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Appropriate Assessment Screening Report

PRESENTED TO

Alida Stewart & John McGrane
Cottbrook, Castlekelly, Bohernabreena, Co. Dublin, D24 YY42

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Environmental Consultancy Services

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DOCUMENT CONTROL SHEET

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1 INTRODUCTION

1.1 Background

Enviroguide Consulting was commissioned by Alida Stewart & John McGrane to prepare an Appropriate Assessment Screening Report for a proposed residential development at Cottbrook, Castlekelly, Bohernabreena, Co. Dublin, D24 YY42, hereafter referred to as 'Proposed Development' or 'Site', when referring to the application area. This report contains information to enable the Competent Authority to undertake Stage 1 Appropriate Assessment screening in respect of the Proposed Development.

1.2 Quality Assurance and Competence

Enviroguide Consulting is a wholly Irish Owned 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. SOB, Ecologist with Enviroguide, undertook the desktop research for this report.

SOB has a B.A. in Zoology from Trinity College Dublin and a M.Sc. Hons. in Wildlife Conservation and Management from University College Dublin, and has experience in desktop research, report writing, and literature scoping-review, as well as practical field and laboratory experience (Pollinator surveying, sampling and identification, habitat surveying, invasive species surveying, etc.). SOB has prepared Stage I and Stage II AA Reports, Invasive Species Surveys, Ecology Statements, and EcIAs.

1.3 Description of Proposed Development

1.3.1 Site Location

The Site of the Proposed Development, as shown in Figure 1, is located approximately 1km southeast of the Bohernabreena Reservoir in Glenasmole Valley and is currently comprised of a single dwelling on a greenfield site. The Site is bound along the south by O'Rourke's Lane, with Cottbrook Stream flowing along the east of the Site into the River Dodder abutting the northeast of the Site. Single dwellings are located along the north and southwest borders of the Site, with the remainder of the Site bounded by agricultural land.

1.3.2 Proposed Development Description

The Proposed Development will consist of an extension to the rear of the existing dwelling. This extension will be single storey and located at a half level above the ground floor of the existing dwelling to respect the site contours. The extension will have a four sided pitched roof with a central roof light and be linked to the existing house via a flat roofed element. This application includes for attendant works of drainage and landscaping to facilitate the above.

