Screening for Appropriate Assessment and Ecology Report for development at Glassamucky, Bohernabreena, Tallaght, Dublin 24

Compiled by OPENFIELD Ecological Services

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Introduction

Biodiversity is a contraction of the words 'biological diversity' and describes the enormous variability in species, habitats and genes that exist on Earth. It provides food, building materials, fuel and clothing while maintaining clean air, water, soil fertility and the pollination of crops. A study by the Department of Environment, Heritage and Local Government placed the economic value of biodiversity to Ireland at €2.6 billion annually (Bullock et al., 2008) for these 'ecosystem services'.

All life depends on biodiversity and its current global decline is a major challenge facing humanity. In 1992, at the Rio Earth Summit, this challenge was recognised by the United Nations through the Convention on Biological Diversity which has since been ratified by 193 countries, including Ireland. Its goal to significantly slow down the rate of biodiversity loss on Earth has been echoed by the European Union, which set a target date of 2010 for *halting* the decline. This target was not met but in 2010 in Nagoya, Japan, governments from around the world set about redoubling their efforts and issued a strategy for 2020 called 'Living in Harmony with Nature'. In 2011 the Irish Government incorporated the goals set out in this strategy, along with its commitments to the conservation of biodiversity under national and EU law, in the second and third national biodiversity action plans (Dept. of Arts, Heritage and the Gaeltacht, 2011; Department of Culture, Heritage and the Gaeltacht, 2017). A fourth plan is due for publication in 2022.

The main policy instruments for conserving biodiversity in Ireland have been the Birds Directive of 1979 and the Habitats Directive of 1992. Among other things, these require member states to designate areas of their territory that contain important bird populations in the case of the former; or a representative sample of important or endangered habitats and species in the case of the latter. These areas are known as Special Protection Areas (SPA) and Special Areas of Conservation (SAC) respectively. Collectively they form a network of sites across the European Union known as Natura 2000. A report into the economic benefits of the Natura 2000 network concluded that "there is a new evidence base that conserving and investing in our biodiversity makes sense for climate challenges, for saving money, for jobs, for food, water and physical security, for cultural identity, health, science and learning, and of course for biodiversity itself" (EC, 2013).

Unlike traditional nature reserves or national parks, Natura 2000 sites are not 'fenced-off' from human activity and are frequently in private ownership. It is the responsibility of the competent national authority to ensure that 'good conservation status' exists for their SPAs and SACs and specifically that Article 6(3) of the Habitats Directive is met. Article 6(3) states:

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.

Sections 177U and 177V of the Planning and Development Act 2000 sets out the purpose of AA Screening is as follows:

A screening for appropriate assessment shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site.

The test at stage 1 AA Screening is that:

The competent authority shall determine that an appropriate assessment of a proposed development is required if it cannot be excluded, on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site.

The test at stage 2 (Appropriate Assessment) is:

Whether or not the proposed development, individually or in-combination with other plans or projects would adversely affect the integrity of a European site.

However, where this is not the case, a preliminary screening must first be carried out to determine whether or not a full AA is required. This screening is carried out by South Dublin County Council.

Screening for Appropriate Assessment

Article 6(3) of the Habitats Directive states:

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.

The purpose of Stage 1 Screening for Appropriate Assessment is to determine whether it is necessary to carry out a Stage 2 full Appropriate Assessment (AA).

Section 177U(1) provides that a screening for appropriate assessment of a proposed development shall be carried out by the competent authority to

assess, in view of best scientific knowledge, if that proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site.

Section 177U(4) provides that the competent authority shall determine that an appropriate assessment of a proposed development is required if it cannot be excluded, on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site.

South Dublin County Council determination as to whether an Appropriate Assessment is required must be made on the basis of objective information and must be recorded.

Where an Appropriate Assessment is required, an applicant for planning permission must prepare and submit a Natura Impact Statement.

This Appropriate Assessment Screening Report (AASR) has been prepared in accordance with the provisions of Article 6(3) of the Habitats Directive and Section 177U of the 2000 Act.

The Purpose of this document

This document provides for the screening of an application to retain a development at Glenside House, Glassamucky, Bohernabreena, Tallaght, Dublin 24.
Under the Planning and Development Act 2000 (as amended), and the Birds and Natural Habitats Regulations 2011, the planning authority cannot grant planning permission where significant effects may arise to a Natura 2000 site. In order to make that decision the development must be screened for AA. This report provides the necessary information to allow South Dublin County Council to carry out this screening.

As this is an application for retention, the planning authority is prohibited from granting permission where it has been concluded that significant effects to Natura 2000 sites may have arisen or are arising.

