ALTEMAR

Marine & Environmental Consultancy

# Dundrum Village Strategic Housing Development (SHD)

# Appropriate Assessment Screening & Natura Impact Statement

**23rd March 2022**

**Prepared by:** Bryan Deegan (MCIEEM) of Altemar Ltd.
**On behalf of:** Dundrum Retail GP DAC (acting for and on behalf of Dundrum Retail Limited Partnership)

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| Document Control Sheet | | | |
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# Table of Contents

# 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 the proposed Dundrum Village Strategic Housing Development (SHD), Main Street, Dundrum, Dublin 14.

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

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 Natura 2000 site and considers whether, on the basis of objective scientific evidence, it can be concluded that there are not likely to be 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.

It should be noted that this AA Screening and NIS are supported by an Environmental Impact Assessment Report and Outline Construction Management Plan.

## Background to Altemar Ltd.

Since its inception in 2001, Altemar has been delivering ecological and environmental services to a broad range of clients. Operational areas include residential, infrastructural, renewable, oil & gas, private industry, local authorities, EC projects and State/semi-State Departments. Bryan Deegan is the managing director of Altemar. Bryan is an environmental scientist and marine biologist with 27 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.

## Background to the Appropriate Assessment

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

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)[1]:

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

*Assessment procedures of plans or projects likely to affect 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;*

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

- *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.*
- *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 and Natura Impact Statement was undertaken in accordance with the European Commission Methodological Guidance on the provision of Article 6(3) and 6(4) of the 'Habitats' Directive 92/43/EEC (EC, 2001), Part XAB of the Planning and Development Act 2000, as amended, in addition to the December 2009 publication from the Department of Environment, Heritage and Local Government; 'Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities' and the European Communities (Birds and Natural Habitats) Regulations 2011. In order to comply with the above Guidelines and legislation, the Appropriate Assessment process has been 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 proposed development is not directly connected with, or necessary to, the management of European sites.

## Description of the Proposed Project

Dundrum Retail GP DAC (acting for and on behalf of Dundrum Retail Limited Partnership) intend to apply for planning permission for a proposed Strategic Housing Development at Dundrum, Co. Dublin.

The development comprises 11no. urban blocks arranged around the central pedestrian spine and a series of 4 courtyards corresponding to 4 separate "zones" or character areas.

The buildings range in height from 4-5 storeys on Main Street to 9-16 storeys to the Dundrum Bypass.

The development will consist of c. 881no. residential units. This development also includes a foodstore, retail, café/restaurant and a creche are at ground floor level, fronting Main Street, as detailed in the Schedule of Accommodation included with this submission.

The development will include the demolition of all existing structures on the site with the exception of No.'s 1-3 Glenville Terrace which will be refurbished.

Vehicular and cycle parking is provided below podium with visitor cycle parking spaces in the public realm. Vehicular access to serve the proposed development will be provided via Dundrum Bypass. The existing vehicular entrance on Main Street will be closed.

Pedestrian connections and linkages are proposed through the site, forming connections that are not currently possible from within the site to Main Street; to the south via Church Square and Ballinteer Road Bridge; and west via the proposed new Sweetmount Bridge connecting Main Street to the residential communities west of the Bypass.

The proposed site outline, location, layout plan, and site wide contextual elevations (Main Street and Dundrum Bypass) are demonstrated in Figures 1 - 6.

## Landscape

A Landscape Design Statement has been prepared by Niall Montgomery + Partners Landscape Architects to accompany this planning application. This document outlines the following landscape design for the proposed development:

'*The landscape design will enforce a human scale through tree planting, a variety of spatial typologies and creation of safe, comfortable open spaces for users to explore. The landscape over time will mature, and so the spaces will be dynamic, opening and closing to reveal secrets and celebrate place.*'

The proposed landscape masterplan is demonstrated in Figure 7.

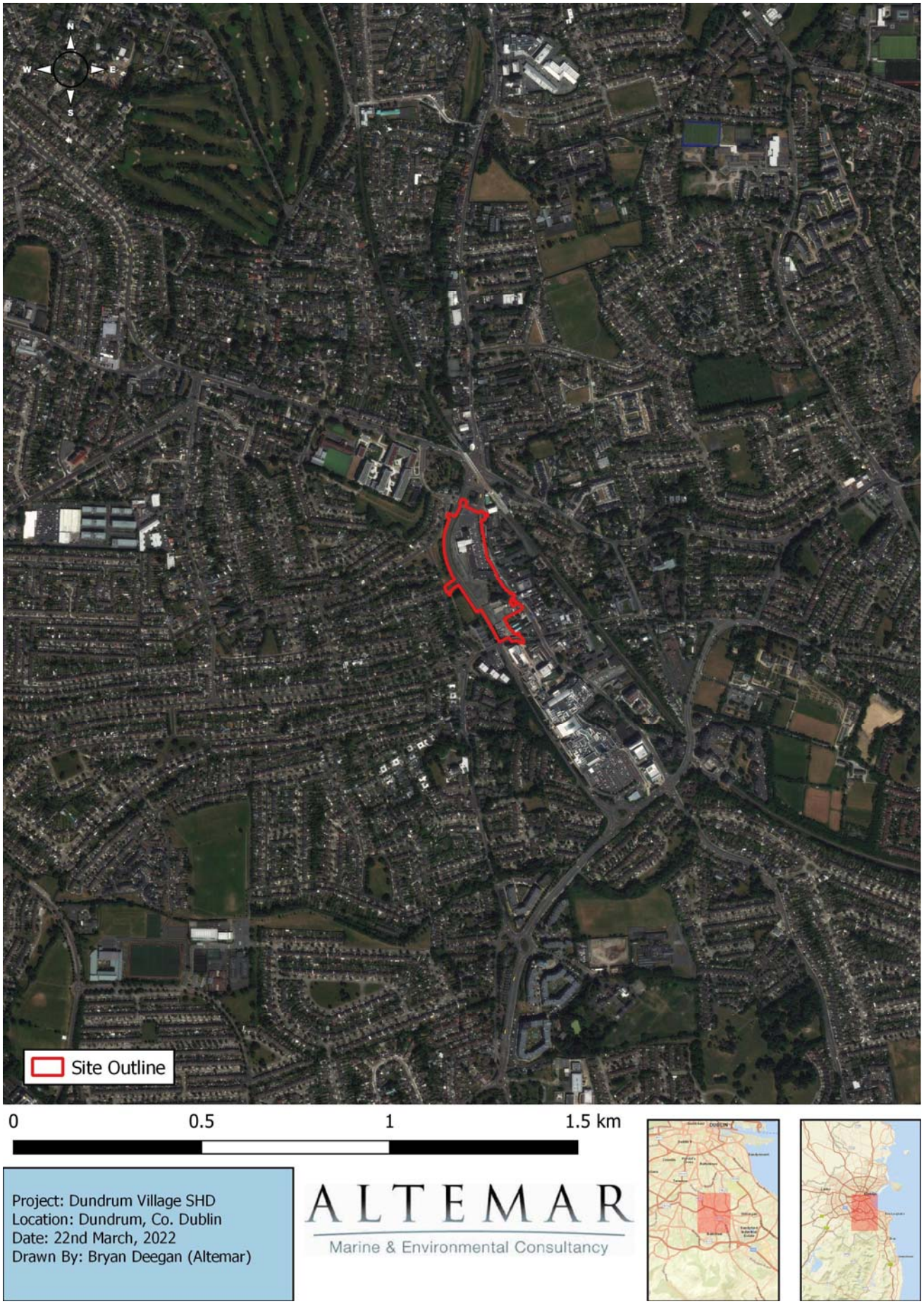



***Figure 1.*** *Site outline and location context.*

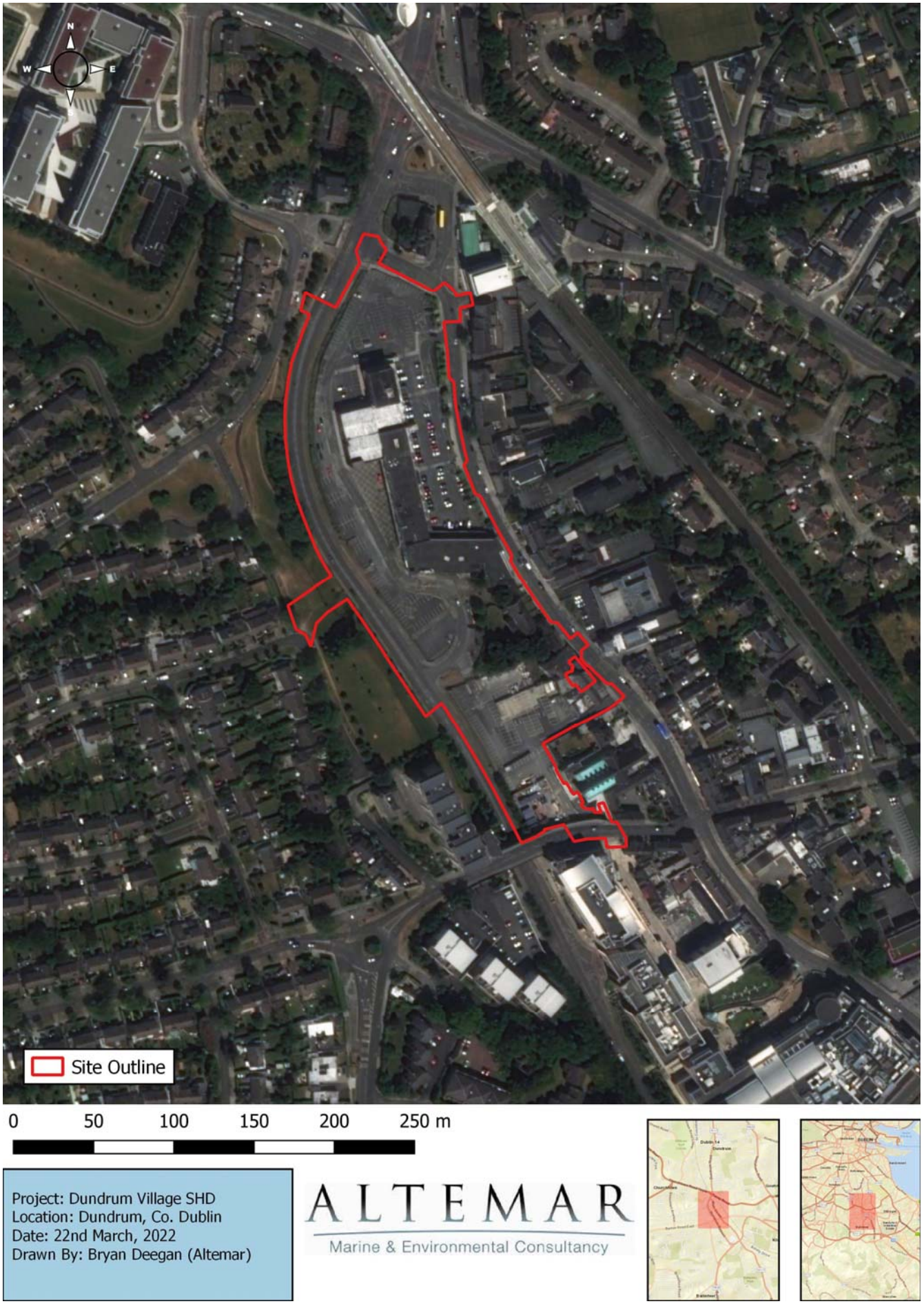



***Figure 2**. Site outline*

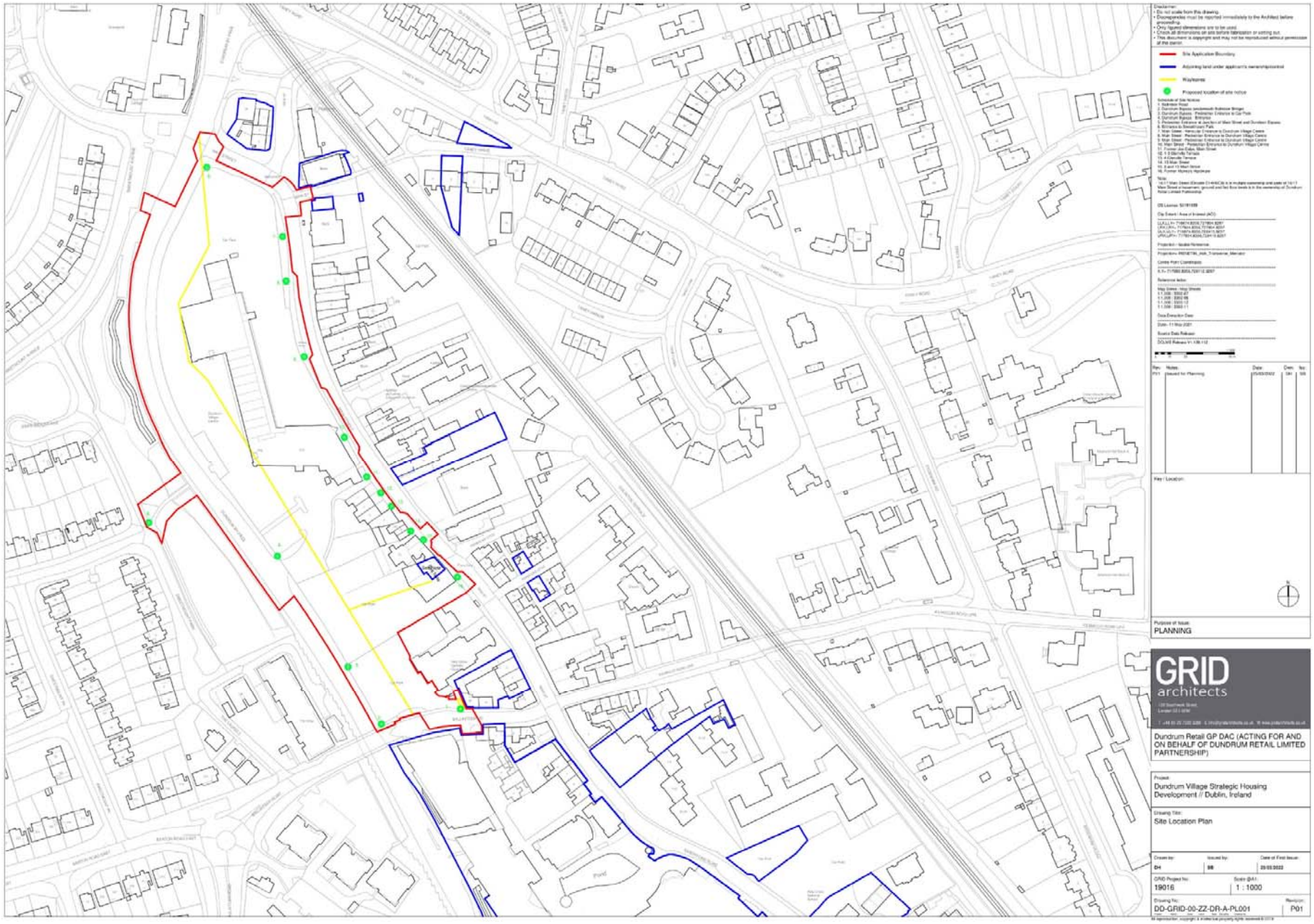



***Figure 3.*** *Site location plan*


***Figure 4.*** *Proposed site layout plan*


***Figure 5.*** *Site wide contextual elevations – Main Street*


***Figure 6.*** *Site wide contextual elevations – Dundrum Bypass*


***Figure 7.*** *Proposed landscape masterplan*

## Drainage

An Engineering Services Report has been prepared by T.J. O'Connor & Associates to accompany this planning application. This report outlines the following drainage strategy for the proposed development at Dundrum, Co. Dublin:

**Surface Water Drainage**

In relation to the existing surface water drainage network, this report outlines the following:

*''There is no attenuation of surface water on any part of the site at present. The existing surface water drainage system drains to the Slang River and to the 300mm dia combined sewer which extends through the length of the site from north to south. The drainage of the roof of the existing Village Shopping Centre discharges to this combined sewer. Approximately 1.677hA of paved surface within the site is connected to this combined sewer, comprising 0.488hA of roof area and 1.189hA of paved surfaces (comprising bituminous macadam and footpaths). A further 0.1hA of unpaved areas (grass and undergrowth) located upslope of paved areas and within the site may also runoff onto areas connected to the combined sewer. Approximately 0.889hA of impervious area within the existing sites discharges to the Slang Stream, without attenuation.'*

In relation the proposed surface water drainage design, this report outlines the following:

*'The proposed development incorporates a 2-Stage treatment approach as described below.*

***Stage One** of the treatment approach includes:*

- *Extensive Green Roofs for the management of surface water runoff from >60% of the roof areas.*
- *Blue roofs to ventilation and plant areas at roof level*
- *Intensive green roofs (substrate > 200mm depth) to soft landscaped areas at roof terrace and podium level, comprising lawns, and deeper planted areas. Standard GR2 of the Green Roof Policy in Appendix 7.2 of the draft County Development Plan 2022-2028 has also been satisfied with over 80% of roof area, comprising intensive green roof and permeable paving at podium and parts of the roof terrace levels along with extensive green roof to parts of all 11 no Blocks 1in the development. The extent of green roof provision is shown at drawing no 16031- TJOC-00-XX-DR-C-1081, included at Appendix C.*
- *Hard landscaping with subbase storage at roof terrace level and at podium level, together with areas of hard landscaping at grade outside of podium at Ground Floor level*
- *Infiltration planters and tree pits external to buildings at ground floor and lower ground floor levels*
- *A dry swale located between Phase 1 and the Bypass at the northern end of the site*

***Stage Two** of the treatment approach includes:*

- *Attenuation storage, comprising of Stormtech units, sized for a criterion of no flooding in a 1 in 30-year Storm Event, including a 20% allowance for Climate Change.*
- *Class I bypass petrol interceptors located upstream of the outlet flow control on the north and south catchments.*
- *Outlet flow control to the Slang stream in the form of Hydrobrakes to limit the discharge rate to greenfield runoff rate.*
- *2 No outfalls are proposed serving the southern and northern parts of the site respectively. A minor catchment is also identified serving approach to and the western end of the footbridge over the Dundrum Bypass. The paved area within the western catchment will drain to a bioretention area in Sweetmount Park. The catchment boundaries are shown on the drawing No. 16031-TJOC-00-XX-DR-C-1081 Proposed Surface Water Drainage layout.*

*The 2-Stage approach has the benefit that runoff from carparking and hardstanding areas is filtered through the permeable paving at podium level and subbase storage at Podium and lower ground floor level, thereby contributing to the interception of silts and hydrocarbons, thereby reducing the potential for contamination.'*

This report continues:

*'All Stormtech systems will be installed with an isolator row and inspection port to permit routine inspection and maintenance of the system.*

*At podium level, surface water runoff from the hard standing areas will discharge to a nofines aggregate subbase beneath the paving. Soft landscaping at podium level will generally have a depth of 450mm or greater*

*and is therefore classed as intensive green roof based on the definitions in the DLRCC Green Roof Policy (Appendix 7.2 of the DLRCC Draft Development Plan 2022-2028). The filtration effect of the runoff passing through permeable paving, soft landscaping and open coarse graded crushed rock sub-base will trap any silts and protect against any contamination at the points of discharge to the receiving water.'*

**Foul Water Drainage**

In relation to the existing foul drainage network, this report outlines the following:

'*The existing sewerage system serving the area in the vicinity of the proposed development can be summarised as follows:*

a) *300mm diameter sewer flowing northwards along the original valley of the Slang Stream behind the Catholic Church and through the Dundrum Shopping Centre Car Park. This sewer receives connections from the existing development on the west side of Dundrum Main Street and from the existing Shopping Centre. It originates at Ballinteer Road Bridge and runs on the east side of the Dundrum Bypass within the site as far as the west side of Waldemar Terrace from where it continues northwards alongside the Slang stream. This sewer receives surface water and foul sewer flows from the Shopping Centre, Church and other properties fronting onto Main St*
b) *450mm diameter sewer serving the Ballinteer Road which increases to 675mm diameter at the point where it turns to run northwards along the west side of the Main Street Bypass. This sewer continues northwards on the west side of the Slang stream as far as Taney Cross where it continues northwest alongside the LUAS light rail line.*
c) *225mm dia sewer from Castlebrook estate and a 450 mm dia sewer from the Dundrum Town Centre are connected to the southern end of the 675mm dia sewer between Dundrum Castle and Ballinteer Road.*
d) *225mm dia sewer in the Sandyford Road and Dundrum Main Street originates near the Irish Marketing Institute in Balally. This sewer has a branch connection from the Upper Kilmacud Road and it continues down Dundrum Main Street. Problems have been experienced with this sewer in Dundrum Main Street as a result of ingress of surface runoff from the older housing on the Upper Kilmacud Road. It would appear that none of the buildings fronting the west side of the Main Street north of Ballinteer Road are connected to this sewer. The Sandyford Rd sewer was diverted along the Ballinteer Rd and into the 675mm dia Main St Bypass foul sewer when the Dundrum Town Centre Scheme was constructed.*
e) *225mm dia combined sewer in Taney Road which continues northwards along the Dundrum Road as a 300mm dia sewer.'*

In relation to the proposed foul drainage network, this report outlines the following:

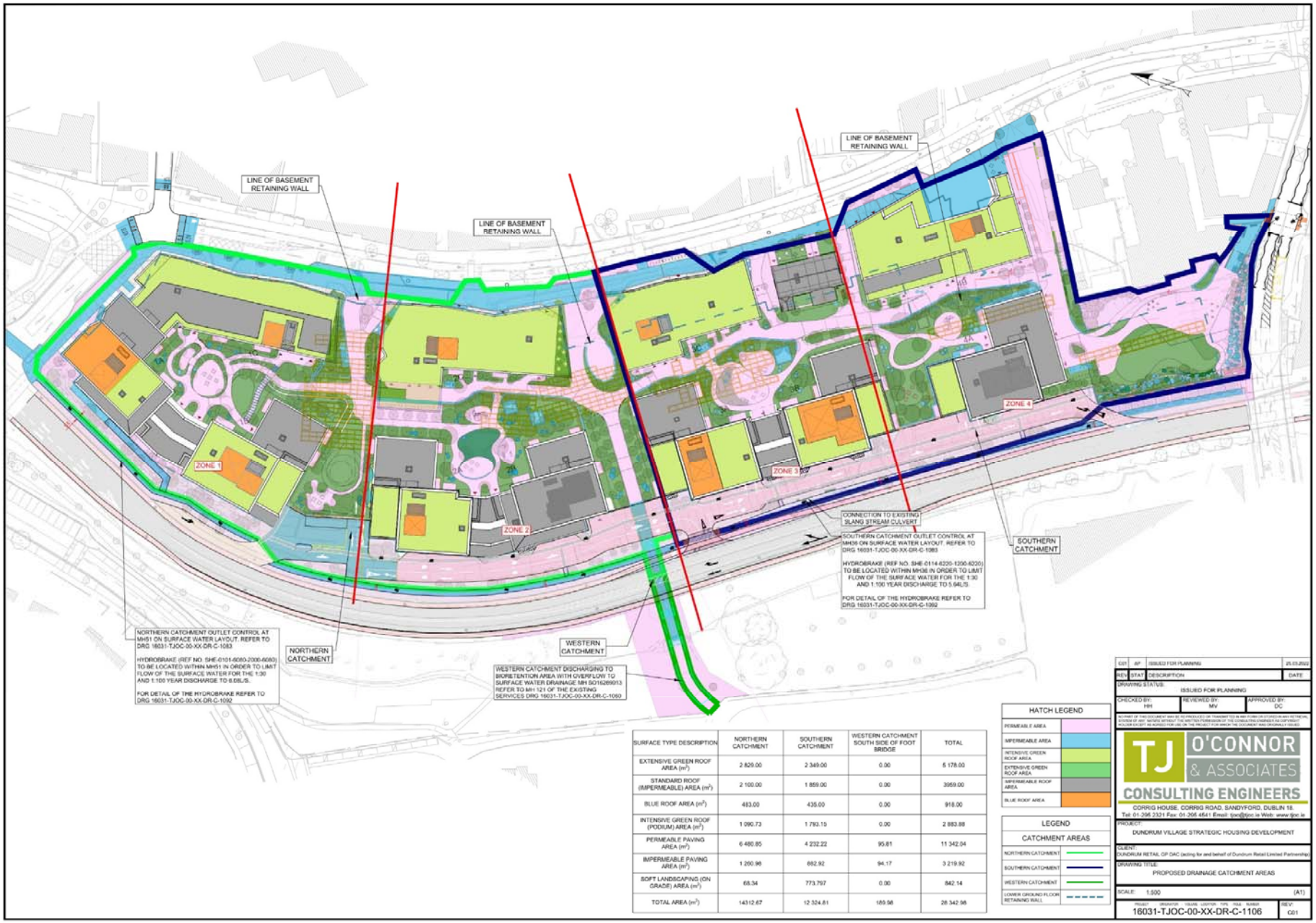
*'The foul sewerage will discharge from each of the four phases of the development to a proposed trunk foul sewer within the proposed service road. The existing 300mm diameter combined sewer through the development site will be abandoned as far as the site boundary as shown in plan at drawing no 16031-TJOC-00-XX-DR-C-1060 at Appendix B.*