1.3.3 Drainage and Water Supply

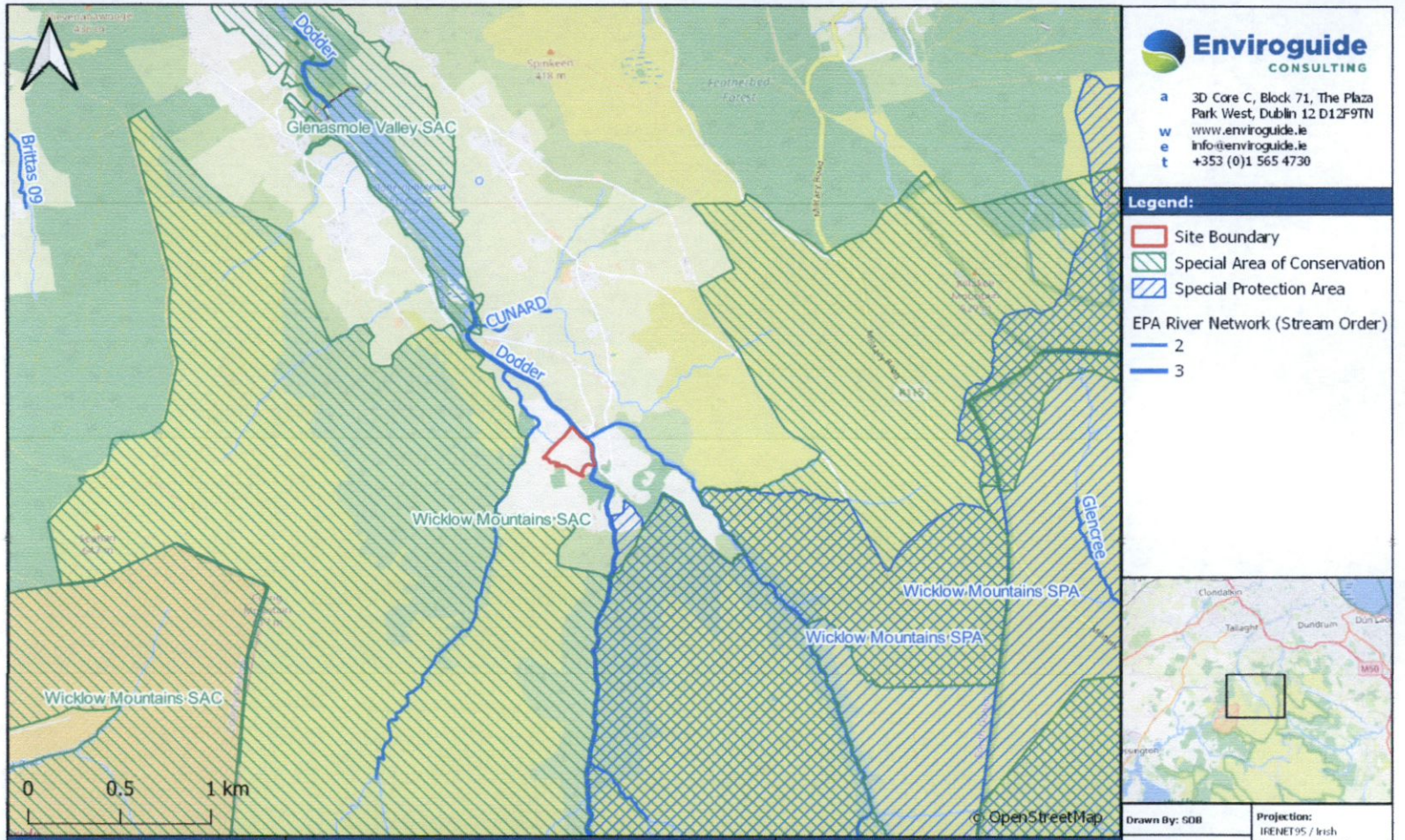
1.3.3.1 *Surface Water*

As outlined in the Proposed Drainage Plan (Clancy Moore, 2023), surface water discharge from the paved areas and the roofs will pass through a Class 1 by-pass petrol / oil interceptor and then be discharged to ground via a proposed soakaway. As such, there will be no direct discharge of surface water to nearby watercourses.

The proposed Sustainable Drainage Systems (SuDS) measures included as part of the Proposed Development consist of permeable paving, a swale at the east of the existing carpark, a soakaway at the north of the existing house, and 3 no. bioretention / rainwater gardens.

1.3.3.2 *Foul Water*

The Site is currently served by a septic tank system to the north of the existing dwelling comprised of a septic tank and percolation area. The capacity of this Tricel Vento 6 septic tank system is in compliance with Environmental Protection Agency (EPA) Code of Practise (EPA, 2021). The Proposed Development will be served by this septic tank system.



Applicant:	Project:	Figure Title:
Alida Stewart & John McGrane	Proposed Develpoment at Cottbrook, Castlekelly, Bohernabreena, Co. Dublin, D24 YY42	Site location

FIGURE 1. SITE LOCATION.

