

**MWP**

**Screening for Appropriate Assessment**  
**Residential Development at Broomhill Road,**  
**Tallaght, Dublin 24**

**Garyaron Homes**

**May 2022**

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## **1. Introduction**

### **1.1 Purpose of the Assessment**

Malachy Walsh and Partners Engineering and Environmental Consultants (MWP) have been engaged by John Fleming Architects (JFA), under the appointment of the Applicant, Garyaron Homes Ltd., in relation to a planning application for a proposed residential development in Co. Dublin. This screening for Appropriate Assessment report has been undertaken to determine whether the proposal to construct a residential development at Broomhill Road, Tallaght, Dublin 24, is likely to result in significant effects on nearby sites with European conservation designations (i.e. Natura 2000 Sites). The screening exercise determines the need for a full Appropriate Assessment. The screening for Appropriate Assessment report has been undertaken by MWP ecologists. An Ecological Impact Assessment (EclA) and Environmental Impact Assessment screening report have also been prepared by MWP in relation to the proposal.

### **1.2 Statement of Competency**

This screening for Appropriate Assessment report has been prepared by Hazel Dalton (BSc., BBus.). Hazel is a Senior Ecologist with seven years' experience in environmental consultancy. She is experienced in ecological surveying, ecological impact assessment and the Appropriate Assessment process. She has undertaken ecological assessments for a wide variety of projects including renewable energy and infrastructure developments, coastal/marine projects, housing and various other development projects. She has extensive experience with ecological report writing including ecological impact assessment and Appropriate Assessment (AA, NIS).

She is an experienced field ecologist and has a diverse ecological survey profile. Particular field survey skills include habitats and flora, mammals including badger, otter and bats, birds, invasive species and Kerry slug. She also has experience in biological sampling for freshwater biological water quality assessments. She has held NPWS Licences for small mammal trapping, tape lure/endoscope bird surveys, disturbance of bats and Kerry slug and photographing wild animals.

### **1.3 Project Overview**

Strategic Housing Development (SHD) applications are applications for planning permission directly to An Bord Pleanála (ABP) for certain housing developments.

Garyaron Homes intends to apply to ABP for a 5 year planning permission for a SHD scheme on lands at Broomhill Road, Tallaght, Dublin 24, D24 XA52 and Unit 51, Broomhill Road, Tallaght, Dublin 24, D24 E124 on a site of approximately 1.4 ha.

The proposed development will consist of (a) the demolition (total area approx. 4,319.9 sqm) of the existing buildings on site and the existing front boundary treatment; and (b) the construction of a new residential and mixed-use scheme of 242 no. apartment units in 5 no. blocks (Blocks A to E) ranging from 4 to 7 storeys in height.

The proposed development will also include a childcare facility/creche, a café, reception area, resident lounge, letting office, rentable room/studio space, public gym and a public co-working space as well as landscaped open spaces. The development shall be served via a new vehicular access point from Broomhill Road (upgrade works are proposed). The associated site and infrastructural works include provision for water services; foul and surface water drainage and connections; attenuation proposals; permeable paving; all landscaping works; boundary treatment; internal roads and footpaths; waste storage areas and electrical services and all associated site development works.

The site as it currently stands is already developed with a two-storey office/ light industrial unit on the south side and various containers and sheds on a concrete/ tarmacadam surface in the northern end of the site, which is suitable for accommodating container delivery. There are ample parking facilities at the rear of the industrial unit. The site is surrounded by a mixture of office light industrial and warehouse buildings of various ages. The site is part of an on-going regeneration scheme by South Dublin County Council to introduce a residential mix into the general area.

## 1.4 Legislative Context

The Habitats Directive (92/43/EEC) seeks to conserve natural habitats of wild fauna and flora by the designation of Special Areas of Conservation (SACs) and the Birds Directive (79/409/EEC) seeks to protect birds of special importance by the designation of Special Protected Areas (SPAs). It is the responsibility of each member state to designate SPAs and SACs, both of which form part of Natura 2000, a network of protected sites throughout the European Community. The Habitats Directive has been transposed into Irish law and the relevant Regulations are the European Communities (Birds and Natural Habitats) Regulations 2011. The requirement for Appropriate Assessment of the implications of plans and projects on the Natura 2000 network of sites comes from the Habitats Directive (Article 6(3)).

Under the European Communities (Birds and Natural Habitats) Regulations 2011 a public authority is required to carry out a screening for Appropriate Assessment of a proposed development prior to issuing consent to assess, in view of best scientific knowledge and the sites conservation objectives, if that project or plan, individually or in combination with other plans or projects is likely to have a significant effect on a Natura 2000 site.

The screening for Appropriate Assessment will determine whether an Appropriate Assessment of the proposed development is required if it cannot be excluded, on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, will have a significant effect on a Natura 2000 site, in view of the site's conservation objectives.

The information presented in this screening for Appropriate Assessment report will be used by the competent authority, in this case ABP, to assist them to complete their screening exercise. If it is determined that an Appropriate Assessment is required in respect of the proposed development, a Natura Impact Statement (NIS) must be prepared.

## 1.5 Stages of Appropriate Assessment

The Appropriate Assessment process is a four-stage process with issues and tests at each stage. The purpose of the screening assessment is to record in a transparent and reasoned manner the likely effects on Natura 2000 sites of a proposed development. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required. The stages are set out in **Appendix 2**. This proposal has proceeded as far as Stage 1.

## 2. Methodology

### 2.1 Appropriate Assessment Guidance

This screening for Appropriate Assessment report has been undertaken in accordance with the European Commission Methodological Guidance on the provision of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC

(EC, 2001), the European Commission Guidance ‘Managing Natura 2000 Sites’ (EC, 2018), and *Appropriate Assessment of Plans & Projects - Guidance for Planning Authorities* prepared by the NPWS (DoEHLG, 2010).

## 2.2 Desk Study

In order to complete the screening for Appropriate Assessment report certain information on the existing environment is required. A desk study was carried out to collate available information on the subject site’s natural environment. This comprised a review of the following publications, data and datasets:

- OSI Aerial photography and 1:50000 mapping
- National Parks and Wildlife Service (NPWS)
- National Biodiversity Data Centre (NBDC) (on-line map-viewer)
- BirdWatch Ireland
- Teagasc soil area maps (NBDC website)
- Geological Survey Ireland (GSI) area maps
- Environmental Protection Agency (EPA) water quality data
- Eastern River Basin District (ERBD) datasets (Water Framework Directive)
- South Dublin County Council Development Plan 2016 - 2022
- *Draft* South Dublin County Development Plan 2022 – 2028
- Tallaght Town Centre Local Area Plan 2020 - 2026
- Review of requested records from NPWS Rare and Protected Species database
- Other information sources and reports footnoted in the course of the report

### 2.2.1 Database searches and data requests

The study area lies within the Ordnance Survey National Grid hectad O02. Concise and site-specific information on species records available in this hectad was retrieved from the NBDC on-line database and reviewed. A data request for records of any rare or protected flora and fauna within the hectad O02 was also submitted to the National Parks and Wildlife Service (NPWS) on the 8<sup>th</sup> July 2021.

Data was received from NPWS on 12<sup>th</sup> July 2021. Data was provided for an area of 5 km around a centroid of the site with Irish Grid coordinates x: 309290; y:228410.

Information received in response to the data request was used to help inform the impact assessment in relation to the proposal.

## 2.3 Field Surveys

The desk top study was supplemented by an ecological walkover survey of the proposed development site which included surveying for habitats, flora and fauna. This was undertaken by an MWP ecologist on 7<sup>th</sup> July 2021. The walkover survey had regard to ‘Best Practice Guidance for Habitat Survey and Mapping’ (Smith *et al.*, 2011) and ‘A Guide to Habitats in Ireland’ (Fossitt, J. A., 2000). As part of this survey, habitats within and bounding the development site were categorised to Level 3 according to Fossitt (2000). Habitats occurring within the site were

assessed for their potential suitability for terrestrial mammal species. Evidence of terrestrial mammals such as tracks, feeding signs and droppings were searched for. Any birds observed or heard calling during the walkover survey were recorded. Any invasive alien plant species (IAPS) observed within the site during the walkover survey were also recorded. Following the walkover survey, a habitat map for the development site was prepared.

Bat surveys were undertaken on-site by Bat Eco Services separate to the ecological walkover survey undertaken by MWP.

## 2.4 Screening for Appropriate Assessment

As set out in the NPWS guidance, the task of establishing whether a plan or project is likely to have an effect on a Natura 2000 site(s) is based on a preliminary impact assessment using available information and data, including that outlined above, and other available environmental information, supplemented as necessary by local site information and ecological surveys. This is followed by a determination of whether there is a risk that the effects identified could be significant. The precautionary principal approach is required.

Once the potential impacts that may arise from the proposal are identified the significance of these is assessed through the use of key indicators:

- Habitat loss and alteration
- Disturbance and/or displacement of species
- Habitat or species fragmentation
- Water quality

## 3. Screening for Appropriate Assessment

The purpose of the screening assessment is to record in a transparent and reasoned manner the likely effects on relevant Natura 2000 Sites of the project.

Screening for Appropriate Assessment (Stage 1) determines the need for a full Appropriate Assessment (Stage 2) and consists of a number of steps, each of which is addressed in the following sections of this report:

- 3.1 Establish whether the project is necessary for the management of a Natura 2000 Site
- 3.2 Description of the project (proposed residential development at Broomhill Road, Tallaght, Dublin 24)
- 3.3 Identification of other plans, projects and activities
- 3.4 Identification of Natura 2000 Sites potentially affected
- 3.5 Identification and description of potential individual and cumulative impacts of the project
- 3.6 Assessment of the significance of the impacts on the integrity of Natura 2000 Sites
- 3.7 Conclusion of screening stage

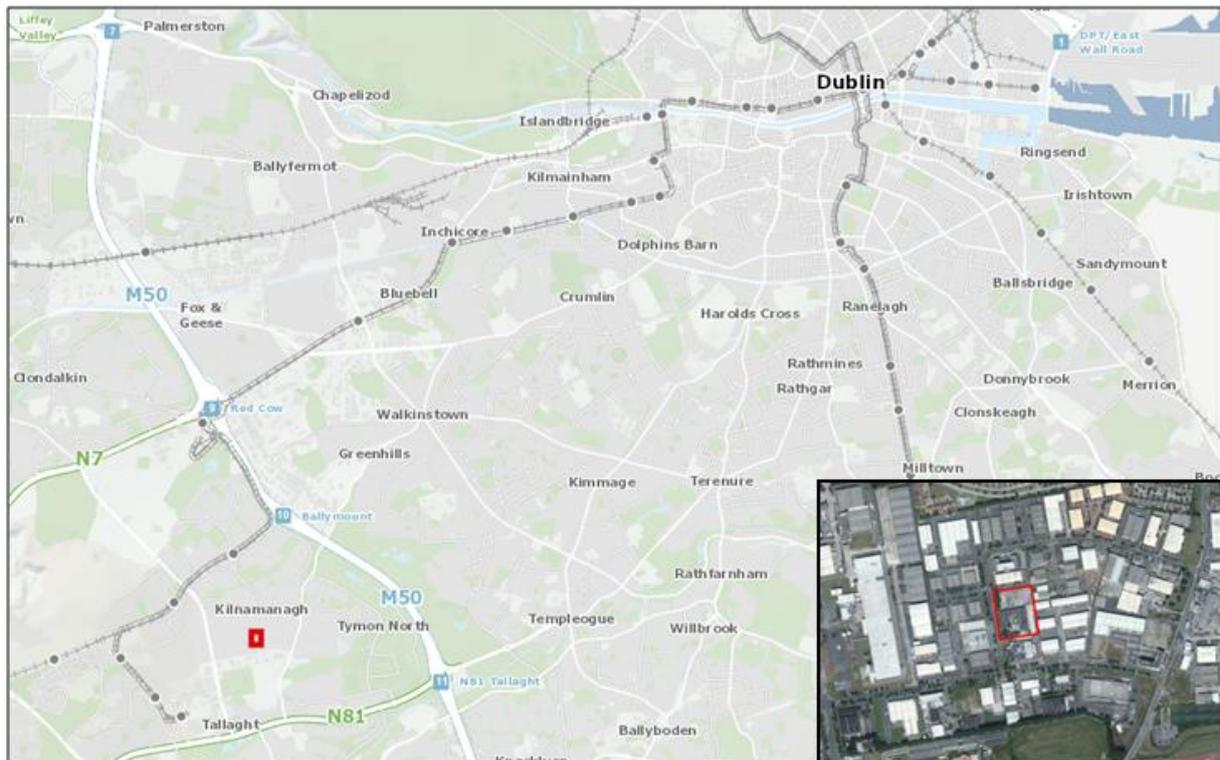
### 3.1 Management of Natura 2000 Sites

The proposal is not connected with or necessary to the conservation management of a Natura 2000 Site.