*The existing foul connections from the Holy Cross Church and the Parochial House will be diverted to the foul sewer network serving the proposed development as shown at Drg and 16031-TJOC-00-XX-DR-C-1066 at Appendix I. The transfer agreement relating to the lands to the west of the Parochial House and the Holy Cross Church provided for this easement and obligation to provide service connections to these properties.'.*

*'The proposed development will be provided with separate foul and surface water drainage systems. Surface water from the proposed development will pass through a SuDS management train and be attenuated prior to discharge to the Slang stream and to ground through infiltration. All existing surface water drainage connections within the site to the sewers on the IW combined sewer network will be abandoned when the development is constructed.*

*A wastewater pumping station incorporating balancing storage will be constructed on the proposed sewer network. This pumping station will limit discharges into the Irish Water network to 2 DWF corresponding to 10.42l/s as required by the Irish Water Confirmation of Feasibility.'*

The proposed drainage catchment area is demonstrated in Figure 8. The proposed combined services layout (lower ground floor, podium) is demonstrated in Figures 9 & 10. The proposed roof surface water drainage layout is demonstrated in Figure 11. The proposed foul pumping station is demonstrated in Figure 12.




| SURFACE TYPE DESCRIPTION | NORTHERN CATCHMENT | SOUTHERN CATCHMENT | WESTERN CATCHMENT SOUTH SIDE OF FOOT BRIDGE | TOTAL |
|---|---|---|---|---|
| EXTENSIVE GREEN ROOF AREA ($m^2$) | 2 829.00 | 2 349.00 | 0.00 | 5 178.00 |
| STANDARD ROOF (IMPERMEABLE) AREA ($m^2$) | 2 100.00 | 1 859.00 | 0.00 | 3959.00 |
| BLUE ROOF AREA ($m^2$) | 483.00 | 435.00 | 0.00 | 918.00 |
| INTENSIVE GREEN ROOF (PODIUM) AREA ($m^2$) | 1 090.73 | 1 793.15 | 0.00 | 2 883.88 |
| PERMEABLE PAVING AREA ($m^2$) | 6 480.85 | 4 232.22 | 95.81 | 11 342.04 |
| IMPERMEABLE PAVING AREA ($m^2$) | 1 200.98 | 882.92 | 94.17 | 3 219.92 |
| SOFT LANDSCAPING (ON GRADE) AREA ($m^2$) | 68.34 | 773.797 | 0.00 | 842.14 |
| TOTAL AREA ($m^2$) | 14312.67 | 12 324.81 | 189.98 | 28 342.98 |

***Figure 8.*** *Proposed drainage catchment area*

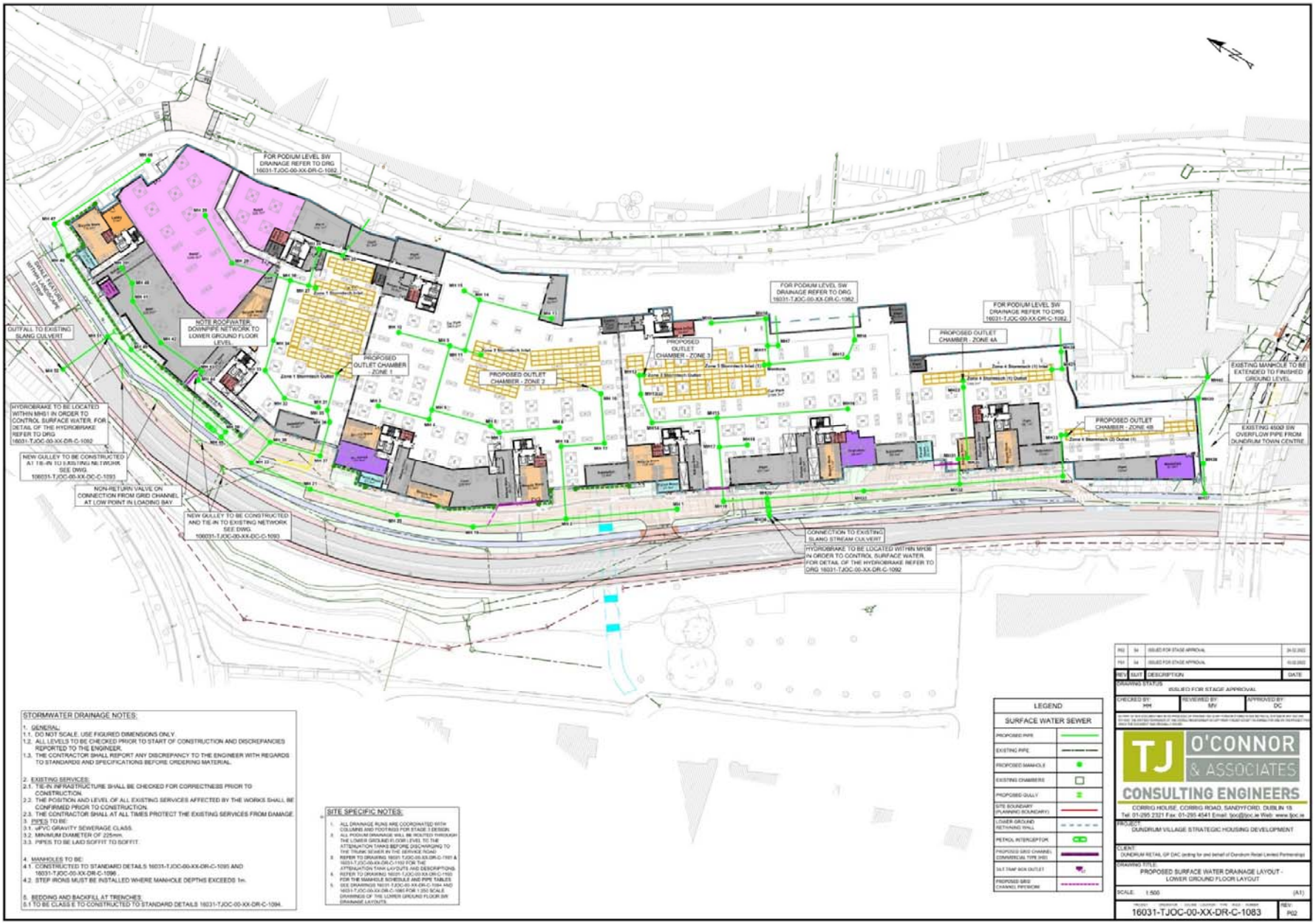



***Figure 9.*** *Proposed combined services layout – lower ground floor*

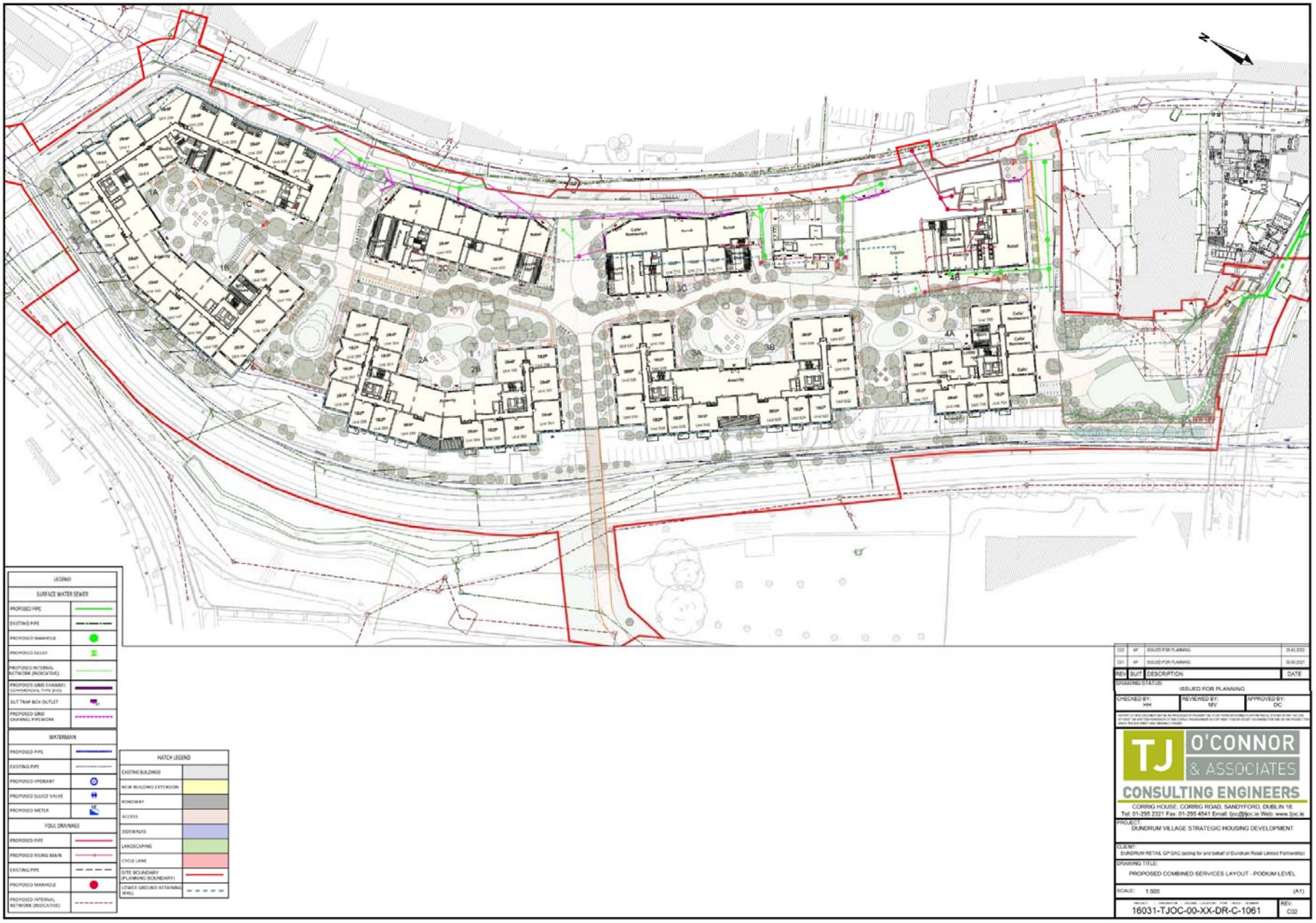



***Figure 10.*** *Proposed combined services layout – podium level*

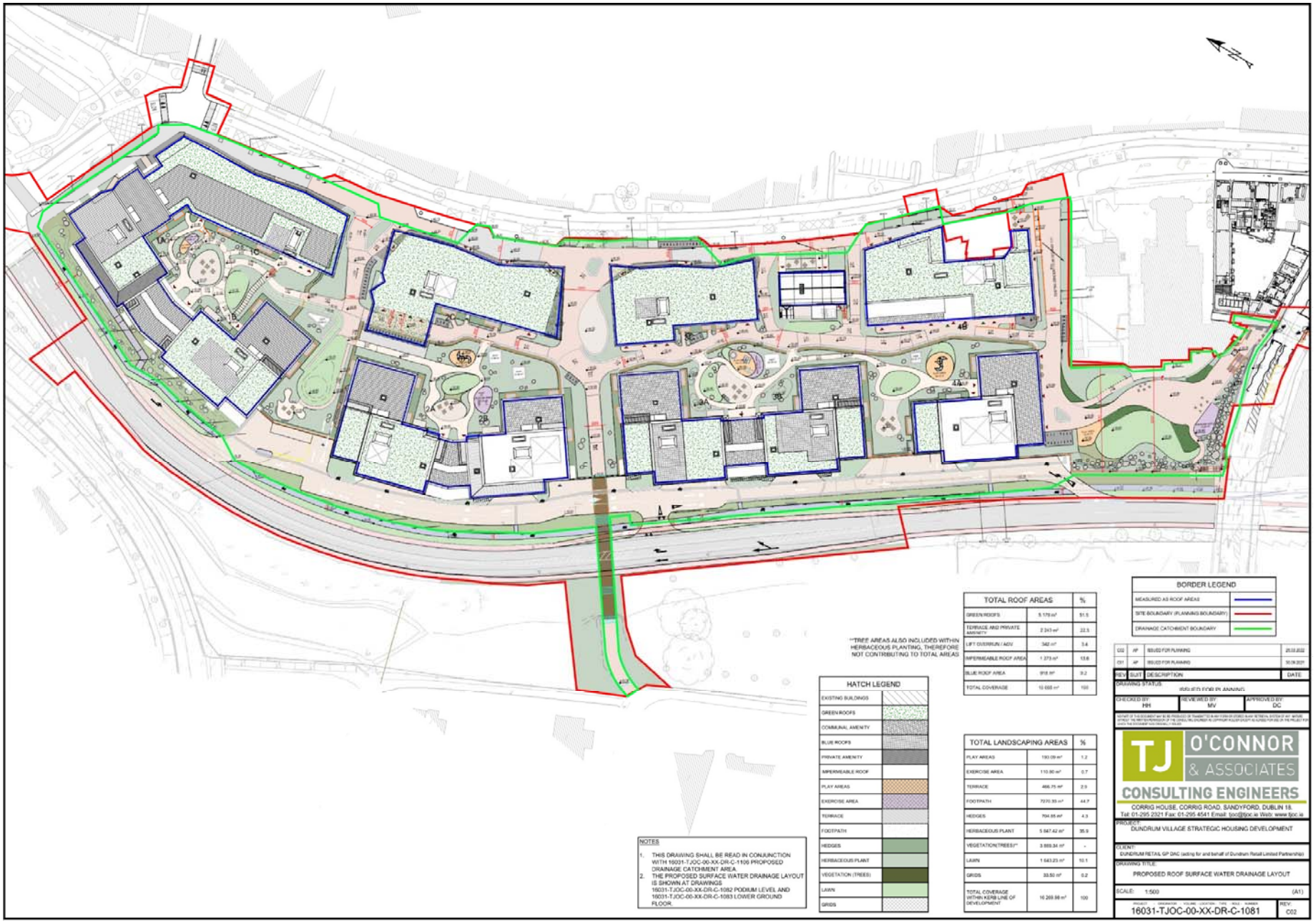



***Figure 11.*** *Proposed roof surface water drainage layout*

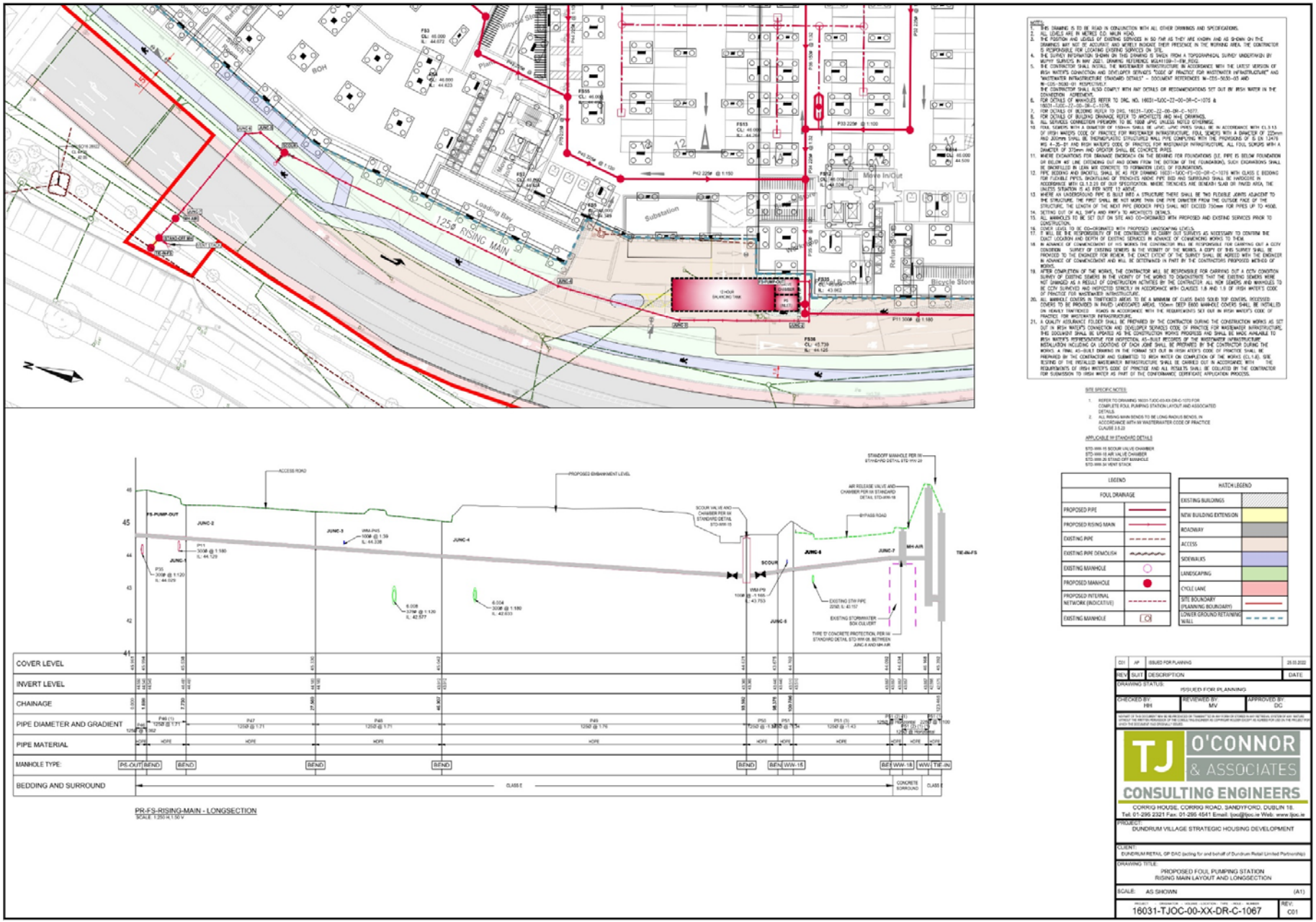



***Figure 12.*** *Proposed foul pumping station, rising main layout, and long section*

## Flood Risk Assessment

A Site-Specific Flood Risk Assessment has been prepared by T.J. O'Connor & Associates to accompany this planning application. This report concludes with the following:

'*A flood risk assessment of the proposed development at the Old Shopping centre and adjacent lands at Dundrum, referred to as the Dundrum Village SHD, was undertaken in accordance with the "Planning System and Flood Risk Management Guidelines, 2009."*

*The proposed development comprises residential development with commercial development at Ground and Lower Ground floor levels. Commercial development is classed as "Less Vulnerable" development and is appropriate to be located in Flood Zone B without a requirement for a Justification test. Residential development is classed as "Highly Vulnerable" development and is appropriate in Flood Zone B if the requirements of a Justification Test are met.*

*The flood risk assessment concluded that:*

*1) Part of the site is located within the extents of the 0.1% AEP flood extent for fluvial flooding.*

*2) The site is considered at moderate risk from pluvial flooding in its current state, and this is mitigated by design in the proposed development.*

*3) The site is not at risk from coastal flooding.*

*4) The development is classed as "Highly Vulnerable" due to the residential component.*

*5) The site is assessed to be partially within Flood Zone B, comprising two areas at the northern extremity of the site and alongside part of the western boundary with the Dundrum Bypass area around the entrance to the red carpark.*

*6) The flood risk to the site is from fluvial and pluvial flooding.*

*7) Flood risk is managed by substituting "Less Vulnerable" development at the lower level of the development and by locating "Highly Vulnerable" development at the upper levels, well above potential flood level.*

*8) The Planning and Flood Risk Management Guidelines class "Less Vulnerable development" as appropriate within the Flood Zone B. DLRCC has confirmed that the MTC zoning has passed the Justification test at a plan making level. This Site Specific Flood risk Assessment demonstrates that the proposed development*

*satisfies the Justification Test at a Development Management Level.*

*9) Levels within the Lower Ground Floor level of the development are proposed to be in excess of 300mm above the predicted 0.1% AEP fluvial level in the area providing a freeboard against flooding even in an event of this probability. The proposed lower ground floor level is also above the level of Taney Cross which is the ultimate controlling factor for flooding in the vicinity of the site. Dundrum Village SHD Site Specific Flood Risk Assessment*

*10) The proposed development incorporates SUDS features in the form of a SuDS management train. These features will attenuate flood flows, control the rate of discharge from the site, eliminate surface water runoff from the site entering the combined sewer network and reduces the risk of downstream flooding.*

*11) Compensatory flood storage is provided for the 0.1%AEP event within the service road and in a reservoir beneath the lower ground floor level in Zone 1 in order to avoid any increased risk to flooding to neighbouring properties or downstream of the site.*

*12) The inclusion of green roofs and tree pits will significantly reduce the annual runoff from the site.*

*13) Implementing SUDS will benefit the existing sewer network by providing surplus capacity to other areas as a result of the SUDS features controlling the flows and runoff generated during a flood event.*

*14) The proposed development will incorporate flood relief in the form of an overland flood flow path to facilitate the resolution of historic flooding issues outside of the site at the Ballinteer Road.*

*15) The proposed development will incorporate emergency access and escape routes to provide for safe access and egress and for access for emergency services in the*

*0.1% AEP event and any residual risk which may exist.*

*16) The proposed development will not increase flood risk to other properties downstream of the site. The implementation of SUDS will help to reduce flood risk to downstream areas by attenuating the flows that would have otherwise discharged directly into the storm network.*

*17) The proposed development will not create new areas of potential hazard to life within or in the vicinity of the site. Locations previously identified as representing a high hazard to life, in the north east corner of the site and at the low point in the car park to the west of the existing shopping centre will no longer exist as a result of the proposed development.*

*The SSFRA is in accordance with the requirements for a Flood Risk Assessment as per Section 10.7 and Section 12.9.6 and 12.10.1 of the draft DLRCC County Development Plan 2022 – 2028, the accompanying Appendix 7, Sustainable Drainage System Measures, and Appendix 16, Strategic Flood Risk Assessment, and the guidance in Appendix A of the Planning System and Flood Risk Management Guidelines for Local Government (2009).*

*The proposed development and the associated flood risk management proposals are consistent with the planning authority's policies and objectives for flood management, SUDS, green infrastructure and climate change as set out in Chapter 4 of the Strategic Dundrum Village SHD Site Specific Flood Risk Assessment Flood Risk Assessment at Appendix 16, draft Dun Laoghaire Rathdown County Development Plan 2022– 2028, having regard to the flood zone mapping included in that plan.*'

## Proposed Construction Phasing

An Outline Construction Management Plan has been prepared by TJ O'Connor & Associates Consulting Engineers to accompany this planning application. Appendix A of this report contains the following drawings that outline the proposed phasing of the construction stage of the proposed development. The proposed construction layout plan is demonstrated in Figure 13. The proposed phasing plan (lower ground floor and podium level) are demonstrated in Figures 14 & 15.