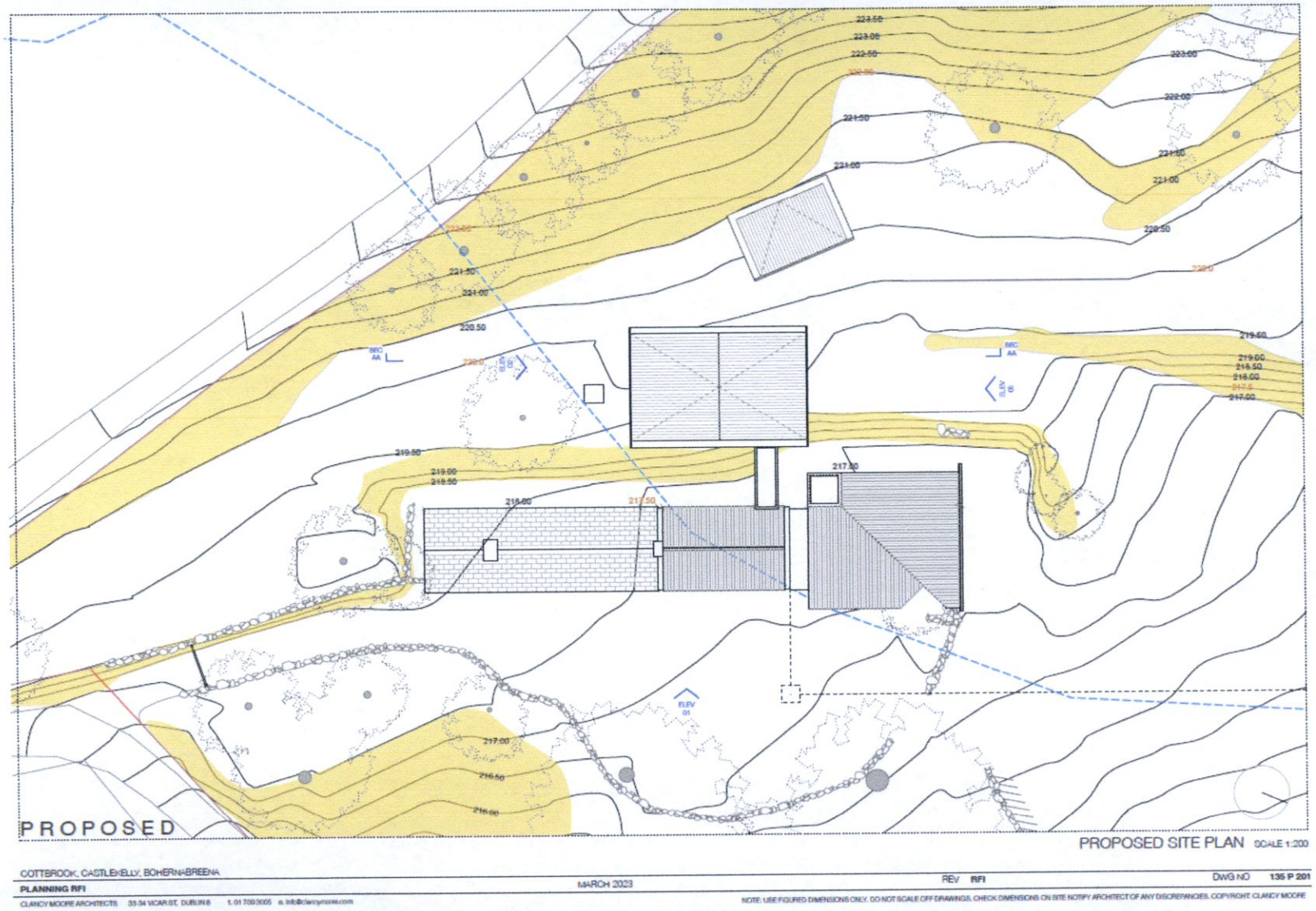


FIGURE 2. PROPOSED SITE LAYOUT (CLANCY MOORE ARCHITECTS, 2023 DRG. NO. 135 P 201).

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."

2.2 Policy Context

2.2.1 South Dublin County Development Plan 2022 – 2028

Policies and objectives of the South Dublin County Development Plan 2022 – 2028 that are of relevance to this Screening 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 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 plan or project and the description and characterisation of other projects or plans that in combination have the potential for having significant effects on the European site;
- Identification of European sites potentially affected;
- Identification and description of potential effects on the European site;
- Assessment of the likely significance of the effects identified 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 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. This includes best practice measures and development requirements, such as SuDS, where they act to prevent significant impacts on a European site.

3.3 Desk Study

A desktop study was carried out to collate and review available information, datasets and documentation sources relevant for the completion of the NIS. The desk- top 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 site synopses available at *https://natura2000.eea.europa.eu/*;
- Information on species records and distributions, obtained from the National Biodiversity Data Centre (NBDC) at *www.maps.biodiversityireland.ie;*
- Information on waterbodies, catchment areas and hydrological connections obtained from the 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 available at the National Planning Application Database and South Dublin County Council.