About OPENFIELD Ecological Services

OPENFIELD Ecological Services is headed by Pádraic Fogarty who has worked for 25 years in the environmental field and in 2007 was awarded an MSc from Sligo Institute of Technology for research into Ecological Impact Assessment (EcIA) in Ireland. Since its inception in 2007 OPENFIELD has carried out numerous EcIAs for Environmental Impact Assessment (EIA), Appropriate Assessment in accordance with the EU Habitats Directive, as well as individual planning applications. Pádraic is a full member of the Institute of Environmental Management and Assessment (IEMA).
Guidance

This AA 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;
- *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* (European Commission, 2001);
- *Communication from the Commission on the precautionary principle* (European Commission, 2000); and,
- *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* (European Commission, 2021).

Methodology

The methodology for this screening statement is clearly set out in a document prepared for the Environment DG of the European Commission entitled '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' (Oxford Brookes University, 2001). Chapter 3, part 1, of this document deals specifically with screening while Annex 2 provides the template for the screening/finding of no significant effects report matrices to be used.

In accordance with this guidance, the following methodology has been used to produce this screening statement:

Step 1: Management of the Site
This determines whether the project is necessary for the conservation management of the site in question.

Step 2: Description of the Project
This step describes the aspects of the project that may have an impact on the Natura 2000 site.

Step 3: Characteristics of the Site
This process identifies the conservation aspects of the site and determines whether negative impacts can be expected as a result of the plan. This is done through a literature survey and consultation with relevant stakeholders – particularly the National Parks and Wildlife Service (NPWS). All potential effects

are identified including those that may act alone or in combination with other projects or plans.

Using the precautionary principle, and through consultation and a review of published data, it is normally possible to conclude at this point whether potential impacts are likely. Deficiencies in available data are also highlighted at this stage.

Step 4: Assessment of Significance
Assessing whether an effect is significant or not must be measured against the conservation objectives for the Natura area in question.
If this analysis shows that significant effects are likely then a full AA will be required.
The steps are compiled into a screening matrix, a template of which is provided in Appendix II of the EU methodology.

Mitigation measures cannot be taken into account in an AA screening assessment

A full list of literature sources that have been consulted for this study is given in the References section to this report while individual references are cited within the text where relevant.

Screening Template as per Annex 2 of EU methodology:

This plan is not necessary for the management of any SAC or SPA and so Step 1 as outlined above is not relevant.

Brief description of the proposed project

The project will involve:

- Retention and completion of existing building (A1) with direct link to existing family home providing extra living accommodation.
- Retention & completion of existing building (B) to rear North boundary for use as private family Gym and general store.
- Retention of single storey shed (E) in side garden (South) for storage of equipment used by applicant in relation to his work.
- Retention and completion of building (F) located on North side of Land to accommodate the storage of Vintage Cars owned by the applicant together with required storage of associated materials.

The subject site is located in the valley of the Dodder River at Glenasmole, east of the Glassamucky Road which runs along the eastern side of the valley. This is a steep-sided valley, close to the northern limit of the Wicklow uplands and here the river has been dammed to form two reservoirs which provide drinking water for Dublin City. The surrounding area is characterised by low intensity farming, typically with sheep. A number of one-off houses are also scattered throughout the valley along with commercial forestry, particularly along the east-facing slopes. Historic mapping shows that land use in the vicinity has changed little over the past 100 years with the creation of the reservoirs in the late 1800s.

Available maps from the Environmental Protection Agency (EPA) shows the Piperstown Stream running along the boundary the development site. This water course flows to the north-west, entering the River Dodder north of the reservoirs. The River Dodder that flows north into Dublin City, joining the River Liffey at Grand Canal Dock.

The site location is shown in figure 1.

Figure 1 – Site location showing nearby Natura 2000 sites and local water courses. The boundaries of the SACs in this area are shown in tan.

Figure 2 – indicative site boundary showing proximity to the Glenasmole Reservoir SAC.

The lands subject to this retention application are composed of artificial habitats including buildings and hard surfacing. The development site is approximately 400m from the boundary of the Glenasmole Reservoir SAC as the crow flies.

The subject proposal is for the retention of buildings along with associated services. No works were undertaken on any area inside or directly adjacent to the SAC boundary. There is an existing wastewater treatment system. The development has not resulted in an increase in loading to this system. This layout is shown in figure 3.

Drinking water for the development is from a mains supply, the element for retention have not resulted in any measurable change to the demand for freshwater.

This development occurred on a site that is of low biodiversity value and is within a rural area with low levels of background noise and light.

The project has increased the area of hard/impermeable surfaces on the site as buildings and driveways replaced grassland. Rainwater from the site passes to and existing soakaway, which is a form of Sustainable Drainage System (SUDS).