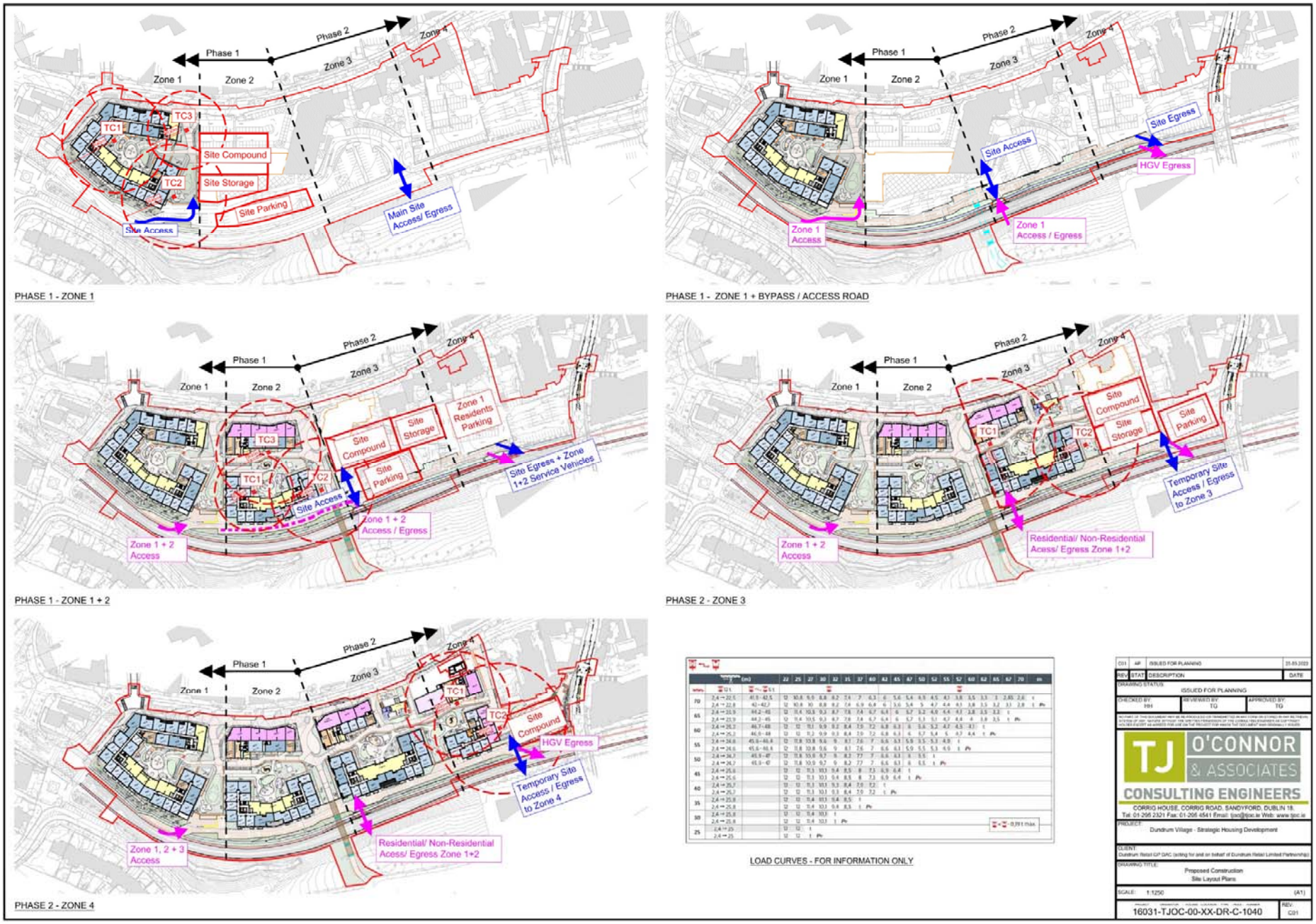



***Figure 13.*** *Proposed construction site layout plan*

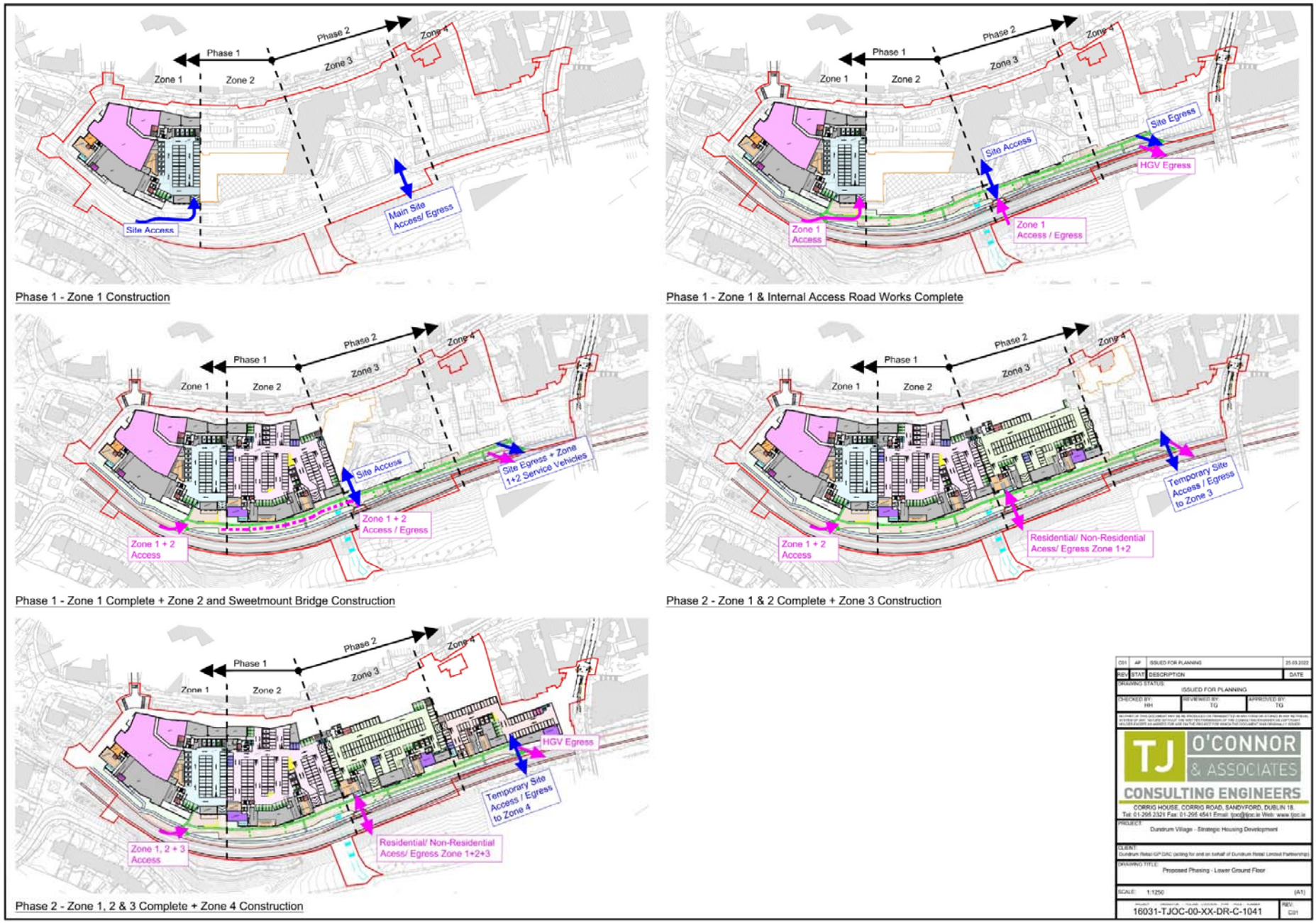



***Figure 14.*** *Proposed phasing – lower ground floor*

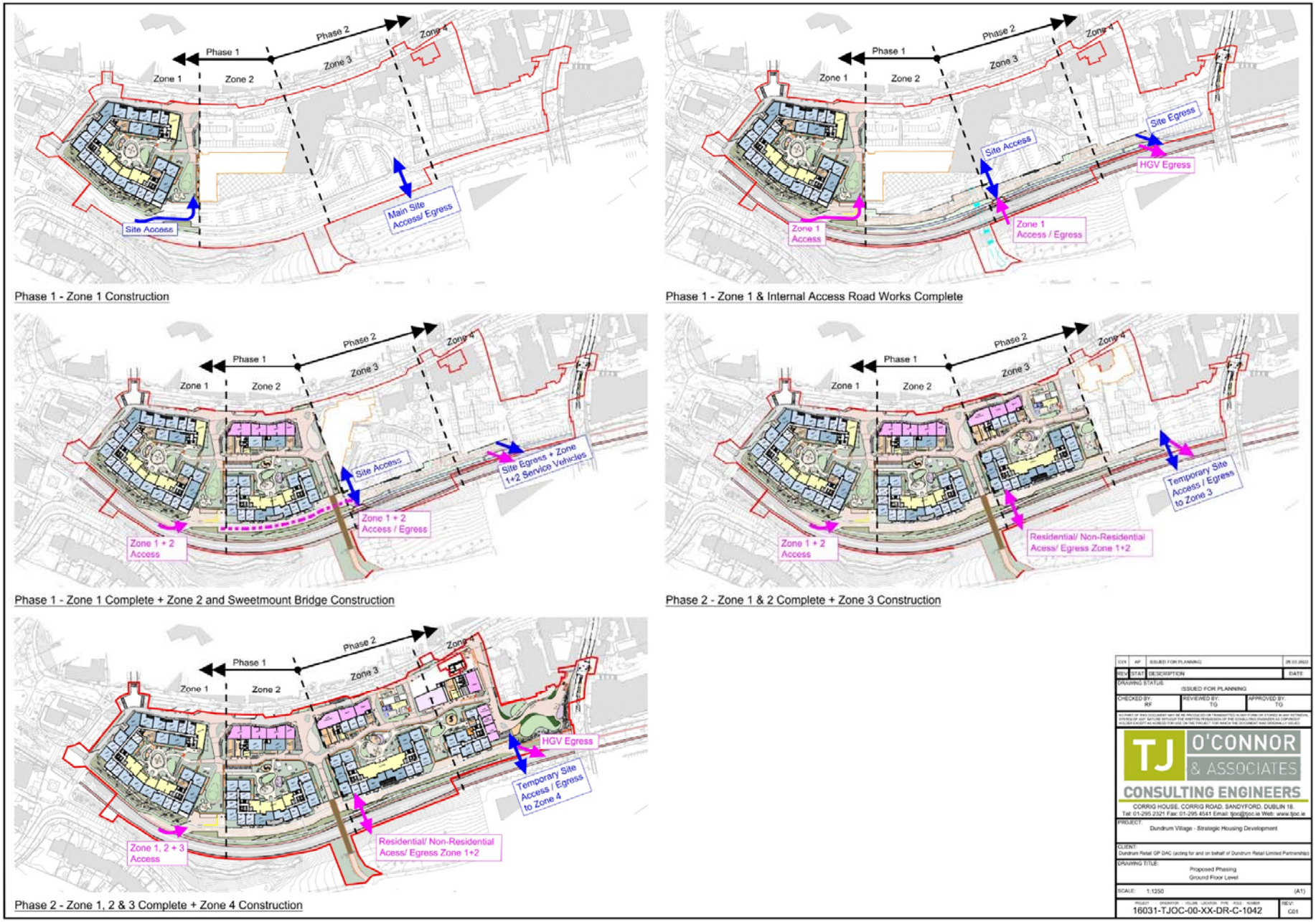



***Figure 15.*** *Proposed phasing – podium level*

## Identification of European Sites / Sites Potentially Affected

The proposed development site is not within a European site. As outlined in Office of the Planning Regulator (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 3.7 km away (South Dublin Bay and River Tolka Estuary SPA). It should also be noted that the proposed project will be on a phased basis and therefore will be developed over several years, which would lengthen the time at which impacts would be foreseen.

The proposed development site is a brownfield site located within the suburbs of Dublin. A culverted section of the River Slang passes through and alongside the proposed development site. This watercourse outfalls to the River Dodder, which in turn outfalls to the River Liffey, and ultimately outfalls to the marine environment at Dublin Bay. Given the nature of the proposed demolition and site clearance works, the scale of the proposed development, and the fact that a section of the River Slang passes through the subject site, out of an abundance of caution it is considered that the Zone of Influence (ZOI) of the proposed project extends beyond the site outline to include Natura 2000 sites located within Dublin Bay due to the direct hydrological pathway. In the absence of mitigation, there is the potential for dust and contaminated surface water runoff to enter the River Slang with the potential for downstream impacts on Natura 2000 sites located within Dublin Bay i.e. South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, and North Bull Island SPA.

In the interest of carrying out a thorough assessment in line with both the Habitats Directive and the precautionary principle, the area of assessment was expanded beyond the ZoI 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 16 & 17. Watercourses, waterbodies, SACs and SPAs within 5km are demonstrated in Figures 18 - 21. Due to the significant dilution effects within the marine environment, it is considered that no Natura 2000 sites with a direct or indirect pathway are noted beyond 15km and no impacts are foreseen on Natura 2000 sites beyond 15km.

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

| Site Code | NATURA 2000 Site | Distance | Direct Pathway |
|---|---|---|---|
| Special Areas of Conservation | | | |
| IE000210 | South Dublin Bay SAC | 3.8 km | **Yes** |
| IE002122 | Wicklow Mountains SAC | 6.2 km | No |
| IE000206 | North Dublin Bay SAC | 8.6 km | **Yes** |
| IE001209 | Glenasmole Valley SAC | 8.7 km | No |
| IE000725 | Knocksink Wood SAC | 8.7 km | No |
| IE003000 | Rockabill to Dalkey Island SAC | 10.2 km | No |
| IE000713 | Ballyman Glen SAC | 10.3 km | No |
| IE000202 | Howth Head SAC | 13.1 km | No |
| IE000199 | Baldoyle Bay SAC | 14 km | No |
| IE000714 | Bray Head SAC | 14.5 km | No |
| Special Protection Area | | | |
| IE004024 | South Dublin Bay and River Tolka Estuary SPA | 3.7 km | **Yes** |
| IE004040 | Wicklow Mountains SPA | 6.4 km | No |
| IE004006 | North Bull Island SPA | 8.7 km | **Yes** |
| IE004172 | Dalkey Islands SPA | 10 km | No |
| IE004016 | Baldoyle Bay SPA | 14 km | No |

*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** | | | |
| IE0000210 | South Dublin Bay SAC | **IN** | **Conservation Objectives**<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>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>The proposed development site is located within a suburban environment at a minimum of 3.8 km from this SAC (Figure 16).<br><br>Given the proposed demolition, localised contamination on site, large scale reprofiling works, the scale of the proposed development including temporal extent of works, the fact that a section of the River Slang traverses through the subject site, and that it is proposed to direct surface water drainage to the River Slang, it is considered that there is a direct hydrological connection to this SAC and mitigation measures are required to ensure that dust and contaminated surface water do not enter the proximate River Slang. There is an indirect pathway to the site via the foul water network and Ringsend WwTP.<br><br>Mitigation measures will need to be in place to prevent silt, dust, contamination and petrochemicals from entering the River Slang, which has a direct pathway to this SAC. For these reasons (mitigation measures are required for the prevention of significant effects on a Natura 2000 site), 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 are likely - Natura Impact Statement Required.** |
| IE0002122 | Wicklow Mountains SAC | **OUT** | **Conservation Objectives**<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>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] |

| NATURA Code | Name | Screened IN/OUT | Details/Reason |
|---|---|---|---|
| | | | Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*) [8110]<br>Calcareous rocky slopes with chasmophytic vegetation [8210]<br>Siliceous rocky slopes with chasmophytic vegetation [8220]<br>Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]<br>*Lutra lutra* (Otter) [1355]<br><br>**Potential Impact**<br>The proposed development site is located within a suburban environment 6.2 km from the Wicklow Mountains SAC (Figure 16). This SAC is located inland at a higher elevation. Based on objective scientific evidence there is no likelihood of significant effects on the Natura 2000 site. There is no direct or indirect hydrological or ecological pathway from the proposed development site to the terrestrial SAC located at a higher elevation.<br><br>No potential impact is foreseen. There is no direct or indirect pathway from the proposed site to this SAC. The construction and operation of the proposed development will not impact on the conservation interests of the site.<br>**No significant effects are likely.** |
| IE0000206 | North Dublin Bay SAC | **IN** | **Conservation Objectives**<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>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>*Petalophyllum ralfsii* (Petalwort) [1395]<br><br>**Potential Impact**<br><br>The proposed development site is located within a suburban environment at a minimum of 8.6 km from this SAC (Figure 16).<br><br>Given the proposed demolition, localised contamination on site, large scale reprofiling works, the scale of the proposed development including temporal extent of works, the fact that a section of the River Slang traverses through the subject site, and that it is proposed to direct surface water drainage to the River Slang, it is considered that there is a direct hydrological connection to this SAC and mitigation measures are required to ensure that dust and contaminated surface water do not enter the proximate River Slang. There is an indirect pathway to the site via the foul water network and Ringsend WwTP.<br><br>Mitigation measures will need to be in place to prevent silt, dust, contamination and petrochemicals from entering the River Slang, which has |

| NATURA Code | Name | Screened IN/OUT | Details/Reason |
|---|---|---|---|
| | | | a direct pathway to this SAC. For these reasons (mitigation measures are required for the prevention of significant effects on a Natura 2000 site), it is necessary to proceed to a NIS on the effects of the project on this site in view of its conservation objectives.<br>**Significant effects are likely - Natura Impact Statement Required** |
| IE0001209 | Glenasmole Valley SAC | **OUT** | **Conservation Objectives**<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>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>The proposed development site is located within a suburban environment 8.7 km from this SAC (Figure 16). There is no direct or indirect hydrological or ecological pathway between the proposed development and the SAC. No potential impact is foreseen. The construction and operation of the proposed development will not impact on the conservation interests of the site.<br><br>**No significant effects are likely.** |
| IE000725 | Knocksink Wood SAC | **OUT** | **Conservation Objectives**<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>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>The proposed development site is located within a suburban environment 8.7 km from this SAC (Figure 16). There is no direct or indirect hydrological or ecological pathway between the proposed development and the SAC.<br><br>No potential impact is foreseen. The construction and operation of the proposed development will not impact on the conservation interests of the site.<br><br>**No significant effects are likely.** |
| IE0003000 | Rockabill to Dalkey Island SAC | **OUT** | **Conservation Objectives**<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>Reefs [1170]<br>Phocoena phocoena (Harbour Porpoise) [1351] |

| NATURA Code | Name | Screened IN/OUT | Details/Reason |
|---|---|---|---|
| | | | **Potential Impact**<br>The proposed development site is located within a suburban environment at a minimum of 10.2 km from this SAC (Figure 16). There is no direct hydrological pathway from the proposed development site to the SAC.<br><br>Out of an abundance of caution, it is considered that there is an indirect hydrological pathway to this SAC via surface water and foul water. Given that a section of the River Slang traverses through the subject site, there is the potential for silt or pollutants to enter the marine environment. However, given the distance to this SAC (min. 10.2 km), and in the absence of mitigation measures, any silt or pollutants will settle, be dispersed, or diluted within the marine environment. No significant impacts on the qualifying interests of this SAC are foreseen. Foul water will undergo treatment in Ringsend WwTP.<br><br>No potential impact is foreseen. There is no direct pathway from this 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** |
| IE000713 | Ballyman Glen SAC | **OUT** | **Conservation Objectives**<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>Petrifying springs with tufa formation (*Cratoneurion*) [7220]<br>Alkaline fens [7230]<br><br>**Potential Impact**<br>The proposed development site is located within a suburban environment 10.3 km from this SAC (Figure 16). There is no direct or indirect hydrological or ecological pathway between the proposed development and the SAC. No potential impact is foreseen. The construction and operation of the proposed development will not impact on the conservation interests of the site.<br><br>**No significant effects are likely.** |
| IE0000202 | Howth Head SAC | **OUT** | **Conservation Objectives**<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>Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]<br>European dry heaths [4030]<br><br>**Potential Impact**<br>The proposed development site is located within a suburban environment at a minimum of 13.1 km from this SAC (Figure 16). There is no direct hydrological pathway from the proposed development site to the SAC.<br><br>Out of an abundance of caution, it is considered that there is an indirect hydrological pathway to this SAC via dust and surface water runoff. Given |

| NATURA Code | Name | Screened IN/OUT | Details/Reason |
|---|---|---|---|
| | | | that a section of the River Slang traverses through the subject site, there is the potential for silt or pollutants to enter the marine environment. However, given the distance to this SAC (min. 13.1 km), and in the absence of mitigation measures, any silt or pollutants will settle, be dispersed, or diluted within the marine environment. No significant impacts on the qualifying interests of this SAC are foreseen.<br><br>No potential impact is foreseen. There is no direct pathway from this 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** |
| IE0000199 | Baldoyle Bay SAC | **OUT** | **Conservation Objectives**<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>Mudflats and sandflats not covered by seawater at low tide [1140] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] Mediterranean salt meadows (Juncetalia maritimi) [1410]<br><br>**Potential Impact**<br>The proposed development site is located within an urban environment 14 km from this SAC (Figure 16). There is no direct hydrological pathway from the proposed development site to the SAC.<br><br>Out of an abundance of caution, it is considered that there is an indirect hydrological pathway to this SAC via dust and surface water runoff. Given that a section of the River Slang traverses through the subject site, there is the potential for silt or pollutants to enter the marine environment. However, given the distance to this SAC (min. 14 km), and in the absence of mitigation measures, any silt or pollutants will settle, be dispersed, or diluted within the marine environment. No significant impacts on the qualifying interests of this SAC are foreseen.<br><br>No potential impact is foreseen. There is no direct pathway from this 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** |
| IE000714 | Bray Head SAC | **OUT** | **Conservation Objectives**<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>Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]<br>European dry heaths [4030]<br><br>**Potential Impact** |

