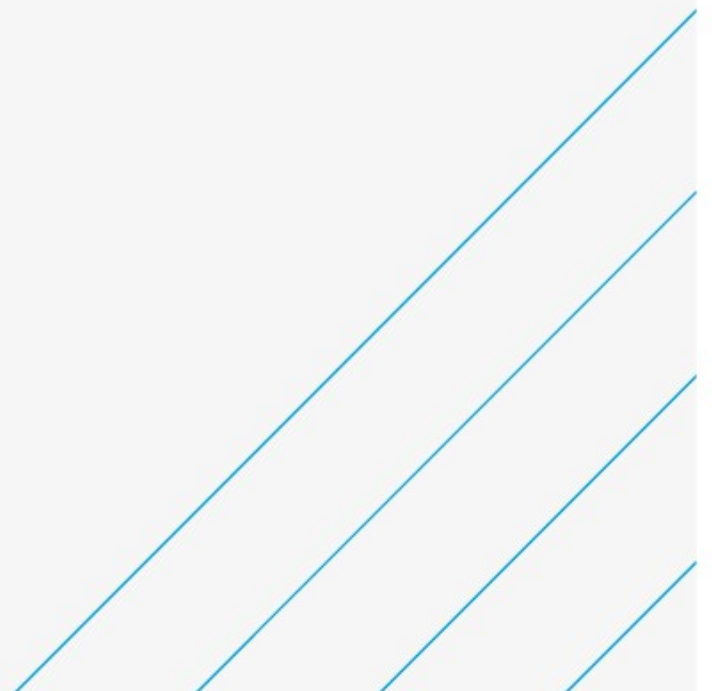


Coastal Quarter SHD 2

Natura Impact Statement

Shankill Property Investments Limited

September 2022



Notice

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1. Introduction

Atkins Ireland was commissioned to prepare an Appropriate Assessment Screening Report and a Natura Impact Statement for a planning application for a proposed residential development, referred to as the Coastal Quarter SHD 2, at Ravenswell, Bray located within Wicklow County Council and Dún Laoghaire-Rathdown County Council jurisdictions. This Natura Impact Statement is for the Coastal Quarter SHD 2 which is the first phase of the Harbour Point Masterplan and is intended for submission to An Bord Pleanála via the Strategic Housing Development (SHD) planning process. The location of the proposed residential development for the Coastal Quarter SHD 2 (hereafter referred to as 'the Site', 'the project' or 'proposed development'), is presented in Figure 1-1 below. The indicative layout of the housing development is illustrated in Appendix A. The location of the proposed Coastal Quarter SHD 2 development in the context of the Harbour Point Masterplan Lands is presented in Appendix B.

The Coastal Quarter SHD 2 site forms part of planning permission granted in 2010: - An Bord Pleanála Reference Number: PL39.230246 and An Bord Pleanála Reference Number: PL06D.230215. A primary school along with associated sports / recreational areas has been constructed on ca. 5 hectares to the west of the application site. Significant infrastructural works were also undertaken with a new road network now in situ providing two main access routes; a Northern Access Route which borders the eastern and northern boundaries of the Industrial Yarns site and a Southern Access Road which facilitates access via the Upper Dargle Road.

An Environmental Impact Assessment Report (EIAR) has also been developed for the proposed SHD project and accompanies this application (EIAR Atkins document reference: 5214419DG0002).

1.1. Project Description

The applicant intends to apply to An Bord Pleanála for permission for a Strategic Housing Development (SHD) comprising 586 no. residential units in a mix of apartments, duplexes and houses. In addition, a childcare facility, café, retail unit and 1 no. commercial unit (incorporating a gym and a juice bar) are proposed along with all associated and ancillary development and infrastructural works, hard and soft landscaping, open spaces, boundary treatment works, ancillary car and bicycle parking spaces at surface, undercroft and basement levels. The proposed houses and duplexes range in height from 2 – 3 storeys with the proposed 4 no. apartment blocks ranging in height from 3 – 12 storeys. Block A will accommodate 162 no. Build-to-Rent (BTR) units. It is proposed that 274 no. units will be located within the administrative area of Dun Laoghaire-Rathdown County Council and 312 no. units will be located within the administrative area of Wicklow County Council. The childcare facility, retail, café and commercial unit will all be located in the administrative area of Wicklow County Council.

Planning permission was granted on part of the subject site for 234 no. residential units, a childcare facility, café and retail unit subject to compliance with the terms of conditions attached to reference ABP-311181-21. The current proposed development includes the development as previously permitted under ABP-311181-21 including minor revisions chiefly addressing conditions and new proposals for Blocks A and B which were previously refused.

The site is generally bounded to the north by existing public open space at Woodbrook Glen, to the east by the Irish Rail Dublin-Wexford/Rosslare main rail line, to the south by the River Dargle and undeveloped lands and to the west by undeveloped lands and the existing Ravenswell schools campus.

1.1.1. Surface Water Management System

The proposed surface water drainage system for the proposed development has been designed in accordance with the Greater Dublin Regional Code of Practice for Drainage Works and Sewers (GDSDS). Surface water runoff from the development will be attenuated to greenfield rates in accordance with GDSDS using a hydrobrake on the surface water outlet. Surface Water flow exceeding allowable outflow rates will be stored in underground storage units (for rainfall events up to 1 in 100-year return period, with a 20% allowance for climate change and 10% for urban creep). Surface water drainage for the proposed development will employ Sustainable Urban Drainage Systems (SuDS) techniques. The SuDS features proposed to be used in the drainage network include modular permeable paving; swales; filter drains; tree pits and underground storage units. Surface water drainage for the proposed development will be via 2 no. attenuation / storm water storage units with outfall at one location to the River Dargle.

Surface water management system designs for the proposed development are included in Appendix C. Surface water management systems for the proposed project are outlined in detail within the accompanying Stormwater Impact Assessment Report (Atkins document reference: 5214419DG0012).

1.1.2. Foul Effluent

Foul water from the proposed development will connect to the local foul water network with final treatment to be undertaken at Shanganagh Waste Water Treatment Plant (WwTP). Shanganagh WwTP has recently been subject to an upgrade and as such has the capacity to accept the additional foul water the proposed housing development would generate. Irish Water has confirmed that the plant has capacity to adequately process the additional input from the operational demand presented by the proposed Coastal Quarter development (refer to the Engineering Planning Report (Atkins document reference: 5214419DG0018)).

Surface water and foul water drainage designs for the proposed development are included in Appendix C.

1.1.3. Potable Water

Proposed watermain services (100-225mm diameter pipeline), including firewater requirements for the development will be provided. The peak daily domestic water demand (including potable use) for the proposed development is calculated to be 2.75 l/s. Irish Water has confirmed that the existing water network has sufficient capacity to meet these peak operational water requirements.

The location of the proposed residential development for the Site is presented in Figure 1-1

2. Scope of Study

The aim of this report is to provide supporting information to assist the competent authority to carry out an Appropriate Assessment (AA) determination with respect to the proposed project.

2.1. Legislative Context

Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, known as the 'Habitats Directive' provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats and species of European Community interest, at a favourable conservation status. Articles 3 – 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservations of an EU-wide network of sites known as European sites. European sites are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Birds Directive (79/409/EEC).

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans or projects that could potentially affect European sites. Article 6(3) establishes the requirement for Appropriate Assessment: -

“Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”

Article 6(4) deals with the steps that should be taken when it is determined, as a result of Appropriate Assessment, that a plan or project will adversely affect a European site. Alternative solutions, imperative reasons of overriding public interest (IROPI) and compensatory measures need to be addressed in this case. Article 6(4) states: -

“If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.”

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.”

The requirements of Articles 6(3) and 6(4) of the Habitats Directive have been transposed into Irish planning legislation by section 177U and 177V of the Planning and Development Act 2000 as amended.

2.2. Appropriate Assessment Process

Guidance on the AA process was produced by the European Commission (EC, 2021), which was subsequently used to develop guidance for Ireland by the Department of Environment, Heritage and Local Government in 2009 (DEHLG, 2009) and also by the National Parks and Wildlife Service in 2018¹ (NPWS, 2018). These guidance documents set out a staged approach to complete the AA process and outlines the issues and tests at each stage. The stages outlined below are taken from the guidance document Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (DEHLG, 2009) and Office of the Planning Regulator; Appropriate Assessment Screening for Development Management (2021).

¹ <https://www.npws.ie/development-consultations>

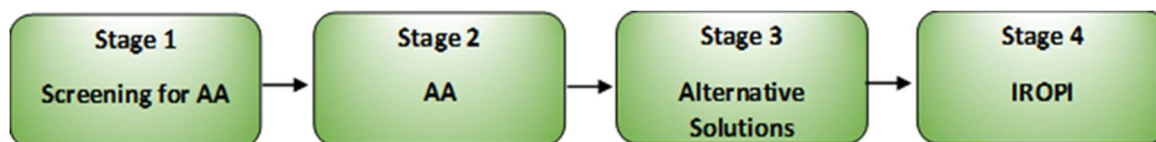


Figure 2-1 - Appropriate Assessment Process (Source: DEHLG, 2009).

2.2.1. Screening for Appropriate Assessment

Screening is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3): -

- i. Whether a plan or project is directly connected to or necessary for the management of the site, and
- ii. Whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a European site in view of its conservation objectives.

If the effects are deemed to be significant, potentially significant, or uncertain, then the process must proceed to Appropriate Assessment.

2.2.2. Appropriate Assessment

Appropriate Assessment considers whether the plan or project, alone or in combination with other projects or plans, will have adverse effects on the integrity of a European site, and includes any necessary mitigation measures.

The competent authority can only agree to the plan or project after having ascertained that it will not adversely affect the integrity of the site(s) concerned. If this cannot be determined, and where sufficient mitigation cannot be achieved, the alternative solutions need to be considered and the process proceeds to the consideration of alternative solutions.

2.2.3. Alternative Solutions

This examines any alternative solutions or options that could enable the plan or project to proceed without adverse effects on the integrity of a European site. The process must return to AA as alternatives will require assessment in order to proceed. Demonstrating that all reasonable alternatives have been considered and assessed, and that the least damaging option has been selected, it is necessary to examine whether there are imperative reasons of overriding interest (IROPI).

2.2.4. IROPI

This examines whether there are imperative reasons of overriding public interest for allowing a plan or project that will have adverse effects on the integrity of a European site to proceed in cases where it has been established that no less damaging alternative solution exists. Compensatory measures must be proposed and assessed, of which the Commission must be informed.

The AA process only progresses through the full process for certain plans and projects. For example, for a project not connected with the management of a European site and where no likely significant effects on a European site in view of its conservation objectives are identified, the process stops at Screening for AA. Throughout the process the precautionary principle must be applied, which requires that the conservation objectives of Natura 2000 prevail where there is uncertainty (EC, 2021).

3. Methods

3.1. Legislation & Guidance Documents

This report was prepared with reference and due consideration to the following documents and due regard for relevant case law, including but not limited to: -

- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild flora and fauna (Habitats Directive);
- Statutory Instrument No. 477/2011 — European Communities (Birds and Natural Habitats) Regulations 2011(as amended);
- National Parks and Wildlife Service - Development Consultations² (NPWS 2018);
- Planning and Development Act 2000 (as amended) and Planning and Development Regulations 2001 (as amended);
- European Commission (2018). Managing Natura 2000 sites: the provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC;
- European Commission (2021). Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC;
- European Commission (2001). Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC;
- Department of the Environment, Heritage and Local Government (2009; 2010 update). Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities;
- Office of Planning Regulation (2021). Appropriate Assessment Screening for Development Management. OPR Practice Note PN01;
- Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine CIEEM (2018; 2022 reprint);
- Guidelines for Preliminary Ecological Appraisal CIEEM. (2017);
- Fossitt, J.A. (2000). A Guide to Habitats in Ireland. The Heritage Council. The Heritage Council;
- Scott Wilson and Levett-Therivel, (2006). Appropriate Assessment of Plans. Scott Wilson, Levett-Therivel Sustainability Consultants, Treweek Environmental Consultants and Land Use Consultants;
- Inland Fisheries Ireland (2020). Planning for Watercourses in the Urban Environment. A Guide to the Protection of Watercourses through the use of Buffer Zones, Sustainable Drainage Systems, Instream Rehabilitation, Climate / Flood Risk and Recreational Planning. A Guideline Developed by Inland Fisheries Ireland; and,
- Cases; C-323/17 People Over Wind & anor. V. Coillte; C-461/17 Holohan v An Bord Pleanála; Kelly v An Bord Pleanála & anor [2019] IEHC 84; Eco Advocacy CLG v An Bord Pleanála & anor [2021] IEHC 265, and other relevant court rulings and case law.

² <https://www.npws.ie/development-consultations>

3.2. Desk Study

A desk study was carried out to collate information available on European sites in the vicinity of the project. These areas were viewed using Google Earth, Google maps³ and Bing maps⁴ (last accessed on 27/07/2022).

The National Parks and Wildlife Service (NPWS) and National Biodiversity Data Centre (NBDC) online databases were reviewed concerning European sites and their features of interest in the vicinity of the project.

The Environmental Protection Agency (EPA) mapping⁵ system was used to identify any hydrological connection between the project and European sites, this information was supported by site walkover surveys.

Locations and boundaries of all European sites within zone of influence of the project were identified and reviewed using the NPWS online map viewer. Boundary shapefiles were also downloaded from this site to facilitate the preparation of project graphics.