There has been no loss, or direct interference with, habitats within any Natura 2000 site.

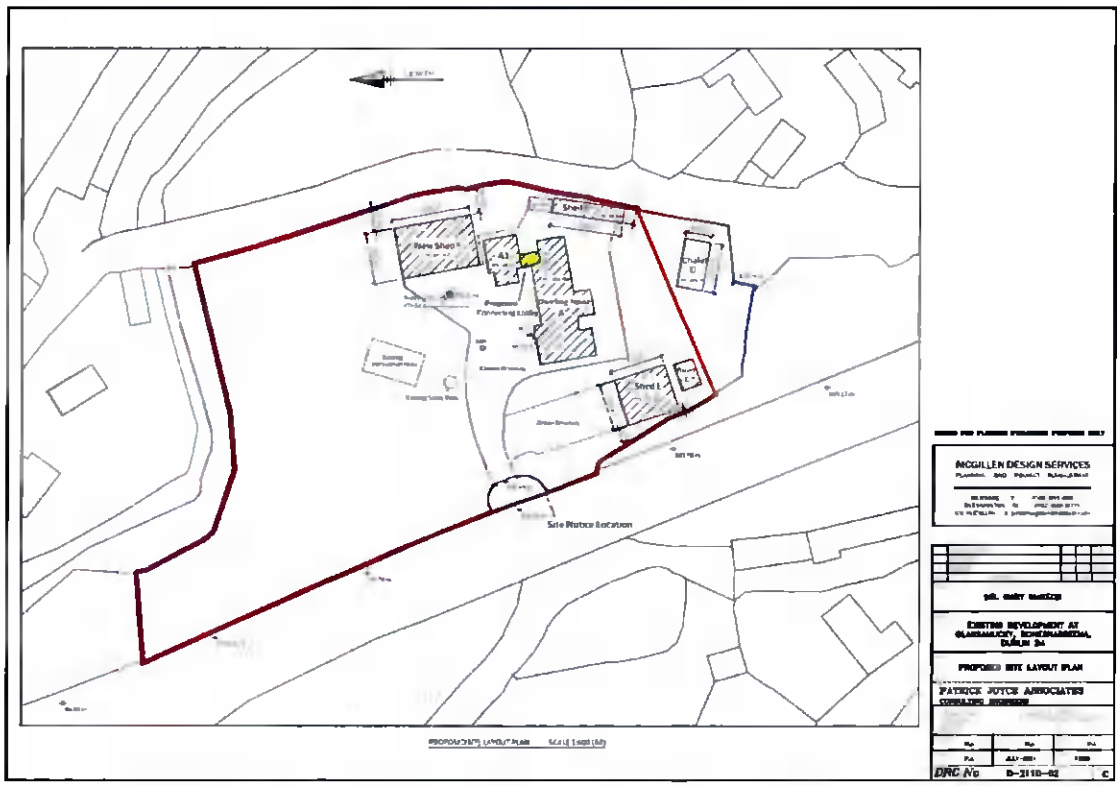

Figure 3 – existing site layout including proposed new link (highlighted in yellow)