## 3.2 Description of Project

### 3.2.1 Site Location and Context

The proposal site is situated within Broomhill Industrial Estate in Tallaght, located approximately 6 km from Dublin City Centre. The subject site is bound to the north by Broomhill Terrace, to the west by Broomhill Road and to the east and south by existing industrial/commercial premises. There are currently two entrances to the site, both off Broomhill Road. The N81 Tallaght Bypass is situated 0.9 km to the south of the site while the M50 Motorway is situated 1.5 km to the north-east (see **Figure 1** below).



**Figure 1. Location of proposed development site**

### 3.2.2 Brief Project Description

Once complete, the proposed development will comprise a total of 242 no. apartment units including 96 no. 1-bed apartments, 141 no. 2-bed apartments, and 5 no. 3-bed apartments distributed over five blocks (Blocks A-E).

The proposal will also include a public gym, co-working office space, rentable room/studio, reception, residents lounge and café with al-fresco seating at ground level in Block B and C. A 465 sqm childcare facility/creche will be integrated into the ground floor of Block D with access to 340 sqm of private enclosed play space. A central green space with lawn, play and seating areas will be contained within the development with pathways connecting to car and bicycle parking areas. Landscaping will be employed throughout the site including within the central green space, car parking areas and along the boundary with Broomhill Road.

### 3.2.3 Purpose of the Project

The purpose of the project is to contribute towards meeting the current demand for residential housing in the greater Dublin City area by the construction of apartments units.

### 3.2.4 Description of Existing Site

#### 3.2.4.1 General Site Description

The development site is located in Broomhill Industrial Estate which is situated approximately 30 minutes' drive from Dublin City Centre. The site primarily comprises built ground, accommodating a two-storey office/light industrial unit in the south and various sheds and containers sitting on concrete/tarmac in the northern section (see **Figure 2** below). The roadways surrounding the site are sporadically lined with deciduous trees on managed grass verge.

This built-up area is part of a regeneration scheme in South Dublin County Council to introduce a residential mix into the area. The site location is ideal having Tallaght's leading amenities on its doorstep and being close to public transport including the Luas and bus routes. The site is on the periphery of the M50 close to Tymon Park within 1 km of various schools, fitness centres, parks, Tallaght hospital and town centre.



**Figure 2. Aerial view of approximate proposed development site in context of surrounding area**

The development site is located in the townland of Tallaght and the Electoral Division (ED) of Tallaght-Kingswood. During the 2016 census, this ED was found to have a total population of 3,996 person's resident<sup>1</sup>. The main Corine (2018) land cover category for the proposed development site and land extending away from it is 'artificial surfaces – industrial and commercial units' with 'artificial surfaces – discontinuous urban fabric' further north and 'artificial surfaces – green urban areas' further south<sup>2</sup>.

Bedrock at the site and throughout the greater area is made up of 'Visean limestone and calcareous shale'. Sub-soil at the proposal site and its surrounds comprises 'man made' with areas of mainly 'limestone till

<sup>1</sup> <http://census.cso.ie/sapmap/> [Accessed 24-08-21]

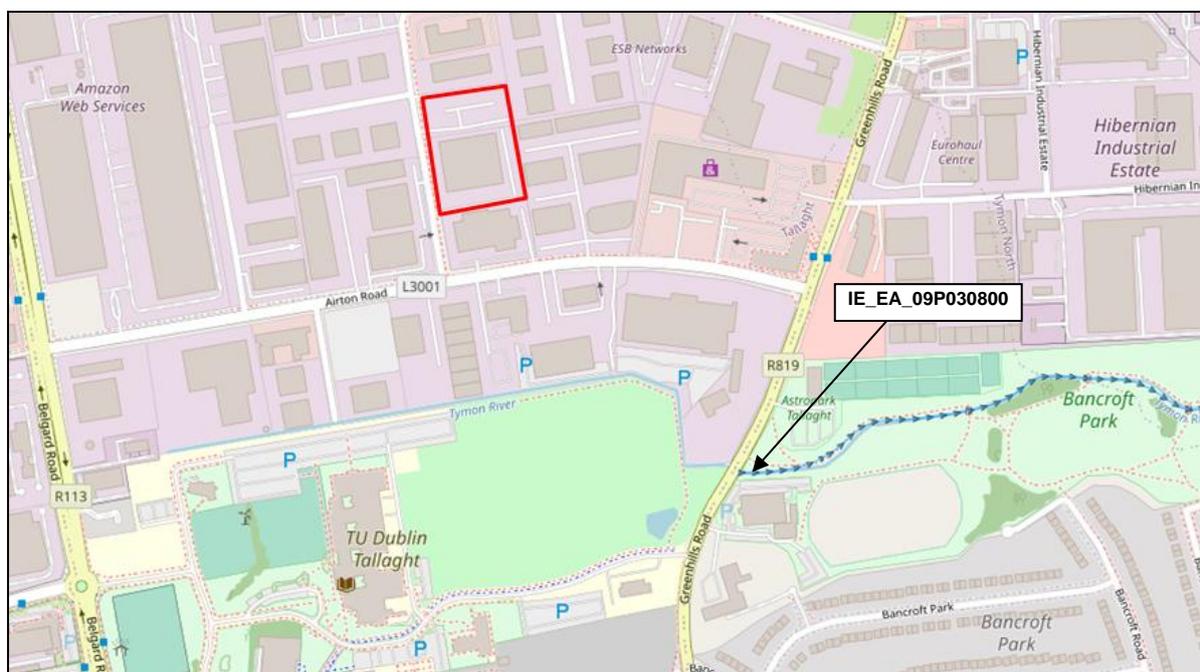
<sup>2</sup> [EPA Maps](#) [accessed 23/08/21]

(Carboniferous)' further to the south and east, along with smaller pockets of 'alluvium undifferentiated' and 'limestone sands and gravels (Carboniferous)'. Soil type at the site and extending away comprises 'urban'.

### 3.2.4.2 Hydrology and Hydrogeology

The site is located within the 'Liffey and Dublin Bay' WFD catchment and the 'Dodder\_SC\_010' WFD sub-catchment. The northern boundary of the proposal site lies immediately south of the boundary with the 'Liffey\_SC\_090' WFD sub-catchment. The extreme north-western corner of the proposal site is located within the 'Liffey\_SC\_090' sub-catchment. The site is located within the 'Poddle\_010' WFD river sub-basin. The extreme north-western corner of the proposal site lies within the 'Camac\_040' WFD river sub-basin.

A review of open street mapping and aerial photography determined that the nearest watercourse to the development site is the 'Tymon River' which travels west to east approximately 0.22 km due south of the proposal site (see **Figure 3** below). During the ecological walkover survey, this watercourse was determined to comprise a modified stream running along the boundary of a university campus. This stream is separated from the proposal site by intervening built ground comprising various commercial premises, Airton Road (L3001) and existing carparks.



**Figure 3. Watercourses in the vicinity of the proposal site (approximate site outline in red) (adapted from EPA map-viewer)**

From Greenhills Road (R819) eastwards, this watercourse is mapped on the EPA map-viewer 'flow network' as a 1st order stream (identified as IE\_EA\_09P030800), located in Bancroft Park (see **Figure 3** above). This particular stretch of the watercourse is located approximately 0.4 km to the south-east of the proposal site at the closest point. The IE\_EA\_09P030800 stream continues eastwards and then northwards, eventually forming the 'Poddle' stream (IE\_EA\_09P030800) just to the south of the Western Parkway Motorway. The 'Poddle' stream continues in a generally northwards direction towards the city centre, being piped underground for much of its length, eventually discharging to the River Liffey in excess of 7.5 km to the north.

The nearest downstream EPA river water quality monitoring station is located at 'The Priory, Kimmage Road' approximately 5 km downstream of the Greenhills Road crossing where the 'Poddle' stream has been assigned a

Q-value of 'Q3', recorded in 2007. The river waterbody WFD status 2013-2018 of the 'Poddle' stream is 'unassigned'.

A review of on-line mapping shows that the site overlies the 'Dublin' groundwater body (GWB) (GWB Code IE\_EA\_G\_008). This GWB has an area of 825 km<sup>2</sup> with a GWB WFD Status 2013-2018 of 'Good' with a GWB risk category currently under review'.

It is proposed that wastewater from the proposed development will discharge to Ringsend UWWT plant (Licence No. D0034) via the existing public foul system. This plant discharges treated effluent into the estuarine waters of the River Liffey which drains into Dublin Bay. The Liffey Estuary from Islandbridge Weir to the Poolbeg Lighthouse including the River Tolka Basin and the South Bull Lagoon is designated as a "sensitive area" by Part 2, Schedule 3, of the Urban Wastewater Regulations, SI 254 of 2001<sup>3</sup>.

The latest WFD Transitional Waterbody status 2013 – 2018 of the 'Liffey Estuary Lower' is 'Good'. The latest WFD Coastal Waterbody status 2013 – 2018 of 'Dublin Bay' is also 'Good'. As to the Coastal Waterbodies Risk – Cycle 2 – status, 'Dublin Bay' is considered to be 'not at risk'<sup>4</sup>.

### 3.2.4.3 Field Surveys

The dominant habitat occurring within and surrounding the subject site is Buildings and artificial surfaces (BL3) comprising the existing buildings and paved surfaces, as expected given the location of the site within an industrial/commercial setting. Other habitats recorded within the site included Amenity grassland (improved) (GA2), Dry meadows and grassy verges (GS2), Scattered trees and parkland (WD5), Scrub (WS1)/Ornamental non-native shrub (WS3) and Treeline (WL2). These modified/managed habitats occur as minor areas within the footprint of the overall site. No annexed habitats or species were recorded.

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<sup>3</sup> Ringsend UWWTP AER 2020 [090151b2807d3b9b.pdf \(epa.ie\)](https://www.epa.ie/publications/default.aspx?category=2&id=1202) Accessed 07/10/2021

<sup>4</sup> [EPA Maps](https://www.epa.ie/maps/) Accessed 07/10/2021



Plate 1. View from within the southern half of the site looking northwards



Plate 2. View from within the northern half of the site looking east



**Plate 3. View of site adjacent to Broomhill Road looking north along conifer treeline**

### 3.2.5 Characteristics of the Project

The proposed development will consist of:

- (a) the demolition of the existing buildings on site (total area approx. 4,319.9 sqm) and the existing front boundary treatment.
- (b) and the construction of a new residential and mixed-use scheme of 242 no. apartment units in 5 no. blocks (Blocks A to E) ranging from 4 to 7 storeys in height as follows:
  - Block A (5 storeys) comprising 40 no. apartments (4 no. 1 bed, 31 no. 2 bed and 5 no. 3 bed units)
  - Block B and C (7 storeys) comprising 102 no. apartments (45 no. 1 bed and 57 no. 2 bed units)
  - Block D (5 - 7 storeys) comprising 36 no. apartments (16 no. 1 bed and 20 no. 2 bed units)
  - Block E (4 - 5 storeys) comprising 64 no. apartments (31 no. 1 bed and 33 no. 2 bed units)

Block D will accommodate a Childcare Facility/creche of approx. 465 sqm at ground floor level. The proposal will also provide for a café of approx. 50.9 sqm at the ground floor of Block C.

