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Marine & Environmental Consultancy

# Appropriate Assessment Screening & Natura Impact Statement - Information for a Stage 1 (AA Screening) and Stage 2 (Natura Impact Statement) for the demolition of existing buildings and the construction of a Large-Scale Residential Development (LRD) at Parkmore Industrial Estate, Long Mile Road, Robinhood, Dublin 12.

**7th March 2025**

**Prepared by:** Bryan Deegan (MCIEEM) of Altemar Ltd.
**On behalf of:** Watfore Ltd. (Dairygold)

Altemar Ltd., 50 Templecarrig Upper, Delgany, Co. Wicklow. 00-353-1-2010713. info@altemar.ie
Directors: Bryan Deegan and Sara Corcoran
Company No.427560 VAT No. 9649832U
www.altemar.ie

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| Project | Appropriate Assessment Screening & Natura Impact Statement - Information for a Stage 1 (AA Screening) and Stage 2 (Natura Impact Statement) for the demolition of existing buildings and the construction of a Large-Scale Residential Development (LRD) at Parkmore Industrial Estate, Long Mile Road, Robinhood, Dublin 12. | | |
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# Introduction

The following Appropriate Assessment Screening and Natura Impact Statement – Information for a Stage 1 (AA Screening) and Stage 2 (Natura Impact Statement) AA has been prepared by Altemar Ltd. for a demolition of existing buildings and the construction of a Large-Scale Residential Development (LRD) on a site at Parkmore Industrial Estate, Long Mile Road, Robinhood, Dublin 12.

The AA Screening stage examines the likely significant effects of a plan or project, either on its own, or in combination with other plans and projects, upon a European site and considers whether, on the basis of objective scientific evidence, it can be concluded that there are no likely significant effects on any European site, in view of best scientific knowledge and the conservation objectives of the relevant European sites.

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

European sites[1] are those sites designated as Special Areas of Conservation (SAC) or Special Protection Areas (SPA).

## 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. Bryan is an environmental scientist and marine biologist with 30 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 carried out all elements of this Appropriate Assessment Screening and Natura Impact Statement.

# Background to the Appropriate Assessment

The Habitats Directive 92/43/EEC (together with the Birds Directive (2009/147/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 Habitats 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 European 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."*

[1] "European site" means—
(a) a candidate site of Community importance,
(b) a site of Community importance, F815[(ba) a candidate special area of conservation,]
(c) a special area of conservation,
(d) a candidate special protection area,
(e) a special protection area;

As outlined in "Managing European sites, The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC" (European Commission, 21 November 2018) *"The purpose of the appropriate assessment is to assess the implications of the plan or project in respect of the site's conservation objectives, either individually or in combination with other plans or projects. The conclusions should enable the competent authorities to ascertain whether the plan or project will adversely affect the integrity of the site concerned. The focus of the appropriate assessment is therefore specifically on the species and/or the habitats for which the European site is designated."*

As outlined in the EC guidance document on Article 6(4) (January 2007)[2]:

*"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 European 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 European 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.*

[2] 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;

- *The characterisation of the biological integrity and the impact assessment should be based on the best possible indicators specific to the European assets which must also be useful to monitor the plan or project implementation."*

## Stages of the Appropriate Assessment

This Appropriate Assessment screening was undertaken in accordance with the European Commission Methodological Guidance on the provision of Article 6(3) and 6(4) of the 'Habitats' Directive 92/43/EEC (EC, 2001), Part XAB of the Planning and Development Act 2000, as amended, in addition to the December 2009 publication from the Department of Environment, Heritage and Local Government; 'Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities', OPR Practice Note PN01 Appropriate Assessment Screening for Development Management, and the European Communities (Birds and Natural Habitats) Regulations 2011. In order to comply with the above Guidelines and legislation, the Appropriate Assessment process must be structured as follows:

1) Screening stage:
    - Description of plan or project, and local site or plan area characteristics;
    - Identification of relevant European sites, and compilation of information on their qualifying interests and conservation objectives
    - Identification and description of individual in combination effects likely to result from the proposed project;
    - Assessment of the likely significance of the effects identified above. Exclusion of sites where it can be objectively concluded that there will be no likely significant effects; and,

      Conclusions
2) Appropriate Assessment (Natura Impact Statement):
    - Description of the European 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; and,
    - 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"
    - Conclusions.

If it can be demonstrated during the AA screening phase (Stage 1), that the proposed project will not have a significant effect, whether alone or in combination with other plans or projects, on the conservation objectives of a Natura 2000 site, then no further AA (Stage 2) will be required. It is important to note that there is a requirement to apply a precautionary approach to AA screening. Therefore, where effects are possible, certain or unknown at the screening stage, AA will be required.

In addition, it should be noted that Article 6(3) of the Habitats Directive must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an AA of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site.

# Stage 1 Screening Assessment

## Management of the Site

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

## Description of the Proposed Project

Watfore Ltd. (Dairygold), intend to apply for Planning Permission for development at Parkmore Industrial Estate, Long Mile Road, Robinhood, Dublin 12.

The development will comprise a Large-Scale Residential Development (LRD) on a site at Parkmore Industrial Estate, Long Mile Rd, Robinhood, Dublin, 12. The proposed development will comprise the demolition of existing industrial units, and construction of a mixed use, residential-led development within 4 no. blocks ranging in height from 06 to 10 storeys over semi-basement. The development will comprise the following: 436 no. apartments (studios; 1 beds; 2 beds and 3 beds) with commercial/employment units, creche, café and library. Provision of car, cycle and motorbike parking. Vehicular accesses from Parkmore estate road and additional pedestrian/cyclist accesses from the Long Mile Road and Robinhood Road. Upgrade works to the estate road and surrounding road network. All associated site development works and services provision, open spaces, ESB substations, plant areas, waste management areas, landscaping and boundary treatments.

The proposed site outline, location, site layout plan, and elevations are demonstrated in Figures 1-4.

## Landscape

The landscape strategy plan and report for the proposed development has been prepared by NMP Landscape Architects.

The landscape design summary is as follows:

*''Landscape design proposals are driven by ecological influences in response to the sites context and relationship with surrounding character. Experienced sequentially as routes of discovery and exploration which weave themselves across the lands revealing a sensorium of spatial typologies.*

*The landscape design has been planned in such a way so as to maximise the site's orientation and anticipated microclimate to create habitable, quality spaces which respond to human comfort, encouraging residents and public into a safe and surveilled space. A number of potential routes through the site have been identified to benefit connections with its surroundings and provide a better amenity for the wider community. Pedestrian and cycle routes complement this strategy underpinning the sustainable credentials associated with the development.*

*In addition, it is anticipated that the development will offer a net gain to biodiversity through the development of additional habitat connecting existing surrounding ecological stands with continuous tree canopies for bat and bird roosting and provision of specific plants for wildlife to forage through.*

*An increased number of trees, areas for surface water treatment, coupled with best practice maintenance will ensure a sustainable landscape for the future. Edge conditions and relationships with neighboring developments are sensitively integrated and screened.*

*The primary objectives of the design are to encourage biodiversity through varied tree and shrub planting, create a series of interlinking spaces which 'blur' the boundaries and create 'moments' for interactions, crafting a sense and extension of the community for the wider neighborhood.''*

The proposed landscape masterplans are demonstrated in Figure 5 & 6.


***Figure 1**. Proposed site outline and location*


***Figure 2.*** *Proposed site outline*


***Figure 3*** *– Proposed site layout*


***Figure 4*** *– Proposed site elevations*

## Landscape

A Landscape Design Statement Report has been prepared by NMP Landscape Architects to accompany this planning application. As outlined in the Landscape Design Statement:

*''Landscape design proposals are driven by ecological influences in response to the sites context and relationship with surrounding character. Experienced sequentially as routes of discovery and exploration which weave themselves across the lands revealing a sensorium of spatial typologies.*

*The landscape design has been planned in such a way so as to maximise the site's orientation and anticipated microclimate to create habitable, quality spaces which respond to human comfort, encouraging residents and public into a safe and surveilled space. A number of potential routes through the site have been identified to benefit connections with its surroundings and provide a better amenity for the wider community. Pedestrian and cycle routes complement this strategy underpinning the sustainable credentials associated with the development.*

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The proposed landscape masterplan is demonstrated in Figures 5 & 6.

## Drainage

An Engineer's Planning Stage Report has been prepared by Roughan & O'Donovan Consulting Engineers to accompany this planning application. This report outlines the following foul and surface water drainage strategy for the proposed development:

**Foul Water Drainage**

*'It is proposed to provide new separate surface and foul drainage systems to serve the proposed development. This section describes the existing foul drainage services on or near the site and summarises the additional foul drainage infrastructure required to serve the proposed development.*

*Existing Foul Drainage*

*Foul drainage records obtained indicate that there is existing foul and combined drainage infrastructure within the vicinity of the site. The records show an existing 225mm diameter foul sewer immediately east of the site within the industrial estate access road. This foul sewer discharges to a 225mm diameter combined sewer located immediately northeast of the site on Long Mile Road.*

*Proposed Foul Drainage*

*It is proposed to construct a new foul sewer network to serve the development. Foul discharge from the site will discharge to the existing 225mm dia. foul sewer located within the existing access road to the east of the site. Runoff from cleaning operations in the basement car park will also be conveyed to the foul network in accordance with the Greater Dublin Regional Code of Practice for Drainage Works.*
*A Confirmation of Feasibility Letter was received from Uisce Eireann in September 2024 which outlined that a connection to the existing foul network can be facilitated if infrastructure upgrades are carried out on the wider foul network. To facilitate a foul connection from the proposed development, approximately 360m of network extension will be carried out along regional road R112 (between regional roads R110 and R810) to divert flow from an existing 225mm diameter sewer to the 9B trunk sewer. These foul upgrade works fall within the Dublin City Council, county boundary and as such, a separate planning application has been lodged to Dublin City*

*Council for these Uisce Eireann infrastructure upgrade works. A Statement of Design Acceptance was received in February 2025.'*

**Surface Water Drainage**

*'Existing Surface Water Drainage*

*Surface water drainage records obtained indicate that there is existing surface water drainage infrastructure within the vicinity of the site. The records show existing 225mm diameter surface water gravity drainage pipes immediately north, east and west of the site.*

*Proposed Surface Water Drainage*

*As part of the development, a number of different SuDS measures are proposed to minimise the impact on water quality and water quantity of the runoff and maximise the amenity and biodiversity opportunities within the site. The site topography will allow for the site to drain by gravity to the existing surface water pipe network located in the existing industrial estate access road. It is proposed to construct a new surface water drainage system for the development to collect runoff and convey it to the outfall location. The site will be served by a new network consisting of surface water pipes, blue / green roofs, rain gardens and conveyance swales. The rain gardens and blue/green roofs will provide for the attenuation storage requirements on site as a result of the residential development.'*

**SuDS**

*As part of the development, a number of different SuDS measures are proposed to minimise the impact on water quality and water quantity of the runoff and maximise the amenity and biodiversity opportunities within the site. These measures have been chosen and designed in accordance with the South Dublin County Council Sustainable Drainage Explanatory, Design & Evaluation Guide 2022. The proposed SuDS measures will include Source Control measures as part of a Management Train whereby the surface water is managed locally in small subcatchments rather than being conveyed to and managed in large systems further down the catchment. The combination of the SuDS measures listed below will maximise the potential for surface water attenuation, reducing the impact on the existing surface water drainage network downstream. The proposed techniques will offer high level of treatment processes and nutrient removal of the runoff, particularly during the 'first flush'. Finally, the various measures will offer significant amenity and biodiversity opportunities compared to other drainage systems. It is proposed to provide the following SuDS measures:*

- *Blue/green roof systems to all building blocks and areas above basements*
- *Rain Gardens to manage runoff at the surface from the central pathway through the site*
- *Vegetated swales*
- *Flow control devices to limit discharge'*

The drainage layout is demonstrated in figures 7-10.

## Flood Risk Assessment

A Flood Risk Assessment has been prepared by Roughan & O'Donovan Consulting Engineers. The report concludes the following:

| Source | Pathway | Receptor | Likelihood | Consequence | Risk |
|---|---|---|---|---|---|
| Tidal | Overland flow, out of bank | Development Site | Low Possibility | Low (distance from tidal waterbody and site elevations limit possible flood extents) | Low (due to relative distance from, and elevation of site above nearest tidal waterbody) |
| Fluvial | Overland flow, out of bank | Development Site | Low Possibility | Low (site elevations limit possible flood extents – Development site is within Flood Zone C) | Low (due to relative elevation of site above nearest watercourse) |
| Surface Water | Overland flow | Development Site | Low Possibility | Low (The City Edge Project pluvial mapping indicates pluvial flooding within the vicinity of the site however these maps represent overland flow as a result of extreme rainfall events only and do not take into account the surface water drainage network for the area. No other sources consulted reported surface water flooding on site) | Low (if appropriate drainage system is incorporated in development and maintained appropriately) |
| Ground Water | Rising levels | Development Site | Low Possibility | Low (no indication of previous groundwater flooding at the site) | Low (due to low permeability of soil cover, no indication of previous groundwater flooding at the site) |

*'The consulted sources indicate that no area of the subject site is liable to flood from fluvial, coastal or groundwater sources. The susceptibility of Long Mile Road to pluvial flooding is noted but through the use of appropriate drainage measures the risk is considered low. All sources indicate that there is a low risk of flooding on site and that the site is within Flood Zone C, ensuring it is appropriate for residential and commercial developments.'*