Desktop information on relevant European sites was reviewed on the NPWS website, including the site synopsis for each SAC/SPA, the conservation objectives, the site boundaries as shown on the NPWS online map viewer, the standard European Data Form for the SAC/SPA which details conditions and threats of the sites, and published information and unpublished reports on the relevant European sites. Information on the Status of EU Protected Habitats and Species in Ireland was reviewed from Article 17 Reports NPWS, August 2019 (data source; <https://www.npws.ie/publications/article-17-reports/article-17-reports-2019>).

Information on land-use zoning was sourced from the online mapping of the Department of Housing, Local Government and Heritage. (<http://www.myplan.ie/en/index.html>).

Recent and historical OSI mapping and aerial photography was reviewed (data source; www.geohive.ie). Information on soils, geology and hydrogeology within the study area was reviewed using the Geological Survey of Ireland online map viewer (data source; <http://www.gsi.ie>).

Also reviewed were the Dún Laoghaire-Rathdown County Development Plan 2016-2022, Dún Laoghaire-Rathdown County Development Plan 2022-2028, Wicklow County Development Plan 2016–2022 and Draft Wicklow County Development Plan 2021–2027, including the accompanying Appropriate Assessment documentation prepared for these plans (Natura Impact Reports). Relevant planning information for the surrounding area was reviewed using the planning enquiry systems of Wicklow County Council and Dún Laoghaire-Rathdown County Council. Search criteria were implemented to determine whether such projects or plans would be relevant to this study and this information was used to determine potential cumulative impacts from other plans / projects with the proposed development.

Datasets of species recorded within and around the proposed development were sought from and provided by NPWS and BirdWatch Ireland (i.e. the Irish Wetland Bird Survey (I-WeBS)).

As part of this study ecological surveys have been conducted within the study area of the proposed development site and also within the wider Harbour Point Masterplan lands (refer to Appendix B for map of Harbour Point Masterplan lands); details of which are included in an accompanying Environmental Impact Assessment Report (Atkins document reference; 5214419DG0002). The results of ecological surveys were reviewed as part of this assessment. Ecology reports associated with neighbouring developments were also reviewed where available.

3.3. Site Visit

Site visits were undertaken during February, July and August 2020 and July 2022 by an Atkins ecologist. The purpose of the visits was to undertake an assessment of ecological features and supporting habitats that may be present within and surrounding the Site in relation to the proposed development project; having regard to survey guidance sources such as *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2017) and *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* (CIEEM, 2018).

³ <https://www.google.ie/maps>

⁴ <http://www.bing.com/maps/>

⁵ <https://gis.epa.ie/EPAMaps/>

The objectives of the ecological Site visits were to: -

- Check for evidence of rare or protected habitats and species and to assess the potential for such species to be present on Site;
- Assess the potential for habitats listed on Annex I to the Habitats Directive, as well as species listed on Annex II or Annex IV to the Habitats Directive and birds listed on Annex I to the Birds Directive to occur on Site given their ecological requirements as identified by NPWS⁶; and
- Check for evidence of invasive plant species restricted under Section 49 of the Habitats Regulations (S.I. No. 477 of 2011, as amended) or the EU Invasive Alien Species Regulation (1143/2014).

A Phase 1 habitat survey was undertaken during July 2020 in line with published practice (Smith *et al.*, 2011), with habitats classified in line with the Heritage Council Classification scheme (Fossitt, 2000). Dominant plant species in each habitat type were recorded. Plant nomenclature followed the Botanical Society of Britain and Ireland's *List of Accepted Plant Names* (BSBI, 2007).

During July-August 2020 and July 2022 the hedgerows, trees and treelines within the Site were also assessed for signs of bird activity. Bird activity was recorded on the Site during the course of each site visit. Incidental sightings of birds, mammals, invertebrates and amphibians were noted during site visits to further evaluate the importance of the Site to flora and fauna. During the ecological surveys the presence of invasive plant species such as Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and Giant Hogweed (*Heracleum mantegazzianum*) were also searched for.

The Site was surveyed for evidence of bat activity during July-August 2020. Bat surveys assessed the Site for evidence of roosting, feeding and commuting bats and included Tree Potential Bat Roost (PBR) Surveys, Static Detector Surveys, Dusk and Dawn Bat Surveys, Walking Transect surveys and Building Inspections.

The Site was visited over both winter and summer months during 2020. A number of SPAs in the wider landscape support wintering bird species which can travel a significant distance from their associated SPA; the site visits therefore also assessed the Site's potential to provide roosting or feeding opportunities for such species (e.g. field feeding waders or geese).

The surveys undertaken are considered to be sufficient to provide an ecological appraisal of the Site in the context of the proposed development project. The Site could be fully accessed and weather conditions were dry. Sufficient time was allocated to each survey and surveys were carried out by a competent, qualified and experienced ecologist. Therefore, no limitations to the surveys are noted.

3.4. Statement of Authority

The Natura Impact Statement was prepared by Colin Wilson with technical support and peer review provided by Paul O'Donoghue.

Colin Wilson has a BSc (Hons) in Environmental Science. He has over 14 years working in the fields of ecology and environmental management. He is a Senior Ecologist with experience in ecological surveying, environmental assessment, on-site ecological supervision and mitigation. He has experience on multiple road projects, infrastructure and residential development projects regarding all elements of surface and groundwater management, monitoring, sampling and associated reporting. Colin also has a broad range of experience in invasive species management, biosecurity and control. Colin has prepared numerous AA screening reports and NIS reports and has also been involved in the development of Environmental Operating Plans and Construction Environmental Management Plans for a number of national infrastructure projects.

Paul O'Donoghue has a BSc (Zoology), MSc (Behavioural Ecology) and a PhD in avian ecology and genetics. Paul is a chartered member of the Society for the Environment (CEnv) and a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM). Paul has over 18 years' experience in ecology; including extensive experience in the preparation of Habitat Directive Assessments / Natura Impact Statements (i.e. Appropriate Assessment under Article 6(3) of the EU Habitats Directive).

⁶ Article 17 Reports 2019: <https://www.npws.ie/publications/article-17-reports/article-17-reports-2019>

4. Existing Environment

4.1. Introduction

The Site of the proposed development is located largely on lands formerly used as a golf course. The project site is also bordered to the south by former Bray Golf Club lands / Masterplan lands and the River Dargle which flows in an easterly direction outfalling to the Irish Sea in Bray Harbour ca. 50m from the southeast extent of the project site. This stretch of the river has been subject to flood alleviation works and the banks of the river have been recently developed into a formalised promenade and public amenity space. To the north of the Site the Rathmichael Stream flows in an easterly direction through wooded and grassland areas which have formalised public pathways throughout. To the east the Dublin to Rosslare railway line forms a continuous border for the entirety of the development site. The west boundary of the development site is dominated by school buildings and associated sports pitches.

The former Bray Golf Club lands have been subject to recent development in certain areas between 2016-2018. Ravenswell Primary School along with associated sports / recreational areas have been constructed on ca. 5 hectares of the overall lands. Significant infrastructural works were also undertaken with a new road network in situ providing two main access routes, a Northern Access Route which borders the eastern and northern boundaries of the Industrial Yarns site and a Southern Access Road which facilitates access via the Upper Dargle Road. The new school and new road network is shown in Figure 4-1 below along with the location of watercourses to the south and north of the site.

Site surveys were undertaken during winter 2020 and again during summer months of 2020 and 2022. The following sections of the report provides a summary of the key features of the Site.

4.1.1. Habitats

Amenity Grassland (GA2)

The development site is a former golf course and the lands are predominantly comprised of amenity grassland (GA2). The grasslands are well maintained and regularly mown for the large part, however, small areas of grassland (around scattered parkland trees and informal pathways) have been left uncut during the summer months.

Scattered Trees and Parkland (WD5)

Within the central areas of the former golf course lands there are numerous scattered trees (WD5). The tree species found within the development site include: - *Acer pseudoplatanus* (Sycamore), *Fraxinus excelsior* (Ash), *Populus alba* (White Poplar), *Populus* spp. (other poplars), *Pinus contorta* (Shore Pine), *Acer platanoides* (Norway Maple), *Prunus* spp. (flowering Cherry), *Sorbus intermedia* (Swedish Whitebeam) and *Sorbus aria* (Whitebeam).

Mixed Broadleaved / Conifer Woodland (WD2)

Within the northwest area of the proposed development site there is an area of mixed broadleaved and conifer woodland (WD2). The woodland is largely unmanaged and has numerous informal trails throughout. Tree species within the small area of woodlands include: *Acer pseudoplatanus* (Sycamore), *Populus* spp. (Poplar), *Abies* spp. (firs), *Picea* spp. (spruces), *Pinus* spp. (pines), *Pinus sylvestris* (Scots Pine), *Aesculus hippocastanum* (Horse Chestnut), *Sorbus aucuparia* (Rowan), *Carpinus betulus* (Hornbeam) and *Fraxinus excelsior* (Ash).

Treelines (WL2)

Along the entire northern extents of the Site, inside the boundary fence, there is a treeline which includes species; *Cupressus macrocarpa* (Monterey Cypress), *Pinus sylvestris* (Scots Pine), *Pinus contorta* (Shore Pine), *Chamaecyparis lawsoniana* (Lawson Cypress), *Pinus* spp. (Pine) and *Castanea sativa* (Sweet Chestnut).

Hedgerow (WL1)

Hedgerows are found within the Site in only 2 no. areas, both along the eastern boundary. Along the northern side of the east boundary there is ca. 100m of hedgerow which is comprised predominantly of semi-mature *Crataegus monogyna* (Hawthorn) with occasional young Ash. Further south along the eastern boundary (in the vicinity of the new road and railway underpass) there is a further ca. 50m of hedgerow which is largely made up of young Ash with occasional Hawthorn.

Recolonising Bare Ground (ED3)

Within the southwest section of the Site, adjacent to the new primary school, the former golf clubs' lands have been subject to previous construction activities associated with the building of the new road and school. In this area ground has been previously cleared of grasses and soils and the area can be categorised as recolonising bare ground. Within this area Rosebay willowherb, dock, *Ulex europaeus* (Gorse), *Cirsium* spp. (thistles), Ragwort, *Dipsacus fullonum* (Teasel) and *Hypochaeris radicata* (Cat's-ear) were noted on previously stripped ground.

Artificial Surfaces (BL3)

In the southwest section of the Site adjacent to the new school there are hard standing areas in the form of gravel tracks and gravelled parking areas. Also, along the entirety of the southern section, where the Site is in proximity to the River Dargle, there are hardstanding gravel areas where the former golf club lands have been previously cleared to accommodate works associated with the building of flood defences and promenade along the watercourse.

Plates 4-1 to 4-5 illustrate the habitats within the former golf course lands during Site surveys during 2020.



Plate 4-1 Informal path alongside railway.



Plate 4-2 Gravel tracks and old golf course lands.



Plate 4-3 Gravel tracks near school.



Plate 4-4 Northern perimeter mature treeline.



Plate 4-5 Recolonising bare ground east of school.

Invasive species

There are a number of records of invasive plant species within the wider area of the Site as follows: Giant Hogweed (*Heracleum mantegazzianum*), Traveller's-joy (*Clematis vitalba*) and Three-cornered Garlic (*Allium triquetrum*). The sightings of Giant Hogweed have all been within the vicinity of the Dargle River. No invasive species were recorded within the project site during ecological surveys (2020 and 2022).

4.1.2. Watercourses

The Site is located within the Dargle subcatchment (Subcatchment ID 10-5). Both the River Dargle and the Rathmichael stream are detailed by the Environmental Protection Agency (EPA) as having 'Good' water quality status (2013-2018) and are both detailed as being 'Not at Risk' of failing to meet the relevant Water Framework Directive (WFD) objectives by 2027.

The main channel of the River Dargle is designated as a Salmonid Water under the European Communities (Quality of Salmonid Waters) Regulations, 1988 (S.I. No. 293/1988). The location of the watercourses in the context of the development site is illustrated in Figure 4-1 below.

for foraging with NBDC datasets showing records of otter sightings in 2017. Evidence of otter has been noted by NPWS⁷ staff on the Rathmichael Stream where a spraint was noted at the culvert under the railway line indicating that otters use this watercourse for access to the sea.

The Site is in relatively close proximity to the coast and Bray Harbour; the lower stretches of the Dargle River and the coastal waters are a subsite counted as part of the Irish Wetland Bird Survey (I-WeBS). No waterbirds were noted during 2020 winter surveys within the Site boundary. Several species of gull were noted roosting with the former golf club lands south (outside) of the Site. Mute swan, mallard and gull species (Herring gull and Black-headed gull) were noted along the lower stretches of the Dargle River and numerous Mute swans (with cygnets) were noted roosting and sheltering on the small beach within Bray harbour. Mute swans, gulls and mallard were noted during both winter and summer months in the area of the Dargle River and estuary.

The waterbirds in this area, in particular the Mute swans and gulls, seem habituated to human activity with pedestrians and cars noted within 2m of a Mute swan and gull roosting location on the beach within the harbour walls. No geese species, such as Light-bellied Brent Geese, were noted during Site surveys of the harbour, coastal waters, former golf club lands or the Site and I-WeBS data indicates the Bray Harbour area is not a prime site for geese. The bird species noted within the Site during 2020 and 2022 surveys are given in Table 4-1 below.

Table 4-1 Bird Species recorded within the Site.