Residential amenity areas will be provided in the form of a reception of approx. 125.1 sqm, resident lounge of approx. 45 sqm, a letting office of approx. 11.8 sqm, a rentable room/studio space of 39 sqm, a public gym of approx. 128.5 sqm and a public co-working space of approx. 128.4 sqm, all at the ground floor level of Blocks B & C.

Each residential unit will be afforded with private open space in the form of a balcony or terrace. Communal open space of 1,797.4 sqm is proposed in the form of 2no. roof top terraces at Blocks D and E, courtyard space at

ground level, outdoor seating and planting and pedestrian and cyclist links. Public open space of 1,400 sqm is also proposed in the form of outdoor seating, paved areas, a lawn area, play areas and an outdoor seating area to the front of the proposed café at Block C.

A total of 136 no. car parking spaces are provided at ground floor level, including 7 no. Accessible spaces at surface level; and 426 no. bicycle spaces (Visitor and Resident in bike stands and secure stacked bike spaces) are proposed.

Please refer to **Figure 4** and the Planning Drawings for the proposed site layout.

The development shall be served via a new vehicular access point from Broomhill Road. Upgrade works are proposed to the vehicular access point to facilitate the proposed development and to provide for improved access and egress for the overall development. New pedestrian and cyclist access points will be provided on to Broomhill Road from the site.

The associated site and infrastructural works include provision for water services; foul and surface water drainage and connections; attenuation proposals; permeable paving; all landscaping works; boundary treatment; internal roads and footpaths; waste storage areas and electrical services and all associated site development works.

Surface water run-off generated from the development will be routed through a series of on-site Sustainable Urban Drainage System (SuDS) elements which have been incorporated into the project at design stage. SuDS elements are widely used to alleviate detrimental effects of urban stormwater drainage on receiving watercourses. The Greater Dublin Strategic Drainage Study (GDSDS) Final Strategy Report outlines the systematic implementation of best practice stormwater management systems, including SuDS, which are to be employed as standard for all new developments<sup>5</sup>.

SuDS elements to be employed include use of sedum roofs, permeable paving, bypass petrol interceptor, silt trap and hydro-brake. These elements will utilise runoff interception, detention and infiltration at source before discharging to an on-site attenuation system. A proprietary petrol interceptor and silt trap will be provided on the inlet to the proposed attenuation to improve the quality of the discharge by capturing all possible debris and hydrocarbons pollution from the development. A flow control device or 'hydrobrake' provided on the outfall pipe of the attenuation system will control flow to green field run-off rates. Each of these SuDS mechanisms provides various stormwater treatment, storage and/or attenuation functions by which surface run-off from the development will be managed prior to leaving the site and entering the existing public stormwater drainage system via an existing Local Authority stormwater drain located on Broomhill Road.

The proposed foul sewer, fully separated from the proposed storm water drainage, is designed for sewage and wastewater collection from the proposed buildings. It will discharge to the existing public foul sewer system. The development will connect to Ringsend UWWTP via the public system. Irish Water (IW) has confirmed via a pre-connection enquiry application and a Statement of Design Acceptance (dated May 2022) that the proposed connection is feasible based on the network capacity currently available subject to condition of introducing sewage flow management. This will be achieved via the proposed construction of a pumping station on-site which will store and control discharge from the development to the Local Authority gravity network to ensure that the development will not have a detrimental effect on the capacity of the downstream network. The flow control and storage measures will be installed, owned and operated by the developer until planned public network upgrades (currently at preliminary design stage) are delivered and additional capacity in the network becomes available.

Water supply to the proposed development will be provided through a new 150Ø watermain connection to the existing Local Authority located in Broomhill Road to the west of the site.

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<sup>5</sup> [Microsoft Word - GDSDS Final Strategy Report - April 05.doc \(greaterdublindrainage.com\)](#) Accessed 07/10/2021

Please refer to the Drainage Design Report (April 2022) and Drainage Layout Planning Drawing (Drawing Ref: D1679-D1-PL2, April 2022) for the development prepared by Kavanagh Burke Consulting Engineers which accompany the planning application for more information.

A Construction Environmental Management Plan (CEMP) has been prepared by AWN Consulting (AWN) on behalf of the Applicant. The CEMP encompasses construction programming and phasing, excavations, site logistics, construction traffic and site access, construction lighting, air quality, noise and vibration, resource and waste management and surface water management.

The Site Layout is shown in **Figure 4** below. Please also refer to the Planning Drawings which accompany the planning application.

The proposal is described below and has been confirmed with the project engineer.

<p><i>Size, scale, area, land-take</i></p>	<p>The total development site has an overall footprint of 1.4 ha with a gross floor area of construction of 22,499.9 sqm.</p> <p>Within this, the footprint of each of the 5 No. apartment blocks are as follows:</p> <ul style="list-style-type: none"> <li>– Block A (5 storeys) comprising 40 no. apartments (4,105 sqm)</li> <li>– Block B and C (7 storeys) comprising 102 no. apartments (9,212.9 sqm)</li> <li>– Block D (5 - 7 storeys) comprising 36 no. apartments (3,778 sqm)</li> <li>– Block E (4 - 5 storeys) comprising 64 no. apartments (5,404 sqm)</li> </ul> <p>There is no spatial overlap with any Natura 2000 site; therefore, there will be no land take within any Natura 2000 site. There is an indirect hydrological connection between the development site and certain Natura 2000 sites via the proposed connection to Ringsend WWTP which will receive wastewater from the development and discharge treated effluent to the Lower Liffey/Dublin Bay.</p>
<p><i>Details of physical changes that will take place during the various stages of implementing the proposal</i></p>	<p><b><u>Site set-up and clearance</u></b></p> <p>Site set up, welfare facilities and compound establishment, decommissioning and movement of site compound and facilities as needed. Set up of hoarding around compound and the site boundary. Erection of safety signage to all areas and implementation of traffic/pedestrian management plan. Site clearance to remove minimal vegetation and topsoil will take place prior to works commencing. All of the existing structures on site will be demolished as part of initial enabling works and hardstanding material excavated before the construction of the proposed development. Total area of demolition approx. 4,319.9 sqm.</p> <p><b><u>Construction phase</u></b></p> <p>The project excavations will involve excavations for new foundations, site levelling and excavations for roads and services.</p> <p>Construction of building structure on ground foundations. General site works including construction of drainage infrastructure, internal roads and footpaths (construction methodology and programme will be dictated by the Contractor). Ancillary site development works, landscaping and services.</p>

	<p><u>Construction Sequence (indicative)</u></p> <ul style="list-style-type: none"> <li>• Construction of the foundations for the development will involve the excavation of the site to foundation level, construction of the reinforced concrete foundations and subsequent backfilling to proposed floor level.</li> <li>• Construction of load bearing walls, non-load bearing vertical elements and roof structures.</li> <li>• Installation of cladding to roof level and roof cladding.</li> <li>• First fix Mechanical &amp; Electrical Fit-Out will commence from ground floor level upwards.</li> <li>• This will be followed by the second fix and final connections.</li> <li>• Initial installation of stud work when cladding completed, and floor is weather tight.</li> <li>• Installation of equipment and associated connection to services.</li> <li>• Completion of finishes.</li> <li>• The final commissioning period will commence during fit-out.</li> </ul> <p><b>Operational phase</b></p> <p>On-going routine landscaping and general maintenance works.</p>
<p><i>Description of resource requirements for the construction/operation and decommissioning of the proposal (water resources, construction material, human presence etc)</i></p>	<p><b>Construction-related Materials (indicative)</b></p> <ul style="list-style-type: none"> <li>• Hoarding, scaffolding</li> <li>• Structural/Secondary support steelwork</li> <li>• Flooring</li> <li>• Non-structural metalwork</li> <li>• External wall finishes</li> <li>• Roof finishes</li> <li>• Above ground drainage pipes, fitting and pipework ancillaries</li> <li>• Foul and surface water drainage</li> <li>• Watermain pipework</li> <li>• Concrete (in-situ, reinforcement, sundries, formwork, precast/composite)</li> <li>• Brickwork/blockwork</li> <li>• Roofing, cladding and waterproofing</li> <li>• Woodwork</li> <li>• Road and pavements (sub-bases, bases and surfacing)</li> <li>• Kerbs, channels and edgings</li> <li>• Signage</li> <li>• Manholes and gullies</li> <li>• Attenuation tank</li> <li>• Full retention and bypass interceptors, silt traps, grease trap</li> <li>• Water storage units for fire fighting</li> <li>• Electrical pipework</li> <li>• Fill (crushed stone Clause 804, pea gravel)</li> <li>• Plaster, render, cement mortar etc.</li> <li>• Wall cladding</li> </ul>

	<ul style="list-style-type: none"> <li>• Tiling</li> </ul> <p><b>Construction plant and machinery required (indicative):</b></p> <ul style="list-style-type: none"> <li>• Hydraulic excavators</li> <li>• Mobile cranes</li> <li>• Specialist hydraulic demolition/crushing machines</li> <li>• 20t 360 Excavators</li> <li>• 20t Dumper Truck</li> <li>• 3t Mini Digger</li> <li>• 5t Dumper truck</li> <li>• 3t roller</li> <li>• Ready-mix concrete trucks</li> <li>• Pump unit for ready mix concrete</li> <li>• Vibrating rollers</li> <li>• HGV 20 foot trailers</li> <li>• HGV 40 foot trailers</li> <li>• Telescopic site handlers</li> <li>• Road Sweeper</li> <li>• Block Grab</li> <li>• Teleporter</li> <li>• 20m<sup>3</sup> Skips</li> <li>• Articulated Booms 65ft</li> <li>• Scissor Lifts</li> <li>• 30 kva Generator (until temporary Power is live)</li> <li>• Kerbing Machine</li> <li>• Asphalt paver finisher</li> </ul> <p><b>Water Requirement</b></p> <p>Water supply during construction and operation will be via Public Watermain on Broomhill Road.</p> <p><b>Human Resource Requirement</b></p> <p>It is estimated that there will initially be 40 - 60 staff on site on a typical day, however during peak construction periods this is expected to fluctuate up to 100-150 staff and contractors on site per day.</p>
<p><i>Description of timescale for the various activities that will take place as a result of implementation (including likely start and finish date)</i></p>	<p>The construction works associated with the development will be undertaken in a single phase. Demolition &amp; construction work is expected to take approximately 18 - 24 months for the demolition, construction and commissioning phases prior to commencement of full operations and occupation.</p> <p>The construction programme is intended to commence in the first quarter of 2023, with a 18-24-month programme and will be completed in 1 phase. The commencement date for the project will be dependent on timing of grant of planning.</p>