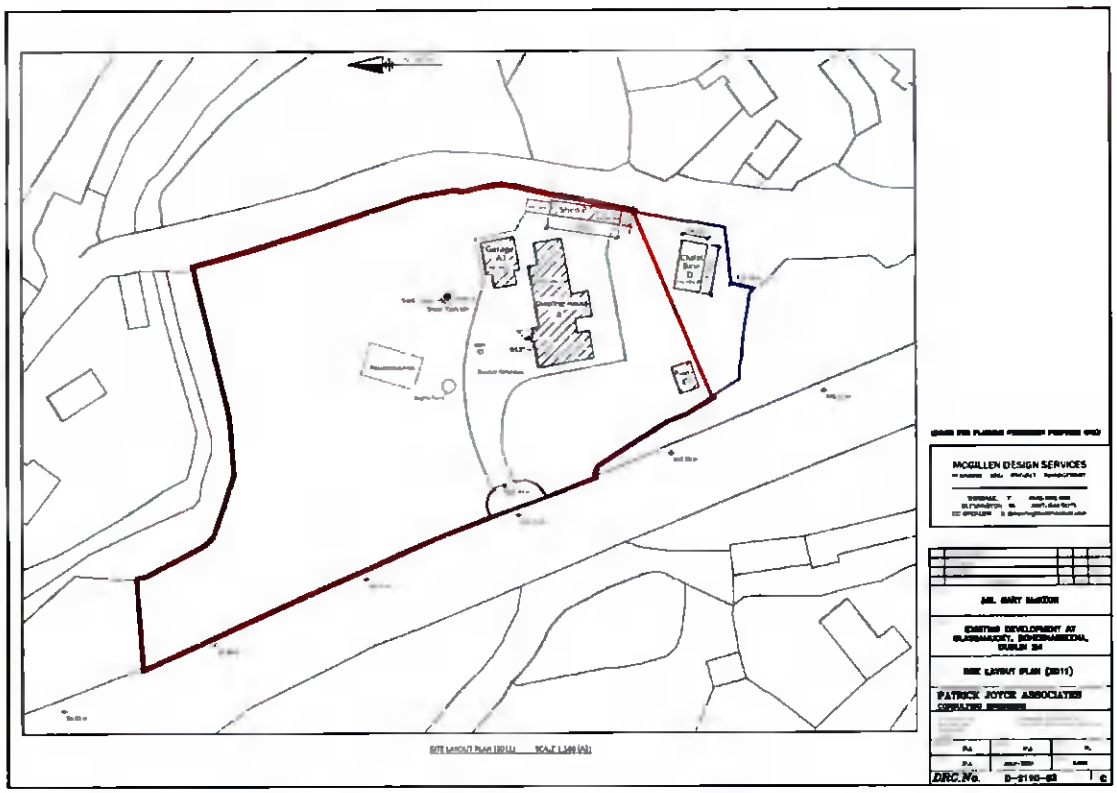

Figure 4 – site layout prior to construction of buildings for which retention permission is sought

Brief description of Natura 2000 sites

In assessing the zone of influence of this project upon Natura 2000 sites the following factors must be considered:

- Potential impacts arising from the project
- The location and nature of Natura 2000 sites
- Pathways between the development and the Natura 2000 network

There is no prescribed radius to determine which Natura 2000 sites are to be examined and this depends upon the zone of influence of the project. It has already been stated that the site is not located within or directly adjacent to any Natura 2000 site while the Glenasmole Valley SAC can be found approximately 400m to the west.

The Wicklow Mountains SAC can be found approximately 1.8km to the south-west while the Wicklow Mountains SPA is located approximately 4km to the south. No other SAC or SPA lies within the zone of influence of this project as there are no pathways to such areas.

The **Glenasmole Valley SAC** (code: 1209) is the flooded valley of the Dodder river, dammed to provide drinking water for the city of Dublin, and covering an area of nearly 150ha. Woodland has developed around its margins while species-rich grassland is to be found on some of its slopes. A number of rare plants species, including a variety of orchids, are to be found here.

The reasons why this area falls under the SAC designation are set out in the qualifying interests. They are habitat types listed in Annex I or species listed in Annex II of the Habitats Directive. This information is provided by the National Parks and Wildlife Service (NPWS) and is shown in table 1 below. In this case the SAC is designated only for protected habitat types. The status for each habitat is on a national scale and does not necessarily relate to features at Glenasmole (NPWS, 2019).

Table 1 – Qualifying interests for the Glenasmole Valley SAC (from NPWS)

Code	Habitats	Status
6210	Orchid rich grassland/Calcareous grassland	Bad
6410	Molinea meadows	Bad
7220	Petrifying springs (priority habitat)	Inadequate

- **Orchid-rich grassland (6210)** This is a species rich grassland habitat found on well drained calcareous soils. It must be important for orchids in order to fall into this category. While there is evidence that an increased occurrence of flooding on some sites may be having a detrimental effect the principle threats listed are from agricultural intensification and 'stock feeding', i.e. overgrazing.
- **Molinea meadows (6410)** *Molinea caerulea,* the Purple Moor-grass, is typically associated with upland peatland habitats but this habit type occurs on lowland sites associated with traditional agricultural practices. The main threats that it

faces are associated with changes in land use, e.g. land abandonment or intensification.

- **Petrifying Springs (7220)**: These are very localised habitats that arise from the precipitation of excess calcium carbonate in supersaturated running water. They are associated with characteristic bryophytes. They are vulnerable to changes in water quality, flow regime and intensification of land use practices (NPWS, 2013).

Site specific conservation objectives have been published for this SAC (NPWS, 2021) and are summarised here.

Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco Brometalia) (important orchid sites – priority habitat) (6210)
Habitat area stable or increasing subject to natural processes; no decline in habitat distribution; maintain vegetation composition in a favourable status (including non-native and negative indicator species); not more than 10% bare soil; less than 20m^2 showing signs of serious grazing or other disturbance.

Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) (6410)
Habitat area stable or increasing subject to natural processes; no decline in habitat distribution; maintain vegetation composition in a favourable status (including non-native and negative indicator species); not more than 10% bare soil; less than 20m^2 showing signs of serious grazing or other disturbance.

