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Appropriate Assessment Screening Report

PRESENTED TO

Capami Ltd.

Proposed Large-scale Residential Development (Oldcourt LRD)

September 24

Environmental Consultancy Services

DOCUMENT CONTROL SHEET

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1 INTRODUCTION

1.1 Background

Enviroguide Consulting was commissioned by Capami Ltd. to prepare an Appropriate Assessment Screening Report for a Proposed Large-Scale Residential Development at Bohernabreena, Oldcourt, Ballycullen, Co. Dublin, hereafter referred to as 'Proposed Development' or 'Site', when referring to the application Site area. This report contains information to enable the Competent Authority to undertake Stage 1 Appropriate Assessment (AA) screening in respect of the Proposed Development.

1.2 Quality Assurance and Competence

Enviroguide Consulting is multi-disciplinary consultancy specialising in the areas of the Environment, Waste Management and Planning. All Enviroguide consultants carry scientific or engineering qualifications and have a wealth of experience working within the Environmental Consultancy sectors, having undergone extensive training and continued professional development.

Enviroguide Consulting as a company remains fully briefed in European and Irish environmental policy and legislation. Enviroguide staff members are highly qualified in their field. Professional memberships include the Chartered Institution of Wastes Management (CIWM), the Irish Environmental Law Association and Chartered Institute of Ecology and Environmental Management (CIEEM).

All surveying and reporting have been carried out by qualified and experienced ecologists and environmental consultants. The following ecologists from Enviroguide contributed to the preparation of this report via desk studies, field surveys and authorship:

- SH – Ecologist
- WMC – Ecologist
- BMC – Ecologist (Ornithologist)
- BT – Ecologist
- CBH – Ecologist
- WS – Intern Ecologist
- SA – Ecologist (no longer with Enviroguide)

SH has a B.Sc. (Hons) in Zoology and a Ph.D. in Marine Ecology from University College Dublin, and a wealth of experience in desktop research, bioinformatics analyses, literature review and reporting, as well as practical field and laboratory experience including habitat mapping, invasive species surveys, terrestrial fauna surveys (incl. mammal presence and bat activity surveys), freshwater and marine fish surveys and environmental DNA analysis. SH has prepared several Stage I and Stage II Appropriate Assessment Reports and Ecological Impact Assessments (EcIA). Additionally, SH has authored and supported the preparations of a number of Biodiversity Chapters for Environmental Impact Assessment Reports.

WMC has a B.Sc. in Applied Freshwater and Marine Biology from Galway-Mayo Institute of Technology. WMC has four years of experience in ecological surveying and in this time, he has covered a wide range of ecological topics including ornithological surveying, bat surveying, badger surveying/exclusions, otter surveying, macroinvertebrate surveying and habitat surveying among others. WMC has also completed the field and report work of numerous planning surveys including Preliminary Ecological Appraisals (PEA), Appropriate Assessment (AA), Natura Impact Statement (NIS) and Ecological Clerk of Works (ECoW) surveys.

BMcC is an Ecologist and experienced Ornithologist with 12 years of bird survey experience. BMcC is a longstanding and active member of Bird Watch Ireland and has provided Ornithology survey work for ecological consultancies, e.g., vantage points surveys of gulls, terns, raptors, waders, and wildfowl; hinterland surveys of the above as well as riverine species; and breeding waders and country birds. BMcC is highly experienced with all survey methodologies and with surveying all species groups of Irish birds and migrants.

BT has a B.Sc. in Environmental Biology (Hons) and a PhD in Marine Ecology from University College Dublin, and a wealth of experience in desktop research, literature scoping-review, and report writing, as well as practical field experience (Habitat mapping surveys, intertidal surveys, vantage point surveys, winter bird surveys, fresh water macro-invertebrate identification etc.). BT has experience in compiling Biodiversity Chapters of Environmental Impact Assessment Reports (EIARs), AA screening and NIS reports, and in the overall assessment of potential effects to ecological receptors from a range of developments.

CBH is an experienced Ecologist with Enviroguide and has a BSc. (Hons) in Wildlife Biology from Munster Technological University (formerly ITT). CBH has a wealth of experience in desktop research, literature review and reporting, as well as practical field and laboratory experience including experience in surveying habitats, plants, bats, birds, mammals, and invasive species. CBH has prepared several PEA, EcIA, and Stage I/Stage II AA Reports, as-well as ornithology reports for renewable energy projects (wind and solar technology). Additionally, CBH has completed, and supported the preparations of several Biodiversity Chapters for Environmental Impact Assessment Reports (EIAR). CBH is also a Qualifying member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

WS is a near-graduate UCD Environmental Science Masters student and is a postgraduate student intern at Enviroguide from June until September of this year. WS has training in ecological assessment, GIS, ecology, and environmental engineering. This training is coupled with experience working in the UCD Energy Institute and UCC Biological, Earth and Environmental Sciences school. WS excels in client interactions and hold a first-class honours undergraduate degree in Psychology from Trinity College Dublin, as well as undergraduate certificates in innovation and entrepreneurship. WS has excellent organisational, analytical and report writing skills, honed during his time working in academia, non-governmental organisations, and the private sector.

1.3 Description of Proposed Development

1.3.1 Site Location

Capami Ltd. intends to apply for planning permission for a Proposed LRD in the townlands of Bohernabreena, Oldcourt and Killininny, Dublin 24.

The Development Site is located to the east of Bohernabreena Road, north and east of Bohernabreena cemetery, south and south-east of St. Anne's GAA club, south and south-west of the Dodderbrook residential estate, west of the Ballycullen Gate residential development (currently under construction) and west of Oldcourt Road (the R113) (Figure 1).

The Site measures 19.8 hectares and is primarily under agricultural use (there is a small commercial development at the western boundary). The lands north and east of the Site are developed (primarily residential). The western boundary adjoins Bohernabreena Cemetery. The lands south of the Site are under agricultural use.

1.3.2 Proposed Development Description

The Proposed Development consists of 523 no. dwellings, comprised of (i) 319 no. two and three storey, detached, semi-detached, and terraced houses (i.e. 53 no. two-bed, 180 no. three-bed, 5 no. two / three bed, and 34 no. four-bed units), (ii) 142 no. two and three bed apartment and duplex units in 10 no. three storey duplex blocks, 62 no. one and three bed apartment and duplex units in 31 no. three storey "E" type houses, and (iii) 44 no. apartments (8 no. one bed, 19 no. two bed, and 17 no. three bed units) in 7 no. two / three storey apartment blocks, along with a childcare facility of approximately 320 sq.m located on the ground floor of proposed apartment block C.

Private amenity space for the residential units is provided in the form of rear gardens for houses and ground floor terraces / upper floor balconies for apartment and duplex units. The Proposed Development provides for c.5.68 hectares of public open space and c.3,425 sq.m of communal open space associated with proposed residential units.

Vehicular access to the development will be via 4 no. access points, as follows: (i) from the west of the site via 2 no. accesses located off Bohernabreena Road, (ii) from the north of the site via 1 no. access at Dodderbrook Place, and (iii) from Oldcourt Road (the R113) to the east, via adjoining residential development at Ballycullen Gate. The proposed development includes for pedestrian and cyclist connections and accesses throughout the proposed development and to adjoining lands to the north at Dodderbrook Avenue and to the north-west into St. Anne's GAA club.

The Proposed Development includes for a total of 783 no. surface car parking spaces, provided in the form of on-street and on-curtilage parking, and a total of 642 no. bicycle parking spaces, provided in designated bicycle storage areas and in the form of short-term visitor spaces.

The proposed development includes the demolition of all existing structures on site, including 2 no. single storey dwellings and outbuildings/sheds (total demolition area: c. 4,152.06m^2), hard and soft landscaping works, boundary treatments, SuDs features, drainage infrastructure, services infrastructure, bin stores, bicycle stores, car parking

(including EV parking facilities), public lighting etc. and all associated site development works.

The Proposed Development provides for (i) all associated site development works above and below ground, including surface water attenuation & an underground foul sewerage pumping station in the northern part of the site, (ii) public open spaces (c. 3Ha), (iii) communal open spaces (c. 6,392m²), (iv) hard and soft landscaping and boundary treatments, (v) surface car parking (783 no. car parking spaces, including EV parking), (vi) bicycle parking (642 no. bicycle parking spaces), (vii) bin & bicycle storage, (viii) public lighting, and (ix), plant (M&E), utility services & 5 no. ESB sub-stations, all on an overall application site area of 18.3ha.

1.3.3 Drainage and Water Supply

1.3.3.1 Surface Water

As per the Engineering Planning Report prepared by Pinnacle for the Proposed Development (Pinnacle, 2024), South Dublin County Council (SDCC) record drawings and topographical survey information have identified a Ø450mm surface water sewer on the west of the Site. The existing Ø450mm sewer conveys surface water from the Bohernabreena cemetery northwards through the Proposed Development. There are several existing agricultural ditches across the Site, conveying surface water runoff from the south northwards across the subject Site.

It is proposed that the existing Ø450mm surface water sewer shall be diverted to connect to a new proposed surface water pipeline following the Proposed Development road networks. The final detailed design of the diversion within the Proposed Development road network shall be agreed upon with the SDCC drainage department. It should be noted that the proposed surface water measures are aimed at improving the general surface water management of the site, by introducing interceptors, Sustainable Drainage Solutions (SuDS) measures and by restricting the ultimate discharge.

By way of complying with sustainability elements i.e. SuDS, the surface water run-off from the entire development, has been attenuated within the methods as described above, catering for a 1:100yr storm event + 20% climate change. These systems cater for all the main roads drainage.

The discharge of stormwater from the developed site shall be limited by way of a flow control device to the equivalent greenfield runoff rate for each return period. The attenuation systems, permeable paving, swales, and restricted outflow proposed are all in keeping with best practice.

Permeable paving will be utilised for the surface-level carparking area to provide treatment and storage to rainwater falling on these areas. Swales will be used for access road surface water treatment, where possible, to treat water at the source before conveying it to the downstream attenuation facilities. The following SuDS measures have been incorporated into the development:

- Blue/Green roofs (on roof attenuation)
- Permeable paving
- Swales

- Bio-retention Tree pits
- Bio-retention Rain gardens
- Detention basins
- Petrol/Hydrocarbon separators
- Flow control device

For a detailed explanation of all SuDS measures, refer to the engineering report (Pinnacle, 2024) prepared for the Site.

1.3.3.2 Foul Drainage

As per the Engineering Planning Report prepared by Pinnacle for the Proposed Development (Pinnacle, 2024), according to Uisce Éireann (Irish Water) GIS records and the site-specific topographical survey, there is an existing Ø225mm foul sewer on the west of the Site, draining northwards, providing service to the existing private dwellings. A portion of this existing foul sewer shall remain outside of the site boundary and tie into the new proposed foul sewer network. Where the existing line crosses the subject site, it shall be integrated into the proposed foul network prior to being discharged into the existing foul sewer to the northeast. The discharge shall ultimately outfall at the same location in Allenton Drive. Additionally, there are foul sewer connections located within both northeastern Dodderbrook developments, although the westernmost of the two developments is not yet available on Uisce Éireann (Irish Water) GIS.

The foul drainage from this Proposed Development will be discharged to four outfall connections via four Ø225mm diameter pipes into existing sewers to the north, north, north-east & north-west of the development.

The foul water from the subject Site shall ultimately connect to the existing surrounding public foul water sewer network from where it shall discharge to the Ringsend Wastewater Treatment Plant (WWTP).

It should be further noted that a pre-connection enquiry has been submitted to Uisce Éireann, for both water & wastewater, in respect of this Proposed Development on December 8, 2023. The foul water design shall be compliant with any requirements from Uisce Éireann as part of the PCE process.

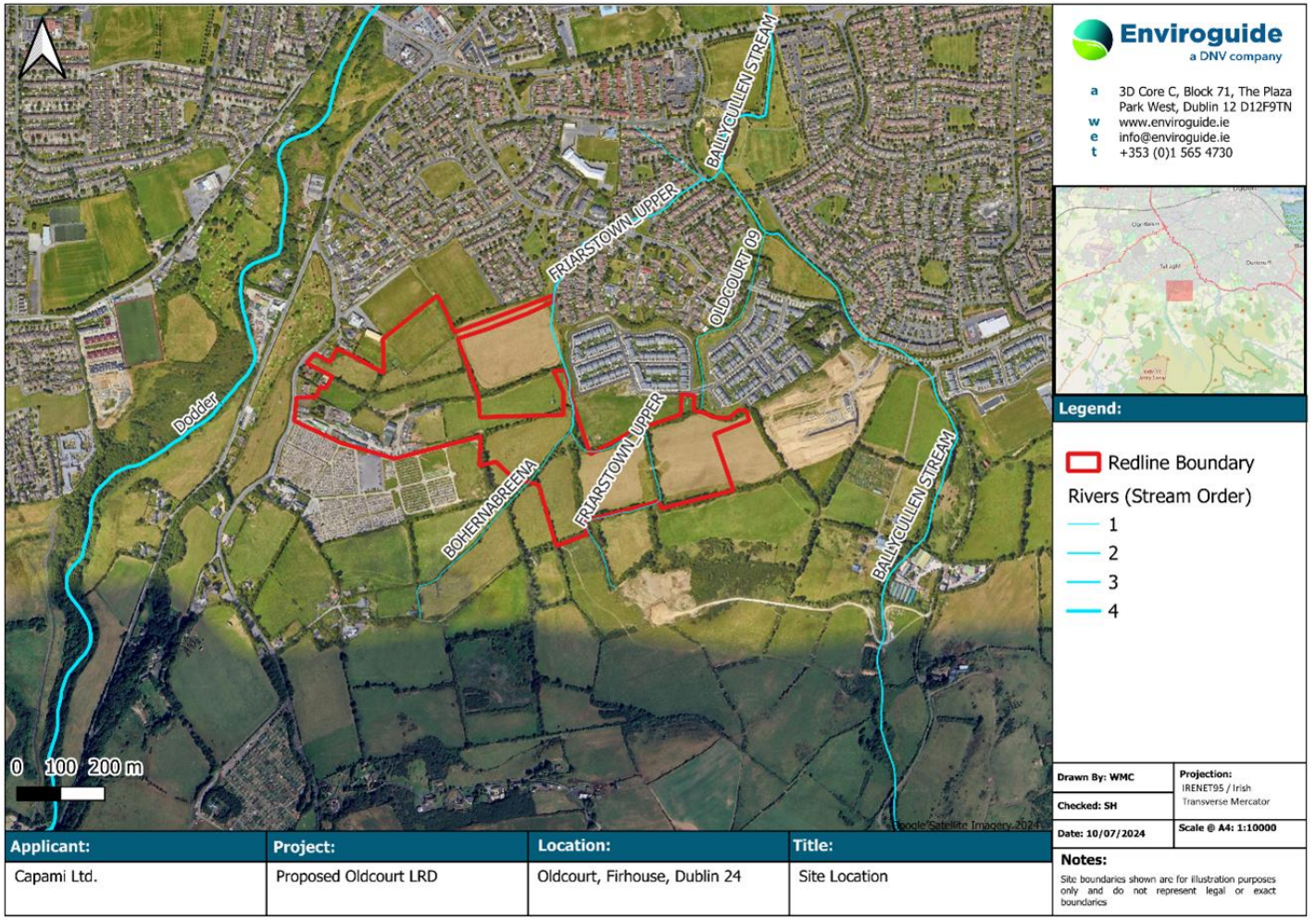

FIGURE 1. SITE LOCATION.

