mitigation would not be seen to be necessary for the protection of this SAC as there is no direct pathway. No impacts on the qualifying interests of this Natura 2000 site are foreseen.</p> <p>No significant effects are likely.</p>
IE0000202	Howth Head SAC	<p>Conservation Objectives</p> <p>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.</p> <p>Qualifying Interests</p> <p>(1230) Vegetated sea cliffs of the Atlantic and Baltic coasts (4030) European dry heaths</p> <p>Source/Pathway/Receptor links between the works and the Natura 2000 site, with the potential to result in significant adverse effects.</p> <p>The proposed development is over 4.5 km from the SAC. There is no direct hydrological pathway from the site to this SAC. There is a potential indirect pathway via the marine environment. However, due to the distance via the indirect pathway (e.g. surface/foul water networks) any pollutants or silt will be dispersed, settle or be diluted on the open marine environment. Foul water from the development will be processed in the existing Ringsend Treatment works. Irish water has confirmed that the <i>“proposed connection to the Irish Water network(s) can be facilitated.”</i> The indirect pathway of surface water or, foul water to Ringsend will not result in a significant effect on the Natura 2000 site.</p> <p>Impacts caused by the project, in the absence of mitigation measures, would be expected to be localised to the immediate environs of Baldoyle Bay, due to the connection to the Mayne River via the existing attenuation on site. Mitigation would not be seen to be necessary for the protection of this SAC as there is no direct pathway. No impacts on the qualifying interests of this Natura 2000 site are foreseen.</p> <p>No significant effects are likely.</p>
IE0000204	Lambay Island SAC	<p>Conservation Objectives</p> <p>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.</p> <p>Qualifying Interests</p>

Natura Code	Name	Details/Reason
		<p>1170 Reefs</p> <p>1230 Vegetated sea cliffs of the Atlantic and Baltic coasts</p> <p>1364 Grey seal (<i>Halichoerus grypus</i>)</p> <p>1365 Harbour seal (<i>Phoca vitulina</i>)</p> <p>Source/Pathway/Receptor links between the works and the Natura 2000 site, with the potential to result in significant adverse effects.</p> <p>The proposed development is 10.9 km from the Ireland's Eye SAC. There is no direct hydrological pathway from the site to this SAC. There is a potential indirect pathway via the marine environment. However, due to the distance via the indirect pathway (e.g. surface/foul water networks) any pollutants or silt will be dispersed, settle or be diluted on the open marine environment. Foul water from the development will be processed in the existing Ringsend Treatment works. Irish water has confirmed that the "<i>proposed connection to the Irish Water network(s) can be facilitated.</i>" The indirect pathway of surface water or, foul water to Ringsend will not result in a significant effect on the Natura 2000 site.</p> <p>Impacts caused by the project, in the absence of mitigation measures, would be expected to be localised to the immediate environs of Baldoyle Bay, due to the connection to the Mayne River via the existing attenuation on site. Mitigation would not be seen to be necessary for the protection of this SAC as there is no direct pathway. No impacts on the qualifying interests of this Natura 2000 site are foreseen.</p> <p>No significant effects are likely.</p>

In combination Effects

As can be seen from Figure 2 the proposed development site has previously undergone site clearance.

Projects and plans in the vicinity of the proposed development are seen in Table 4.

Table 4. Projects / Plans in the Vicinity of the proposed Project.

Ref. No.	Address	Proposal
F19A/0633	Lands at Station Road, Lusk, Co Dublin	For the demolition of an existing dwelling and commercial buildings and amendments to Blocks 5A, 5B & 6 of approved development PL06F.247787 / Reg. Ref. F15A/0565. This application is being lodged alongside applications to revise parts of Block 2 & 3 (F19A/0454), part of Block 4 (F19A/0469) and the remainder of Block 4 & part of Block 7 (F19A/0479). The amendments sought in this application comprise the construction in a revised format of Blocks 5A, 5B & part of Block 6 consisting of the construction of 48no. 2 storey 3 bed houses; 3no. 2 storey 4 bed houses; 9no. 3 storey 4 bed houses; 1no. 3 storey mixed use Building A containing 1 no. 139sqm cafe unit; 1 no. 76sqm retail unit and ancillary bin stores at ground floor with 6no. 2 bed apartments over with separate direct access to street and to rear courtyard; 1no. 2 storey Building B containing 504sqm of bar / restaurant space with ancillary yard and bin store; 1no. 3 storey Building C with 2no. retail units totalling 260sqm and ancillary bin stores at ground floor and 6no. 2 bed apartments and 2no. 1 bed apartments over, with separate direct access to street and to rear courtyard; 1no. 2 storey Building D crèche totalling 497sqm with landscaped external play areas; 162no. surface car parking spaces; 2 loading spaces and 5 crèche drop off spaces; bicycle parking ; amendment to permitted street linking Scholars Walk and Loughcommon Lane to include two way vehicular traffic along a mixture of dedicated vehicular carriageways and shared surface