***Figure 5*** *– Proposed landscape masterplan-sheet 1*


***Figure 6*** *– Proposed landscape masterplan-sheet 2*

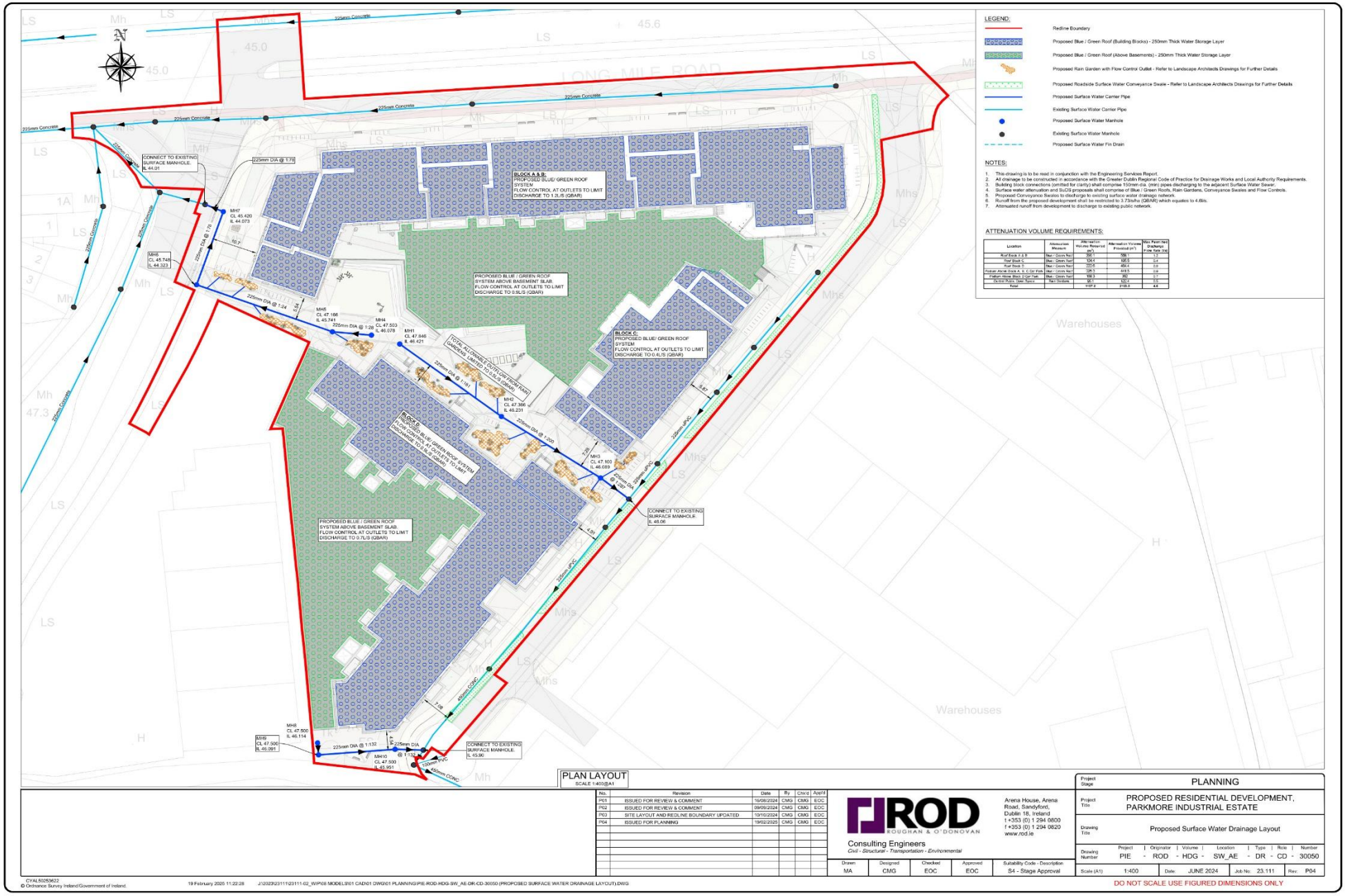


***Figure 7*** *– Proposed surface water drainage*

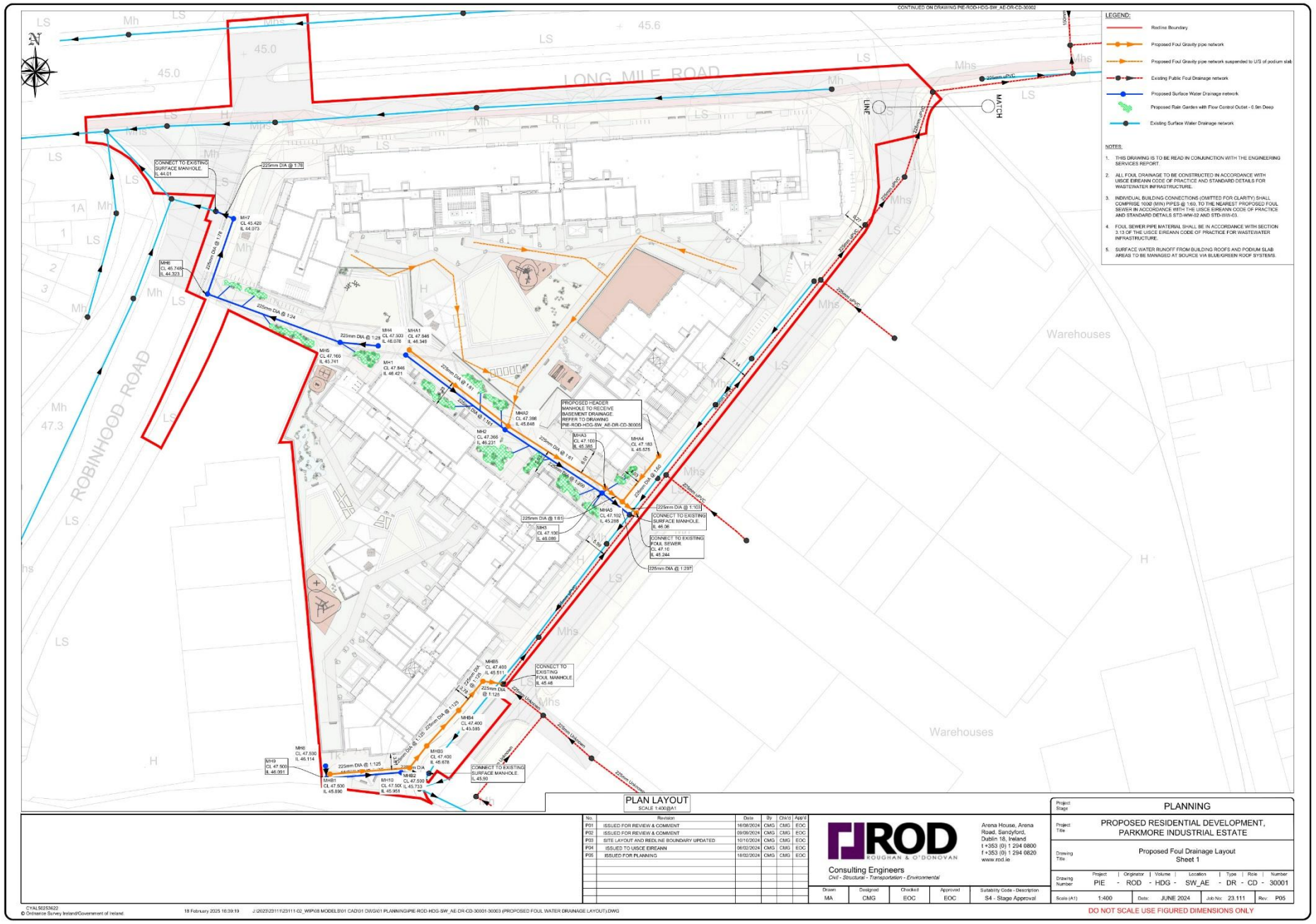


***Figure 8*** *– Proposed foul water drainage layout-sheet 1*

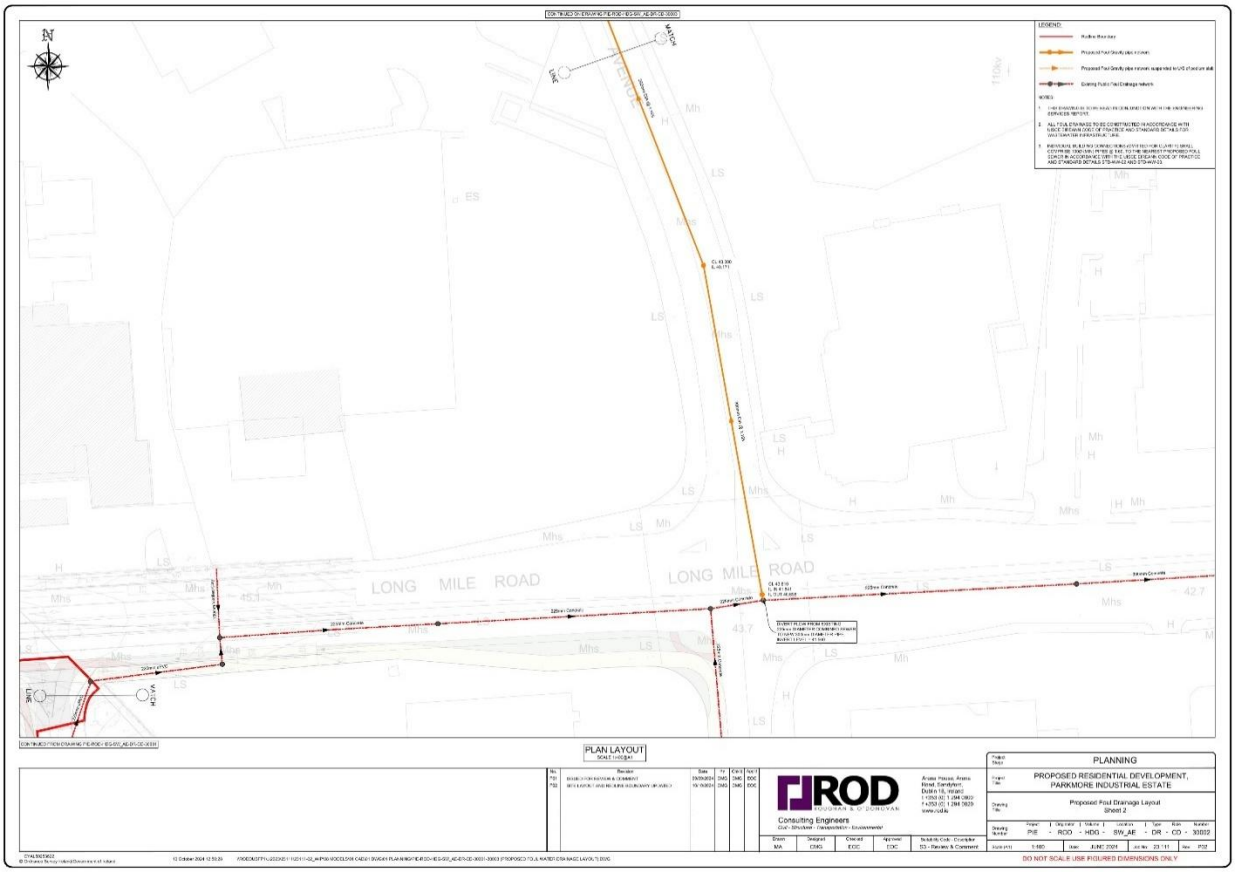


***Figure 9***– *Proposed foul water layout -sheet 2*

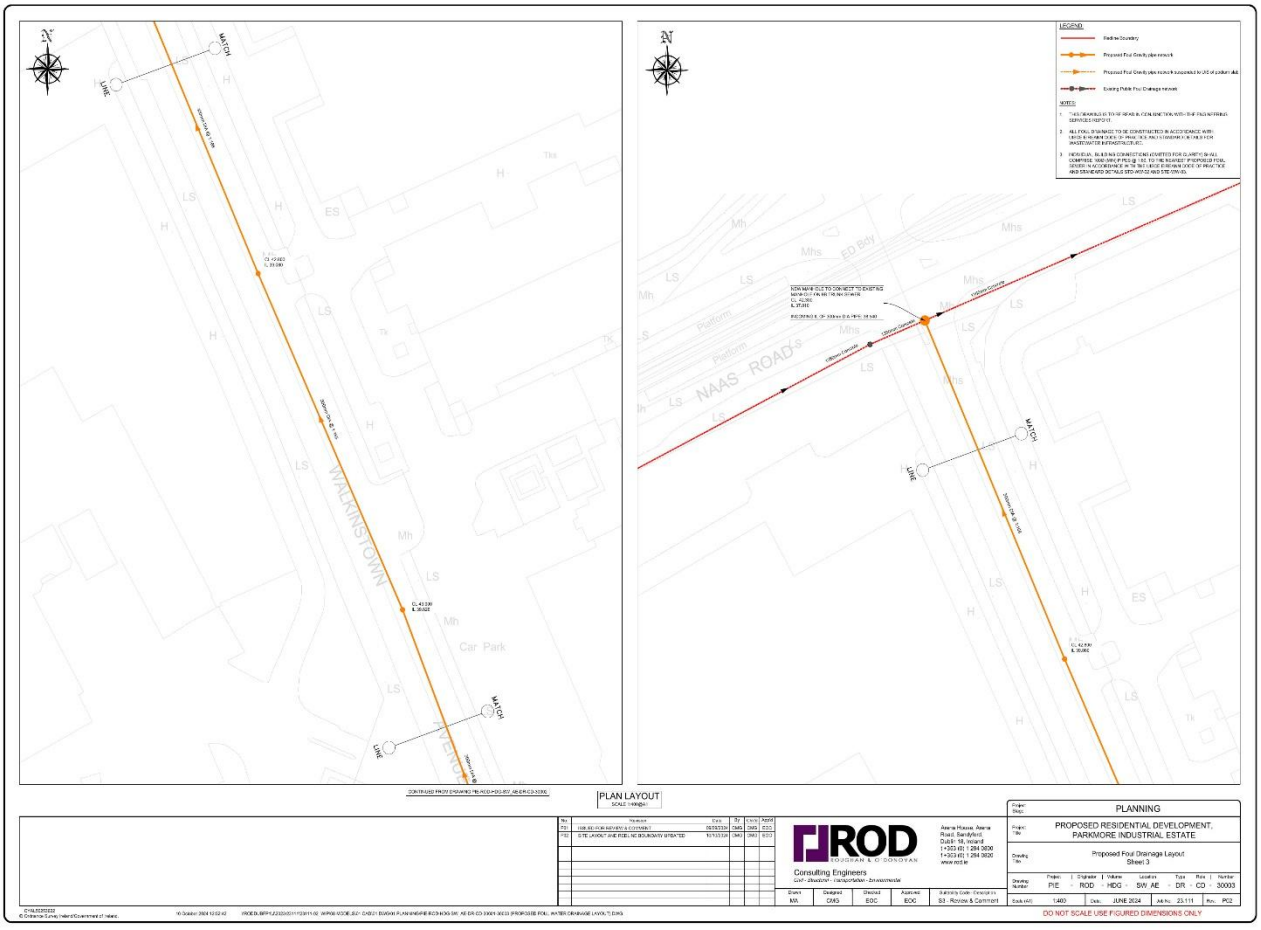


***Figure 10*** *– Proposed foul water layout -sheet 3*

## Identification of Relevant Natura 2000 Sites

The proposed development site is not within a European site and is not necessary for the management of a Natura 2000 site. As outlined in Office of the Planning Regulator Guidance Note on AA Screening (2021) "*The zone of influence of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. This should be established on a case-by-case basis using the Source- Pathway-Receptor framework and not by arbitrary distances (such as 15 km)*."

A key factor in the consideration as to whether or not a particular European site is likely to be affected by the proposed development is its distance from the development location. It is generally, but not necessarily, the case that the greater the distance from the plan or project the smaller the likelihood of impacts. In this case, the nearest European site to the proposed development is 7.2 km away (Glenasmole Valley SAC). Given the scale of the proposed development, and the fact that surface water drainage will ultimately to the River Liffey and Dublin Bay (via Walkinstown Stream & River Camac), out of an abundance of caution it is considered that the ZOI of the proposed project includes the site outline, the River Liffey and Natura 2000 sites located within Dublin Bay. In the absence of mitigation, there is the potential for dust and surface water runoff to enter the surface water network with the potential for downstream impacts on Natura 2000 sites located within Dublin Bay. Specifically, South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, North Bull Island SPA, and North-West Irish Sea SPA.

In the interest of carrying out a thorough assessment in line with both the Habitats Directive, and the precautionary principle, the ZoI was expanded for this assessment to include designated sites within 15km of the proposed development site, and sites beyond 15km with the potential for a hydrological connection. This was done in the interest of ensuring that any pathways, however indirect or remote, were taken into account. All Natura 2000 sites within 15km, and beyond 15km with the potential for a hydrological pathway are listed in Table 1. The qualifying interests, and the potential impact of the development on each European site and qualifying interest, are screened in/out in Table 2. SPA's and SAC's within 15km are seen in Figures 11 & 12. Waterbodies, SACs and SPAs proximate to the subject site are demonstrated in Figures 13-15.

*Table 1. Proximity to designated sites of conservation importance*

| Site Code | NATURA 2000 Site | Distance |
|---|---|---|
| *Special Areas of Conservation* | | |
| IE001209 | Glenasmole Valley SAC | 7.2 km |
| IE000210 | South Dublin Bay SAC | 8.7 km |
| IE002122 | Wicklow Mountains SAC | 10.0 km |
| IE001398 | Rye Water Valley/Carton SAC | 10.6 km |
| IE000206 | North Dublin Bay SAC | 11.5 km |
| IE000725 | Knocksink Wood SAC | 15.0 km |
| *Special Protection Areas* | | |
| IE004024 | South Dublin Bay and River Tolka Estuary SPA | 8.7 km |
| IE004040 | Wicklow Mountains SPA | 9.9 km |
| IE004006 | North Bull Island SPA | 11.6 km |
| IE004236 | North-West Irish Sea SPA | 13.2 km |

***Table 2.*** *Initial screening of Natura 2000 sites within 15km and Natura 2000 sites within 15km with potential of hydrological connection to the proposed development*

| Natura Code | Name | Screened In/Out | Details/Reason |
|---|---|---|---|
| **Special Areas of Conservation** | | | |
| IE000210 | South Dublin Bay SAC | **IN** | **Conservation Objectives**<br><br>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.<br><br>**Qualifying Interests**<br><br>Mudflats and sandflats not covered by seawater at low tide [1140]<br>Annual vegetation of drift lines [1210]<br>Salicornia and other annuals colonising mud and sand [1310]<br>Embryonic shifting dunes [2110]<br><br>**Potential Impact**<br><br>The development site is located within an urban area 8.7 km from the South Dublin Bay SAC (Figure 11).<br><br>There is an indirect hydrological connection to this SAC via the proposed surface water drainage strategy. Surface water drainage will be directed to the Walkinstown Stream located 9m south of the site boundary, via the surface water network. This stream connects to the River Camac, outflowing to the River Liffey Estuary and ultimately the marine environment at Dublin Bay. It is considered that, out of an abundance of caution, and in the absence of mitigation, there is the potential for dust and contaminated surface water runoff to enter the Walkinstown Stream/Camac River with the potential for downstream impacts on the qualifying interests of this SAC. Mitigation measures are required to ensure that dust and contaminated surface water runoff does not enter the Walkinstown Stream.<br><br>There is an indirect hydrological pathway via foul water drainage. Foul wastewater will be directed to an existing public foul network, which in turn discharges to Ringsend WwTP for treatment. Foul wastewater will be treated along this network and as a result no significant effects on this SAC are likely from this indirect hydrological pathway.<br><br>In a strict application of the precautionary principle, it has been concluded that significant effects on the South Dublin Bay SAC cannot be ruled out, in the absence of mitigation measures, from the proposed development primarily as a result of the direct hydrological connection of surface water drainage to the SAC.<br><br>Mitigation measures will need to be in place to prevent silt, hazardous materials and petrochemicals entering the Walkinstown Stream which has a direct hydrological pathway to this SAC. For these reasons (mitigation measures are required in relation surface water drainage), it is necessary to |

| | | | |
|---|---|---|---|
| | | | proceed to a NIS on the effects of the project on this site in view of its conservation objectives.<br><br>**Significant effects cannot be ruled out - Natura Impact Statement Required** |
| IE000206 | North Dublin Bay SAC | **IN** | **Conservation Objectives**<br><br>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.<br><br>**Qualifying Interests**<br><br>Mudflats and sandflats not covered by seawater at low tide [1140]<br>Annual vegetation of drift lines [1210]<br>Salicornia and other annuals colonising mud and sand [1310]<br>Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]<br>Mediterranean salt meadows (*Juncetalia maritimi*) [1410]<br>Embryonic shifting dunes [2110]<br>Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]<br>Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]<br>Humid dune slacks [2190]<br>Petalwort (*Petalophyllum ralfsii*) [1395]<br><br>**Potential Impact**<br><br>The proposed works are located within an urban area 11.5 km from North Dublin Bay SAC (Figure 11).<br><br>There is an indirect hydrological connection to this SAC via the proposed surface water drainage strategy. Surface water drainage will be directed to the Walkinstown Stream located 9m south of the site boundary, via the surface water network. This stream connects to the River Camac, outflowing to the River Liffey Estuary and ultimately the marine environment at Dublin Bay. It is considered that, out of an abundance of caution, and in the absence of mitigation, there is the potential for dust and contaminated surface water runoff to enter the Walkinstown Stream/Camac River with the potential for downstream impacts on the qualifying interests of this SAC. Mitigation measures are required to ensure that dust and contaminated surface water runoff does not enter the Walkinstown Stream.<br><br>In addition, there is an indirect hydrological pathway via foul water drainage. Foul wastewater will be directed to an existing public foul network, which in turn discharges to Ringsend WwTP for treatment. Foul wastewater will be treated along this network and as a result no significant effects on this SAC are likely from this indirect hydrological pathway.<br><br>In a strict application of the precautionary principle, it has been concluded that significant effects on the North Dublin Bay SAC cannot be ruled out, in the absence of mitigation measures, from the proposed development primarily as a |

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|---|---|---|---|
| | | | result of the direct hydrological connection of surface water drainage to the SAC.<br><br>Mitigation measures will need to be in place to prevent silt, hazardous materials and petrochemicals entering the Walkinstown Stream which has a direct hydrological pathway to this SAC. For these reasons (mitigation measures are required in relation surface water drainage), it is necessary to proceed to a NIS on the effects of the project on this site in view of its conservation objectives.<br><br>**Significant effects cannot be ruled out - Natura Impact Statement Required** |
| IE001209 | Glenasmole Valley SAC | **OUT** | **Conservation Objectives**<br><br>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.<br><br>**Qualifying Interests**<br><br>Semi-Natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) [6210]<br>Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) [6410]<br>Petrifying springs with tufa formation (*Cratoneurion*) [7220]<br><br>**Potential Impact**<br><br>The proposed development site is located within an urban environment 7.2 km from this SAC. No potential impact is foreseen. There is no direct or indirect hydrological pathway from the proposed development site to the SAC. The construction and operation of the proposed development will not impact on the conservation interests of the site.<br><br>**No significant effects likely** |
| IE002122 | Wicklow Mountains SAC | **OUT** | **Conservation Objectives**<br><br>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.<br><br>**Qualifying Interests**<br><br>Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3110]<br>Natural dystrophic lakes and ponds [3160]<br>Northern Atlantic wet heaths with *Erica tetralix* [4010]<br>European dry heaths [4030]<br>Alpine and Boreal heaths [4060]<br>Calaminarian grasslands of the *Violetalia calaminariae* [6130]<br>Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [6230]<br>Blanket bogs (* if active bog) [7130]<br>Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*) [8110]<br>Calcareous rocky slopes with chasmophytic vegetation [8210] |

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| | | | Siliceous rocky slopes with chasmophytic vegetation [8220]<br>Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]<br>Otter (*Lutra lutra*) [1355]<br><br>**Potential Impact**<br><br>The proposed development site is located in an urban environment 10.0 km from this SAC. No potential impact is foreseen. There is no direct or indirect hydrological pathway from the proposed development site to the SAC. The construction and operation of the proposed development will not impact on the conservation interests of the site.<br><br>**No significant effects likely** |
| IE001398 | Rye Water Valley/Carton SAC | **OUT** | **Conservation Objectives**<br><br>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.<br><br>**Qualifying Interests**<br><br>Petrifying springs with tufa formation (*Cratoneurion*) [7220]<br>*Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014]<br>*Vertigo moulinsiana* (Desmoulin's Whorl Snail) [1016]<br><br>**Potential Impact**<br><br>The proposed development site is located within an urban environment 10.6 km from this SAC. No potential impact is foreseen. There is no direct or indirect hydrological pathway from the proposed development site to the SAC. The construction and operation of the proposed development will not impact on the conservation interests of the site.<br><br>**No significant effects likely** |
| IE000725 | Knocksink Wood SAC | **OUT** | **Conservation Objectives**<br><br>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.<br><br>**Qualifying Interests**<br><br>Petrifying springs with tufa formation (*Cratoneurion*) [7220]<br>Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]<br>Alluvial forests with Alnus glutinosa and Fraxinus excelsior (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0]<br><br>**Potential Impact**<br><br>The proposed development site is located within an urban environment 15.0 km from this SAC. No potential impact is foreseen. There is no direct or indirect hydrological pathway from the proposed development site to the SAC. The construction and operation of the proposed development will not impact on the conservation interests of the site.<br><br>**No significant effects likely** |

| Special Protection Areas | | | |
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| IE004024 | South Dublin Bay and River Tolka Estuary SPA | **IN** | **Conservation Objectives**<br><br>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.<br><br>**Qualifying Interests**<br><br>Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]<br>Oystercatcher (*Haematopus ostralegus*) [A130]<br>Ringed Plover (*Charadrius hiaticula*) [A137]<br>Grey Plover (*Pluvialis squatarola*) [A141]<br>Knot (*Calidris canutus*) [A143]<br>Sanderling (*Calidris alba*) [A144]<br>Dunlin (*Calidris alpina*) [A149]<br>Bar-tailed Godwit (*Limosa lapponica*) [A157]<br>Redshank (*Tringa totanus*) [A162]<br>Black-headed Gull (*Chroicocephalus ridibundus*) [A179]<br>Roseate Tern (*Sterna dougallii*) [A192]<br>Common Tern (*Sterna hirundo*) [A193]<br>Arctic Tern (*Sterna paradisaea*) [A194]<br>Wetland and Waterbirds [A999]<br><br>**Potential Impact**<br><br>The development site is located within an urban area 8.7 km from the South Dublin Bay and River Tolka Estuary SPA.<br><br>There is an indirect hydrological connection to this SPA via the proposed surface water drainage strategy. Surface water drainage will be directed to the Walkinstown Stream located 9m south of the site boundary, via the surface water network. This stream connects to the River Camac, outflowing to the River Liffey Estuary and ultimately the marine environment at Dublin Bay. It is considered that, out of an abundance of caution, and in the absence of mitigation, there is the potential for dust and contaminated surface water runoff to enter the Walkinstown Stream/Camac River with the potential for downstream impacts on the qualifying interests of this SPA. Mitigation measures are required to ensure that dust and contaminated surface water runoff does not enter the Walkinstown Stream.<br><br>In addition, there is an indirect hydrological pathway to this SPA via foul water drainage. Foul wastewater will be directed to an existing public foul network, which in turn discharges to Ringsend WwTP for treatment. Foul wastewater will be treated along this network and as a result no significant effects on this SPA are likely from this indirect hydrological pathway.<br><br>Given the minimum distance to this SPA (8.7km) across a substantial urban environment, no significant noise or vibration impacts on this SPA are foreseen.<br><br>In a strict application of the precautionary principle, it has been concluded that significant effects on the South Dublin Bay and River Tolka Estuary SPA cannot be ruled out, in the absence of mitigation measures, from the proposed |

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| | | | development primarily as a result of the indirect hydrological connection of surface water drainage to the SPA and the potential for pollution and silt to enter this network.<br><br>Mitigation measures will need to be in place to prevent silt, hazardous materials and petrochemicals entering the surface water network, which has an indirect hydrological pathway to this SPA. For these reasons (mitigation measures are required in relation surface water drainage), it is necessary to proceed to a NIS on the effects of the project on this site in view of its conservation objectives.<br><br>**Significant effects cannot be ruled out - Natura Impact Statement Required** |
| IE004006 | North Bull Island SPA | **IN** | **Conservation Objectives**<br><br>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.<br><br>**Qualifying Interests**<br><br>Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]<br>Shelduck (*Tadorna tadorna*) [A048]<br>Teal (*Anas crecca*) [A052]<br>Pintail (*Anas acuta*) [A054]<br>Shoveler (*Anas clypeata*) [A056]<br>Oystercatcher (*Haematopus ostralegus*) [A130]<br>Golden Plover (*Pluvialis apricaria*) [A140]<br>Grey Plover (*Pluvialis squatarola*) [A141]<br>Knot (*Calidris canutus*) [A143]<br>Sanderling (*Calidris alba*) [A144]<br>Dunlin (*Calidris alpina*) [A149]<br>Black-tailed Godwit (*Limosa limosa*) [A156]<br>Bar-tailed Godwit (*Limosa lapponica*) [A157]<br>Curlew (*Numenius arquata*) [A160]<br>Redshank (*Tringa totanus*) [A162]<br>Turnstone (*Arenaria interpres*) [A169]<br>Black-headed Gull (*Chroicocephalus ridibundus*) [A179]<br>Wetland and Waterbirds [A999]<br><br>**Potential Impact**<br><br>The proposed works are located within an urban area 11.6 km from the North Bull Island SPA (Figure 12). There is no direct hydrological pathway to this SPA.<br><br>There is an indirect hydrological connection to this SPA via the proposed surface water drainage strategy. Surface water drainage will be directed to the Walkinstown Stream located 9m south of the site boundary, via the surface water network. This stream connects to the River Camac, outflowing to the River Liffey Estuary and ultimately the marine environment at Dublin Bay. It is considered that, out of an abundance of caution, and in the absence of mitigation, there is the potential for dust and contaminated surface water runoff to enter the Walkinstown Stream/Camac River with the potential for downstream impacts on the qualifying interests of this SPA. Mitigation measures are required to ensure that |

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| | | | dust and contaminated surface water runoff does not enter the Walkinstown Stream.<br><br>In addition, there is an indirect hydrological pathway to this SPA via foul water drainage. Foul wastewater will be directed to an existing public foul network, which in turn discharges to Ringsend WwTP for treatment. Foul wastewater will be treated along this network and as a result no significant effects on this SPA are likely from this indirect hydrological pathway.<br><br>Given the minimum distance to this SPA (11.6 km) across a substantial urban environment, no significant noise or vibration impacts on this SPA are foreseen.<br><br>In a strict application of the precautionary principle, it has been concluded that significant effects on the North Bull Island SPA cannot be ruled out, in the absence of mitigation measures, from the proposed development primarily as a result of the indirect hydrological connection of surface water drainage to the SPA.<br><br>Mitigation measures will need to be in place to prevent silt, hazardous materials and petrochemicals entering the surface water network, which has an indirect hydrological pathway to this SPA. For these reasons (mitigation measures are required in relation surface water drainage), it is necessary to proceed to a NIS on the effects of the project on this site in view of its conservation objectives.<br><br>**Significant effects cannot be ruled out - Natura Impact Statement Required** |
| IE004236 | North-West Irish Sea SPA | **IN** | **Conservation Objectives**<br><br>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**.**<br><br>**Qualifying Interests**<br><br>Common Scoter (*Melanitta nigra*) [A065]<br>Red-throated Diver (*Gavia stellata*) [A001]<br>Great Northern Diver (*Gavia immer*) [A003]<br>Fulmar (*Fulmarus glacialis*) [A009]<br>Manx Shearwater (*Puffinus puffinus*) [A013]<br>Shag (*Phalacrocorax aristotelis*) [A018]<br>Cormorant (*Phalacrocorax carbo*) [A017]<br>Little Gull (*Larus minutus*) [A177]<br>Kittiwake (*Rissa tridactyla*) [A188]<br>Black-headed Gull (*Chroicocephalus ridibundus*) [A179]<br>Common Gull (*Larus canus*) [A182]<br>Lesser Black-backed Gull (*Larus fuscus*) [A183]<br>Herring Gull (*Larus argentatus*) [A184]<br>Great Black-backed Gull (*Larus marinus*) [A187]<br>Little Tern (*Sterna albifrons*) [A195]<br>Roseate Tern (*Sterna dougallii*) [A192]<br>Common Tern (*Sterna hirundo*) [A193]<br>Arctic Tern (*Sterna paradisaea*) [A194] |