	<p>The proposed hours of work on site will be stipulated in the planning conditions attached to the planning grant. Any working hours outside the normal construction working hours will be agreed with the Local Authority.</p>
<p><i>Description of wastes arising and other residues (including quantities) and their disposal</i></p>	<p><b>Construction phase</b></p> <p>General non-hazardous construction and demolition wastes may comprise the following:</p> <ul style="list-style-type: none"> <li>• Mixed C&amp;D waste (concrete (approx. 3,650 m<sup>3</sup>), bricks, tiles, ceramics, wood, glass, plastic, steel and other scrap metal</li> <li>• Soil/sub-soil, stones (approx. 3,650 m<sup>3</sup>)</li> <li>• Paper, cardboard/plasterboard</li> <li>• Certain electrical waste</li> <li>• Insulation materials</li> <li>• Other residual/surplus building materials</li> <li>• Temporary W/C utilities waste</li> <li>• Green/organic waste</li> <li>• Dry mixed recyclables/ mixed non-recyclables</li> <li>• Estimated quantity of demolition waste 1,296 tonnes</li> <li>• Estimated quantity of construction waste 1,186.6 tonnes</li> </ul> <p>It is expected that all excavated material will be removed off-site. Estimated 3 m max excavation depth. Expected volume of bulk excavation on site is 7,300 m<sup>3</sup> comprising concrete hardstanding and soil and stone.</p> <p>Potentially hazardous wastes which may arise include contaminated soil, fuels and oils, construction chemicals and other known hazardous substances (paints, glues/adhesives, batteries etc.), invasive plant species and/or vector material and asbestos.</p> <p>All plant will likely be refuelled on-site e.g. excavators, tractors &amp; quads, while rigid and articulated vehicles (if required) will likely be fuelled off-site as would all site vehicles (jeeps, cars and vans). A Fuel Management Plan will be implemented prior to the commencement of works. As fuels and oils are classed as hazardous materials, any on-site storage of fuel/oil, all storage tanks and all draw-off points will be bunded (or stored in double-skinned tanks) and located in a dedicated, secure area of the site. Emergency procedures and contingency plans, including emergency spill kit with oil boom, will be set up to deal with accidental spillages.</p> <p>Surface water discharge from the site will be managed and controlled for the duration of the construction works until the permanently attenuated surface water drainage system of the proposed site is complete. A temporary drainage system shall be installed prior to the commencement of the construction works to collect surface water runoff by the site during construction. Any temporary W/C utilities used on site during the construction phase will be maintained by an approved and permitted contractor.</p>

	<p>In the event that any potentially contaminated material is encountered, it will be segregated from clean/inert material, tested and classified as either non-hazardous or hazardous and dealt with accordingly.</p> <p>No Japanese Knotweed or any third schedule invasive species were detected. If any are detected during the construction and demolition phases of the development, then an invasive species management plan will be produced and implemented.</p> <p>If any Asbestos Containing Material (ACM) or suspected ACMs are identified, they will be required to be removed by a suitably trained and competent person prior to commencement of works. ACMs will only be removed from site by a suitably permitted waste haulier and will be brought to a suitably licenced facility.</p> <p>Paints, glues, adhesives, WEEE and other known hazardous substances will be stored in appropriate receptacles in designated areas pending collection by an authorised waste contractor.</p> <p>A detailed Resource Waste Management Plan (AWN Consulting Ltd.) has been prepared in relation to the development. Please refer to this document for more information.</p> <p><b>Operational phase</b></p> <p>Typical wastes arising will comprise dry mixed recyclables (paper, plastic, etc), organic waste (food/green waste), glass and mixed non-recyclable/general waste as well as other miscellaneous waste elements e.g. garden waste, batteries etc.</p> <p>Waste shall be segregated and stored in designated areas and protected as may be appropriate against spillage and leachate run-off. 5 No. dedicated Waste Storage Areas (WSAs) including 4 No. for residents and 1 No. for commercial have been allocated within the development footprint. Waste will be collected by licenced waste contractors and be transported to registered/permitted/licensed facilities only.</p> <p>The development will connect to the public foul sewer system via a proposed foul sewer which will be fully separated from proposed storm water drainage. Wastewater will ultimately discharge to Ringsend WWTP. Sufficient capacity has been confirmed with IW subject to sewage flow management measures which will be employed.</p> <p>Surface water run-off generated by the development will discharge from site via a proposed attenuation system and flow control device to an existing Local Authority storm drain.</p> <p>A detailed Operational Waste Management Plan (AWN Consulting Ltd.) has been prepared for the development. Please refer to this document for more information.</p>
<p><i>Identification of wastes arising and other residues</i></p>	<ul style="list-style-type: none"> <li>• Fuels/oils/lubricants etc</li> <li>• Chemical substances/residues</li> </ul>

<p><i>(including quantities) that may be of particular concern in the context of the Natura 2000 network</i></p>	<ul style="list-style-type: none"> <li>• Waste concrete/mortar and other cementitious material</li> <li>• Effluent from temporary welfare facilities/operational development</li> </ul>
<p><i>Description of any additional services required to implement the project or plan, their location and means of construction</i></p>	<p>A site compound(s) including offices and temporary welfare facilities will be set up by the main contractor. Please refer to the CEMP for possible site compound locations within the development site. Materials, fuel etc will be stored in the secure site compound.</p> <p>Construction traffic and site access will be via Broomhill Road. A Construction Traffic Management Plan will be implemented.</p>

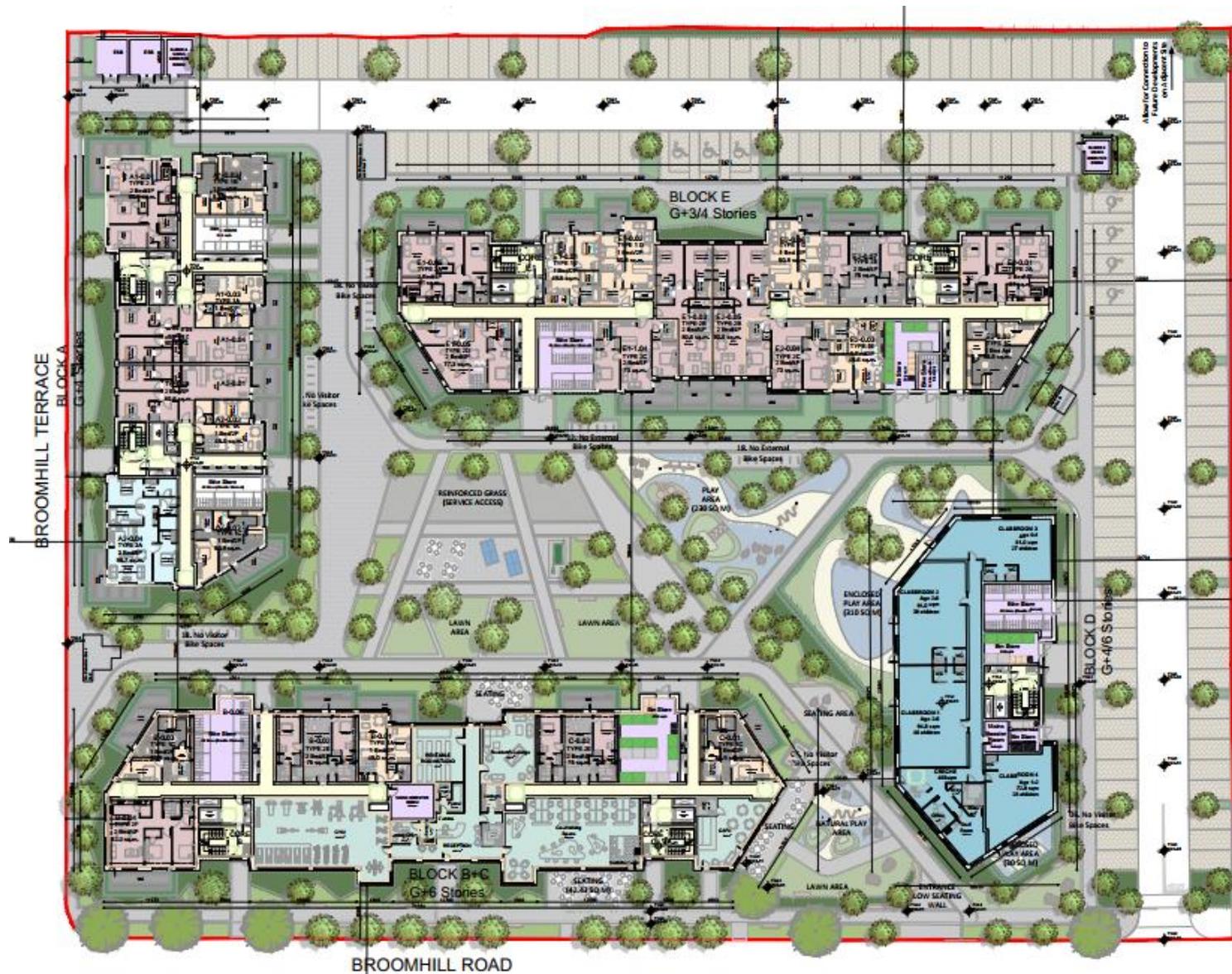


Figure 4. Development at Broomhill Road - Ground floor site plan (Source: John Fleming Architects)

### 3.3 Identification of Other Projects or Plans or Activities

#### 3.3.1 Plans

With regards to the potential for cumulative or in-combination effects, the South Dublin County Council Development Plan (2016 – 2022), the draft South Dublin County Development Plan (2022 – 2028) and the Tallaght Town Centre Local Area Plan (2020 – 2026) were considered. The site is zoned ‘Objective Regen’ to facilitate enterprise/or residential led regeneration.

#### 3.3.2 Permitted and proposed developments in the locality

A search of South Dublin County Council’s online planning enquiry system<sup>6</sup> for recent granted or on-going planning applications located within the vicinity of the proposed development site was undertaken. A summary of these are outlined in **Table 1** below.

**Table 1. List of granted and/or on-going planning applications within the vicinity of proposed development site**

Application No	Applicant	Location	Proposed Development	Decision	Decision Date
SD17A/0077	Airton Frameworks Ltd.	Unit 31, Airton Road, Tallaght, Dublin 24.	(1) Change of use of part of existing warehouse to retail use at first floor (260sq.m), internal alterations; (2) new vehicular entrance on Airton Road, expanded parking capacity in one-way system, widening of access on Broomhill Road and all associated site works.	Grant permission	09/05/2017
SD17A/0253	Irish School of Motoring Limited	Unit 6B, Broomhill Business Complex, Broomhill Road, Dublin 24	Part change of use of building from ancillary warehouse use to ancillary warehouse/logistics training use; (ii) internal alterations and partitioning to provide for training room (149.08sq.m), canteen (82.3sq.m) and toilets at ground floor level and storage/training at new first floor/mezzanine level (82.3sq.m); (iii) widening of existing door on front (east facing) elevation and replacement of 2 windows to match existing windows on front (east facing) elevation; (iv) refurbishment and demarcation of existing car parking; and (v) all associated site works.	Grant permission	15/09/2017
SD17A/0403	Killart Ltd.	Airton House, Airton Road, Tallaght, Dublin 24	Block A - demolition of 150sq.m of two storey offices at the west elevation to form vehicular access to the rear car park. Provision of new facing brick in lieu of metal cladding, new window and enlarging of existing windows on the front (north) elevation. Enlargement of existing	Grant permission	10/01/2018

<sup>6</sup> <https://www.sdcc.ie/en/services/planning/planning-applications/> [Accessed 20/04/2022]