FIGURE 2. PROPOSED SITE LAYOUT (PINNACLE, 2024).

2 LEGISLATIVE AND POLICY CONTEXT

2.1 Legislative Background

The Habitats Directive (92/43/EEC) seeks to conserve natural habitats and wild fauna and flora by the designation of Special Areas of Conservation (SACs) and the Birds Directive (2009/147/EC) seeks to protect birds of special importance by the designation of Special Protection Areas (SPAs). The Habitats Directive has been transposed into Irish law through the EC (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011).

It is the responsibility of each Member State to designate SPAs and SACs, both of which will form part of the Natura 2000 Network, a network of protected sites throughout the European Community. These designated sites are referred to as "Natura 2000 sites" or "European sites". SACs are selected for the conservation of Annex I habitats (including priority types which are in danger of disappearance) and Annex II species (other than birds). SPAs are selected for the conservation of Annex I birds and other regularly occurring migratory birds and their habitats. The annexed habitats and species for which each site is selected correspond to the Qualifying Interests (QIs) and Special Conservation Interests (SCIs) of the sites; from these the conservation objectives of the site are derived.

An AA is a required assessment to determine the likelihood of significant effects, based on best scientific knowledge, of any plans or projects on European sites. A screening for AA determines whether a plan or project, either 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.

This AA Screening has been undertaken to determine the potential for significant effects on relevant European sites. The purpose of this assessment is to determine, the appropriateness, or otherwise, of the Proposed Development in the context of the conservation objectives of such sites.

2.1.1 Legislative Context

The obligations in relation to Appropriate Assessment have been implemented in Ireland under Part XAB of the Planning and Development Act 2000, as amended ("the 2000 Act"), and in particular Section 177U and Section 177V thereof. The relevant provisions of Section 177U in relation to AA screening have been set out below:

"***177U.—*** *(1) A screening for appropriate assessment of a draft Land use plan or application for consent for Proposed Development shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that Land use plan or Proposed Development, individually or in combination with another plan or project is likely to have a significant effect on the European site.*

(2)…

(3)…

(4) The competent authority shall determine that an appropriate assessment of a draft Land use plan or a Proposed Development, as the case may be, is required if it cannot be excluded, on the basis of objective information, that the draft Land use plan or Proposed Development,

individually or in combination with other plans or projects, will have a significant effect on a European site.

(5) The competent authority shall determine that an appropriate assessment of a draft Land use plan or a Proposed Development, as the case may be, is not required if it can be excluded, on the basis of objective information, that the draft Land use plan or Proposed Development, individually or in combination with other plans or projects, will have a significant effect on a European site."

An Appropriate Assessment is required under Article 6 of the Habitats Directive where a project or plan may give rise to significant effects upon a European site. Paragraph 3 states that:

"*6(3) 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."*

According to the ruling delivered in open court in Luxembourg on 15th June 2023 regarding the interpretation of Article 6(3) of Directive 92/43, the Article must be interpreted as meaning that:

"In order to determine whether it is necessary to carry out an appropriate assessment of the implications of a plan or project for a site, account may be taken of the features of that plan or project which involve the removal of contaminants and which therefore may have the effect of reducing the harmful effects of the plan or project on that site, where those features have been incorporated into that plan or project as standard features, inherent in such a plan or project, irrespective of any effect on the site".

As such, standardised embedded mitigation (such as the use of Sustainable Drainage Systems (SuDS) in large-scale residential developments), that are incorporated into the design of a proposal or project and which may result in a reduction of effects impacting European sites, but where the primary reason of the embedded mitigation is not to protect a European site, are permitted for consideration during the undertaking of AA.

2.2 Policy Context

2.2.1 South Dublin County Development Plan 2022-2028

While the County Development Plan in its entirety is relevant to this Development and can be referred to separately. Policies, principles and objectives of the South Dublin County Development Plan (SDCDP) 2022 – 2028 that are of particular relevance to this Report are outlined below:

- **Policy NCBH3:** Conserve and protect Natura 2000 Sites and achieve and maintain favourable conservation status for habitats and species that are considered to be at

risk through the protection of the Natura 2000 network from any plans or projects that are likely to have a significant effect on their coherence or integrity.

- **NCBH3 Objective 1:** To prevent development and activities that would adversely affect the integrity of any Natura 2000 site located within or adjacent to the County and promote the favourable conservation status of the habitats and species integral to these sites.
- **NCBH3 Objective 2:** To ensure that plans, including land use plans, will only be adopted, if they either individually or in combination with existing and/or proposed plans or projects, will not have a significant adverse effect on a European Site, or where such a plan is likely or might have such a significant effect (either alone or in combination), South Dublin County Council will, as required by law, carry out an appropriate assessment as per requirements of Article 6(3) of the Habitats Directive 92/43/EEC of the 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, as transposed into Irish legislation. Only after having ascertained that the plan will not adversely affect the integrity of any European site, will South Dublin County Council adopt the plan, incorporating any necessary mitigation measures. A plan which could adversely affect the integrity of a European site may only be adopted in exceptional circumstances, as provided for in Article 6(4) of the Habitats Directive as transposed into Irish legislation.
- **NCBH3 Objective 3:** To ensure that planning permission will only be granted for a development proposal that, either individually or in combination with existing and/or proposed plans or projects, will not have a significant adverse effect on a European Site, or where such a development proposal is likely or might have such a significant adverse effect (either alone or in combination), the planning authority will, as required by law, carry out an appropriate assessment as per requirements of Article 6(3) of the Habitats Directive 92/43/EEC of the 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, as transposed into Irish legislation. Only after having ascertained that the development proposal will not adversely affect the integrity of any European site, will the planning authority agree to the development and impose appropriate mitigation measures in the form of planning conditions. A development proposal which could adversely affect the integrity of a European site may only be permitted in exceptional circumstances, as provided for in Article 6(4) of the Habitats Directive as transposed into Irish legislation.

2.2.2 South Dublin County Biodiversity Action Plan 2020 – 2026

South Dublin County Biodiversity Action Plan 2020 – 2026 is set out to protect and improve biodiversity through specific actions:

- Collate ecological data and survey and map the County, to provide an evidence base for informed biodiversity decision-making and to form the basis for a Green Infrastructure network, key projects to include:
    i. Map the distribution of the habitats and species in the County.
    ii. Map and manage the spread of non-native invasive species.
    iii. Survey and monitor biodiversity at identified pollinator sites.
    iv. Survey and map wetlands in the County.
    v. Map the tree canopy cover in the County and quantify its carbon capture.
    vi. Map the County's hedgerow network and identify key Green Infrastructure links.

- Develop a Biodiversity Communications Strategy, to celebrate and promote the enjoyment and protection of nature in South Dublin County, promoting engagement with national initiatives and events such as Biodiversity Week, Tree Week, Heritage Week, Pure Mile etc.
- Support rural and urban communities to undertake local biodiversity projects, training, and citizen science, encouraging appropriate initiatives that protect biodiversity while benefiting local economies.
- Quantify and promote the economic benefits (the natural capital) provided by the County's ecological landscapes (ecosystem services).
- Devise and implement good governance strategies to ensure the smooth integration of national and EU biodiversity legislation and policy requirements into all Council plans, projects, and services.
- Develop and implement best practice biodiversity protection guidelines and maintenance plans for the County's habitats and species, for use on Council lands and as guidance to assist local communities, developers, businesses, farming community, schools, etc.
- In the preparation process for the SDCC Development Plan, innovative approaches to promote strategic biodiversity policies and objectives will be developed.
- Coordinate with the Council's Climate Change Action Plan 2019-2024 to identify impacts on biodiversity arising from climate change, targeting and implementing necessary measures to assist biodiversity adapt to changing conditions.

2.2.3 Ballycullen – Oldcourt Local Area Plan (LAP) 2014

The overall objective of the LAP is to provide a development framework with residential densities appropriate to the unique location of the lands on the suburban edge of the Dublin Mountain foothills (Figure 3). The Plan provides for the construction of approximately 1,600 additional dwellings (about 4,600 persons) at a range of densities appropriate to the area.

The strategy complies with the requirements of the Core Strategy of the County Development Plan 2010 – 2016 and that of the Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (2009).

The LAP lands include areas that are potentially sensitive in terms of biodiversity and conservation. The Planning Authority is of the opinion that this LAP would be likely to have significant effects on the environment. An Environmental Report and AA Screening have therefore been undertaken as part of the production of the LAP and the assessment and mitigation measures have been assimilated.

The LAP was subject to a Strategic Environmental Assessment (SEA) and an AA and includes lands on which the current Proposed Development is located.

FIGURE 3. EXTENT OF LAP LANDS (SOURCE BALLYCULLEN-OLDCOURT LAP 2009).

The LAP identifies a number of objective themes for the protection of biodiversity under the Green Infrastructure Strategy, including:

- SuDS measures and efficient use of surface water (e.g., collection and reuse of grey water)
- Flood Risk Management
- Groundwater Vulnerability and Protection
- Protection and Incorporation of Natural Heritage
- Biodiversity Networks – Hedgerows and Streams
- Topography and Contours
- Protected Species
- Tracks and Trails

The above themes provide for a comprehensive approach to the protection and enhancement of local biodiversity and sensitive ecological features via the implementation of the LAP.

2.3 Stages of Appropriate Assessment

This AA Screening Report (the 'Screening Report') has been prepared by Enviroguide Consulting. It considers whether the Proposed Development is likely to have a significant effect on a European site and whether a Stage 2 AA is required.

The AA process is a four-stage process. Each stage requires different considerations, assessments and tests to ultimately arrive at the relevant conclusion for each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

The four stages of an AA, can be summarised as follows:

- **Stage 1: *Screening*.** The Screening for AA considers whether a plan or project is directly connected to or necessary for the management of a European site, or 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.
- **Stage 2: *Natura Impact Statement (NIS).*** Where Stage 1 determines that significant effects are likely, uncertain or unknown, the preparation of a NIS is required. The NIS must include a scientific examination of evidence and data to classify potential impacts on any European site(s) in view of their conservation objectives in the absence of mitigation. The NIS will identify appropriate mitigation to remove the potential for likely significant adverse effects on any European site(s). If the competent authority determines that the plan or project would have an adverse effect on the integrity of any European site(s) despite mitigation, it can only grant consent after proceeding through stages 3 and 4.
- **Stage 3: *Assessment of alternative solutions***. If the outcome of Stage 2 is negative i.e., adverse impacts to the sites cannot be scientifically ruled out, despite mitigation, the plan or project should proceed to Stage 3 or be abandoned. This stage examines alternative solutions to the proposal.
- **Stage 4: *Assessment where no alternative solutions exist and where adverse impacts remain***. The final stage is the main derogation process examining whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project to adversely affect a European site, where no less damaging solution exists.

The Habitats Directive promotes a hierarchy of avoidance, mitigation, and compensatory measures. First the project should aim to avoid any negative effects on European sites by identifying possible effects early in the planning stage and designing the project to avoid such effects. Second, mitigation measures should be applied, if necessary, during the AA process to the point where no adverse impacts on the site(s) remain. If the project is still likely to result in adverse effects, and no further practicable mitigation is possible, a refusal for planning permission may be recommended. In this case, the project will generally only be considered where no alternative solutions are identified and the project is required for IROPI, or, in the case of priority habitats, considerations of health or safety, or beneficial consequences of primary importance for the environment or to other IROPI. Then compensation measures are required for any remaining adverse effects.

3 AA SCREENING METHODOLOGY

3.1 Guidance

This Screening Report has been undertaken in accordance with the following guidance:

- *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities.* (Department of Environment, Heritage and Local Government, 2010 revision);
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities.* Circular NPW 1/10 & PSSP 2/10;
- *Communication from the Commission on the precautionary principle* (European Commission, 2000);
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* (European Commission, 2019);
- *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* Brussels, 28.9.2021 C (European Commission, 2021); and
- *Appropriate Assessment Screening for Development Management, OPR Practice Note PN01, Office of the Planning Regulator March 2021.*

3.2 Screening Steps

Screening for AA involves the following steps:

- Establish whether the plan or project is directly connected with or necessary for the management of a European site;
- Description of the baseline existing environment at the Site of the Proposed Development;
- Identification of relevant European site(s) potentially affected;
- Identification and description of potential effects on the relevant European site(s);
- Assessment of the likely significance of the effects identified on the relevant European site(s);
- Description and characterisation of other projects or plans that in combination with the Proposed Development have the potential for having significant effects on the European site; and
- Exclusion of sites where it can be objectively concluded that there will be no significant effects.

It should be noted that any targeted ecological mitigation measures and/or measures intended or included for the purposes of avoiding adverse effects arising as a result of the Proposed Development on any European site **have not been considered** as part of this Screening Report.