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| | | | Puffin (*Fratercula arctica*) [A204]<br>Razorbill (*Alca torda*) [A200]<br>Guillemot (*Uria aalge*) [A199]<br><br>**Potential Impacts**<br><br>The proposed works are located within an urban area 13.2 km from the North-West Irish Sea SPA. There is no direct hydrological pathway to this SPA.<br><br>There is an indirect hydrological connection to this SPA via the proposed surface water drainage strategy. Surface water drainage will be directed to the Walkinstown Stream located 9m south of the site boundary, via the surface water network. This stream connects to the River Camac, outflowing to the River Liffey Estuary and ultimately the marine environment at Dublin Bay. It is considered that, out of an abundance of caution, and in the absence of mitigation, there is the potential for dust and contaminated surface water runoff to enter the Walkinstown Stream/Camac River with the potential for downstream impacts on the qualifying interests of this SPA. Mitigation measures are required to ensure that dust and contaminated surface water runoff does not enter the Walkinstown Stream.<br><br>In addition, there is an indirect hydrological pathway to this SPA via foul water drainage. Foul wastewater will be directed to an existing public foul network, which in turn discharges to Ringsend WwTP for treatment. Foul wastewater will be treated along this network and as a result no significant effects on this SPA are likely from this indirect hydrological pathway.<br><br>Given the minimum distance to this SPA (13.2 km) across a substantial urban environment, no significant noise or vibration impacts on this SPA are foreseen.<br><br>In a strict application of the precautionary principle, it has been concluded that significant effects on the North-West Irish Sea SPA cannot be ruled out, in the absence of mitigation measures, from the proposed development primarily as a result of the indirect hydrological connection of surface water drainage to the SPA.<br><br>Mitigation measures will need to be in place to prevent silt, hazardous materials and petrochemicals entering the surface water network, which has an indirect hydrological pathway to this SPA. For these reasons (mitigation measures are required in relation surface water drainage), it is necessary to proceed to a NIS on the effects of the project on this site in view of its conservation objectives.<br><br>**Significant effects cannot be ruled out - Natura Impact Statement Required** |
| IE004040 | Wicklow Mountains SPA | **OUT** | **Conservation Objectives**<br><br>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. |

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| | | | **Qualifying Interests**<br><br>Merlin (*Falco columbarius*) [A098]<br>Peregrine (*Falco peregrinus*) [A103]<br><br>**Potential Impact**<br><br>The proposed development site is located within an urban environment 9.9 km from this SPA. No potential impact is foreseen. There is no direct or indirect hydrological pathway from the proposed development site to the SPA.<br><br>Given the minimum distance to this SPA (9.9 km) across a substantial urban environment, no significant noise or vibration impacts on this SPA are foreseen.<br><br>The construction and operation of the proposed development will not impact on the conservation interests of the site.<br><br>**No significant effects likely** |

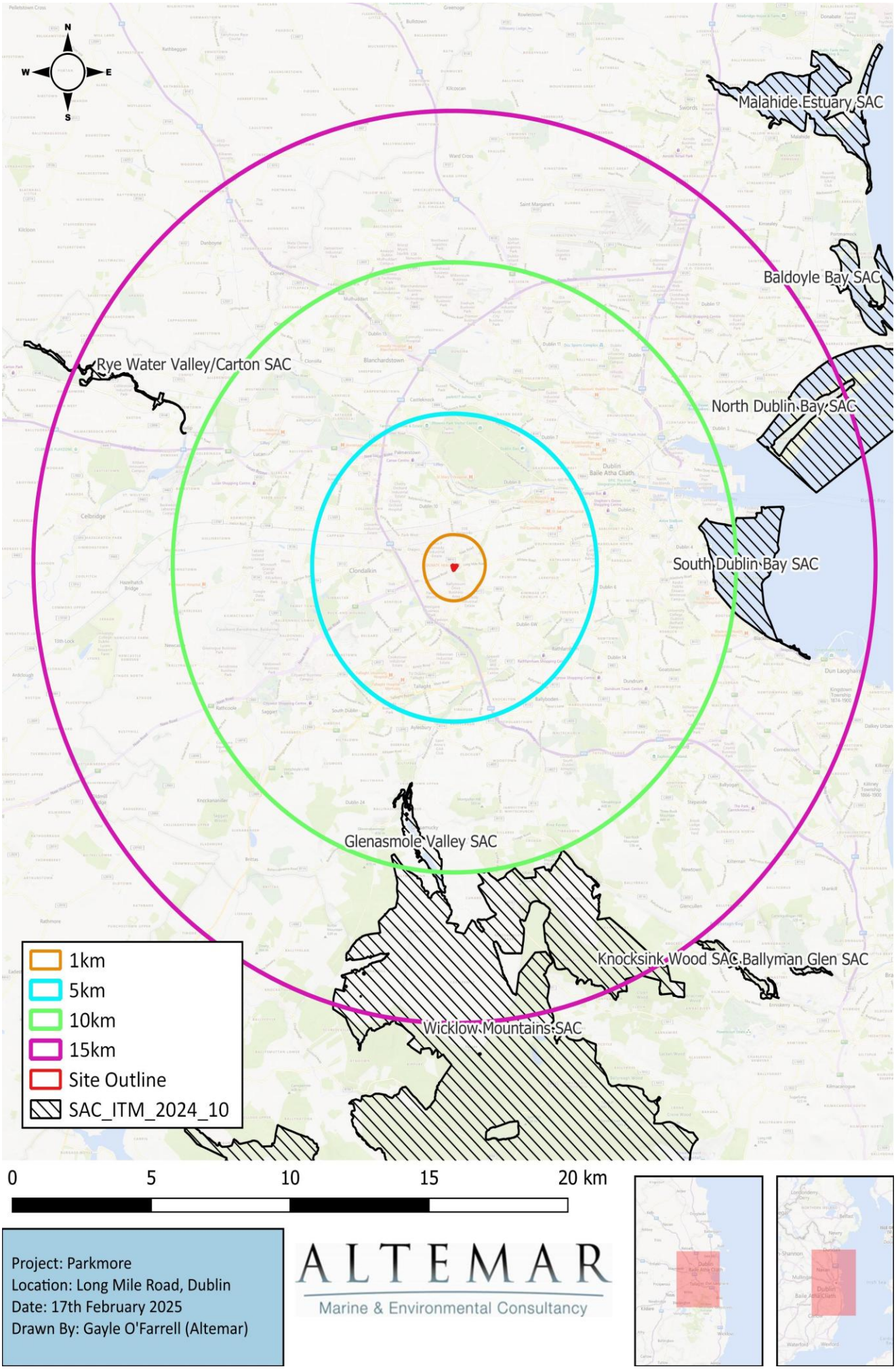


***Figure 11.*** *Special Areas of Conservation (SAC) within 15km of the proposed works site*

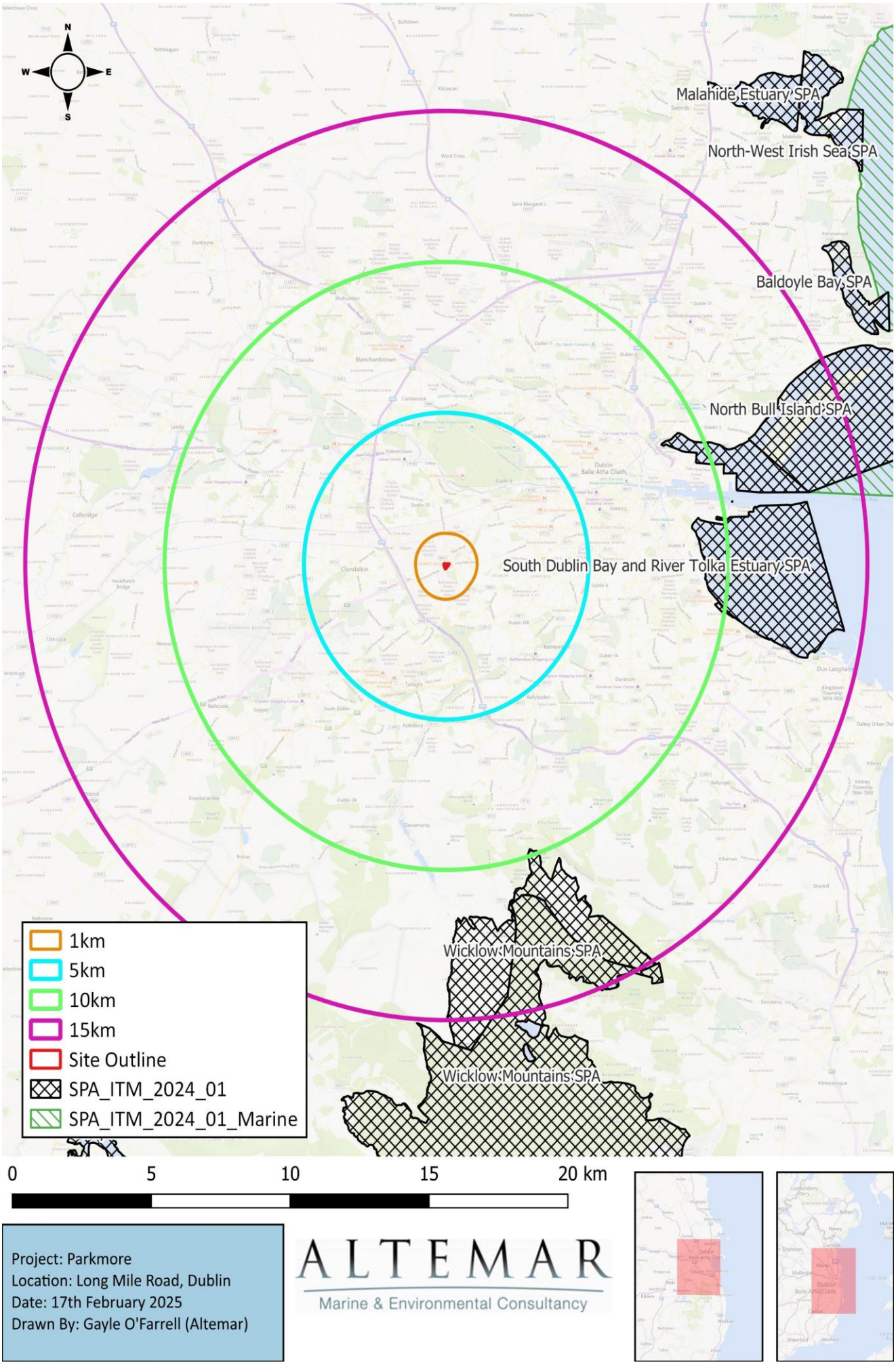


***Figure 12.*** *Special Protection Areas (SPA) within 15km of the proposed works site*

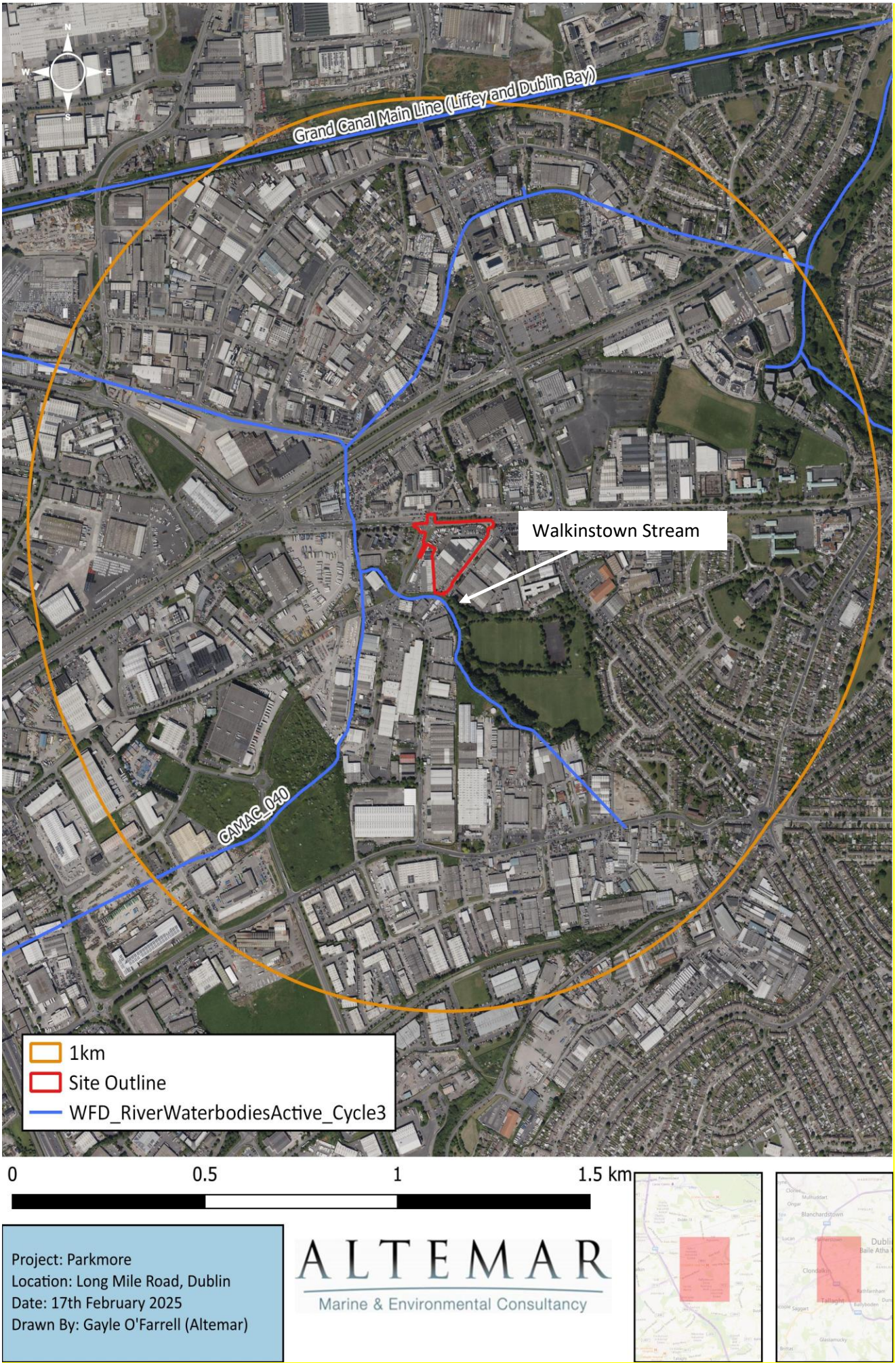


***Figure 13.*** *Waterbodies within 1km of the subject site*

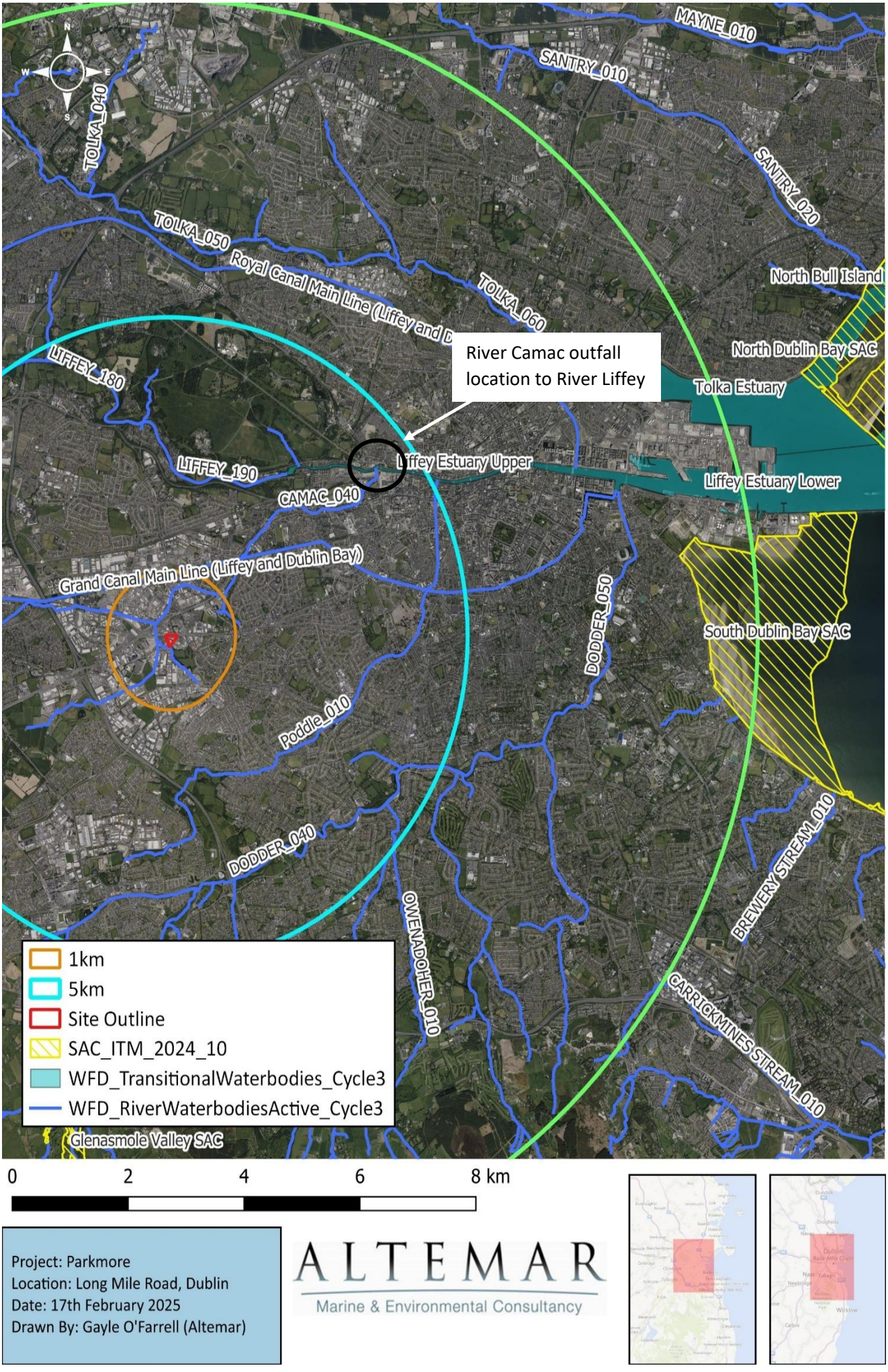


***Figure 14.*** *Waterbodies and SACs proximate to the proposed works site*

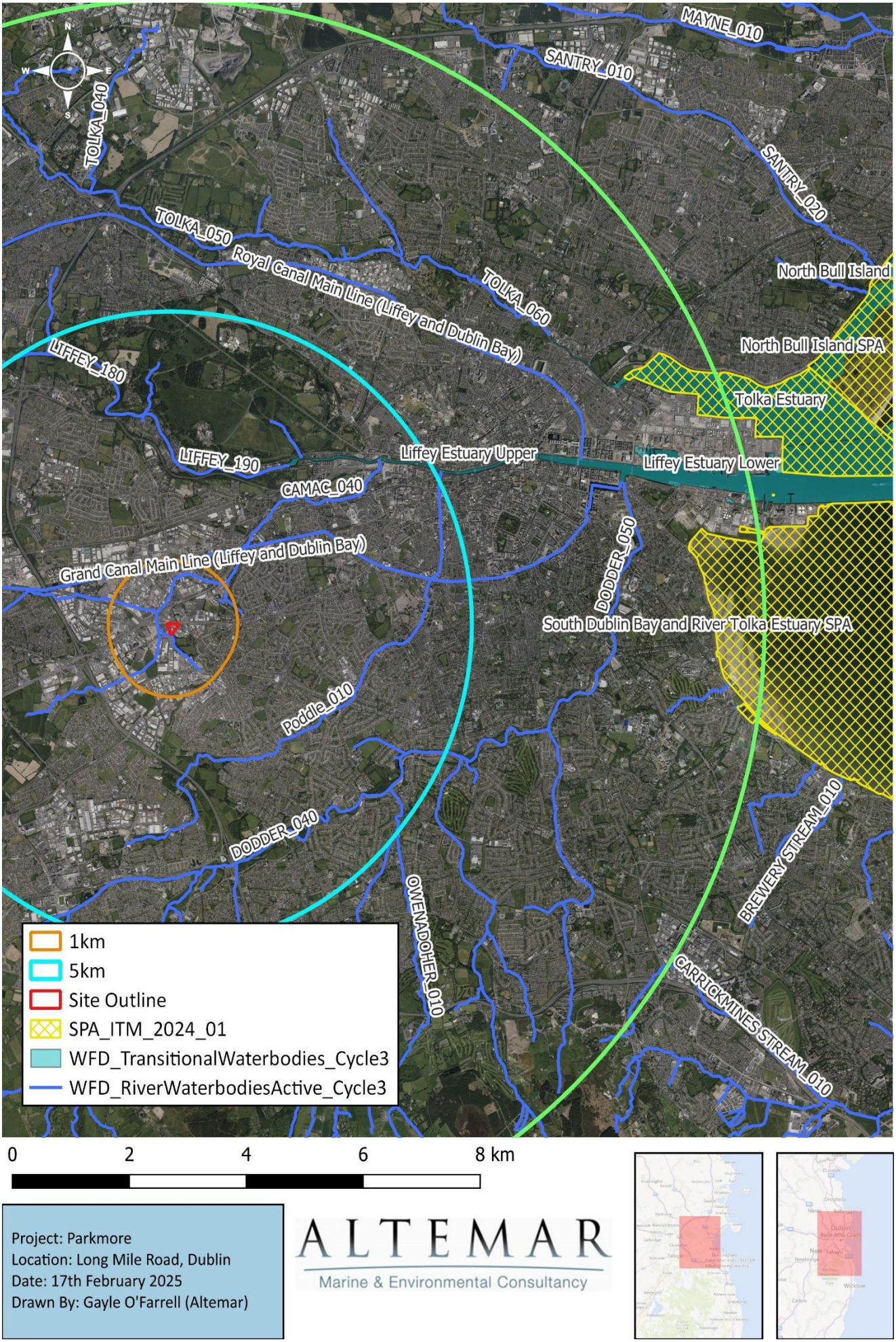


***Figure 15.*** *Waterbodies and SPAs proximate to the proposed works site*

## In-Combination Effects

Cumulative Impacts can be defined as "*impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project*". Effects which are caused by the interaction of effects, or by associated or off-site projects, are classed as indirect effects. Cumulative effects are often indirect, arising from the accumulation of different effects that are individually minor. Such effects are not caused or controlled by the project developer.