Species	Scientific name	BoCCI status
Stonechat	<i>Saxicola rubicola</i>	Green
Blackbird	<i>Turdus merula</i>	Green
Wood pigeon	<i>Columba palumbus</i>	Green
Robin	<i>Erithacus rubecula</i>	Amber
Goldcrest	<i>Regulus</i>	Amber
Rook	<i>Corvus frugilegus</i>	Green
Blue Tit	<i>Cyanistes caeruleus</i>	Green
Song Thrush	<i>Turdus philomelos</i>	Green
Bullfinch	<i>Pyrrhula pyrrhula</i>	Green
Hooded Crow	<i>Corvus cornix</i>	Green
House sparrow	<i>Passer domesticus</i>	Amber
Herring gull (overfly)	<i>Larus argentatus</i>	Red

4.1.4. Bray Head

Bray Head is designated as a Special Area of Conservation; Bray Head SAC (000714) and is further designated at a national level as a proposed Natural Heritage Area; Bray Head pNHA (000714). Bray Head is also subject to a Special Amenity Area Order (Wicklow County Council; Bray Town Council; Greystones Town Council, 2007⁸). A Special Amenity Area Order (SAAO) is designed to protect areas that are of particularly high amenity value, which are sensitive to intense development pressure and which cannot be adequately protected by existing planning controls. The Special Amenity Area Order for Bray Head lists: - *Objectives in relation to the Preservation or Enchantment of the Character or Special Features of the Area*. A summary of the objectives detailed in Bray Head SAAO are as follows (non-exhaustive list): -

- Objective 1.1 - *'In order to facilitate social inclusion, it is an objective of the Council to increase public access on foot to coastal, heathland and woodland areas for informal recreation.'*
- Objective 1.2 - *'To protect the special amenity area ensuring that its resources are used in an effective and sustainable manner.'*

⁷ An Bord Pleanála Inspector's Report ABP-311181-21

⁸<https://www.wicklow.ie/Portals/0/adam/Content/I46A8jfaW0el3Wd4pR64AQ/Link/Bray%20Head%20Special%20Area%20Amenity%20Order%202007.pdf>

- Objective 1.3 - 'To manage the area in order to conserve its natural and cultural assets and realise its exceptional potential as a place for informal recreation, tourism and environmental education.'

The SAAO further outlines: - "Heath, a habitat listed on Annex I of the EU Habitats Directive, is the principle habitat over much of the Head. It occurs over the light sandy soils found in the upper slopes of Bray Head. The heath community is frequently accidentally or deliberately burned and this assists its development rather than hinders it.' Bray Head SAAO lists as Policy 1.3.4; 'The Council, in accordance with the Wildlife (Amendment) Act, 2000 and the National Parks and Wildlife Service shall promote a Heathland Management Programme consisting of controlled burning of the site on a ten year rotation, in small patches, during the legal burning season."

5. Appropriate Assessment Screening

5.1. Connectivity of Project to European Sites

The 'zone of influence' (ZoI) for a project is the area over which ecological features may be subject to significant effects as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries. The zone of influence will vary for different ecological features depending on their sensitivity to an environmental change (CIEEM, 2018).

A distance of 15km has been recommended in the case of plans, as a potential zone of influence and this distance is derived from UK guidance (Scott Wilson *et al.*, 2006). However, for projects the distance could be much less, and in some cases less than 100m. DoEHLG guidance⁹ as well as guidance recently published by the Office of Planning Regulation (OPR, 2021) advises that this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, the sensitivities of the ecological receptors, and the potential for in-combination effects.

Thus, given the nature, scale and extent of the proposed project, the potential zone of influence will consider European sites with regard to the location of a European site, the Qualifying Interests (QIs) of the site and their potential mobility outside that European site, the source-pathway-receptor model and potential environment effects of the proposed project.

The project does not lie within any European site.

It follows that given the nature of the proposed project the potential zone of influence will be limited to European sites where qualifying interest habitats or species have some form of connectivity, such as hydrological connectivity with the proposed development project.

There are 13 no. European sites within the potential zone of influence (ZoI) of the proposed development project; 9 no. SACs and 4 no. SPAs, as outlined in Table 5-1 below.

The proposed development site is bordered to the south by the Dargle River which outfalls to the Irish Sea. The proposed development will involve construction of a surface water / storm water drainage outfall on the banks of the River Dargle. Drainage during the operational phase of the proposed development will outfall to the River Dargle and Irish Sea. Given that a number of the European sites within the potential zone of influence of the proposed project are coastal or marine in nature, hydrological connectivity exists from the development site to the coastal and marine based European sites via the River Dargle and Irish Sea. The closest European sites with potential indirect connectivity via the River Dargle and Irish Sea are; Bray Head SAC (000714) (ca. 1.7km) and Rockabill to Dalkey Island SAC (003000) (ca. 4.1km).

When considering the zone of influence, consideration has also been given to species which may occur at a distance from the SAC or SPA for which they are a Qualifying Interest. Harbour porpoise which is a QI species of Rockabill to Dalkey Island SAC can cover significant distances along the Irish coastline and is an example of such a mobile species. Similarly many SPA waterbird species have a wide geographical range, notably seabirds such as the Roseate Tern which has recently been noted as breeding in small numbers in Dalkey Island SPA

⁹ DoEHLG (2009). *Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities.* Department of Environment, Heritage and Local Government, Dublin, Ireland.

during 2020¹⁰ and which have an important breeding colony within Rockabill SPA. Therefore, the mobility of QI species and their potential to range outside of the delineated boundaries of their respective European sites has also been considered as part of this assessment.

Table 5-1 details the European sites that are within the potential ZOI of the project and lists their associated qualifying interests. Figures 5-1 and 5-2 depict the locations of the European Sites within the potential ZOI of the proposed development project.

¹⁰ Details of Dalkey Island Roseate tern - <http://roseatetern.org/dalkey-island.html>

Table 5-1 European sites within the potential zone of influence of the proposed project.

European Site	Distance from Works	Qualifying Interests	Screening Comment
Bray Head SAC (000714) ¹¹	ca. 1.7km	<ul style="list-style-type: none"> • Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] • European dry heaths [4030] 	<p>Bray Head SAC is designated for the conservation of cliff and heath habitats. There is no direct overlap between the project site and this SAC, nor do these habitats occur within or in close proximity to the project site.</p> <p>Proposed construction activities include small scale works on the banks of the River Dargle and drainage from the proposed project site will outfall to the River Dargle and Irish Sea once the development is completed. Therefore, indirect connectivity exists to this coastal SAC from the proposed development project via the River Dargle and the Irish Sea.</p> <p>The QI habitats for the SAC are terrestrial in nature; heaths and cliffs; vegetated sea cliffs of the Atlantic and Baltic coasts [1230] & European dry heaths [4030].</p> <p>Potential indirect impacts from the proposed project via the hydrological pathway of the Irish Sea on terrestrial heath habitats located on top of the headland are precluded given the lack of possible connectivity.</p> <p>Potential indirect impacts via the hydrological pathway of the Irish Sea on terrestrial cliff habitats are not considered likely given that only the base of the cliffs are in contact with coastal waters. Also, given the dilution and dispersal that would occur within the Irish Sea this is not considered a viable pathway through which the conservation objectives of the SAC could be affected.</p> <p>The proposed development once completed may lead to an increase in public footfall within Bray Head SAC. There are formalised and managed pathways through Bray Head some of which are through heathland habitats and along cliff tops. The objectives and principles of Bray Head Special Amenity Area Order detail extensive measures for the management of increased public access as well as for the maintenance of recreational walkways to be undertaken in combination with the protection of the heath and cliff habitats. Given that the formalised paths through Bray Head are already heavily utilised by the public, and given the paths and heaths are subject to continued management and maintenance measures, it is considered that any increase in footfall that may occur along Bray Head's formalised pathways</p>

¹¹ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000714.pdf

European Site	Distance from Works	Qualifying Interests	Screening Comment
			<p>as a result of the proposed development is not likely to have significant effects on Bray Head's heath and cliff habitats in view of their conservation objectives.</p> <p>This site is not therefore considered further.</p>
<p>Rockabill to Dalkey Island SAC (003000)¹²</p>	<p>ca. 4.1km</p>	<ul style="list-style-type: none"> • Reefs [1170] • <i>Phocoena phocoena</i> (Harbour Porpoise) [1351] 	<p>This marine SAC is designated for reef habitat and for the conservation of marine mammal; Harbour porpoise.</p> <p>There is no direct overlap between the development site and this SAC. The QI habitats and species are marine in nature and therefore do not occur within the project site. The site lies within OS 2km grid square; O21U; this includes adjoining coastal waters. NBDC map viewer includes recent records of porpoise within this grid square (09/04/2020).</p> <p>Proposed construction activities include small scale works on the banks of the River Dargle and drainage from the proposed project site will outfall to the River Dargle and Irish Sea. Therefore, the proposed project has potential indirect connectivity to the qualifying interests of this SAC via the River Dargle and the Irish Sea.</p> <p>During the operational phase of the proposed development foul waters will be treated at Shanganagh WwTP. Treated waters from the WwTP outfall to the Irish Sea. Therefore, the proposed project has potential indirect connectivity to the qualifying interests of this SAC via discharged treated waters from the WwTP at Shanganagh.</p> <p>Also given the mobile nature of the QI species; Harbour porpoise, there is potential indirect connectivity to this Rockabill to Dalkey Island SAC QI species where harbour porpoise may occur within marine waters outside of the SAC site extents / near Bray Harbour.</p> <p>Rockabill to Dalkey Island SAC is considered further below.</p>
<p>Ballyman Glen SAC (000713)¹³</p>	<p>ca. 2.2km</p>	<ul style="list-style-type: none"> • Petrifying springs with tufa formation (<i>Cratoneurion</i>) [7220] • Alkaline fens [7230] 	<p>Ballyman Glen SAC is designated for alkaline fen and natural spring habitats.</p> <p>There is no direct overlap between the development site and this SAC, nor do these habitats occur within or in close proximity to the project. There is no indirect connectivity from the project to this SAC via surface water features, drainage</p>

¹² https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO003000.pdf

¹³ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000713.pdf

European Site	Distance from Works	Qualifying Interests	Screening Comment
			<p>ditches or by any other vectors. The project site is downstream of Ballyman Glen and as such cannot influence the features of interest of this SAC.</p> <p>The location, scale and duration of the development project is such that they will not contribute to direct, indirect or in-combination impacts on habitats for which the SAC has been designated and do not have the potential to affect the conservation objectives of these habitats.</p> <p>This site is not considered further.</p>
Knocksink Wood SAC (000725) ¹⁴	ca. 4.1km	<ul style="list-style-type: none"> • Petrifying springs with tufa formation (<i>Cratoneurion</i>) [7220] • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] • Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0] 	<p>Knocksink Wood SAC is designated for woodland and natural spring habitats.</p> <p>There is no direct overlap between the development site and this SAC, nor do these habitats occur within or in close proximity to the project. There is no indirect connectivity from the project site to this SAC via surface water features, drainage ditches or by any other vectors.</p> <p>The location, scale and duration of the development project is such that they will not contribute to direct, indirect or in-combination impacts on habitats for which the SAC has been designated and do not have the potential to affect the conservation objectives of these habitats.</p> <p>This site is not considered further.</p>
Glen of the Downs SAC (000719) ¹⁵	ca. 7km	<ul style="list-style-type: none"> • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] 	<p>Glen of the Downs SAC is designated for oak woodland habitats.</p> <p>There is no direct overlap between the development site and this SAC, nor do these habitats occur within or in close proximity to the project. There is no indirect connectivity from the project to this SAC via surface water features, drainage ditches or by any other vectors.</p> <p>The location, scale and duration of the development project is such that they will not contribute to direct, indirect or in-combination impacts on habitats for which the SAC has been designated and do not have the potential to affect the conservation objectives of these habitats.</p> <p>This site is not considered further.</p>

¹⁴ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000725.pdf

¹⁵ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000719.pdf

European Site	Distance from Works	Qualifying Interests	Screening Comment
Wicklow Mountains SAC (002122) ¹⁶	ca. 7.5km	<ul style="list-style-type: none"> • Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110] • Natural dystrophic lakes and ponds [3160] • Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010] • European dry heaths [4030] • Alpine and Boreal heaths [4060] • Calaminarian grasslands of the <i>Violetalia calaminariae</i> [6130] • Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [6230] • Blanket bogs (* if active bog) [7130] • Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>) [8110] • Calcareous rocky slopes with chasmophytic vegetation [8210] • Siliceous rocky slopes with chasmophytic vegetation [8220] • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] 	<p>This mountainous SAC is designated for a range of habitats and for the conservation of otters found within the rivers of the Wicklow mountains.</p> <p>There is no direct overlap between the development site and this SAC, nor do any of these habitats occur within or in close proximity to the project.</p> <p>Otter are the only QI species associated with this SAC. Wicklow Mountains National Park information¹⁷ outlines “<i>Otters occur in low numbers in Wicklow’s lakes and rivers</i>”. NPWS site documentation¹⁸ maps the commuting areas for otter as being within the upland lakes and loughs within the SAC. The nearest of these lakes to the project site is Bray Lower and Upper loughs which are ca. >18.5km upstream of the project site. Whilst otter are highly mobile species and can migrate for significant distances along watercourses. NPWS publications¹⁹ outline “<i>In lowland rivers and fish-rich lakes otters only need to maintain small territories (1-2km), but on smaller rivers and in upland areas, where food tends to be less abundant, otter territories can stretch to 10 or 15 km.</i>” The nearest watercourses and lakes within the SAC are ca. >14km and ca. >18.5km upstream respectively of the project site in Bray town. It is considered that the lower stretches of the River Dargle in Bray town are outside of the territorial range of the otter populations of Wicklow Mountains SAC. Given the distance to Wicklow Mountains SAC otter territories, it is considered that the otter populations accommodated within the upstream SAC will not be affected by the housing development project in the urban area of Bray town.</p> <p>There is no indirect connectivity from the project to this SAC via surface water features, drainage ditches or by any other vectors.</p> <p>The location, scale and duration of the development project is such that they will not contribute to direct, indirect or in-combination impacts on habitats or species for which the SAC has been designated and do not have the potential to affect the conservation objectives of these habitats.</p> <p>This site is not considered further.</p>