3.3 Desk Study

A desktop study was carried out in August 2024 to collate and review available information, datasets and documentation sources relevant for the completion of this Screening Report. The desktop study relied on the following sources:

- Information on the network of European Sites, boundaries, QIs and conservation objectives, obtained from the National Parks and Wildlife Service (NPWS) at *www.npws.ie*;
- Text summaries of the relevant European sites taken from the respective Standard Data Forms (available at *https://natura2000.eea.europa.eu/*) and Site Synopses (available at *www.npws.ie*);
- Information on waterbodies, catchment areas and hydrological connections obtained from the Environmental Protection Agency (EPA) at *www.gis.epa.ie*;
- Information on bedrock, groundwater, aquifers and their statuses, obtained from Geological Survey Ireland (GSI) at *www.gsi.ie*;
- Satellite imagery and mapping obtained from various sources and dates including Google, Digital Globe, Bing and Ordnance Survey Ireland; and
- Information on the existence of permitted developments, or developments awaiting decision, in the vicinity of the Proposed Development from the South Dublin County Council online planning database (SDCC, 2024) and the National Planning Database (DHLGH, 2024).

For a complete list of the documents consulted as part of this assessment, see *Section 6 References*.

3.4 Field surveys

A range of field surveys have been carried out at the Site to date. These are summarised in Table 1. For full details on the methods and results of the fields surveys listed, please refer to the Biodiversity Chapter of the EIAR accompanying this application under separate cover. All surveys were carried out at the appropriate time of year by suitably qualified ecologists. No limitations to field surveys were encountered which would prevent robust conclusions being drawn as to the potential impacts of the Proposed Development. Surveys and results relevant to this Screening Report have been highlighted in green in the below and summarised in section 4.1.2, however all surveys and dates are shown in the table for completeness.

TABLE 1. FIELD SURVEYS UNDERTAKEN AT THE PROPOSED DEVELOPMENT SITE.

Survey	Surveyor	Dates
Multidisciplinary walkover surveys (incl. habitat mapping, flora and fauna)	Enviroguide Consulting (SH, SA, WMC)	20.09.2022 07.10.2022 04.06.2024
Breeding Bird Surveys	Enviroguide Consulting (BMcC)	10.05.2023 19.06.2023 05.07.2023
PBRA	Enviroguide consulting (CBH, WMC)	04.07.2023 13.07.2023

Survey	Surveyor	Dates
		04.06.2024
Bat Dusk Transect Surveys	Enviroguide Consulting (various)	01.09.2022 (Eastern half) 08.09.2022 (Western half) 16.05.2023 (full site) 21.06.2023 (full site) 09.08.2023 (full site)

3.5 Identification of Relevant European sites

The Zone of Influence (ZOI) for a project is the area over which ecological features may be affected by changes as a result of a development and associated activities. This is likely to extend beyond the development site, for example where there are ecological or hydrological links beyond the Site boundaries (CIEEM, 2018). Furthermore, ZOI in relation to European sites is described as follows in the 'OPR Practice Note PN01 - Appropriate Assessment Screening for Development Management' (OPR, 2021):

> "*The zone of influence of a Proposed Development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. This should be established on a case-by-case basis using the Source-Pathway-Receptor framework and not by arbitrary distances (such as 15 km).*"

Thus, to identify the European sites that potentially lie within the ZOI of the Proposed Development, a Source-Path-Receptor (S-P-R) method was adopted, as described in OPR PN01 (OPR 2021). This note was published to provide guidance on screening for AA during the planning process, and although it focuses on the approach a planning authority should take in screening for AA, the methodology is also readily applied in the preparation of Screening Reports such as this.

The relevant European sites were identified based on the following:

- Identification of potential sources of effects based on the Proposed Development description and details, including changes to potentially suitable ex-situ habitats at the Site (i.e., habitats utilised by SCI bird species outside of their designated SPAs);
- Use of up-to-date GIS spatial datasets for European designated sites and water catchments – downloaded from the NPWS website (*www.npws.ie*) and the EPA website (*www.epa.ie*) to identify European sites which could potentially be affected by the Proposed Development; and
- Identification of potential pathways between the Site of the Proposed Development and any European sites within the ZOI of any of the identified sources of impacts.
    - The catchment data were used to establish or discount potential hydrological connectivity between the Proposed Development and any European sites.
    - Groundwater, soils, and bedrock information used to establish or discount potential hydrogeological connectivity between the Proposed Development and any European sites.

  - Air and land connectivity assessed based on Proposed Development details and proximity to European sites.
  - Consideration of potential indirect pathways, e.g., impacts to flight paths, *ex-situ* habitats, etc.

- Defining the likely ZOI based on the identified sources of effects and potential pathways between the Proposed Development and any European sites.

3.6 Assessment of Significant Effects

The conservation objectives of the European sites identified to lie within the ZOI were reviewed and assessed in order to establish whether the construction and operation of the Proposed Development has the potential to have a negative impact on any of the QIs and/or conservation objectives listed for the site.

The assessment framework is taken from the best practice guidelines issued by the European Commission, i.e., "*Assessment of plans and projects significantly affecting Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*".

The potential for significant effects that may arise from the Proposed Development was considered through the use of key indicators:

- Habitat loss or alteration.
- Habitat/species fragmentation.
- Disturbance and/or displacement of species.
- Changes in population density.
- Changes in water quality and resource.

In addition, information pertaining to the conservation objectives of the European sites, the ecology of the designated habitats and species and known or perceived sensitivities of the habitats and species were considered.

3.7 Limitations

No limitations were encountered which would prevent robust conclusions from being drawn as to the potential impacts of the Proposed Development and therefore the likely significant effects on the European Site, in view of the Site's conservation objectives.

4 STAGE 1 SCREENING ASSESSMENT

4.1 Existing Environment

4.1.1 Desk Study Results

4.1.1.1 Hydrology, Geology and Hydrogeology

The Site is located in the Liffey and Dublin Bay (Catchment I.D 09) and in the Dodder_SC_010-Sub-catchment (Sub-catchment I.D.10_5) (EPA, 2024).

Two small streams cross the Site approximately in the middle in a south to north direction. The Bohernabreena flows through the Site following parts of the hedgerow boundaries of the fields in a southwest to northeast direction. A second stream, Friarstown Upper, flows in a general south to north direction through the Site, also following the field boundaries, before converging with the Bohernabreena stream. The converged stream, Friarstown Upper, then continues in a northerly direction until it meets the Ballycullen Stream, which ultimately flows into the River Dodder main channel.

Bohernabreena, Friarstown Upper, and Ballycullen Stream, as well as the Dodder from where they converge until Rathfarnham (approx. 5km downstream), are all assessed as one river waterbody under the WFD, the DODDER_040. The DODDER_040 waterbody has been assigned *Moderate* water quality status (WFD 2016-2021) and is classified as *At Risk* of failing to achieve their Water Framework Directive status objectives by 2027 (EPA, 2024).

The EPA water quality monitoring data for the stations on the Ballycullen Stream and the Dodder River within 5km (hydrological) of the Site are summarised in Table 2. It should be noted that the reported Q-values downstream of the Site are all over 20 years old.

TABLE 2. EPA MONITORING STATIONS AND ASSIGNED Q VALUES.

EPA Monitoring Station name	Station Code	Location from Site	Distance from Site (hydrological)	Assigned Q value (Year of record)
DODDER - Footbridge Firhouse (Balroth Weir)	RS09D010400	North, downstream	Approx. 3.1km	3-4, Moderate (1984)
New Br, Firhouse	RS09D010420	North, downstream	Approx 3.1km	4, Good (1998)
DODDER - New Br u/s Templeogue Br	RS09D010430	North, downstream	Approx. 4.1km	3, Poor (2002)
Old Bawn Br	RS09D010300	North, upstream	Approx. 2.7km	4, Good (2022)

The Site of the Proposed Development is situated on the Kilcullen groundwater body IE_EA_G_003, which is classified as having "*Good*" status (WFD Status 2013-2018). The aquifer type in the area is a "*Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones".* The bedrock units underlying the Site are classified as "*Aghfarrell Formation"* (GSI, 2024a) while the quaternary sediments classified as "*Till derived from limestones"* (GSI, 2024a).

The level of vulnerability to groundwater contamination from human activities at the Site varies, with a small area at the northwest of the Site classed as *Low*, *Moderate* and *High* vulnerability

dominating the majority of the Site, and a narrow section of *Extreme* vulnerability at the southern boundary of the Site (GSI, 2024a) (Figure 4). The subsoil beneath the Site is *Limestone till (Carboniferous)* (EPA, 2024a). The SIS National Soils database classified the soil beneath the Site as "*Urban"* (GSI, 2024a).

The Waterbody Status for water bodies relevant to the Site as recorded by the EPA (2024) in accordance with European Communities (Water Policy) Regulations 2003 (SI no. 722/2003), Part IV of the European Communities Environmental Objectives (Surface Waters) Regulations 2009 and Part IV of the European Communities Environmental Objectives (Groundwater) Regulations 2010, are provided in Table 3.

TABLE 3. WFD RISK AND WATER BODY STATUS

Waterbody Name	Water body; EU code	Location from Site	Distance from Site (km)	WFD water body status (2016-2021)	WFD 3rd cycle Risk Status	Hydraulic Connection to the Site
Surface Water Bodies						
DODDER_040	IE_EA_09D010620	Within the Site	Within the Site	Moderate	At risk	Within the Site
Groundwater Bodies						
Kilcullen Groundwater Body	IE_EA_G_003	N/A	N/A	Good	At risk	Underlying groundwater-body

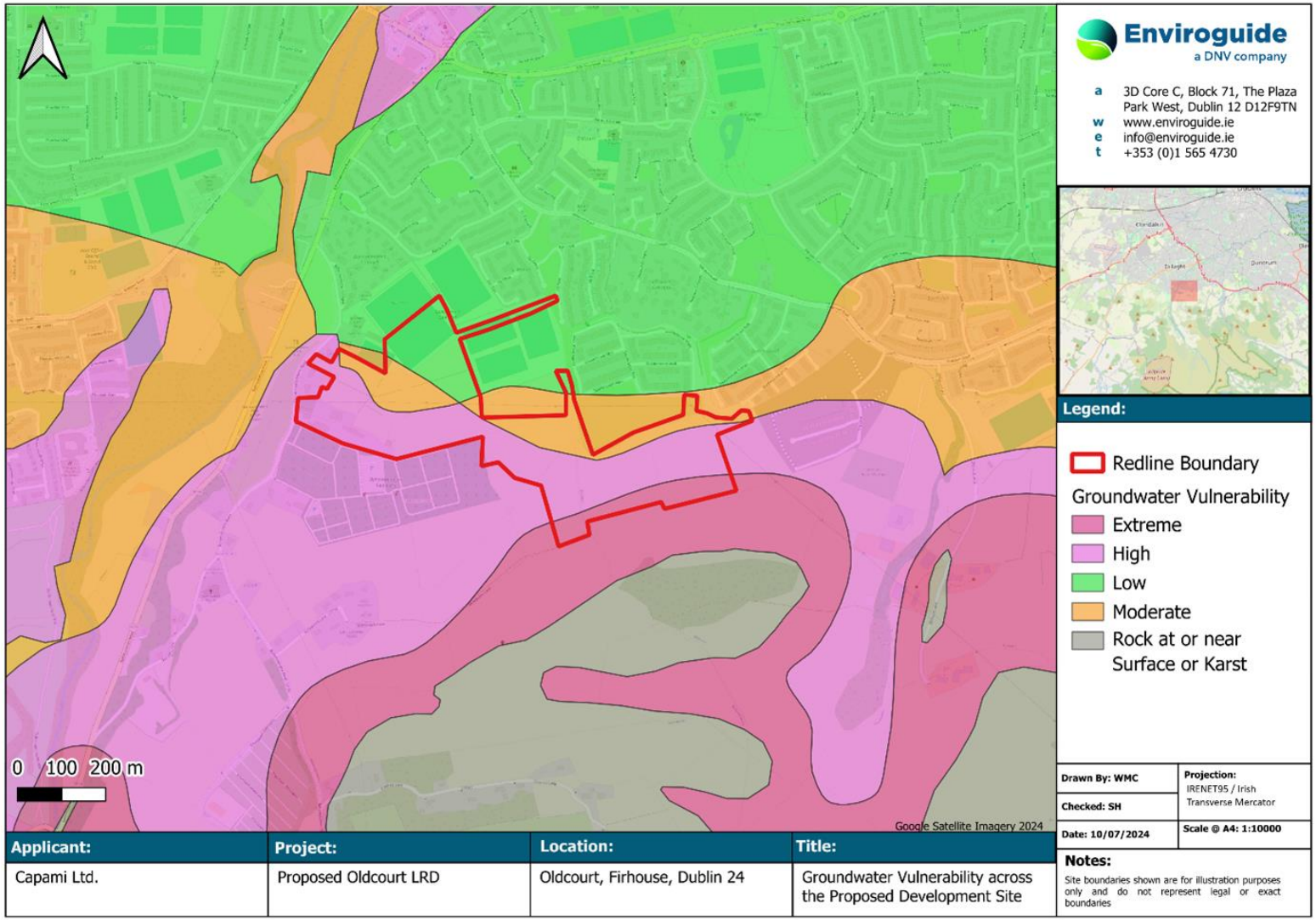

FIGURE 4. GROUNDWATER VULNERABILITY ACROSS THE PROPOSED DEVELOPMENT SITE.

4.1.2 Relevant Field Survey results

4.1.2.1 Habitats & Flora

Several distinct habitat types, as well as mosaics of different habitats (codes follow Fossitt, 2000) were recorded within the habitat survey area (Figure 5). The Site consists mostly of 'Improved agricultural grassland – GA1', with mature 'Hedgerows – WL1' and 'Treelines – WL2' acting as field dividers. 'Drainage ditches – FW4' were recorded under some of the linear habitats.

Japanese knotweed (*Reynoutria japonica)* was recorded at the Site during the walk over surveys carried out on the 20th of September 2023, 7th of October 2023 or 4th of June 2024. This species is listed as a high impact invasive species and is also listed under regulation S.I 477. Butterfly bush (*Buddleia davidii*) was also recorded during the Site walkover and is listed as a medium impact invasive species.