A review of other off-site developments and proposed developments was completed as part of this assessment. The following projects and plans were reviewed and considered for possible cumulative effects with the Proposed Development.

Table 3 details the existing, proposed and granted planning permissions on record in the area:

*Table 3: Potential Cumulative Impacts*

| Planning Ref No. | Address | Summary of Development |
|---|---|---|
| 2778/21 | Rear of Eir Training Centre, Walkinstown Avenue, Dublin 12, D12 WK84 | To erect a 24m high lattice telecommunications structure, together with antennas, dishes and associated equipment and to remove the existing 18m high telecommunications monopole at the rear. |
| 3228/20 | Site to the east of Walkinstown Avenue at the junction of Walkinstown Avenue and Naas Road | O'Flynn Construction Co. Unlimited Company intend to apply for a 10-year permission for a mixed use including part Build to Rent development in 13 no. blocks (Blocks A-L) ranging in height from 4-15 storeys over 3 no. basements with a cumulative gross floor area of 168,184.13 sq.m at this 6.921 hectare site to the east of Walkinstown Avenue at the junction of Walkinstown Avenue and Naas Road. The application area includes part of the 'Nissan Site' (6.429 hectares) and 0.492 hectares to accommodate works to facilitate connections to municipal services and works proposed to public roads. The development will consist of; i. the demolition of all existing vehicle trade buildings (8,015.66 sq.m) and removal of 4 no. existing 38kV ESB timber poles and 2 no. existing 38kV lattice masts on the site; ii. construction of 3 no. basements with cumulative gross floor area (GFA) of 37,240.54 sq.m incorporating car parking, motorcycle parking, plant rooms and waste management facilities, comprising; a. 'West Basement' located under Blocks A, B, C, D and E (18,815.93 sq.m GFA), with 2 no. entrance/exit ramps including 1 no. situated between Blocks C and E and 1 no. on south side of Block B and containing 411 no. car parking spaces including 17 no. disabled parking spaces and 15 no. car-club spaces, together with 15 no. motorcycle spaces; b. 'North Basement' located under Blocks F, G K, and H1 (5,998.24 sq.m GFA), with entrance/exit ramp on western side of Block K and containing 97 no. car parking spaces including 8 no. disabled parking spaces and 3 no. car-club spaces, together with 4 no. motorcycle spaces; and c. 'South Basement' located under Blocks H2, J, I and L (12,426.37 sq.m GFA), with entrance/exit ramp situated between Blocks L and J and containing 296 no. car parking spaces including 19 no. disabled parking spaces and 7 no. car-club spaces, together with 15 no. motorcycle spaces; iii. Block A - a hotel (148 no. rooms) with an upper height of 15-storeys (53.475m maximum above ground level) and a GFA of 7,415.0 sq.m in at the junction of Naas Road and Walkinstown Avenue; iv. a total of 1,137 no. residential units and associated tenant amenities (combined 2,948.90 sq.m GFA) across 12 no. blocks (B-L) that range in height from 4-10 storeys, with a cumulative GFA of 113,147.79 sq.m, of which Blocks C and L are dedicated Build to Rent (BtR). The residential units will be distributed as follows; • Block B with an upper height of 10 no. storeys (36.439m maximum above ground level) comprising 20 no. studio apartments, 48 no. 1-bedroom (2 person) units, 135 no. 2-bedroom (4 person) units and 16 no. 3-bedroom (5 person) units; • Block C with an upper height of 8 no. storeys (30.139m maximum above ground level) comprising 42 no. studio apartments, 67 no. 1-bedroom (2 person) units and 54 no. 2-bedroom (4 person) units and tenant facilities and amenities (combined 1,457.80 sq.m) incorporating refuse store, bicycle store, delivery room, manager's office, concierge office, gym and flex spaces, business centre, conference/meeting rooms, café, resident lounges, library, games room, cinema room, community room and chef's kitchen; all ancillary site development works, drainage, plant, waste storage, boundary treatment and lighting. |

| Planning Ref No. | Address | Summary of Development |
|---|---|---|
| SD20A/0247 | St. Cillian's National School, Robinhood Road, Dublin 12 | Construction of a single storey side extension to existing single storey detached national school; minor internal and façade amendments to existing school including new accessible access door arrangement and all associated site works |
| SD19A/0281 | Merrywell Industrial Estate, Ballymount, Dublin 12 | Installation of new paving; removal of existing timber post and rail fence; installation of textured block walls incorporating new signage; erection of two textured block columns topped with new signage; all associated site development works |
| SD21A/0350 | Long Mile Road, Drimnagh, Dublin 12 | Retention of constructed fence and boundaries and the relocation of existing access gate to revised location and proposed use of space as an allotment |
| 4535/23 | Long Mile Retail Centre, 111/113 Long Mile Road, Dublin 12, D12 HY4A | Permission is sought for: (a) Change of use of rear portion of the premises from warehouse distribution to retail use, (b) Sub-division of existing unit to facilitate transfer of part of the unit to adjoining premises 109/110 (not within the ownership of the applicants) but without any change of use, (c) Provision of new escape doorways to the side and rear of the premises, (d) for changes to front elevation to include new signage panel over front elevation and for alterations to existing totem signage panel adjacent to public roadside, all to terraced single storey retail warehouse (Currently Wigoders Homestyle) at Long Mile Retail Centre, 111/113 Long Mile Road, Dublin 12 D12 HY4A. |
| SD23A/0041 | 23A, Robinhood Industrial Estate, Robinhood Road, Dublin 22 | Change of use from light industrial/warehouse to recreation facility (climbing gym), internal reconfiguration to provide coffee dock, toilets & staff facilities and minor elevational changes (front and sides). |

There is no direct pathway to designated sites. It is considered that in combination effects on Natura 2000 sites, 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 designated conservation sites will be seen as a result of the proposed development alone or in 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.**

## Conclusions

An appropriate assessment screening of the proposed development, 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 effects on the conservation objectives and qualifying interests of the Natura 2000 sites was carried out in Table 2. Based on best scientific knowledge and objective information and assessment, the possibility of significant effects caused by the proposed project was excluded for the following Natura 2000 sites, for the reasons set out in Table 2 above:

**Special Areas of Conservation**

(002122) Wicklow Mountains SAC
(001209) Glenasmole Valley SAC
(001398) Rye Water Valley/Carton SAC
(000725) Knocksink Wood SAC

**Special Protection Areas**

(004040) Wicklow Mountains SPA

Given the scale of the proposed development, and that it is proposed to discharge surface water drainage to an existing surface water drainage network that outfalls to the Walkinstown Stream and ultimately the River Liffey and marine environment at Dublin Bay, it is considered that the potential ZOI of the proposed works extends beyond the site outline to include the Walkinstown Stream/River Camac, River Liffey, and Natura 2000 sites located within Dublin Bay. Out of an abundance of caution, in the absence of mitigation measures, there is the potential for petrochemicals or silt laden material to enter the marine environment at South Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, North Dublin Bay SAC, North Bull Island SPA and North-West Irish Sea SPA during construction and operation.

Acting on a strictly precautionary basis, NIS is required in respect of the effects of the project on South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, North Bull Island SPA, and North-West Irish Sea SPA because it cannot be excluded on the basis of best objective scientific information following screening, in the absence of control or mitigation measures in relation to pollution (silt, dust, potential contamination and runoff) during construction and operation, that the plan or project, individually and/or in combination with other plans or projects, will have a significant effect on the named European Site/s.

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

**NIS is required for South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, North Bull Island SPA and North-West Irish Sea SPA.**

## Stage 2: Natura Impact Statement

A Natura Impact Statement (NIS) is Stage 2 of the Appropriate Assessment process. In the case of the proposed development at Parkmore, acting on a strictly precautionary basis, an NIS is required in respect of the effects of the project on South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary , North Bull Island SPA and North-West Irish Sea SPA (due to the potential for petrochemicals or silt laden material to enter the Walkinstown Stream and marine environment downstream of the works), 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.

The NIS evaluates the potential for direct, indirect effects, alone or in combination with other plans and projects having taken into account the use of mitigation measures.

A further review of the Conservation Objectives and qualifying interests is necessary to determine if significant effects are likely to adversely affect the integrity of the identified Natura 2000 sites.

### South Dublin Bay SAC (Site code: 000210)

As outlined in the South Dublin Bay SAC Site Synopsis[3] (NPWS, version date 10.12.2015):

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

*The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):*

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

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

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

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

*South Dublin Bay is an important site for waterfowl. Although birds regularly commute between the south bay and the north bay, recent studies have shown that certain populations which occur in the south bay spend most of their time there. The principal species are Oystercatcher (1215), Ringed Plover (120), Sanderling (344), Dunlin (2628) and Redshank (356) (average winter peaks 1996/97 and 1997/98). Up to 100 Turnstones are usual in the*

[3] https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY000210.pdf

*south bay during winter. Brent Goose regularly occur in numbers of international importance (average peak 299). Bar-tailed Godwit (565), a species listed on Annex I of the E.U. Birds Directive, also occur.*

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

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

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

The Natura 2000 Standard Data Form (2020)[4] states that:

'*This intertidal site extends from the South Wall at Dublin Port to the West Pier at Dun Laoghaire, a distance of c. 5 km. At their widest, the intertidal flats extend for almost 3 km. The seaward boundary is marked by the low tide mark, while the landward boundary is now almost entirely artificially embanked. Several permanent channels exist, the largest being Cockle Lake. A small sandy beach occurs at Merrion Gates, while some bedrock shore occurs near Dun Laoghaire. A number of small streams and drains flow into the site. The proximity of the site to Dublin City results in it being a very popular recreational area. It is also important for educational and research purposes.*

*Site possesses a fine and fairly extensive example of intertidal flats. Sediment type is predominantly sand, with muddy sands in the more sheltered areas. A typical macro-invertebrate fauna exists. Has the largest stand of Zostera on the east coast. Supports part of the important wintering waterfowl populations of Dublin Bay. Regularly has an internationally population of Branta bernicila horta, plus nationally important numbers of at least a further 6 species, including Limosa lapponica. Regular autumn roosting ground for significant numbers of Sterna terns, including S. dougallii. The scientific interests of the site have been well documented.*'

As outlined in the Conservation objectives supporting document[5] (NPWS, 2013), it is an objective:

'*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 attributes and targets.''*

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

Target 2: *''Maintain the extent of the Zostera-dominated community, subject to natural processes.''*

Target 3: *''Conserve the high quality of the Zostera-dominated community, subject to natural processes.''*

Target 4: *''Conserve the following community type in a natural condition: Fine sands with Angulus tenuis community complex.'*

[4] https://www.npws.ie/sites/default/files/protected-sites/natura2000/NF000210.pdf

[5] https://www.npws.ie/sites/default/files/publications/pdf/000210_South%20Dublin%20Bay%20SAC%20Marine%20Supporting%20Doc_V1.pdf

**Figure 1. Extent of Mudflats and sandflats not covered by seawater at low tide in South Dublin Bay SAC**

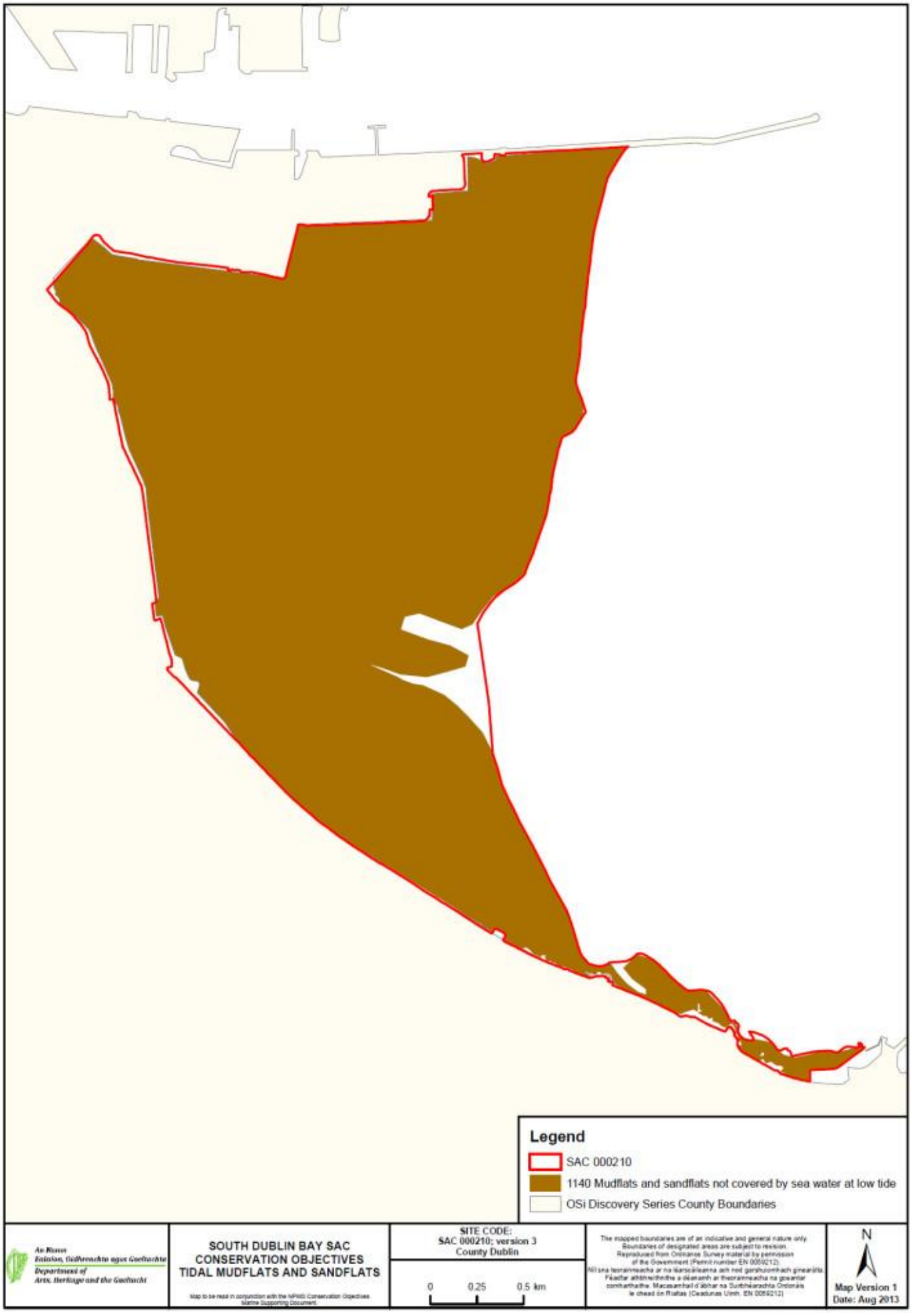


***Figure 16*** *– South Dublin Bay SAC – Tidal mudflats and sandflats*

**Figure 2. Distribution of community types in South Dublin Bay SAC**

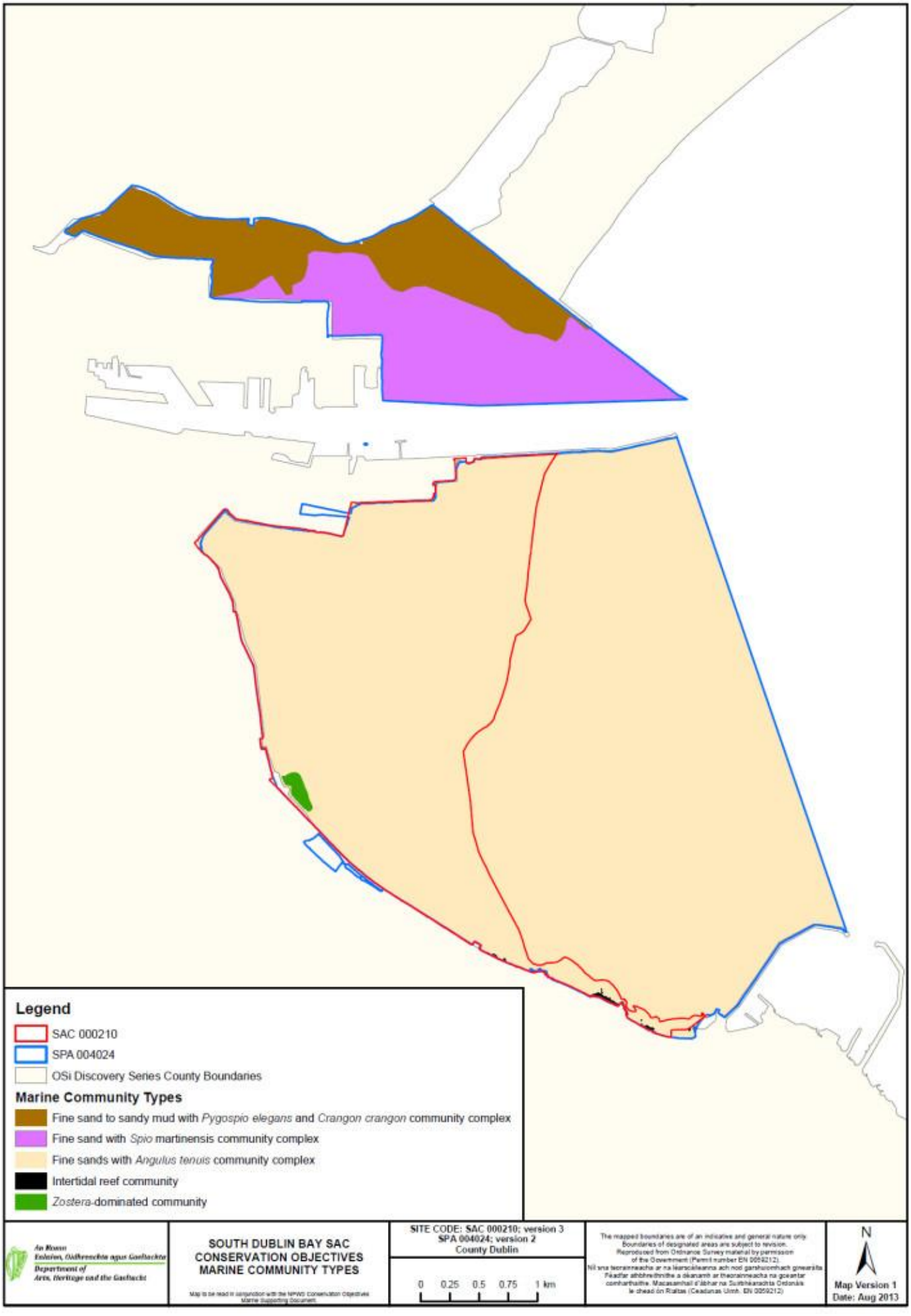


***Figure 17*** *– South Dublin Bay SAC – Marine community types*

## North Dublin Bay SAC (Site code: 000206)

As outlined in the North Dublin Bay SAC Site Synopsis[6] (NPWS, version date 12.08.2013):

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

*The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):*

*[1140] Tidal Mudflats and Sandflats*
*[1210] Annual Vegetation of Drift Lines*
*[1310] Salicornia Mud*
*[1330] Atlantic Salt Meadows*
*[1410] Mediterranean Salt Meadows*
*[2110] Embryonic Shifting Dunes*
*[2120] Marram Dunes (White Dunes)*
*[2130] Fixed Dunes (Grey Dunes)**
*[2190] Humid Dune Slacks*
*[1395] Petalwort (Petalophyllum ralfsii)*

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

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

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

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

*The island shelters two intertidal lagoons which are divided by a solid causeway. The sediments of the lagoons are mainly sands with a small and varying mixture of silt and clay. The north lagoon has an area known as the "Salicornia flat", which is dominated by Salicornia dolichostachya, a pioneer glasswort species, and covers about 25 ha. Beaked Tasselweed (Ruppia maritima) occurs in this area, along with some Narrow-leaved Eelgrass (Zostera angustifolia). Dwarf Eelgrass (Z. noltii) also occurs in Sutton Creek. Common Cordgrass (Spartina*

[6] https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY000206.pdf

*anglica) occurs in places but its growth is controlled by management. Green algal mats (Enteromorpha spp., Ulva lactuca) cover large areas of the flats during summer. These sediments have a rich macrofauna, with high densities of Lugworms (Arenicola marina) in parts of the north lagoon. Mussels (Mytilus edulis) occur in places, along with bivalves such as Cerastoderma edule, Macoma balthica and Scrobicularia plana. The small gastropod Hydrobia ulvae occurs in high densities in places, while the crustaceans Corophium volutator and Carcinus maenas are common. The sediments on the seaward side of North Bull Island are mostly sands. The site extends below the low spring tide mark to include an area of the sublittoral zone.*

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

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

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

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

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

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

The Natura 2000 Standard Data Form (2020)[7] states that:

'*The North Bull Island sand spit is a relatively recent depositional feature, formed as a result of improvements to Dublin Port during the 18th and 19th centuries. It is almost 5km long and 1km wide and runs parallel to the coast between Clontarf and Sutton. The sediment which forms the island is predominantly glacial in origin and siliceous in nature. Between the island and the mainland there occurs two sheltered intertidal areas which are separated by a solid causeway constructed in 1964. The seaward side of the island has a fine sandy beach. A substantial area of shallow marine water is included in the site. The interior of the island is excluded from the*

[7] https://www.npws.ie/sites/default/files/protected-sites/natura2000/NF000206.pdf

*site as it has been converted to golf courses. The proximity of the North Bull Island to Dublin City results in it being a very popular recreational area. It is also very important for educational and research purposes. Nature conservation is a main landuse within the site.*

*Site possesses an excellent diversity of coastal habitats. The North Bull Island dune system is one of the most important systems on the east coast and is one of the few in Ireland that is actively accreting. It possesses extensive and mostly good quality examples of embryonic, shifting marram and fixed dunes, as well as excellent examples of humid dune slacks. Both Atlantic and Mediterranean salt marshes are well represented and a particularly good marsh zonation is shown. The salt marshes grade into mudflats and sandflats, some of which are dominated by annual Salicornia species. Petalophyllum ralfsii occurs at its only known station away from the western seaboard. The site has five Red Data Book vascular plant species and four Red Data Book bryophyte species. This is one of the most important sites for wintering waterfowl in Ireland, with internationally important populations of Branta bernicla horta, Calidris canutus and Limosa lapponica, plus nationally important numbers of a further 14 species. 20% of the national total of Pluvialis squatarola occurs here. Formerly it had important colony of Sterna albifrons. North Dublin Bay is nationally important for three insect species. The scientific interests of the site have been well documented and future prospects are good owing to the various designations assigned to site.*'

As outlined in the Conservation objectives supporting document (NPWS, 2013):

'*North Dublin Bay SAC (site code: 206) is designated for a range of coastal habitats, including mudflats and salt flats, saltmarsh and sand dunes. The following eight coastal habitats are included in the qualifying interests for the site (* denotes a priority habitat):*

- *Salicornia and other annuals colonising mud and sand (1310)*
- *Atlantic salt meadows (Glauco-Puccinellietalia maritimae) (ASM) (1330)*
- *Mediterranean salt meadows (Juncetaliea maritimi) (MSM) (1410)*
- *Annual vegetation of drift lines (1210)*
- *Embryonic shifting dunes (2110)*
- *Shifting dunes along the shoreline with Ammophila arenaria (white dunes) (2120)*
- *Fixed coastal dunes with herbaceous vegetation (grey dunes) (2130)**
- *Humid dune slacks (2190)*

*The first three are saltmarsh habitats and the last five are associated with sand dune systems, although all eight of these habitats are found in close association with each other (McCorry, 2007; Ryle et al., 2009; Delaney et al., 2013).*

*This backing document sets out the conservation objectives for the eight coastal habitats listed above in North Dublin Bay SAC, which are defined by a list of parameters, attributes and targets. The main parameters are (a) Range (b) Area and (c) Structure and Functions, the last of which is broken down into a number of attributes, including physical structure, vegetation structure and vegetation composition.*

*The targets set for the saltmarsh habitats are based primarily on the results of the Saltmarsh Monitoring Project (SMP) (McCorry, 2007; McCorry & Ryle, 2009[8]) and this document should be read in conjunction with those reports.'*

[8] McCorry, M. (2007) Saltmarsh Monitoring Project 2006, Unpublished report for National Parks and Wildlife Service, Dublin, IE.
McCorry, M., Ryle, T. (2009) Saltmarsh Monitoring Project 2007-2008: Final Report, Unpublished report for National Parks and Wildlife Service, Dublin, IE.