Petrifying springs – priority habitat (7220)
Habitat area stable or increasing subject to natural variations; no decline in habitat distribution; maintain appropriate hydrological regimes; maintain appropriate levels of tufa formation; maintain nitrate level at less than 10mg/l; restore phosphate level to less than 15µg/l; maintain variety of vegetation communities, subject to natural processes; at least three positive/high quality indicator species as listed in Lyons and Kelly (2016) and no loss from baseline number; potentially negative indicator species should not be dominant or abundant; woody species should be absent in unwooded springs; invasive species should be absent; cover of algae less than 2%; field layer height between 10cm and 50cm (except for bryophyte-dominated ground <10cm); no decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat; maintain features of local distinctiveness, subject to natural processes.

Wicklow Mountains SAC & SPA (site codes: 2122 & 4040)
Wicklow Mountains is a large area and is designated as both an SAC and SPA as well as being a National Park. It is an upland area underlain with granite and is an important amenity and recreational area, as well as being of high conservation value. Its qualifying interests are shown in table 3 while its 'features of interest' are given as Merlin *Falco columbarius* (breeding) and Peregrine *Falco peregrinus* (breeding).

Table 3 – Qualifying interests for the Wicklow Mountains SAC (site code: 4040)

Habitats	Status
Active Blanket bog	Bad
Atlantic wet heath	Bad
European dry heath	Bad
Old oak woodland	Bad
Siliceous rocky slopes	Inadequate
Calcareous rocky slopes	Inadequate
Siliceous scree	Inadequate
Alpine and Boreal heath	Bad
Natural dystrophic lakes	Inadequate
Oligotrophic lakes	Inadequate
Species rich Nardus grassland	Bad
Calaminarian Grassland	Inadequate
Otter	Favourable

- **Active Blanket Bog (7130)** This is a very widespread habitat in Ireland found on uplands and lowlands along the Atlantic seaboard. Active blanket bog is peat forming, principally indicating the presence of Sphagnum sp. mosses but also other species. Degraded bog, where there is now forestry or bare peat, are excluded as they are not considered 'active'.
- **Atlantic wet heath (4010)** This is a heather dominant habitat that is intermediate between dry heath and blanket bog, and is frequently found in association with these two. Grazing and trampling by sheep is identified as the greatest threat to the status of the habitat but non-native invasive species such as Rhododendron and the moss *Campylopus introflexus* also impact negatively upon the habitat.
- **Dry heath (4030)**: This is a community of heather shrubs that occurs on well-drained, acidic, nutrient-poor mineral or peaty soils. Pressures on this habitat arise from high levels of sheep grazing, as well as afforestation, mining and quarrying. Unregulated burning is also identified as an important threat to the structure of this habitat.
- **Alpine and Boreal Heath (4060)** This habitat occurs on exposed mountain tops with acid substrate where stunted growths of heather are found. It is also found in the Burren, Co. Clare at low altitudes.
- **Siliceous Scree (8110)** This is a mountainous habitat characterised by expanses of shattered siliceous rock from small, mobile stones to stable

boulders. Vegetation is sparse and frequently dominated by moss or lichen communities.

- **Calcareous or Siliceous Rocky Slopes (8210 & 8220)** These are vertical or near vertical slopes of calcareous or siliceous rock with cracks and fissures that are home to unique communities of plants. Climate change is considered to be the greatest threat where specialist arctic-alpine plants are to be found.
- **Upland Oligotrophic lakes (3130).** These are naturally low nutrient status lakes that in Ireland are associated with expanses of blanket bog. They are threatened by eutrophication (excessive input of nutrients) and peatland drainage.
- **Dystrophic lakes (3160)** These are naturally low oxygen, nutrient poor, acid lakes that occur in association with peatland habitats. They have low species diversity but some of these species are uniquely associated with this habitat.
- **Camalinarian Grassland (6130).** This unusual grassland community is found in Ireland on the sites of previous extraction works such as old mines. Certain bryophyte and vascular plants, including some notable rarities, thrive in conditions of high heavy metal concentrations, such as copper, lead or zinc.
- **Otter (1355)** This aquatic mammal lives its entire life in and close to wet places, including rivers, lakes and coastal areas. They will feed on a wide variety of prey items. Despite local threats from severe pollution incidents and illegal fishing, its population is considered stable and healthy, and so is assessed as being of 'good' status.

Generic conservation objectives only are available for this SPA (NPWS, 2021).