Ref. No.	Address	Proposal
		<p>zones; new civic plaza measuring 1134sqm, with additional Class 1 Open Space allocated in the New Park described in F18A/0645 & F18A/0646; ancillary minor amendments to associated roads, paving, landscaping, street signage, public lighting , utility supply installations, drainage & attenuation and other site works and infrastructure. The application site is located at Station Road Lusk Co Dublin adjacent the Remount Roundabout, and is comprised of blocks 5A,5B & part of Block 6 of approved development PL 06F.247787, together with an additional area of .022 ha that consists of the SMF Motor Factors, car salesroom and garage and adjacent dwelling on Station Road and the adjoining access cul-de-sac. The application site includes all lands subject to Condition 2 of the original permission PL 06F.247787 / Reg. Ref. F15A/0565, which required a separate application to be made for parts of Blocks 5B & 6.</p> <p>An Appropriate Assessment Report was prepared on behalf of the development proposed under planning reference number F19A/0633. The assessment was compiled by OPENFIELD Ecological Services for McGarrell Reilly Homes, the developer of the proposal, in December 2019. The conclusion of the assessment states the following:</p> <p><i>“This project has been screened for AA under the appropriate methodology. It has found that significant effects are not likely to arise, either alone or in combination with other plans or projects, to the Natura 2000 network. No mitigation measures are relied upon to arrive at this conclusion.”</i></p>
F11A/0290 (/E1), PL06F.2397 32		<p>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.</p>
F19A/0461	Myrtle, Grange Road Baldoyle	<p>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</p>
Baldoyle – Stapolin Local Area Plan 2013 (extended)		<p>The GA1 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 a future GA3 project – as well as further potential future residential and landscape / amenity works as indicated in the LAP. As outlined in the LAP <i>“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.”</i></p> <p>“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</p>

Ref. No.	Address	Proposal
		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).

Ringsend WwTP

The foul sewer terminates at Ringsend Waste Water Treatment Plant (WWTP). The foul water from the site will transfer to the Ringsend WWTP via public foul sewer where it will be diluted and mixed with other effluent. Treatment will take place at Ringsend WWTP prior to discharge into Dublin Bay. Irish Water operate this facility under licence (EPA D0034-01) and are required to comply with environmental legislation. In 2019 (ABP Ref. PL29S.301798), the facility received planning to upgrade capacity to 2.4 million PE, which will be in place by the time the proposed project becomes operational. The EIAR for the upgrading of Ringsend WWTP stated that *“The likely cumulative impact of the Proposed WwTP Component is that the resident population of the Greater Dublin Area will be capable of growing to its target population levels over time due to the increased capacity of the Ringsend WwTP. This will enable objectives at both national and regional levels to be met. Note that Phase 1 of these works is currently underway with a target completion date of 2021.”*

Note that as part of this application an Environmental Impact Assessment Report (EIAR) was submitted. Sections 5 and 6 of this EIAR related to Marine Biodiversity and Terrestrial Biodiversity respectively and each contained a section on the ‘do nothing scenario’. These review the effects to biodiversity in Dublin Bay in the absence of the upgrade works.

“If the status quo is maintained there will be little or no change in the majority of the intertidal faunal assemblages found in Dublin Bay which would likely continue to be relatively diverse and rich across the bay. Previous studies suggest that the outer and south bays are largely unaffected by the nutrient inputs from the WwTP at Ringsend and from the Liffey and Tolka rivers. Therefore, the sandy communities found in those areas will likely remain dominated by the same assemblage of Nephthys, tellinids and other pollution-sensitive species, albeit subjected to natural spatial and seasonal variations.

However, the areas in the Tolka Estuary and North Bull Island channel will continue to be affected by the cumulative nutrient loads from the river Liffey and Tolka and the effluent from the Ringsend WwTP. These areas will likely continue to be colonised by opportunistic taxa tolerant of organic enrichment. There is a possibility that an increase in the nutrient outputs from the plant due to the operational overload and storm water discharges could result in a decline in the biodiversity of these communities as a result of low oxygen availability caused by increased organic enrichment. Considering the existing situation, it is possible that through the future oversupply of DIN to the area impacted by the existing outfall, benthic production could be adversely impacted due to hypoxic or even anoxic conditions. An increase in the cover of opportunistic macroalgae could lead to further deterioration in the lagoons in the North Bull as they add to the organic load on the benthos and further increase the BOD. These events,

although localised, could deteriorate the biological status for Dublin Bay as a whole. Nonetheless, it is unlikely, as existing historical data suggests that pollution in Dublin Bay has had little or no effect on the composition and richness of the benthic macroinvertebrate. Although a localised decline could occur, it is not envisaged to be to a scale that could pose a threat to the shellfish, fish, bird or marine mammal populations that occur in the area. (section 5.7.1)

If the Proposed WwTP Component is not implemented, there is a possibility that an increase in the nutrient outputs from the plant due to operational overload and storm water discharges could result in a decline in the biodiversity of invertebrate communities in the Tolka Estuary and North Bull Island channel as a result of low oxygen availability caused by increased organic enrichment. An increase in the cover of opportunistic macroalgae could lead to further deterioration in the lagoons in the North Bull as they add to the organic load on the benthos and further increase the BOD. These events, although localised, could deteriorate the biological status for Dublin Bay as a whole. It is unlikely that they would have any significant impact on the waterbird populations that forage on invertebrates in Dublin Bay.