¹⁶ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002122.pdf

¹⁷ <https://www.wicklowmountainsnationalpark.ie/nature/mammals/>

¹⁸ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002122.pdf

¹⁹ https://www.npws.ie/sites/default/files/publications/pdf/Otter_leaflet.pdf

European Site	Distance from Works	Qualifying Interests	Screening Comment
		<ul style="list-style-type: none"> • <i>Lutra lutra</i> (Otter) [1355] 	
South Dublin Bay SAC (000210) ²⁰	ca. 10km	<ul style="list-style-type: none"> • Mudflats and sandflats not covered by seawater at low tide [1140] • Annual vegetation of drift lines [1210] • Salicornia and other annuals colonising mud and sand [1310] • Embryonic shifting dunes [2110] 	<p>South Dublin Bay SAC is designated for a range of coastal and estuarine habitats. There is no direct overlap between the development site and this SAC, nor do protected coastal or estuarine habitats occur within or in immediate proximity to the project site.</p> <p>Indirect connectivity exists to this SAC via ca. 10km the Irish Sea, however, given the dilution and dispersal that would occur within the Irish Sea this is not considered a viable pathway through which there could be impacts on the QI habitats of the SAC in view of their conservation objectives.</p> <p>The location, scale and duration of the development project is such that they will not contribute to direct, indirect or in-combination impacts on habitats for which the SAC has been designated and do not have the potential to affect the conservation objectives of these habitats.</p> <p>This site is not considered further.</p>
The Murrough Wetlands SAC (002249) ²¹	ca. 11km	<ul style="list-style-type: none"> • Annual vegetation of drift lines [1210] • Perennial vegetation of stony banks [1220] • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330] • Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] • Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> [7210] • Alkaline fens [7230] 	<p>The Murrough Wetlands SAC is designated for a range of coastal and wetland habitats.</p> <p>There is no direct overlap between the development site and this SAC, nor do protected coastal or wetland habitats occur within or in immediate proximity to the project site.</p> <p>Indirect connectivity exists to this SAC via ca. 11km the Irish Sea; however, given the dilution and dispersal that would occur within the Irish Sea this is not considered a viable pathway through which there could be impacts on the QI habitats of the SAC in view of their conservation objectives.</p> <p>The location, scale and duration of the development project is such that they will not contribute to direct, indirect or in-combination impacts on habitats for which the SAC has been designated and do not have the potential to affect the conservation objectives of these habitats.</p>

²⁰ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000210.pdf

²¹ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002249.pdf

European Site	Distance from Works	Qualifying Interests	Screening Comment
			This site is not considered further.
Carriggower Bog SAC (000716) ²²	ca. 11.3km	<ul style="list-style-type: none"> Transition mires and quaking bogs [7140] 	<p>Carriggower Bog SAC is designated for wetland habitats.</p> <p>There is no direct overlap between the development site and this SAC, nor do protected wetland habitats occur within or in close proximity to the project. There is no indirect connectivity from the project to this SAC via surface water features, drainage ditches or by any other vectors.</p> <p>The location, scale and duration of the development project is such that they will not contribute to direct, indirect or in-combination impacts on habitats for which the SAC has been designated and do not have the potential to affect the conservation objectives of these habitats.</p> <p>This site is not considered further.</p>
Dalkey Islands SPA (004172) ²³	ca. 6.4km	<ul style="list-style-type: none"> Roseate Tern (<i>Sterna dougallii</i>) [A192] Common Tern (<i>Sterna hirundo</i>) [A193] Arctic Tern (<i>Sterna paradisaea</i>) [A194] 	<p>Dalkey Islands SPA is designated for the conservation of a number of breeding tern species, including Roseate tern. Colonies off Dublin support a significant proportion of the north-eastern Atlantic breeding population of Roseate tern (e.g. Rockabill SPA (004014)).</p> <p>There is no direct overlap between the project site and this SPA. The project site does not accommodate habitat that would provide for suitable nesting sites for terns.</p> <p>Terns feed within the marine environment on aquatic species and do not feed in terrestrial sites and as such the project site does not provide for tern foraging habitats.</p> <p>The project site is sufficiently remote (ca. 6.4km) so as to negate disturbance related impacts on tern populations accommodated within the SPA.</p> <p>With urbanization, collision with man-made structures, such as buildings and windows, has become a major threat for birds. A key consideration is the location of the structure and how birds will fly through the wider landscape. In the case of tern species, the movements would be expected to be within the marine environment, along the shoreline or along estuaries. The project site does proffer</p>

²² https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000716.pdf

²³ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004172.pdf

European Site	Distance from Works	Qualifying Interests	Screening Comment
			<p>marine habitats or habitats suitable for terns. The project site and associated taller buildings does not lie between habitats suitable for terns so regular or repeated passage across the Site by terns will not occur. The migratory flight paths of terns will not be inland across the project site towards the Wicklow Mountains. As such, it is considered, the proposed project will not impact upon the migratory flight paths of SPA species nor restrict their mobility between wetland sites and there will be no likely significant effects on QI terns species from collision risk.</p> <p>The location, scale and operation of the project is such that it will not contribute to direct, indirect or in-combination impacts on bird species for which the SPA has been designated and do not have the potential to affect the conservation objectives of these species.</p> <p>This site is not considered further.</p>
Wicklow Mountains SPA (004040) ²⁴	ca. 7.7km	<ul style="list-style-type: none"> • Merlin (<i>Falco columbarius</i>) [A098] • Peregrine falcon (<i>Falco peregrinus</i>) [A103] 	<p>Wicklow Mountains SPA is designated for the conservation of merlin and peregrine falcon.</p> <p>There is no direct overlap between the development project site and this SPA, nor does the site accommodate habitat that would provide for suitable nesting sites for these species. The project site is sufficiently remote so as to negate disturbance related impacts on nesting birds accommodated within the SPA.</p> <p>While during the winter months both merlin and peregrine falcon move to coastal wetlands to hunt, the former Bray Golf Club lands would not be seen as optimal foraging habitat by either species. Development of the site in Bray is considered unlikely to have an impact on ex-situ hunting by either species which is nesting in the Wicklow Mountains.</p> <p>Falcons are agile flyers with high levels of visual acuity and BirdWatch Ireland identify Peregrines; '<i>Breeding on cliff faces and in recent years migrating into cities and nesting on taller buildings</i>' Given their agility, acuity and their adaptability and propensity to the urban environment, the larger, taller apartment blocks proposed for the Site do not pose a collision risk to the falcon populations of the SAC.</p> <p>The location, scale and operation of the project is such that it will not contribute to direct, indirect or in-combination impacts on bird species for which the SPA has</p>

²⁴ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004040.pdf

European Site	Distance from Works	Qualifying Interests	Screening Comment
			<p>been designated and do not have the potential to affect the conservation objectives of these species.</p> <p>This site is not considered further.</p>
<p>South Dublin Bay and River Tolka Estuary SPA (004024)²⁵</p>	<p>ca. 10km</p>	<ul style="list-style-type: none"> • Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] • Oystercatcher (<i>Haematopus ostralegus</i>) [A130] • Ringed Plover (<i>Charadrius hiaticula</i>) [A137] • Grey Plover (<i>Pluvialis squatarola</i>) [A141] • Knot (<i>Calidris canutus</i>) [A143] • Sanderling (<i>Calidris alba</i>) [A144] • Dunlin (<i>Calidris alpina</i>) [A149] • Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] • Redshank (<i>Tringa totanus</i>) [A162] • Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] • Roseate Tern (<i>Sterna dougallii</i>) [A192] • Common Tern (<i>Sterna hirundo</i>) [A193] • Arctic Tern (<i>Sterna paradisaea</i>) [A194] • Wetland and Waterbirds [A999] 	<p>South Dublin Bay and River Tolka Estuary SPA is designated for a wide range of wintering waterbirds as well as the wetland habitats which host the bird species.</p> <p>There is no direct spatial overlap between the works area and this SPA. The project site is sufficiently remote that there is no risk of disturbance to waders and wildfowl using the SPA. The proposed project will not impact upon the migratory flight paths of SPA species nor restrict their mobility between wetland sites.</p> <p>As noted the Bray Harbour I-WeBS count site (I-WeBS site code; 0T907) is located around the mouth of the Dargle. I-WeBs data records from Bray Harbour supports relatively low numbers of species for which South Dublin Bay and River Tolka Estuary SPA is designated (predominantly gulls, refer to Table 4-2). However, these sightings are confined to coastal / estuarine waters and not within the project site.</p> <p>A number of species such Light-bellied Brent Geese, Curlew, Black-tailed Godwit, Oystercatchers and gulls do utilise terrestrial lands / fields in the wider landscape (i.e. away from the SPA or coastal waters). The Bray Harbour I-WeBS count site does not include any of the terrestrial lands of the project site. However, there is no evidence of the project site being used by field feeding species. Site surveys undertaken in winter 2020 for this project did not record any field feeding species within the proposed project site. Furthermore, it should be noted that the site is prone to high levels of disturbance from walkers, dogs and experiences high levels of antisocial behaviour.</p> <p>The project site is not utilised by wildfowl and/or wintering waterbirds. The Site is located between this SPA (located 10km north) and The Murroughs SPA (located 12km south of the Site). Whilst the passage of wildfowl and waterbirds between these SPAs is currently poorly understood, any flight paths are likely to be along the coastline. Any north – south passage that may diverge inland, i.e. off the coastline, would necessitate passage over south Dublin City (with its numerous tall</p>

²⁵ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004024.pdf

European Site	Distance from Works	Qualifying Interests	Screening Comment
			<p>structures/buildings) and/or Bray Head (noted to be 243m above sea level), therefore any potential ca. 22km inland flight path would necessitate being at an altitude above the proposed building heights within the Site. Also, given the location of the SPA, the migratory flight paths of QI species to and from the SPA will not be across the project site. Given the location of the Site and the nature of the elevated landscape between SPAs and the low potential for any, or low altitude, passage across the Site the project will not restrict bird mobility between wetland sites and there will be no likely significant effects on the SPA bird populations from potential collision with proposed apartment buildings.</p> <p>Indirect connectivity exists to this SPA via the Irish Sea, however, given the dilution and dispersal that would occur within ca. 10km of the Irish Sea this is not considered a viable pathway through which surface water runoff could impact upon the wetlands associated with the SPA.</p> <p>The location, scale and operation of the project is such that it will not contribute to direct, indirect or in-combination impacts on bird species for which the SPA has been designated and do not have the potential to affect the conservation objectives of these species.</p> <p>This site is not considered further.</p>
The Murrough SPA (004186) ²⁶	ca. 12.1km	<ul style="list-style-type: none"> • Red-throated Diver (<i>Gavia stellata</i>) [A001] • Greylag Goose (<i>Anser anser</i>) [A043] • Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] • Wigeon (<i>Anas penelope</i>) [A050] • Teal (<i>Anas crecca</i>) [A052] • Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] • Herring Gull (<i>Larus argentatus</i>) [A184] 	<p>The Murrough SPA is designated for a wide range of wintering and breeding waterbirds as well as the wetland habitats which host the bird species.</p> <p>There is no direct overlap between the works area and this SPA. The project is sufficiently remote that there is no risk of disturbance to waders and wildfowl using the SPA. The proposed project will not impact upon the migratory flight paths of SPA species nor restrict their mobility between wetland sites.</p> <p>I-WeBs data records relatively low numbers of some of the SPA waterbird species (predominantly gulls, refer to Table 4-2) within the Bray Harbour count site, however these sightings are confined the aquatic environment, coastal / estuarine waters and not the project site. The site does not provide any suitable habitat for offshore species such as Red-throated diver or Little Tern.</p>

²⁶ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004186.pdf

European Site	Distance from Works	Qualifying Interests	Screening Comment
		<ul style="list-style-type: none"> • Little Tern (<i>Sterna albifrons</i>) [A195] • Wetland and Waterbirds [A999] 	<p>The project site is not a terrestrial area utilised by field feeding wildfowl and/or waterbirds. Any passage to or from estuarine habitats to the north (e.g. South Dublin Bay) or migratory flight paths of QI species to/from the Murrough SPA would likely be along the coastline. Any north – south passage or migratory flight paths that may diverge inland, i.e. off the coastline, would necessitate passage over south Dublin City (with its numerous tall structures/buildings) and/or Bray Head (noted to be 243m above sea level), therefore any potential inland flight path would necessitate being at an altitude above the proposed building heights within the Site. Given the location of the Site and the nature of the surrounding landscape and the low potential for any, or low altitude, passage across the Site, the project will not restrict bird mobility between wetland sites and there will be no likely significant effects on the SPA bird populations from potential collision with proposed apartment buildings.</p> <p>Indirect connectivity exists to this SPA via the Irish Sea, however, given the dilution and dispersal that would occur within ca. 10km of the Irish Sea this is not considered a viable pathway through which surface water runoff could impact upon the wetlands associated with the SPA.</p> <p>The location, scale and operation of the project is such that it will not contribute to direct, indirect or in-combination impacts on bird species for which the SPA has been designated and do not have the potential to affect the conservation objectives of these species.</p> <p>This site is not considered further.</p>