Site specific conservation objectives have been published for the SAC (NPWS, 2017) and are summarised as:

Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) (3110)
Habitat area stable or increasing, no decline in habitat distribution, typical species present and in good condition, vegetation composition correctly distributed and in good condition, Maintain appropriate natural hydrological regime necessary to support the habitat; Restore appropriate lake substratum type, extent and chemistry to support the vegetation; restore water transparency; Restore the concentration of nutrients in the water column to sufficiently low levels to support the habitat and its typical species; Restore appropriate water quality to support the habitat, including high chlorophyll a status; Maintain appropriate water quality to support the habitat, including high phytoplankton composition status; Restore/maintain trace/absent attached algal biomass (<5% cover) and high phytobenthos status; Maintain high macrophyte status; Maintain appropriate water and sediment pH, alkalinity and cation concentrations to support the habitat, subject to natural processes; Restore/maintain appropriate water colour to support the habitat;

Restore/maintain appropriate organic carbon levels to support the habitat; Restore/maintain appropriate turbidity to support the habitat; Maintain the area and condition of fringing habitats necessary to support the natural structure and functioning of habitat 3110.

Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea (3130)
Habitat area stable or increasing, no decline in habitat distribution, typical species present and in good condition, vegetation composition correctly distributed and in good condition, Maintain appropriate natural hydrological regime necessary to support the habitat; Restore appropriate lake substratum type, extent and chemistry to support the vegetation; restore water transparency; Restore the concentration of nutrients in the water column to sufficiently low levels to support the habitat and its typical species; Restore appropriate water quality to support the habitat, including high chlorophyll a status; Maintain appropriate water quality to support the habitat, including high phytoplankton composition status; Restore/maintain trace/absent attached algal biomass (<5% cover) and high phytobenthos status; Maintain high macrophyte status; Maintain appropriate water and sediment pH, alkalinity and cation concentrations to support the habitat, subject to natural processes; Restore/maintain appropriate water colour to support the habitat; Restore/maintain appropriate organic carbon levels to support the habitat; Restore/maintain appropriate turbidity to support the habitat; Maintain the area and condition of fringing habitats necessary to support the natural structure and functioning of habitat 3130.

European Wet Heaths (4010)
Habitat area stable or increasing subject to natural processes; no decline in habitat distribution; maintain soil nutrient status within natural range; maintain vegetation composition and structure (including negative indicator species and absence of burning); less than 10% disturbed/bare ground.

European Dry Heaths (4030)
Habitat area stable or increasing subject to natural processes; no decline in habitat distribution; maintain soil nutrient status within natural range; maintain vegetation composition and structure (including negative indicator species and absence of burning); less than 10% disturbed/bare ground.

Alpine and Boreal Heaths (4060)
Habitat area stable or increasing subject to natural variations; no decline in habitat distribution; maintain vegetation composition in a favourable status (including non-native and negative indicator species); less than 10% disturbed/bare ground; indicators of local distinctiveness maintained.

Calaminarian grasslands of the Violetalia calaminariae (6130)
No decline in habitat area subject to natural processes; no decline in habitat distribution; Maintain adequate open ground; Maintain high copper (Cu) levels in soil; Maintain low and open vegetation; Maintain diversity and populations of metallophyte bryophytes.

Species-rich Nardus grasslands (6230)
No decline in habitat area subject to natural processes; no decline in habitat distribution; Maintain soil nutrient status within natural range; Maintain variety of vegetation communities, subject to natural processes; Number of positive indicator species present at each monitoring stop is at least seven; At least two high quality indicator species for base rich examples of the habitat and at least one for base-poor examples of the habitat; Species richness at each monitoring stop at least 25; Cover of non-native species less than or equal to 1%; Cover of negative indicator species individually less than or equal to 10% and collectively less than or equal to 20%; Cover of Sphagnum species less than or equal to 10%; Cover of Polytrichum species less than or equal to 25%; Cover of shrubs, bracken (Pteridium aquilinum) and heath collectively less than or equal to 5%; Forb component of forb:graminoid ratio is 20- 90%; Proportion of the sward between 5cm and 50cm tall is at least 25%; Cover of litter less than or equal to 20%; Cover of disturbed bare ground less than or equal to 10%; Area of the habitat showing signs of serious grazing or disturbance less than 20m²; No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat.