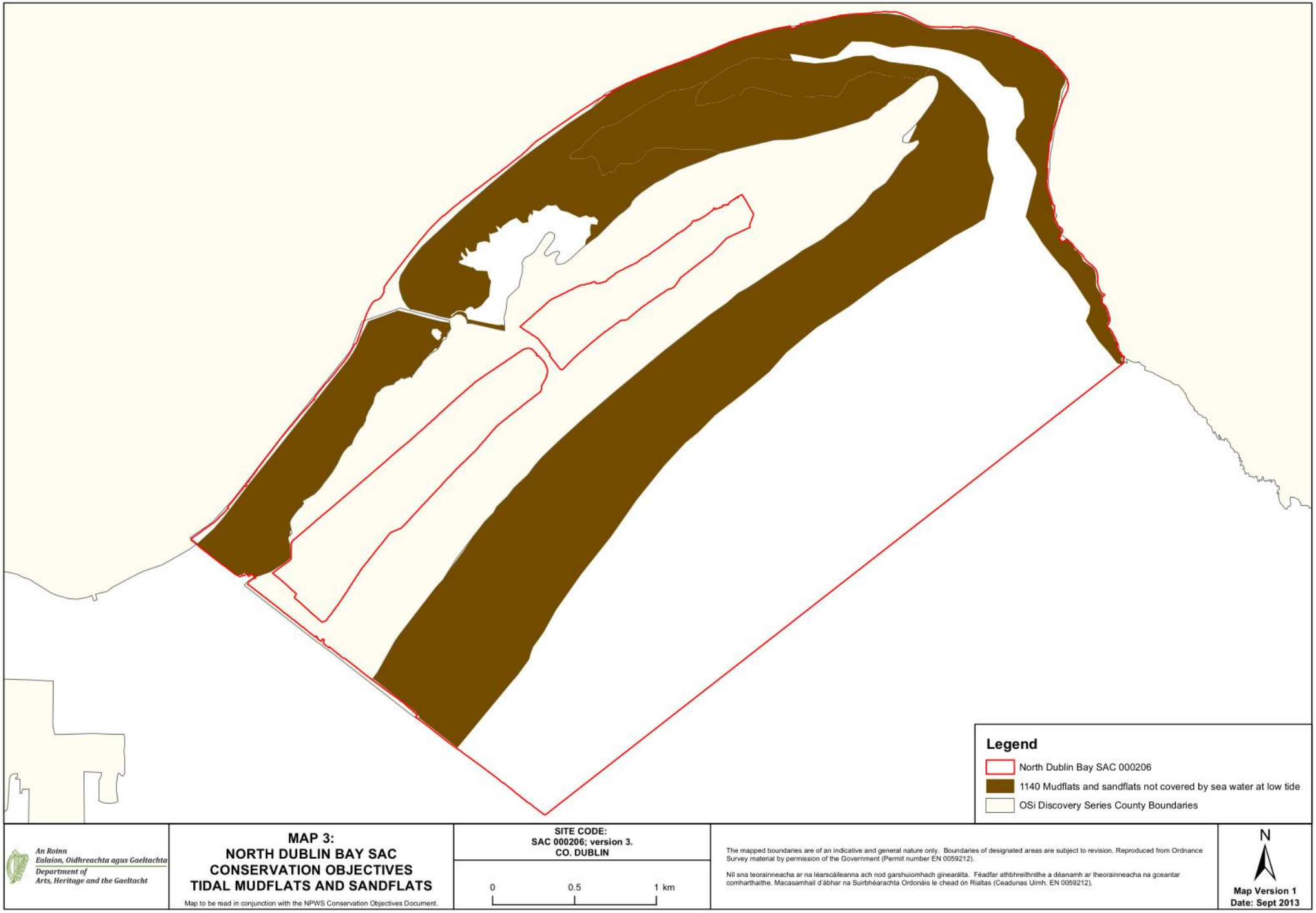


***Figure 18**. North Dublin Bay SAC – Tidal mudflats and sandflats*

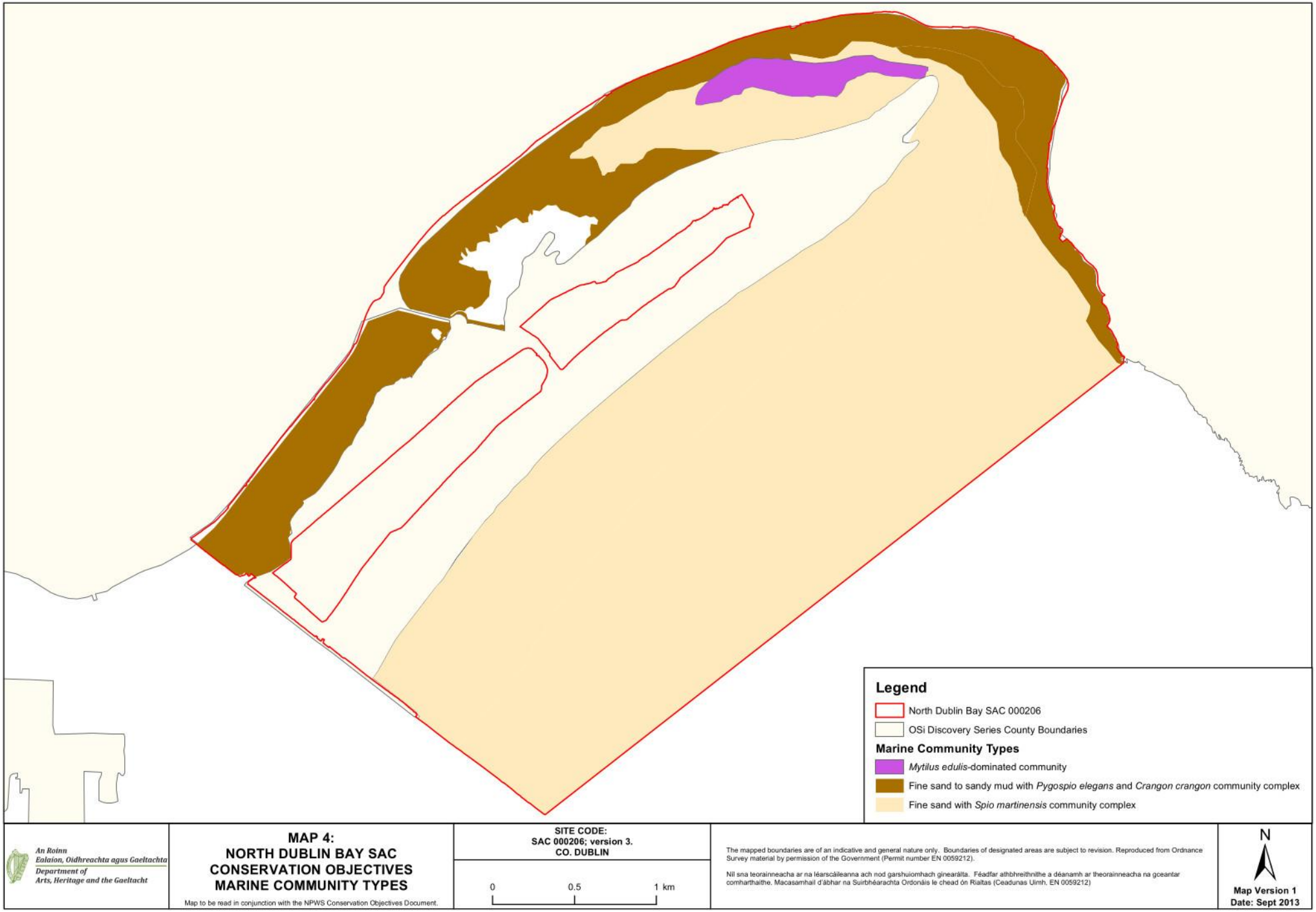


***Figure 19**. North Dublin Bay SAC – Marine community types*

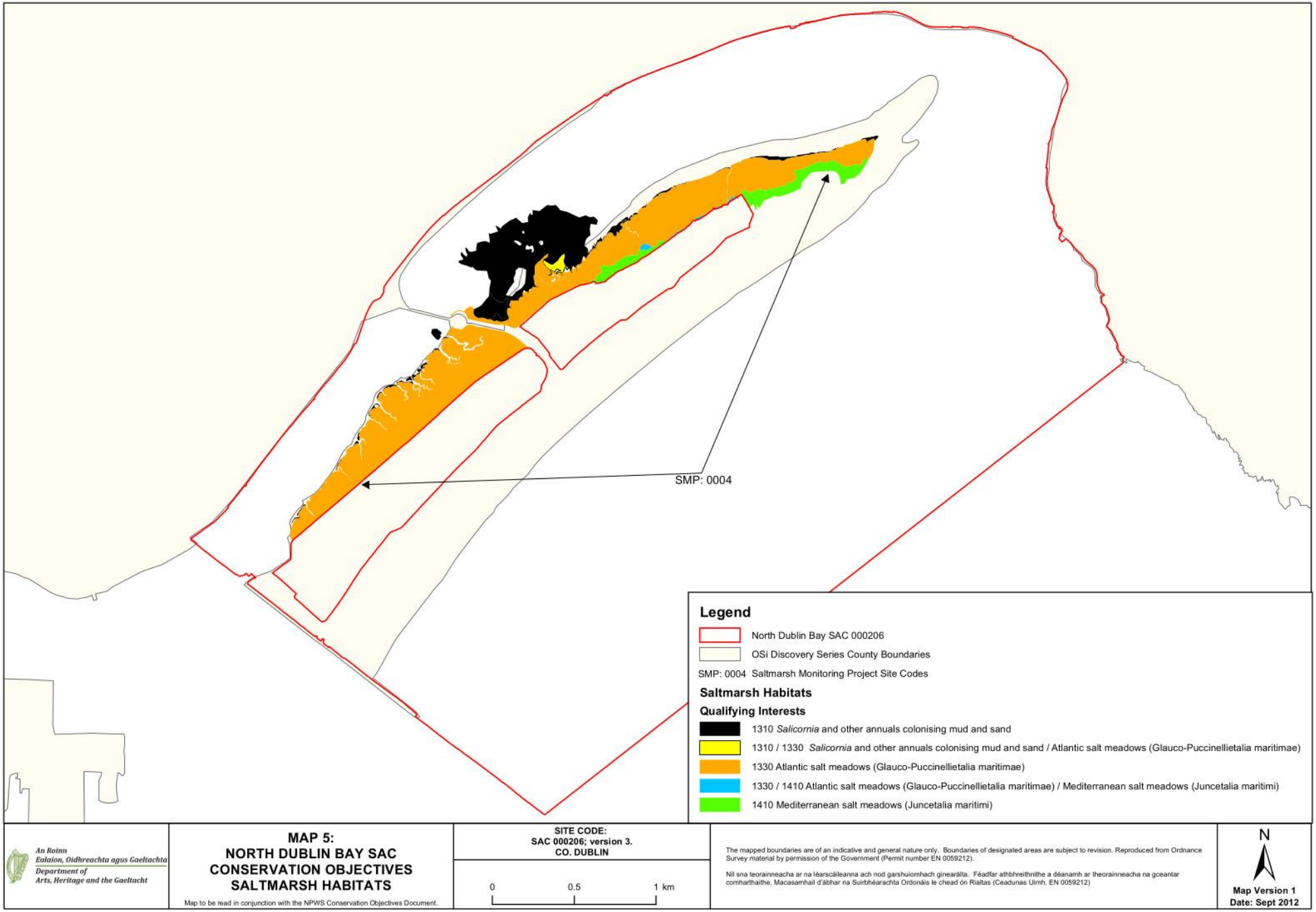


***Figure 20**. North Dublin Bay SAC – Saltmarsh habitats*

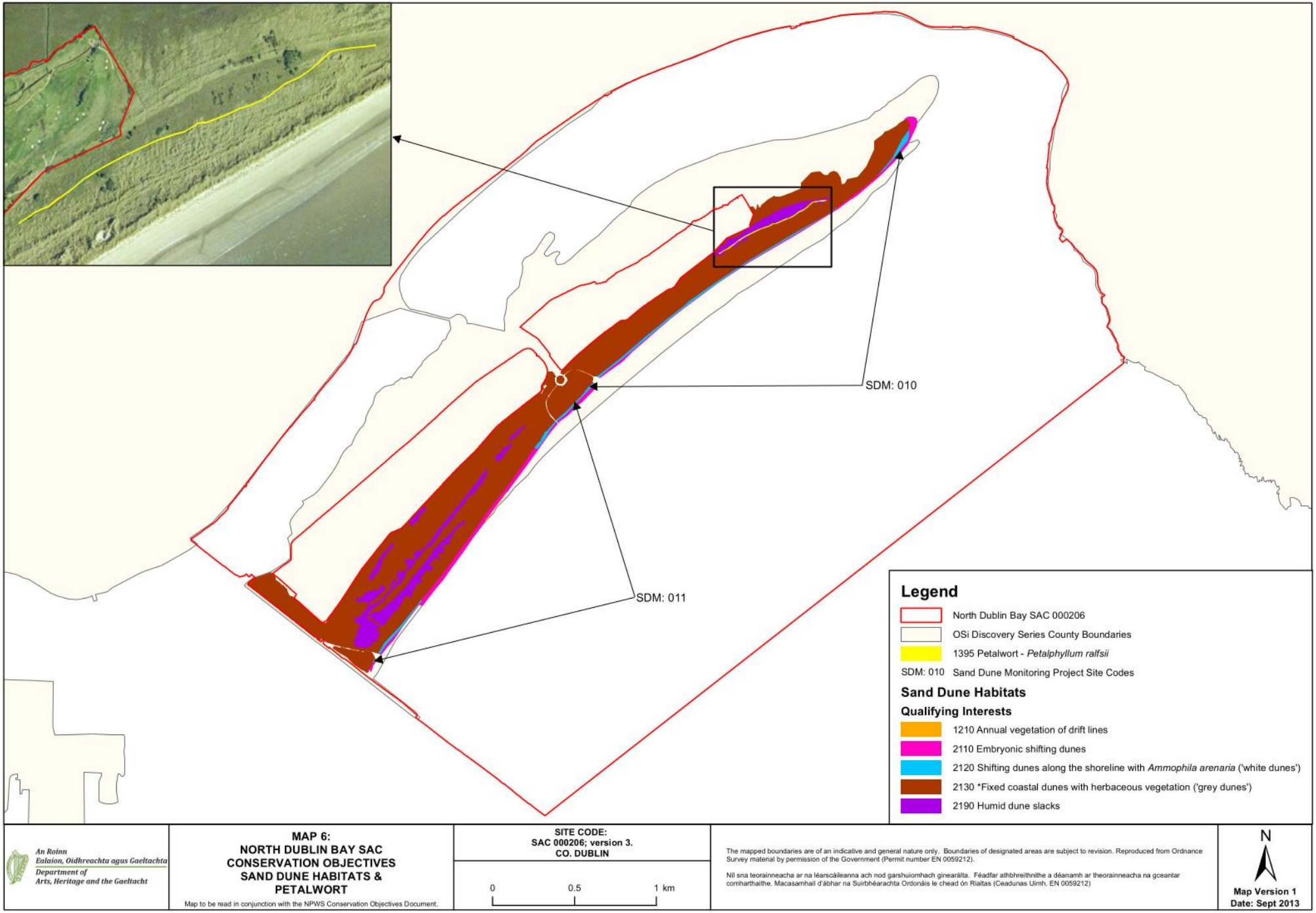


***Figure 21**. North Dublin Bay SAC – Sand dune habitats & petalwort*

## South Dublin Bay and River Tolka (Site code: 004024)

As outlined in the South Dublin Bay SAC Site Synopsis[9]. (NPWS, version date 30.05.2015):

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

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

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

*The site is an important site for wintering waterfowl, being an integral part of the internationally important Dublin Bay complex – all counts for wintering waterbirds are five year mean peaks for the period 1995/96 to 1999/2000. Although birds regularly commute between the south bay and the north bay, recent studies have shown that certain populations which occur in the south bay spend most of their time there. An internationally important population of Light-bellied Brent Goose (368) occurs regularly and newly arrived birds in the autumn feed on the Eelgrass bed at Merrion. At the time of designation the site supported nationally important numbers of a further nine species: Oystercatcher (1,145), Ringed Plover (161), Grey Plover (45), Knot (548), Sanderling (321), Dunlin (1,923), Bar-tailed Godwit (766), Redshank (260) and Black-headed Gull (3,040). Other species occurring in smaller numbers include Great Crested Grebe (21), Curlew (127) and Turnstone (52). Little Egret, a species which has recently colonised Ireland, also occurs at this site.*

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

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

*South Dublin Bay is an important staging/passage site for a number of tern species in the autumn (mostly late July to September). The origin of many of the birds is likely to be the Dublin breeding sites (Rockabill and the*

[9] https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY004024.pdf

*Dublin Docks) though numbers suggest that the site is also used by birds from other sites, perhaps outside the state. This site is selected for designation for its autumn tern populations: Roseate Tern (2,000 in 1999), Common Tern (5,000 in 1999) and Arctic Tern (20,000 in 1996).*

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

The Natura 2000 Standard Data Form (2020)[10] states that:

'*This site comprises a substantial part of Dublin Bay. It includes virtually all of the intertidal area in the south bay, as well as much of the Tolka Estuary to the north of the River Liffey. A portion of the shallow bay waters is also included. In the south bay, the intertidal flats extend for almost 3 km at their widest. The sediments are predominantly well-aerated sands. The sands support the largest stand of Zostera noltii on the East Coast. Several permanent channels exist, the largest being Cockle Lake. A small sandy beach occurs at Merrion Gates, while some bedrock shore occurs near Dun Laoghaire. The landward boundary is now almost entirely artificially embanked. Sediments in the Tolka Estuary vary from soft thixotrophic muds with a high organic content in the inner estuary to exposed, well aerated sands off the Bull Wall. The proximity of the site to Dublin City results in it being a very popular recreational area. It is also important for educational and research purposes.*

*The site possesses extensive intertidal flats which support wintering waterfowl which are part of the overall Dublin Bay population. It regularly has an internationally important population of Branta bernicla hrota, which feeds on Zostera noltii in the autumn. It has nationally important numbers of a further 6 species: Haematopus ostralegus, Charadrius hiaticula, Calidris canutus, Calidris alba, Calidris alpina and Limosa lapponica. It is an important site for wintering gulls, especially Larus ridibundus and Larus canus. South Dublin Bay is the premier site in Ireland for Larus melanocephalus, with up to 20 birds present at times. Is a regular autumn roosting ground for significant numbers of terns, including Sterna dougallii, S. hirundo and S. paradisaea.*'

According to the conservation Objectives Supporting Document[11] (NPWS 2014) for the South Dublin Bay and River Tolka Estuary SPA:

'*The overarching Conservation Objective for North Bull Island Special Protection Area, and for South Dublin Bay and River Tolka Estuary Special Protection Area, is to ensure that waterbird populations and their wetland habitats are maintained at, or restored to, favourable conservation condition. This includes, as an integral part, the need to avoid deterioration of habitats and significant disturbance; thereby ensuring the persistence of site integrity.*

*The site should contribute to the maintenance and improvement where necessary, of the overall favourable status of the national resource of waterbird species, and continuation of their long-term survival across their natural range.*

*Conservation Objectives for North Bull Island Special Protection Area, and for South Dublin Bay and River Tolka Estuary Special Protection Area, based on the principles of favourable conservation status, are described below and summarised in Table 3.1. Note that these objectives should be read and interpreted in the context of information and advice provided in additional sections of this report.*

*Objective 1: To maintain the favourable conservation condition of the non-breeding waterbird Special Conservation Interest species listed for North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA.*

[10] https://www.npws.ie/sites/default/files/protected-sites/natura2000/NF004024.pdf

[11] *Note that 'population' refers to site population (numbers wintering at the site) rather than the species biogeographic population.*
https://www.npws.ie/sites/default/files/publications/pdf/South%20Dublin%20Bay%20and%20River%20Tolka%20Estuary%20SPA%20(004024)%20Conservation%20objectives%20supporting%20document%20-%20[Version%201].pdf