4.1.2.2 Fauna

No evidence of Annex II species such as lesser horseshoe bat (*Rhinolophus hipposideros*) or otter (*Lutra lutra*) were recorded on site, nor was there any suitable habitat available for them on the Site. However, otter has historically been recorded in the Dodder, which is hydrologically linked to the Site.

The Site was deemed to have no significant habitats suitable for wintering SCI bird species during the bird surveys carried out by BMc. No SCI bird species were recorded on the Site during the bird surveys.

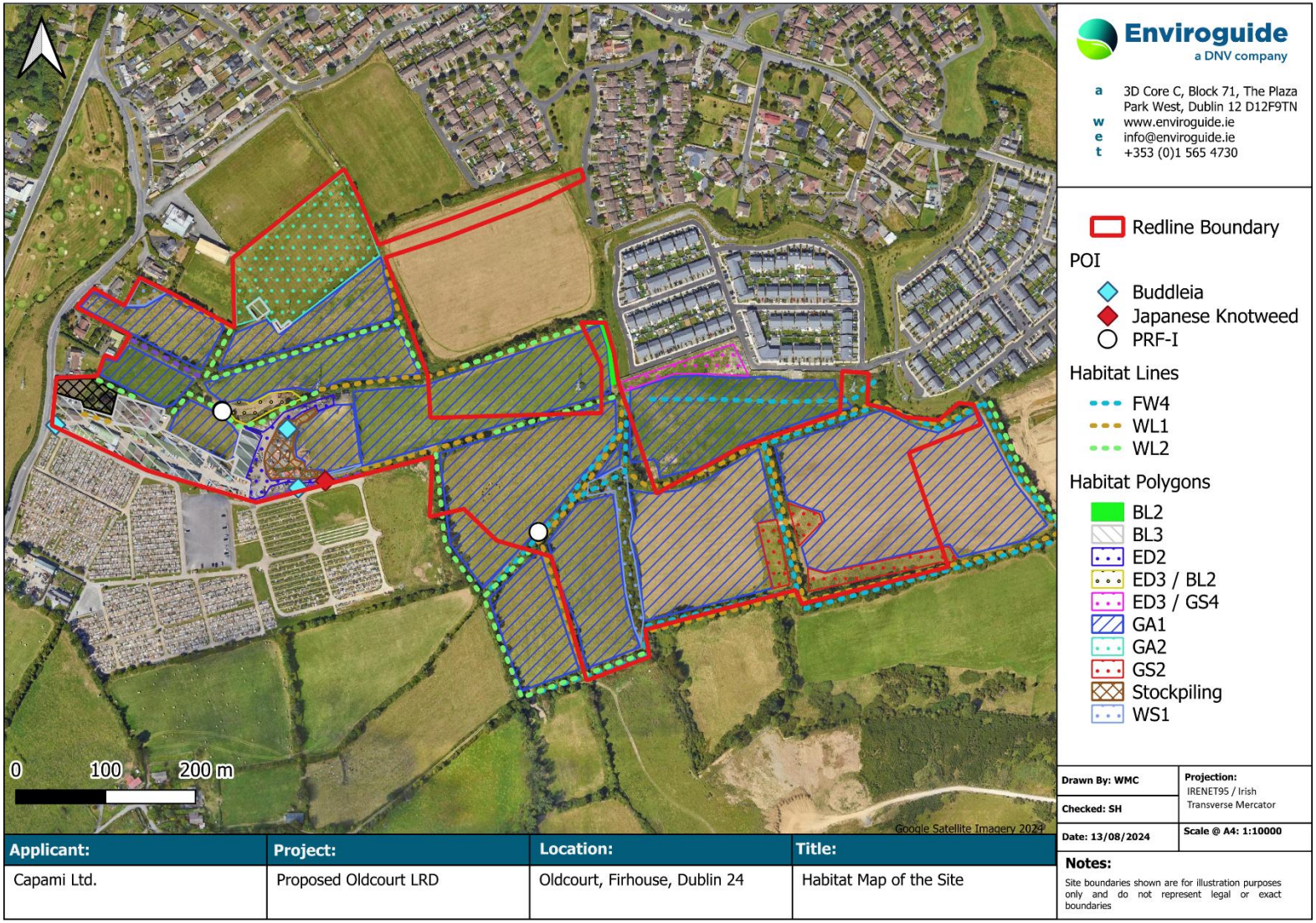

FIGURE 5: MAP OF HABITATS RECORDED AT THE SITE.

4.2 Identification of Relevant European Sites

4.2.1 Potential Sources of Impacts

The Proposed Development is not directly connected with or necessary to the management of European sites. However, the following elements of the Proposed Development were identified and assessed for their potential to cause likely significant effects on European sites.

Construction Phase (*Estimated duration: **7 years***)

- Uncontrolled releases of dust, sediments and/or other pollutants to air due to earthworks;
- Surface water run-off containing silt, sediments and/or other pollutants into nearby waterbodies or surface water network;
- Surface water run-off containing silt, sediments and/or other pollutants into the local groundwater;
- Waste generation during the Construction Phase comprising soils and construction wastes;
- Potential spread of invasive floral species due to construction activity;
- Increased noise, dust and/or vibrations as a result of construction activity;
- Increased dust and air emissions from construction traffic;
- Increased lighting in the vicinity as a result of construction activity; and
- Increased human presence and activity as a result of construction activity.

Operational Phase *(Estimated duration: Indefinite)*

- Surface water drainage from the Site of the Proposed Development;
- Foul water from the Proposed Development;
- Increased lighting at the Site and in the vicinity emitted from the Proposed Development;
- Bird collisions with tall buildings; and
- Increased human presence and activity at the Site and in the vicinity as a result of the Proposed Development.

4.2.2 Potential Pathways to European Sites

For the above listed potential sources of effects to have the potential to cause likely significant effects on any European site, a pathway between the source of potential effects (i.e., the Site of the Proposed Development) and the receptor is required. Potential impact pathways are discussed in the following sections in the context of the identified impact sources as identified in section 4.2.1.

4.2.2.1 Direct Pathways

4.2.2.1.1 Hydrological pathways

Two small streams traverse the centre of the Site in a general south to north direction. The Bohernabreena flows through the Site following parts of the hedgerow boundaries of the fields in a southwest to northeast direction. A second stream, the Friarstown Upper, flows in a general south to north direction through the Site, also following the field boundaries, before converging with Bohernabreena.

The two streams traversing the Site provide a potential hydrological pathway to the Dodder main channel, which ultimately discharges into Dublin Bay at Ringsend, approx. 15km downstream of the Site. The following European sites are located within Dublin Bay:

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

While this pathway is considered to be weak due to distance, the potential for likely significant impacts via this pathway is considered further in this report.

No other European sites are hydrologically connected to the Proposed Development.

4.2.2.1.2 Hydrogeological pathways

During groundworks and other construction activities, the ground will be exposed and any potential accidental discharges to ground could potentially migrate vertically downward to the underlying bedrock aquifer, and laterally within the aquifer to any downgradient drainage ditches and streams. However, there are no direct hydrogeological pathways to any European sites from the Proposed Development Site as the topography of the Site would suggest that groundwater through the Site would primarily flow in a northern direction, and likely drain into the ditches and streams located adjacent to the Proposed Development. In addition, majority of ground water within the Kilcullen groundwater body (GWB) flows within the first 3m below ground, with flow paths a maximum of couple hundred meters in length (GSI, 2024b). Discharges are generally to the nearest watercourse, in the context of the Site this is likely to be the Bohernabreena stream, and therefore any discharges to ground are likely to be dispersed further via the hydrological pathway discussed in the previous section.

As such, it is considered that no European sites are linked to the Site via a direct hydrogeological pathway.

4.2.2.1.3 Air and land pathways

The Construction Phase of the Proposed Development could introduce dust and noise impacts transferable via air and land pathways, as well as increased lighting and human activity at the Site and in the vicinity of the Site during the Construction and Operational Phases. Large developments (i.e., >10,000m^2 earthworks area, >10,000m^3 building volume) are estimated to have a high dust soiling potential up to 400m from the source (Holman *et al.,*2014), while noise levels of 120dB at source have been shown to have the capacity to impact on waterbirds up to approx. 200m from the source (Cutts *et al.,*2013). The ZOI of light spill from the Site is considered to be limited to the immediate surrounding habitats.

No European sites are linked to the Site via air pathways due to the distance between the Site and the nearest European site of Glenasmole Valley SAC (001209) located approx. 1.2 km southwest of the Site.

Spread of invasive species from the Site to any European sites could also occur over land pathways such as via construction traffic. Construction traffic is not anticipated to be routed through the Glenasmole Valley SAC along the Ballinascorney Road, however construction workers may commute through this site after leaving the Proposed Development in private

vehicles. As such, there exists a weak connection via land to this SAC, and the potential for impacts via this pathway is considered further in this report.

4.2.2.2 Indirect Pathways

The Proposed Development will be served by separate foul water and surface water sewers during its Operational Phase. It is noted that there is a weak indirect hydrological connection between the Site and European sites in Dublin Bay via the sewerage network, which will eventually be processed and treated at Ringsend WWTP prior to discharge to Dublin Bay.

The Site is considered unsuitable for wintering waterbirds as it does not contain any suitable habitats that could be utilised as *ex-situ* feeding/roosting grounds e.g., amenity grassland, wet grassland or wetlands.

The treelines along the field boundaries of the Site form a part of ecological corridors stretching from the Site south to the Hellfire wood, and ultimately to the Wicklow Mountains SAC (002122) and Wicklow Mountains SPA (004040) approx. 4km south of the Proposed Development (as the crow flies). Additionally, the Dodder River, which is located approx. 120m west of the Site at its nearest point to the Proposed Development, originates within the Wicklow Mountain SAC approx. 6 km upstream of the Site along the river.

The Wicklow Mountains SAC is designated for otter (*Lutra lutra*) which is a relatively mobile species. Research carried out by Ó'Néill et al., (2009) on ranging behaviours of otter on river systems in Ireland found that female otter ranges averaged 7.5km while male otter home ranges varied between 7-21km. Wicklow Mountains SAC is located within the same sub-catchment (Dodder_SC_010) to the Proposed Development. Additionally, the current guidance in respect of the hydrological distance that territorial otters roam suggests a maximum territorial range of 35km for male otters along suitable watercourses (NIEA, 2011). Thus, the stretches of Dodder River in proximity to the Proposed Development is considered likely to hold QI otter populations associated with the Wicklow Mountains SAC, as the SAC falls within the territorial ranges of otter and is located within the same sub-catchment.

The Wicklow Mountains SPA is designated for Merlin (*Falco columbarius*) and Peregrine (*Falco peregrinus*). The Site may provide some suitable hunting habitat for these species, and thus a weak indirect pathway exists.

4.2.3 Relevant European sites

A European site will only be at risk from likely significant effects where a S-P-R link exists between the Proposed Development Site and the European site. All of the European sites considered under the S-P-R method are listed in Table 4, with none of the European sites identified as having an S-P-R link of note to the Proposed Development Site.

TABLE 4. EUROPEAN SITES CONSIDERED WITH THE SOURCE-PATHWAY-RECEPTOR (S-P-R) METHOD TO ESTABLISH NOTABLE LINKS BETWEEN THE SOURCES OF EFFECTS ARISING FROM THE PROPOSED DEVELOPMENT, AND ANY RELEVANT EUROPEAN SITES. THOSE SITES WITH NOTABLE S-P-R LINKS ARE HIGHLIGHTED IN GREEN (IF ANY). QUALIFYING INTERESTS (QIS) TAKEN FROM THE RELEVANT CONSERVATION OBJECTIVES DOCUMENTS (AS REFERENCED) AND/OR THE STANDARD DATA FORMS (SDF) (EEA, 2023)[1].

Site Name & Site Code	Qualifying Interests (*= priority habitats)	Potential Pathways
Special Areas of Conservation (SAC)		
South Dublin Bay SAC (000210) Linear Distance to Proposed Development: approx. 11.1km NE	As per SDF update 10/2020 **Habitats** 1210 Annual vegetation of drift lines. 1310 *Salicornia* and other annuals colonising mud and sand. 2110 Embryonic shifting dunes. 1140 Mudflats and sandflats not covered by seawater at low tide.	Weak hydrological pathway via the Dodder River due to tributaries within the Site. An indirect pathway via the sewerage network to Ringsend WWTP and subsequent effluent release into Dublin Bay. No other pathways identified.
North Dublin Bay SAC (000206) Linear Distance to Proposed Development: Approx.. 15.4km NE	As per SDF update 10/2020 **Habitats** 1140 Mudflats and sandflats not covered by seawater at low tide 1210 Annual vegetation of drift lines 1310 *Salicornia* and other annuals colonising mud and sand 1320 Spartina swards (*Spartinion maritimae*) 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) 1410 Mediterranean salt meadows (*Juncetalia maritimi*) 2110 Embryonic shifting dunes 2120 Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)* 2190 Humid dune slacks **Species** 1395 Petalwort (*Petalophyllum ralfsii*)	Weak hydrological pathway via the Dodder River due to tributaries within the Site. An indirect pathway via the sewerage network to Ringsend WWTP and subsequent effluent release into Dublin Bay. No other pathways identified.
Glenasmole Valley SAC (001209) Linear Distance to Proposed Development: approx. 1.2 km SW	As per SDF update 10/2021 **Habitats** 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) 6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) 7220 Petrifying springs with tufa formation (Cratoneurion)*	Potential land pathway via construction traffic.

[1] Where applicable, the full species list included in this table is as per the latest updated information as indicated, so either the Conservation Objectives (CO) document for the site, or the latest Standard Data Form (SDF) (EEA, 2023). For SDF updates, CO are not yet available for the newly added species but are assumed, for the purposes of assessment, to follow the same format as for other feature species.