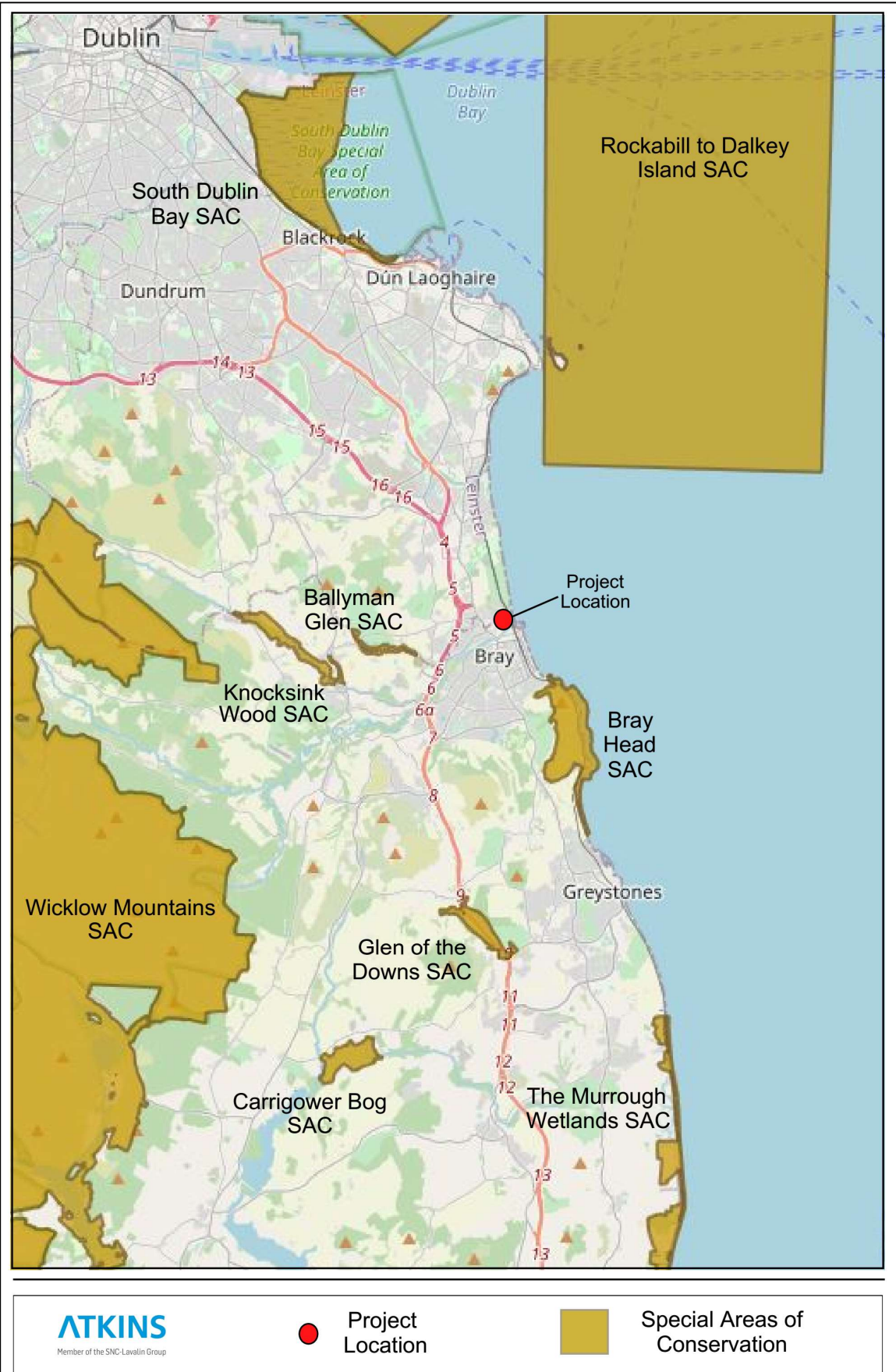


Figure 5-1 SACs within the potential zone of influence of the development project.



Figure 5-2 SPAs within the potential zone of influence of the development project

5.2. Brief Description of Rockabill to Dalkey Island SAC

Rockabill to Dalkey Island SAC is described as follows in the NPWS site synopsis (NPWS, 2014): -

“This site includes a range of dynamic inshore and coastal waters in the western Irish Sea. These include sandy and muddy seabed, reefs, sandbanks and islands. This site extends southwards, in a strip approximately 7 km wide and 40 km in length, from Rockabill, running adjacent to Howth Head, and crosses Dublin Bay to Frazer Bank in south Co. Dublin. The site encompasses Dalkey, Mughlins and Rockabill islands.

*Reef habitat is uncommon along the eastern seaboard of Ireland due to prevailing geology and hydrographical conditions. Expansive surveys of the Irish coast have indicated that the greatest resource of this habitat within the Irish Sea is found fringing offshore islands which are concentrated along the Dublin coast. A detailed survey of selected suitable islands has shown areas with typical biodiversity for this habitat both intertidally and subtidally. Species recorded in the intertidal included *Fucus spiralis*, *Fucus serratus*, *Pelvetia canaliculata*, *Ascophyllum nodosum*, *Semibalanus balanoides* and *Necora puber*. Subtidally, a wide range of species include *Laminaria hyperborea*, *Flustra foliacea*, *Alaria esculenta*, *Halidrys siliquosa*, *Pomatocereos triqueter*, *Alcyonium digitatum*, *Metridium senile*, *Caryophyllia smithii*, *Tubularia indivisa*, *Mytilus edulis*, *Gibbula umbilicalis*, *Asterias rubens*, and *Echinus esculentus*. These reefs are subject to strong tidal currents with an abundant supply of suspended matter resulting in good representation of filter feeding fauna such as sponges, anemones and echinoderms.*

The area selected for designation represents a key habitat for the Annex II species Harbour Porpoise within the Irish Sea. Population survey data show that porpoise occurrence within the site boundary meets suitable reference values for other designated sites in Ireland. The species occurs year-round within the site and comparatively high group sizes have been recorded. Porpoises with young (i.e. calves) are observed at favourable, typical reference values for the species. Casual and effort-related sighting rates from coastal observation stations are significant for the east coast of Ireland and the latter appear to be relatively stable across all seasons. The selected site contains a wide array of habitats believed to be important for Harbour Porpoise including inshore shallow sand and mudbanks and rocky reefs scoured by strong current flow. The site also supports Common Seal and Grey Seal, for which terrestrial haul-out sites occur in immediate proximity to the site. Bottle-nosed Dolphins has also occasionally been recorded in the area. A number of other marine mammals have been recorded in this area including Minke, Fin and Killer Whales and Risso’s and Common Dolphins.

The coastal environment of Co. Dublin is a very significant resource to birds with some nationally and internationally important populations. Of particular note in this site are the large number of terns (Arctic, Common and Roseate) known to use Dalkey Island as a staging area (approx. 2,000) after breeding. Other seabirds commonly seen include Kittiwake, Razorbill, Guillemot, Puffin, Fulmar, Shag, Cormorant, Manx Shearwater, Gannet and gulls.

This site is of conservation importance for reefs, listed on Annex I, and Harbour Porpoise, listed on Annex II, of the E.U. Habitats Directive.”

5.2.1. Features of Interest

The Rockabill to Dalkey Island SAC is designated for Reef habitats and Harbour porpoise as listed in Table 5-1 above. Due to the location and marine nature of the SAC, not all qualifying interests of the SAC are within the ZoI of the proposed project.

Given the location, nature and scale of the proposed project, the qualifying interests of the SAC that are within the ZoI are mobile species which can range outside of the SAC extents and which can frequent coastal waters near the proposed project site. A screening of the qualifying interests of Rockabill to Dalkey Island SAC is detailed in Table 5-2.

The qualifying interest which is within the ZoI of the proposed project is; Harbour porpoise [1351].

Table 5-2 Screening of qualifying interests of the Rockabill to Dalkey Island SAC.

Habitat/ Species	Comment	Within Zol
Reefs [1170]	<p>These marine based habitats are not located in the vicinity of the proposed project. Whilst the site extents of the SAC are ca. 4.1km direct line distance from the project site, the nearest reef habitat is identified within SAC site documentation (NPWS, 2013) as being around Dalkey Island which is ca. 6.5km direct line distance from the project site.</p> <p>Given the dilution and dispersal available in 6.5km of coastal waters, any potential surface water quality impacts that may occur from small scale construction phase drainage works on the banks of the Dargle River will not lead to likely significant effects upon the reef habitats of the SAC.</p> <p>Similarly, the operational phase drainage (storm water / treated foul water) from the proposed development will not lead to likely significant effects upon the favourable conservation status of 'Reefs' habitat in Rockabill to Dalkey Island SAC given the dilution and dispersal that would occur within the intervening areas of the Irish Sea.</p> <p>Therefore, these habitats are located outside the Zol of the proposed project and direct and indirect impacts are not anticipated to these habitats.</p>	No
Harbour porpoise [1351]	<p>Harbour porpoise have been recorded within the coastal waters around Bray Harbour. Porpoise prey on aquatic species which are in turn dependent of good water quality.</p> <p>Small scale construction phase drainage works are proposed on the banks of the Dargle River and drainage from the development is proposed to outfall to the Dargle River and Irish Sea. Therefore, Rockabill to Dalkey Island QI species; Harbour porpoise is considered to be within the Zol of the proposed project. Potential impacts are discussed in Section 6 of this report.</p>	Yes

5.2.2. Conservation Objectives

The conservation objectives for the and the list of specific attributes and targets defining the conservation objectives for each feature of interest can be found on the NPWS website²⁷ (last accessed 03/07/2021, NPWS, 2013). The conservation objectives for the SAC are;

- To maintain the favourable conservation condition of Reefs in Rockabill to Dalkey Island SAC; and,
- To maintain the favourable conservation condition of Harbour porpoise in Rockabill to Dalkey Island SAC.

5.2.3. Potential Threats

The potential threats and pressures as detailed by European Environment Agency²⁸ on the SAC are summarised in Table 5-3 below.

²⁷ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO003000.pdf

²⁸ <https://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=IE0003000>

Table 5-3 Potential threats and pressures on Rockabill to Dalkey Island SAC.

Rank	Threats and pressures (code)	Threats and pressures (type)	Inside/outside/both (i/o/b)
L	J02.02	Removal of sediments	o
H	D03.02	Shipping Lanes	b
H	E03	Discharges	o
M	D02	Utility and service lines	o
H	H06.01	Noise nuisance, noise pollution	b
H	F02.02	Professional active fishing	b
L	J02.11	Siltation rate changes, dumping, depositing of degraded deposits	o

Rank: H -High, M - Medium, L - Low

5.3. Likelihood of Significant Effects on European Sites

The available information on European sites was reviewed to establish whether or not the proposed project is likely to have a significant effect on the conservation objectives of the European sites within the Zol of the proposed project. The likelihood of impacts on the features of interest of the European sites identified in this report is based on information collated from the desk study, site visit and photographs, and other available existing information.

The likelihood of effects occurring are established in light of the nature and scale of the proposed project, the location of the proposed project with respect to European sites and the features of interest and conservation objectives of the European sites.

This report is prepared following the source-pathway-receptor model. The potential impacts are summarised into the following categories for screening purposes.

- Direct impacts refer to habitat loss or fragmentation arising from land-take requirements for development or agricultural purposes. Direct impacts can be as a result of a change in land use or management, such as the removal of agricultural practices that prevent scrub encroachment.
- Indirect and secondary impacts do not have a straight-line route between cause and effect. It is potentially more challenging to ensure that all the possible indirect impacts of the plan/project – in combination with other plans and projects - have been established. These can arise, for example, when a development alters the hydrology of a catchment area, which in turn affects the movement of groundwater to a site and the qualifying interests that rely on the maintenance of water levels. Deterioration in water quality can occur as an indirect consequence of development, which in turn changes the aquatic environment and reduces its capacity to support certain plants and animals. The introduction of invasive species can also be defined as an indirect impact. Disturbance to fauna can arise directly through the loss of habitat (e.g. displacement of qualifying interest species) or indirectly through noise, vibration and increased activity associated with construction and operation.

During the construction phase of the project works will involve construction of a drainage outfall on the banks of the River Dargle and there is therefore the potential to affect the water quality of this watercourse. Also given that during the operational phase of the proposed development drainage (storm water / treated foul water) from the development will outfall to the River Dargle and the Irish Sea, it is concluded by the authors of this report that in the absence of additional measures, it is not possible to screen-out likely significant effects on Rockabill to Dalkey Island SAC Qualifying Interest species; Harbour porpoise. Thus, it is recommended by the authors of this report that the proposed project should be brought forward to the second stage of the assessment process, i.e. full Appropriate Assessment.

6. Appropriate Assessment

This section of the report assesses the European site; Rockabill to Dalkey Island SAC in more detail and examines the potential for adverse effects on the integrity of the site, in view of its conservation objectives. Where effects are identified that may affect the integrity of the SAC, avoidance and mitigation measures are proposed to eliminate those effects. These are discussed below in the following sections.

6.1.1. Identification of potential impacts on the Rockabill to Dalkey Island SAC

6.1.1.1. Direct Impacts

The proposed development does not occur within or directly adjacent to the Rockabill to Dalkey Island SAC and as such there will be no direct impacts with this SAC; i.e. no displacement of species, or the permanent removal of habitat supporting qualifying interest and ecological features of the designated site.

6.1.1.2. Indirect Impacts

Indirect impacts via surface water run-off during construction phase

During wet conditions sediment can mobilise in the form of over-ground run-off during excavations and/or movement of heavy machinery through the Site. Sediment is of particular concern for aquatic species within receiving water bodies.

However, the only works near the River Dargle are those involving the installation of the surface water drainage outfall for the proposed development. All other construction activities are remote from the watercourse and there is the physical barrier of the flood defence walls and public promenade separating the Site from the watercourse. Given the physical barrier the flood defence walls, and promenade present and the distance between the Coastal Quarter residential development works areas and the watercourse, the potential for large volumes of sediment to reach the River Dargle as a result of construction activities is very limited.