For a complete list of the specific documents consulted as part of this assessment, see *Section 5 References*.

3.4 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 the proposed 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 effects.
    - The catchment data were used to establish or discount potential hydrological connectivity between the Proposed Development and any European sites.
    - Groundwater 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.

3.5 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.

4 STAGE 1 SCREENING

4.1 Management of European sites

The Proposed Development is not directly connected with or necessary to the management of European sites.

4.2 Existing Environment

4.2.1 Geology, Hydrology and Hydrogeology

The Site of the Proposed Development is within the *Liffey and Dublin Bay* catchment (Catchment ID: 09) and *Dodder_SC_010* sub-catchment (Sub-Catchment ID: 09_16) (EPA, 2023).

The closest watercourse to the Site is the Cottbrook Stream (EU Code: IE_EA_09D010100, Segment Code: 09_1358) which flows along the east boundary of the Site before entering the River Dodder (EU Code: IE_EA_09D010100, Segment Code: 09_333) at the northeast boundary of the Site. During the most recent survey period of 2016 – 2021, these watercourses were classified as *Not at Risk* of not meeting its Water Framework Directive (WFD) objectives, and were assigned a *Good* ecological status (EPA, 2023). The closest EPA station located 380m east of the Site designated the River Dodder as *High* (Q-Value: 4-5) in 2022 (station code: RS09D010010) (EPA, 2023) (Table 1).

The River Dodder then flows into the Bohernabreena Reservoir, also referred to as Glenasmole Upper (EU Code: IE_EA_09_70), 1km northwest of the Site. During the most recent survey period of 2016 – 2021, this waterbody was classified as *Not at Risk* of not meeting its WFD objectives, and was assigned a *Good* ecological status (EPA, 2023).

The Site is situated on the Kilcullen groundwater body (EU Code: IE_EA_G_003), which is *At Risk* of not meeting its WFD objectives (Table 2). The aquifer type within the Site boundary is a *Poor Aquifer* (Pl) aquifer on bedrock which is *Generally Unproductive except for Local Zones*. The groundwater rock units underlying the aquifer are classified as *Granites & other Igneous Intrusive rocks* (GSI, 2023). The level of vulnerability of the Site to groundwater contamination via human activities is *Extreme* throughout the majority of the Site, with a small area of *Rock at or near surface* within the southwest of the Site. The predominant soil on Site is classified as *Carrigvahanagh*, with *River* present along the east and northeast borders, and the subsoil is primarily Granite sands and gravels (*GGr*) and Granite till (*TGr*) (EPA, 2023), with Alluvium undifferentiated (*A*) along the east and northeast boundaries, and Bedrock at surface (*Rck*) within the southwest of the Site (GSI, 2023).

TABLE 1. EPA MONITORING STATIONS AND ASSIGNED Q VALUES.

EPA Monitoring Station name	Station Code	Location from Site	Distance from Site	Assigned Q value
DODDER - 1.3 km u/s Reservoir u/s distributary	RS09D010010	East	380m	4-5 "High"

TABLE 2. 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
River Waterbodies						
Cottbrook Stream and River Dodder	IE_EA_09D010100	East and northeast	N/A	High	Not at Risk	Abutting the Site boundary
Lake Waterbodies						
Glenasmole Upper	IE_EA_09_70	North-west	1.0	Good	Not at Risk	Downstream of the Site
Ground Waterbodies						
Kilcullen Groundwater Body	IE_EA_G_003	N/A	N/A	Good	At Risk	Underlying groundwater-body

4.3 Identification of Relevant European sites

4.3.1 Potential Sources of Effects

The following elements of the Proposed Development were identified and assessed for their potential to cause likely significant effects on European sites.

Construction Phase

- Uncontrolled releases of silt, 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;
- 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

- Surface water drainage from the Site of the Proposed Development;
- Foul water from the Proposed Development; and
- Increased lighting at the Site and in the vicinity emitted from the Proposed Development.