Site Name & Site Code	Qualifying Interests (*= priority habitats)	Potential Pathways
Wicklow Mountains SAC (002122) Linear Distance to Proposed Development: approx. 4.2 km S	As per SDF update 10/2018 **Habitats** 3110 Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) 3160 Natural dystrophic lakes and ponds 4010 Northern Atlantic wet heaths with *Erica tetralix* 4030 European dry heaths 4060 Alpine and Boreal heaths 6130 Calaminarian grasslands of the *Violetalia calaminariae* 6230 Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)* 7130 Blanket bogs (* if active bog) 8110 Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*)cu 8210 Calcareous rocky slopes with chasmophytic vegetation 8220 Siliceous rocky slopes with chasmophytic vegetation 91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles **Species** 1355 Otter (*Lutra lutra*)	Indirect pathway via impacts to *ex-situ* habitats of otter associated with this SAC within Dodder River. No other pathways identified.
Special Protection Areas (SPAs)		
South Dublin Bay and River Tolka Estuary SPA (004024) Linear Distance to Proposed Development: Approx. 11.1km NE	As per SDF update 10/2021 **Birds** A169 Turnstone (*Arenaria interpres*) A046 Light-bellied Brent Goose *(Branta bernicla hrota)* A144 Sanderling *(Calidris alba)* A149 Dunlin *(Calidris alpina)* A143 Knot *(Calidris canutus)* A137 Ringed Plover *(Charadrius hiaticula)* A130 Oystercatcher *(Haematopus ostralegus)* A182 Common Gull (*Larus canus*) A176 Mediterranean Gull (*Larus melanocephalus*) A179 Black-headed Gull *(Chroicocephalus ridibundus)* A157 Bar-tailed Godwit *(Limosa lapponica)* A069 Red-breasted Merganser (*Mergus serrator*) A160 Curlew (*Numenius arquata*) A017 Great Cormorant (*Phalacrocorax carbo*) A141 Grey Plover *(Pluvialis squatarola)* A005 Great Crested Grebe (*Podiceps cristatus*) A192 Roseate Tern *(Sterna dougallii)* A193 Common Tern *(Sterna hirundo)* A194 Arctic Tern *(Sterna paradisaea)* A162 Redshank *(Tringa totanus)*	Weak hydrological pathway via the Dodder River due to tributaries within the Site. An indirect pathway via sewerage network to Ringsend WWTP and subsequent effluent release into Dublin Bay. No other pathways identified.
North Bull Island SPA (004006) Linear Distance to Proposed Development: Approx.. 15.4km NE	As per SDF update 10/2020 **Birds** A054 Pintail *(Anas acuta)* A056 Shoveler *(Anas clypeata)* A052 Teal *(Anas crecca)* A050 Wigeon (*Anas Penelope*) A053 Mallard (*Anas platyrhynchos*) A169 Turnstone *(Arenaria interpres)* A222 Short-eared Owl (*Asio flammeus*) A046 Light-bellied Brent Goose *(Branta bernicla hrota)* A144 Sanderling *(Calidris alba)*	

Site Name & Site Code	Qualifying Interests (*= priority habitats)	Potential Pathways
	A149 Dunlin *(Calidris alpina)* A143 Knot *(Calidris canutus)* A147 Curlew Sandpiper (*Calidris ferruginea*) A145 Little Stint (*Calidris minuta*) A137 Ringed Plover (*Charadrius hiaticula*) A130 Oystercatcher *(Haematopus ostralegus)* A182 Common Gull (*Larus canus*) A179 Black-headed Gull *(Chroicocephalus ridibundus)* A157 Bar-tailed Godwit *(Limosa lapponica)* A156 Black-tailed Godwit *(Limosa limosa)* A069 Red-breasted Merganser (*Mergus serrator*) A160 Curlew *(Numenius arquata)* A151 Ruff (*Philomachus pugnax*) A140 Golden Plover *(Pluvialis apricaria)* A141 Grey Plover *(Pluvialis squatarola)* A048 Shelduck *(Tadorna tadorna)* A161 Spotted Redshank (*Tringa erythropus*) A164 Greenshank (*Tringa nebularia*) A162 Redshank *(Tringa totanus)*	
Wicklow Mountains SPA (004040) Linear Distance to Proposed Development: approx. 4.2 km S	As per SDF update 10/2020 **Birds** A098 Merlin (*Falco columbarius*) A103 Peregrine (*Falco peregrinus*) A274 Common redstart (*Phoenicurus phoenicurus*) A314 Wood warbler (*Phylloscopus sibilatrix*) A275 Whinchat (*Saxicola rubetra*) A311 Blackcap (*Sylvia atricapilla*) A310 Green warbler (*Sylvia borin*) A282 Ring Ouzel (*Turdus torquatus*)	Indirect pathway due to presence of suitable hunting habitat for the raptor species within the Site.. No other potential pathways identified.

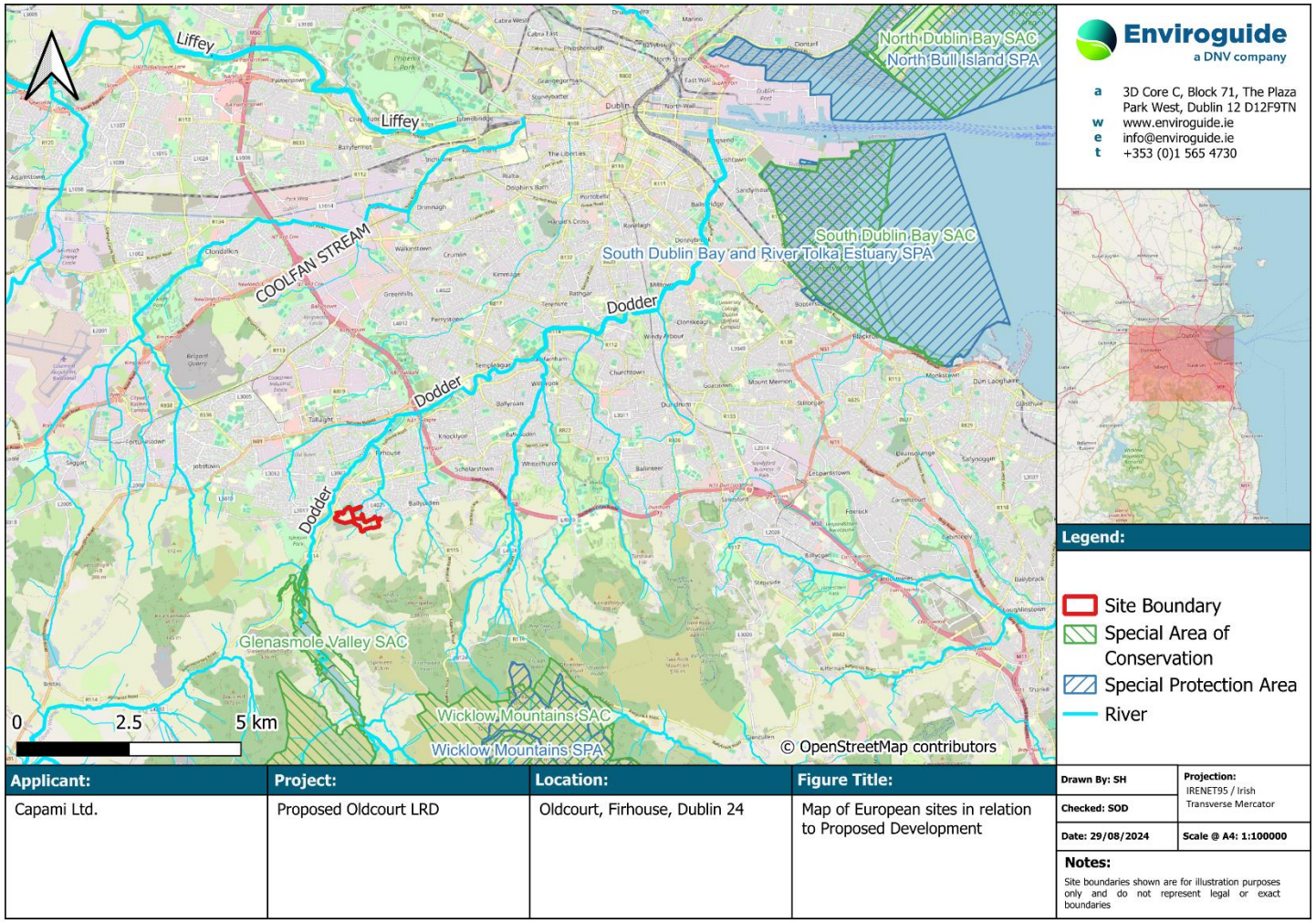

FIGURE 6. LOCATION OF EUROPEAN SITES RELATIVE TO THE PROPOSED DEVELOPMENT.

4.2.3.1 South Dublin Bay SAC (000210)

The following descriptions of the South Dublin Bay SAC (000210) are extracted from the Site Synopsis (NPWS, 2013) for the site:

> "*This site lies south of the River Liffey in Co. Dublin, and extends from the South Wall to the west pier at Dun Laoghaire. It is an intertidal site with extensive areas of sand and mudflats. The sediments are predominantly sands but grade to sandy muds near the shore at Merrion Gates. The main channel which drains the area is Cockle Lake.*
>
> *The bed of Dward Eelgrass (Zostera noltii) found below Merrion Gates is the largest stand on the east coast. Green algae (Enteromorpha spp. and Ulva lactuca) are distributed throughout the area at a low density. Fucoid algae occur on the rocky shore in the Maretimo to Dún Laoghaire area. Species include Fucus spiralis, F. vesiculosus, F. serratus, Ascophyllum nodosum and Pelvetia canaliculata.*
>
> *Several small, sandy beaches with incipient dune formation occur in the northern and western sectors of the site, notably at Poolbeg, Irishtown and Merrion/ Booterstown. The formation at Booterstown is very recent. Drift line vegetation occurs in association with the embryonic and incipient fore dunes. Typically drift lines occur in a band approximately 5 m wide, though at Booterstown this zone is wider in places. The habitat occurs just above the High Water Mark and below the area of embryonic dune. Species present are Sea Rocket (Cakile maritima), Frosted Orache (Atriplex laciniata), Spear-leaved Orache (A. prostrata), Prickly Saltwort (Salsola kali) and Fat Hen (Chenopodium album). Also occurring is Sea Sandwort (Honkenya peploides), Sea Beet (Beta vulgaris subsp. maritima) and Annual Sea-blite (Suaeda maritima). A small area of pioneer saltmarsh now occurs in the lee of an embryonic sand dune just north of Booterstown Station. This early stage of saltmarsh development is here characterised by the presence of pioneer stands of glassworts (Salicornia spp.) occurring below an area of drift line vegetation. As this is of very recent origin, it covers a small area but ample areas of substrate and shelter are available for the further development of this habitat.*
>
> *South Dublin Bay is an important site for waterfowl. Although birds regularly commute between the south bay and the north bay, recent studies have shown that certain populations which occur in the south bay spend most of their time there. The principal species are Oystercatcher (1215), Ringed Plover (120), Sanderling (344), Dunlin (2628) and Redshank (356) (average winter peaks 1996/97 and 1997/98). Up to 100 Turnstones are usual in the south bay during winter. Brent Goose regularly occur in numbers of international importance (average peak 299). Bar-tailed Godwit (565), a species listed on Annex I of the E.U. Birds Directive, also occur.*

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

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

4.2.3.2 North Dublin Bay SAC (000206)

The following descriptions of the North Dublin Bay SAC (000206) are extracted from the Site Synopsis (NPWS, 2013) for the site:

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

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

"Saltmarsh extends along the length of the landward side of the island. The edge of the marsh is marked by an eroding edge which varies from 20 cm to 60 cm high. The marsh can be zoned into different levels according to the vegetation types present."

"The island shelters two intertidal lagoons which are divided by a solid causeway. The sediments of the lagoons are mainly sands with a small and varying mixture of silt and clay. The north lagoon has an area known as the "Salicornia flat", which is dominated by Salicornia dolichostachya, a pioneer glasswort species, and covers about 25 ha. Beaked Tasselweed (Ruppia maritima) occurs in this area, along with some Narrow-leaved Eelgrass (Zostera angustifolia). Dwarf Eelgrass (Z. noltii) also occurs in Sutton Creek. Common Cordgrass (Spartina anglica) occurs in places but its growth is controlled by management. Green algal mats (Enteromorpha spp., Ulva lactuca) cover large areas of the flats

during summer. These sediments have a rich macrofauna, with high densities of Lugworms (Arenicola marina) in parts of the north lagoon. Mussels (Mytilus edulis) occur in places, along with bivalves such as Cerastoderma edule, Macoma balthica and Scrobicularia plana. The small gastropod Hydrobia ulvae occurs in high densities in places, while the crustaceans Corophium volutator and Carcinus maenas are common. The sediments on the seaward side of North Bull Island are mostly sands. The site extends below the low spring tide mark to include an area of the sublittoral zone."

4.2.3.3 Glenasmole Valley SAC (001209)

The following descriptions of the Glenasmole Valley SAC (001209) are extracted from the Site Synopsis (NPWS, 2013) for the site:

"Glenasmole Valley in south Co. Dublin lies on the edge of the Wicklow uplands, approximately 5 km from Tallaght. The River Dodder flows through the valley and has been impounded here to form two reservoirs which supply water to south Dublin. The non-calcareous bedrock of the Glenasmole Valley has been overlain by deep drift deposits which now line the valley sides. They are partly covered by scrub and woodland, and on the less precipitous parts, by a herb-rich grassland. There is much seepage through the deposits, which brings to the surface water rich in bases, which induces local patches of calcareous fen and, in places, petrifying springs.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (= priority; numbers in brackets are Natura 2000 codes): [6210] Orchid-rich Calcareous Grassland* [6410] Molinia Meadows [722 0] Petrifying Springs.*

The areas of Molinia meadows at the site occur associated with the grasslands on the valley sides, and in particular in seepage and flushed areas. Typical and indicative species include Greater Bird's-foot-trefoil (Lotus uliginosus), Tormentil (Potentilla erecta), Purple Moor-grass (Molinia caerulea), Sharp-flowered Rush (Juncus acutiflorus), Adder's-tongue (Ophioglossum vulgatum), Meadow Thistle (Cirsium dissectum) and Fen Bedstraw. As noted above, orchids are frequent in the grasslands at this site.