Whilst the potential for construction related impacts upon the surface water quality of the River Dargle is considered to be low, in the absence of mitigation measures, potential impacts to the surface water quality of the River Dargle, which could in turn affect QI species Harbour porpoise, cannot be entirely ruled out.

Thus, given the potential impacts posed by the proposed works, mitigation measures are set out in Section 6.3.

Indirect Impacts during construction phase via groundwater (hydrogeological pathway)

A review of groundwater vulnerability datasets²⁹ identifies the proposed development site is largely within an area of moderate groundwater vulnerability with a small area at the southern extents of the site with an area of low groundwater vulnerability. Groundwater is assumed to follow local topography and flow towards the sea and/or the River Dargle. During site investigations (March 2020), and subsequent monitoring, local groundwater levels were assessed to range between 4.98m below ground level (bgl) and 0.87mbgl.

Excavation works on site can interact with groundwater and have the potential to expose groundwater to contamination via concrete, hydrocarbons and other chemicals used in construction. Temporary dewatering will likely be required during excavation in portions of the Site, however there will be no discharge to the River Dargle from any dewatering activities. Significant impacts to groundwater quality or flow during the construction phase are not likely. Any potential impacts on groundwater as a result of construction activities will not likely affect the surface water quality in the River Dargle or the coastal water quality in the Irish Sea.

Given the location, nature and scale of the proposed project, potential impacts through groundwater pathways and then onwards via the Irish Sea which could affect the conservation objectives of QI species Harbour porpoise are not considered likely.

²⁹ <https://dcenr.maps.arcgis.com/apps/MapSeries/index.html?appid=a30af518e87a4c0ab2fbde2aac3c228>

Indirect noise and vibration impacts during construction phase (piling works)

Piling works are necessitated for the construction of the proposed apartment blocks. These percussive works will not occur near the coastline or near the coastal waterbody (minimum ca. 100m distance). As such piling works will not result in noise and/or vibration related disturbance impacts to QI species Harbour porpoise.

Indirect impacts from discharge of treated foul effluent during operational phase.

During the operational phase of the development the foul water generated from the development will discharge into the local foul water network. The local foul water network is connected to the Shanganagh WwTP which has been recently upgraded and as such can accommodate the additional load to the network. Treated outfall from Shanganagh WwTP is to the Irish Sea and as such the potential for the treated effluent from the proposed development to impact Rockabill to Dalkey Island SAC is considered.

The Shanganagh WwTP has been subject to the Appropriate Assessment process. The Irish Water Report; *Natura Impact Statement as part of the Shanganagh-Bray Discharge Licence Review (D0038-01 & D005-01)* concluding statements are summarised as follows: -

“There are no effects anticipated to the Rockabill to Dalkey Island SAC or Dalkey Island SPA as the treated effluent from the primary discharge is compliant with licence ELV’s and the closest bathing and surface water monitoring stations to the discharge point achieve good high status.”

“There was no obvious effects of any of the agglomeration discharges within nearby intertidal habitats (single shore) or on the surface of the water, nor were there any foul odours. The designated ‘Reef’ habitat is included as an Annex 1 habitat under consideration. The primary discharge is the closest discharge to this designated habitat. Given the quality of the effluent and the dilution and dispersal available in coastal waters, the ongoing primary discharge is not expected to affect the favourable conservation status of ‘Reefs’ habitat in the Rockabill to Dalkey Island SAC. The additional dilution offered in intervening coastal waters means there is no potential for overflows inshore and in local streams to affect the favourable conservation status of this habitat.”

“The only Annex II species under consideration is the Harbour Porpoise. Data suggests there is a healthy population of porpoise in the SAC. Any minor eutrophication effects within the mixing/dilution zones of the primary discharge or overflows are not expected to impact the favourable conservation status of this species. The primary discharge comprises treated effluent and is effectively dispersed, while the worst effects of the overflows will be within freshwater or shallow intertidal waters to the coast which would not be used by this species.”

“...it is envisaged there will be no significant adverse effects on the integrity of Rockabill to Dalkey Island SAC or Dalkey Island SPA, in view of these sites conservation objectives and the conservation status of the Annex I habitat, Annex II species and protected bird species will not be compromised by the WwTP discharge either directly, indirectly or cumulatively.”

No impacts are anticipated on the qualifying interests of Rockabill to Dalkey Island SAC from foul discharge from the operational phase of the proposed development given effluent will be treated at Shanganagh WwTP prior to discharge and given the dilution and dispersal which will occur within the Irish Sea.

Indirect impacts from discharge of storm water / surface water during operational phase.

Following completion of construction, storm water / surface water (SW) drainage from the development is proposed to discharge to the River Dargle which outfalls to the Irish Sea. There is the potential to impact the water quality of the River Dargle and the water quality coastal waters from untreated and uncontrolled storm water / surface water drainage discharge.

Whilst the potential for SW drainage impacts to the surface water quality of the River Dargle / Irish Sea is considered to be low, given the dilution and dispersal that would occur within these waterbodies, in the absence of mitigation measures potential impacts to the surface water quality of the River Dargle and Irish Sea, which could in turn affect QI species Harbour porpoise, cannot be entirely ruled out.

Thus, given the potential impacts posed by the proposed works, mitigation measures are set out in Section 6.3.

6.2. In-Combination Impacts

Wicklow County Development Plan 2016-2022, Draft Wicklow County Development Plan 2021-2027, Dún Laoghaire-Rathdown County Development Plan 2016-2022 and Dún Laoghaire-Rathdown County Development Plan 2022-2028 set out policies and objectives for the development of both districts. The plans aim to promote the sustainable development and improvement of the economic, environmental, cultural and social aspects of their districts. The County Development Plans also require that any developments must be subject to the AA process and that permitted developments comply with the requirements of the Water Framework Directive, the relevant River Basin Management Plans and the Habitats Directive. A Strategic Environmental Assessment (SEA) was prepared for each of the County Development Plans and they went through the Appropriate Assessment Process. The findings of which were integrated into the objectives of each Plan resulting in plans that afford high levels of protection to the environment and European sites.

It is proposed to develop lands directly adjacent to the Site. The overall proposed Harbour Point Masterplan Development comprises phased residential, retail and commercial development at a key development site within Bray town, via the following 4 no. core phases: -

- Coastal Quarter Phase 1A – the subject of this particular planning application.
- Coastal Quarter Phase 1B – this phase will consist of the development of a mixed use / commercial building (referred to as a Special Building);
- River Quarter Phase 2A – this development will comprise ca. 500no. residential units, a hotel / retirement facility, commercial units (5,000 sqm), a transport bridge over the River Dargle with associated transport route, an access route in the south western corner of the site and a public park area as well as all associated site works; and,
- River Quarter Phase 2B – this development will consist of the development of retail units (20,000 sqm) as well as ca. 200no. residential units, landscaping and all associated site works

Other phases of the Harbour Point Masterplan Development must be considered in the assessment of potential in-combination impacts. It is proposed that Phase 1B, 2A & 2B will be constructed following the completion of Phase 1A. These 3 no. subsequent phases of the Harbour Point Masterplan Development will employ the same foul and surface water drainage approach (SuDS and GSDSDS requirements) as is detailed for Phase 1A and as such the additional phased development is considered unlikely to have significant impacts on the River Dargle or the Irish Sea. Due to the lack of viable pathways from any of the Harbour Point Masterplan Development sites to any European site, it is considered unlikely that the construction and/or operation of any phase of the SHD, either alone or in combination, will give rise to impacts on any European sites.

A search of the Wicklow County Council EPlan and Dún Laoghaire-Rathdown Planning Search site was conducted in July 2022 to determine if there are any granted developments within the vicinity of the project which could act in combination with the project to give rise to cumulative impacts. This search identified in excess of 100 no. granted developments since 2015, the majority of which are small scale developments such as single residential properties, extension works and retention projects. Larger projects within the vicinity of the proposed development which were reviewed include: -

- Aeval Ltd, SHD Planning, Townland of Cork Little, Woodbrook, Shankill, Co. Dublin (Planning Ref: ABP30584419) – Granted February 2020;
- Shankill Property Investments Ltd, Seapoint Road, Ravenswell, Bray, Co. Wicklow (Planning Ref: 22188) – Status; Further Information;
- Board of Directors of St. Gerard's School ,Thornhill Road, Bray, Co Dublin (Planning Ref: D17A/1104) – Granted March 2018;
- Duo Build Ltd, The Old Printworks , St. Laurence's Terrace and Adelaide Villas , Bray, Co. Wicklow (Planning Ref: 191189) – Granted April 2020;

- Woodbrook Campus Ltd., The Aske House, Dublin Road, Bray, Co Dublin (Site address also known as The Aske, Old Bray Road, Shankill, Co Dublin) (Planning Ref: D17A/0065)- Granted on December 2017;
- PEMCO Ltd, 8 & 9 Harbour Industrial Estate, Bray Harbour, Bray, Co. Wicklow (Planning Ref: 16367) – Granted May 2016; and,
- Silverbow Ltd. St. Anthony’s Dwyer Park and No. 22 Dwyer Park, Bray (ABP ref; 313442).

In addition, a number of local infrastructural works are scheduled for commencement during September on or adjacent to the site by others. These works are as described below:

- Irish Rail works – set down / compound area for Irish Rail which is undertaking upgrade works to the rail bridge over the underpass from the application site to Harbour Road. The temporary compound which is required for an approx. two week period from 23.09.22 required minor grading of the area and placement of a hardcore base to position a crane and materials on.
- Irish Water Works - these works are part of a wider Local Area Reinforcement Project by Irish Water and local diversion works. These works involve the laying of a new foul sewer and the diversion of an existing sewer in the existing road leading to the underpass (at the southern side of the site). Irish Water has advised that it intends to commence these works in mid – September and the works will last for approx. 6 weeks.

Three of these developments within vicinity of the proposed development are considered further: -

Aeval Ltd, SHD Planning, Townland of Cork Little, Woodbrook, Shankill, Co. Dublin (Planning Ref: ABP30584419 – Granted February 2020); Permission for a Strategic Housing Development consisting of a residential-led development comprising 685 no. residential units and 1 no. childcare facility in buildings ranging from 2 to 8-stores. This development is located ca. 750m north of the project. An Environmental Impact Assessment and Appropriate Assessment Screening Report were submitted as part of the planning application for this project which determined that significant environmental / ecological impacts are not anticipated.

Shankill Property Investments Ltd, Seapoint Road, Ravenswell, Bray, Co. Wicklow. Demolition of 4 light industrial/commercial buildings including their extensions, change of use from light industrial/commercial to residential use, and the construction of a total of 54 no. apartment units across 2 no. blocks. This development has been subject to the Appropriate Assessment process which concluded that the Seapoint development project will not have an adverse effect on the integrity of the Rockabill to Dalkey Island SAC or any other European site.

Silverbow Ltd. St. Anthony’s Dwyer Park and No. 22 Dwyer Park, Bray (ABP ref; 313442). – (Decision due 17/08/2022). Demolition of existing buildings, construction of 139 no. apartments, creche and associated site works. This development has been subject to the Appropriate Assessment process which concluded; *‘on the basis of the best scientific knowledge available, that the possibility of any significant effects on any European Sites, whether arising from the project itself or in combination with other plans and projects, can be excluded.’*

It is considered that the proposed development will not result in negative impacts on any of the features of interest for which the Rockabill to Dalkey Island SAC has been designated. In the absence of any significant impacts, it is not anticipated that other projects will act in-combination with the proposed development to give rise to cumulative effects on any European sites.

6.3. Mitigation Measures

Whilst the potential for the proposed project to affect the conservation objectives of Harbour porpoise via hydrological pathways is considered to be low, this section describes the mitigation measures required to ensure there will be no adverse effects on the integrity of the Rockabill to Dalkey Island SAC qualifying interest species; Harbour porpoise.

6.3.1. Construction phase

With regard to potential surface water quality impacts the following construction phase mitigation measures are prescribed: -

- The construction management of the Site will take account of the recommendations of the Construction Industry Research and Information Association (CIRIA) guidelines '*Control of Water Pollution from Construction Sites*' and '*Groundwater control - design and practice*' and CIRIA 2010 '*Environmental Good Practice on Site*' to minimise as far as possible the risk of pollution.
- Works will follow best practice guidance as outlined in Guidelines on the Protection of Fisheries during Construction Works in and Adjacent to Waters (IFI, 2016).
- The existing drainage network, specifically along the existing road, and as required elsewhere across the site, will be suitably protected (via. the use of physical barriers and / or the implementation a Site-specific water run-off management plan as required).
- A response procedure will be put in place to deal with any accidental pollution events. Any spillage of fuels, lubricants or hydraulic oils will be immediately contained and the contaminated soil removed from the proposed development and properly disposed of in accordance with all relevant waste management legislation: -
 - All Site vehicles used will be refuelled in bunded and adequately sealed and covered areas in the construction compound area;
 - All oil stored on Site for construction vehicles will be kept in a locked and bunded area;
 - Generators, pumps and similar plant will be placed on drip-trays to prevent contamination;
 - All Site vehicles used will be refuelled in bunded areas;
 - All temporary construction fuel tanks will also be located in a suitably bunded area and all tanks will be double skinned. Relevant Material Safety Data Sheets along with oil absorbent materials will be kept on Site in close proximity to any fuel storage tanks or bowsers during proposed Site development works; and,
 - All fuel / oil deliveries to on-Site oil storage tanks will be supervised, and records will be kept of delivery dates and volumes.
- In order to prevent any potential surface water impacts via release of cementitious materials the following measures will be implemented where poured concrete is being used on Site;
 - The production, transport and placement of all cementitious materials will be strictly planned and supervised. Site batching/production of concrete will not be carried out on Site and therefore these aspects will not pose a risk to the waterbodies present, namely the River Dargle or the Irish Sea;
 - Shutters will be designed to prevent failure. Grout loss will be prevented from shuttered pours by ensuring that all joints between panels achieve a close fit or that they are sealed;
 - Any spillages will be cleaned up and disposed of correctly;
 - Where concrete is to be placed by means of a skip, the opening gate of the delivery chute will be securely fastened to prevent accidental opening;
 - Where possible, concrete skips, pumps and machine buckets will be prevented from slewing over water when placing concrete;
 - Mixer washings and excess concrete will not be discharged directly into the drainage network, or any drainage ditches, surface water bodies or exposed groundwater; and,
 - Surplus concrete will be returned to batch plant after completion of a pour.