A graphic from the ELAR prepared by Irish Water in 2018 showed the zone of influence of the discharge from the Ringsend WwTP and this indicated that effects from the discharge do not extend to the south side of the bay.”

As outlined in the Irish Water website² “In February 2018, the work commenced on the first element, the construction of a new 400,000 population equivalent extension at the Ringsend Wastewater Treatment Plant. These works are at an advanced stage with testing and commissioning stages expected to be completed in the second half of 2021.

Works on the first of four contracts to upgrade the secondary treatment tanks at the plant with Aerobic Granular Sludge (AGS) Technology commenced in November 2020. The addition of AGS technology will allow more wastewater to be treated to a higher standard within the existing tanks. The second contract is at procurement stage and is expected to commence in Q3 2021, following the completion of the capacity upgrade contract. These contracts are phased to ensure that Ringsend WwTP can continue to treat wastewater from the homes, businesses, schools and hospitals of the Greater Dublin Area at current treatment levels throughout the upgrade works.

In March 2021, the contract for the construction of the Phosphorous Recovery Facility was awarded to Murphy International Ltd. Construction is expected to take approximately two years. The Phosphorous Recovery Facility will be built within the confines of the existing Ringsend Wastewater Treatment Plant. It will operate in tandem with the Aerobic Granular Sludge technology being installed in the wastewater treatment plant, to reduce the levels of phosphorous being discharged into the lower Liffey Estuary. This will safeguard the environment of Dublin Bay, and ensure that the plant operates in compliance with the Urban Wastewater Treatment Directive standards.”

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 mitigation measures) and the Source/Pathway/Receptor links between the proposed works and Natura 2000 sites with the potential to result in significant adverse effects on the conservation objectives and features of interest of the Natura 2000 sites was carried out in Table 2. Based on objective information and assessment, the possibility of significant adverse effects caused by the proposed project was excluded for the following Natura 2000 sites and all Natura 2000 sites beyond 15km.

² <https://www.water.ie/projects-plans/ringsend/>

Special Areas of Conservation

- Malahide Estuary SAC
- North Dublin Bay SAC
- Rogerstown Estuary SAC
- South Dublin Bay SAC
- Rockabill to Dalkey Island SAC
- Ireland's Eye SAC
- Howth Head SAC
- Lambay Island SAC

Special Protection Areas

- Broadmeadow Swords Estuary SPA/ Malahide Estuary SPA
- North Bull Island SPA
- Rogerstown Estuary SPA
- South Dublin Bay and River Tolka Estuary SPA
- Ireland's Eye SPA
- Howth Head Coast SPA
- Lambay Island SPA
- Dalkey Islands SPA

The project is limited in scale and extent and the potential zone of influence is seen to be restricted to the immediate vicinity of the proposed development with potential for instream, dust and noise related impacts during construction and pollution during operation in the absence of mitigation measures. It should also be noted that there is a direct hydrological pathway to Baldoyle Bay SAC and Baldoyle Bay SPA via the existing attenuation and Maybe River. There is potential for pollution to enter a wetland proximate to the SPA and Baldoyle Bay and in the absence of mitigation measures there may be potential for impact on the features of interest/qualifying interests of the following Natura 2000 sites:

- Baldoyle Bay SAC;
- Baldoyle Bay SPA;

Mitigation measures are required to limit the impact of the project and two Natura 2000 sites that are proximal to the proposed development. A Stage 2 AA (NIS) of the proposed development is required as it cannot be excluded, on the basis of objective information (without the use of mitigation measures), that the proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site.

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, acting on a strictly precautionary basis an NIS is required in respect of the effects of the project on the Baldoye Bay SAC and Baldoye Bay SPA (implementation of mitigation measures during construction for downstream and dust impacts and during construction and operation for pollution) 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 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.

The NIS evaluates the potential for direct, indirect effects, alone or in combination effects, with other plans and projects having taken into account the use of mitigation measures. The NIS is informed by the EIAR and the Construction Environmental Management Plan (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 SAC and/or SPA.

Baldoye Bay SPA

Site-specific data

The Special Conservation Interests (SCIs) for the Baldoye Bay SPA and the National conservation status of the QI are seen in Table 3.

Table 3: Special Conservation Interests of Baldoye Bay SPA and National status

Natura 2000 Site Name & Code	Qualifying Interests	Current Conservation Status
Baldoye Bay SPA (IE004016)	Light-bellied Brent Goose (<i>Branta bernicla brota</i>) [A046] Shelduck (<i>Tadorna tadorna</i>) [A048] Ringed Plover (<i>Charadrius hiaticula</i>) [A137] Grey Plover (<i>Pluvialis squatarola</i>) [A140] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Wetlands & Waterbirds [A999]	Amber Amber Green Amber Amber -

The status of qualifying interest species listed for Baldoye Bay SPA are as follows³:

- “During winter the site regularly supports 1% or more of the biogeographic population of Light-bellied Brent Geese (*Branta bernicla brota*). 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.