*This objective is defined by the following attributes and targets:*

- *To be favourable, the long term population trend for each waterbird Special Conservation Interest species should be stable or increasing[12]. 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.*

*Factors that can adversely effect 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 (for further discussion on this topic please refer to Section 5.4).*
- *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 (for further discussion on this topic please refer to Section 5.4).*
- *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 ecologically connected to it. The reliance on these habitats will vary from species to species and from site to site. Significant habitat change 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 (for further information on this topic please refer to Section 5.2).*

*Objective 2. To maintain the favourable conservation condition of the wetland habitat at North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA as a resource for the regularly-occurring migratory waterbirds that utilise these areas.*

*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 3,904 ha, other than that occurring from natural patterns of variation.*

*This objective seeks to maintain the permanent extent of the wetland habitats that are contained within the boundary of these two SPAs, and which constitute an important resource for regularly-occurring migratory waterbirds (note that the total designated area also contains some non-wetland habitat).*'

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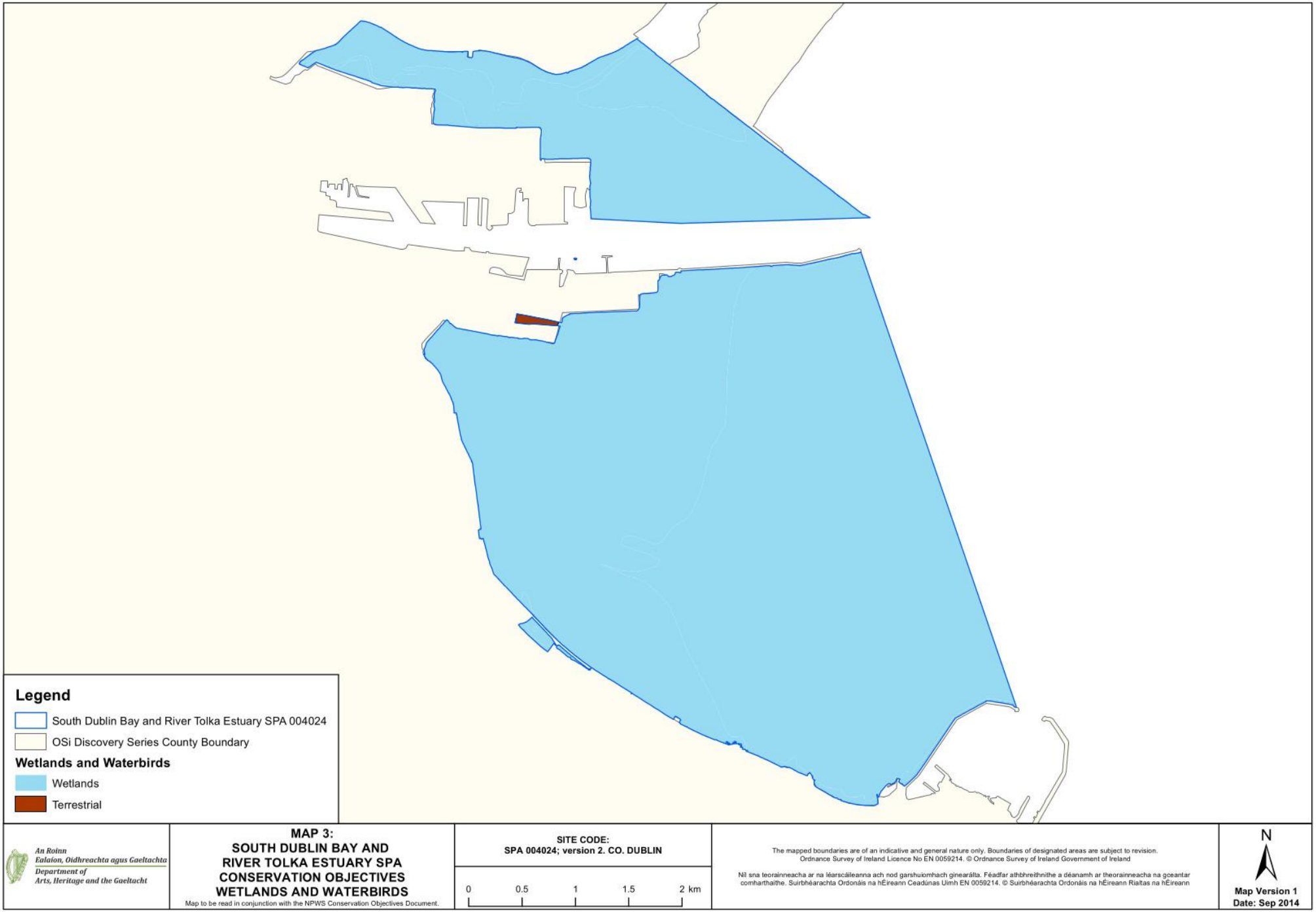



***Figure 22**. South Dublin Bay and River Tolka Estuary SPA – Wetlands and waterbirds*

## North Bull Island SPA (Site code: 004006)

As outlined in the North Bull Island SPA Site Synopsis[13] (NPWS, version date 25.03.2014)

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

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

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

*The North Bull Island SPA is of international importance for waterfowl on the basis that it regularly supports in excess of 20,000 waterfowl. The site supports internationally important populations of three species, Light-bellied Brent Goose (1,548), Black-tailed Godwit (367) and Bar-tailed Godwit (1,529) - all figures are mean peaks for the five winters between 1995/96 and 1999/2000. The site is one of the most important in the country for Light-bellied Brent Goose. A further 14 species have populations of national importance – Shelduck (1,259), Teal (953), Pintail (233), Shoveler (141), Oystercatcher (1,784), Grey Plover (517), Golden Plover (2,033), Knot (2,837), Sanderling (141), Dunlin (4,146), Curlew (937), Redshank (1,431), Turnstone (157) and Black-headed Gull (2,196). The populations of Pintail and Knot are of particular note as they comprise 14% and 10% respectively of the all-Ireland population totals. Other species that occur regularly in winter include Grey Heron, Little Egret, Cormorant, Wigeon, Goldeneye, Red-breasted Merganser, Ringed Plover and Greenshank. Gulls are a feature of the site during winter and, along with the nationally important population of Black-headed Gull (2,196), other species that occur include Common Gull (332) and Herring Gull (331). While some of the birds also frequent South Dublin Bay and the River Tolka Estuary for feeding and/or roosting purposes, the majority remain within the site for much of the winter. The wintering bird populations have been monitored more or less continuously since the late 1960s and the site is now surveyed each winter as part of the larger Dublin Bay complex.*

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

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

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

[13] https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY004006.pdf

The Natura 2000 Standard Data Form (2020)[14] states that:

'*The North Bull Island sand spit is a relatively recent depositional feature, formed as a result of improvements to Dublin Port during the 18th and 19th centuries. It is almost 5km long and 1km wide and runs parallel to the coast between Clontarf and Sutton. The sediment which forms the island is predominantly glacial in origin and siliceous in nature. A well-developed dune system runs the length of the island, with good examples of embryonic, shifting marram and fixed dunes, as well as excellent examples of humid dune slacks. Extensive salt marshes also occur. Between the island and the mainland occur two sheltered intertidal areas which are separated by a solid causeway constructed in 1964. The seaward side of the island has a fine sandy beach. A substantial area of shallow marine water is included in the site. Part of the interior of the island has been converted to golf courses. The proximity of the North Bull Island to Dublin City results in it being a very popular recreational area. It is also very important for educational and research purposes. Nature conservation is a main landuse within the site.*

*The site is among the top ten sites for wintering waterfowl in the country. It supports internationally important populations of Branta bernicila hrota and Limosa lapponica and is the top site in the country for both of these species. A further 14 species have populations of national importance, with particular notable numbers of Tadorna tadorna (8.5% of national total), Anas acuta (11.6% of national total), Pluvialis squatarola (6.9% of national total), Calidris canutus (10.5% of national total). North Bull Island SPA is a regular site for passage waders such as Philomachus pugnax, Calidris ferruginea and Tringa erythropus. The site supports Asio flammeus in winter. Formerly the site had an important colony of Sterna albifrons but breeding has not occurred in recent years. The site provides both feeding and roosting areas for the waterfowl species. Habitat quality for most of the estuarine habitats is very good. The site has a population of the rare Petalophyllum ralfsii which is the only known station away from the western seaboard as well as five Red Data Book vascular plant species and four bryophyte species. It is nationally important for three insect species. Wintering bird populations have been monitored more or less continuously since the late 1960s, and the other scientific interests of the site have also been well documented. Future prospects are good owing to various designations assigned to site.*'

The North Bull Island SPA Conservation Objectives Supporting Document[15] (NPWS, 2014) states the following:

'*North Bull Island lies roughly parallel to the shore and is a low-lying sandy spit, about 4.85 km long and 0.70 km wide (McCorry & Ryle, 2009a). It is a relatively recent geomorphological feature having emerged as a result of the build up of sediment over the last 200 years following the construction of the South and North Bull walls during the 18th and 19th centuries. The North Bull Wall marks the southern boundary of the island and is connected to the mainland by a wooden bridge. The island is actively accreting (Ryle et al. 2009a). A sandy beach, Dollymount Strand, occurs on the seaward side of the island and intertidal mudflats occur on the inner (mainland side) fringed by saltmarsh. A causeway built in 1965 provides the main access to the island and divides the intertidal flats into two areas known as the North and South Bull lagoons. Both of these are covered completely by most tides and are drained by permanent channels; the southern lagoon fills and empties beneath Bull Bridge, while water in the northern lagoon is channelled in and out through Sutton Creek (Harris, 1977). These lagoons provide the main feeding grounds for the wintering waterfowl while the fringing saltmarsh provides the main roost site for wintering birds in Dublin Bay. Macroalgal mats of filamentous Ulva spp. (formerly Enteromorpha spp.) 1 are prevalent.*

*North Bull Island is one of the finest sand dune systems in Ireland and is internationally important in terms of conservation value (McCorry & Ryle, 2009a). It has several high quality examples of rare and threatened coastal habitats and a wealth of biodiversity, which includes several habitats and species listed in Annexes I and II of the EU Habitats Directive. As a consequence, North Bull Island is afforded several other nature conservation designations alongside its status as a Special Protection Area. It was designated as an official bird sanctuary under the Wild Bird Protection Act, 1931, the first bird sanctuary in Ireland (McCorry & Ryle, 2009a), and was established as a National Nature Reserve in 1988 (two parts covered by S.I. 231 and S. I. 232 of 1988). The site*

[14] https://www.npws.ie/sites/default/files/protected-sites/natura2000/NF004006.pdf

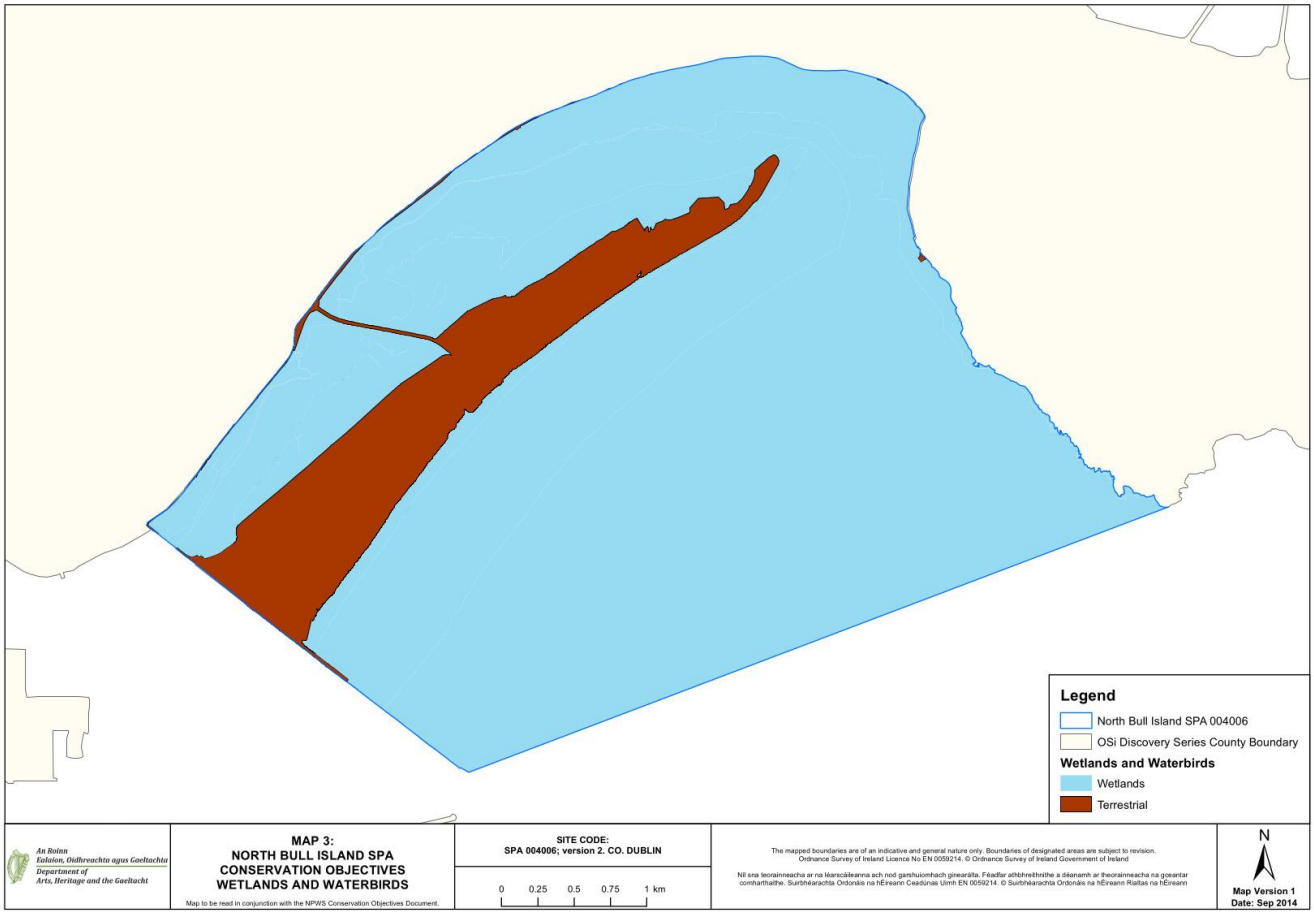
[15] https://www.npws.ie/sites/default/files/publications/pdf/North%20Bull%20Island%20SPA%20(004006)%20Conservation%20objectives%20supporting%20document%20-%20[Version%201].pdf

*has been designated as part of a Special Area of Conservation (North Dublin Bay SAC - NPWS site code 000206). North Bull Island is also a Biogenetic Reserve (Council of Europe) and a UNESCO World Biosphere Reserve.'*

The following objectives have been identified:

'Objective 1: *To maintain the favourable conservation condition of the non-breeding waterbird Special Conservation Interest species listed for North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA*

Objective 2: *To maintain the favourable conservation condition of the wetland habitat at North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA as a resource for the regularly-occurring migratory waterbirds that utilise these areas.'*



## North-West Irish Sea SPA (Site code:004236)

*''The North-west Irish Sea cSPA constitutes an important resource for marine birds. The estuaries and bays that open into it along with connecting coastal stretches of intertidal and shallow subtidal habitats, provide safe feeding and roosting habitats for waterbirds throughout the winter and migration periods. These areas, along with more pelagic marine waters further offshore, provide additional supporting habitats (for foraging and other maintenance behaviours) for those seabirds that breed at colonies on the north-west Irish Sea's islands and coastal headlands. These marine areas are also important for seabirds outside the breeding period.*

*This SPA extends offshore along the coasts of counties Louth, Meath and Dublin, and is approximately 2,333km2 in area. This SPA is ecologically connected to several existing SPAs in this area.*

*The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Common Scoter, Red-throated Diver, Great Northern Diver, Fulmar, Manx Shearwater, Shag, Cormorant, Little Gull, Kittiwake, Black-headed Gull, Common Gull, Lesser Black-backed Gull, Herring Gull, Great Black-backed Gull, Little Tern, Roseate Tern, Common Tern, Arctic Tern, Puffin, Razorbill and Guillemot. The breeding seabird species listed for those SPAs, which abut the North-West Irish Sea SPA are: Fulmar (Lambay Island SPA); Cormorant (Skerries Island SPA; Ireland's Eye SPA; Lambay Island SPA); Shag (Skerries Island SPA; Lambay Island SPA); Lesser Black-backed Gull (Lambay Island SPA); Herring Gull (Skerries Island SPA; Ireland's Eye SPA; Lambay Island SPA); Kittiwake (Lambay Island SPA; Ireland's Eye SPA; Howth Head SPA); Roseate Tern (Rockabill SPA); Common Tern (Rockabill SPA;); Arctic Tern (Rockabill SPA); Little Tern (Boyne Estuary SPA); Guillemot (Lambay Island SPA, Ireland's Eye SPA); Razorbill (Lambay Island SPA, Ireland's Eye SPA); and Puffin (Lambay Island SPA). The Common Tern population that is listed for the nearby South Dublin Bay and River Tolka Estuary SPA is also likely to use this SPA as a foraging resource.*

*Informed by two surveys of the western Irish Sea region in 2016 an estimated 120,232 and 34,626 individual marine birds occurred in this SPA during autumn and winter respectively. Those marine bird species whose estimated abundances equalled or exceeded 1% of the total estimated size of the winter assemblage are: Red-throated Diver (538), Fulmar (506), Little Gull (391), Kittiwake (944), Black-headed Gull (508), Common Gull (2,866), Herring Gull (6,893), Great Black-backed Gull (2,096), Razorbill (4,638) and Guillemot (13,914).*

*The estimated 2016 summer abundance of Manx Shearwater in the Northwest Irish Sea SPA is 13,010 and is of international importance. The estimated 2016 autumn and winter abundances of Great Northern Diver in the North West Irish Sea SPA is 248 and 230 respectively and are of international importance. The estimated abundances of Common Scoter over parts of this SPA can reach significant numbers (e.g. 14,567 in December 2018) which is also of international importance.''*

## Status of Qualifying Interests & Conservation Objectives

The Qualifying Interests (QI) (Features of Interest), Special Conservation Interests (SCIs) for the SAC and SPA sites and the National conservation status of the Natura 2000 sites subject to the NIS are seen in Table 4. The site specific conservation Objectives for Natura 2000 sites are seen in Table 5.

***Table 4**. Qualifying Interests, Conservation Status, Management Objectives, Conditions underpinning site integrity for Natura 2000 sites*

| Qualifying Interests, Conservation Status, Management Objectives, Conditions underpinning site integrity for relevant European sites | | |
|---|---|---|
| Natura 2000 Site Name & Code | Qualifying Interests | Current Conservation Status & Trend |
| Special Areas of Conservation (SAC) | | |
| **South Dublin Bay SAC (000210)** | Mudflats and sandflats not covered by seawater at low tide [1140]<br>Annual vegetation of drift lines [1210]<br>Salicornia and other annuals colonising mud and sand [1310]<br>Embryonic shifting dunes [2110] | **Inadequate**<br>**Inadequate**<br>**Favourable**<br>**Inadequate** |
| **North Dublin Bay SAC (000206)** | Mudflats and sandflats not covered by seawater at low tide [1140]<br>Annual vegetation of drift lines [1210]<br>Salicornia and other annuals colonising mud and sand [1310]<br>Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]<br>Mediterranean salt meadows (*Juncetalia maritimi*) [1410]<br>Embryonic shifting dunes [2110]<br>Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]<br>Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]<br>Humid dune slacks [2190]<br>Petalwort (*Petalophyllum ralfsii*) [1395] | **Inadequate**<br>**Inadequate**<br>**Favourable**<br>**Inadequate**<br>**Inadequate**<br>**Inadequate**<br>**Inadequate**<br>**Bad**<br>**Inadequate**<br>**Favourable** |
| Special Protection Areas (SPA) | | |
| **South Dublin Bay and River Tolka Estuary SPA (004024)** | Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]<br>Oystercatcher (*Haematopus ostralegus*) [A130]<br>Ringed Plover (*Charadrius hiaticula*) [A137]<br>Grey Plover (*Pluvialis squatarola*) [A141]<br>Knot (*Calidris canutus*) [A143]<br>Sanderling (*Calidris alba*) [A144]<br>Dunlin (*Calidris alpina*) [A149]<br>Bar-tailed Godwit (*Limosa lapponica*) [A157]<br>Redshank (*Tringa totanus*) [A162]<br>Black-headed Gull (*Chroicocephalus ridibundus*) [A179]<br>Roseate Tern (*Sterna dougallii*) [A192]<br>Common Tern (*Sterna hirundo*) [A193]<br>Arctic Tern (*Sterna paradisaea*) [A194]<br>Wetland and Waterbirds [A999] | **Amber**<br>**Amber**<br>**Green**<br>**Amber**<br>**Amber**<br>**Green**<br>**Red**<br>**Amber**<br>**Red**<br>**Red**<br>**Amber**<br>**Amber**<br>**Amber**<br>**N/A** |
| **North Bull Island SPA (004006)** | Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]<br>Shelduck (*Tadorna tadorna*) [A048]<br>Teal (*Anas crecca*) [A052]<br>Pintail (*Anas acuta*) [A054]<br>Shoveler (*Anas clypeata*) [A056]<br>Oystercatcher (*Haematopus ostralegus*) [A130]<br>Golden Plover (*Pluvialis apricaria*) [A140] | **Amber**<br>**Amber**<br>**Amber**<br>**Red**<br>**Red**<br>**Amber**<br>**Red** |

| Qualifying Interests, Conservation Status, Management Objectives, Conditions underpinning site integrity for relevant European sites | | |
|---|---|---|
| Natura 2000 Site Name & Code | Qualifying Interests | Current Conservation Status & Trend |
| | Grey Plover (*Pluvialis squatarola*) [A141] | **Amber** |
| | Knot (*Calidris canutus*) [A143] | **Amber** |
| | Sanderling (*Calidris alba*) [A144] | **Green** |
| | Dunlin (*Calidris alpina*) [A149] | **Red** |
| | Black-tailed Godwit (*Limosa limosa*) [A156] | **Amber** |
| | Bar-tailed Godwit (*Limosa lapponica*) [A157] | **Amber** |
| | Curlew (*Numenius arquata*) [A160] | **Red** |
| | Redshank (*Tringa totanus*) [A162] | **Red** |
| | Turnstone (*Arenaria interpres*) [A169] | **Green** |
| | Black-headed Gull (*Chroicocephalus ridibundus*) [A179] | **Red** |
| | Wetland and Waterbirds [A999] | **N/A** |
| **North-West Irish Sea SPA (004236)** | Common Scoter (*Melanitta nigra*) [A065] | **Red** |
| | Red-throated Diver (*Gavia stellata*) [A001] | **Amber** |
| | Great Northern Diver (*Gavia immer*) [A003] | **Amber** |
| | Fulmar (*Fulmarus glacialis*) [A009] | **Amber** |
| | Manx Shearwater (*Puffinus puffinus*) [A013] | **Amber** |
| | Cormorant (*Phalacrocorax carbo*) [A017] | **Amber** |
| | Little Tern (*Sterna albifrons*) [A195] | **Amber** |
| | Kittiwake (*Rissa tridactyla*) [A188] | **Red** |
| | Black-headed Gull (*Chroicocephalus ridibundus*) [A179] | **Amber** |
| | Common Gull (*Larus canus*) [A182] | **Amber** |
| | Lesser Black-backed Gull (*Larus fuscus*) [A183] | **Amber** |
| | Herring Gull (*Larus argentatus*) [A184] | **Amber** |
| | Roseate Tern (*Sterna dougallii*) [A192] | **Amber** |
| | Arctic Tern (*Sterna paradisaea*) [A194] | **Amber** |
| | Puffin (*Fratercula arctica*) [A204] | **Red** |
| | Razorbill (*Alca torda*) [A200] | **Amber** |
| | Guillemot (*Uria aalge*) [A199] | **Amber** |
| | Little Gull (*Hydrocoloeus minutus*) (A862) | **Amber** |
| | Common Tern (*Sterna hirundo*) (A193) | **Amber** |