| NATURA Code | Name | Screened IN/OUT | Details/Reason |
|---|---|---|---|
| | | | The proposed development site is located within an urban environment 14.5 km from this SAC (Figure 16). There is no direct hydrological pathway from the proposed development site to the SAC.<br><br>Out of an abundance of caution, it is considered that there is an indirect hydrological pathway to this SAC via surface water and foul water networks. Given that a section of the River Slang traverses through the subject site, there is the potential for silt or pollutants to enter the marine environment. However, given the distance to this SAC (min. 14.5 km), and in the absence of mitigation measures, any silt or pollutants will settle, be dispersed, or diluted within the marine environment. No significant impacts on the qualifying interests of this SAC are foreseen.<br><br>No potential impact is foreseen. There is no direct pathway from this 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** | | | |
| IE0004024 | South Dublin Bay and River Tolka Estuary SPA | **IN** | **Conservation Objective**<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>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>**Potential Impact**<br><br>The proposed development site is located within an urban environment 3.7 km from this SPA (Figure 17).<br><br>Given the proposed demolition, localised contamination on site, large scale reprofiling works, the scale of the proposed development including temporal extent of works, the fact that a section of the River Slang traverses through the subject site, and that it is proposed to direct surface water drainage to the River Slang, it is considered that there is a direct hydrological connection to this SPA and mitigation measures are required to ensure that dust and contaminated surface water do not enter the proximate River Slang. There is an indirect pathway to the site via the foul water network and Ringsend WwTP.<br><br>The site is a brownfield site and is not an *exsitu* foraging habitat for the qualifying interests of this site. Following on site flightline assessment |

| NATURA Code | Name | Screened IN/OUT | Details/Reason |
|---|---|---|---|
| | | | (Appendix I) the proposed development was not observed to be on the flightlines of qualifying interests of this SPA. No impacts on flightlines of qualifying interests of this SPA are foreseen.<br><br>Mitigation measures will need to be in place to prevent silt, dust, confirmation and petrochemicals from entering the River Slang, which has a direct pathway to this SPA. For these reasons (mitigation measures are required for the prevention of significant effects on a Natura 2000 site), 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 are likely - Natura Impact Statement required**. |
| IE0004040 | Wicklow Mountains SPA | **OUT** | **Conservation Objective**<br>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.<br><br>**Qualifying Interests**<br>Merlin (Falco columbarius) [A098]<br>Peregrine (Falco peregrinus) [A103]<br><br>**Potential Impact**<br>The proposed development site is located within a suburban environment at a minimum of 6.4 km from this SPA (Figure 17). No potential impact is foreseen. There is no direct or indirect hydrological or ecological pathway between the proposed development and the SPA.<br><br>The site is a brownfield site and is not an *exsitu* foraging habitat for the qualifying interests of this site. Following on site flightline assessment (Appendix I) the proposed development was not observed to be on the flightlines of qualifying interests of this SPA. No impacts on flightlines of qualifying interests of 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 are likely.** |
| IE0004006 | North Bull Island SPA | **IN** | **Conservation Objective**<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>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] |

| NATURA Code | Name | Screened IN/OUT | Details/Reason |
|---|---|---|---|
| | | | 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>The proposed development site is located within an urban environment 8.7 km from this SPA (Figure 17).<br><br>Given the proposed demolition, localised contamination on site, large scale reprofiling works, the scale of the proposed development including temporal extent of works, the fact that a section of the River Slang traverses through the subject site, and that it is proposed to direct surface water drainage to the River Slang, it is considered that there is a direct hydrological connection to this SPA and mitigation measures are required to ensure that dust and contaminated surface water do not enter the proximate River Slang. There is an indirect pathway to the site via the foul water network and Ringsend WwTP.<br><br>The site is a brownfield site and is not an *exsitu* foraging habitat for the qualifying interests of this site. Following on site flightline assessment (Appendix I) the proposed development was not observed to be on the flightlines of qualifying interests of this SPA. No impacts on flightlines of qualifying interests of this SPA are foreseen.<br><br>Mitigation measures will need to be in place to prevent silt, dust, contamination and petrochemicals from entering the River Slang, which has a direct pathway to this SPA. For these reasons (mitigation measures are required for the prevention of significant effects on a Natura 2000 site), 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 are likely - Natura Impact Statement required**. |
| IE0004172 | Dalkey Islands SPA | **OUT** | **Conservation Objectives**<br>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.<br><br>**Qualifying Interests**<br>Roseate Tern (*Sterna dougallii*) [A192]<br>Common Tern (*Sterna hirundo*) [A193]<br>Arctic Tern (*Sterna paradisaea*) [A194]<br><br>**Potential Impact**<br>The proposed development site is located within an urban environment 10 km from this SPA (Figure 17). There is no direct hydrological pathway from the proposed development site to this SPA.<br><br>Out of an abundance of caution, it is considered that there is an indirect hydrological pathway to this SPA via surface water and foul water networks. Given that a section of the River Slang traverses through the subject site, there is the potential for silt or pollutants to enter the marine environment. However, given the distance to this SPA (min. 10 km), and in |

| NATURA Code | Name | Screened IN/OUT | Details/Reason |
|---|---|---|---|
| | | | the absence of mitigation measures, any silt or pollutants will settle, be dispersed, or diluted within the marine environment. Foul water will be treated in Ringsend WwTP. No significant impacts on the qualifying interests of this SPA are foreseen.<br><br>The site is a brownfield site and is not an *exsitu* foraging habitat for the qualifying interests of this site. Following on site flightline assessment (Appendix I) the proposed development was not observed to be on the flightlines of qualifying interests of this SPA. No impacts on flightlines of qualifying interests of this SPA are foreseen.<br><br>No potential impact is foreseen. There is no direct pathway from this site to the SPA. The construction and operation of the proposed development will not impact on the conservation interests of the site.<br><br>**No significant effects likely** |
| IE004016 | Baldoyle Bay SPA | **OUT** | **Conservation Objectives**<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>Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]<br>Shelduck (*Tadorna tadorna*) [A048]<br>Ringed Plover (*Charadrius hiaticula*) [A137]<br>Golden Plover (*Pluvialis apricaria*) [A140]<br>Grey Plover (*Pluvialis squatarola*) [A141]<br>Bar-tailed Godwit (*Limosa lapponica*) [A157]<br>Wetland and Waterbirds [A999]<br><br>**Potential Impact**<br>The proposed development site is located within an urban environment 14 km from this SPA (Figure 17). There is no direct hydrological pathway from the proposed development site to this SPA.<br><br>Out of an abundance of caution, it is considered that there is an indirect hydrological pathway to this SPA via surface water runoff. Given that a section of the River Slang traverses through the subject site, there is the potential for silt or pollutants to enter the marine environment. However, given the distance to this SPA (min. 14 km), and in the absence of mitigation measures, any silt or pollutants will settle, be dispersed, or diluted within the marine environment. No significant impacts on the qualifying interests of this SPA are foreseen.<br><br>The site is a brownfield site and is not an *exsitu* foraging habitat for the qualifying interests of this site. Following on site flightline assessment (Appendix I) the proposed development was not observed to be on the flightlines of qualifying interests of this SPA. No impacts on flightlines of qualifying interests of this SPA are foreseen.<br><br>No potential impact is foreseen. There is no direct pathway from this site to the SPA. The construction and operation of the proposed development will not impact on the conservation interests of the site.<br><br>**No significant effects likely** |

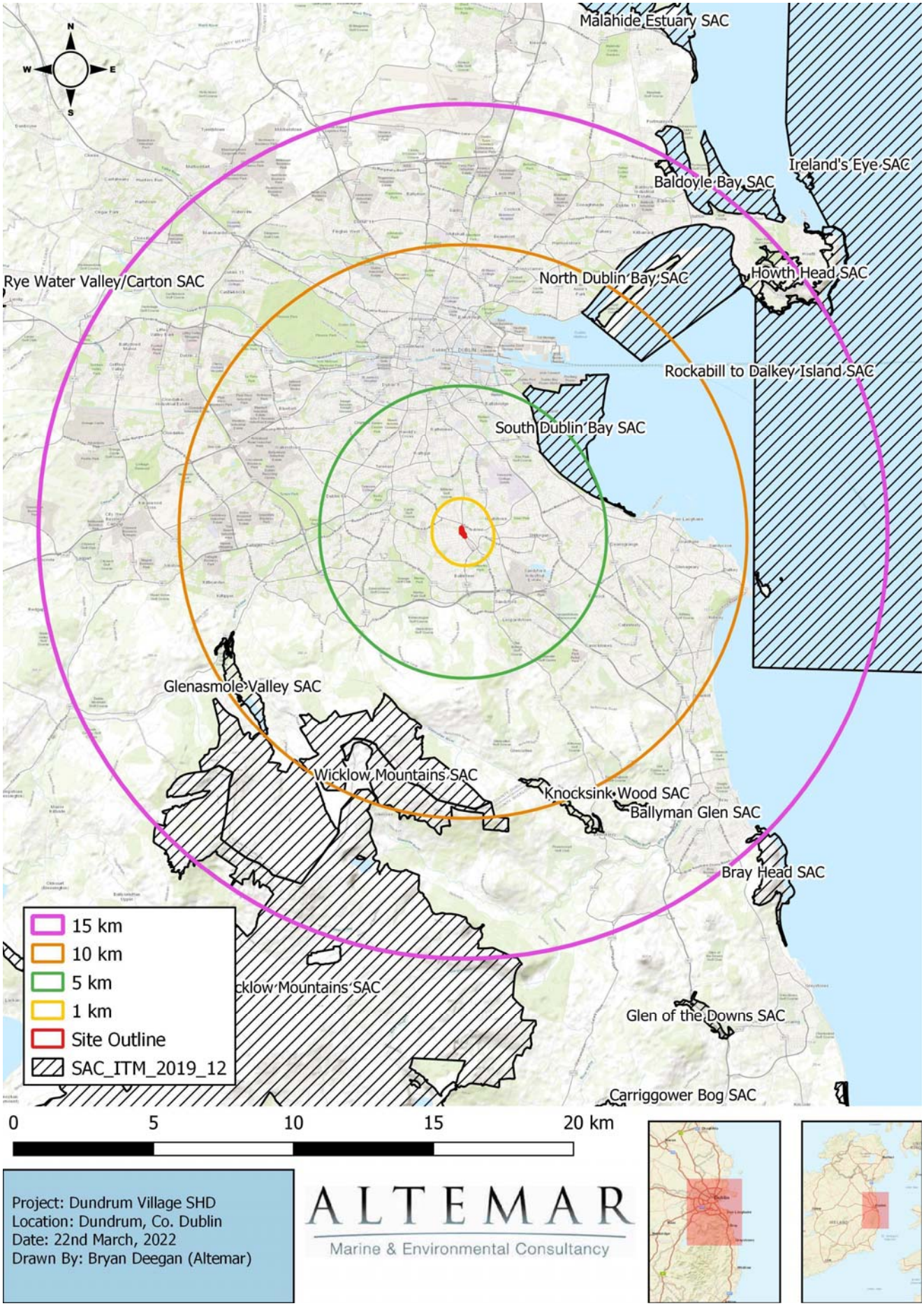



***Figure 16**. Special Areas of Conservation (SAC) within 15km of the proposed development site*

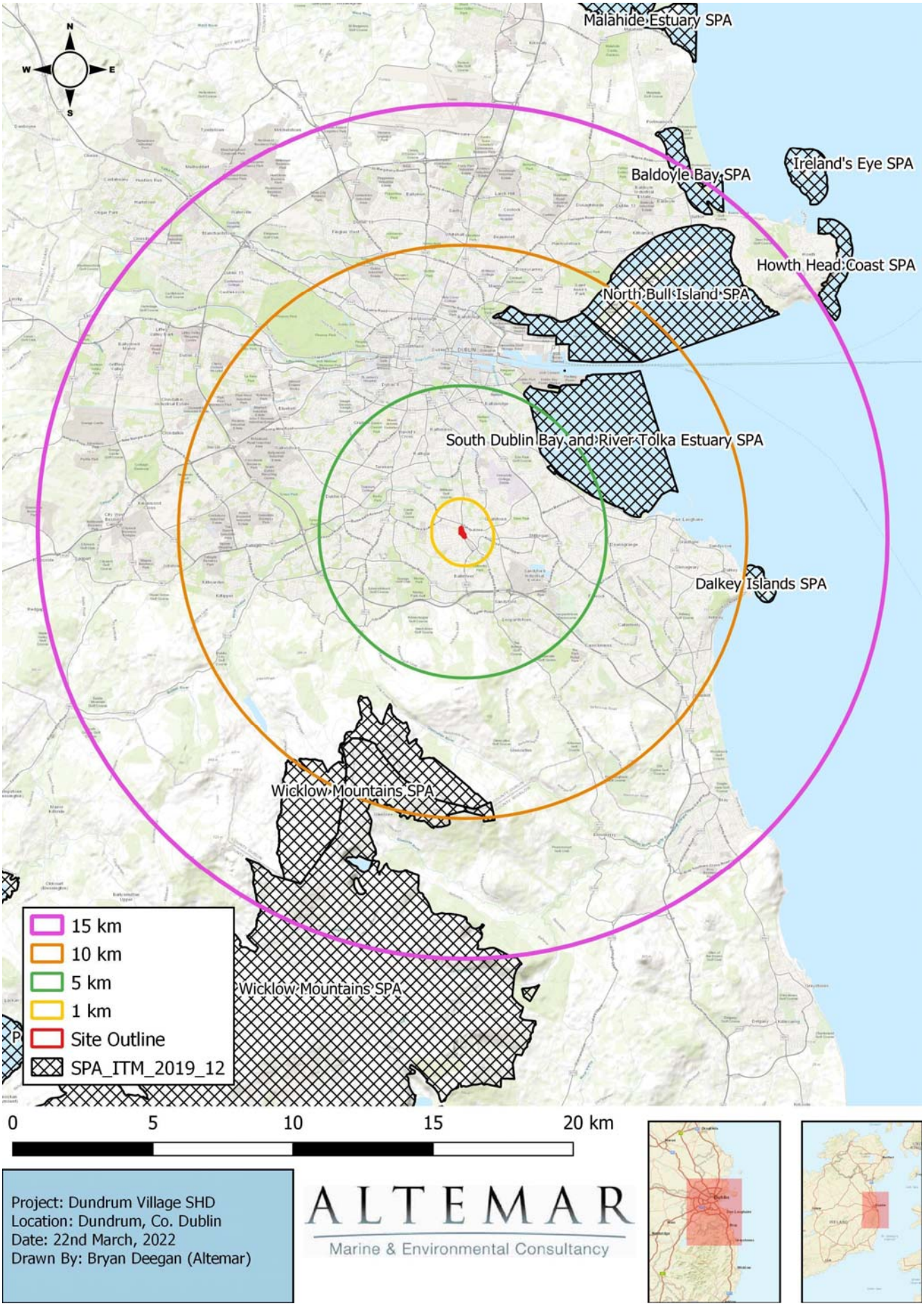



***Figure 17**. Special Protection Areas (SPA) within 15km of the proposed development site*


***Figure 18**. Waterbodies within 1km of the proposed development site (culverted River Slang in green, EPA location in blue)*

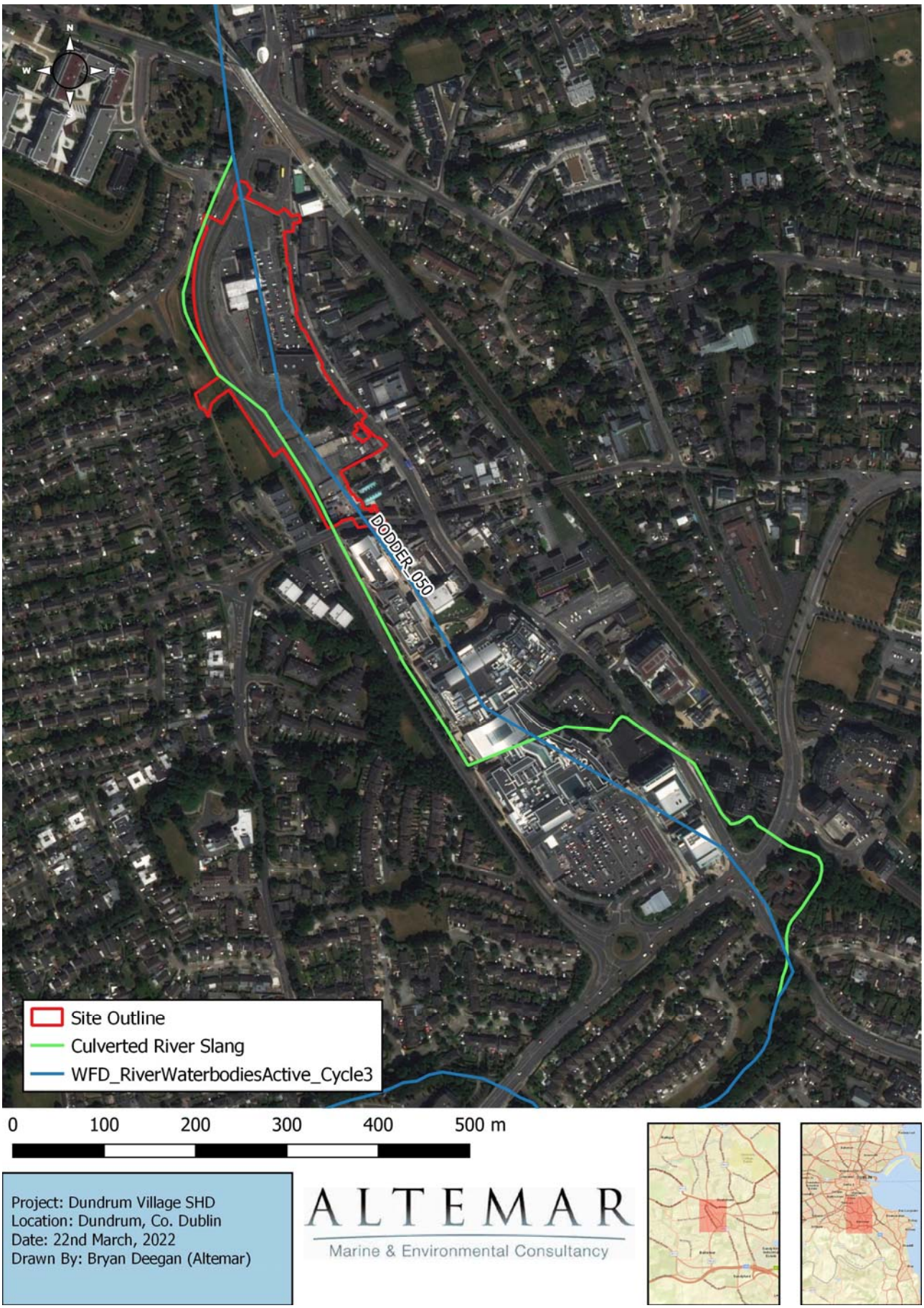



***Figure 19**. Waterbodies proximate to the proposed development site (culverted River Slang in green. EPA location in blue)*

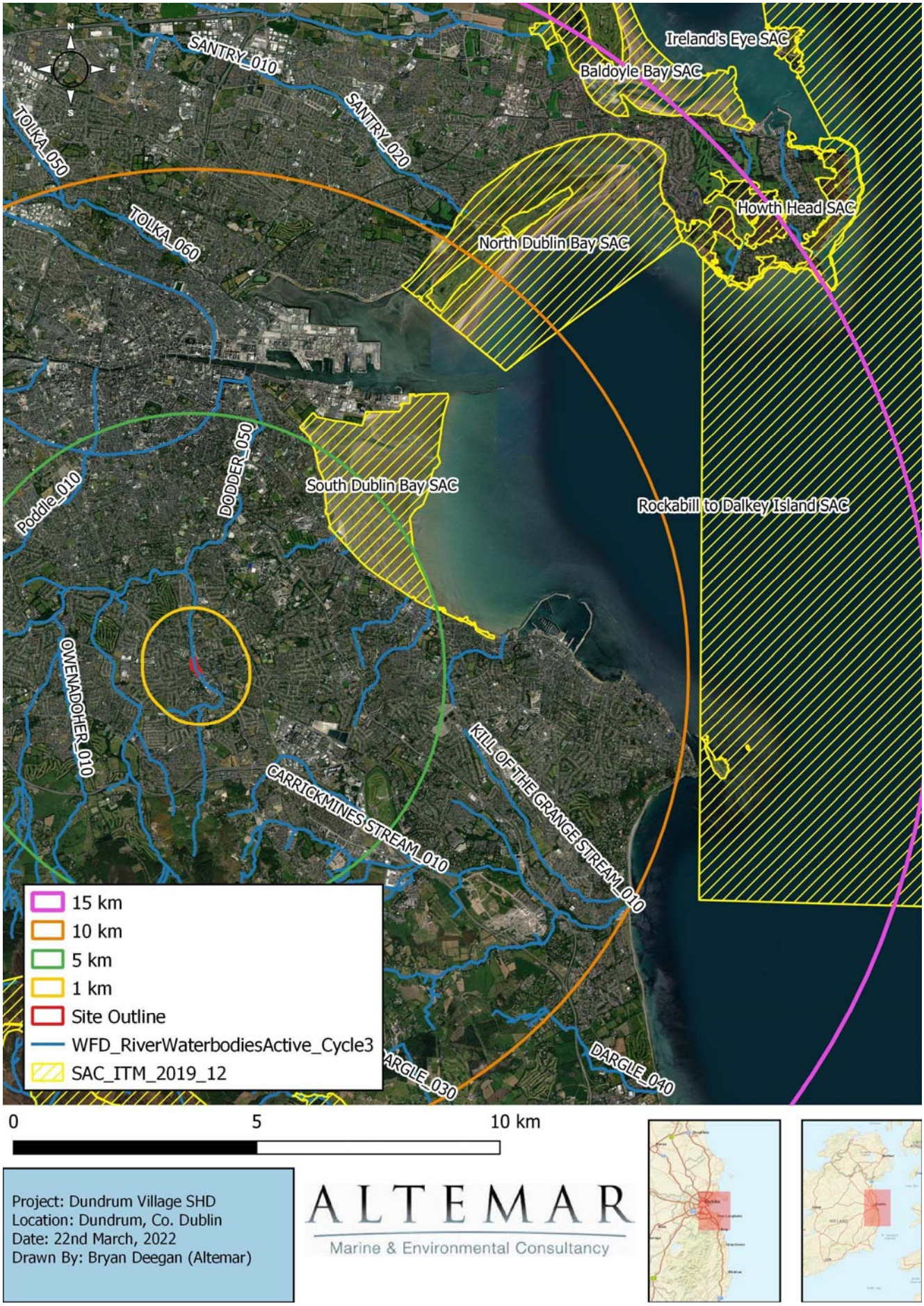



***Figure 20**. Waterbodies proximate to the subject site and SACs within 15km of the subject site*

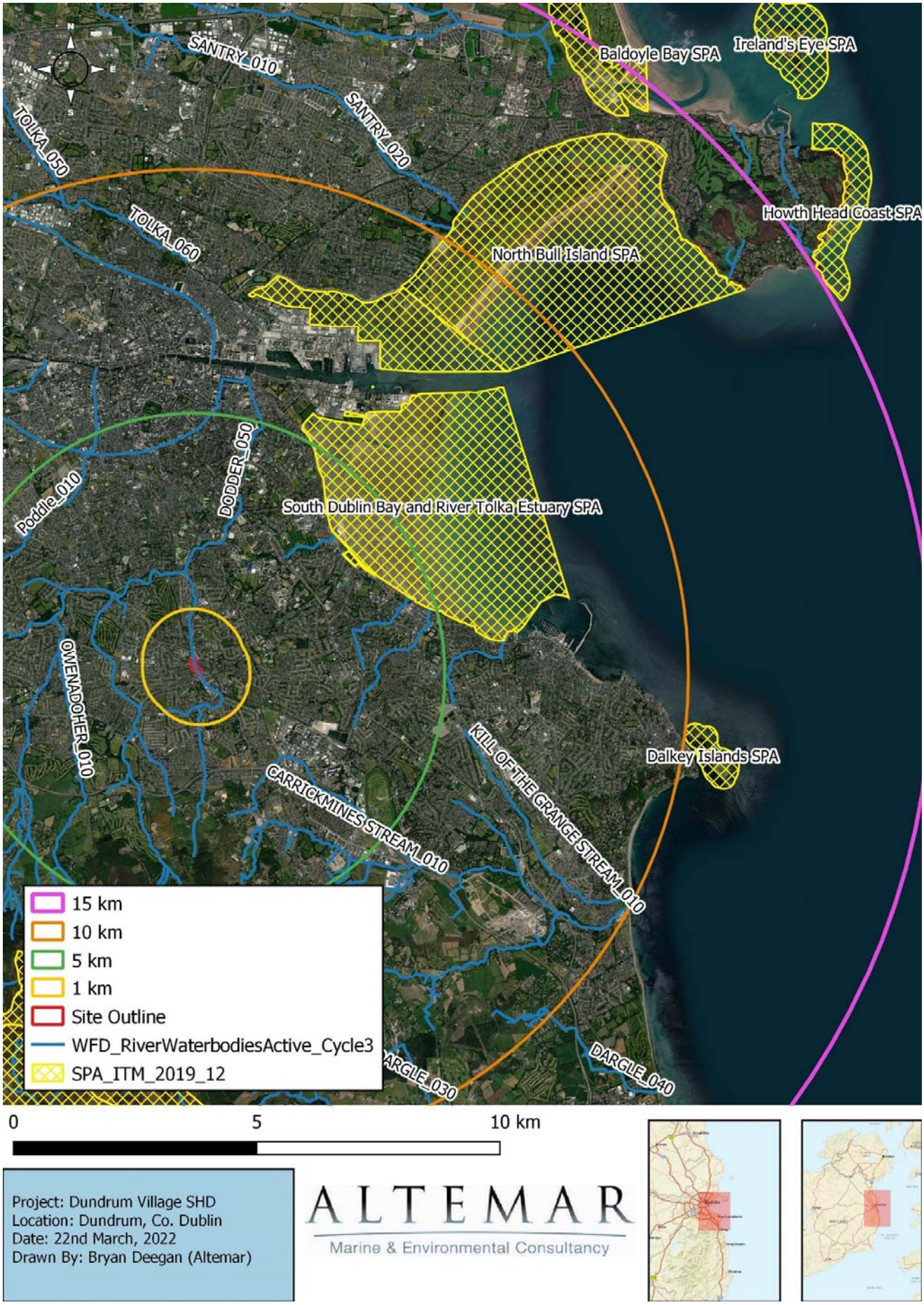



***Figure 21**. Waterbodies proximate to the subject site and SPAs within 15km of the subject site*

## In-Combination Effects

A review of the online planning system (www.myplan.ie) was carried out. The table below outlines a number of planning applications located in close proximity to the subject site that are of note.