Application No	Applicant	Location	Proposed Development	Decision	Decision Date
			windows and provision of new window and door at the south elevation. Block B - Provision of 5 new windows on east elevation, enlargement of windows on south elevation and provision of 2 new windows and enlargement of existing windows on the west elevation.		
SD18A/0100	Automated Technical Controls Ltd.	63/64, Broomhill Drive, Tallaght, Dublin 24.	The widening of the car entrance to the site, installation of new bollards and creation of 4 additional car parking spaces with an area for and including 8 bicycle stands and all site development works, on a site of 0.3263 hectares.	Grant permission	21/05/2018
SD18A/0231	Owen O’Gorman	86, Broomhill Court, Broomhill Industrial Estate, Tallaght, Dublin 24.	(1) Alterations to front and side elevations of existing industrial unit to include a new canopy entrance and external finishes; (2) new vehicular entrance off Broomhill Road to provide for new parking arrangement and all associated site works.	Grant permission	23/08/2018
SD19A/0085	Zoetis Ireland Ltd.	Broomhill Industrial Estate, Broomhill Road, Dublin 24	Demolition of a single storey modular building extension to the rear (north) of the existing facility building and the provision of a 26.68m x 7.43m x 3.51m high (gross floor area of 187sq.m) single storey modular building and associated works to the rear (north) of the light industrial facility.	Grant permission	26/08/2019
SD19A/0346	Killart Limited	Airton House, Airton Road, Tallaght, Dublin 24	Change of use and conversion of an existing vacant two storey office building to provide 38 residential accommodation units to be used as a family hub; 16 units at ground floor level and 22 units at first floor level; with communal kitchen facilities, storage space, family rooms, internal play spaces, staff and ancillary rooms at ground and first floor level; external playground; 19 bicycle spaces and 45 car parking spaces located at ground level; associated site works, services, paving, planting, landscaping, lighting and new boundary walls and fencing; revisions to the existing foul and surface water drainage networks and new tree pit attenuation zones; new boundary treatment; construction of 3 outbuildings and modifications to the existing elevations including the addition of new windows on the rear elevation and rear block; vehicular, pedestrian and cycle	Grant permission and grant retention	06/01/2020

Application No	Applicant	Location	Proposed Development	Decision	Decision Date
			access to the development will be maintained via the existing access point on Airton Road. Retention is sought for minor new and altered window arrangements to the north (front) and west (side) elevations.		
SD20A/0008	Air Force H7V Ltd.	Units 47-48, Broomhill Close, Broomhill Industrial Estate, Tallaght, Dublin 24	Retention of 3 first floor offices and a mezzanine floor for storage purposes; free standing detached steel framed; 7 bay open fronted shed at rear.	Grant retention permission	09/03/2020
SD20A/0327	McHugh Components Ltd.	89, Broomhill Road, Tallaght Industrial Estate, Tallaght, Dublin 24	Erect 224sq.m of photovoltaic panels on the roof of existing building with all associated site works.	Grant permission	12/02/2021
SD21A/0174	Alan Lawlor	Unit 3 Airton Road, Tallaght, Dublin 24	Change of use of part of existing unit from industrial use for use as a restaurant facility with sit-down facility, cafe and deli with take away produce (teas, coffees, sandwiches etc) over two floors and all associated site works.	Grant permission	23/09/2021
SD21A/0131	Back 2 Basics Fitness Studio Ltd.	Unit 2, Broomhill Business Complex, Tallaght, Dublin 24	Change of use of premises from offices and showrooms to health club and for sign on south façade of building.	Grant permission	13/10/2021
SD21A/0243	McHugh Components Ltd.	89, Broomhill Road, Tallaght Industrial Estate, Tallaght, Dublin 24	Warehouse extension (circa 87sq.m) at rear.	Grant permission	20/01/2022

### 3.3.3 EPA licenced facilities

A review of the EPA mapping tool determined that there are several EPA licenced facilities within the greater area surrounding the subject site (see **Table 2** below). There are no Urban Wastewater Treatment (UWWT) plants or sewerage treatment plants in the surrounding area.

**Table 2. List of EPA licenced facilities located within the area surrounding the proposed development site**

Name	Licence Sub-category	Licence No.	Licence Status	Proximity to Subject Site
Safety Kleen Ireland Ltd.	IE	W0099	Licensed	0.17 km to S of site
Bimeda Animal Health Limited	IPC	P0357	Licensed	0.3 km to SW of site
Microprint	IPC	P0659	Licensed	0.3 km to SW of site
Print & Display Limited	IPC	P0116	Licensed	0.8 km to NW of site
INX International Ink Company Limited	IPC	P0252	Licensed	0.9km to W of site
The Adelaide & Meath Hospital, Dublin	IE	P0160	Licensed	1.1 km to SW of site
Tonge Industries Limited	Waste	W0239	Licensed	1.04 km to NW of site
Starrus Eco Holdings Limited	Waste	W0079	Licensed	0.91 km to W of site

### 3.3.4 Existing land-use and on-going activities

The site currently comprises mainly built ground accommodating a two-storey office/light industrial unit in the south and various sheds and containers sitting on concrete/tarmac in the northern section. With regard to the surrounding land-use, the site is surrounded by a mixture of office, commercial, light industrial and warehouse buildings of all ages, most of which are 2/3/4 stories high. Several other industrial estates and business parks are located nearby.

The site sits a block in from Airton Road which connects Belgard Road (R113) to the west with Greenhills Road (R819) to the east. Extending further away from the site, Technological University (TU) Dublin Tallaght is located to the south of Airton Road. Bancroft Park, sports grounds and the local athletics club are situated immediately east of Greenhills Road (see **Figure 3** above).

The potential cumulative and in-combination impacts are discussed further in **Section 3.6.7** below.

### 3.4 Identification of Natura 2000 Sites

#### 3.4.1 Zone of Impact Influence

The screening stage of Appropriate Assessment involves compiling a ‘long list’ of Natura 2000 sites within a zone of potential impact influence for later analysis which may or may not be significantly impacted upon by the proposal. All Natura 2000 sites within 15 km of the proposal location will be characterised in the context of the rationale for designation and qualifying features, in accordance with NPWS guidance. In line with the precautionary principle, during the preparation of this report, Natura 2000 sites that lie outside 15 km that may be significantly impacted as a result of the proposal were also considered. Following this, the potential impacts associated with the proposal will be identified before an assessment is made of the likely significance of these impacts.

As described above, the test for the screening for Appropriate Assessment is to assess, in view of best scientific knowledge, if the development, individually or in combination with other plans/projects is likely to have a significant effect on a Natura 2000 site. If there are any significant, potentially significant, or uncertain effects, it will be necessary to proceed to Appropriate Assessment and submit an NIS.

Adopting the precautionary principle in identifying potentially affected European sites, it has been decided to include all SACs and SPAs within a 15 km radius of the proposal site. **Table 3** below lists designated SACs and SPAs within 15 km or the anticipated zone of influence [may extend beyond 15 km e.g. for watercourses] of the proposal site including their proximity. Given the nature, scope, scale and location of the works, it is not considered that the proposal will significantly affect Natura 2000 sites outside of those considered here. The locations of these designated sites in relation to the subject site are shown on a map in **Figure 4** below.

**Table 3. Natura 2000 Sites within the potential zone of impact influence of the proposal**

Designated Site	Site Code	Proximity of Designated Site to Nearest Point of Subject Site	Hydrological/Ecological Connection? (Yes/No)
Glenasmole Valley SAC	001209	4 km to S of subject site	No
Wicklow Mountains SAC	002122	7.9 km to S of subject site	No
Rye Water Valley/Carton SAC	001398	11.3 km to NW of subject site	No
South Dublin Bay SAC	000210	10.7 km to NE of subjects site	Yes
Knocksink Wood SAC	000725	13.4 km to SE of subject site	No
North Dublin Bay SAC	000206	14.3 km to NE of subject site	Yes
Wicklow Mountains SPA	004040	7.5 km to SE of subject site	No
South Dublin Bay and River Tolka Estuary SPA	004024	10.7 km to E of subject site	Yes
North Bull Island SPA	004006	13.9 km to NE of subject site	Yes

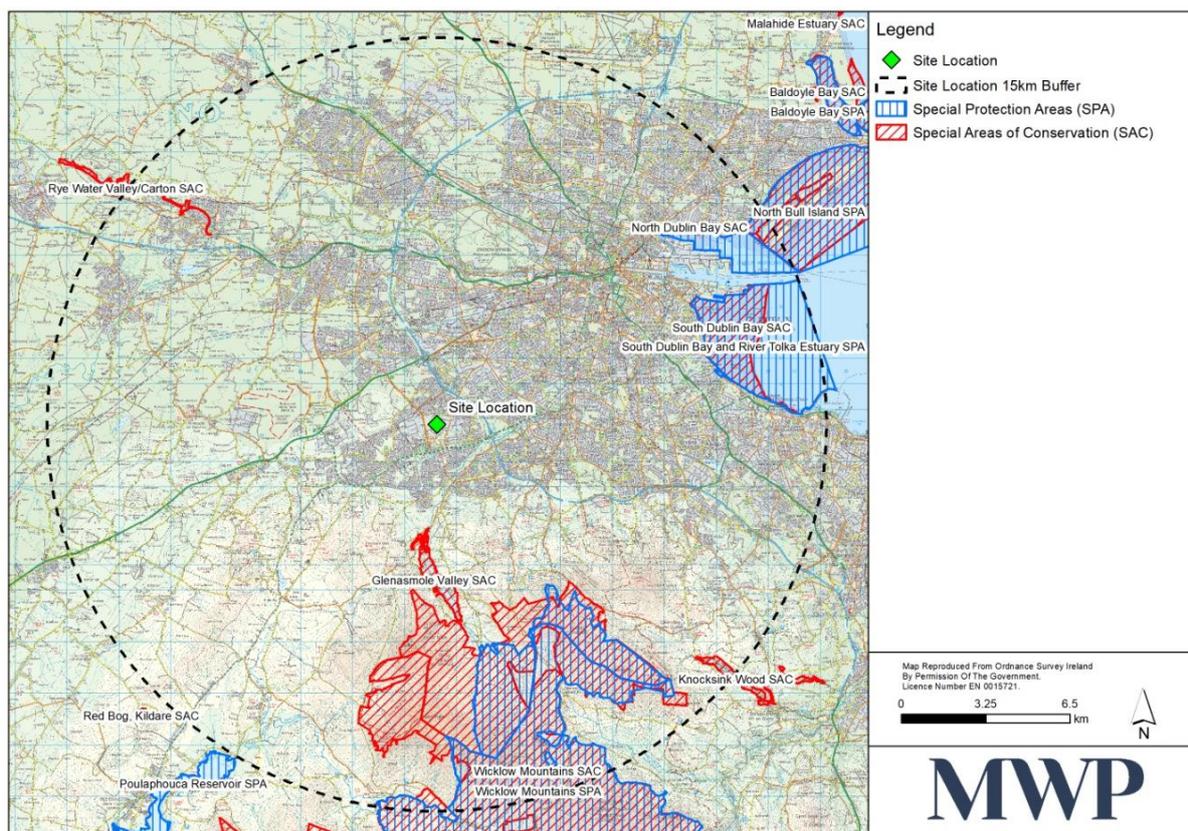


Figure 5. Natura 2000 sites within the zone of potential impact influence of the proposal

### 3.4.2 Characteristics of Natura 2000 Sites

The following table lists the qualifying features of conservation interest for the Natura 2000 sites identified in the previous table. Information pertaining to the Natura 2000 sites is from site synopses, conservation objectives and other information available on [www.npws.ie](http://www.npws.ie).