***Blanket bogs* (7130)**
Area stable or increasing, subject to natural processes; No decline, subject to natural processes; Maintain soil nutrient status within natural range; At least 99% of the total Annex I blanket bog area is active; Natural hydrology unaffected by drains and erosion; Maintain variety of vegetation communities, subject to natural processes; Number of positive indicator species present at each monitoring stop is at least seven; Cover of bryophytes or lichens, excluding Sphagnum fallax, at least 10%; Cover of each of the potential dominant species less than 75%; Total cover of negative indicator species less than 1%; Cover of non-native species less than 1%; Cover of scattered native trees and shrubs less than 10%; Less than 10% of the Sphagnum cover is crushed, broken and/or pulled up; Last complete growing season's shoots of ericoids, crowberry (Empetrum nigrum) and bog-myrtle (Myrica gale) showing signs of browsing collectively less than 33%; No signs of burning in sensitive areas, into the moss, liverwort or lichen layer or exposure of peat surface due to burning; Cover of disturbed bare ground less than 10%; Area showing signs of drainage from heavy trampling, tracking or ditches less than 10%; Less than 5% of the greater bog mosaic comprises erosion gullies and eroded areas; No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat.

Siliceous scree (8110)
Area stable or increasing, subject to natural processes; No decline, subject to natural processes; Maintain soil nutrient status within natural range; Cover of bryophytes and non-crustose lichen species at least 5%; Proportion of vegetation composed of negative indicator species less than 1%; Proportion of vegetation composed of non-native species less than 1%; At least one positive indicator species present in vicinity of each monitoring stop in block scree; Total cover of grass species and dwarf shrubs less than 20%; Total cover of bracken (Pteridium aquilinum), native trees and shrubs less than 25%; Live leaves of forbs and shoots of dwarf shrubs showing signs of grazing or browsing collectively less than 50%; Ground disturbed by human and animal paths, scree running, vehicles less than 10%; No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat.

Calcareous rocky slopes with chasmophytic vegetation (8210)
Area stable or increasing, subject to natural processes; No decline, subject to natural processes; Maintain soil nutrient status within natural range; Number of ferns and Saxifraga indicators at each monitoring stop is at least one; Number of positive indicator species at each monitoring stop is at least three; Proportion of vegetation composed of non-native species less than 1%; Total cover of bracken (Pteridium aquilinum), native trees and shrubs less than 25%; Live leaves of forbs and shoots of dwarf shrubs showing signs of grazing or browsing collectively less than 50%; No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat

Siliceous rocky slopes with chasmophytic vegetation (8220)
Area stable or increasing, subject to natural processes; No decline, subject to natural processes; Maintain soil nutrient status within natural range; Number of ferns and Saxifraga indicators at each monitoring stop is at least one; Number of positive indicator species at each monitoring stop is at least three; Proportion of vegetation composed of non-native species less than 1%; Total cover of bracken (Pteridium aquilinum), native trees and shrubs less than 25%; Live leaves of forbs and shoots of dwarf shrubs showing signs of grazing or browsing collectively less than 50%; No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat

Old sessile oak woods (91A0)
No decline in native tree cover; variety of native species present; negative indicator species absent, i.e. Beech *Fagus sylvatica,* Rhododendron *Rhododendron ponticum* and Cherry Laurel *Prunus laurocerasus.*

Otter
No significant decline in distribution; no significant decline in terrestrial/estuarine/freshwater/lake habitat; no significant decline in couching sites or holts; no decline in available fish biomass;

Pathway Analysis

There is a hydrological connection between the development site and the Glenasmole SAC via groundwater and surface water pathways.

There is no pathway connection to the Wicklow Mountains SAC/SPA or any other Natura 2000 site.

Data collected to carry out the assessment

The NPWS Conservation Statement for the Glenasmole Valley SAC contains detailed information on the location of important habitats and species. The main management issues identified in this document are:

- Agricultural intensification;
- Construction works at the reservoirs;
- Dumping;
- Grazing within the woodland;
- Housing development;
- Impacts of forestry and woodland management
- Inappropriate development of recreational facilities
- Natural succession
- Pollution, leachate from landfill
- Spread of alien species and amenity planting

Map 3 of this report gives an indicative habitat map and this shows that there is no link between the subject site and the SAC. There is little published data on the status of petrifying springs in Ireland. The Natura Data Form published by NPWS for the Glenasmole Valley SAC states that "there are no apparent threats to the petrifying springs".

The conservation objectives document from the NPWS has mapped known locations of the priority petrifying springs habitat. This is reproduced in figure 4.

Water quality in the catchment is monitored by the EPA which maintains a regular assessment programme. At the monitoring points both upstream and downstream of the reservoir water quality has most recently (2019) been determined to be 'high status' and 'good status' respectively. In the context of the Water Framework Directive the status of the lakes are 'good' while the Dodder flowing through them is also 'good'. The Piperstown Stream is 'good'. Downstream of Kiltipper Park the Dodder is of 'moderate status' until it enters the city at Oldbawn, and thereafter it is 'poor'.