Woodland occurs in patches around the site. On the east side of the valley, below the northern lake, a Hazel (Corylus avellana) wood has developed on the unstable calcareous slopes and includes other species such as Ash (Fraxinus excelsior), Downy Birch (Betula pubescens), Goat Willow (Salix caprea) and (Irish) Whitebeam (Sorbus hibernica). Spring Wood-rush (Luzula pilosa), Wood Speedwell (Veronica montana) and Bramble (Rubus fruticosus agg.) are present in the ground flora.

Wet semi-natural broadleaved woodland is also found around the reservoirs and includes Alder (Alnus glutinosa) and willow (Salix spp.), with Yellow Iris (Iris pseudacorus), horsetails (Equisetum spp.), Bramble and localised patches of Japanese Knotweed (Reynoutria japonica), an introduced and invasive

species. The lake shore vegetation is not well developed, which is typical of a reservoir.

There are occasional patches of Reed Canary-grass (Phalaris arundinacea) and Purpleloosestrife (Lythrum salicaria), which are more extensive around the western shore of the northern lake, along with Common Marsh-bedstraw (Galium palustre) and Water Mint (Mentha aquatica). Other vegetation includes Shoreweed (Littorella uniflora) and the scarce Water Sedge (Carex aquatilis).

As well as the Green-winged Orchid and Small-white Orchid, two other threatened species which are listed in the Irish Red Data Book occur in the site, Yellow Archangel (Lamiastrum galeobdolon) and Yellow Bird's-nest (Monotropa hypopitys). Small-white Orchid is legally protected under the Flora (Protection) Order, 1999.

The site provides excellent habitat for bats, with at least four species recorded: Pipistrelle, Leisler's, Daubenton's and Brown Long-eared. Otter occurs along the river and reservoirs.

The site supports Kingfisher, an Annex I species under the E.U. Birds Directive.

Glenasmole Valley contains a high diversity of habitats and plant communities, including three habitats listed on Annex I of the E.U. Habitats Directive. The presence of four Red Data Book plant species further adds to the value of the site, as does the presence of populations of several mammal and bird species of conservation interest."

4.2.3.4 Wicklow Mountains SAC (002122)

The following descriptions of the Wicklow Mountains SAC are extracted from the Site Synopsis (NPWS 2017b) for the site:

"Wicklow Mountains SAC is a complex of upland areas in Counties Wicklow and Dublin, flanked by the Blessington reservoir to the west and Vartry reservoir in the east, Cruagh Mountain in the north and Lybagh Mountain in the south. Most of the site is over 300 m, with much ground over 600 m. The highest peak is 925 m at Lugnaquilla. The Wicklow uplands comprise a core of granites flanked by Ordovician schists, mudstones and volcanics. The form of the Wicklow Glens is due to glacial erosion. The topography is typical of a mountain chain, showing the effects of more than one cycle of erosion. The massive granite has weathered characteristically into broad domes. Most of the western part of the site consists of an elevated moorland, covered by peat. The surrounding schists have assumed more diverse outlines, forming prominent peaks and rocky foothills with deep glens. The dominant topographical features are the products of glaciation. High corrie lakes, deep valleys and moraines are common features of this area. The substrate over much of the area is peat, usually less than 2 m deep. Poor mineral soil covers the slopes, and rock outcrops are frequent. The Wicklow Mountains are drained by several major rivers including the Dargle, Liffey, Dodder, Slaney and Avonmore. The river water in the mountain areas is often peaty, especially during floods."

"The vegetation over most of Wicklow Mountains SAC is a mosaic of heath, blanket bog and upland grassland (mostly on peaty soil, though some on mineral soil), stands of dense Bracken (Pteridium aquilinum), and small woodlands mainly along the rivers. Mountain loughs and corrie lakes are scattered throughout the site."

"Due to the underlying rock strata, the water of the rivers and streams is acid rather than alkaline. The water is generally oligotrophic and free from enrichment. The lakes within the area range from the high altitude lakes of Lough Firrib and Three Lakes, to the lower pater-noster lakes of Glendalough, Lough Tay and Lough Dan. Spectacular corrie lakes, such as Loughs Bray (Upper and Lower), Ouler, Cleevaun, Arts, Kellys and Nahanagan, exhibit fine sequences of moraine stages. The deep lakes are characteristically species-poor, but hold some interesting plants including an unusual form of Quillwort (Isoetes lacustris var. morei), a stonewort (Nitella sp.) and Floating Bur-reed (Sparganium angustifolium)."

"Mammals and birds which occur are typical of the uplands. Deer are abundant, mainly hybrids between Red and Sika Deer. Other mammals include Hare, Badger and Otter, the latter being a species listed on Annex II of the E.U. Habitats Directive."

"Wicklow Mountains is important as a complex, extensive upland site. It shows great diversity from a geomorphological and a topographical point of view. The vegetation provides examples of the typical upland habitats with heath, blanket bog and upland grassland covering large, relatively undisturbed areas. In all, twelve habitats listed on Annex I of the E.U. Habitats Directive are found within the site. Several rare or protected plant and animal species occur, adding further to its value."

4.2.3.5 South Dublin Bay and River Tolka Estuary SPA (004024)

The following descriptions of the South Dublin Bay and River Tolka Estuary SPA (004024) are extracted from the Site Synopsis (NPWS 2015b) for the site:

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

"In the south bay, the intertidal flats extend for almost 3 km at their widest. The sediments are predominantly well-aerated sands. Several permanent channels exist, the largest being Cockle Lake. A small sandy beach occurs at Merrion Gates, while some bedrock shore occurs near Dun Laoghaire. The landward boundary is now almost entirely artificially embanked. There is a bed of Dwarf Eelgrass (Zostera noltii) below Merrion Gates which is the largest stand on the east coast. Green algae (Ulva spp.) are distributed throughout the area at a low density. The macroinvertebrate fauna is well-developed, and is characterised by annelids such as Lugworm (Arenicola marina),

Nephthys spp. and Sand Mason (Lanice conchilega), and bivalves, especially Cockle (Cerastoderma edule) and Baltic Tellin (Macoma balthica). The small gastropod Spire Shell (Hydrobia ulvae) occurs on the muddy sands off Merrion Gates, along with the crustacean Corophium volutator. Sediments in the Tolka Estuary vary from soft thixotrophic muds with a high organic content in the inner estuary to exposed, well-aerated sands off the Bull Wall. The site includes Booterstown Marsh, an enclosed area of saltmarsh and muds that is cut off from the sea by the Dublin/Wexford railway line, being linked only by a channel to the east, the Nutley stream. Sea water incursions into the marsh occur along this stream at high tide. An area of grassland at Poolbeg, north of Irishtown Nature Park, is also included in the site."

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

4.2.3.6 North Bull Island SPA (004006)

The following descriptions of the North Bull Island SPA (004006) are extracted from the Site Synopsis (NPWS 2014) for the site:

"This site covers all of the inner part of north Dublin Bay, with the seaward boundary extending from the Bull Wall lighthouse across to Drumleck Point at Howth Head."

"The North Bull Island SPA is of international importance for waterfowl on the basis that it regularly supports in excess of 20,000 waterfowl. The site supports internationally important populations of three species, Light-bellied Brent Goose (1,548), Black-tailed Godwit (367) and Bar-tailed Godwit (1,529) - all figures are mean peaks for the five winters between 1995/96 and 1999/2000. The site is one of the most important in the country for Light-bellied Brent Goose. A further 14 species have populations of national importance – Shelduck (1,259), Teal (953), Pintail (233), Shoveler (141), Oystercatcher (1,784), Grey Plover (517), Golden Plover (2,033), Knot (2,837), Sanderling (141), Dunlin (4,146), Curlew (937), Redshank (1,431), Turnstone (157) and Black-headed Gull (2,196). The populations of Pintail and Knot are of particular note as they comprise 14% and 10% respectively of the all-Ireland population totals."

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

4.2.3.7 Wicklow Mountains SPA (004040)

The following descriptions of the Wicklow Mountains SPA (004040) are extracted from the Site Synopsis (NPWS, 2014) for the site:

"This is an extensive upland site, comprising a substantial part of the Wicklow Mountains. Most of the site is in Co. Wicklow, but a small area lies in Co. Dublin. The underlying geology of the site is mainly of Leinster granites, flanked by Ordovician schists, mudstones and volcanics. The area was subject to glaciation and features fine examples of glacial lakes, deep valleys and moraines. Most of site is over 300 m, with much ground being over 600 m; the highest peak is Lugnaquillia (925 m). The substrate over much of site is peat, with poor mineral soil occurring on the slopes and lower ground. Exposed rock and scree are features of the site. The predominant habitats present are blanket bog, heaths and upland grassland.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Merlin and Peregrine.

A series of surveys of the Wicklow Mountains SPA indicates that up to 9 pairs of Merlin breed within the site in any one year. Traditionally a ground-nesting species, Merlin in the Wicklow Mountains are usually found nesting in old crows nests in conifer plantations. The open peatlands provide excellent foraging habitat for Merlin with small birds such as Meadow Pipit being their main prey. The cliffs and crags within the site also provide ideal breeding locations for Peregrine (20 pairs in 2002). Other birds of the open peatlands and scree slopes that have been recorded within the site include Ring Ouzel and Red Grouse.

The Wicklow Mountains SPA is of high ornithological importance as it supports nationally important populations of Merlin and Peregrine, both species that are listed on Annex I of the E.U. Birds Directive. Part of Wicklow Mountains SPA is a Statutory Nature Reserve."

4.2.3.8 Qualifying Interests and Conservation Objectives

The QIs/SCIs and their respective conservation objectives for each of the relevant European site(s) are detailed in Table 5Table 5 below.

TABLE 5. QUALIFYING INTERESTS (QIS) / SPECIAL CONSERVATION INTERESTS (SCIS) AND THEIR CONSERVATION OBJECTIVES FOR THE RELEVANT EUROPEAN SITES. THE CONSERVATION STATUS OF EACH QI / SCI WAS SOURCED

FROM THE RELEVANT STANDARD DATA FORM(S) (SOURCE: EEA (2023)), AND THE LATEST NATIONAL STATUS IS TAKEN FROM THE LATEST ARTICLE 17 REPORT (NPWS, 2019A & 2019B) AND BOCCI[2] RESPECTIVELY.

QI / SCI (* = priority habitat)	Conservation Status	National Status	Conservation Objective
North Dublin Bay SAC (000206)			
1140 Mudflats and sandflats not covered by seawater at low tide	Good	Inadequate	To maintain the favourable conservation condition of these habitats in North Dublin Bay SAC.
1210 Annual vegetation of drift lines	Good	Inadequate	To restore the favourable conservation condition of these habitats in North Dublin Bay SAC.
1310 *Salicornia* and other annuals colonising mud and sand	Excellent	Favourable	
1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	Good	Inadequate	To maintain the favourable conservation condition of these habitats in North Dublin Bay SAC.
1410 Mediterranean salt meadows (*Juncetalia maritimi*)	Good	Inadequate	
2110 Embryonic shifting dunes	Excellent	Inadequate	To restore the favourable conservation condition of these habitats in North Dublin Bay SAC.
2120 Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)	Good	Inadequate	
2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)	Excellent	Bad	
2190 Humid dune slacks	Excellent	Inadequate	
1395 *Petalophyllum ralfsii* (Petalwort)	Good	Favourable	To maintain the favourable conservation condition of this species in North Dublin Bay SAC.
South Dublin Bay SAC (000210)			
1140 Mudflats and sandflats not covered by seawater at low tide	Good	Inadequate	To maintain the favourable conservation condition of this habitat in South Dublin Bay SAC.
1210 Annual vegetation of drift lines	Good	Inadequate	*No CO have yet been set for these habitats within this SAC.*
1310 *Salicornia* and other annuals colonising mud and sand	Good	Favourable	
2110 Embryonic shifting dunes	Good	Inadequate	
Glenasmole Valley SAC (001209)			

[2] Birds of Conservation Concern in Ireland (BOCCI) 2020-2026 (Gilbert, Stanbury & Lewis, 2021). The colours represent the species designation on the various BOCCI lists.

QI / SCI (* = priority habitat)	Conservation Status	National Status	Conservation Objective
6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites)	Good	Bad	To restore the favourable conservation condition of these habitats in Glenasmole Valley SAC.
6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)	Good	Bad	
7220 Petrifying springs with tufa formation (Cratoneurion)*	Good	Inadequate	
Wickow Mountains SAC (002122)			
Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [3110]	Good	Bad	To maintain the favourable conservation condition of these habitats in Wicklow Mountains SAC.
Natural dystrophic lakes and ponds [3160]	Good	Inadequate	
Northern Atlantic wet heaths with Erica tetralix [4010]	Good	Bad	To restore the favourable conservation condition of these habitats in Wicklow Mountains SAC.
European dry heaths [4030]	Good	Bad	
Alpine and Boreal heaths [4060]	Good	Bad	
Calaminarian grasslands of the Violetalia calaminariae [6130]	Excellent	Inadequate	To maintain the favourable conservation condition of these habitats in Wicklow Mountains SAC.
Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [6230]	Good	Bad	To restore the favourable conservation condition of these habitats in Wicklow Mountains SAC.
Blanket bogs (* if active bog) [7130]	Good	Bad	
Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani) [8110]	Excellent	Inadequate	
Calcareous rocky slopes with chasmophytic vegetation [8210]	Good	Inadequate	
Siliceous rocky slopes with chasmophytic vegetation [8220]	Good	Inadequate	
Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]	Average or Reduced	Bad	