4.3.2 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 4.3.1.

4.3.2.1 *Direct Pathways*

4.3.2.1.1 Hydrological pathways

The Site is located along the Cottbrook Stream and the River Dodder, which discharge to the Bohernabreena Reservoir 1km northwest of the Site within the Glenasmole Valley SAC (001209). A hydrological pathway exists during the Construction Phase via potential surface water discharge from the Site to the Cottbrook Stream and the River Dodder and therefore the various QIs of Glenasmole Valley SAC.

During the Operational Phase, as detailed in the Proposed Drainage Plan (Clancy Moore, 2023), surface water discharge from paved areas and the roofs of buildings at the Site will be discharged to ground via a proposed soakaway, and as such there will be no direct discharge of surface water run-off to any nearby watercourses, including the Cottbrook Stream and the River Dodder.

The Proposed Development will also be served by the existing waste water treatment system on Site, which complies with the minimum separation distance of 5m as detailed in the EPA Code of Practise for Domestic Waste Water Treatment Systems (EPA, 2021). As such, there is no hydrological pathway via foul water from the Site to any European sites.

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

4.3.2.1.2 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 the Cottbrook Stream and the River Dodder, and subsequently Glenasmole Valley SAC. However, due to the nature and scale of the proposed works, along with the Site investigation carried out in March 2021 as part of a previous application on Site (Planning Ref. No. SD21B/0343) which encountered no groundwater or bedrock at trial holes of 2.1m, this pathway is deemed insignificant and no European sites are linked to the Site via hydrogeological means.

4.3.2.1.3 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. The Site is located 105m from the Wicklow Mountains SAC, with Northern Atlantic wet heaths with *Erica tetralix* [4010], European dry heaths [4030], Alpine and Boreal heaths [4060] and Blanket bogs (* if active bog) [7130] all recorded within close proximity to the Site (NPWS, 2023), as seen in Figure 3. Therefore, direct impact pathways via air and land exist between the Proposed Development and the aforementioned European site.

No other European sites are linked to the Site via air and land pathways due to the relatively small scale of the Proposed Development, the vegetation buffer, and the distance between the Site and the next nearest European site (Wicklow Mountains SPA ca. 265m southeast).

4.3.2.2 *Indirect Pathways*

No indirect pathways (e.g., disruptions to migratory paths) were identified due to the small scale and nature of the Proposed Development.

4.3.1 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 3, however only two European sites were identified to have a S-P-R link of note to the Proposed Development Site, namely:

- Glenasmole Valley SAC.
- Wicklow Mountains SAC.

These sites are highlighted in green in the below.

TABLE 3. 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).

Site Name & Site Code	Qualifying Interests (*= priority habitats)	Potential Pathways
Special Areas of Conservation (SAC)		
Glenasmole Valley SAC (001209) Linear Distance to Proposed Development: approx. 710m NW	**Conservation Objectives Version 1 (NPWS 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 hydrological pathway via potential surface water discharge during the Construction Phase.
Wicklow Mountains SAC (002122) Linear Distance to Proposed Development: approx. 105m W	**Conservation Objectives Version 1 (NPWS 2017):** **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)	Potential air/land pathway via dust during the Construction Phase.

Site Name & Site Code	Qualifying Interests (*= priority habitats)	Potential Pathways	
	[8110] Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*) [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 [1355] *Lutra lutra* (Otter)		

Applicant:	Project:	Figure Title:
Alida Stewart & John McGrane	Proposed Develpoment at Cottbrook, Castlekelly, Bohernabreena, Co. Dublin, D24 YY42	Site location relative to the relevant European sites and associated QI habitats

FIGURE 3. LOCATION OF EUROPEAN SITES AND ASSOCIATED QI HABITATS RELATIVE TO THE PROPOSED DEVELOPMENT.

4.3.1.1 *Glenasmole Valley SAC [001209]*

4.3.1.1.1 Site summary

The following description of the Site is 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.