The status of groundwater throughout the catchment of the Glenasmole Valley is 'good'.

Figure 4 – site location (black circle) in relation to known locations of petrifying spring habitats (green triangles). The direction of surface flow from the development site is northward. From NPWS Conservation Objectives.

The Assessment of Significance of Effects

Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 site.

In order for an effect to occur there must be a pathway between the source (the development site) and the receptor (the SAC or SPA). Where a pathway does not exist, an impact cannot occur.

The proposed development is not located within any SAC or SPA. It lies approximately 400m from the boundary of the Glenasmole Valley SAC.

This is the only Natura 2000 site within the zone of influence of this project.

Habitat loss

Because the site is physically removed from the boundary of the SAC there can be no loss or direct disturbance of habitats or species in this area. The site is separated from the boundary of the Glenasmole Valley SAC by agricultural pastures and no works have been undertaken close to the SAC boundary.

No significant effects can have arisen, or are arising, to Natura 2000 sites from this source.

Indirect habitat disturbance
Some additional noise and artificial light has been generated from this project. However, there are no species which are listed as qualifying interests for the Glenasmole Valley SAC which could be sensitive to these sources. No physical disturbance effects can occur to any Natura 2000 site.

No significant effects can have arisen, or are arising, to Natura 2000 sites from this source.

Pollution during the operation phase
There is a pathway from the site via surface and groundwater flows to the River Dodder and the Glenasmole Valley SAC. Water quality in the Dodder and the Glenasmole Reservoirs is currently 'good'. The point at which the Piperstown Stream enters the river Dodder is north of the lower reservoir and downstream of petrifying springs habitats. Other qualifying interests for the SAC are grasslands and so are not water dependent in a way that petrifying springs are.

The use of a soakaway to attenuate surface water run-off is an accepted form of SUDS (sustainable drainage system) and so this addition will ensure that no negative effects to run-off quality or quantity are occurring.

The developments for which retention permission is sought did not increase the population of the catchment that is discharging to the treatment plant. In other words, no extra effluent has been generated by the development.

There, no affects to water quality or qualifying interests of the Glenasmole Valley SAC can have arisen from this source.

Pollution during the construction phase
Pollutants arising from surface water run-off during construction typically comprise of sediment. During construction projects this can also include cement and other substances which are toxic to aquatic life. No works were carried out at the Piperstown Stream. In a scenario where pollutants may have entered the stream, e.g. sediment run-off, the distance to the SAC (River Dodder) is over 700m. The vast majority of pollution would have settled out of the stream before reaching the River Dodder. In addition, this point is well downstream of petrifying spring habitats and so even were pollutants to reach this section of the SAC no negative effects can have arisen to qualifying interests.

There, no affects to water quality or qualifying interests of the Glenasmole Valley SAC can have arisen from this source.

Hydrology
There will be no new abstraction of groundwater as part of this project and the development will continue to be served by a mains water supply.

There can be no changes to the pattern of groundwater arising from the development which could affect sensitive habitats downstream.
Are there other projects or plans that together with the project or plan being assessed could affect the site?

Individual impacts from one-off developments or plans may not in themselves be significant. However, these may become significant when combined with similar, multiple impacts elsewhere. These are sometimes known as cumulative impacts but in AA terminology are referred to as 'in combination' effects.

In terms of the conservation objectives of the SAC, maintaining the extent and condition of important habitats and species populations is vital. A conservation objective for the petrifying springs habitat is to maintain water quality and hydrological conditions which are subject to surface and groundwater flow patterns. In this case the flow of surface water from the development site is not connected to petrifying spring habitats and so there is no pathway to this qualifying interest. No effects to groundwater quality are predicted to occur from this project.

The second River Basin Management Plan was published under the EU's Water Framework Directive in 2018. This sets out to attain 'good ecological status' of all water bodies by 2015. It includes 190 'priority areas for action' over the 2018-2021 period and the Dodder catchment is among these. The last characterisation of water bodies shows that 24 out of 44 (55%) are reaching 'good status' according to www.catchments.ie. "Diffuse urban sources of pollution are the significant pressure" along the stretches of the Dodder which are not reaching good status.

There are no plans or projects which could act in combination with the current proposal to result in any significant effect to a Natura 2000 site.

Finding of No Significant Effects

In carrying out this AA screening, mitigation measures have not been taken into account. Standard best practice construction measures which could have the effect of mitigating any effects on any European Sites have similarly not been taken into account.

On the basis of the screening exercise carried out above, it can be concluded that the possibility of any significant impacts on any European Sites, whether arising from the project itself or in combination with other plans and projects, can be excluded beyond a reasonable scientific doubt on the basis of the best scientific knowledge available.

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