Table 4. Qualifying features of conservation interest of identified designated sites

Designated Site	Qualifying features of conservation interest
Glenasmole Valley SAC (001209)	<ul style="list-style-type: none"> <li>Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210]</li> <li><i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410]</li> <li>Petrifying springs with tufa formation (Cratoneurion) [7220]</li> </ul>
Wicklow Mountains SAC (002122)	<ul style="list-style-type: none"> <li>Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [3110]</li> <li>Natural dystrophic lakes and ponds [3160]</li> <li>Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010]</li> <li>European dry heaths [4030]</li> <li>Alpine and Boreal heaths [4060]</li> <li>Calaminarian grasslands of the <i>Violetalia calaminariae</i> [6130]</li> <li>Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [6230]</li> <li>Blanket bogs (* if active bog) [7130]</li> </ul>

Designated Site	Qualifying features of conservation interest
	<ul style="list-style-type: none"> <li>• Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>) [8110]</li> <li>• Calcareous rocky slopes with chasmophytic vegetation [8210]</li> <li>• Siliceous rocky slopes with chasmophytic vegetation [8220]</li> <li>• Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0]</li> <li>• <i>Lutra lutra</i> (Otter) [1355]</li> </ul>
Rye Water Valley/Carton SAC (001398)	<ul style="list-style-type: none"> <li>• Petrifying springs with tufa formation (Cratoneurion) [7220]</li> <li>• <i>Vertigo angustior</i> (Narrow-mouthed Whorl Snail) [1014]</li> <li>• <i>Vertigo moulinsiana</i> (Desmoulin's Whorl Snail) [1016]</li> </ul>
South Dublin Bay SAC (000210)	<ul style="list-style-type: none"> <li>• Mudflats and sandflats not covered by seawater at low tide [1140]</li> <li>• Annual vegetation of drift lines [1210]</li> <li>• <i>Salicornia</i> and other annuals colonising mud and sand [1310]</li> <li>• Embryonic shifting dunes [2110]</li> </ul>
Knocksink Wood SAC (000725)	<ul style="list-style-type: none"> <li>• Petrifying springs with tufa formation (Cratoneurion) [7220]</li> <li>• Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0]</li> <li>• Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) [91E0]</li> </ul>
North Dublin Bay SAC (000206)	<ul style="list-style-type: none"> <li>• Mudflats and sandflats not covered by seawater at low tide [1140]</li> <li>• Annual vegetation of drift lines [1210]</li> <li>• <i>Salicornia</i> and other annuals colonising mud and sand [1310]</li> <li>• Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330]</li> <li>• Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410]</li> <li>• Embryonic shifting dunes [2110]</li> <li>• Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120]</li> <li>• Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]</li> <li>• Humid dune slacks [2190]</li> <li>• <i>Petalophyllum ralfsii</i> (Petaltwort) [1395]</li> </ul>
Wicklow Mountains SPA (004040)	<ul style="list-style-type: none"> <li>• Merlin (<i>Falco columbarius</i>) [A098]</li> <li>• Peregrine (<i>Falco peregrinus</i>) [A103]</li> </ul>
South Dublin Bay and River Tolka Estuary SPA (004024)	<ul style="list-style-type: none"> <li>• Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046]</li> <li>• Oystercatcher (<i>Haematopus ostralegus</i>) [A130]</li> <li>• Ringed Plover (<i>Charadrius hiaticula</i>) [A137]</li> <li>• Grey Plover (<i>Pluvialis squatarola</i>) [A141]</li> <li>• Knot (<i>Calidris canutus</i>) [A143]</li> <li>• Sanderling (<i>Calidris alba</i>) [A144]</li> <li>• Dunlin (<i>Calidris alpina</i>) [A149]</li> <li>• Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]</li> <li>• Redshank (<i>Tringa totanus</i>) [A162]</li> <li>• Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179]</li> <li>• Roseate Tern (<i>Sterna dougallii</i>) [A192]</li> <li>• Common Tern (<i>Sterna hirundo</i>) [A193]</li> <li>• Arctic Tern (<i>Sterna paradisaea</i>) [A194]</li> <li>• Wetland and Waterbirds [A999]</li> </ul>
North Bull Island SPA (004006)	<ul style="list-style-type: none"> <li>• Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046]</li> <li>• Shelduck (<i>Tadorna tadorna</i>) [A048]</li> <li>• Teal (<i>Anas crecca</i>) [A052]</li> <li>• Pintail (<i>Anas acuta</i>) [A054]</li> </ul>

Designated Site	Qualifying features of conservation interest
	<ul style="list-style-type: none"> <li>• Shoveler (<i>Anas clypeata</i>) [A056]</li> <li>• Oystercatcher (<i>Haematopus ostralegus</i>) [A130]</li> <li>• Golden Plover (<i>Pluvialis apricaria</i>) [A140]</li> <li>• Grey Plover (<i>Pluvialis squatarola</i>) [A141]</li> <li>• Knot (<i>Calidris canutus</i>) [A143]</li> <li>• Sanderling (<i>Calidris alba</i>) [A144]</li> <li>• Dunlin (<i>Calidris alpina</i>) [A149]</li> <li>• Black-tailed Godwit (<i>Limosa limosa</i>) [A156]</li> <li>• Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]</li> <li>• Curlew (<i>Numenius arquata</i>) [A160]</li> <li>• Redshank (<i>Tringa totanus</i>) [A162]</li> <li>• Turnstone (<i>Arenaria interpres</i>) [A169]</li> <li>• Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179]</li> <li>• Wetland and Waterbirds [A999]</li> </ul>

### 3.4.3 Conservation Objectives

According to the Habitats Directive, the *conservation status of a natural habitat* will be taken as ‘favourable’ within its biogeographic range when:

- its natural range and areas it covers within that range are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable as defined below.

According to the Habitats Directive, the conservation status of a species means the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations. The conservation status will be taken as ‘favourable’ within its biogeographic range when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Site-specific conservation objectives were available for the following sites:

- Wicklow Mountains SAC (002122). Version 1. Produced July 2017.
- South Dublin Bay SAC (000210). Version 1. Produced August 2013.
- North Dublin Bay SAC (000206). Version 1. Produced November 2013.
- South Dublin Bay and River Tolka Estuary SPA (004024). Version 1. Produced March 2015.
- North Bull Island SPA (004006). Version 1. Produced March 2015.
- Glenasmole Valley SAC (001209). Version 1. Produced December 2021.
- Rye Water Valley/Carton SAC (001398). Version 1. Produced December 2021.

- Knocksink Wood SAC (000725). Version 1. Produced December 2021.

Generic conservation objectives were available for:

- Wicklow Mountains SPA (004040). Generic version 9.0. Produced January 2022.

All conservation objectives together with other designated site information are available on <http://www.npws.ie/protectedsites/>. These have been accessed on the 25<sup>th</sup> April 2022.

A management plan is available for Wicklow Mountains National Park (NPWS, 2005). No other management plans are available.

### 3.5 Identification of Potential Impacts

Potential likely ecological impacts arising from the project are identified in this section.

<p><i>Description of elements of the project likely to give rise to potential ecological impacts.</i></p>	<p><b>Construction phase</b></p> <ul style="list-style-type: none"> <li>• Site set-up, mobilisation, vegetation clearance</li> <li>• Demolition, excavation and construction works</li> <li>• Use of plant, machinery, tools etc.</li> <li>• Use of fuels/oils/lubricants/chemicals/concrete /cementitious material</li> <li>• Increased human activity, noise, lighting, dust</li> <li>• Generation of site run-off, waste/spoil</li> <li>• Connection to existing public storm water network</li> </ul> <p><b>Operational phase</b></p> <ul style="list-style-type: none"> <li>• Connection to public foul sewer/discharge of wastewater from the development to Ringsend UWWTP</li> <li>• Connection to existing public storm water network</li> </ul>
<p><i>Describe any likely direct, indirect or secondary ecological impacts of the project (either alone or in combination with other plans or projects) by virtue of:</i></p> <p><i>Size and scale;</i></p> <p><i>Land-take;</i></p> <p><i>Distance from Natura 2000 Site or key features of the Site;</i></p> <p><i>Resource requirements;</i></p> <p><i>Emissions;</i></p> <p><i>Excavation requirements;</i></p>	<p>There is no spatial overlap between the proposal site and any Natura 2000 site. The closest designated site is located 4 km south of the subject site.</p> <p>There are no watercourses draining the development site; therefore, there is no direct hydrological connection between the proposal site and any Natura 2000 site. The development will discharge wastewater to the public foul sewer resulting in additional loading of Ringsend UWWT plant. This plant discharges treated wastewater to the estuarine waters of the River Liffey and Dublin Bay. Therefore, there is a tenuous indirect hydrological link with certain Natura 2000 sites.</p>

<p><i>Transportation requirements;</i></p> <p><i>Duration of construction, operation etc.;</i> <i>and</i></p> <p><i>Other.</i></p>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>• There will be no direct loss/alteration of habitats within any Natura 2000 site.</li> <li>• There is, albeit limited, risk of indirect aquatic habitat and/or water quality impacts due to connection to the public storm water network.</li> <li>• In-direct species disturbance/displacement impacts may potentially occur through potential indirect water quality/habitat impacts, as above. No direct species disturbance or displacement impacts are likely.</li> </ul> <p><b>Operational Phase</b></p> <ul style="list-style-type: none"> <li>• No direct habitat impacts are envisaged during the operational phase.</li> <li>• There is, albeit limited, risk of indirect aquatic habitat and/or water quality impacts due to discharge of wastewater/stormwater to the public system.</li> <li>• In-direct species disturbance/displacement impacts may potentially occur through potential indirect water quality/habitat impacts, as above. No direct species disturbance or displacement impacts are likely.</li> </ul>
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### 3.6 Assessment of Significance of Potential Impacts

This section considers the list of sites identified in **Section 3.4.1** above, together with the potential ecological impacts identified in the previous section and determines whether the project is likely to have significant effects on a Natura 2000 site. When assessing impact, Natura 2000 sites are only considered relevant where a credible or tangible source-pathway-receptor link exists between the proposed development and a protected species or habitat type. In order for an impact to occur there must be a risk initiated by having a 'source' (e.g. excavation), and an impact pathway between the source and the receptor (e.g. a waterbody which connects the proposal site to the protected species or habitats).

An evaluation based on these factors to determine which Natura 2000 sites are the plausible ecological receptors for potential impacts of the proposed development will be conducted in **Sections 3.6.1** and **3.6.2** below. The evaluation takes cognisance of the scope, scale, nature and size of the project, its location relative to the Natura 2000 sites listed in **Table 3** above, and the degree of connectedness that exists between the project and each Natura 2000 site's potential ecological receptors.

Measures intended to avoid or reduce negative environmental effects such as the incorporation of standard SUDS elements as part of the project design have not been relied upon in the following evaluation or in reaching a conclusion with regard to Natura 2000 sites and likely significant effects.

### 3.6.1 Natura 2000 sites outside the zone of potential impact influence

With regards to the proposal, it is considered that the works do not include any element that has the potential to significantly alter the conservation objectives for which certain Natura 2000 sites are designated. It is considered that these Natura 2000 sites are outside the zone of potential impact influence of the proposal due to the absence of plausible impact pathways and/or the attenuating effect of the distance intervening. Therefore, it is objectively concluded that significant effects on these sites are not reasonably foreseeable as a result of the proposed development described at **Section 3.2.5**. These sites, which are listed in **Table 5** below, along with their distance from the subject site and the rationale for exclusion, will not be considered further in this report.

**Table 5. Natura 2000 Sites excluded from further assessment including rationale for exclusion**

Designated Site	Proximity of Designated Site to Nearest Point of Subject Site	Rationale for Exclusion from Assessment
Glenasmole Valley SAC (001209)	4 km to S of subject site	No spatial overlap or hydrological connection. No plausible impact pathway identified.
Wicklow Mountains SAC (002122)	7.9 km to S of subject site	No spatial overlap or hydrological connection. Habitats within the proposal site are not suitable for otter. No plausible impact pathway identified.
Rye Water Valley/Carlton SAC (001398)	11.3 km to NW of subject site	No spatial overlap or hydrological connection. No plausible impact pathway identified.
Knocksink Wood SAC (000725)	13.4 km to SE of subject site	No spatial overlap or hydrological connection. No plausible impact pathway identified.
Wicklow Mountains SPA (004040)	7.5 km to SE of subject site	Intervening distance. Habitats within the proposal site are not suitable for merlin or peregrine. No plausible impact pathway identified.

### 3.6.2 Natura 2000 sites within the zone of potential impact influence

Construction run-off will ultimately drain to the existing public storm drain network following management on-site. The development will discharge treated stormwater to the existing public storm drain network during operation. The development will discharge sewage and wastewater to Ringsend UWWT plant via the existing public foul sewer network during operation. This plant has a primary discharge point into the Lower Liffey and ultimately Dublin Bay. Dublin Bay overlaps with four of the Natura 2000 sites outlined in **Table 3** above. These designated sites are therefore indirectly linked to the proposed development via the existing public foul sewer and storm water network and thus are considered to have the potential to be impacted as a result of the proposal based on the precautionary principal.