At this site, examples of calcareous fen and flush occur between the two reservoirs, where sedges (including Carex flacca and C. panicea) are joined by such species as Grass-of-parnassus (Parnassia palustris), Few-flowered Spike-rush (Eleocharis quinqueflora), Zig-zag clover (Trifolium medium) and the scarce Fen Bedstraw (Galium uliginosum). Tufa depositing springs are long-known from the site, along the valley sides, and some have substantial tufa mounds and banks. Tufa formation is also known from small streams within the woodland at the site.

Orchid-rich grassland occurs in the drier parts of this site and in places grades into Molinia meadow. Orchids recorded in these habitats include Frog Orchid (Coeloglossum viride), Northern Marsh-orchid (Dactylorhiza purpurella), Fragrant Orchid (Gymnadenia conopsea), Marsh Helleborine (Epipactis palustris), Early-purple Orchid (Orchis mascula) and Greater Butterfly Orchid (Platanthera chlorantha). Two further orchid species, both Red Data Book-listed, have also been found here, Greenwinged Orchid (Orchis morio) and Small-white Orchid (Pseudorchis albida).

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 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".

4.3.1.1.2 Conservation Objectives

Site specific conservation objectives (SSCO) have been compiled for Glenasmole Valley SAC (NPWS, 2018a). These are outlined in Table 4.

TABLE 4. QIS / SCIS AND THEIR CONSERVATION OBJECTIVES FOR GLENASMOLE VALLEY SAC. THE CONSERVATION STATUS OF EACH QI / SCI WAS SOURCED FROM THE RELEVANT STANDARD DATA FORMS, AVAILABLE FROM THE NATURA 2000 NETWORK VIEWER.

QI / SCI (* = priority habitat)	Conservation Status	Conservation Objective

Glenasmole Valley SAC		
6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (*important orchid sites)	Good	To restore the favourable conservation condition of these habitats for this SAC.
[6410] *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)	Good	
[7220] Petrifying springs with tufa formation (Cratoneurion)	Good	

4.3.1.2 *Wicklow Mountains SAC [002122]*

4.3.1.2.1 Site summary

The following description of the Site is extracted from the Site Synopsis (NPWS, 2017) 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 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.

The two dominant vegetation communities in the area are heath and blanket bog. Heath vegetation, with both wet and dry heath well represented, occurs in association with blanket bog, upland acid grassland and rocky habitats. The wet heath is characterised by species such as Heather (Calluna vulgaris), Cross-leaved Heath (Erica tetralix), cottongrasses (Eriophorum spp.), Tormentil (Potentilla erecta), Mat-grass (Nardus stricta), bent grasses (Agrostis spp.) and bog mosses (Sphagnum spp.). In places the wet heath occurs in conjunction with flush communities and streamside vegetation, and here species such as Heath Rush (Juncus squarrosus) and sedges (Carex spp.) are found. Dry heath at this site is confined to shallow peaty soils on steep slopes where drainage is better and particularly in sheltered conditions. It is characterised by species such as Heather, gorse (Ulex spp.), Bell Heather (Erica cinerea), Bilberry (Vaccinium myrtillus), Purple Moor-grass (Molinia caerulea) and lichens (Cladonia spp.). In places the heath grades into upland grassland on mineral soil.

Blanket bog is usually dominated by cottongrasses, Heather and bog mosses. On steeper slopes there is some flushing and here Purple Moor-grass, Heath Rush and certain Sphagnum species become more common. The Liffey Head blanket bog is among the best of its kind in eastern Ireland, with deep peat formations and an extensive system of dystrophic pools developed among the hummocks and hollows on the bog surface.

Alpine vegetation occurs on some of the mountain tops, notably in the Lugnaquilla area, and also on exposed cliffs and scree slopes elsewhere in the site. Here alpine heath vegetation is represented with heath species such as Crowberry (Empetrum nigrum) and Cowberry, and others such as Dwarf Willow (Salix herbacea), the greygreen moss Racomitrium lanuginosum, and scarce species such as Mountain Clubmoss (Diphasiastrum alpinum), Firmoss (Huperzia selago), and Starry Saxifrage (Saxifraga stellaris). Some rare arctic-alpine species have been recorded, including Alpine Lady's-mantle (Alchemilla alpina) and Alpine Saw-wort (Saussurea alpina).