- Fuels, chemicals, oils or hazardous materials shall be stored in Site compound areas located outside of the lower lying southern portion of the Site. These Site compound areas are within the Site boundary and are not located adjacent to the River Dargle nor within 100m of the River Dargle.

6.3.2. Operational phase

With regard to potential surface water quality impacts the following operational phase mitigation measures are proposed;

- The surface water drainage is compliant with the requirements set out in the Greater Dublin Strategic Drainage Study (GSDSDS).
- Storm water drainage from the development will employ SuDS features and is proposed to outfall to the River Dargle via controlled flow through 2 no. underground attenuation / holding tanks (refer to Appendix C).
- A SuDS management train approach is proposed for the site with the principle of preventing runoff by reducing impermeable areas.
- SuDS proposed for the site include;
 - Extensive & Intensive Green Roofs.
 - permeable paving.
 - swales in park areas adjacent to roads,
 - filter drains to rear gardens.
 - modular underground attenuation.
 - flow control devices.
- SuDS elements have been designed in accordance with the CIRIA SuDS manual.
- SuDS measures will reduce the potential for contaminants, such as silts etc., to impact the River Dargle through the treatment process (swales / attenuation) employed prior to discharge.

The accompanying Stormwater Impact Assessment Report (Atkins document reference; 5214419DG0012) also details the project specific SuDS measures which will treat and reduce surface water run-off from the Site.

7. Conclusions

Given the full and proper implementation of the mitigation measures detailed in this NIS, the quality of the storm water / surface water / treated foul water from the proposed development, either during construction or operation, will not have a significant impact on water quality within the River Dargle or Irish Sea. As such there will be no significant effects on the Rockabill to Dalkey Island SAC, or any other European site, from either the construction or operation of the proposed development via hydrological pathways.

This NIS provides the competent authority with supporting information to undertake the Appropriate Assessment in relation to the proposed Coastal Quarter development project and its potential for direct, and indirect and in-combination effects on the Rockabill to Dalkey Island SAC.

The NIS has examined the potential impacts of the proposed project on the integrity of the SAC, alone and in combination with other plans and projects, considering the site's structure, function and conservation objectives. Where impacts potentially constituting adverse effects on the site were identified, mitigation measures have been prescribed to avoid or minimise those impacts such that they no longer constitute adverse effects on the integrity of the site.

Following a comprehensive evaluation of the potential direct, indirect and cumulative impacts on the qualifying interests of the SAC and the implementation of the proposed mitigation measures, it has been concluded by the authors of this report that there will be no residual impacts and the proposed project will not have an adverse effect on the integrity of the Rockabill to Dalkey Island SAC or any other European site.

8. References

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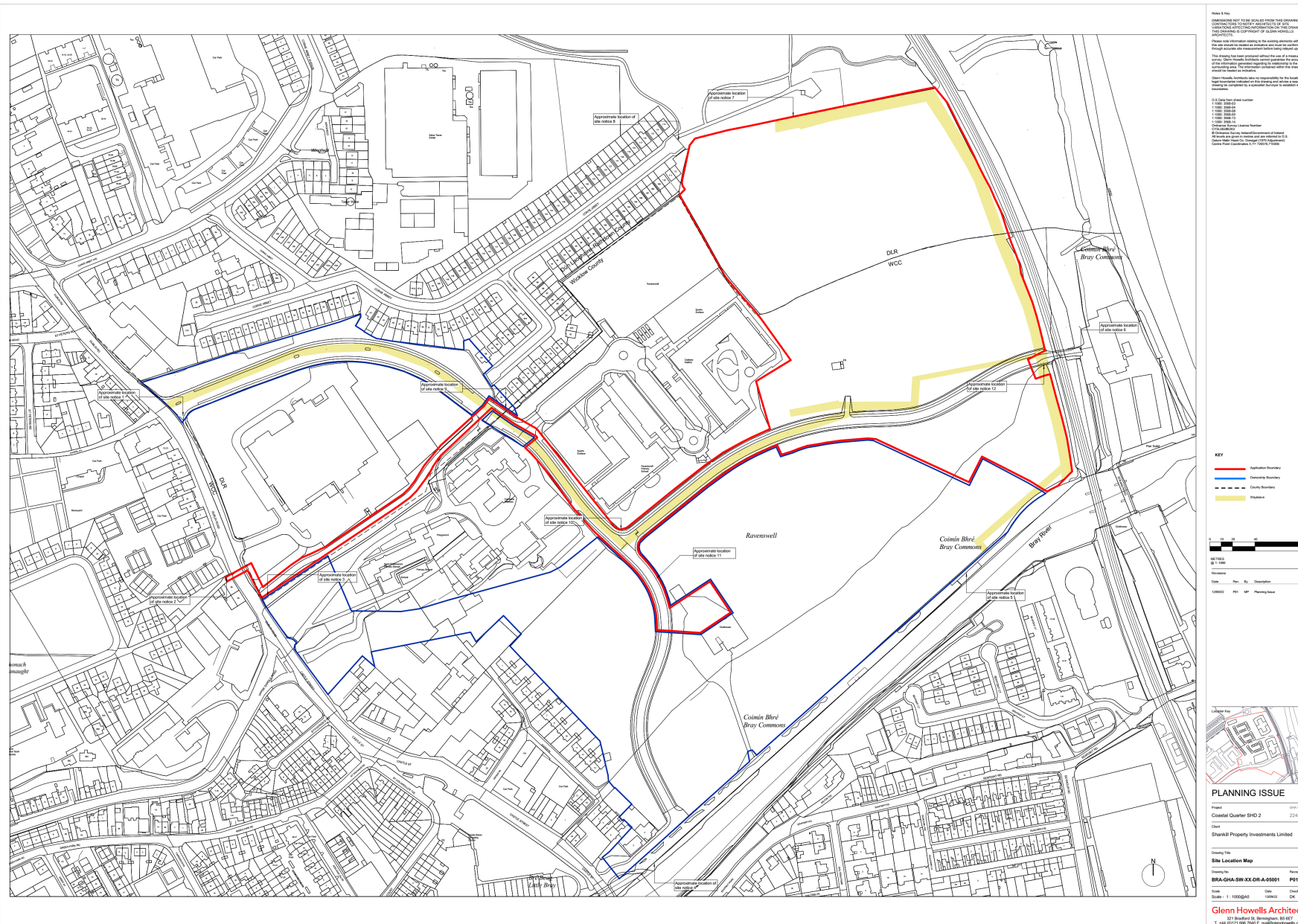
Appendices



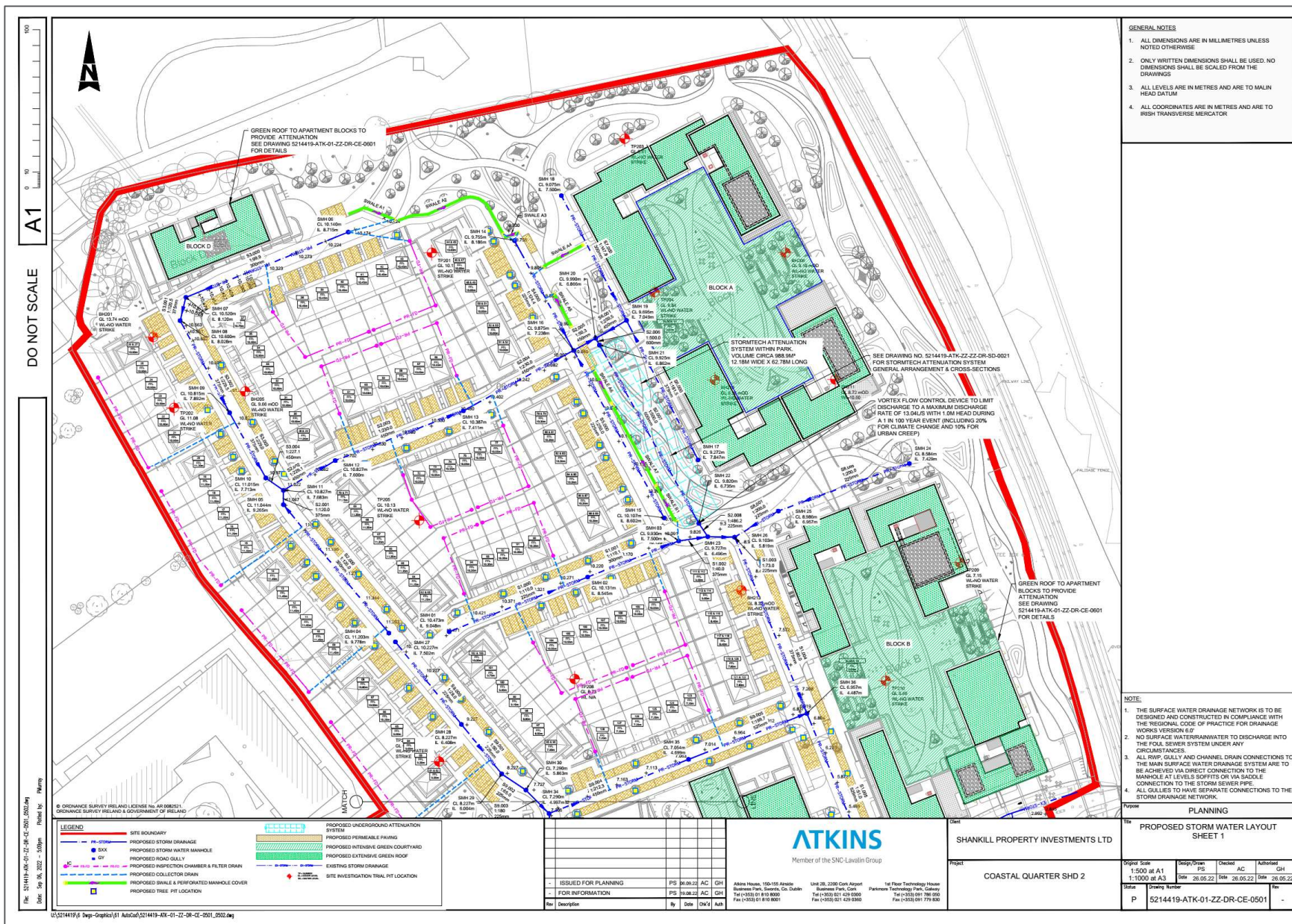
Appendix A. Housing Development Site Layout