³ NPWS (2013) Conservation Objectives: Baldoye 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 Baldoye SPA is outlined in the NPWS²². “Non - breeding waterbirds have been counted at Baldoye 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.

Baldoye 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 4.

Table 4. Bird counts of species of conservation importance in Baldoye 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 Baldoye 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 Baldoye 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 Baldoye SPA as follows²³:

Objective 1 is ‘To maintain the favourable conservation condition of the non - breeding waterbird Special Conservation Interest species listed for Baldoye 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;
- 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 Baldoye 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 Baldoye 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 Baldoye 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 Baldoye 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 Baldoye 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 Baldoye Bay SPA are seen in Table 5.

Table 5. Attribute, measure and target of the site conservation objectives for Baldoye Bay SPA.

Attribute	Measure	Target
Baldoye Bay SPA		
A046 Brent Goose (<i>Branta bernicla brota</i>), A048 Shelduck (<i>Tadorna tadorna</i>), A137 Ringed Plover (<i>Charadrius hiaticula</i>), A140 Golden Plover (<i>Pluvialis apricaria</i>), A141 Grey Plover (<i>Pluvialis squatarola</i>), A157 Bar-tailed Godwit (<i>Limosa lapponica</i>), 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

Baldoye Bay SAC

Site-specific data

The Qualifying Interests (QI) (Features of Interest) and the National conservation status of the QI of for Baldoye Bay SAC are seen in Table 6.

Table 6. Qualifying Interests of Baldoye Bay SAC and National status

Natura 2000 Site Name & Code	Qualifying Interests	Current Conservation Status
Baldoye Bay SAC	Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (Glauco - <i>Puccinellietalia maritimae</i>) (1330) Mediterranean salt meadows (<i>Juncetalia maritimi</i>) (1410)	Unfavourable/Inadequate Unfavourable/Inadequate Unfavourable/Inadequate

The Conservation Objectives and overall status of species and habitats in Baldoye Bay SAC are as follows^{4 5)}

“Objective: To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Baldoye 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.*
- *Estuarine sandy mud with *Pygospio elegans* and *Tubificoides benedii* community complex; 152ha.*
- 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

⁴ NPWS (2012). Conservation Objectives: Baldoye Bay SAC 000199. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

⁵NPWS (2012) Baldoye Bay SAC (site code: 199) Conservation objectives supporting document -Marine Habitats

the reporting cycle and the particular resilience of the receiving habitat in combination with other activities within the designated site.”



Figure 16: Distribution of Mudflats and Sandflats not covered by seawater at low tide in Baldoye Bay SAC