QI / SCI (* = priority habitat)	Conservation Status	National Status	Conservation Objective
Lutra lutra (Otter) [1355]	Good	Favourable	To maintain the favourable conservation condition of this species in Wicklow Mountains SAC.
South Dublin Bay and River Tolka Estuary SPA (0040224)			
A005 Great-crested grebe (*Podiceps cristatus*)	Good	Amber	*No CO has yet been set for these species within this SPA.*
A017 Great cormorant (*Phalacrocorax carbo*)	Good	Amber	
A046 Light-bellied Brent Goose (*Branta bernicla hrota*)	Excellent	Amber	To maintain the favourable conservation condition of these species in South Dublin Bay and River Tolka Estuary SPA.
A069 Red-breasted merganser	Good	Amber	*No CO has yet been set for this species within this SPA.*
A130 Oystercatcher (*Haematopus ostralegus*)	Good	Red	To maintain the favourable conservation condition of these species in South Dublin Bay and River Tolka Estuary SPA.
A137 Ringed Plover (*Charadrius hiaticula*)	Good	Amber	
A141 Grey Plover (*Pluvialis squatarola*)	Good	Red	*Grey Plover is proposed for removal from the list of Special Conservation Interests for South Dublin Bay and River Tolka Estuary SPA. As a result, a site-specific conservation objective has not been set for this species.*
A143 Knot (*Calidris canutus*)	Good	Red	To maintain the favourable conservation condition of these species in South Dublin Bay and River Tolka Estuary SPA.
A144 Sanderling (*Calidris alba*)	Excellent	Green	
A149 Dunlin (*Calidris alpina*)	Good	Red	
A157 Bar-tailed Godwit (*Limosa lapponica*)	Good	Red	
A160 Eurasian Curlew *(Numenius arquata)*	Good	Red	
A162 Redshank (*Tringa totanus*)	Good	Red	
A169 Ruddy turnstone *(Arenaria interpres)*	Good	Green	
A176 Mediterranean Gull *(Larus melanocephalus)*	Excellent	Amber	
A179 Black-headed Gull (*Chroicocephalus ridibundus*)	Good	Amber	

QI / SCI (* = priority habitat)	Conservation Status	National Status	Conservation Objective
A182 Common gull (*Larus canus*)	Good	Amber	*No CO has yet been set for this species within this SPA*
A192 Roseate Tern (*Sterna dougallii*)	Excellent	Amber	To maintain the favourable conservation condition of these species in South Dublin Bay and River Tolka Estuary SPA.
A193 Common Tern (*Sterna hirundo*)	Excellent	Amber	
A194 Arctic Tern (*Sterna paradisaea*)	Excellent	Amber	
North Bull Island SPA (004006)			
A046 Light-bellied Brent Goose (*Branta bernicla hrota*)	Excellent	Amber	To maintain the favourable conservation condition of these species in North Bull Island SPA
A048 Shelduck (*Tadorna tadorna*)	Excellent	Amber	
A054 Pintail (*Anas acuta*)	Excellent	Amber	
A056 Shoveler (*Anas clypeata*)	Excellent	Red	
A052 Teal (*Anas crecca*)	Excellent	Amber	
A050 Wigeon (*Anas Penelope*)	Excellent	Amber	*No CO has yet been set for these species within this SPA.*
A053 Mallard (*Anas platyrhynchos*)	Excellent	Amber	
A069 Red-breasted Merganser (*Mergus serrator*)	Excellent	Amber	
A130 Oystercatcher (*Haematopus ostralegus*)	Excellent	Red	To maintain the favourable conservation condition of these species in North Bull Island SPA
A137 Ringed Plover (*Charadrius hiaticula*)	Excellent	Amber	*No CO has yet been set for these species within this SPA.*
A140 Golden Plover *(Pluvialis apricaria)*	Good	Red	To maintain the favourable conservation condition of these species in North Bull Island SPA
A141 Grey Plover *(Pluvialis squatarola)*	Excellent	Red	
A143 Knot *(Calidris canutus)*	Excellent	Red	*No CO has yet been set for these species within this SPA.*
A144 Sanderling (*Calidris alba*)	Excellent	Green	To maintain the favourable conservation condition of these species in North Bull Island SPA
A145 Little stint (*Calidris minuta*)	Good	Green	*No CO has yet been set for these species within this SPA.*
A147 Curlew sandpiper (*Calidris ferruginea*)	Good	Red	

QI / SCI (* = priority habitat)	Conservation Status	National Status	Conservation Objective
A149 Dunlin (*Calidris alpina*)	Excellent	Red	To maintain the favourable conservation condition of these species in North Bull Island SPA
A143 Knot (*Calidris canutus*)	Excellent	Red	
A151 Ruff (*Philomachus pugnax*)	Good	Amber	*No CO has yet been set for these species within this SPA.*
A156 Black-tailed Godwit *(Limosa limosa)*	Excellent	Red	To maintain the favourable conservation condition of these species in North Bull Island SPA
A157 Bar-tailed Godwit *(Limosa lapponica)*	Excellent	Red	
A160 Eurasian Curlew (*Numenius arquata*)	Excellent	Red	
A161 Spotted Redshank (*Tringa erythropus*)	Good	Amber	*No CO has yet been set for these species within this SPA.*
A162 Redshank (*Tringa totanus*)	Excellent	Red	To maintain the favourable conservation condition of these species in North Bull Island SPA
A164 Greenshank (*Tringa nebularia*)	Excellent	Green	*No CO has yet been set for these species within this SPA.*
A169 Turnstone (*Arenaria interpres*)	Excellent	Amber	To maintain the favourable conservation condition of these species in North Bull Island SPA
A179 Black-headed Gull (*Chroicocephalus ridibundus*)	Excellent	Amber	
A182 Common Gull (*Larus canus*)	Excellent	Amber	*No CO has yet been set for these species within this SPA.*
A222 Short-eared Owl (*Asio flammeus*)	Good	Amber	
Wicklow Mountains SPA			
A098 Merlin (*Falco columbarius*)	Excellent	Amber	To maintain the favourable conservation condition of these species in this SPA.
A103 Peregrine (*Falco peregrinus*)	Excellent	Green	
A274 Common redstart (*Phoenicurus phoenicurus*)	Excellent	Red	*No CO has yet been set for these species within this SPA.*
A314 Wood warbler (*Phylloscopus sibilatrix*)	Excellent	Red	
A275 Whinchat (*Saxicola rubetra*)	Good	Red	
A311 Blackcap (*Sylvia atricapilla*)	Excellent	Green	
A310 Green warbler (*Sylvia borin*)	Excellent	Green	

QI / SCI (* = priority habitat)	Conservation Status	National Status	Conservation Objective
A282 Ring Ouzel (*Turdus torquatus*)	Good	Red	

4.3 Assessment of Likely Significant Effects

The following sections discuss the potential for likely significant effects on the relevant European site(s), taking into consideration the QIs, SCIs and SSCOs (where available), and assesses whether the Proposed Development has the capacity to adversely affect the integrity of this European site. Furthermore, due consideration shall be given to species not formally identified but which may be present within the relevant European site(s) and adversely effected by the Proposed Development, provided that those potential impacts are likely to affect the conservation objectives of the designated site. The potential for significant effects that may arise from the Proposed Development was considered through the use of key indicators as detailed in section 3.6.

4.3.1 Habitat Loss and Alteration

Given the location of the Proposed Development, no direct habitat loss and/or alteration is expected as a result of the Construction or Operation Phases. However, a land pathway via potential construction traffic (construction and/or private vehicles) travelling through the **Glenasmole Valley SAC** along the Ballinascorney Road was identified. Vehicles leaving the Construction Site, in the absence of precaution, may inadvertently spread invasive species currently present at the Site to areas outside of the Proposed Development footprint. As such, the potential for likely significant habitat loss or alteration within the Glenasmole Valley SAC **cannot be ruled out**.

No significant habitat loss or alteration is expected as an indirect effect via water quality deterioration due to the significant remove of the Site from the nearest downstream European sites. The potential for water quality deterioration is discussed in detail in section 4.3.3.

The raptor species associated with the Wicklow Mountains SPA, namely merlin and peregrine, could hunt within the Site lands. Both species are known to hunt other birds, ranging from waders and waterfowl to thrushes and other smaller species. The intervening lands between the Wicklow Mountains SPA and the Proposed Development consist of similar farmland fields as well as forested areas and scrub. Together with the habitats available within the SPA itself, it is considered that the extent of potential hunting grounds at the Site of the Proposed Development is not significant, and as such no significant loss of *ex-situ* habitat is likely to occur.

4.3.2 Habitat / Species Fragmentation

Given the location of the Proposed Development, no direct habitat or species fragmentation is expected as a result of the Construction or Operational Phases. Additionally, no significant habitat / species fragmentation is expected as an indirect effect via water quality deterioration due to the significant remove of the Site from the nearest downstream European sites. The potential for water quality deterioration is discussed in detail in section 4.3.3.

4.3.3 Changes in Water Quality and Resource

During construction, surface water flows through the Site may discharge into the existing drainage ditches and/or streams traversing the Site. In the absence of

appropriate site-specific measures to protect the surface water network, there exists a potential of pollutants such as silts, sediments and/or hydrocarbons (in the event of a spillage) reaching the Dodder River main channel via the existing surface water connections.

As described in the WFD Screening Assessment prepared for the Proposed Development (AWN, 2024a), no potential impacts on water quality are anticipated post-mitigation. The mitigation measures referred to in the assessment are best practice construction measures that are described in detail in the accompanying Construction and Environmental Management Plan (CEMP) (Enviroguide, 2024).

The measures described in the CEMP are considered to be best practice measures that would be implemented on Site during the Construction Phase *regardless of the existence of a pathway* to a European site. As such, following the ruling in open court in Luxembourg on 15th June 2023 regarding the interpretation of Article 6(3) of Directive 92/43 (see section 2.1.1), in conjunction with the WFD assessment (AWN, 2024a), the potential for significant adverse effects on water quality of the Dodder River, and by extension any potential impacts on European sites, could be ruled out in the Stage 1 of the AA process.

However, due to the anticipated duration of the Construction Phase (7 years) and out of an abundance of precaution it is considered here that a level of uncertainty remains in the absence of site-specific details of these best practice measures to adequately assess whether the water quality of the Dodder River will be impacted by the Proposed Development during Construction Phase.

Deterioration of water quality in the Dodder River near the Site could have an indirect impact on otter associated with the **Wicklow Mountains SAC** that inhabit the Dodder River downstream of the Site, via e.g., potential reduction in prey availability. Therefore, the potential for likely significant impacts on water quality which could have an indirect impact on this European site **cannot be ruled out**, however any potential impacts are considered to be relatively localised.

The hydrological pathway to European sites located within Dublin Bay is considered to provide sufficient dilution capacity to rule out the potential for significant adverse impacts on water quality within these sites (AWN, 2024b), even in the absence of site-specific details on the aforementioned best practice measures. As such, the potential for direct impacts on the water quality the North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA, and the South Dublin Bay and River Tolka Estuary SPA can be ruled out.

The potential for foul water generated at the Site of the Proposed Development to reach Dublin Bay and result in significant effects to any European sites via impacts on Dublin Bay water quality is deemed negligible due to the following:

- The ongoing upgrade works to Ringsend WWTP which will increase the capacity of the facility from 1.6 million PE to 2.4 million PE (see section 4.3.6.3 below for more details). To provide context, the total predicted peak foul water run-off rate from the Proposed Development is estimated at 2.220

l/s.

- It is considered that significant effects on marine biodiversity and the European sites within Dublin Bay from the current operation of Ringsend WWTP are unlikely (see section 4.3.6.3 below for more details).

- The main area of dispersal of the treated effluent from Ringsend WWTP is in the Tolka Basin and around North Bull Island. South Dublin Bay is deemed largely unaffected by the effluent from the plant (Uisce Éireann, 2018a). It is therefore deemed that **there is no potential** for likely significant effects in the relevant Dublin Bay European sites to occur, as a result of foul waters generated at the Site during its operational lifetime.

4.3.4 Disturbance and / or Displacement of Species

Otters associated with the Wicklow Mountains SAC may be present within the stretches of the Dodder River that are in close proximity to the Proposed Development. Otter holts and couches require a minimum protection zone of 30m, while natal dens (active breeding holts) require a protection zone of 150m (NIEA, 2011).

The distance from the nearest point of the Proposed Development to the Dodder River is approximately 120m. However, the road boundary at the point where the Site is nearest to the river is considered sufficiently dense and high to remove any potential of impacts from disturbance as a result of Construction activities (Figure 7). In addition, two roads and a Pitch-and-Putt course are located in the intervening area between the Site and the Dodder. It is highly unlikely that any otters within the River Dodder would utilise the Site itself. Additionally, natal dens (breeding holts) are typically located up to 1km away from the main watercourse to protect cubs from other adult otters (NIEA, 2011). Due to the presence of roads and an active Pitch-and-Putt on the east of the Dodder River, and less disturbed lands to the west of the Dodder, it is unlikely that natal dens would be located right next to the Dodder or towards the Site in proximity to the Proposed Development. Therefore, it is considered that there is no potential for significant adverse impacts from direct disturbance from noise and/or vibrations as a result of the Proposed Development.

FIGURE 7. VEGETATION BOUNDARY ACROSS THE ROAD FROM THE NEAREST POINT OF THE SITE TO THE DODDER RIVER.

However, disturbance an/or displacement of species may also occur as an indirect effect via water quality deterioration, and as noted in section 4.3.3, could potentially impact on otters associated with the Wicklow Mountains SAC. Displacement could occur due to e.g., reductions in prey availability as a result of water quality changes, as otter would need to travel to new areas to hunt and forage.

As such, the potential for localised disturbance and/or displacement of otter associated with **Wicklow Mountains SAC** as a result of the Proposed Development **cannot be ruled out**.

4.3.5 Changes in Population Density

Given the location of the Proposed Development, no direct changes to the population density of any species is expected as a result of the Proposed Development. Changes in population densities could also occur indirectly as a result of water quality impacts, however, as noted in section 4.3.3, the potential water quality impacts are anticipated to be relatively localised. Therefore, it is considered that significant changes to population densities of any QI/SCI species are not likely to occur, either directly as a result of the Proposed Development, or indirectly due to potential water quality impacts on the Dodder River.

4.3.6 Other Indirect Impacts – Collision Risk

Flightpath and collision risk were assessed given the proximity of the Site to nearby Special Protection Areas (SPAs). Tall structures such as buildings can lead to fatal collisions with commuting bird species, particularly those with low manoeuvrability, often referred to as “poor” fliers (Jenkins, Smallie, & Diamond, 2010)(Jenkins et al., 2010).

A review of available literature indicates that bird collisions with man-made structures are common, with migratory passerine species being the most frequent victims (Banks, 1979; Klem, 1990). Collisions with buildings are generally associated with reflective materials, such as windows or large glass surfaces, which can create the illusion of continuous sky or landscape, an effect that can be exacerbated by lighting (Klem, 1990).