***Table 5**. Site specific conservation objectives for Natura 2000 sites*

| **South Dublin Bay SAC (000210)** | | |
|---|---|---|
| **Attribute** | **Measure** | **Target** |
| Mudflats and sandflats not covered by water at low tide [1140] (Maintain the favourable conservation condition) | | |
| Habitat area | Hectares | The permanent habitat area is stable or increasing, subject to natural processes |
| Community extent | Hectares | Maintain the extent of the *Zostera*-dominated community, subject to natural processes |
| Community structure: *Zostera* density | Shoots/$m^2$ | Conserve the high quality of the *Zostera*-dominated community, subject to natural processes |
| Community distribution | Hectares | Conserve the following community types in a natural condition: Fine sands with *Angulus tenuis* community complex |
| **North Dublin Bay SAC (000206)** | | |
| **Attribute** | **Measure** | **Target** |
| Mudflats and sandflats not covered by water at low tide [1140] (Maintain the favourable conservation condition) | | |
| Habitat area | Hectares | The permanent habitat area is stable or increasing, subject to natural processes |
| Community extent | Hectares | Maintain the extent of the *Mytilus edulis*-dominated community, subject to natural processes |
| Community structure: *Mytilus edulis* density | Individuals/$m^2$ | Conserve the high quality of the *Mytilus edulis* -dominated community, subject to natural processes |
| Community distribution | Hectares | Conserve the following community types in a natural condition: Fine sand to sandy mud with *Pygospio elegans* and *Crangon crangon* community complex; Fine sand with *Spio martinensis* community complex |
| Annual vegetation of drift lines [1210] (Restore the favourable conservation condition) | | |
| Habitat area | Hectares | Area 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: functionality and sediment supply | Presence/ absence of physical barriers | Maintain the natural circulation of sediment and organic matter, without any physical obstructions |
| Vegetation structure: zonation | Occurrence | Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession |
| Vegetation composition: typical species and subcommunities | Percentage cover at a representative number of monitoring stops | Maintain the presence of species-poor communities with typical species: sea rocket (*Cakile maritima*), sea sandwort (*Honckenya peploides*), prickly saltwort (*Salsola kali*) and oraches (*Atriplex* spp.) |
| Vegetation composition: negative indicator species | Percentage cover | Negative indicator species (including non-natives) to represent less than 5% cover |
| Salicornia and other annuals colonizing mud and sand [1310] (Restore the favourable conservation condition of Salicornia and other annuals colonizing mud and sand) | | |
| Habitat area | Hectares | Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: North Bull Island 29.10 ha. |
| 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 sediment 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 vegetation with 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 sub-communities | Percentage cover | Maintain the presence of species-poor communities listed in SMP (McCorry and Ryle, 2009) |
| Vegetation structure: negative indicator species – *Spartina anglica* | Hectares | No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%. |
| Atlantic salt meadows [1330] (Maintain the favourable conservation condition) | | |
| Habitat area | Hectares | Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: North Bull Island 81.84ha. |
| 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 vegetation with 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 sub-communities | Percentage cover at a representative number of monitoring stops | Maintain range of sub-communities with typical species listed in SMP (McCorry and Ryle, 2009) |
| Vegetation structure: negative indicator species – *Spartina anglica* | Hectares | No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%. |
| Mediterranean salt meadows [1410] (Maintain the favourable conservation condition) | | |
| Habitat area | Hectares | Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: North Bull Island – 7.98ha. |
| Habitat distribution | Occurrence | No decline, or change in habitat distribution, subject to natural processes |
| Physical structure: sediment supply | Presence/ absence of physical barriers | Maintain/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 range of coastal habitats including transitional zones, subject to natural processes including erosion and succession |
| Vegetation structure: vegetation height | Centimetres | Maintain structural vegetation with 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 sub-communities | Percentage cover at a representative number of monitoring stops | Maintain range of sub-communities with typical species listed in SMP (McCorry and Ryle, 2009) |
| Vegetation structure: negative indicator species – *Spartina anglica* | Hectares | No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%. |
| Embryonic shifting dunes [2110] (Restore the favourable conservation condition) | | |
| Habitat area | Hectares | Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: North Bull Island – 2.64ha; South Bull – 3.43ha. |
| Habitat distribution | Occurrence | No decline, or change in habitat distribution, subject to natural processes |
| Physical structure: functionality and sediment supply | Presence/ absence of physical barriers | Maintain the natural circulation of sediment and organic matter, without any physical obstructions |
| Vegetation structure: zonation | Occurrence | Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession |
| Vegetation composition: plant health of foredune grasses | Percentage Cover | More than 95% of sand couch (*Elytrigia juncea*) and/or lyme grass (*Leymus arenarius*) should be healthy (i.e., green plant parts above ground and flowering heads present) |
| Vegetation composition: typical species and sub-communities | Percentage cover at a representative number of monitoring stops | Maintain the presence of species-poor communities with typical species: sand couch (*Elytrigia juncea*) and/or lyme grass (*Leymus arenarius*) |
| Vegetation structure: negative indicator species | Percentage Cover | Negative indicator species (including non-native species) to represent less than 5% cover |
| Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] (Restore the favourable conservation condition) | | |
| Habitat area | Hectares | Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: North Bull Island – 2.20ha; South Bull – 0.97ha. |
| Habitat distribution | Occurrence | No decline, or change in habitat distribution, subject to natural processes |
| Physical structure: functionality and sediment supply | Presence/ absence of physical barriers | Maintain the natural circulation of sediment and organic matter, without any physical obstructions |
| Vegetation structure: zonation | Occurrence | Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession |
| Vegetation composition: plant health of dune grasses | Percentage Cover | 95% of marram grass (*Ammophila arenaria*) and/or lyme-grass (*Leymus arenarius*) should be healthy (i.e. green plant parts above ground and flowering heads present) |
| Vegetation composition: typical species and sub-communities | Percentage cover at a representative number of monitoring stops | Maintain the presence of species-poor communities dominated by marram grass (*Ammophila arenaria*) and/or lyme-grass (*Leymus arenarius*) |

| | | |
|---|---|---|
| Vegetation structure: negative indicator species | Percentage Cover | Negative indicator species (including non-native species) to represent less than 5% cover |
| Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] (Restore the favourable conservation condition) | | |
| Habitat area | Hectares | Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: North Bull – 40.29ha; South Bull – 64.56ha. |
| Habitat distribution | Occurrence | No decline, or change in habitat distribution, subject to natural processes |
| Physical structure: functionality and sediment supply | Presence/ absence of physical barriers | Maintain the natural circulation of sediment and organic matter, without any physical obstructions |
| Vegetation structure: zonation | Occurrence | Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession |
| Vegetation structure: bare ground | Percentage cover | Bare ground should not exceed 10% of fixed dune habitat, subject to natural processes |
| Vegetation structure: sward height | Centimetres | Maintain structural variation within sward |
| Vegetation composition: typical species and sub-communities | Percentage cover at a representative number of monitoring stops | Maintain range of sub-communities with typical species listed in Delaney et. al. (2013) |
| Vegetation composition: negative indicator species (including *Hippophae rhamnoides*) | Percentage Cover | Negative indicator species (including non-native species) to represent less than 5% cover |
| Vegetation composition: scrub/trees | Percentage Cover | No more than 5% cover or under control |
| Humid dune slacks [2190] (Restore the favourable conservation condition) | | |
| Habitat area | Hectares | Area increasing, subject to natural processes, including erosion and succession. For sub-sites mapped: North Bull – 3.96ha; South Bull – 9.15ha. |
| Habitat distribution | Occurrence | No decline, or change in habitat distribution, subject to natural processes |
| Physical structure: functionality and sediment supply | Presence/ absence of physical barriers | Maintain the natural circulation of sediment and organic matter, without any physical obstructions |
| Physical structure: hydrological and flooding regime | Water table levels; groundwater fluctuations (metres) | Maintain natural hydrological regime |
| Vegetation structure: zonation | Occurrence | Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession |
| Vegetation structure: bare ground | Percentage cover | Bare ground should not exceed 5% of dune slack habitat, with the exception of pioneer slacks which can have up to 20% bare ground |
| Vegetation structure: vegetation height | Centimetres | Maintain structural variation within sward |
| Vegetation composition: typical species and sub-communities | Percentage cover at a representative number of monitoring stops | Maintain range of sub-communities with typical species listed in Delaney et. al. (2013) |
| Vegetation composition: cover of *Salix repens* | Percentage cover;<br>centimetres | Maintain less than 40% cover of creeping willow (*Salix repens*) |
| Vegetation composition: negative indicator species | Percentage Cover | Negative indicator species (including non-native species) to represent less than 5% cover |

| | | |
|---|---|---|
| Vegetation composition: scrub/trees | Percentage Cover | No more than 5% cover or under control |
| Petalwort (*Petalophyllum ralfsii)* [1395] (Maintain the favourable conservation condition) | | |
| Distribution of populations | Number and geographical spread of populations | No decline |
| Population size | Number of individuals | No decline |
| Age of suitable habitat | Hectares | No decline |
| Hydrological conditions: soil moisture | Occurrence | Maintain hydrological conditions so that substrate is kept moist and damp throughout the year, but not subject to prolonged inundation by flooding in winter |
| Vegetation structure: height and cover | Centimetres and percentage | Maintain open, low vegetation with a high percentage of bryophytes (small acrocarps and liverwort turf) and bare ground |
| **South Dublin Bay and River Tolka Estuary SPA (004024)** | | |
| Attribute | Measure | Target |
| Light-bellied Brent Goose (*Branta bernicla hrota*) [A046], Oystercatcher (*Haematopus ostralegus* ) [A130], Ringed Plover (*Charadrius hiaticula*) [A137], Knot (*Calidris canutus*) [A143], Sanderling (*Calidris alba*) [A144], Dunlin (*Calidris alpina alpina*) [A149], Bar-tailed Godwit (*Limosa lapponica*) [A157], Redshank (*Tringa totanus*) [A162], Black-headed Gull (*Chroicocephalus ridibundus*) [A179] (Maintain the favourable conservation condition)<br>Note: Grey Plover (*Pluvialis squatarola*) [A141] is proposed for removal from the list of SCI's for the site so no site specific conservation objective is included for the species | | |
| 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 |
| Roseate Tern *Sterna dougallii* [A192] | | |
| Passage population: individuals | Passage population: individuals | Passage population: individuals |
| Distribution: roosting areas | Distribution: roosting areas | Distribution: roosting areas |
| Prey biomass available | Prey biomass available | Prey biomass available |
| Barriers to connectivity | Barriers to connectivity | Barriers to connectivity |
| Disturbance at roosting site | Disturbance at roosting site | Disturbance at roosting site |
| Common Tern *Sterna hirundo* [A193] | | |
| Breeding population abundance: apparently occupied nests (AONs) | Breeding population abundance: apparently occupied nests (AONs) | Breeding population abundance: apparently occupied nests (AONs) |
| Productivity rate: fledged young per breeding pair | Productivity rate: fledged young per breeding pair | Productivity rate: fledged young per breeding pair |
| Passage population: individuals | Passage population: individuals | Passage population: individuals |
| Distribution: breeding colonies | Distribution: breeding colonies | Distribution: breeding colonies |
| Distribution: roosting areas | Number; location; area (hectares) | No significant decline |
| Prey biomass available | Kilogrammes | No significant decline |
| Barriers to connectivity | Number; location; shape; area (hectares) | No significant increase |
| Disturbance at breeding site | Level of impact | Human activities should occur at levels that do not adversely affect the |

| | | |
|---|---|---|
| | | breeding common tern population |
| Disturbance at roosting site | Level of impact | Human activities should occur at levels that do not adversely affect the numbers of common tern among the post-breeding aggregation of terns |
| Arctic Tern *Sterna paradisaea* [A194] | | |
| Passage population: individuals | Number | No significant decline |
| Distribution: roosting areas | Number; location; area (hectares) | No significant decline |
| Prey biomass available | Kilogrammes | No significant decline |
| Barriers to connectivity | Number; location; shape; area (hectares) | No significant increase |
| Disturbance at roosting site | Level of impact | Human activities should occur at levels that do not adversely affect the numbers of Arctic tern among the post-breeding aggregation of terns |
| A999 Wetlands - To maintain the favourable conservation condition of the wetland habitat | | |
| Habitat Area | Hectares | The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 2,192ha, other than that occurring from natural patterns of variation |

| **North Bull Island SPA (004006)** | | |
|---|---|---|
| Attribute | Measure | Target |
| Light-bellied Brent Goose (*Branta bernicla hrota*) [A046], Shelduck (*Tadorna tadorna*) [A048], Teal (*Anas crecca*) [A052], Pintail (*Anas acuta*) [A054], Shoveler (*Anas clypeata*) [A056 ], Oystercatcher (*Haematopus ostralegus* ) [A130], Golden Plover (*Pluvialis apricaria*) [A140], Grey Plover (*Pluvialis squatarola*) [A141], Knot (*Calidris canutus*) [A143], Sanderling (*Calidris alba*) [A144], Dunlin (*Calidris alpina alpina*) [A149], Black-tailed Godwit (*Limosa limosa*) [A156], Bar-tailed Godwit (*Limosa lapponica*) [A157], Curlew (*Numenius arquata*) [A160], Redshank (*Tringa totanus*) [A162], Turnstone (*Arenaria interpres*) [A169], Black-headed Gull (*Chroicocephalus ridibundus*) [A179] (Maintain the favourable conservation condition) | | |
| 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 |
| A999 Wetlands - To maintain the favourable conservation condition of the wetland habitat | | |
| Habitat Area | Hectares | The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 1,713ha, other than that occurring from natural patterns of variation |

| **North-West Irish Sea SPA (004236)** | | |
|---|---|---|
| Attribute | Measure | Target |
| Common Scoter (*Melanitta nigra*) [A065]; Red-throated Diver (*Gavia stellata*) [A001]; Great Northern Diver (*Gavia immer*) [A003]; Black-headed Gull (*Chroicocephalus ridibundus*) [A179]; Common Gull (*Larus canus*) [A182]; Little Gull (*Hydrocoloeus minutus*) (A862); Great Black-backed Gull (*Larus marinus*) [A187] | | |
| Non-breeding population size | Number | No significant decline |
| Spatial distribution | Hectares, time and intensity of use | Sufficient number of locations, area, and availability (in terms of timing and intensity of use) of suitable habitat to support the population |
| Forage spatial distribution, extent and abundance | Location and hectares, and forage biomass | Sufficient number of locations, area of suitable habitat and available forage biomass to support the population target |
| Disturbance across the site | Intensity, frequency, timing and duration | The intensity, frequency, timing and duration of disturbance occurs at levels that do not significantly impact the achievement of targets for population size and spatial distribution |
| Barriers to connectivity and site use | Number; location; shape; area (hectares) | The number, location, shape and area of barriers do not significantly impact the site population's access to the SPA or other ecologically important sites outside the SPA |
| Fulmar (*Fulmarus glacialis*) [A009]; Kittiwake (*Rissa tridactyla*) [A188]; Herring Gull (*Larus argentatus*) [A184]; Razorbill (*Alca torda*) [A200]; Guillemot (*Uria aalge*) [A199]; | | |

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|---|---|---|
| Population size | Number | Long term SPA population trend is stable or increasing |
| Spatial distribution | Hectares, time and intensity of use | Sufficient number of locations, area, and availability (in terms of timing and intensity of use) of suitable habitat to support the population |
| Forage spatial distribution, extent and abundance | Location and hectares, and forage biomass | Sufficient number of locations, area of suitable habitat and available forage biomass to support the population target |
| Disturbance across the site | Intensity, frequency, timing and duration | The intensity, frequency, timing and duration of disturbance occurs at levels that do not significantly impact the achievement of targets for population size and spatial distribution |
| Barriers to connectivity and site use | Number; location; shape; area (hectares) | The number, location, shape and area of barriers do not significantly impact the site population's access to the SPA or other ecologically important sites outside the SPA |
| Manx Shearwater (*Puffinus puffinus*) [A013]; Cormorant (*Phalacrocorax carbo*) [A017]; Shag (*Phalacrocorax aristotelis*) [A018]; Little Tern (*Sterna albifrons*) [A195]; Lesser Black-backed Gull (*Larus fuscus*) [A183]; Roseate Tern (*Sterna dougallii*) [A192]; Arctic Tern (*Sterna paradisaea*) [A194]; Puffin (*Fratercula arctica*) [A204]; Common Tern (*Sterna hirundo*) (A193) | | |
| Breeding population size | Number | No significant decline |
| Spatial distribution | Hectares, time and intensity of use | Sufficient number of locations, area, and availability (in terms of timing and intensity of use) of suitable habitat to support the population |
| Forage spatial distribution, extent and abundance | Location and hectares, and forage biomass | Sufficient number of locations, area of suitable habitat and available forage biomass to support the population target |
| Disturbance across the site | Intensity, frequency, timing and duration | The intensity, frequency, timing and duration of disturbance occurs at levels that do not significantly impact the achievement of targets for population size and spatial distribution |
| Barriers to connectivity | Number; location; shape; area (hectares) | The number, location, shape and area of barriers do not significantly impact the site population's access to the SPA or other ecologically important sites outside the SPA |

# Analysis of the Potential Impacts on Natura 2000 Sites.

Watfore Ltd. (Dairygold) intend to apply for planning permission for the demolition of existing buildings and the construction of a Large-Scale Residential Development (LRD) at Parkmore Industrial Estate, Long Mile Road, Robinhood, Dublin.

## Impacts of the proposed works

The proposed development is not within a designated conservation site. The nearest Natura 2000 site is the Glenasmole Valley SAC (7.2km). Given the nature of the construction works, and recognising that it is proposed to direct surface water drainage to the Walkinstown Stream at the southern boundary of the site via the surface water network, which outfalls to the River Liffey and ultimately the marine environment at Dublin Bay, it is considered that there is an indirect hydrological pathway to South Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, North Dublin Bay SAC, North Bull Island SPA and North-West Irish Sea SPA. Out of an abundance of caution, it is considered that there is the potential for dust and contaminated surface water runoff to enter the Walkinstown Stream during construction and operation and reach downstream European Sites. It cannot be ruled out, without mitigation, that the proposed development will have significant effects on the identified European sites.

The potential impacts on European sites are seen in Table 6. The proposed construction works would impact on the existing ecology of the site and the surrounding area. In the absence of mitigation, this could lead to the transportation of dust, pollution and surface water runoff to the Walkinstown, particularly given the proximity of the stream to the proposed works, with the potential for downstream impacts on European sites located within Dublin Bay.

Construction and operational phase mitigation measures are required on site particularly as clearance of the site is proposed which will remove all existing terrestrial habitats and in the absence of mitigation would lead to silt laden and contaminated runoff entering the Grand Canal Tunnel and downstream designated sites.