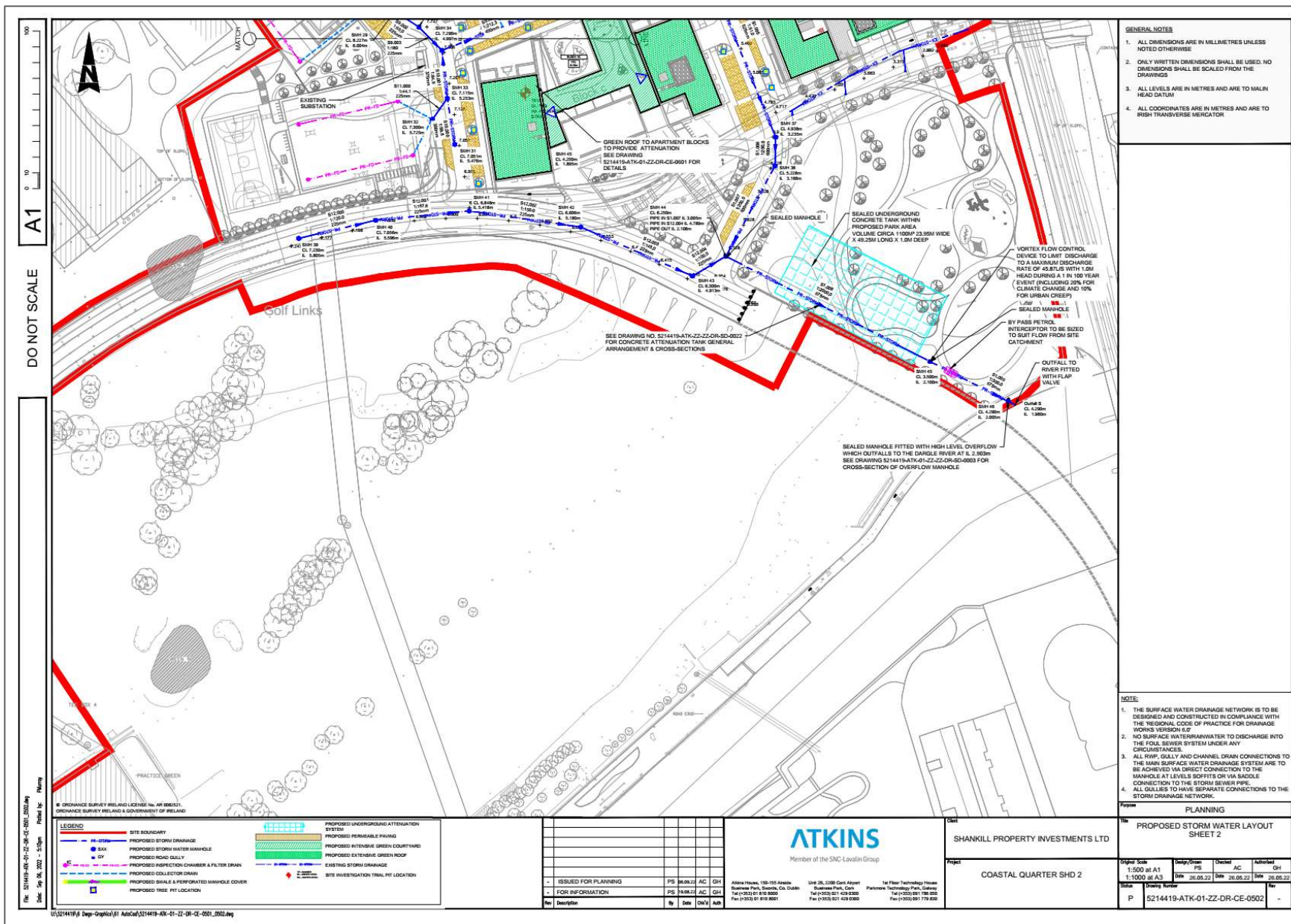


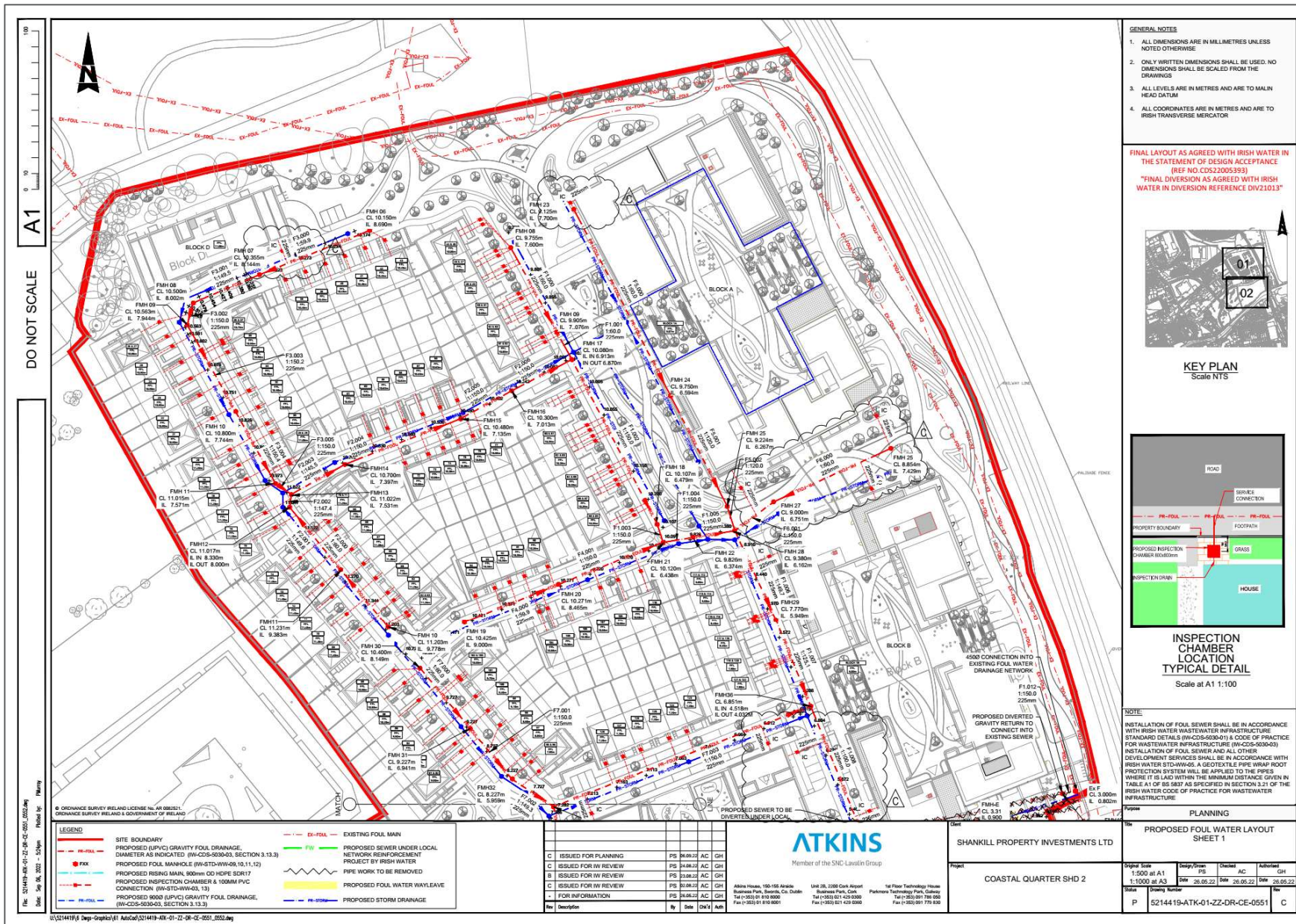
Appendix B. Location of Proposed Coastal Quarter SHD 2 & Harbour Point Masterplan lands



Appendix C. Proposed Coastal Quarter SHD 2 - Storm Water & Foul Water Drainage Design







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A1
DO NOT SCALE

File: S214419D-01-ZZ-DR-CE-0551_002.dwg
Date: Sep 06, 2022 15:56m
Project: Planning

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Legend	Description
[Red line]	SITE BOUNDARY
[Red dashed line]	PROPOSED (UPVC) GRAVITY FOUL DRAINAGE, DIAMETER AS INDICATED (W-CDS-5030-03, SECTION 3.13.3)
[Red dashed line]	PROPOSED FOUL MANHOLE (W-ST0-WW-09.10.11.12)
[Red dashed line]	PROPOSED RISING MAIN, 800mm CD HDPE SDR17
[Red dashed line]	PROPOSED INSPECTION CHAMBER & 100MM PVC CONNECTION (W-CDS-5030-03, SECTION 3.13.3)
[Red dashed line]	PROPOSED 800D (UPVC) GRAVITY FOUL DRAINAGE, (W-CDS-5030-03, SECTION 3.13.3)
[Green dashed line]	EXISTING FOUL MAIN
[Green dashed line]	PROPOSED SEWER UNDER LOCAL NETWORK REINFORCEMENT PROJECT BY IRISH WATER
[Green dashed line]	PIPE WORK TO BE REMOVED
[Green dashed line]	PROPOSED FOUL WATER WAYLEAVE
[Green dashed line]	PROPOSED STORM DRAINAGE

Rev	Description	By	Date	CHK'd	App'd
1	ISSUED FOR PLANNING	PS	06.09.22	AC	GH
2	ISSUED FOR IW REVIEW	PS	04.08.22	AC	GH
3	ISSUED FOR IW REVIEW	PS	01.08.22	AC	GH
4	FOR INFORMATION	PS	26.05.22	AC	GH



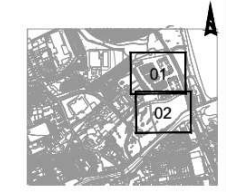
Atkins House, 160-162 Abbeville
Barnack Park, Cork
Tel: (+353) 01 410 8000
Fax: (+353) 01 410 8001

Unit 2B, 2000 Cork Airport
Barnack Park, Cork
Tel: (+353) 01 420 9300
Fax: (+353) 01 420 9300

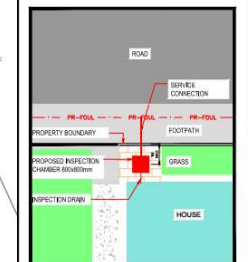
1st Floor Technology House
Parklands Technology Park, Dublin
Tel: (+353) 011 788 050
Fax: (+353) 011 779 830

- GENERAL NOTES**
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE
 2. ONLY WRITTEN DIMENSIONS SHALL BE USED. NO DIMENSIONS SHALL BE SCALED FROM THE DRAWINGS
 3. ALL LEVELS ARE IN METRES AND ARE TO MALIN HEAD DATUM
 4. ALL COORDINATES ARE IN METRES AND ARE TO IRISH TRANSVERSE MERCATOR

FINAL LAYOUT AS AGREED WITH IRISH WATER IN THE STATEMENT OF DESIGN ACCEPTANCE (REF NO. CDS22005393)
FINAL DIVERSION AS AGREED WITH IRISH WATER IN DIVERSION REFERENCE DIV21013



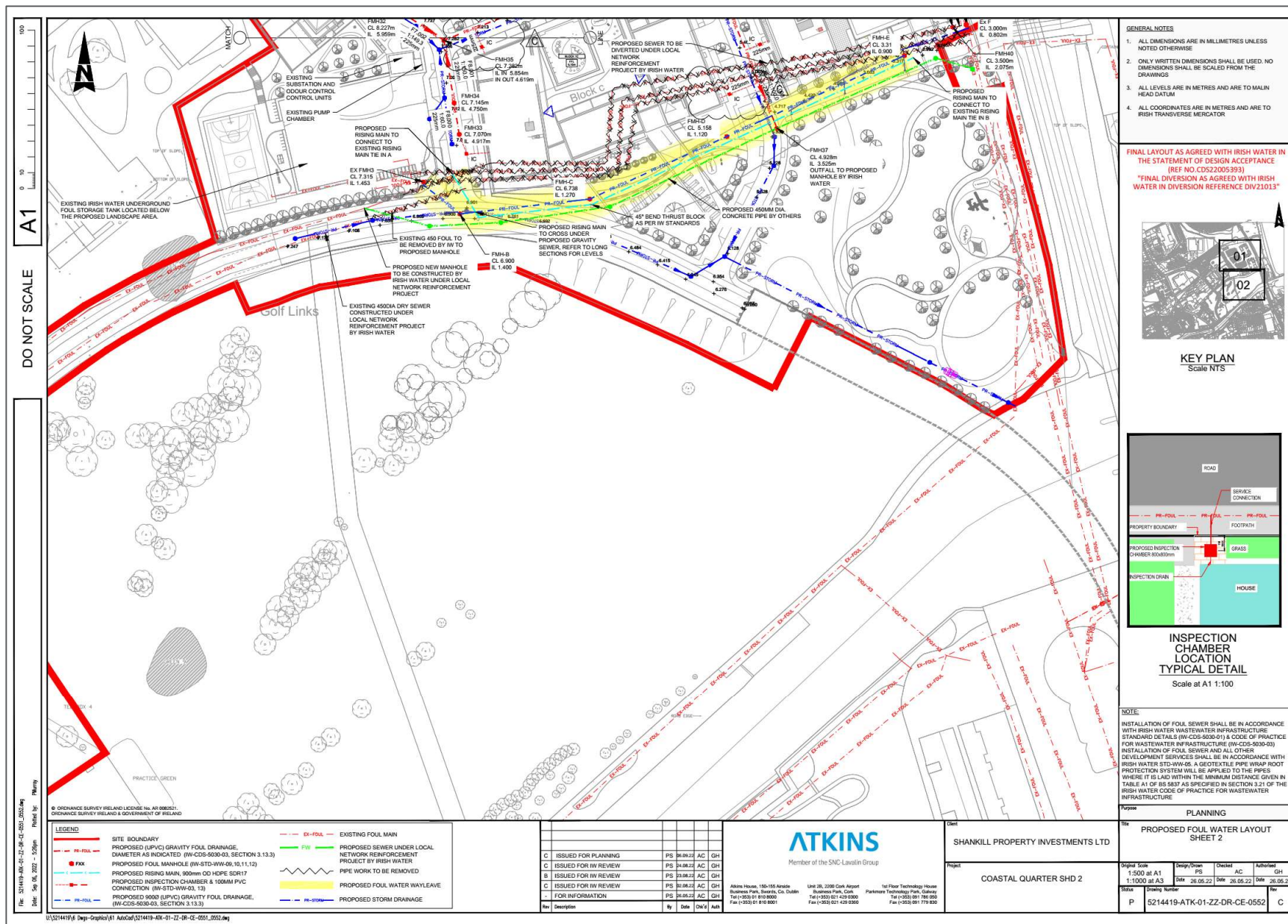
KEY PLAN
Scale NTS



INSPECTION CHAMBER LOCATION TYPICAL DETAIL
Scale at A1 1:100

NOTE:
INSTALLATION OF FOUL SEWER SHALL BE IN ACCORDANCE WITH IRISH WATER WASTEWATER INFRASTRUCTURE STANDARD DETAILS (W-CDS-5030-01) & CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE (W-CDS-5030-03).
INSTALLATION OF FOUL SEWER AND ALL OTHER DEVELOPMENT SERVICES SHALL BE IN ACCORDANCE WITH IRISH WATER STD-WW-05. A GEOTEXTILE PIPE WRAP ROOT PROTECTION SYSTEM WILL BE APPLIED TO THE PIPES WHERE IT IS Laid WITHIN THE MINIMUM DISTANCE GIVEN IN TABLE 1 OF BS 5887 AS SPECIFIED IN SECTION 3.2.1 OF THE IRISH WATER CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE.

Project	SHANKILL PROPERTY INVESTMENTS LTD			
Client	SHANKILL PROPERTY INVESTMENTS LTD			
Drawn	PS	06.09.22	Checked	AC
Authorised	GH	26.05.22	Drawn	GH
Scale	Original Scale	1:500 at A1	1:1000 at A3	
File No	S214419D-01-ZZ-DR-CE-0551			
Sheet No	02			



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