*Table 3. Approved planning applications located in close proximity to the subject site*

| Ref. No. | Address | Proposal |
|---|---|---|
| ABP30526119 | Building 5, Dundrum Town Centre, Sandyford Road, Dublin 18 | Permission for a strategic housing development consisting of: The construction of a 7-9 storey apartment building with 107no. units (comprising 1no. studio apartment, 50no. 1 bed apartment units and 56no. 2 bed apartment units) and ancillary accommodation totalling 9792sqm gross floor area over an existing podium structure (2.2 to 2.5 metres above pavement level) completed as part of the overall Town Centre development (Reg. Ref: D00A/0112, as amended). The residential accommodation includes resident services, amenities and support facilities totalling 710.5 sqm consisting of lobby area, co-working space, multi- purpose / games room, management office and post room at ground floor level (270.9 sqm), gym at first floor (55 sq.m), cinema/media room at third floor level (55 sq.m), lounge at seventh floor level (114 sq.m) with visitor toilet block (25.3 sq.m), facilities storage (25.3 sq.m) at sixth floor level and residential storage at second floor level (55 sq.m), fourth floor level (55 sq.m) and fifth floor level (55 sq.m). A double height café / restaurant unit (79 sq.m) is proposed at ground floor with access doors to the internal services road. Part of the existing podium structure is removed to provide street level access to the café / restaurant unit. The development includes communal open space in the form of a landscaped podium courtyard (284 sq.m), landscaped roof garden at seventh floor level (207 sq.m) and upgrade of the public realm in addition to private balconies / terraces. A new ESB substation and switch room (19.2 sq.m) is also proposed at the northern boundary of the site adjacent to Sandyford Road. Vehicular access to serve the proposed development will be provided via the existing basement entrance from Sandyford Road. A designated cycle entrance along the existing service road is also proposed. The proposed building is located above an existing basement car park (3 levels) and revisions are proposed to the basement car park as follows: Level 1M: provision of bicycle facilities (including provision of dedicated bicycle ramp, 164no. cycle parking spaces and bicycle service area), bin store, 2no. storage rooms reconfigured lift / stair core and associated circulation lobbies resulting in an additional 433.1sqm and involving loss of 21no. car parking spaces: Level 1: provision of a boiler room / plant, storage room and reconfigured lift / stair core and associated circulation lobbies resulting in an additional 255.9sqm and resulting in the loss of 8no. car parking spaces at this level. The reconfiguration of the existing car parking layout is proposed to provide 47no. car parking spaces at this level to be allocated to the proposed residential development: Level -1: The provision of a water storage room, and storage room and revisions to existing stair / lift cores and circulation lobbies resulting in an additional 113.6sqm and involving loss of 5no. car parking spaces. Permission is also sought for public lighting, hard and soft landscaping, boundary treatments, green roofs, photovoltaic panels and all associated site and development works. |
| D18A/0140 | Site of 0.2344 ha, Nos. 1-5 Ashgrove | Permission for development consisting of: 1) The refurbishment, amalgamation and change of use of 5 no. existing vacant buildings (Nos. 1-5 Ashgrove Terrace) and construction of a new 2 storey building (730 |

| Ref. No. | Address | Proposal |
|---|---|---|
| | Terrace, and lands to the rear, (known as 'Pembroke Square'), Dundrum Town Centre, Sandyford Road, Dundrum, Dublin 16. | sqm) to the rear of and part interconnected with the existing Ashgrove Terrace. The refurbished Ashgrove Terrace (688 sqm) is connected to the new building to the rear and the total gross floor area of the existing buildings and the new building is 1,418 sqm, which will accommodate: A) Unit 1 (1,094 sqm); a restaurant/bar with an retail element (foodhall/delicatessen) and ancillary accommodation over two levels with entrances from Sandyford Road (via existing Ashgrove Terrace) and from the new building extension from the new public space referred to as Pembroke Square. The unit has outdoor seating areas at ground level on Sandyford Road, to the rear on Pembroke Square and on first floor terrace. B) Unit 2 (324 sqm): a café/restaurant unit over two levels with access from the new Pembroke Square and outdoor seating on first floor terrace. 2) Leisure/entertainment/amusement facility with restaurant/bar facilities and ancillary accommodation at extended existing basement level (681 sqm) with access from a new lift/stair core at ground level on Pembroke Square. 3) Multipurpose outdoor space - The remainder of the site will provide a new outdoor space (referred to as Pembroke Square) with associated public realm improvement works, hard and soft landscaping, seating and lighting. Permission is sought for use of the area as a multi-purpose space for events of a cultural, educational, social, recreational or sporting character (including food and craft markets, exhibitions, outdoor cinema, food and beverage stalls and retail concessions on an all year round basis) and the placing or maintenance of tents, vans or temporary or moveable structures or objects on the lands in connection with such uses including the provision of power and lighting and associated signage. Permission is also sought for all associate signage, bicycle parking (28 spaces), plant and all associated site and development works. Ashgrove Terrace is within a candidate Architectural Conservation Area. |
| D15A/0081 | Notre Dames Des Missions | Permission for development at the site which includes Fernbank House, a Protected Structure (RPS Ref. No. 823-Notre Dame School). The proposed development includes: A total of 269 no. dwellings consisting of 50 no. x 1 bedroom apartments; 154 no. x 2 bedroom apartments; 6 no. x 2 bedroom duplex apartments; 54 no. x 3 bedroom duplex apartments and 1 no. 4 bedroom single family dwelling. The apartment dwellings will be provided in a series of buildings (Blocks A, B, C, D, E, F and G) which range in height from 3 to 6 storeys. The 1 no. single family dwelling will be provided in Fernbank House (a Protected Structure RPS Ref. No. 823-Notre Dame School) which is to be retained and refurbished (including internal and external alterations) in order to cater for use as a single family dwelling. The proposals provide for the retention and refurbishment of the existing walled garden of Fernbank House, the creation of new vehicular entrance with 2 no. parking spaces and its use as a private garden for the dwelling and the retention and refurbishment of the lean-to sheds (outbuildings) for use as a general storage and bicycle storage area for apartment Block G. The proposed apartment buildings will be laid out about a series of landscaped courtyards and open space, over an undercroft/basement car park level, which contains 373 no. car parking spaces. In addition 30 no. surface car parking spaces are proposed, including 2 no. car parking spaces within the curtilage of Fernbank House, resulting in a total of 403 no. car parking spaces. A total of 342 no. cycle parking spaces are proposed. Vehicular access will be via a main entrance on the eastern boundary of the subject site onto Churchtown Road Upper and includes proposed amendments to the |

| Ref. No. | Address | Proposal |
|---|---|---|
| | | existing road layout. There will be three no. pedestrian entrances to the site, including a pedestrian access and emergency vehicular access from Finsbury Park to the south. A 161 sqm crèche and an electricity substation room (20 sqm) are proposed at ground floor level of Block G. The development also includes amended boundary treatments and other ancillary site works all on a 2.67 ha site. |

In relation to Planning Ref. **ABP30526119**, an Appropriate Assessment Screening report was prepared by NM Ecology Ltd. to accompany this planning application. This report concludes with the following:

'*Article 42(7) of the European Communities (Birds and Natural Habitats) Regulations 2011 states that: "The public authority shall determine that an Appropriate Assessment of a plan or project is not required […] if it can be excluded on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site."*

*To assist the planning authorities with the screening exercise, we have provided supporting information including; a description of the proposed development; an outline of its environmental setting; details of Natura 2000 sites within the potential zone of impact; and an assessment of potential impacts. Based on this information, we have demonstrated that there will be no risk of direct or indirect impacts on any Natura 2000 sites, so we conclude that Appropriate Assessment is not required.*'

It should be noted that, following an assessment of the documents accompanying each planning application on the online planning system (www.myplan.ie), it was found that no AA Screening or Natura Impact Statement reports accompany the planning applications for Planning Ref. **D18A/0140** or **D15A/0081**.

Further, there are a number of approved planning applications located within the site outline. The table below outlines a number of planning applications located within the boundaries of the subject site that are of note.

*Table 4. Approved planning applications located within the boundaries of the subject site*

| Ref. No. | Address | Proposal |
|---|---|---|
| D20A/0304 | Holy Cross Church and Parochial House, Main Street, Dundrum, Dublin 14 | Permission for development at rear. The development will consist of the temporary use (for the next 5 years 2020-2024 inclusive) of lands to the rear of the Holy Cross Catholic Church and Parochial Hall for the erection of a temporary structure (792sq.m) for use as an ice rink for a period of 17 weeks (October-January) per year. The proposed development also includes the provision of power and lighting, mobile toilets, associated signage and all associated site and development works. The ice rink will avail of vehicular and pedestrian access via the existing temporary car park at Mulvey's Yard, Rear of No. 17 Main Street and pedestrian access via temporary stairs and the existing pedestrian gate on Ballinteer Road. No works are proposed to the Holy Cross Church (Protected Structure). |
| D18A/0803 | Mulveys Yard to rear of No.17 Main Street, Parochial House & Holy Cross Church, Main Street, Dundrum, Dublin 14 | Retention Permission is being sought for a temporary carpark for 5 years (0.4848 ha), approximately 156 spaces, with vehicular and pedestrian access from Main Street and from Dundrum Village Centre (Old Dundrum Shopping Centre) and link to Dundrum Town Centre carpark. The development will also be utilised as an overflow carpark for Dundrum Town Centre during busy seasons, eg. Christmas etc. No works are proposed to Holy Cross Church (Protected Structure). |

It should be noted that, following an assessment of the scanned documents accompanying each planning application on the online planning system (www.myplan.ie), it was found that no AA Screening or Natura Impact Statement reports accompany the planning applications for Planning Ref. **D20A/0304** or **D18A/0803**.

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

*As outlined by Irish Water*[2] *"The major upgrade that is now underway will allow the Ringsend WwTP to treat the increasing volumes of wastewater arriving at the plant to the required standard, enabling future housing and commercial development. The project will deliver, on a phased basis, the capacity to treat the wastewater for a population equivalent of 2.4 million while achieving the standards of the Urban Wastewater Treatment Directive. Irish Water is working to provide infrastructure to achieve compliance with the Urban Wastewater Treatment Directive for a population equivalent of 2.1 million in the second half of 2023. When all the proposed works are complete in 2025, the Ringsend Wastewater Treatment Plant will be able to treat wastewater for up to 2.4 million population equivalent while meeting the required standards."*

During construction there is potential for surface water and pollution to enter the Slang River. The drainage and water attenuation design included in the proposed development will have a net beneficial impact, particularly during heavy rainfall events where attenuation will take place prior to discharge in the surface water network.

No cumulative or in combination effects on European sites are likely to have a significant effect. Cumulatively, these other proposals will not significantly affect European sites. No projects in the vicinity of the proposed development would be seen to have a significant in combination effect on Natura 2000 sites.

**No significant effects are likely from in combination effects**

[2] https://www.water.ie/projects/local-projects/ringsend/

## Conclusions

An initial screening of the proposed works, using the precautionary principle (without the use of any mitigation measures) and the Source/Pathway/Receptor links between the proposed works and Natura 2000 sites with the potential to result in significant 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 and sites beyond 15km:

**Special Areas of Conservation**

(000199) Baldoyle Bay SAC
(003000) Rockabill to Dalkey Island SAC
(000202) Howth Head SAC
(002122) Wicklow Mountains SAC
(001209) Glenasmole Valley SAC
(000725) Knocksink Wood SAC
(000713) Ballyman Glen SAC
(000714) Bray Head SAC

**Special Protection Areas**

(004016) Baldoyle Bay SPA
(004172) Dalkey Islands SPA
(004040) Wicklow Mountains SPA

Given the nature of the works, the scale of the proposed development, the fact that a culverted section of the River Slang traverses through the subject site, and that it is proposed to direct surface water drainage to the River Slang, it is considered that the potential ZOI of the proposed works extends beyond the site outline to include Natura 2000 sites located within Dublin Bay. Out of an abundance of caution, in the absence of mitigation measures, despite significant dilution, settlement and mixing within the Slang River, River Dodder and River Liffey and within the estuarine elements of the River Liffey where settlement and flocculation would also occur, it is considered that there is the potential for petrochemicals, contamination, or silt laden material to enter the marine environment and result in significant effects on South Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, North Dublin Bay SAC and North Bull Island SPA. It should also be noted that the proposed project will be on a phased basis and therefore will be developed over several years, which would lengthen the time at which impacts would be foreseen.

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, and North Bull Island SPA because it cannot be excluded on the basis of best objective scientific information following screening, in the absence of control or mitigation measures, that the plan or project, individually and/or in combination with other plans or projects, will have a significant effect on the named European Site/s.

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

**NIS is required for South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, and North Bull Island 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 Strategic Housing Development (SHD) at Dundrum, Co. Dublin, acting on a strictly precautionary basis, an NIS is required in respect of the potential effects of the project on South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, and North Bull Island SPA due to the direct pathway from the proposed works and the potential for downstream effects, because it cannot be excluded on the basis of best objective scientific information, in the absence of control or mitigation measures, following screening that the plan or project, individually and/or in combination with other plans or projects, will have a significant effect on the named European Site/s.

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

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

A further review of the Conservation Objectives and qualifying interests is necessary to determine if significant effects are likely to impact 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*

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

*vegetation. As this is of very recent origin, it covers a small area but ample areas of substrate and shelter are available for the further development of this habitat.*

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

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

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

*At low tide the inner parts of the south bay are used for amenity purposes. 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**

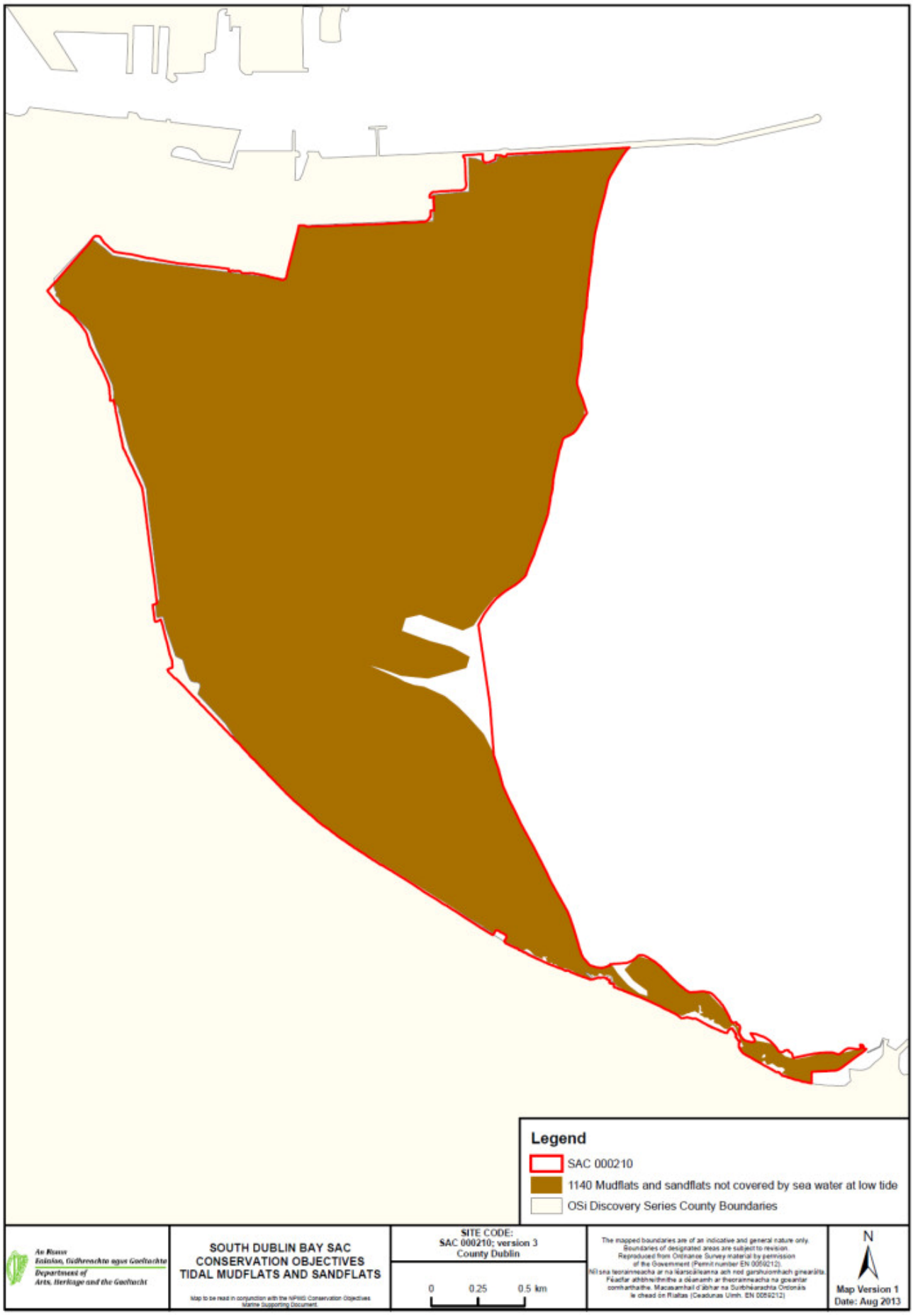
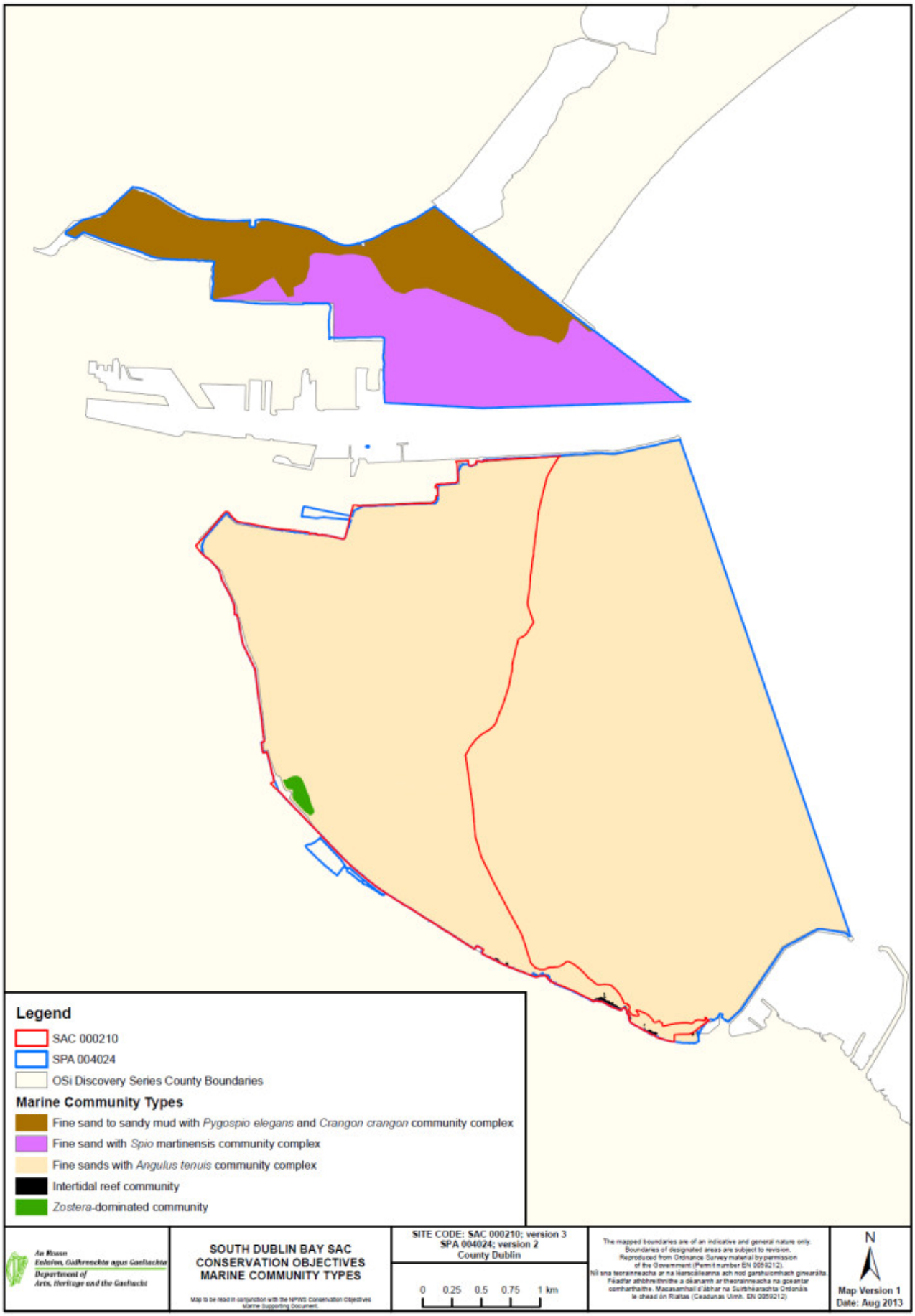


**Figure 2. Distribution of community types in South Dublin Bay SAC**



## 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.*

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

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

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

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

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

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

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

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

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

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 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) and this document should be read in conjunction with those reports.'*

[7] https://www.npws.ie/sites/default/files/protected-sites/natura2000/NF000206.pdf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**MAP 3:**
**NORTH DUBLIN BAY SAC**
**CONSERVATION OBJECTIVES**
**TIDAL MUDFLATS AND SANDFLATS**

Map to be read in conjunction with the NPWS Conservation Objectives Document.