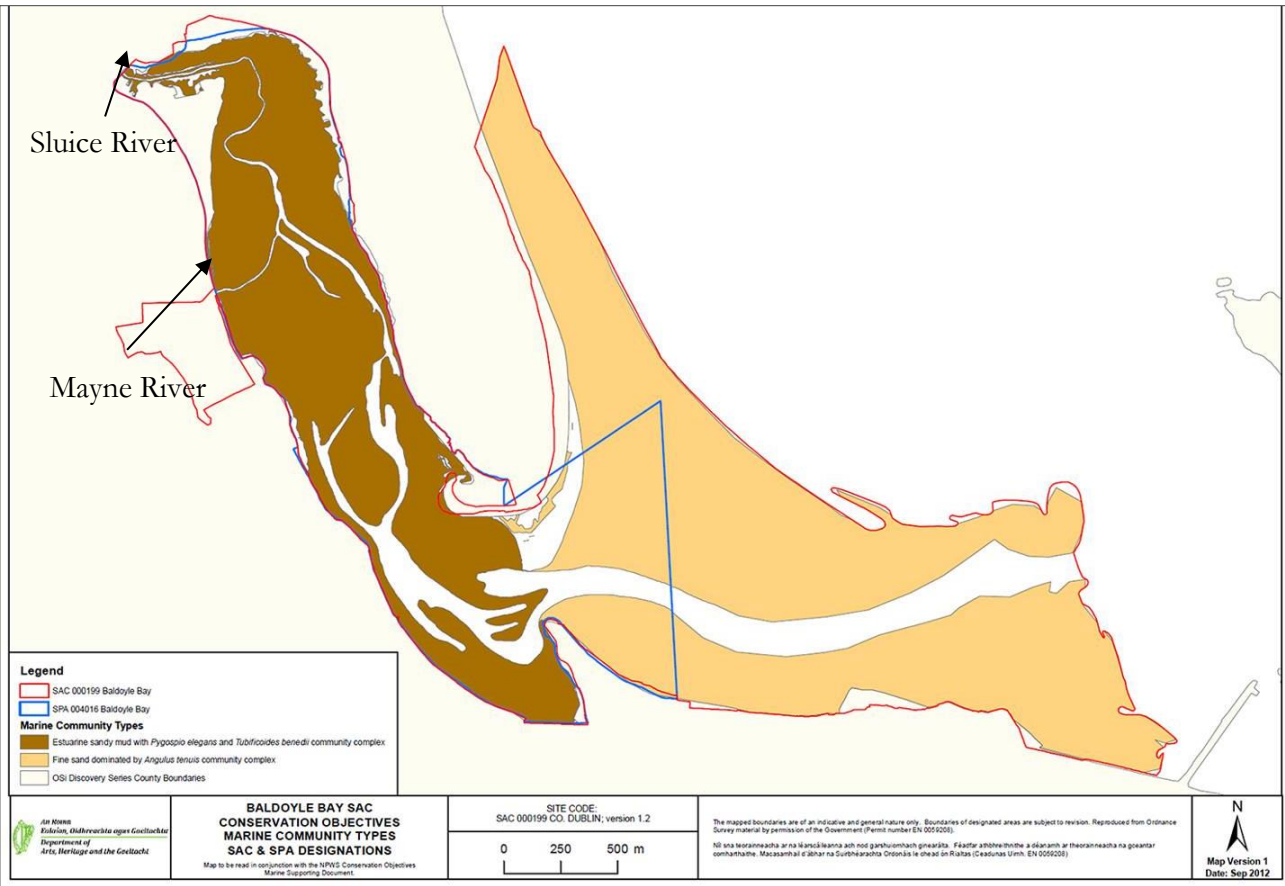


Figure 17: Distribution of marine community types in Baldoye Bay SAC & Baldoye SPA

As outlined in the Conservation objectives supporting document - coastal habitats (NPWS, 2012b⁶) “Baldoyle Bay SAC is also designated for a range of coastal habitats, including saltmarsh. These saltmarsh habitats are found in close association with each other. Three of the following coastal habitats are included in the qualifying interests for the site:

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

The following habitats have been recorded during the Coastal Monitoring Project⁷ 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) *; and
- Humid dune slacks (2190).

*Priority habitat.”

Within Baldoyle Bay SAC, there are five main areas of saltmarsh and Atlantic salt meadow (ASM) is the dominant saltmarsh habitat type (Figure 10). As outlined in NPWS 2012b “The main area occurs in the north-west corner of the estuary and to the south of the estuarine river channel. This area contains the largest area of ASM and contains a band of Mediterranean salt meadows (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)⁸”.

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.”

⁶ NPWS (2012b). Baldoyle Bay SAC (site code 199) Conservation objectives supporting document -coastal habitats

⁷ 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.

⁸ McCorry, M. (2007). Saltmarsh Monitoring Project 2006. Unpublished report to the National Parks and Wildlife Service.