Therefore, the assessment of significance of potential impacts that follows focuses on the following Natura 2000 sites:

**Table 6. Natura 2000 sites within the zone of potential impact influence and rationale for inclusion**

Natura 2000 Site	Proximity of subject site to nearest point of designated site (km)	Rationale for inclusion in assessment
South Dublin Bay SAC (000210)	10.7 km to NE of subjects site	Indirectly hydrologically linked to subject site via proposed connections to the existing public foul sewer/storm water network. Limited potential for indirect
North Dublin Bay SAC (000206)	14.3 km to NE of subject site	
South Dublin Bay and River Tolka Estuary SPA (004024)	10.7 km to E of subject site	

Natura 2000 Site	Proximity of subject site to nearest point of designated site (km)	Rationale for inclusion in assessment
North Bull Island SPA (004006)	13.9 km to NE of subject site	habitat, water quality and/or species impacts. Precautionary principle.

The likelihood of significant effects to a Natura 2000 site from the project was determined based on several indicators including:

- Water quality and resource
- Habitat loss
- Habitat alteration
- Habitat or species fragmentation
- Disturbance and/or displacement of species

The likelihood of significant cumulative/in-combination effects is assessed in **Section 3.6.7**.

### 3.6.3 Water Quality

There are no watercourses within or in the vicinity of the subject site; therefore, there will be no direct impacts on water quality as a result of the proposal.

With regard to potential indirect water quality impacts associated with the generation of sewage/wastewater from the use of temporary welfare facilities during the construction phase, it is noted that these facilities will be maintained accordingly by an approved and permitted contractor who will remove effluent to a licenced facility for disposal. Therefore, this aspect of the proposal is not considered to have any potential for significant effects to Natura 2000 sites.

With regard to potential indirect water quality impacts associated with surface water run-off generated during the construction phase, this will be controlled at source by the appointed contractor. Implementation of construction industry best practice guidelines (Construction Industry Research and Information Association – CIRIA guidance) and the CEMP which has been prepared for the development is noted. However, notwithstanding this, it is objectively concluded that due to the location of the development within a highly urbanised landscape within Dublin City, the absence of direct impact pathways between the proposal site and any Natura 2000 sites, and the proposal to connect into the existing public stormwater system servicing the area, significant water quality impacts within Natura 2000 sites are not likely. In conclusion, this aspect of the proposal is not considered to have any potential for significant effects to Natura 2000 sites.

During the operational phase, it is proposed that wastewater from the development will discharge to the existing public foul system and from there to Ringsend UWWT plant (Licence No. D0034). This UWWT plant discharges treated effluent (following secondary treatment) into the estuarine waters of the River Liffey which drains into Dublin Bay. As outlined in Section 3.2.4.2 above, the latest WFD Transitional Waterbody status 2013 – 2018 of the ‘Liffey Estuary Lower’ is ‘Good’ and the latest WFD Coastal Waterbody status 2013 – 2018 of ‘Dublin Bay’ is ‘Good’<sup>7</sup>. The latest EPA plant compliance for Ringsend UWWT plant is ‘Fail’<sup>8</sup>.

The latest Annual Environmental Report (AER) 2020 for Ringsend UWWT plant (D0034-01) available on the EPA website was reviewed. This determined that the WWTP was non-compliant with certain ELV’s set in the

<sup>7</sup> [EPA Maps](#) Accessed 07/10/2021

<sup>8</sup> <https://gis.epa.ie/EPAMaps/> Accessed 07/10/2021

wastewater discharge licence, mainly due to overloading. While both the annual mean and annual maximum hydraulic loading (flow) is less than the peak Treatment Plant Capacity, the current organic load (PE) (peak week) exceeds the organic design capacity of the plant (1,640,000 PE).

S.I. No. 272 of 2009 (as amended) / S.I. No. 77 of 2019 has set physio-chemical standards for 'High' and 'Good' status in transitional and coastal waterbodies which must be complied with outside of the allocated mixing zone a licenced discharge<sup>9</sup>. While the primary discharge from the facility does have an observable negative impact on water quality in the vicinity of the outfall point, an observable negative impact on the WFD status of the Liffey Estuary was not recorded. Marine monitoring undertaken in 2020 for Ringsend UWWT plant at various sampling points within transitional and coastal waters determined that overall, there was compliance with ELV's as per the wastewater discharge licence and that no other impacts on regulated coastal and Irish Sea water quality were recorded during the survey period<sup>7</sup>.

The AER outlines planned phased upgrade works for the plant including timeframes for completion. These upgrade works will increase the capacity of the plant on a phased basis. There are four key elements to planned upgrade works comprising provisions of additional secondary treatment facility capacity with nutrient reduction, upgrading of the existing secondary treatment tanks to provide additional capacity and nutrient reduction, provision of a new phosphorus recovery process and expansion of the plants sludge treatment facilities<sup>7</sup>. The new additional 400,000 population equivalent (PE) capacity wastewater treatment plant had an expected completion date of 2021<sup>10</sup>.

Based on planned upgrade works, it is anticipated that the plant will be discharging treated effluent in compliance with parameters set out in the discharge licence by late 2023 (based on a load of 2.1m PE), with the overall plant upgrade works expected to take until 2025 to complete<sup>7</sup>. Once complete, the plant will have an increased capacity of 2.4 million PE<sup>8</sup>.

With regard to potential indirect water quality impacts associated with generation of wastewater from the operational development, in summary, wastewater will be discharged to the existing public foul system from where it will discharge to Ringsend UWWT plant for secondary treatment, prior to discharge of final treated effluent into the Liffey Estuary and subsequent dispersal into Dublin Bay.

Bearing in mind the Irish Water Confirmation of Feasibility and Statement of Design Acceptance received by the Applicant in relation to a future possible connection to the public system and noting planned upgrades to Ringsend UWWT plant, it is objectively concluded that due to the absence of direct impact pathways between the proposal site and any Natura 2000 sites, the proposal to connect into the public system where effluent will undergo secondary treatment and the degree of mixing and dilution of final treated effluent which will naturally occur within the estuary and greater Dublin Bay area, significant water quality impacts within Natura 2000 sites are not likely. In conclusion, this aspect of the proposal is not considered to have any potential for significant effects to Natura 2000 sites.

With regard to potential indirect water quality impacts which may arise as a result of generation of stormwater during the operational phase of the proposed development, it is proposed to discharge stormwater to the existing public stormwater drainage network. While it is noted that the proposal has incorporated a number of standard construction industry best-practice SUDS mechanisms, due to the location of the development within a highly urbanised landscape within Dublin City, the absence of direct impact pathways between the proposal site and any Natura 2000 sites, and the proposal to connect into the existing public stormwater system servicing the area, significant water quality impacts within Natura 2000 sites are not likely. In conclusion, this aspect of the proposal is not considered to have any potential for significant effects to Natura 2000 sites.

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<sup>9</sup> Ringsend UWWTP AER 2020 [090151b2807d3b9b.pdf \(epa.ie\)](#) Accessed 07/10/2021

<sup>10</sup> EPA Site Visit Report Dec 2020 [090151b2807a0a61.pdf \(epa.ie\)](#) Accessed 07/10/2021

### 3.6.4 Habitat Loss and Alteration

#### 3.6.4.1 South Dublin Bay SAC (000210), North Dublin Bay SAC (000206), South Dublin Bay and River Tolka Estuary SPA (004024), North Bull Island SPA (004006)

Both South Dublin Bay SAC and North Dublin Bay SAC are designated for a variety of tidal/coastal habitats, as outlined in **Table 4** above.

There is no spatial overlap with either of these sites and so there will be no direct loss or alteration of Annex I habitat within these sites. With regard to indirect alteration of habitats within the marine aquatic influenced zone via potential water quality impacts which may arise as a result of the proposal, it has been determined in **Section 3.6.3** above that significant water quality impacts are not likely as a result of the project. Therefore, significant indirect alteration of any Annex I habitat for either of these designated sites is not envisaged.

Both the South Dublin Bay and River Tolka Estuary SPA and North Bull Island SPA are designated for the protection of 'Wetland' [A999] habitat. There is no spatial overlap with either of these sites. Significant water quality impacts, which could potentially result in indirect alteration of 'Wetland' habitat, are not likely to arise from the project.

In conclusion, it is objectively concluded that significant direct or indirect habitat loss or alteration impacts within South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA and North Bull Island SPA as a result of the proposed development are not predicted and significant effects on any Natura 2000 sites are not likely.

### 3.6.5 Disturbance and/or Displacement of Species

#### 3.6.5.1 North Dublin Bay SAC 000206

North Dublin Bay SAC is designated for the protection of one species, namely petalwort (*Petalophyllum ralfsii* [1395]). Petalwort is a pioneering species of liverwort found in areas of bare, moist, stable sand or on short turf, mainly on mildly to strongly base rich dune slacks and machair where the habitat can be subject to inundation in the winter (NPWS, 2019).

There is no spatial overlap with the SAC or plausible impact pathway through which direct or indirect impacts could arise. Furthermore, the subject site does not contain suitable habitat for this species, nor was this species recorded during field surveys at the subject site. It is objectively concluded that significant disturbance or displacement impacts to the QI species petalwort a result of the proposed development are not predicted and thus significant effects on North Dublin Bay SAC are not likely in this regard.

#### 3.6.5.2 South Dublin Bay and River Tolka Estuary SPA (004024), North Bull Island SPA (004006)

Both the South Dublin Bay and River Tolka Estuary SPA and North Bull Island SPA are designated for the protection of a wide variety of wintering waterfowl species which utilise the estuarine and coastal habitats within the sites and surrounding areas for feeding and roosting.

The intervening distances between the subject site and the SPAs will ensure that there is no potential for direct disturbance/displacement of any SCIs.

With regard to the potential for indirect disturbance or displacement of SCIs via potential water quality/indirect habitat alteration impacts, it has been determined in **Section 3.6.3** and **Section 3.6.4** above that significant water quality impacts and/or indirect habitat alteration are not likely as a result of the project.

It is objectively concluded that significant direct or indirect species disturbance or displacement impacts within South Dublin Bay and River Tolka Estuary SPA and North Bull Island SPA as a result of the proposed development are not predicted and thus significant effects on these Natura 2000 sites are not likely in this regard.

### **3.6.6 Habitat or Species Fragmentation**

Habitat fragmentation has been defined as ‘reduction and isolation of patches of natural environment’ (Hall et al., 1997 cited in Franklin et al., 2002) which results in spatial separation of habitat areas which had previously been in a state of greater continuity. Adverse effects of habitat fragmentation on species include the increased isolation of populations which can detrimentally impact on the resilience or robustness of the populations.

The preceding sections have concluded that significant habitat loss/alteration; water quality and/or species disturbance/displacement effects are not likely to occur within any of the Natura 2000 sites considered to be within the zone of potential impact influence of the proposal.

Bearing in mind the nature and location of the proposed development, it is objectively concluded that significant habitat or species fragmentation effects are not likely to occur within South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA or North Bull Island SPA, as a result of the proposal considered in this report.

### **3.6.7 Cumulative/In-combination Impacts**

As well as singular effects, the potential for in-combination or cumulative effects also need to be considered. A cumulative impact arises from incremental changes caused by past, present and proposed projects together with the proposed development considered in this document. Relevant plans and projects have been identified in **Section 3.33** above.

With regard to the potential for significant cumulative or in-combination effects due to interaction between the proposed development and the South Dublin County Council Development Plan 2016 – 2022, the draft South Dublin County Development Plan 2022 – 2028 or the Tallaght Town Centre Local Area Plan 2022, Stage 2 Appropriate Assessment was carried out in relation to these plans. These Appropriate Assessments were fully integrated with the various stages of the CDP and LAP processes in order to ensure that the ecological implications of the CDPs and LAP do not impact upon any areas designated as European Sites.