**SITE CODE:**
**SAC 000206; version 3.**
**CO. DUBLIN**

0 0.5 1 km

The mapped boundaries are of an indicative and general nature only. Boundaries of designated areas are subject to revision. Reproduced from Ordnance Survey material by permission of the Government (Permit number EN 0059212).

Níl sna teorainneacha ar na léarscáileanna ach nod garshuiomhach ginearálta. Féadfar athbhreithnithe a déanamh ar theorainneacha na gceantar comharthaithe. Macasamhail d'ábhar na Suirbhéarachta Ordonáis le chead ón Rialtas (Ceadunas Uimh. EN 0059212).

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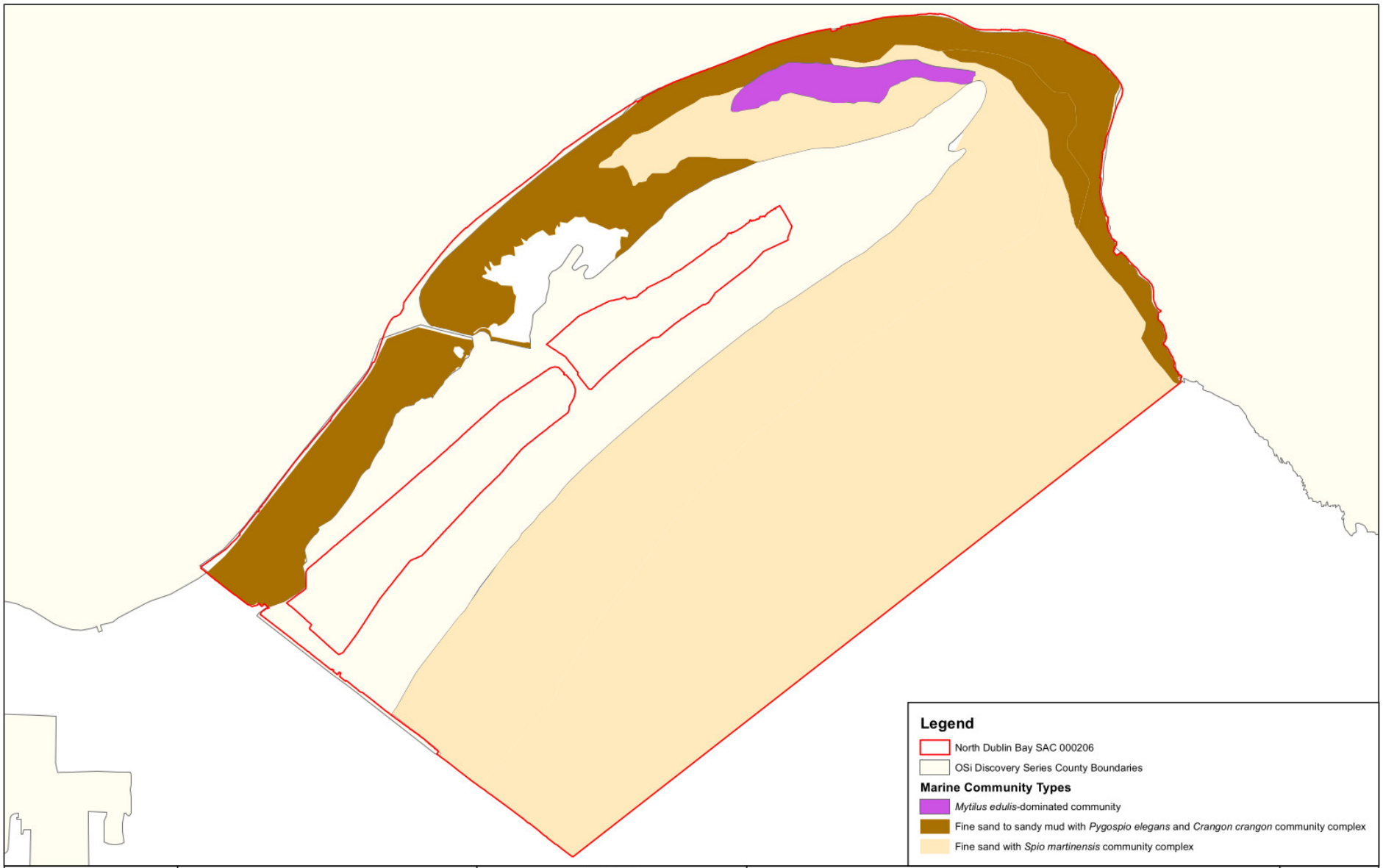
**Map Version 1**
**Date: Sept 2013**

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**MAP 4:**
**NORTH DUBLIN BAY SAC**
**CONSERVATION OBJECTIVES**
**MARINE COMMUNITY TYPES**

Map to be read in conjunction with the NPWS Conservation Objectives Document.

**SITE CODE:**
**SAC 000206; version 3.**
**CO. DUBLIN**

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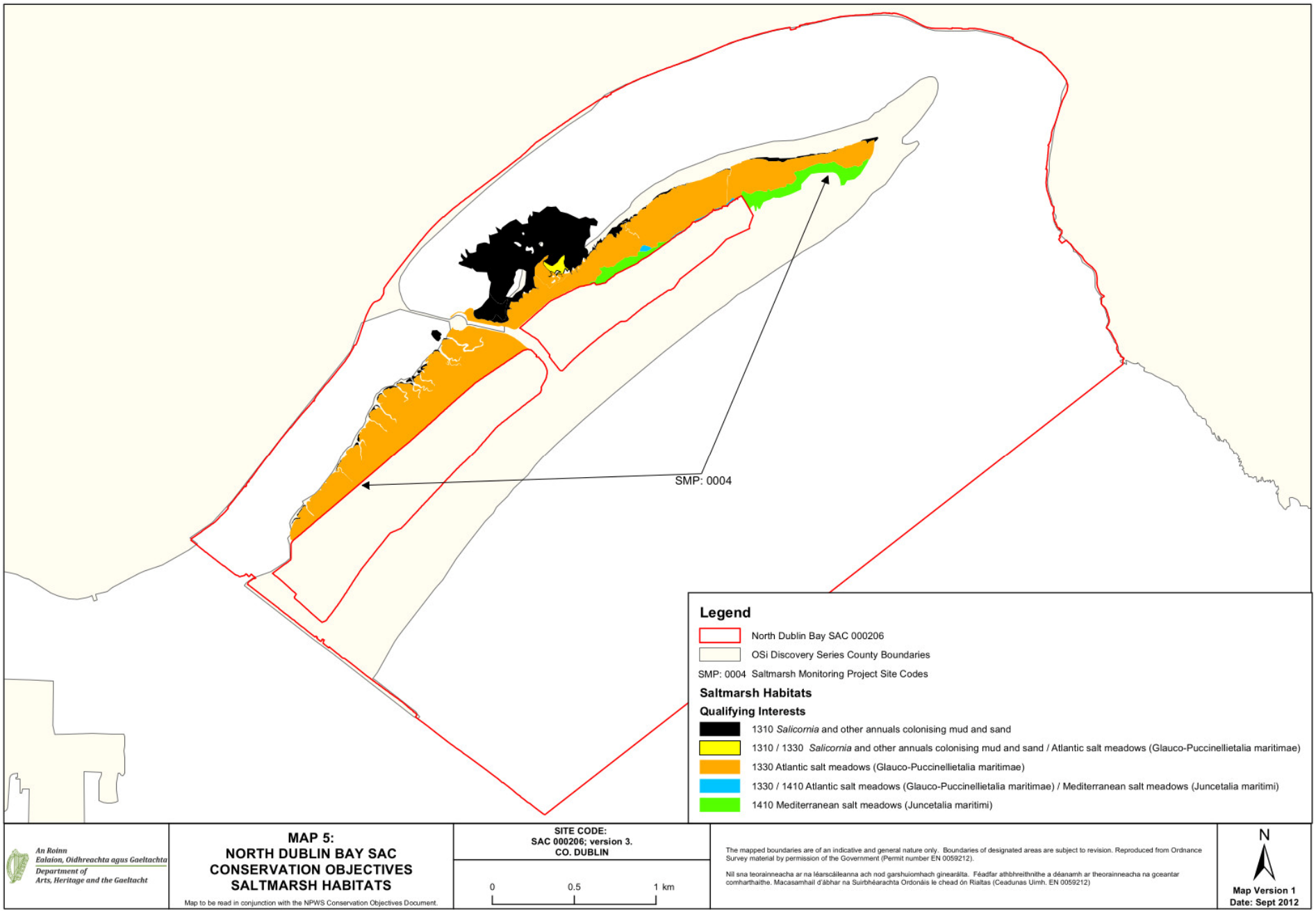
**Map Version 1**
**Date: Sept 2013**


SMP: 0004
Legend
North Dublin Bay SAC 000206
OSi Discovery Series County Boundaries
SMP: 0004 Saltmarsh Monitoring Project Site Codes
Saltmarsh Habitats
Qualifying Interests
1310 Salicornia and other annuals colonising mud and sand
1310 / 1330 Salicornia and other annuals colonising mud and sand / Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
1330 / 1410 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) / Mediterranean salt meadows (Juncetalia maritimi)
1410 Mediterranean salt meadows (Juncetalia maritimi)
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MAP 5:
NORTH DUBLIN BAY SAC
CONSERVATION OBJECTIVES
SALTMARSH HABITATS
Map to be read in conjunction with the NPWS Conservation Objectives Document.
SITE CODE:
SAC 000206; version 3.
CO. DUBLIN
0
0.5
1 km
The mapped boundaries are of an indicative and general nature only. Boundaries of designated areas are subject to revision. Reproduced from Ordnance Survey material by permission of the Government (Permit number EN 0059212).
Níl sna teorainneacha ar na léarscáileanna ach nod garshuiomhach ginearálta. Féadfar athbhreithnithe a déanamh ar theorainneacha na gceantar comharthaithe. Macasamhail d'ábhar na Suirbhéarachta Ordonáis le chead ón Rialtas (Ceadunas Uimh. EN 0059212)
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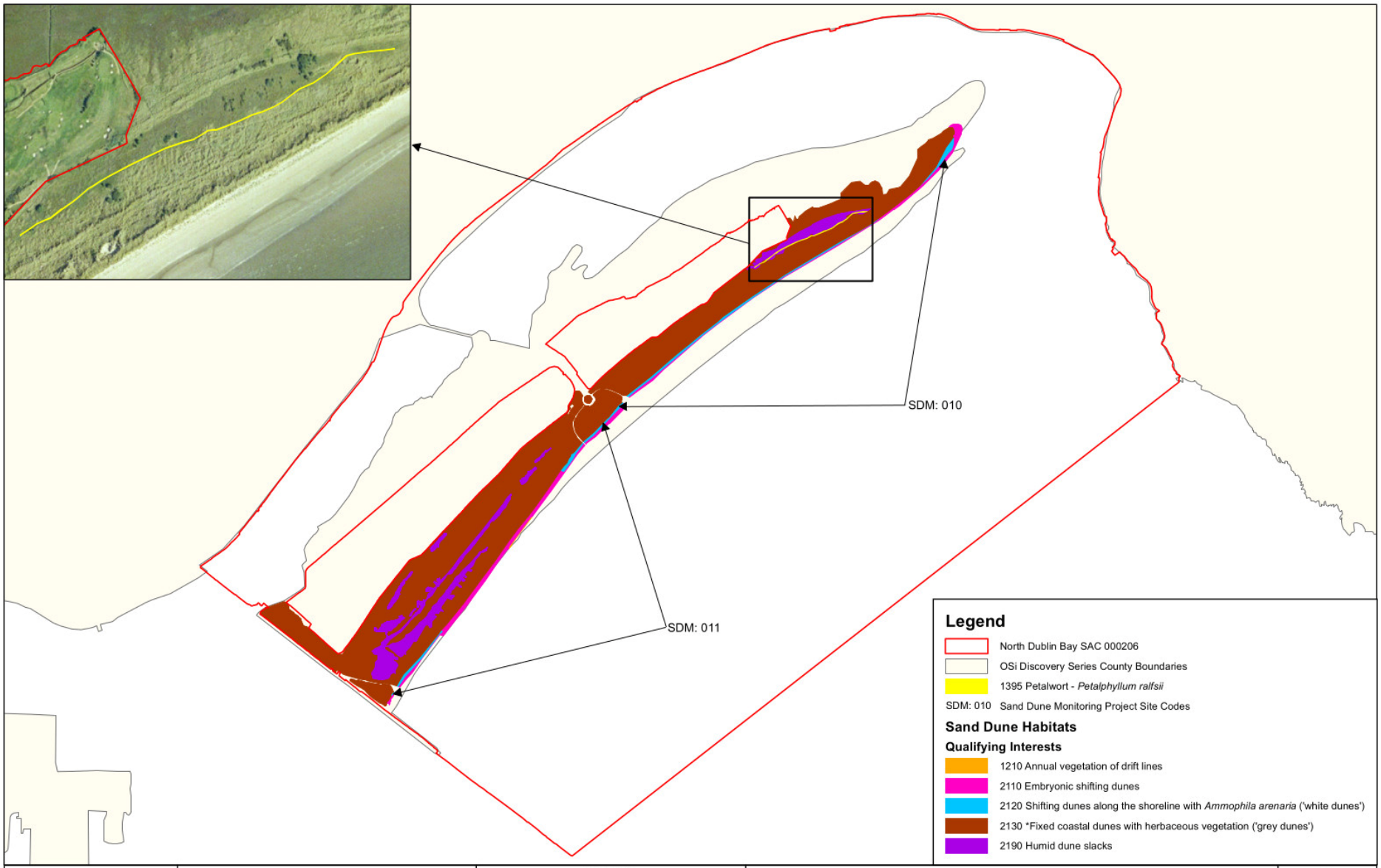
Map Version 1
Date: Sept 2012

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**MAP 6:**
**NORTH DUBLIN BAY SAC**
**CONSERVATION OBJECTIVES**
**SAND DUNE HABITATS & PETALWORT**

Map to be read in conjunction with the NPWS Conservation Objectives Document.

**SITE CODE:**
**SAC 000206; version 3.**
**CO. DUBLIN**

0 0.5 1 km



N

**Map Version 1**
**Date: Sept 2013**

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

As outlined in the South Dublin Bay SAC Site Synopsis[8]. (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*

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

*increased, with 216 pairs recorded in 2000. This increase was largely due to the ongoing management of the site for breeding terns. More recent data highlights this site as one of the most important Common Tern sites in the country with over 400 pairs recorded here in 2007.*

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

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

The Natura 2000 Standard Data Form (2020)[9] 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[10] (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.*

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

[10] *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

*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.*

*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. 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:*

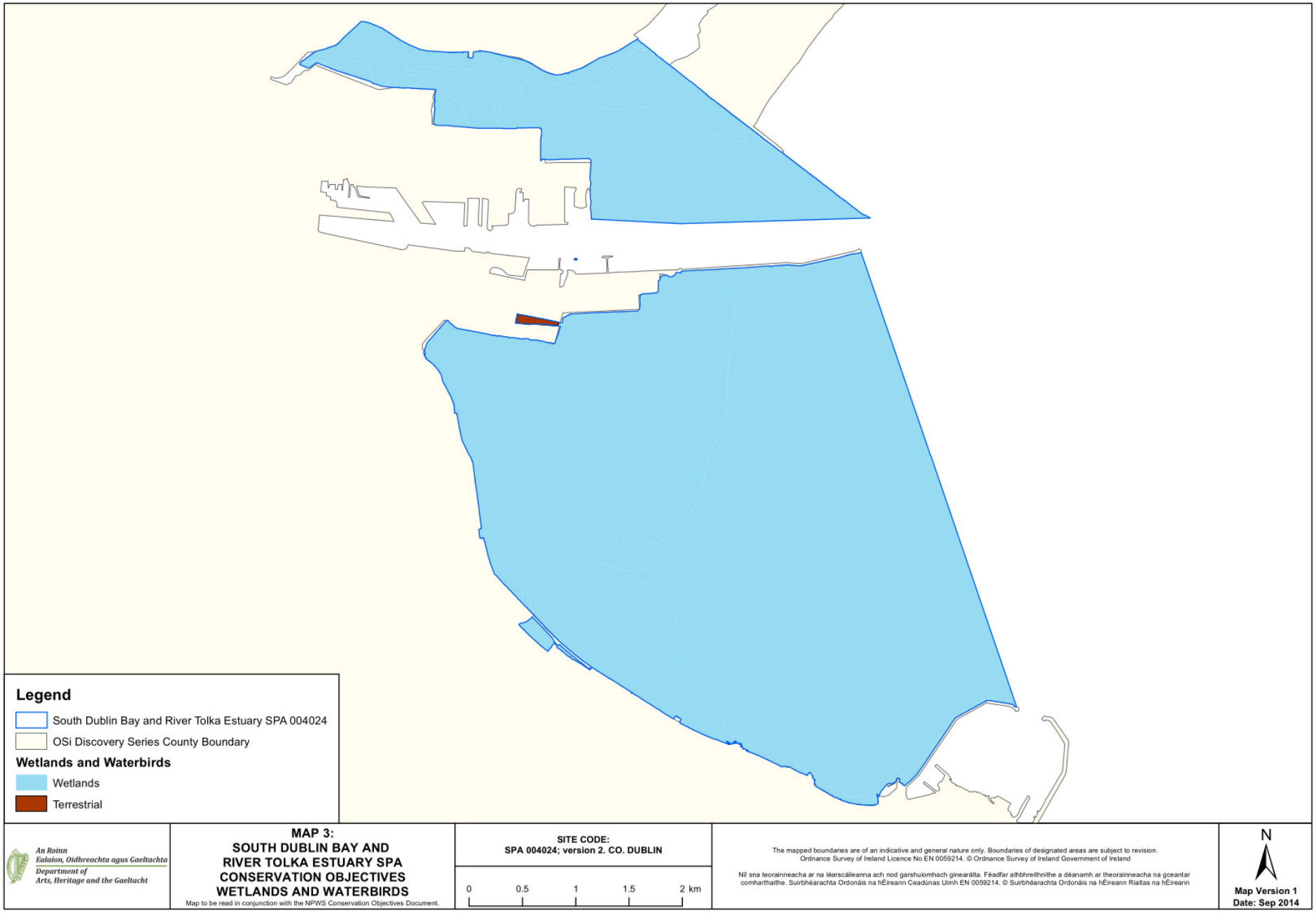
- *Habitat modification: activities that modify discreet areas or the overall habitat(s) within the SPA in terms of how one or more of the listed species use the site (e.g. as a feeding resource) could result in the displacement of these species from areas within the SPA and/or a reduction in their numbers (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).'*


Legend
South Dublin Bay and River Tolka Estuary SPA 004024
OSi Discovery Series County Boundary
Wetlands and Waterbirds
Wetlands
Terrestrial
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MAP 3:
SOUTH DUBLIN BAY AND RIVER TOLKA ESTUARY SPA CONSERVATION OBJECTIVES WETLANDS AND WATERBIRDS
Map to be read in conjunction with the NPWS Conservation Objectives Document.
SITE CODE:
SPA 004024; version 2. CO. DUBLIN
0 0.5 1 1.5 2 km
The mapped boundaries are of an indicative and general nature only. Boundaries of designated areas are subject to revision.
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Níl sna teorainneacha ar na léarscáileanna ach nod garshuiomhach ginearálta. Féadfar athbhreithnithe a déanamh ar theorainneacha na gceantar comharthaithe. Suirbhéarachta Ordonáis na hÉireann Ceadúnas Uimh EN 0059214. © Suirbhéarachta Ordonáis na hÉireann Rialtas na hÉireann
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Map Version 1
Date: Sep 2014

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

As outlined in the North Bull Island SPA Site Synopsis[11] (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-*

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

*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.*'

The Natura 2000 Standard Data Form (2020)[12] 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[13] (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*

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

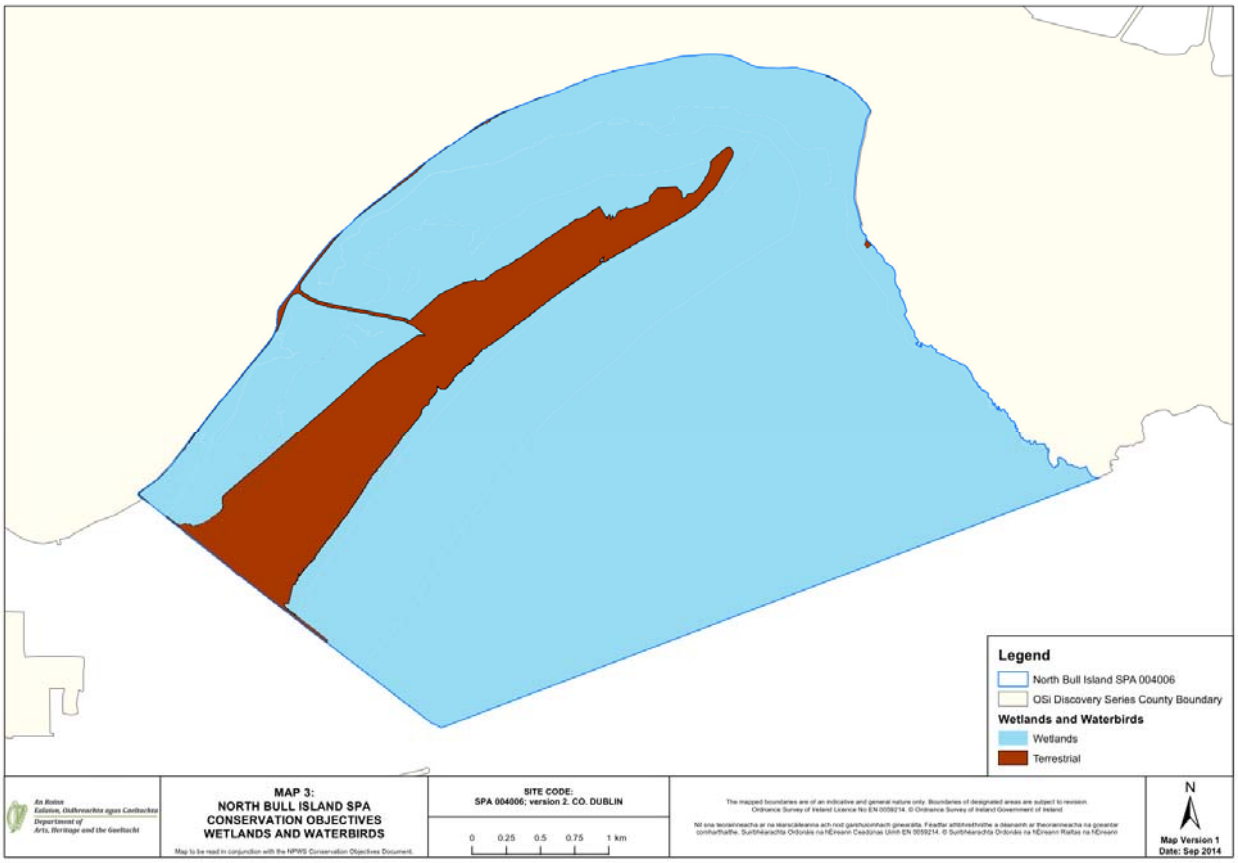
[13] https://www.npws.ie/sites/default/files/publications/pdf/North%20Bull%20Island%20SPA%20(004006)%20Conservation%20objectives%20supporting%20document%20-%20[Version%201].pdf

*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 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.'*




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 5. The site specific conservation Objectives for Natura 2000 sites are seen in Table 6.