The site supports a range of rare plant species. Parsley Fern (Cryptogramma crispa), Marsh Clubmoss (Lycopodiella inundata), Lanceolate Spleenwort (Asplenium billotii), Small-white Orchid (Pseudorchis albida) and Bog Orchid (Hammarbya paludosa) are all legally protected under the Flora (Protection) Order, 2015. Greater Broomrape (Orobanche rapum-genistae), Alpine Saw-wort and Alpine Lady's-mantle are listed in the Irish Red Data Book. The rare Myxomycete fungus Echinostelium colliculosum has been recorded from the Military Road.

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. Pine Marten has recently been confirmed as occurring within the site. Among the birds, Meadow Pipit, Skylark, Raven and Red Grouse are resident throughout the site. Wheatear, Whinchat and the scarce Ring Ouzel are summer visitors. Wood Warbler and Redstarts are rare breeding species of the woodlands. Dipper and Grey Wagtail are typical riparian species. Merlin and Peregrine, both Annex I species of the E.U. Birds Directive, breed within the site. Recently, Goosander has become established as a breeding species".

4.3.1.2.2 Conservation Objectives

SSCO have been compiled for Wicklow Mountains SAC (NPWS, 2018b). These are outlined in Table 5.

TABLE 5. QIS / SCIS AND THEIR CONSERVATION OBJECTIVES FOR WICKLOW MOUNTAINS SAC. THE CONSERVATION STATUS OF EACH QI / SCI WAS SOURCED FROM THE RELEVANT STANDARD DATA FORMS, AVAILABLE FROM THE NATURA 2000 NETWORK VIEWER.

QI / SCI (* = priority habitat)	Conservation Status	Conservation Objective
Wicklow Mountains SAC		
[3110] Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)	Good	To maintain or restore the favourable conservation condition of these habitats for this SAC.
[3160] Natural dystrophic lakes and ponds	Good	
[4010] Northern Atlantic wet heaths with *Erica tetralix*	Good	
[4030] European dry heaths	Good	

[4060] Alpine and Boreal heaths	Good	
[6130] Calaminarian grasslands of the *Violetalia calaminariae*	Excellent	
[6230] Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)	Good	
[7130] Blanket bogs (* if active bog)	Good	
[8110] Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*)	Excellent	
[8210] Calcareous rocky slopes with chasmophytic vegetation	Good	
[8220] Siliceous rocky slopes with chasmophytic vegetation	Good	
[91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles	Average	
[1355] *Lutra lutra* (otter)	Good	

4.4 Assessment of Likely Significant Effects

The following sections discuss the potential for likely significant effects on the relevant European sites, 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 these European sites. The potential for significant effects that may arise from the Proposed Development was considered through the use of key indicators as detailed in section 3.5.

4.4.1 Habitat Loss and Alteration

The Proposed Development is not located within any European site and therefore there will be no direct loss or alteration of habitat as a result of the Proposed Development. However, due to the proximity of Annex I habitats associated with Wicklow Mountains SAC, namely Northern Atlantic wet heaths with *Erica tetralix* [4010], European dry heaths [4030], Alpine and Boreal heaths [4060] within 105m of the Site, and Blanket bogs (* if active bog) [7130] abutting the south boundary of the Site, in the absence of appropriate mitigation measures, there is potential for significant effects on these habitats via dust deposition during the Construction Phase of the Proposed Development.

Ex-situ habitat may exist on Site for any SCI listed for The Wicklow Mountain SPA, namely Merlin (*Falco columbarius*) [A098] and Peregrine (*Falco peregrinus*) [A103]. However, due to the small scale and nature of the Proposed Development, any potential loss of *ex-situ* habitat will not be significant.

4.4.2 Habitat / Species Fragmentation

As there will be no direct habitat loss within any European sites, no direct habitat fragmentation will arise as a result of the Proposed Development. However, as outlined in section 4.4.1, there is potential for indirect impacts to nearby Annex I habitats associated with Wicklow Mountains SAC via dust deposition during the Construction Phase of the Proposed Development. As such, the potential for significant impacts to these habitats cannot be excluded.