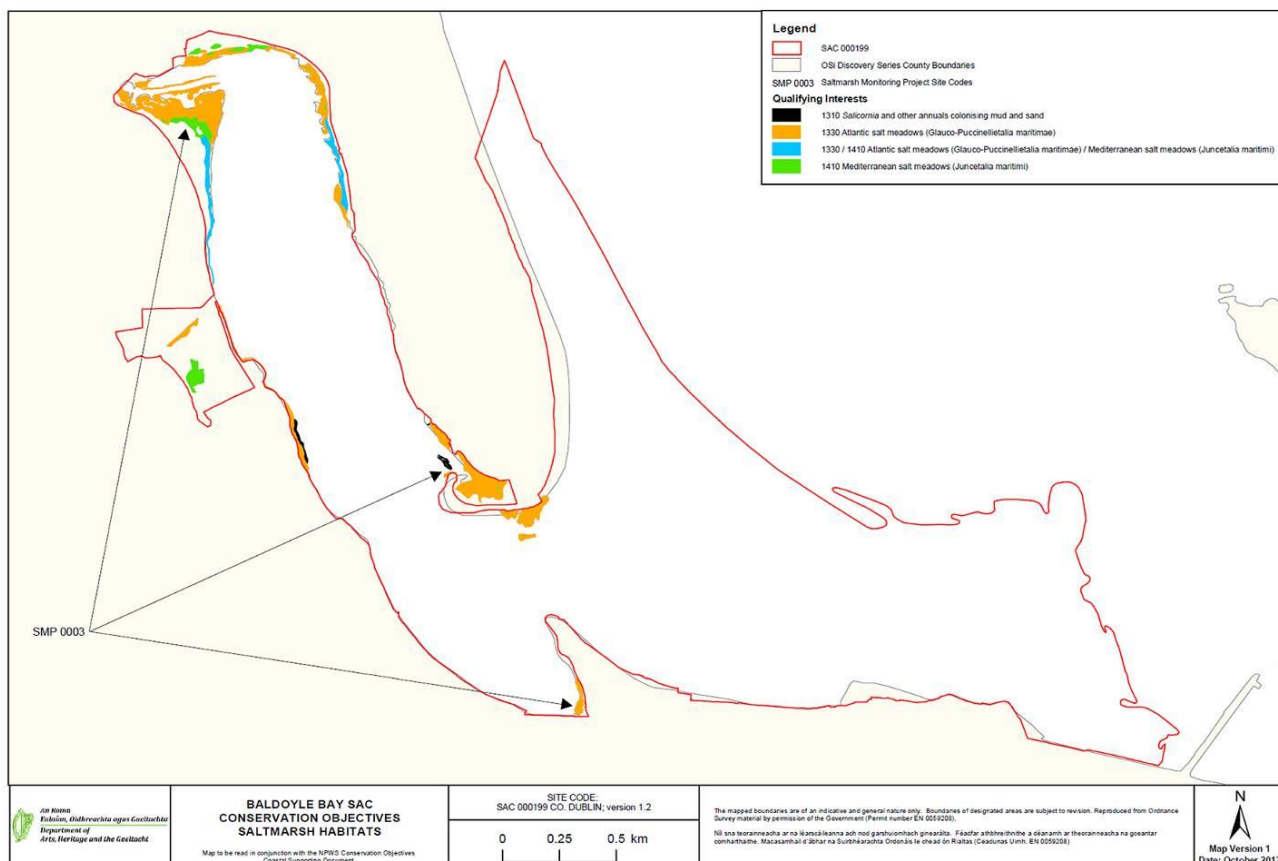


Figure 18: Saltmarsh habitats found Baldoye SAC

The attribute, measure and target of the site-specific conservation Objectives for Baldoye Bay SAC are seen in Table 7.

Table 7. Attribute, measure and target of the site conservation objectives for Baldoye Bay SAC.

Attribute	Measure	Target
Baldoye Bay SAC		
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
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	Maintain more than 90% of area outside creeks vegetated

Attribute	Measure	Target
	number of monitoring stops	
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- <i>Spartina anglica</i>	Hectares	No significant expansion of common cordgrass (<i>Spartina anglica</i>), with an annual spread of less than 1%
Atlantic salt meadows (Glauco-Puccinellietalia maritima [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 - <i>Spartina anglica</i>	Hectares	No significant expansion of common cordgrass (<i>Spartina anglica</i>), 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
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

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 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 - <i>Spartina anglica</i>	Hectares	No significant expansion of common cordgrass (<i>Spartina anglica</i>), with an annual spread of less than 1%

Analysis of the Potential Impacts

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 8.

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 7. 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 9).

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 8. 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 Impacts on Natura 2000 Sites
Baldoyle Bay SAC [IE0000199]	<p>1310 Salicornia and other annuals colonising mud and sand</p> <p>1330 Atlantic salt meadows (<i>Glauco - Puccinellietalia maritimae</i>)</p> <p>1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</p>	<p>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.</p> <p>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.</p> <p>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:</p> <ol style="list-style-type: none"> 1) 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- <i>Spartina anglica</i> of <i>Salicornia</i> and other annuals colonising mud and sand [1310]. 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 –1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)

Table 8. 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 Impacts on Natura 2000 Sites
		<p>3) 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 (<i>Juncetalia maritimi</i>)</p> <p>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.</p>
<p>Baldoyle Bay SPA [IE0004016]</p>	<p>A046 Brent Goose (<i>Branta bernicla hrota</i>) A048 Shelduck (<i>Tadorna tadorna</i>) A137 Ringed Plover (<i>Charadrius hiaticula</i>) A140 Golden Plover (<i>Pluvialis apricaria</i>) A141 Grey Plover (<i>Pluvialis squatarola</i>) A157 Bar-tailed Godwit (<i>Limosa lapponica</i>) A999 Wetlands.</p>	<p>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.</p> <p>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.</p> <p>Noise would be generated by the construction which may cause disturbance to the qualifying interests. However as outlined in Appendix I “<i>The maximum likely distance at which disturbance will impact SCIs from the Baldoyle Bay SPA is 300m (Cutts et al., 2013).</i>”</p> <p>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 ($\geq 54\text{dB}$ and $< 63\text{dB LAeq, 16hr}$ and $\geq 48\text{dB}$ and $< 55\text{dB L}_{\text{night}}$). Based on Noise assessment (AWN Consulting Ltd. EIAR</p>

Table 8. 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 Impacts on Natura 2000 Sites
		<p>Chapter 12) the loudest Construction Noise Level at the SPA boundary from the construction works would be 41db.</p> <p>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:</p> <p><i>“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.</i></p> <ul style="list-style-type: none"> <i>• Level 1 disturbances (heads up alert) were observed to occur in the noise level range of 66 to 83 dB LAmax F for percussive piling.</i> <i>• Level 2 disturbances (short walk or swim from the source of noise) were observed to occur in the range 68 –81 dB LAmax F for percussive piling.</i> <i>• 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.</i> <p><i>A percussive piling noise level less than 66 dB LAmax F gave rise to no noise disturbance.”</i></p> <p>As outlined by RPS (2018) in their Review of Effects of Construction Noise on Birds in SSSI near Springs Road Exploratory Well site in discussing Postlethwaite and Stephenson (2012) it was stated that <i>“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.”</i></p> <p>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</p>