## Mitigation Measures

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 downstream European sites (Table 7).

| Table 6. Potential for adverse effects on the qualifying interests and conservation objectives of Natura 2000 sites | | |
|---|---|---|
| Natura 2000 Site | Qualifying Interests | Potential for Adverse Effects |
| **South Dublin Bay SAC** | Mudflats and sandflats not covered by seawater at low tide [1140]<br>Annual vegetation of drift lines [1210]<br>Salicornia and other annuals colonising mud and sand [1310]<br>Embryonic shifting dunes [2110] | Works on site, dust, and surface water runoff in addition to truck movements during construction may lead to silt or contaminated materials from the site entering the Walkinstown Stream. Concrete, silt, or pollution could enter the watercourse during enabling works, including site clearance and reprofiling. If on-site concrete production is required or cement works are carried out in the vicinity of drains or the Walkinstown Stream, there is potential for contamination of the watercourses. The construction of the proposed development may have a significant impact on the water quality of the stream, which will then outfall to the South Dublin Bay SAC. There is potential for accidental pollution to enter into the stream in the absence of mitigation. The removal of soil from the site could lead to silt build in existing drains and the surface water drainage of which leads to the Walkinstown Stream.<br>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 the adjacent watercourse. The storage of topsoil or works onsite could lead to dust, soil or silt laden runoff entering adjacent watercourses.<br>Without the presence of mitigation measures there is a potential for downstream effects if significant quantities of pollution or silt entered the Walkinstown Stream that leads to South Dublin Bay SAC.<br>Impacts on the SAC from upstream sources have the potential to directly impact on the qualifying interests of the SAC in the absence of mitigation measures. In the absence of mitigation measures there is the potential to impact on the distribution number and range of the following qualifying interests due to the potential for water pollution:<br>• Mudflats and sandflats not covered by seawater at low tide [1140]<br>• Annual vegetation of drift lines [1210]<br>• Salicornia and other annuals colonising mud and sand [1310]<br>• Embryonic shifting dunes [2110]<br>Mitigation measures are required to remove the potential of impacts on the SAC from direct pathways via the Walkinstown Stream |
| **North Dublin Bay SAC** | Mudflats and sandflats not covered by seawater at low tide [1140]<br>Annual vegetation of drift lines [1210]<br>Salicornia and other annuals colonising mud and sand [1310]<br>Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] | Works on site, dust, and surface water runoff in addition to truck movements during construction may lead to silt or contaminated materials from the site entering the Walkinstown Stream. Concrete, silt, or pollution could enter the watercourse during enabling works, including site clearance and reprofiling. If on-site concrete production is required or cement works are carried out in the vicinity of drains or the Walkinstown Stream, there is potential for contamination of the watercourses. The construction of the proposed development may have a significant impact on the water quality of the stream, which will then outfall to the North Dublin Bay SAC. There is potential for accidental pollution to enter into the stream in the absence of mitigation. The removal of soil from the site could lead to silt build in existing drains and the surface water drainage of which leads to the Walkinstown Stream.<br>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 the adjacent watercourse. The |

| Table 6. Potential for adverse effects on the qualifying interests and conservation objectives of Natura 2000 sites | | |
|---|---|---|
| Natura 2000 Site | Qualifying Interests | Potential for Adverse Effects |
| | Mediterranean salt meadows (*Juncetalia maritimi*) [1410]<br>Embryonic shifting dunes [2110]<br>Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]<br>Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]<br>Humid dune slacks [2190]<br>Petalwort (*Petalophyllum ralfsii*) [1395] | storage of topsoil or works onsite could lead to dust, soil or silt laden runoff entering adjacent watercourses. Without the presence of mitigation measures there is a potential for downstream effects if significant quantities of pollution or silt entered the Walkinstown Stream that leads to North Dublin Bay SAC.<br><br>Impacts on the SAC from upstream sources have the potential to directly impact on the qualifying interests of the SAC in the absence of mitigation measures. In the absence of mitigation measures there is the potential to impact on the distribution number and range of the following qualifying interests due to the potential for water pollution:<br><br>• Mudflats and sandflats not covered by seawater at low tide [1140]<br>• Annual vegetation of drift lines [1210]<br>• Salicornia and other annuals colonising mud and sand [1310]<br>• Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]<br>• Mediterranean salt meadows (*Juncetalia maritimi*) [1410]<br>• Embryonic shifting dunes [2110]<br>• Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]<br>• Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]<br>• Humid dune slacks [2190]<br>• Petalwort (*Petalophyllum ralfsii*) [1395]<br><br>Mitigation measures are required to remove the potential of impacts on the SAC from indirect pathways via the Walkinstown Stream and River Camac. |
| **South Dublin Bay and River Tolka Estuary SPA** | Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]<br>Oystercatcher (*Haematopus ostralegus*) [A130]<br>Ringed Plover (*Charadrius hiaticula*) [A137]<br>Grey Plover (*Pluvialis squatarola*) [A141]<br>Knot (*Calidris canutus*) [A143]<br>Sanderling (*Calidris alba*) [A144]<br>Dunlin (*Calidris alpina*) [A149] | Works on site, dust, and surface water runoff in addition to truck movements during construction may lead to silt or contaminated materials from the site entering the Walkinstown Stream. If on-site concrete production is required or cement works are carried out in the vicinity of drains or the Walkinstown Stream, there is potential for contamination of the watercourses. The construction of the proposed development may have a significant impact on the water quality of the stream, which will then outfall to the South Dublin Bay and River Tolka Estuary SPA. There is potential for accidental pollution to enter into the stream in the absence of mitigation. The removal of soil from the site could lead to silt build up in the existing drainage network and the surface water drainage of which leads to the Walkinstown Stream.<br><br>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 in the adjacent watercourse. 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. Contaminated wastewater from onsite toilets could cause localised pollution. |

| Table 6. Potential for adverse effects on the qualifying interests and conservation objectives of Natura 2000 sites | | |
|---|---|---|
| Natura 2000 Site | Qualifying Interests | Potential for Adverse Effects |
| | Bar-tailed Godwit (*Limosa lapponica*) [A157]<br>Redshank (*Tringa totanus*) [A162]<br>Black-headed Gull (*Chroicocephalus ridibundus*) [A179]<br>Roseate Tern (*Sterna dougallii*) [A192]<br>Common Tern (*Sterna hirundo*) [A193]<br>Arctic Tern (*Sterna paradisaea*) [A194]<br>Wetland and Waterbirds [A999] | Impacts on the SPA from upstream sources have the potential to directly impact on the qualifying interests of the SPA in the absence of mitigation measures. In the absence of mitigation measures there is the potential to impact on the distribution number and range of the following qualifying interests due to the potential for water pollution:<br>• Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]<br>• Oystercatcher (*Haematopus ostralegus*) [A130]<br>• Ringed Plover (*Charadrius hiaticula*) [A137]<br>• Grey Plover (*Pluvialis squatarola*) [A141]<br>• Knot (*Calidris canutus*) [A143]<br>• Sanderling (*Calidris alba*) [A144]<br>• Dunlin (*Calidris alpina*) [A149]<br>• Bar-tailed Godwit (*Limosa lapponica*) [A157]<br>• Redshank (*Tringa totanus*) [A162]<br>• Black-headed Gull (*Chroicocephalus ridibundus*) [A179]<br>• Roseate Tern (*Sterna dougallii*) [A192]<br>• Common Tern (*Sterna hirundo*) [A193]<br>• Arctic Tern (*Sterna paradisaea*) [A194]<br>Mitigation measures are required to remove the potential of impacts on the SPA from the indirect pathways via the Walkinstown Stream. |
| **North Bull Island SPA** | Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]<br>Shelduck (*Tadorna tadorna*) [A048]<br>Teal (*Anas crecca*) [A052]<br>Pintail (*Anas acuta*) [A054]<br>Shoveler (*Anas clypeata*) [A056]<br>Oystercatcher (*Haematopus ostralegus*) [A130]<br>Golden Plover (*Pluvialis apricaria*) [A140]<br>Grey Plover (*Pluvialis squatarola*) [A141]<br>Knot (*Calidris canutus*) [A143] | Works on site, dust, and surface water runoff in addition to truck movements during construction may lead to silt or contaminated materials from the site entering the Walkinstown Stream. If on-site concrete production is required or cement works are carried out in the vicinity of drains or the Walkinstown Stream, there is potential for contamination of the watercourses. The construction of the proposed development may have a significant impact on the water quality of the stream, which will then outfall to the North Bull Island SPA. There is potential for accidental pollution to enter into the stream in the absence of mitigation. The removal of soil from the site could lead to silt build up in the existing drainage network and the surface water drainage of which leads to the Walkinstown Stream.<br>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 in the adjacent watercourse. 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. Contaminated wastewater from onsite toilets could cause localised pollution. |

| Table 6. Potential for adverse effects on the qualifying interests and conservation objectives of Natura 2000 sites | | |
|---|---|---|
| Natura 2000 Site | Qualifying Interests | Potential for Adverse Effects |
| | Sanderling (*Calidris alba*) [A144]<br>Dunlin (*Calidris alpina*) [A149]<br>Black-tailed Godwit (*Limosa limosa*) [A156]<br>Bar-tailed Godwit (*Limosa lapponica*) [A157]<br>Curlew (*Numenius arquata*) [A160]<br>Redshank (*Tringa totanus*) [A162]<br>Turnstone (*Arenaria interpres*) [A169]<br>Black-headed Gull (*Chroicocephalus ridibundus*) [A179]<br>Wetland and Waterbirds [A999] | Impacts on the SPA from upstream sources have the potential to directly impact on the qualifying interests of the SPA in the absence of mitigation measures. In the absence of mitigation measures there is the potential to impact on the distribution number and range of the following qualifying interests due to the potential for water pollution:<br>• Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]<br>• Shelduck (*Tadorna tadorna*) [A048]<br>• Teal (*Anas crecca*) [A052]<br>• Pintail (*Anas acuta*) [A054]<br>• Shoveler (*Anas clypeata*) [A056]<br>• Oystercatcher (*Haematopus ostralegus*) [A130]<br>• Golden Plover (*Pluvialis apricaria*) [A140]<br>• Grey Plover (*Pluvialis squatarola*) [A141]<br>• Knot (*Calidris canutus*) [A143]<br>• Sanderling (*Calidris alba*) [A144]<br>• Dunlin (*Calidris alpina*) [A149]<br>Mitigation measures are required to remove the potential of impacts on the SPA from the indirect pathways via the Walkinstown Stream. |
| **North-West Irish Sea SPA** | A065]<br>Red-throated Diver (*Gavia stellata*) [A001]<br>Great Northern Diver (*Gavia immer*) [A003]<br>Fulmar (*Fulmarus glacialis*) [A009]<br>Manx Shearwater (*Puffinus puffinus*) [A013]<br>Cormorant (*Phalacrocorax carbo*) [A017]<br>Little Tern (*Sterna albifrons*) [A195]<br>Kittiwake (*Rissa tridactyla*) [A188]<br>Black-headed Gull (*Chroicocephalus ridibundus*) [A179]<br>Common Gull (*Larus canus*) [A182] | Works on site, dust, and surface water runoff in addition to truck movements during construction may lead to silt or contaminated materials from the site entering the Walkinstown Stream. If on-site concrete production is required or cement works are carried out in the vicinity of drains or the Walkinstown Stream, there is potential for contamination of the watercourses. The construction of the proposed development may have a significant impact on the water quality of the stream, which will then outfall to the North-West Irish Sea SPA. There is potential for accidental pollution to enter into the stream in the absence of mitigation. The removal of soil from the site could lead to silt build up in the existing drainage network and the surface water drainage of which leads to the Walkinstown Stream.<br><br>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 in the adjacent watercourse. 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. Contaminated wastewater from onsite toilets could cause localised pollution.<br><br>Impacts on the SPA from upstream sources have the potential to directly impact on the qualifying interests of the SPA in the absence of mitigation measures. In the absence of mitigation measures there is the potential to impact on the distribution number and range of the following qualifying interests due to the potential for water pollution: |

| Table 6. Potential for adverse effects on the qualifying interests and conservation objectives of Natura 2000 sites | | |
|---|---|---|
| Natura 2000 Site | Qualifying Interests | Potential for Adverse Effects |
| | Lesser Black-backed Gull (*Larus fuscus*) [A183]<br>Herring Gull (*Larus argentatus*) [A184]<br>Roseate Tern (*Sterna dougallii*) [A192]<br>Arctic Tern (*Sterna paradisaea*) [A194]<br>Puffin (*Fratercula arctica*) [A204]<br>Razorbill (*Alca torda*) [A200]<br>Guillemot (*Uria aalge*) [A199]<br>Little Gull (*Hydrocoloeus minutus*) (A862) | • Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]<br>• Oystercatcher (*Haematopus ostralegus*) [A130]<br>• Ringed Plover (*Charadrius hiaticula*) [A137]<br>• Grey Plover (*Pluvialis squatarola*) [A141]<br>• Knot (*Calidris canutus*) [A143]<br>• Sanderling (*Calidris alba*) [A144]<br>• Dunlin (*Calidris alpina*) [A149]<br>• Bar-tailed Godwit (*Limosa lapponica*) [A157]<br>• Redshank (*Tringa totanus*) [A162]<br>• Black-headed Gull (*Chroicocephalus ridibundus*) [A179]<br>• Roseate Tern (*Sterna dougallii*) [A192]<br>• Common Tern (*Sterna hirundo*) [A193]<br>• Arctic Tern (*Sterna paradisaea*) [A194]<br><br>Mitigation measures are required to remove the potential of impacts on the SPA from the indirect pathways via the Walkinstown Stream. |

***Table 7**. Mitigation measures*

| Sensitive Receptors | Potential Impacts on SPA & SAC | Mitigation Measures to Prevent Significant effects on Natura 2000 sites |
|---|---|---|
| South Dublin Bay SAC<br>North Dublin Bay SAC<br>South Dublin Bay and River Tolka Estuary SPA<br>North Bull Island SPA<br>North-West Irish Sea SPA<br>Walkinstown Stream<br>River Camac<br>River Liffey | • Habitat degradation<br>• Dust deposition<br>• Pollution<br>• Silt ingress from site runoff<br>• Downstream impacts<br>• Negative impacts on the aquatic environment, aquatic species and qualifying interests. | A CEMP has been prepared by Roughan & O'Donovan Consulting Engineers to accompany this planning application. The 'Environmental Management System' chapter outlines the following construction phase mitigation measures to prevent downstream impacts on Natura 2000 sites:<br><br>*'Water Pollution*<br><br>*Measures shall be taken to ensure that the groundwater related to the site does not come into contact with higher proportions of contaminants during the construction activity. Surface water in the vicinity ultimately discharges to Dublin Bay, which is an SPA, SAC and UNESCO Biosphere, and it is of paramount importance that these waterways are not affected during the construction works. The following avoidance measures are proposed to prevent the occurrence of any pollution incidents:*<br>• *Throughout all stages of the construction phase of the project the contractor will ensure that good housekeeping is maintained at all times and that all site personnel are made aware of the requirement to avoid water pollution of all types.*<br>• *Fuels, oils, greases and hydraulic fluids will be stored in bunded areas well away from any surface water gullies. Refuelling of machinery, etc., will be carried out in bunded areas.*<br>• *Runoff from machine service and concrete mixing areas will not enter any watercourse or groundwater.*<br>• *Areas for the stockpiling of materials will be kept to a minimum size, well away from any watercourse or permeable ground. It is noted that there is extremely limited scope for the stockpiling of materials on site.*<br>• *Any small short-term storage of excavated material shall be kept away from drains and shall be covered with high grade plastic in order to prevent runoff from entering groundwater.*<br>• *An emergency plan to deal with accidental spills within the confines of the site, and always at a safe distance from the surface water sewerage network, will be drafted with the inclusion of the relevant stakeholder contact details.*<br>• *Any water collected in excavations will be treated as contaminated material and pumped into the foul runoff system or removed from site in tankers until the surface water infrastructure is complete, flow controls installed and inspected. Desilting and petrochemical interception of all surface runoff/pumped water will take place for the length of the construction project, using standard techniques including silt buster/silt socks, local silt traps throughout the site, etc.*<br>• *A petrochemical interceptor will be placed on the surface water network prior to discharge.*<br>• *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 surface water network. Prior to discharge of water from excavations adequate filtration and petrochemical interception will be provided to ensure no deterioration of water quality and ensure compliance with the Water Pollution Acts.*<br>• *Wastewater from the temporary staff facilities will be discharged to sealed contaminant systems, and disposed via licensed contractors.* |

| Sensitive Receptors | Potential Impacts on SPA & SAC | Mitigation Measures to Prevent Significant effects on Natura 2000 sites |
|---|---|---|
| | | • *The pouring of concrete, sealing of joints, application of water-proofing paint or protective systems, curing agents, etc will be completed in the dry to avoid pollution of the freshwater environment. Method statements for these activities will be agreed prior to commencement.*<br><br>*Air and Dust*<br>*Dust is a nuisance and can be damaging to humans, machinery, plants and animals. All workers on site are to consider the nuisance caused by the impacts of dust. The effects of dust will be minimised using the following techniques;*<br>• *Avoid creating unnecessary dust.*<br>• *Cover materials which could create dust when windy.*<br>• *Dampen down dust in operations which create dust.*<br>• *Ensure that vehicles leaving site do not leave mud on the road.*<br><br>*Waste Management*<br>*The proper management and handling of waste on site is essential to ensure that pollution and increased levels of contamination are minimised. Effective management of waste on site will consist of the following measures;*<br>• *Closed skip containers.*<br>• *Non dumping/littering policy on site.*<br>• *Waste segregation.*<br>• *Regular clean up of the site.*<br>• *Careful handling and transportation to avoid damage to raw materials.*<br>• *Efficient ordering.*<br><br>*Noise & Vibration*<br>*Noise will be generated from excavation works, from delivery vehicles and from concreting operations. Noise hoarding will be erected around noisy equipment /activities where necessary.*<br>*A noise and vibration control management plan shall be prepared by the contractor and shall be submitted in writing to South Dublin County Council's air quality monitoring and noise control department for approval in advance of the works commencing. The restrictions of the noise and vibration control management plan will include:*<br>*1) Contractor to comply with all prevailing legislative requirements;*<br>*2) All plant to comply with all prevailing legislative requirements, CE marked, and maintained and tested accordingly;*<br>*3) All plant and machinery to be switched off when not in use;*<br>*4) Noise and vibration limits to be prescribed in construction contract, and monitoring to be implemented at sensitive receptors. Management plans to be prepared for addressing any exceedances;*<br>*5) Ensure plant and equipment have properly operating silencers / mufflers;*<br>*6) Consider the location of noisy plant in order to minimise nuisance to nearby houses, motorists, and wildlife;* |

| Sensitive Receptors | Potential Impacts on SPA & SAC | Mitigation Measures to Prevent Significant effects on Natura 2000 sites |
|---|---|---|
| | | *7) Specific measures to be included to monitor noise and vibration during granite excavation works, and the same noise and vibration limits will apply.*<br><br>*Light Pollution*<br>*Lighting shall be focussed and controlled during the construction phase.'*<br><br>In addition, the following mitigation will be in place:<br><br>**Construction Phase Mitigation**<br>• A project ecologist will be appointed to oversee works and will approve drainage during construction.<br>• Local watercourses and drains will be protected from dust, silt and surface water throughout the works.<br>• Local silt traps established throughout site.<br>• Mitigation measures on site include dust control, stockpiling away from watercourse and drains<br>• Stockpiling of loose materials will be kept to a minimum of 40m from watercourses and drains.<br>• Stockpiles and runoff areas following clearance will have suitable barriers to prevent runoff of fines into the drainage system and watercourses.<br>• 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.<br>• 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.<br>• Stockpiles and runoff areas following clearance will have suitable barriers to prevent runoff of fines into the drainage system and watercourses.<br>• Fuel, oil and chemical storage will be sited within a bunded area. A risk-based approach will be taken.<br>• Bunds will be kept clean and spills within the bund area will be cleaned immediately to prevent groundwater contamination.<br>• During the construction works silt traps will be put in place in the vicinity of all runoff channels of the stream to prevent sediment entering the watercourse.<br>• Petrochemical interception and bunds in refuelling area<br>• Maintenance of any drainage structures (e.g. de-silting operations) will not result in the release of contaminated water to the surface water network.<br>• During the works, silt traps will be put in place<br>• No discharges will be to the watercourse during and post works. Silt traps established throughout site including a double silt fence between the site and the watercourse. |

| Sensitive Receptors | Potential Impacts on SPA & SAC | Mitigation Measures to Prevent Significant effects on Natura 2000 sites |
|---|---|---|
| | | • Sufficient onsite cleaning of vehicles prior to leaving the site and on nearby roads, will be carried out, particularly during groundworks.<br>• The Site Manager will be responsible for the pollution prevention programme and will ensure that at least daily checks are carried out to ensure compliance. A record of these checks will be maintained.<br>• The site compound will include a dedicated bund for the storage of dangerous substances including fuels, oils etc. Refuelling of vehicles/machinery will only be carried out within the bunded area.<br>• A project ecologist will be appointed and be consulted in relation to all onsite drainage during construction works.<br>• Dewatering of excavations may be necessary. Appropriate monitoring of groundwater levels during site works will be undertaken. Standard construction phase filtering of surface water for suspended solids will be carried out. Unfiltered surface water discharges or runoff are not permitted from the site into the watercourse during the works.<br>• Concrete trucks, cement mixers or drums/bins are only permitted to wash out in designated wash out area greater than 50m from sensitive receptors including drains and drainage ditches.<br>• Abstraction of water from watercourses will not to be permitted.<br>• Spill containment equipment shall be available for use in the event of an emergency. The spill containment equipment shall be replenished if used and shall be checked on a scheduled basis.<br>• Materials, plant and equipment shall be stored in the proposed site compound location;<br>• Plant and equipment will not be parked within 50m of the watercourse at the end of the working day;<br>• Hazardous liquid materials or materials with potential to generate run-off shall not be stored within 50m of the watercourse.<br>• All oils, fuels and other hazardous liquid materials shall be clearly labelled and stored in an upright position in an enclosed bunded area within the proposed development site compound. The capacity of the bunded area shall conform with EPA Guidelines – hold 110% of the contents or 110% of the largest container whichever is greater;<br>• Drip trays will be turned upside down if not in use to prevent the collection of rainwater;<br>• Waters collected in drip trays will 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;<br>• Plant and equipment to be used during works, will be in good working order, fit for purpose, regularly serviced/maintained and have no evidence of leaks or drips;<br>• No plant used shall cause a public nuisance due to fumes, noise, and leakage or by causing an obstruction;<br>• Re-fuelling of machinery, plant or equipment will be carried out in the site compound as per the appointed Construction Contractor re-fuelling controls;<br>• 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.<br><br>**Operational Phase Mitigation** |

| Sensitive Receptors | Potential Impacts on SPA & SAC | Mitigation Measures to Prevent Significant effects on Natura 2000 sites |
|---|---|---|
| | | • A project ecologist will be appointed to oversee completion of all landscape and drainage works.<br>• The foul and surface water drainage systems will be assessed by the project ecologist. |

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

A robust series of mitigation measures are proposed. These would ensure that surface water runoff from the proposed works site is clean, uncontaminated and that dust from the works would not significantly impact on the Walkinstown Stream/River Camac. It should be noted that the early implementation of ecological supervision on site will be at the initial mobilisation and enabling works. This is seen as an important element to the project, particularly in relation to the implementation of surface water runoff mitigation strategies.

With the successful implementation of the mitigation measures to limit surface water impacts on the Walkinstown Stream, including mitigation/supervision, no significant impacts are foreseen from the construction works of the proposed project. Residual impacts of the proposed project will be localised to the immediate vicinity of the proposed works and would not impact on the integrity of downstream Natura 2000 sites.

The construction and operational mitigation proposed for the development satisfactorily addresses the mitigation of potential impacts on South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, North Bull Island SPA and North-West Irish Sea SPA, through the application of the standard construction phase controls as outlined above, which are included in the CEMP. In particular, the mitigation measures to ensure compliance with Water Pollution Acts, Inland Fisheries Ireland guidance and to prevent silt and pollution entering the Walkinstown Stream will satisfactorily address the potential impacts on downstream biodiversity and Natura 2000 sites within Dublin Bay. Adverse effects on the integrity of Natura 2000 sites having regard to their conservation objectives can be objectively ruled out following the implementation of the mitigation measures outlined above.

It is essential that these measures outlined are complied with, to ensure that the proposed development does not have “downstream” environmental impacts. These measures are to protect the surface water, which is the primary vector of impacts from the site, and to ensure that any European Sites are not impacted during construction and operation.

## Conclusion

Following the implementation of the mitigation measures outlined, the construction and operation of the proposed development will not result in direct, indirect or in-combination effects which would have the potential to adversely affect the qualifying interests/special conservation interests of the European sites screened in for NIS with regard to the range, population densities or conservation status of the habitats and species for which these sites are designated (i.e. conservation objectives).

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

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

## Data used for the AA Screening/NIS

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

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