***Table 5**. 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** |

| 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 |
| **North Bull Island SPA (004006)** | Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] | **Amber** |
| | Shelduck (*Tadorna tadorna*) [A048] | **Amber** |
| | Teal (*Anas crecca*) [A052] | **Amber** |
| | Pintail (*Anas acuta*) [A054] | **Red** |
| | Shoveler (*Anas clypeata*) [A056] | **Red** |
| | Oystercatcher (*Haematopus ostralegus*) [A130] | **Amber** |
| | Golden Plover (*Pluvialis apricaria*) [A140] | **Red** |
| | 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** |

***Table 6**. 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 |

| North Dublin Bay SAC (000206) | | |
|---|---|---|
| **Attribute** | **Measure** | **Target** |
| 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 |

| North Dublin Bay SAC (000206) | | |
|---|---|---|
| **Attribute** | **Measure** | **Target** |
| 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 |

| North Dublin Bay SAC (000206) | | |
|---|---|---|
| **Attribute** | **Measure** | **Target** |
| 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 |

| North Dublin Bay SAC (000206) | | |
|---|---|---|
| **Attribute** | **Measure** | **Target** |
| 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. |

| North Dublin Bay SAC (000206) | | |
|---|---|---|
| **Attribute** | **Measure** | **Target** |
| 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; 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 |

| South Dublin Bay and River Tolka Estuary SPA (004024) | | |
|---|---|---|
| Attribute | Measure | Target |
| 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 |

## Analysis of the Potential Impacts on Natura 2000 Sites.

Dundrum Retail GP DAC (acting for and on behalf of Dundrum Retail Limited Partnership) intend to apply for planning permission for a proposed Strategic Housing Development at Dundrum, Co. Dublin.

The development comprises 11no. urban blocks arranged around the central pedestrian spine and a series of 4 courtyards corresponding to 4 separate "zones" or character areas.

The buildings range in height from 4-5 storeys on Main Street to 9-16 storeys to the Dundrum Bypass.

The development will consist of c. 881no. residential units. This development also includes a foodstore, retail, café/restaurant and a creche are at ground floor level, fronting Main Street, as detailed in the Schedule of Accommodation included with this submission.

The development will include the demolition of all existing structures on the site with the exception of No.'s 1-3 Glenville Terrace which will be refurbished.

Vehicular and cycle parking is provided below podium with visitor cycle parking spaces in the public realm. Vehicular access to serve the proposed development will be provided via Dundrum Bypass. The existing vehicular entrance on Main Street will be closed.

Pedestrian connections and linkages are proposed through the site, forming connections that are not currently possible from within the site to Main Street; to the south via Church Square and Ballinteer Road Bridge; and west via the proposed new Sweetmount Bridge connecting Main Street to the residential communities west of the Bypass.

### Construction Impacts

The proposed development is not within a designated conservation site. The nearest Natura 2000 site is South Dublin Bay and River Tolka Estuary SPA (3.7 km). Given the nature of the demolition and site clearance works, the scale of the proposed development, localised contamination on site, and recognising that a culverted section of the River Slang traverses through the subject site, it is considered that there is a direct hydrological pathway to South Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, North Dublin Bay SAC, and North Bull Island 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 River Slang and impact on the integrity of Natura 2000 sites located within Dublin Bay.

The potential impacts on Natura 2000 sites are seen in Table 7. The proposed demolition and clearance works would potentially impact on the existing ecology of the site and the surrounding area. This could lead to the transportation of dust, silt, and contaminated surface water runoff to the proximate River Slang, with the potential for downstream impacts on the integrity of Natura 2000 sites located within Dublin Bay.

Demolition and construction phase mitigation measures are required on site, particularly as clearance of the site is proposed which will remove all existing terrestrial habitats and can lead to silt laden and contaminated runoff. Compliance with the Water Pollution Acts and Inland Fisheries guidance[14] documentation would be seen as the primary method of ensuring no significant impact on designated conservation sites. Mitigation measures are required to ensure compliance with the Water Pollution Acts guidance.

It should also be noted that the proposed project will be constructed on a phased basis and therefore will be developed over several years, which would lengthen the time at which impacts would be foreseen.

### Operational Impacts

Once constructed, all onsite drainage will be connected to separate foul and surface water systems. Surface water runoff will comply with SUDS and Water Pollution Act drainage requirements. Measures will be in place to prevent downstream impacts. Following the implementation of mitigation measures outlined below, no significant impacts on designated sites are likely during operation.

[14] https://www.fisheriesireland.ie/documents/624-guidelines-on-protection-of-fisheries-during-construction-works-in-and-adjacent-to-waters/file.html

| Table 7. Potential for adverse effects on the qualifying interests and conservation objectives of Natura 2000 sites | | |
|---|---|---|
| Natura 2000 Site & Site Code | Qualifying Interests | Potential for Adverse Effects |
| **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] | Given the nature of the works, all of these effects would be expected to be localised in nature, restricted to the vicinity of the site. However, as there is a watercourse passing through the site with a direct pathway to the Natura 2000 site, without the presence of mitigation measures there is a potential for downstream effects if significant quantities of pollution or silt were introduced into the watercourse with potential for downstream impacts on South Dublin Bay SAC. The habitats of conservation interest of this SAC are not on site. However, the range of the habitats that are of conservational interest are located downstream of the proposed works.<br><br>Unmitigated works have the potential for downstream impacts on aquatic biodiversity and habitats of conservation importance through the introduction of silt and pollution. Demolition, site reprofiling, storage of topsoil or construction works in the vicinity of the watercourse or drains leading to the watercourse could lead to dust, soil, pollution, or silt laden runoff entering the watercourse with potential downstream impacts. Contaminated surface water runoff on site during construction or operation may lead to silt, cement or contaminated materials from the site entering the watercourse with downstream impacts on the SAC. If on-site concrete production is required or cement works are carried out in the vicinity of watercourses/drains, there is potential for contamination of watercourses. The use of plant and machinery, as well as the associated temporary storage of construction materials, oils, fuels and chemicals could lead to pollution on site or in adjacent watercourses.<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:<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>Mitigation measures are required to remove the potential of impacts on this SAC from direct pathways via the watercourse on site. |
| **North Dublin Bay SAC** | Mudflats and sandflats not covered by seawater at low tide [1140]<br>Annual vegetation of drift lines [1210] | Given the nature of the works, all of these effects would be expected to be localised in nature restricted to the vicinity of the site. However, as there is a watercourse passing through the site with a direct pathway to the Natura 2000 site, without the presence of mitigation measures there is a potential for downstream effects if significant quantities of pollution or silt were introduced into the watercourse with potential for downstream |

| Table 7. Potential for adverse effects on the qualifying interests and conservation objectives of Natura 2000 sites | | |
|---|---|---|
| Natura 2000 Site & Site Code | Qualifying Interests | Potential for Adverse Effects |
| | 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] | impacts on North Dublin Bay SAC. The habitats of conservation interest of this SAC are not on site. However, the range of the habitats that are of conservational interest are located downstream of the proposed works.<br><br>Unmitigated works have the potential for downstream impacts on aquatic biodiversity and habitats of conservation importance through the introduction of silt and pollution. Demolition, site reprofiling, storage of topsoil or construction works in the vicinity of the watercourse or drains leading to the watercourse could lead to dust, soil, pollution, or silt laden runoff entering the watercourse with potential downstream impacts. Contaminated surface water runoff on site during construction or operation may lead to silt, cement or contaminated materials from the site entering the watercourse with downstream impacts on the SAC. If on-site concrete production is required or cement works are carried out in the vicinity of watercourses/drainage ditches, there is potential for contamination of watercourses. The use of plant and machinery, as well as the associated temporary storage of construction materials, oils, fuels and chemicals, could lead to pollution on site or in adjacent watercourses.<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:<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 for significant impacts on this SAC from direct pathways via the watercourse on site. |
| **South Dublin Bay and River** | Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] | Given the nature of the works, all of these effects would be expected to be localised in nature restricted to the vicinity of the site. However, as there is a watercourse passing through the site with a direct pathway to the Natura 2000 site, without the presence of mitigation measures there is a potential for downstream effects if |

| Table 7. Potential for adverse effects on the qualifying interests and conservation objectives of Natura 2000 sites | | |
|---|---|---|
| Natura 2000 Site & Site Code | Qualifying Interests | Potential for Adverse Effects |
| **Tolka Estuary SPA** | 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] | significant quantities of pollution or silt were introduced into the watercourse with potential for downstream impacts on South Dublin Bay and River Tolka Estuary SPA.<br><br>Unmitigated works have the potential for downstream impacts on aquatic biodiversity and species of conservation importance and their prey items through the introduction of silt and pollution. Demolition, site reprofiling, storage of topsoil or construction works in the vicinity of the watercourse or drains leading to the watercourse could lead to dust, soil, pollution, or silt laden runoff entering the watercourse with potential downstream impacts. Contaminated surface water runoff on site during construction or operation may lead to silt, cement or contaminated materials from site entering the watercourse with downstream impacts on the SPA. If on-site concrete production is required or cement works are carried out in the vicinity of watercourses/drains, there is potential for contamination of watercourses. The use of plant and machinery, as well as the associated temporary storage of construction materials, oils, fuels and chemicals could lead to pollution on site or in adjacent watercourses with downstream impacts.<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 there is the potential to impact on the distribution number and range of the following qualifying interests:<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><br>Mitigation measures are required to remove the potential of impacts on the SPA from direct pathways via the watercourse on site. |

| Table 7. Potential for adverse effects on the qualifying interests and conservation objectives of Natura 2000 sites | | |
|---|---|---|
| Natura 2000 Site & Site Code | Qualifying Interests | Potential for Adverse Effects |
| **North Bull Island SPA** | Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]<br><br>Shelduck (*Tadorna tadorna*) [A048]<br><br>Teal (*Anas crecca*) [A052]<br><br>Pintail (*Anas acuta*) [A054]<br><br>Shoveler (*Anas clypeata*) [A056]<br><br>Oystercatcher (Haematopus *ostralegus*) [A130]<br><br>Golden Plover (*Pluvialis apricaria*) [A140]<br><br>Grey Plover (*Pluvialis squatarola*) [A141]<br><br>Knot (*Calidris canutus*) [A143]<br><br>Sanderling (*Calidris alba*) [A144]<br><br>Dunlin (*Calidris alpina*) [A149]<br><br>Black-tailed Godwit (*Limosa limosa*) [A156]<br><br>Bar-tailed Godwit (*Limosa lapponica*) [A157]<br><br>Curlew (*Numenius arquata*) [A160]<br><br>Redshank (*Tringa totanus*) [A162]<br><br>Turnstone (*Arenaria interpres*) [A169] | Given the nature of the works, all of these effects would be expected to be localised in nature, restricted to the vicinity of the site. However, as there is a watercourse passing through the site with a direct pathway to the Natura 2000 site, without the presence of mitigation measures there is a potential for downstream effects if significant quantities of pollution or silt were introduced into the watercourse with potential for downstream impacts on North Bull Island SPA.<br><br>Unmitigated works have the potential for downstream impacts on aquatic biodiversity and species of conservation importance and their prey items through the introduction of silt and pollution. Demolition, site reprofiling, storage of topsoil or construction works in the vicinity of the watercourse or drains leading to the watercourse could lead to dust, soil, pollution, or silt laden runoff entering the watercourse with potential downstream impacts. Contaminated surface water runoff on site during construction or operation may lead to silt, cement or contaminated materials from site entering the watercourse with downstream impacts on the SPA. If on-site concrete production is required or cement works are carried out in the vicinity of watercourses/drainage ditches there is potential for contamination of watercourses. The use of plant and machinery, as well as the associated temporary storage of construction materials, oils, fuels and chemicals could lead to pollution on site or in adjacent watercourses with downstream impacts.<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:<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] |

| Table 7. Potential for adverse effects on the qualifying interests and conservation objectives of Natura 2000 sites | | |
|---|---|---|
| Natura 2000 Site & Site Code | Qualifying Interests | Potential for Adverse Effects |
| | Black-headed Gull (*Chroicocephalus ridibundus*) [A179]<br><br>Wetland and Waterbirds [A999] | • 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>Mitigation measures are required to remove the potential of impacts on the SPA from direct pathways via the watercourse on site. |

***Table 8**. Mitigation measures*

| Sensitive Receptors | Potential Impacts on SPA & SAC | Mitigation Measures to Prevent Impacts on Natura 2000 sites |
|---|---|---|
| South Dublin Bay SAC<br><br>North Dublin Bay SAC | • Habitat degradation<br>• Dust deposition<br>• Pollution<br>• Silt ingress from site runoff<br>• Downstream impacts<br>• Negative impacts on the aquatic environment, habitats, aquatic species, bird fauna, and qualifying interests. | The accompanying EIAR and OCMP outline the required mitigation measures in detail. These measures will be carried out. It should be noted that no additional measures than those outlined in the EIAR and OCMP are deemed necessary to prevent significant effects on Natura 2000 sites. The outlined mitigation measures and ecological supervision and monitoring will ensure compliance with Water Pollution Acts to prevent impacts on the River Slang which would be seen as the vector for potential impacts on Natura 2000 sites.<br><br>***EIAR***<br><br>"**Chapter 7: Water**" of the EIAR that accompanies this planning application outlines the following mitigation and monitoring measures designed to offset any potential impacts on the existing water, wastewater, and flooding elements that may arise as a result of the proposed development:<br><br>**Construction Phase**<br><br>*'**W-C1**: The Main Contractor(s) CEMP shall provide the measures detailed in the Outline Construction Management Plan submitted with this application to avoid discharge of silt contaminated runoff or hydrocarbons.*<br><br>***W-C2**: The Contractor shall provide a Water Management System to avoid polluted or silt laden surface water runoff from the site. Pumped flows shall be adequately treated prior to discharge to the receiving water to remove silt and possible contamination by hydrocarbons and cement.*<br><br>***W-C3**: The CEMP will include measures to address flood risk during construction without reducing existing flood storage volume.*<br><br>***W-C4:** Dedicated fuel storage areas shall be provided on-site which shall be a minimum of 50m from watercourses or drains or, alternatively, fuelling shall take place offsite.*<br><br>***W-C5**: **A** Water Management System shall be established within the site boundary. The system shall include for all ground water collected from within the site to be directed/pumped to settlement tanks and silt bags prior to discharge at an agreed discharge rate.*<br><br>***W-C6**: The Contractor shall comply with the following guidance documents: i) Control of Water Pollution from Construction Sites – Guidance for Consultants and Contractors (C532D) (CIRIA 2001) and ii) Development and Flood Risk - guidance for the construction industry (C624) (CIRIA 2004).'*<br><br>***'W-M1:** The Construction Environmental Management Plan (CEMP) shall include detailed provisions to avoid discharge of silt contaminated runoff or hydrocarbons. Any silt settlement ponds and chambers proposed as part of the CEMP will be monitored daily throughout the construction of the works.'* |

| Sensitive Receptors | Potential Impacts on SPA & SAC | Mitigation Measures to Prevent Impacts on Natura 2000 sites |
|---|---|---|
| South Dublin Bay and River Tolka Estuary SPA<br><br>North Bull Island SPA | • Habitat degradation<br>• Dust deposition<br>• Pollution<br>• Silt ingress from site runoff<br>• Downstream impacts<br>• Negative impacts on the aquatic environment, habitats, aquatic species, bird fauna, and qualifying interests. | **<u>Operational Phase</u>**<br><br>***'W-O1:*** *Incidental surface run-off from lower ground floor car parks, compactor units and bin stores / service yard areas will be discharged into the foul drainage system. Grit / petrol / oil separators to be provided in all of the above areas.*<br><br>***W-O2:*** *Petrol /oil separators will be provided for surface water drains receiving flows from the site service road and loading yard.*<br><br>***W-O3:*** *Stormwater attenuation shall be provided with flow controls to ensure that the rate of discharge of surface water runoff is limited to greenfield run-off rates at each outfall from the site in accordance with the Greater Dublin Regional Code of Practice for Drainage Works, the Greater Dublin Strategic Drainage Strategy and the local authority's Stormwater Management Policy.*<br><br>***W-O4****: A two-stage surface water management train incorporating sustainable drainage components in accordance with local authority's stormwater management policy will improve the water quality of surface water discharges, contributing to improved water quality in the Slang River.*<br><br>***W-O5:*** *Compensatory Flood Storage volume shall be provided within the Service Road and under the Lower Ground Floor of the proposed development in order to ensure that there is no increase in flood risk to any properties in the area.*<br><br>***W-O6:*** *Electrical substations and control kiosks will have a floor level of 46mOD or higher in order to avoid risk of flood ingress in a 0.1%AEP flood event. This minimum level includes an allowance for freeboard and climate change.'*<br><br>***'W-M2****: The Sustainable Urban Drainage Scheme (SuDS) and compensatory flood storage provisions will be subject to ongoing maintenance and routine inspection in accordance with an operational management plan to ensure that flow controls and SuDS features are functioning properly.*<br><br>***W-M3****: Construction activities shall be monitored to ensure that the compensatory flood storage volume is provided within the site until the permanent compensatory storage is operational in Zones 1 and 2.*<br><br>***W-M4****: The compensatory flood storage system will incorporate inspection chambers to confirm that there is no ingress of groundwater or surface water runoff into the below ground storage volume. These inspection chambers will also allow visual confirmation that the system has drained down after any flood event that results in a build-up of flood waters on the service road.*<br><br>***W-M5****: Water quality testing shall be undertaken in the open section of the Slang River directly adjacent to and down-stream from the site in consultation with the project ecologist when construction works are in progress.*<br><br>***W-M6****: Daily monitoring of the condition and capacity of silt bags in the road gullies along the Dundrum Bypass shall be undertaken during construction stage of the project with gully cleaning and silt bag replacement undertaken as necessary.'*<br><br>"**Chapter 8: Air and Climate**" of the EIAR that accompanies this planning application outlines the following mitigation and monitoring measures designed to offset any potential air quality and climate impacts associated with the proposed development |

| Sensitive Receptors | Potential Impacts on SPA & SAC | Mitigation Measures to Prevent Impacts on Natura 2000 sites |
|---|---|---|
| | | during both the construction and operational phases. These measures would ensure that the River Slang is protected from Airborne emissions:<br><br>**<u>Construction Phase</u>**<br><br>***'AC-C1:*** *The main contractor will ensure the following best practice methods are applied during construction:-*<br><br>• *Removal of Asbestos prior to demolition works.*<br>• *Use of water mist cannons to supress dust during demolition works.*<br>• *Screening and use of water spray bars on mobile crushing plant.*<br>• *Screening of building during demolition to contain dust.*<br>• *Provision of vehicle wheel wash facilities at site exits*<br>• *Cleaning of local roads.*<br>• *Vehicle/Plant engines shall be turned off when not in use*<br>• *Vehicle/Plant engines shall be maintained to ensure efficient operation.*<br>• *Mains power shall be utilised for Site Offices instead of generators*<br><br>***AC- C2:*** *Dust suppression measures will be implemented to minimise dust generation during extended dry periods. Dust monitoring will be conducted through the demolition excavation period. A complaints management procedure shall be developed prior to the commencement of works.'*<br><br>***'AC-M1***: *A programme of dust deposition and Particulate PM2.5 & PM10 monitoring shall be initiated prior to the commencement of demolition works.*'<br><br>"**Chapter 5: Biodiversity**" of the EIAR that accompanies this planning application outlines the following mitigation and monitoring measures designed to offset impacts on biodiversity associated with the proposed development during both the construction and operational phases. Only measures that ensure compliance with Water Pollution Acts to prevent impacts on the River Slang are outlined as NIS mitigation measures:<br><br>**<u>Construction Phase</u>**<br><br>'***B-C1*** *Prior to the commencement of development, the developer shall engage the services of a qualified ecologist as an ecological consultant.'*<br><br>'***B-M1*** *Monitoring in relation to dust, surface water and biodiversity will be carried out by a project ecologist during the construction phase.*'<br><br>**<u>Operational Phase</u>**<br><br>**'*B-O1*** *The attenuation and surface water connections will be inspected upon completion by the project ecologist.'* |

| Sensitive Receptors | Potential Impacts on SPA & SAC | Mitigation Measures to Prevent Impacts on Natura 2000 sites |
|---|---|---|
| | | ***OCMP***<br><br>As detailed in the Outline Construction Management Plan (prepared by T.J. O'Connor & Associates to accompany this application), the following mitigation in relation to surface water will be in place:<br><br>***'3.6. Pollution Control***<br><br>***General***<br><br>• *Demolition and Construction methods used will be tailored to reduce, as much as possible, dust and noise pollution.*<br>• *In order to prevent the accidental release of hazardous materials (fuels, paints, cleaning agents, etc.) during site activity, all hazardous materials will be stored within secondary containment designed to retain at least 110% of the storage contents. Temporary bunds for oil/diesel storage tanks will be used on the site during the construction phase of the proposed development. Safe materials handling of all potentially hazardous materials will be emphasised to all construction personnel employed during this phase of the proposed development.*<br>• *Prior to the commencement of demolition and construction, details will be provided for locations and safe-guards for refuelling of machinery, machine servicing, concrete-mixing, etc.*<br><br>***Surface Water Drainage & Ground Water Control***<br><br>*A specific method statement will be prepared by the Contractor and agreed with Dun-Laoghaire Rathdown County Council prior to commencement of the works, detailing the measures to be taken to ensure that no water run-off from the proposed development occurs during the construction period.*<br><br>*Throughout the works, all surface water (water from excavations etc.) will be pumped to a holding tank on site. From here the water will be pumped to a series of settlement tanks. These tanks will act as primary and secondary settlement. The settlement tanks will be of sufficient number and size to allow the necessary retention time for solids to settle. The discharge water from the final tank will be routed to the existing combined water system with approval from the local authority. Visual checks of the pumping and settlement system will be carried out on a routine basis.*<br><br>*Run-off control measures to include the following:*<br><br>• *The Contractor shall provide a Water Management System to avoid polluted or silt laden surface water runoff from the site.*<br>• *Dewatering measures will only be employed where necessary for local excavation.*<br>• *All ground water to be diverted to silt curtains and settlement tanks prior to discharging to the foul sewer outfall from the site*<br>• *Provision of exclusion zones and barriers (e.g. silt fences) between earthworks, stockpiles and temporary surfaces to prevent sediment washing from the site and into the Dundrum Bypass road gullys* |

| Sensitive Receptors | Potential Impacts on SPA & SAC | Mitigation Measures to Prevent Impacts on Natura 2000 sites |
|---|---|---|
| | | • *All trucks will have a built-on tarpaulin that will cover excavated material as it is being hauled off-site where possible.*<br>• *All vehicles to use either truck wheel wash or manual wheel wash prior to leaving site.*<br>• *Road sweeper to be used to control any residual sediment from the site on the local road network, particularly the Dundrum Bypass.*<br>• *Additional measures such as installing silt collection bags in road gullys along Dundrum Bypass and routine cleaning of silt bags and road gully sumps*<br>• *The use of a road sweeper prior to rain forecasts to be used to further mitigate sediment material entering the River Slang*<br>• *Water quality monitoring station to be established adjacent Dundrum Library to record baseline water quality and weekly testing of water quality during the works.*<br>*For groundwater encountered during construction phase, mitigation measures will include;*<br>o *Dewatering by pumping to an appropriate treatment facility or settlement tanks in order to allow sediment to settle from solution prior to discharge.*<br>o *Excluding contaminating materials such as fuels and hydrocarbons from sensitive parts of the site i.e., highly vulnerable groundwater areas*<br>• *All surface water sewer connections will be made under the supervision of the Local Authority/Irish Water and checked prior to commissioning*<br>• *All onsite surface water drains will be tested and surveyed prior to connection to the public sewer to prevent any possibility of ingress of ground water*<br>• *All surface water manholes and drains will be inspected and where necessary sealed to ensure that uncontrolled ground water inflow does not occur*<br>• *Filters and silt traps will be used to prevent rain washing silts and other materials into the surface water network and creating blockages.*<br>• *Surface water discharge from the site will be managed and controlled for the duration of the construction works, as noted in the points above, until the permanently attenuated surface water drainage system of the proposed development is complete.*<br>• *Regular inspections of settlement tanks are to be carried out and additional treatment used if settlement is not adequate.*<br>• *Bunded areas will be created for the storage or use of any fuels, oils, greases, cement, etc.*<br>*Refuelling of plant and machinery will be occur a minimum of 50m from the open water course and emergency spill kits will be kept close to works.* |

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

A robust series of mitigation measures will be implemented. These will ensure that the proposed works will not impact on the watercourse on site which, out of an abundance of caution, has been determined to be a direct pathway to four Natura 2000 sites in Dublin Bay. It should be noted that the early implementation of ecological supervision on site will be prior to 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 River Slang, including mitigation/supervision, no significant impacts are foreseen from the demolition and site clearance works of the proposed project. Residual impacts of the proposed project will be localised to the immediate vicinity of the proposed works and will not impact on the integrity of Natura 2000 sites.