4.4.3 Changes in Water Quality and Resource

As detailed in the Proposed Drainage Plan (Clancy Moore, 2023), surface water discharge from paved areas and the roofs of buildings at the Site will be discharged to ground via a proposed soakaway, and as such there will be no direct discharge of surface water run-off to any nearby watercourses, including the Cottbrook Stream and the River Dodder during the Operational Phase of the Proposed Development.

However, during the Construction Phase of the Proposed Development, there is a potential hydrological connection via surface water discharge to the Cottbrook Stream and the River Dodder abutting the Site. Therefore, there is a hydrological connection between the Site and Glenasmole Valley SAC via surface water discharges from the Site during the Construction Phase.

In the absence of appropriate mitigation measures, there is potential for sediments/pollutants from the Site to enter Glenasmole Valley SAC, which could result in impacts on water quality within this European site.

4.4.4 Disturbance and / or Displacement of Species

As outlined in section 4.4.3 above, the hydrological link between the Site and the European Sites in Bohernabreena Reservoir assessed here has the potential to cause disturbance and/or displacement to otter (*Lutra lutra*) associated with Wicklow Mountains SAC due to effects on the water quality and resource indicator during the Construction Phase.

4.4.5 Changes in Population Density

The Proposed Development does not have the capacity to cause any significant changes in the population density of any species within any European site.

4.4.6 Potential for In-combination Effects

4.4.6.1 *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 Wicklow County Council Planning Applications online map. This distance incorporates nearby developments that may also drain to the River Dodder. 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 the majority of the developments within the vicinity of the Site of the Proposed Development are applications granted for small-scale extensions and alterations to existing residential and commercial properties and are outlined in Table 6. No larger developments exist within the vicinity of the Proposed Development.

TABLE 6. GRANTED AND PENDING DEVELOPMENT APPLICATIONS WITHIN 1.5KM OF THE PROPOSED DEVELOPMENT. LOCATION AND DISTANCE GIVEN IS RELATIVE TO THE PROPOSED DEVELOPMENT.

Planning Reference	Planning Authority	Status	Location
SD20A/0005	**Wicklow County Council**	**Permission**	**25m S**
Development Description Retention of reconstruction of existing cottage; change of window opening sizes to new extension (previously granted under Reg. Ref. SD17B/0413). **Potential for In-combination effects** **No** – Due to the small scale and nature of the works, potential for significant in-combination impacts to European sites can be ruled out.			
SD18A/0455	**Wicklow County Council**	**Permission**	**400m NE**
Development Description 150sq.m single storey extension to the existing community centre; kitchen and community space; group space; sanitary facilities and ancillary storage; vehicular site access; on-site wastewater treatment system and all associated site works. **Potential for In-combination effects** **No** - Due to the small scale and nature of the works, potential for significant in-combination impacts to European sites can be ruled out.			

4.4.6.2 *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 Wicklow County Development Plan), 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. The Wicklow 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.

TABLE 7. SUMMARY OF IMPACT ASSESSMENT ON EUROPEAN SITES AS A RESULT OF THE PROPOSED DEVELOPMENT.

Site	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							
Glenasmole Valley SAC (001209)	No	No	No	None	YES	None	**YES**
Wicklow Mountains SAC (002122)	YES	YES	YES	None	No	None	**YES**

5 APPROPRIATE ASSESSMENT SCREENING CONCLUSION

The Proposed Development at Cottbrook, Castlekelly, Bohernabreena, Co. Dublin, D24 YY42 has been assessed taking into account:

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

Upon examination of the relevant information including in particular the nature of the Proposed Development and the likelihood of significant effects on European sites, the possibility may not be excluded that the Project will have a likely significant effect on any of the European sites listed below:

- Glenasmole Valley SAC (001209).
- Wicklow Mountains SAC (002122).

Accordingly, a NIS has been prepared for the Project and is included under separate cover.

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