Additionally, the physical location of buildings and structures can influence the likelihood of bird collisions. Structures situated near areas regularly used by large numbers of feeding, breeding, or roosting birds, or those positioned along local flight paths between important foraging and roosting areas, may present a higher collision risk (Erickson et al., 2005).

The Proposed Development is not near any SPAs associated with waders or other poor fliers. The species associated with the Wicklow Mountains SPA that could utilise the Site include two raptor species, namely merlin and peregrine (the other species have more localised territories). Both of these species are excellent fliers and not likely to collide with clearly visible static structures.

The design of the proposed buildings at the Site includes windows but avoids large surfaces of reflective glass. The façades of the buildings are broken up with a varied material composition that intersperses any reflective areas, providing important visual cues to commuting or foraging bird species. These architectural features reduce the risk of bird collisions by ensuring that the structures are clearly visible to birds.

The proposed buildings are also relatively low and do not protrude extensively above any of the surrounding buildings in the cityscape of Dublin. Considering this and the fact that many migrating birds, such as swans and geese typically fly at much higher altitudes during migration (Irish Aviation Authority, 2020), the risk of collisions is considered negligible. Furthermore, bird species that regularly navigate urban environments are accustomed to avoiding static structures such as buildings (Bing et al., 2012).

Therefore, based on the design, height, and location of the Proposed Development, the risk of bird collisions, including for any at-risk species, is considered unlikely.

4.3.7 Potential for In-combination Effects

4.3.7.1 Existing Planning Permissions

A search of planning applications located within a 500m radius of the Site of the Proposed Development was conducted using online planning resources such as the National Planning Application Database (NPAD) (MyPlan.ie) and South Dublin County Council online map. Any planning applications listed as granted or decision pending

from within the last five years were assessed for their potential to act in-combination with the Proposed Development and cause likely significant effects on the relevant European sites. Long-term developments granted outside of this time period were also considered where applicable.

It is noted that many of the granted and pending applications are of small scale and not likely to have in combination effects. It is further noted that the majority of other developments within the vicinity of the Site of the Proposed Development are applications granted for large scale residential developments under the Ballycullen-Oldcourt LAP. The larger developments in the vicinity of the Proposed Development are outlined in Table 6:

TABLE 6. GRANTED AND PENDING DEVELOPMENT APPLICATIONS WITHIN 500 M OF THE PROPOSED DEVELOPMENT. LOCATION AND DISTANCE GIVEN IS RELATIVE TO THE PROPOSED DEVELOPMENT.

Planning Reference	Planning Authority	Status	Location
SD20A/0177	**SDCC**	**Granted**	**Approx. 250m SW**
Development Description Importation and spreading of topsoil and subsoil of approximately 24,888 tonnes (to be < 25,000 tonnes) on agricultural lands measuring circa 2.6 hectares for the purposes of improving the quality of land for agricultural activity; surface water management controls comprising a swale and land drain and all ancillary site works; intention to apply for a waste licence for the development works. **Potential for In-combination effects** The granted development was subject to AA Screening which concluded no potential for significant impacts on any European sites from the granted development, alone or in combination with other projects and plans. The granted development is only for importation of clean soils, and the site is also removed from any notable watercourses with links to European sites. As such, no potential for in-combination effects with the Proposed Development are anticipated.			
SD19A/0104 **ABP-305800-19**	**SDCC / ABP**	**Granted**	**Adjacent to the north**
Development Description 24 dwellings on a site of 0.76 hectares comprising: 8 two storey, four bed semi-detached houses, 12 two storey, three bed semi-detached and terraced houses, 4 two bed apartments in 1 two storey apartment block; all associated site development works, car parking, open spaces and landscaping including modification to an extant permission under Ref. SD14A/0180; permission is also sought for the demolition of a detached dwelling on site. Access to the development will be via an adjoining development known as Dodderbrook (permitted under Ref. SD14A/0180) **Potential for In-combination effects** The granted development was subject to AA Screening which concluded no potential for significant impacts on any European sites from the granted development, alone or in combination with other projects and plans. No specific reference is made to potential surface water discharges during construction, however, the development is required to comply with best practice development standards that will ensure no significant discharges of polluted surface waters are made into the surface water network that could link to European sites			

downstream. The site is not yet built on and is currently serving as a compound for the construction of SD17A/0468. Considering the above, and the lack of impact pathways concerning the Proposed Development identified in this report, no significant in-combination effects with the Proposed Development are anticipated.

4.3.7.2 Relevant Policies and Plans

The local policies and plans detailed in section 2.2 above were reviewed and considered for possible in-combination effects with the Proposed Development. Each of these plans has undergone AA, and where potential for likely significant effects has been identified (e.g., in the case of the SDCC County Development Plan 2022 – 2028), an NIS has been prepared which identifies appropriate mitigation. As such, it is considered that the plans and policies listed will not result in in-combination effects with the Proposed Development. SDCC County Development Plan 2022 – 2028 has directly addressed the protection of European sites and biodiversity through specific objectives. The above listed plans are not being relied upon to rule out potential significant effects on European sites.

4.3.6.3 Operation of Ringsend WwTP

This section addresses in more detail the general issue of potential in-combination effects with Ringsend WWTP arising from the Operational Phase of the Proposed Development and other Developments, including future developments.

In summary, the impact of the Proposed Development and any future development has already been appropriately considered and assessed as part of the application process for the existing planning permissions pertaining to Ringsend WWTP.

The 2012 Ringsend Wastewater Treatment Plant application for planning permission (Ref. PL.29N.YA0010) was for a population equivalent of 2.4 million and was predicated on the findings of the 2005 GDSDS. The GDSDS set out the drainage requirements for the Greater Dublin Area (GDA) up to 2031. The GDSDS relied on the Regional Planning Guidelines (RPGs) and the National Spatial Strategy (NSS) in order to estimate the future projected population increases for the GDA. The studies indicated a predicted growth in population from 1.2 million in 2002 to just over 2 million in 2031 for the GDA region.

In June 2018 Uisce Éireann applied for and subsequently received planning permission in 2019 for upgrade works to the Ringsend WWTP facility. The first phase of upgrade works to Ringsend WWTP was completed in December 2021, which increased the capacity of the plant by 400,000 P.E. These works, together with the future works permitted will ultimately increase the capacity of the facility from 1.6 million P.E. to 2.4 million P.E. by 2025 (Uisce Éireann website: https://www.water.ie/projects/local-projects/ringsend/).

Therefore, both the initially permitted 2012 upgrade and the permitted 2019 revised upgrade (Ref. ABP-301798-18) for Ringsend Wastewater Treatment Plant take account of population growth up to 2.4 million population equivalents. Both applications were subject to EIA and therefore accompanied by an EIAR and accompanied by an AA screening report and NIS.

Notwithstanding the above, on an individual basis the Operational Phase of the Proposed Development will have an imperceptible effect on the habitats/species/qualifying interests listed within the relevant European sites specifically South Dublin Bay and River Tolka Estuary SPA (site code 004024), North Bull Island SPA (004006), and North Dublin Bay SAC (000206), in terms of flows, relative to the total amount of waste water currently being received at Ringsend WWTP (the total predicted peak foul water run-off rate from the Proposed Development is estimated at 2.220 l/s).

Under the heading of "Potential impact – Discharge of treated effluent, impacts on water quality, effects on qualifying interests", the NIS (Uisce Éireann, 2018b) for the Ringsend Wastewater Treatment Plant 2019 revised upgrade provides as follows:

"In the operational phase, the proposed upgrade of the Ringsend WWTP Component will result in an increase in the plant capacity and also an improvement in the final effluent quality. This will result in a reduction in the licensed parameters discharged into the receiving water, with significantly reduced quantities in respect of ammonia and phosphorous."

This NIS goes on to state as follows:

"Overall no significant adverse effects on are foreseen and indeed, a slight positive effect is possible. Effects of discharge during the operational phase of the project from the upgrade project will therefore have imperceptible impact on habitats listed within these European sites."

In respect of this issue, the NIS concludes as follows:

"Thus, there is no potential for in-combination impacts of any other plan and project with the Ringsend WWTP Component of the proposed Upgrade Project."

The EIAR for the ongoing upgrade at Ringsend WWTP (Uisce Éireann, 2018a) also details the lack of any significant impacts to European sites observed as a result of the current stormwater overflow discharge levels at the WWTP. During storm events, once the capacities of the holding tanks are surpassed, the WWTP releases overflow via an outfall at Pigeon House Rd into the lower Liffey estuary.

The EIAR carried out in relation to said upgrade concluded that in the ‘do nothing’ scenario, i.e., wherein the upgrade is not carried out; the current existing levels of nutrient input to Dublin Bay as a result of stormwater overflow from the WWTP, are not deemed to pose significant threats to the integrity of European sites located within or adjacent to Dublin Bay, or any of their Conservation Objectives regardless of said upgrade.

The EIAR report acknowledges that under the do-nothing scenario “the areas in the Tolka Estuary and North Bull Island channel will continue to be affected by the cumulative nutrient loads from the river Liffey and Tolka and the effluent from the Ringsend WWTP”, which could result in a decline in biodiversity and the deterioration of the biological status of Dublin Bay (Uisce Éireann, 2018a). Nevertheless, these negative impacts of nutrient over-enrichment are considered “unlikely”. This is because historical data suggests that pollution in Dublin Bay has had little or no effect on the composition and richness of the benthic macroinvertebrate fauna. The EIAR notes that

"although a localised decline could occur, it is not envisaged to be to a scale that could pose a threat to the shellfish, fish, bird or marine mammal populations that occur in the area." Furthermore, the EIAR notes that significant impacts on waterbird populations foraging on invertebrates in Dublin Bay due to nutrient over-enrichment are "unlikely" to occur. What is important to note is that the do-nothing scenario predicts that nutrient and suspended solid loads from the WWTP will "continue at the same levels and the impact of these loadings should maintain the same level of effects on marine biodiversity" and that "if the status quo is maintained there will be little or no change in the majority of the intertidal faunal assemblages found in Dublin Bay which would likely continue to be relatively diverse and rich across the bay."

Therefore, it can be concluded that likely significant effects on marine biodiversity and the European sites within Dublin Bay from the current operation of Ringsend WWTP are unlikely. Importantly, this conclusion is not dependent upon any future works to be undertaken at Ringsend. Thus, in the absence of any upgrading works, significant in-combination effects to European sites in this regard are not deemed likely to arise, and therefore likely significant effects involving foul waters produced by the Proposed Development also do not have the potential to occur.

It is therefore concluded that there is no possibility for any significant in-combination effects to European sites involving the Proposed Development.

TABLE 7. SUMMARY OF PATHWAYS AND IMPACT ASSESSMENT ON EUROPEAN SITES AS A RESULT OF THE PROPOSED DEVELOPMENT. EUROPEAN SITES WHICH REQUIRE STAGE 2 AA ARE HIGHLIGHTED IN GREEN.

Site	Pathways Identified	Habitat Loss / Alteration	Habitat or Species Fragmentation	Disturbance and/or Displacement of Species	Changes in Population Density	Changes in Water Quality and/or Resource	In-combination effects	Stage 2 AA Required
SAC								
North Dublin Bay SAC	Hydrological (weak, via Dodder)	No	No	No	None	None	None	NO
South Dublin Bay SAC	Hydrological (weak, via Dodder)	No	No	No	None	None	None	NO
Glenasmole Valley SAC	Land (via construction traffic)	No	**Yes**	No	None	None	None	**YES**
Wicklow Mountains SAC	Indirect (via Dodder)	No	No	**Yes** (indirect impact via water quality of the Dodder)	None	**Yes** (indirect impact)	None	**YES**
SPA								
South Dublin Bay and River Tolka Estuary SPA	Hydrological (weak, via Dodder)	No	No	No	None	None	None	NO
North Bull Island SPA	Hydrological (weak, via Dodder)	No	No	No	None	None	None	NO
Wicklow Mountains SPA	None	No	No	No	None	None	None	NO

5 APPROPRIATE ASSESSMENT SCREENING CONCLUSION

The Proposed Development at Bohernabreena, Oldcourt, Ballycullen, Co. Dublin has been assessed, taking into account:

- The nature, size and location of the proposed works and possible impacts arising from the construction works.
- The QIs and conservation objectives of the European sites
- The potential for in-combination effects arising from other plans and projects.

In carrying out this AA screening, any targeted ecological mitigation measures and/or measures intended or included for the purposes of avoiding adverse effects arising as a result of the Proposed Development on any European site have not been taken into account. As a precaution, mitigation measures considered to be best practice during the Construction Phase but which require careful site-specific considerations to adequately prevent impacts on any European sites have similarly not been taken into account during the screening process.

In conclusion, upon the examination, analysis and evaluation of the relevant information and applying the precautionary principle, it is concluded by the authors of this report that the possibility **may be excluded** that the Proposed Development will have a significant effect on any of the European sites listed below:

- North Dublin Bay SAC
- South Dublin Bay SAC
- South Dublin Bay and River Tolka Estuary SPA
- North Bull Island SPA
- Wicklow Mountains SPA

However, upon the examination, analysis and evaluation of the relevant information and applying the precautionary principle, it is concluded by the authors of this report that the possibility **cannot be excluded** that the Proposed Development will have a significant effect on any of the European sites listed below:

- **Glenasmole Valley SAC**
- **Wicklow Mountains SAC**

Glenasmole Valley SAC is located along the Ballinascorney Road, and as such the potential for significant impacts via inadvertent spread of invasive species by construction related traffic (commercial and private vehicles) could not be ruled out. In addition, it is considered that the likelihood for indirect impacts via potential water quality deterioration within the Dodder River on any otters associated with the Wicklow Mountains SAC that may inhabit the Dodder River in proximity to the Site, cannot be excluded in the absence of site-specific detail on best practice surface water protection measures.

On the basis of the screening exercise carried out above, it can be concluded, on the basis of the best scientific knowledge available and objective information, 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, cannot be excluded. Thus, there is a requirement to proceed to Stage 2 of the AA process; and a NIS has been prepared and accompanies this submission under separate cover.

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