Table 8. 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 Impacts on Natura 2000 Sites
		<p>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.</p> <p>Given the nature of the potential effects outlined above, the proposed project could affect the:</p> <ol style="list-style-type: none"> 1. Distribution and Range, timing and intensity of use of areas of the SPA for Light-bellied Brent Goose (<i>Branta bernicla brota</i>) [A046], Shelduck (<i>Tadorna tadorna</i>) [A048], Ringed Plover (<i>Charadrius hiaticula</i>) [A137], Golden Plover (<i>Pluvialis apricaria</i>) [A140], Grey Plover (<i>Pluvialis squatarola</i>) [A141], Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]. The area of Wetlands [A999] <p>Mitigation measures are required to limit the effect of the project on the qualifying interests of the proposed development site.</p>

Table 9.

Sensitive Receptors	Potential Impacts	Mitigation Measures
<p>Baldoyle Bay SPA [IE0004016]</p> <p>Baldoyle Bay SAC [IE0000199]</p>	<p>Habitat degradation</p> <p>Dust deposition</p> <p>Pollution</p> <p>Silt ingress from site runoff</p> <p>Downstream impacts</p> <p>Negative impacts on aquatic and bird fauna.</p> <p>Disturbance</p>	<p>Construction</p> <p><u>Contamination of watercourses leading to Natura 2000 Sites</u></p> <ul style="list-style-type: none"> • 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.

Sensitive Receptors	Potential Impacts	Mitigation Measures
		<ul style="list-style-type: none"> • 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 <p><u>Air & Dust</u></p> <ul style="list-style-type: none"> • 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.

Sensitive Receptors	Potential Impacts	Mitigation Measures
		<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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. <p><u>Monitoring</u></p> <ul style="list-style-type: none"> • 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.

Sensitive Receptors	Potential Impacts	Mitigation Measures
		<ul style="list-style-type: none"> • 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. <p>Measures Specific to Earthworks</p> <ul style="list-style-type: none"> • 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. <p><u>Storage/Use of Materials, Plant & Equipment</u></p> <ul style="list-style-type: none"> • 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

Sensitive Receptors	Potential Impacts	Mitigation Measures
		<p>shall conform with EPA Guidelines – hold 110% of the contents or 110% of the largest container whichever is greater;</p> <ul style="list-style-type: none"> • Fuel may be stored in the designated bunded area or in fuel bowzers located in the proposed compound location. Fuel bowzers 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. <p><u>Noise</u></p> <p>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:</p> <ul style="list-style-type: none"> • selection of quiet plant; • noise control at source; • screening; and • liaison with the public. <p>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.</p> <p>Operation</p>

Sensitive Receptors	Potential Impacts	Mitigation Measures
		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 Natura 2000 site conservation objectives likely 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.

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 a Stage 1 Appropriate Assessment Screening and Stage 2 NIS for the Proposed Development, outlining 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 and projects, in view of best scientific knowledge, is likely to have a significant effect on any European or Natura 2000 site.

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.

6. Data used for the AA Screening

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.

7. References

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

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.

Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities, Department of the Environment, Heritage and Local Government 2009;
http://www.npws.ie/publications/archive/NPWS_2009_AA_Guidance.pdf

Managing NATURA 2000 Sites: the provisions of Article 6 of the Habitats Directive 92/43/EEC, European Commission 2000;
http://ec.europa.eu/environment/nature/Natura2000/management/docs/art6/provision_of_art6_en.pdf

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;
http://ec.europa.eu/environment/nature/Natura2000management/docs/art6/Natura_2000_assess_en.pdf

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;
http://ec.europa.eu/environment/nature/Natura2000/management/docs/art6/guidance_art_6_4_en.pdf

Guidance document on the implementation of the birds and habitats directive in estuaries and coastal zones with particular attention to port development and dredging;
http://ec.europa.eu/environment/nature/Natura2000/management/docs/guidance_doc.pdf

NPWS (2007). The Status of EU Protected Habitats and Species in Ireland.
http://www.npws.ie/publications/euconservationstatus/NPWS_2007_Conservation_Status_Report.pdf