The mitigation measures outlined for the construction and operational phases of the development satisfactorily address the potential for significant effects on South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, and North bull Island SPA, through the application of the standard demolition and construction phase controls as outlined above. In particular, the mitigation measures to ensure compliance with Water Pollution Acts to prevent silt and pollution entering the River Slang will satisfactorily address the potential for significant effects on downstream biodiversity and Natura 2000 sites within Dublin Bay. No significant adverse effects on the conservation objectives of Natura 2000 sites are likely following the implementation of the mitigation measures outlined above.

### In-Combination Effects

A review of the online planning system (www.myplan.ie) was carried out. The table below outlines a number of planning applications located in close proximity to the subject site that are of note. It should be noted that, an assessment of the scanned documents accompanying each planning application on the online planning system (www.myplan.ie) was carried out.

*Table 9. Approved planning applications located in close proximity to the subject site*

| Ref. No. | Address | Proposal |
|---|---|---|
| ABP30526119 | Building 5, Dundrum Town Centre, Sandyford Road, Dublin 18 | Permission for a strategic housing development consisting of: The construction of a 7-9 storey apartment building with 107no. units (comprising 1no. studio apartment, 50no. 1 bed apartment units and 56no. 2 bed apartment units) and ancillary accommodation totalling 9792sqm gross floor area over an existing podium structure (2.2 to 2.5 metres above pavement level) completed as part of the overall Town Centre development (Reg. Ref: D00A/0112, as amended). The residential accommodation includes resident services, amenities and support facilities totalling 710.5 sqm consisting of lobby area, co-working space, multi- purpose / games room, management office and post room at ground floor level (270.9 sqm), gym at first floor (55 sq.m), cinema/media room at third floor level (55 sq.m), lounge at seventh floor level (114 sq.m) with visitor toilet block (25.3 sq.m), facilities storage (25.3 sq.m) at sixth floor level and residential storage at second floor level (55 sq.m), fourth floor level (55 sq.m) and fifth floor level (55 sq.m). A double height café / restaurant unit (79 sq.m) is proposed at ground floor with access doors to the internal services road. Part of the existing podium structure is removed to provide street level access to the café / restaurant unit. The development includes communal open space in the form of a landscaped podium courtyard (284 sq.m), landscaped roof garden at seventh floor level (207 sq.m) and upgrade of the public realm |

| Ref. No. | Address | Proposal |
|---|---|---|
| | | in addition to private balconies / terraces. A new ESB substation and switch room (19.2 sq.m) is also proposed at the northern boundary of the site adjacent to Sandyford Road. Vehicular access to serve the proposed development will be provided via the existing basement entrance from Sandyford Road. A designated cycle entrance along the existing service road is also proposed. The proposed building is located above an existing basement car park (3 levels) and revisions are proposed to the basement car park as follows: Level 1M: provision of bicycle facilities (including provision of dedicated bicycle ramp, 164no. cycle parking spaces and bicycle service area), bin store, 2no. storage rooms reconfigured lift / stair core and associated circulation lobbies resulting in an additional 433.1sqm and involving loss of 21no. car parking spaces: Level 1: provision of a boiler room / plant, storage room and reconfigured lift / stair core and associated circulation lobbies resulting in an additional 255.9sqm and resulting in the loss of 8no. car parking spaces at this level. The reconfiguration of the existing car parking layout is proposed to provide 47no. car parking spaces at this level to be allocated to the proposed residential development: Level -1: The provision of a water storage room, and storage room and revisions to existing stair / lift cores and circulation lobbies resulting in an additional 113.6sqm and involving loss of 5no. car parking spaces. Permission is also sought for public lighting, hard and soft landscaping, boundary treatments, green roofs, photovoltaic panels and all associated site and development works. |
| D18A/0140 | Site of 0.2344 ha, Nos. 1-5 Ashgrove Terrace, and lands to the rear, (known as 'Pembroke Square'), Dundrum Town Centre, Sandyford Road, Dundrum, Dublin 16. | Permission for development consisting of: 1) The refurbishment, amalgamation and change of use of 5 no. existing vacant buildings (Nos. 1-5 Ashgrove Terrace) and construction of a new 2 storey building (730 sqm) to the rear of and part interconnected with the existing Ashgrove Terrace. The refurbished Ashgrove Terrace (688 sqm) is connected to the new building to the rear and the total gross floor area of the existing buildings and the new building is 1,418 sqm, which will accommodate: A) Unit 1 (1,094 sqm); a restaurant/bar with an retail element (foodhall/delicatessen) and ancillary accommodation over two levels with entrances from Sandyford Road (via existing Ashgrove Terrace) and from the new building extension from the new public space referred to as Pembroke Square. The unit has outdoor seating areas at ground level on Sandyford Road, to the rear on Pembroke Square and on first floor terrace. B) Unit 2 (324 sqm): a café/restaurant unit over two levels with access from the new Pembroke Square and outdoor seating on first floor terrace. 2) Leisure/entertainment/amusement facility with restaurant/bar facilities and ancillary accommodation at extended existing basement level (681 sqm) with access from a new lift/stair core at ground level on Pembroke Square. 3) Multipurpose outdoor space - The remainder of the site will provide a new outdoor space (referred to as Pembroke Square) with associated public realm improvement works, hard and soft landscaping, seating and lighting. Permission is sought for use of the area as a multi-purpose space for events of a cultural, educational, social, recreational or sporting character (including food and craft markets, exhibitions, outdoor cinema, food and beverage stalls and retail concessions on an all year round basis) and the placing or maintenance of tents, vans or temporary or moveable structures or objects on the lands in connection with such uses including the provision of power and lighting and associated signage. Permission is also sought for all associate signage, bicycle parking (28 spaces), plant and all |

| Ref. No. | Address | Proposal |
|---|---|---|
| | | associated site and development works. Ashgrove Terrace is within a candidate Architectural Conservation Area. |
| D15A/0081 | Notre Dames Des Missions | Permission for development at the site which includes Fernbank House, a Protected Structure (RPS Ref. No. 823-Notre Dame School). The proposed development includes: A total of 269 no. dwellings consisting of 50 no. x 1 bedroom apartments; 154 no. x 2 bedroom apartments; 6 no. x 2 bedroom duplex apartments; 54 no. x 3 bedroom duplex apartments and 1 no. 4 bedroom single family dwelling. The apartment dwellings will be provided in a series of buildings (Blocks A, B, C, D, E, F and G) which range in height from 3 to 6 storeys. The 1 no. single family dwelling will be provided in Fernbank House (a Protected Structure RPS Ref. No. 823-Notre Dame School) which is to be retained and refurbished (including internal and external alterations) in order to cater for use as a single family dwelling. The proposals provide for the retention and refurbishment of the existing walled garden of Fernbank House, the creation of new vehicular entrance with 2 no. parking spaces and its use as a private garden for the dwelling and the retention and refurbishment of the lean-to sheds (outbuildings) for use as a general storage and bicycle storage area for apartment Block G. The proposed apartment buildings will be laid out about a series of landscaped courtyards and open space, over an undercroft/basement car park level, which contains 373 no. car parking spaces. In addition 30 no. surface car parking spaces are proposed, including 2 no. car parking spaces within the curtilage of Fernbank House, resulting in a total of 403 no. car parking spaces. A total of 342 no. cycle parking spaces are proposed. Vehicular access will be via a main entrance on the eastern boundary of the subject site onto Churchtown Road Upper and includes proposed amendments to the existing road layout. There will be three no. pedestrian entrances to the site, including a pedestrian access and emergency vehicular access from Finsbury Park to the south. A 161 sqm crèche and an electricity substation room (20 sqm) are proposed at ground floor level of Block G. The development also includes amended boundary treatments and other ancillary site works all on a 2.67 ha site. |

In relation to Planning Ref. **ABP30526119**, an Appropriate Assessment Screening report was prepared by NM Ecology Ltd. to accompany this planning application. This report concludes with the following:

'*Article 42(7) of the European Communities (Birds and Natural Habitats) Regulations 2011 states that: "The public authority shall determine that an Appropriate Assessment of a plan or project is not required […] if it can be excluded on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site."*

*To assist the planning authorities with the screening exercise, we have provided supporting information including; a description of the proposed development; an outline of its environmental setting; details of Natura 2000 sites within the potential zone of impact; and an assessment of potential impacts. Based on this information, we have demonstrated that there will be no risk of direct or indirect impacts on any Natura 2000 sites, so we conclude that Appropriate Assessment is not required.*'

Further, there are a number of approved planning applications located within the site outline. The table below outlines a number of planning applications located within the boundaries of the subject site that are of note.

*Table 10. Approved planning applications located within the boundaries of the subject site*

| Ref. No. | Address | Proposal |
|---|---|---|
| D20A/0304 | Holy Cross Church and Parochial House, Main Street, Dundrum, Dublin 14 | Permission for development at rear. The development will consist of the temporary use (for the next 5 years 2020-2024 inclusive) of lands to the rear of the Holy Cross Catholic Church and Parochial Hall for the erection of a temporary structure (792sq.m) for use as an ice rink for a period of 17 weeks (October-January) per year. The proposed development also includes the provision of power and lighting, mobile toilets, associated signage and all associated site and development works. The ice rink will avail of vehicular and pedestrian access via the existing temporary car park at Mulvey's Yard, Rear of No. 17 Main Street and pedestrian access via temporary stairs and the existing pedestrian gate on Ballinteer Road. No works are proposed to the Holy Cross Church (Protected Structure). |
| D18A/0803 | Mulveys Yard to rear of No.17 Main Street, Parochial House & Holy Cross Church, Main Street, Dundrum, Dublin 14 | Retention Permission is being sought for a temporary carpark for 5 years (0.4848 ha), approximately 156 spaces, with vehicular and pedestrian access from Main Street and from Dundrum Village Centre (Old Dundrum Shopping Centre) and link to Dundrum Town Centre carpark. The development will also be utilised as an overflow carpark for Dundrum Town Centre during busy seasons, eg. Christmas etc. No works are proposed to Holy Cross Church (Protected Structure). |

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

*As outlined by Irish Water*[15] *"The major upgrade that is now underway will allow the Ringsend WwTP to treat the increasing volumes of wastewater arriving at the plant to the required standard, enabling future housing and commercial development. The project will deliver, on a phased basis, the capacity to treat the wastewater for a population equivalent of 2.4 million while achieving the standards of the Urban Wastewater Treatment Directive. Irish Water is working to provide infrastructure to achieve compliance with the Urban Wastewater Treatment Directive for a population equivalent of 2.1 million in the second half of 2023. When all the proposed works are complete in 2025, the Ringsend Wastewater Treatment Plant will be able to treat wastewater for up to 2.4 million population equivalent while meeting the required standards."*

During construction there is potential for surface water and pollution to enter the Slang River. The drainage and water attenuation design included in the proposed development will have a net beneficial impact, particularly during heavy rainfall events where attenuation will take place prior to discharge in the surface water network. No cumulative or in combination effects on European sites are likely to have a significant effect. Cumulatively, these other proposals will not significantly affect European sites. No projects in the vicinity of the proposed development would be seen to have a significant in combination effect on Natura 2000 sites.

**No significant effects are likely from in combination effects**

[15] https://www.water.ie/projects/local-projects/ringsend/

## Conclusion

In a strict application of the precautionary principle, it has been concluded that significant effects are likely on South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA and North Bull Island SPA from the proposed works in the absence of mitigation measures, primarily as a result of direct hydrological connection to the site via the River Slang. For this reason, an NIS was carried out to assess whether the proposed project, either alone or in combination with other plans or projects, in view of best scientific knowledge and in view of the sites' conservation objectives, will adversely affect the integrity of the European Site. All other Natura 2000 sites were screened out at initial screening.

Mitigation measures will be in place to ensure that there are no significant impacts on the watercourse that leads to Dublin Bay. Surface water discharge from site will be developed in accordance with: The Greater Dublin Strategic Drainage Study Volume 2; The Greater Dublin Regional Code of Practice for Drainage Works; BS EN – 752:2008, Drains and Sewer Systems Outside Buildings; and, Part H, Building Drainage of the Building Regulation.

The mitigation measures proposed for the construction and operational phases of the development satisfactorily address the potential for significant effects on South Dublin Bay SC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, and North Bull Island SPA, through the application of the standard demolition and construction phase controls as outlined above. In particular, the mitigation measures to ensure compliance with Water Pollution Acts to prevent silt and pollution entering the River Slang will satisfactorily address the potential for significant effects on downstream biodiversity and Natura 2000 sites within Dublin Bay. No significant adverse effects on the conservation objectives of Natura 2000 sites are likely following the implementation of the mitigation measures proposed. No adverse effects on European sites will occur post-mitigation.

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

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

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

## Data used for the AA Screening/NIS Assessment

NPWS site synopses and Conservation objectives of sites within 15km were examined. 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 ESRI terrain maps and satellite imagery. Several site visits were carried out, including bat surveys, to determine if the site contained possible threats to a Natura 2000 site or any Natura 2000 species or habitats. An EIAR accompanies this AA Screening and NIS.

## References

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


1. Department of Environment Heritage and Local Government Circular NPW 1/10 and PSSP 2/10 on Appropriate Assessment under Article 6 of the Habitats Directive – Guidance for Planning Authorities March 2010.
2. Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities, Department of the Environment, Heritage and Local Government 2009; www.npws.ie/publications/archive/NPWS_2009_AA_Guidance.pdf
3. Managing NATURA 2000 Sites: the provisions of Article 6 of the Habitats Directive 92/43/EEC, European Commission 2000; ec.europa.eu/environment/nature/Natura2000/management/docs/art6/provision_of_art6_en.pdf
4. Assessment of Plans and Projects Significantly Affecting EUROPEAN Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC; ec.europa.eu/environment/nature/Natura2000management/docs/art6/Natura_2000_assess_en.pdf
5. Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EC; https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021XC1028(02)&from=EN
6. Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission; ec.europa.eu/environment/nature/Natura2000/management/docs/art6/guidance_art6_4_en.pdf
7. Guidance document on the implementation of the birds and habitats directive in estuaries and coastal zones with particular attention to port development and dredging; ec.europa.eu/environment/nature/Natura2000/management/docs/guidance_doc.pdf
8. The Status of EU Protected Habitats and Species in Ireland. www.npws.ie/publications/euconservationstatus/NPWS_2007_Conservation_Status_Report.pdf
9. NPWS (2013) Conservation Objectives: South Dublin Bay SAC 000210. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
10. NPWS (2017) Conservation Objectives: Wicklow Mountains SAC 002122. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
11. NPWS (2013) Conservation Objectives: North Dublin Bay SAC 000206. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
12. NPWS (2021) Conservation Objectives: Glenasmole Valley SAC 001209. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
13. NPWS (2021) Conservation Objectives: Knocksink Wood SAC 000725. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.
14. NPWS (2013) Conservation Objectives: Rockabill to Dalkey Island SAC 003000. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht
15. NPWS (2019) Conservation Objectives: Ballyman Glen SAC 000713. Version 1. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.
16. NPWS (2012) Conservation Objectives: Baldoyle Bay SAC 000199. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht
17. NPWS (2016) Conservation Objectives: Howth Head SAC 000202. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
18. NPWS (2017) Conservation Objectives: Bray Head SAC 000714. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.
19. NPWS (2015) Conservation Objectives: South Dublin Bay and River Tolka Estuary SPA 004024. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
20. NPWS (2022) Conservation objectives for Wicklow Mountains SPA [004040]. Generic Version 9.0. Department of Housing, Local Government and Heritage.
21. NPWS (2015) Conservation Objectives: North Bull Island SPA 004006. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
22. NPWS (2022) Conservation objectives for Dalkey Islands SPA [004172]. Generic Version 9.0. Department of Housing, Local Government and Heritage
23. NPWS (2013) Conservation Objectives: Baldoyle Bay SPA 0004016. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht

# Appendix I - Dundrum Shopping Centre (Old Centre) Winter Bird and Flightline Survey January 2022

In January 2022 two winter bird/flightline surveys were conducted on the footprint of the original Dundrum Shopping centre adjacent Main Street, Dundrum, Co Dublin, by Hugh Delaney, a freelance Ecologist (Birds primarily) having completed work on numerous sites with ecological consultancies over 10+ years. Hugh is local to the Dun Laoghaire-Rathdown area in Dublin and is especially familiar with the bird life and its ecology in the environs going back over 30 years.

**Winter Bird Survey Methodology**

Winter bird surveys are conducted from soon after sunrise until late in the afternoon before sunset, the site is monitored throughout the day and all bird species utilizing the site recorded, including species flying through overhead. Checks are also made on suitable habitat nearby or adjacent the site for comparative purposes and to monitor any interchange of birds between sites. Target species (species of more special interest) utilizing the site will be mapped and estimates of the time these species frequented the site recorded. Specific emphasis was placed on establishing the presence of Brent Geese passing over or close to the site, with dedicated observation (especially early and late in day when Geese would be most likely recorded passing through site on route to sites from the coast). On survey was conducted on January 12th and a second a week later on January 19th. Dublin Bay tides (North Wall) are recorded for the purposes of this possibly being a factor with any sightings recorded.

**Site location and description**

The original Dundrum Shopping Centre sited just off the Main Street in Dundrum is an urban site comprising the shopping centre structure (approximately 20m in height) and adjacent tarmacadam carpark with a few trees and shrubbery around the border. The surrounding area is a well-developed urban environment.

Figure 1. Old Dundrum Shopping Centre site outline. Vantage points selected are marked in yellow, these provided optimal viewing over entire site, with the elevation of the adjacent Dundrum Luas Station viewpoint especially beneficial. Observations were switched at intervals between the three vantage points, with most time spent at the vantage points at Luas Station and Ulster bank below the station as these were considered the most optimal.

**Survey results**

January 12th, 2022

Sunrise- 08.35hrs/Sunset 16.32hrs. Weather – Wind F1 Southwest, Cloud 4/8, Dry, 10c, Excellent visibility. On-site 08.20hrs – 16.40hrs.
Dublin Bay tides (North Wall) 00.48hrs (1.4m), 07.26hrs (3.2m), 13.10hrs (1.6m), 19.38hrs (3.3m).

Species recorded – Rook, Jackdaw, Magpie, Blackbird, Starling, Feral Pigeon, Dunnock, Pied Wagtail, Grey Wagtail, Herring Gull, Black-headed Gull, Hooded Crow, Woodpigeon.

08.20hrs-12.30hrs – On arrival on site optimal vantage points were established (best at northeast side of site). Site was boundary was circled on foot several times during morning, with continual checking of overhead passing species. Herring Gull and Black-headed Gull were the most frequent species noted over site, maximum counts of 8-10 Herring Gulls around site at one time. Small numbers of Black-headed Gulls recorded, maximum counts of 5 or less. Feral Pigeon and occasional small flocks of Starling noted passing over site. No other Target species recorded.

12.30hrs-16.40hrs – Vantage point observations made from the northeast locations made for most of afternoon and continually from Luas Station from 14.00hrs to finish. Similar numbers of Herring and Black-headed Gulls recorded with a notable increase from 15.00hrs of Black-headed Gulls (c.100) passing east (likely birds returning to Dublin Bay to roost). Small numbers of Starling and Feral Pigeon also passing over site. Corvids noted on Shopping Centre roof and around car park with Jackdaw being commonest, maximum count of 15 birds noted. A few of the other passerine species recorded mostly foraging around car park area. No other species recorded.

January 19th, 2021

Sunrise- 08.27hrs/Sunset 16.44hrs. Weather – Wind F4 Northwest, Cloud 6/8, Dry, 9c, Excellent visibility. On-site 08.15hrs – 16.45hrs.

Dublin Bay tides (North Wall) 00.15hrs (3.69m), 05.49hrs (1.08m), 12.27hrs (3.95m), 18.19hrs (0.89m).

Species recorded – Rook, Jackdaw, Magpie, Song Thrush, Mistle Thrush, Blackbird, Starling, Feral Pigeon, Dunnock, Pied Wagtail, Grey Wagtail, Herring Gull, Black-headed Gull, Hooded Crow, Woodpigeon.

08.15hrs-12.30hrs – Most of morning spent overlooking site from the northeast vantage points, and a circuit of site made in late morning. Again, Herring Gull (< 5 at a time usual) and Black-headed Gull (singles or several) observed over site in small numbers and occasionally landing onto shopping centre roof. Feral Pigeon and Starling observed passing through site in small numbers with Feral Pigeon also observed on the roof of the structure. A Rowan Tree heavily laden with berries attracted some Thrush species on the main street opposite Bank of Ireland. Otherwise, quiet with no other target species noted.

12.30hrs-16.45hrs – All three vantage points utilized, and several circuits of site made, Herring Gull and Black-headed Gull again in small numbers with once again a late afternoon passage noted of both species east over the site (likely heading to roost in Dublin Bay) with c.30 Herring and c.80 Black-headed noted from 15.00hrs-16.45hrs. Feral Pigeon, Starling again occasionally passing over site and the dominate corvid species noted being Jackdaw. No other species noted.

**Comments and observations on survey results**

Observations on these two visits to the old Dundrum Shopping Centre revealed that no significant target species such as Brent Geese would appear at least to pass over this site or nearby with any regularity, a check on the database Irishbirding.com of sightings of Brent Geese over the last several years reveals no site known in the immediate vicinity to Dundrum with records of foraging Brent Geese. The closest sites to Dundrum recently documented with Brent Geese in winter (and known to me from personal observations) being Kilbogget Park in Cabinteely, Blackrock College & Park (Blackrock), Clonkeen College (Cabinteely) and St Kevin's College (Crumlin).