In general, County Development Plans and Local Area Plans incorporate a range of environmental and natural heritage policy safeguards. These safeguards to protect the natural environment will also apply to the proposal described in this report. No significant cumulative impacts are predicted between the proposal and the South Dublin County Council Development Plan 2016 – 2022, the draft South Dublin County Development Plan 2022 – 2028 or the Tallaght Town Centre Local Area Plan 2022.

With regard to permitted and proposed developments in the locality, these mainly comprise permissions for relatively minor modifications to existing buildings and/or change of use within the surrounding built-up/industrial area. Grant of planning also exists for the conversion of an existing vacant two storey office building in the nearby vicinity into 38 residential accommodation units along with various on-site amenities and all associated site works.

Given the location and nature of the proposed development and bearing in mind that the preceding sections have concluded that significant water quality, habitat or species impacts are not considered likely, significant in-combination effects due to interaction between the proposed development and these planning permissions, or any EPA licenced or on-going land use activities in the area, are not envisaged.

It is objectively concluded that significant in-combination effects on Natura 2000 sites within the zone of influence of the proposal, namely South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA or North Bull Island SPA, are not likely as a result of the proposal considered in this report.

### **3.7 Conclusion of Screening Stage**

In conclusion, to determine the potential impacts, if any, of the project on nearby Natura 2000 sites, a screening process for appropriate assessment was undertaken.

It has been objectively concluded, during the screening process, that the following Natura 2000 sites within the potential zone of impact influence of the proposed development are not likely to be significantly affected by the proposal considered in this report. These sites are:

- South Dublin Bay SAC (000210)
- North Dublin Bay SAC (000206)
- South Dublin Bay and River Tolka Estuary SPA (004024)
- North Bull Island SPA (004006)
- Glenasmole Valley SAC (001209)
- Wicklow Mountains SAC (002122)
- Rye Water Valley/Carton SAC (001398)
- Knocksink Wood SAC (000725)
- Wicklow Mountains SPA (004040)

It is concluded that, on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, will not have a significant effect on the aforementioned Natura 2000 sites, in view of the site's conservation objectives, and therefore Stage 2 Appropriate Assessment is not required in relation to the proposal described in this report.

## 4. References

Department of the Environment, Heritage and Local Government (DoEHLG) (2010). *Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities*. Department of Environment, Heritage and Local Government.

European Commission (EC) (2018). *Managing Natura 2000 Sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC*. Luxembourg: Office for Official Publications of the European Communities.

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NPWS, 2005. Management Plan for Wicklow Mountains National Park 2005 – 2009. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government.

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## **Appendix 1**

### **Finding of No Significant Effects Report**

**FINDING OF NO SIGNIFICANT EFFECTS MATRIX**

<b>Name of project or plan</b>	Broomhill Road SHD, Tallaght, Dublin
<b>Name and location of Natura 2000 site</b>	South Dublin Bay SAC (000210) (10.7 km to north-east) North Dublin Bay SAC (000206) (14.3 km to north-east) South Dublin Bay and River Tolka Estuary SPA (004024) (10.7 km to east) North Bull Island SPA (004006) (13.9 km to north-east) Glenasmole Valley SAC (001209) (4 km to south) Wicklow Mountains SAC (002122) (7.9 km to south) Rye Water Valley/Carlton SAC (001398) (11.3 km to north-west) Knocksink Wood SAC (000725) (13.4 km to south-east) Wicklow Mountains SPA (004040) (7.5 km to south-east)
<b>Description of the project</b>	Construction of SHD scheme on lands at Broomhill Road, Tallaght, Dublin 24 on a site of approximately 1.4 ha. The proposed development will comprise a mixed-use residential apartment complex of 242 no. apartment units.
<b>Is the project or plan directly connected with or necessary to the management of the site?</b>	No
<b>Are there other projects or plans that together with the project or plan being assessed could affect the site</b>	No

**THE ASSESSMENT OF SIGNIFICANCE OF EFFECTS**

<b>Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 site(s).</b>	No likely significant effects on Natura 2000 sites are envisaged as a result of the proposed development.
<b>List of agencies consulted: provide contact name and telephone or e- mail address.</b>	N/A
<b>Response to consultation.</b>	N/A

**DATA COLLECTED TO CARRY OUT THE ASSESSMENT**

<b>Who carried out the assessment?</b>	Hazel Dalton, Senior Ecologist with Malachy Walsh and Partners
<b>Sources of data</b>	Refer to references.
<b>Level of assessment completed</b>	Stage 1 AA.

## **Appendix 2**

### **Stages of Appropriate Assessment**

### **Stage 1 - Screening**

This is the first stage of the Appropriate Assessment process and that undertaken to determine the likelihood of significant impacts as a result of a proposed project or plan. It determines need for a full Appropriate Assessment.

If it can be concluded that no significant impacts to Natura 2000 Sites are likely then the assessment can stop here. If not, it must proceed to Stage 2 for furthermore detailed assessment.

### **Stage 2 - Natura Impact Statement (NIS)**

The second stage of the Appropriate Assessment process assesses the impact of the proposal (either alone or in combination with other projects or plans) on the integrity of the Natura 2000 Site with respect to the conservation objectives of the site and its ecological structure and function. This is a much more detailed assessment than Stage 1. A Natura Impact Statement containing a professional scientific examination of the proposal is required and includes any mitigation measure to avoid, reduce or offset negative impacts.

If the outcome of Stage 2 is negative i.e. adverse impacts to the sites cannot be scientifically ruled out, despite mitigation, the plan or project should proceed to Stage 3 or be abandoned.

### **Stage 3 - Assessment of alternative solutions**

A detailed assessment must be undertaken to determine whether alternative ways of achieving the objective of the project/plan exists.

Where no alternatives exist the project/plan must proceed to Stage 4.

### **Stage 4 - Assessment where no alternative solutions exist and where adverse impacts remain**

The final stage is the main derogation process examining whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project to adversely affect a Natura 2000 Site where no less damaging solution exists.

## **Appendix 3**

### **Site Synopses**

**Site Name: South Dublin Bay SAC**

**Site Code: 000210**

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

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

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

The bed of Dwarf 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. Furoid 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/Boosterstown. The formation at Boosterstown 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 Boosterstown 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 Boosterstown Station. This early stage of saltmarsh development is here characterised by the presence of pioneer stands of glassworts (*Salicornia* spp.) occurring below an area of drift line vegetation. As this is of very recent origin, it covers a small area but ample areas of substrate and shelter are available for the further development of this habitat.

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

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

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

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

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

**Site Name: North Dublin Bay SAC**

**Site Code: 000206**

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

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

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

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

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

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

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

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

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

Three rare plant species which are legally protected under the Flora (Protection) Order, 1999 have been recorded on the North Bull Island. These are Lesser Centaury (*Centaureum 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 surrounding intertidal flats. The site is used regularly for educational purposes. North Bull Island has been designated a Special Protection Area under the E.U. Birds Directive and it is also a statutory Wildfowl Sanctuary, a Ramsar Convention site, a Biogenetic Reserve, a Biosphere Reserve and a Special Area Amenity Order site.

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

## SITE SYNOPSIS

**SITE NAME: SOUTH DUBLIN BAY AND RIVER TOLKA ESTUARY SPA**

**SITE CODE: 004024**

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

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

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

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

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

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

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

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

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

## SITE SYNOPSIS

**SITE NAME: NORTH BULL ISLAND SPA**

**SITE CODE: 004006**

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

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

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

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

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

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

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

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

## **Appendix 4**

### **Figures**

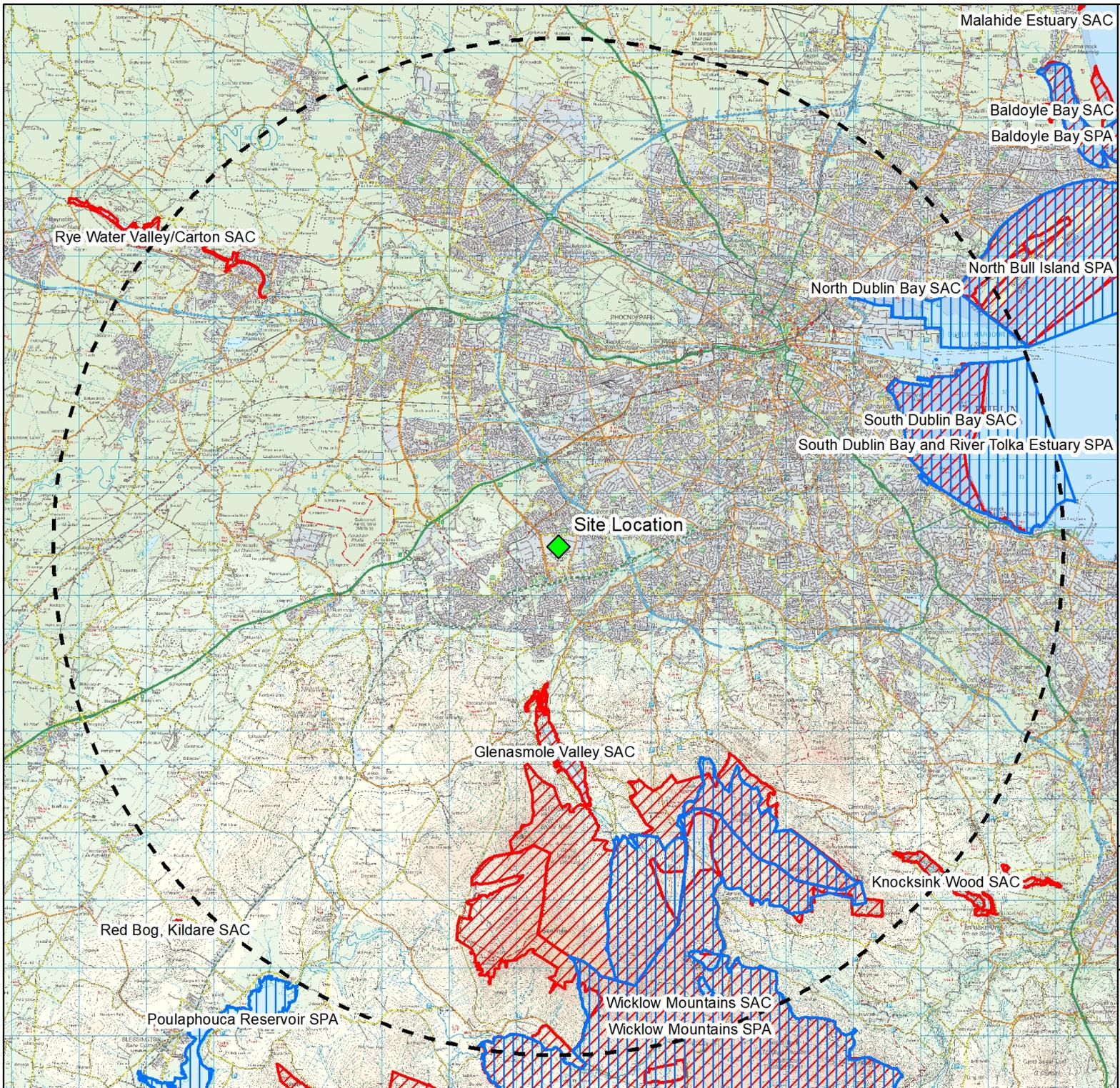


### Legend

-  Boundary
-  Building and artificial surfaces (BL3)
-  Amenity grassland (improved) (GA2)
-  Dry meadows and grassy verges (GS2)
-  Scattered trees and parkland (WD5)
-  Treeline (WL2)
-  Ornamental/non-native shrub (WS3 / Scrub (WS1).

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**Legend**

-  Site Location
-  Site Location 15km Buffer
-  Special Protection Areas (SPA)
-  Special Areas of Conservation (SAC)

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**MWP**