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

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

- National Parks and Wildlife Services (NPWS) (2013b). Conservation Objectives: North Dublin Bay SAC 000206. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- National Parks and Wildlife Services (NPWS) (2013d). Conservation Objectives: Rogerstown Estuary SAC 000208. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- National Parks and Wildlife Services (NPWS) (2013e). Rockabill to Dalkey Island SAC (site code: 3000) Conservation objectives supporting document. -Marine Habitats and Species Version 1
- National Parks and Wildlife Services (NPWS) (2013f). The Status of EU Protected Habitats and Species in Ireland.
- National Parks and Wildlife Services (NPWS) (2015a). 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.
- National Parks and Wildlife Services (NPWS) (2015b). Conservation Objectives: North Bull Island SPA 004006. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- National Parks and Wildlife Services (NPWS) (2016). Conservation objectives for Howth Head SAC [000202]. Generic Version 1, National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- National Parks and Wildlife Services (NPWS) (2021). Conservation objectives for Dalkey Islands SPA 004172. Generic Version 6.0. Department of Arts, Heritage and the Gaeltacht.
- National Parks and Wildlife Services (NPWS) (2021). Conservation objectives for Ireland's Eye SPA [004117]. Generic Version 6.0. Department of Arts, Heritage and the Gaeltacht.
- National Parks and Wildlife Services (NPWS) (2021). Conservation objectives for Howth Head Coast SPA [004113]. Generic Version 4.0. Department of Arts, Heritage and the Gaeltacht.

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 8. 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 (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 GA1 is 700m 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 GA1. This species is not 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 8. MKO Wintering Bird Survey within the Wider Site Ownership line (purple).

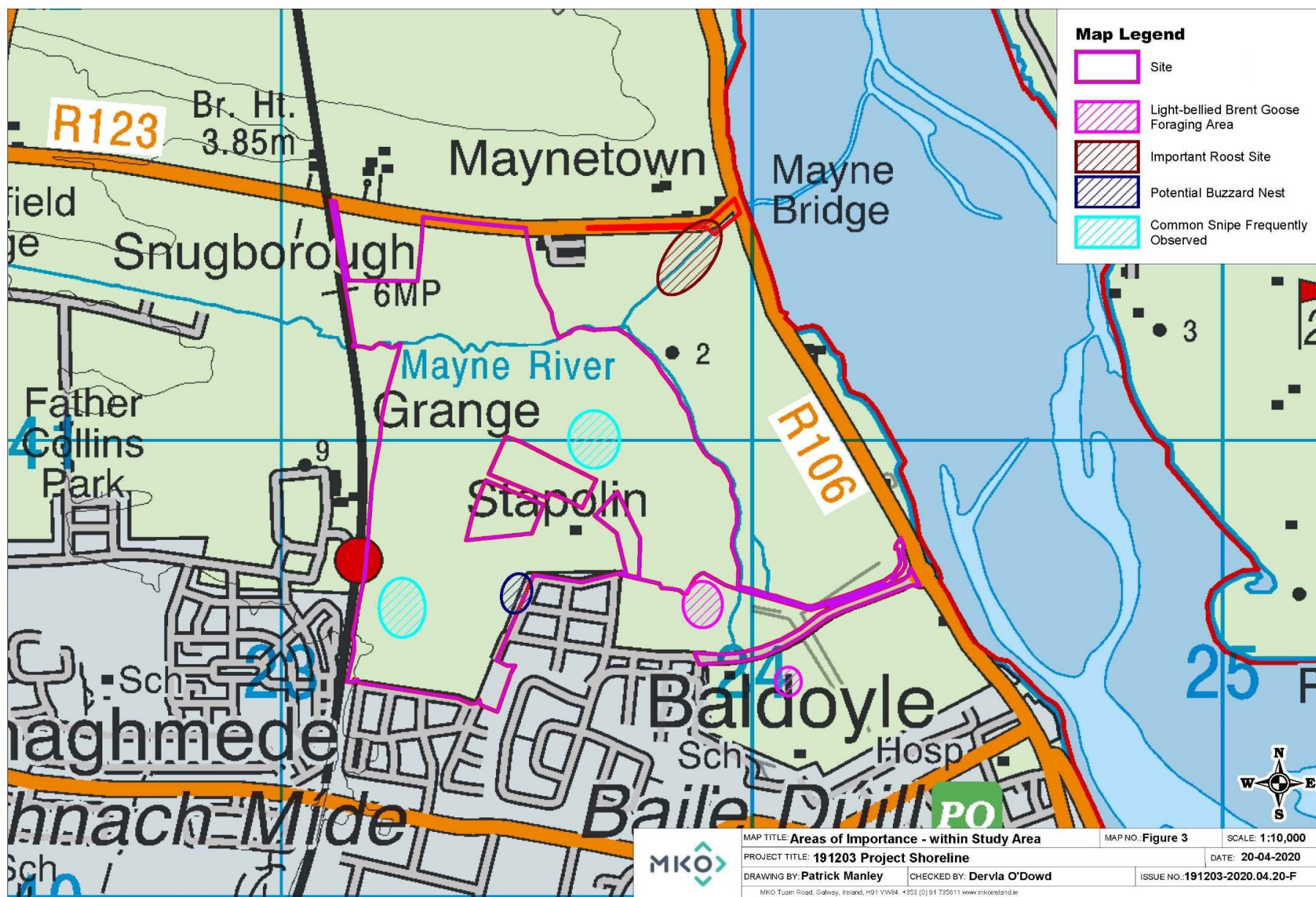


Figure 9. Areas of importance within the Wider Site Ownership line (purple). (Note : Snipe in GA1 Area (Not a qualifying interest of Baldoye Bay SPA. (amber listed))

