APPROPRIATE ASSESSMENT SCREENING REPORT

FOR

PROPOSED RESIDENTIAL DEVELOPMENT

AT

STONEY HILL ROAD, RATHCOOLE, COUNTY DUBLIN

ON BEHALF OF

Romeville Developments Ltd.

Prepared by
Enviroguide Consulting

Dublin
3D Core C, Block 71, The Plaza, Park West, Dublin 12

Kerry
19 Henry Street
Kenmare, Co. Kerry

Wexford
M10 Wexford Enterprise Centre, Strandfield Business Park, Rosslare Road, Wexford

www.enviroguide.ie
info@enviroguide.ie
+353 1 565 4730

DOCUMENT CONTROL SHEET

Client	Romeville Developments Ltd.
Project Title	Proposed Residential Development at Stoney Hill Road, Rathcoole, Co. Dublin
Document Title	Appropriate Assessment Screening Report

Revision	Status	Author(s)	Reviewed	Approved	Issue Date
1.0	Draft for internal Review	**Shannen O'Brien** *Project Ecologist*	Siobhán Atkinson *Senior Ecologist*	-	-
2.0	Draft for Client	**Shannen O'Brien** *Project Ecologist*	Siobhán Atkinson *Senior Ecologist*	Jim Dowdall *Director*	13/07/2022
3.0	Final	**Shannen O'Brien** *Project Ecologist*	Siobhán Atkinson *Senior Ecologist*	Jim Dowdall *Director*	19/08/2022

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

REPORT LIMITATIONS

Synergy Environmental Ltd. t/a Enviroguide Consulting (hereafter referred to as "Enviroguide") has prepared this report for the sole use of Romeville Developments Ltd. in accordance with the Agreement under which our services were performed. No other warranty, expressed or implied, is made as to the professional advice included in this Report or any other services provided by Enviroguide.

The information contained in this Report is based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested and that such information is accurate. Information obtained by Enviroguide has not been independently verified by Enviroguide, unless otherwise stated in the Report.

The methodology adopted and the sources of information used by Enviroguide in providing its services are outlined in this Report.

The work described in this Report is based on the conditions encountered and the information available during the said period of time. The scope of this Report and the services are accordingly factually limited by these circumstances.

All work carried out in preparing this report has used, and is based upon, Enviroguide's professional knowledge and understanding of the current relevant national legislation. Future changes in applicable legislation may cause the opinion, advice, recommendations or conclusions set-out in this report to become inappropriate or incorrect. However, in giving its opinions, advice, recommendations and conclusions, Enviroguide has considered pending changes to environmental legislation and regulations of which it is currently aware. Following delivery of this report, Enviroguide will have no obligation to advise the client of any such changes, or of their repercussions.

Enviroguide disclaim any undertaking or obligation to advise any person of any change in any matter affecting the Report, which may come or be brought to Enviroguide's attention after the date of the Report.

Certain statements made in the Report that are not historical facts may constitute estimates, projections or other forward-looking statements and even though they are based on reasonable assumptions as of the date of the Report, such forward-looking statements by their nature involve risks and uncertainties that could cause actual results to differ materially from the results predicted. Enviroguide specifically does not guarantee or warrant any estimate or projections contained in this Report.

Unless otherwise stated in this Report, the assessments made assume that the site and facilities will continue to be used for their current or stated proposed purpose without significant changes.

The content of this report represents the professional opinion of experienced environmental consultants. Enviroguide does not provide legal advice or an accounting interpretation of liabilities, contingent liabilities or provisions.

If the scope of work includes subsurface investigation such as boreholes, trial pits and laboratory testing of samples collected from the subsurface or other areas of the site, and environmental or engineering interpretation of such information, attention is drawn to the fact that special risks occur whenever engineering, environmental and related disciplines are applied to identify subsurface conditions. Even a comprehensive sampling and testing programme implemented in accordance with best practice and a professional standard of care may fail to detect certain conditions. Laboratory testing results are not independently verified by Enviroguide and have been assumed to be accurate. The environmental, ecological, geological, geotechnical, geochemical and hydrogeological conditions that Enviroguide interprets to exist between sampling points may differ from those that actually exist. Passage of time, natural occurrences and activities on and/or near the site may substantially alter encountered conditions.

1 INTRODUCTION

1.1 Background

Enviroguide Consulting was commissioned by Romeville Developments Ltd. to undertake a screening for Appropriate Assessment (AA) in respect of the Proposed Development at Stoney Hill Road, Rathcoole, Co. Dublin. This report contains information to enable the Competent Authority to undertake Stage 1 Appropriate Assessment screening in respect of the Proposed Development.

1.2 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). SACs and SPAs are collectively known as Natura 2000 or European Sites. It is the responsibility of each member state to designate SPAs and SACs. 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 of the sites; from these the conservation objectives of the site are derived.

An 'Appropriate Assessment' (AA) is a required assessment to determine the likelihood of significant impacts, 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.

1.2.1 Legislative Context

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.*"

These 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."

1.2.2 Stages of AA

This Appropriate Assessment 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 European Sites and whether a Stage 2 Appropriate Assessment is required.

The AA process is a four-stage process, with issues and tests at 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.

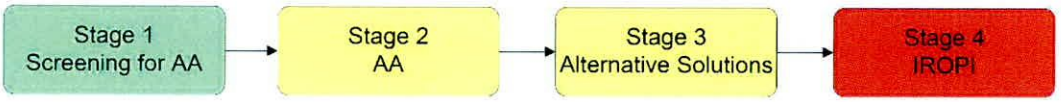

FIGURE 1. THE FOUR STAGES OF THE APPROPRIATE ASSESSMENT PROCESS (DEHLG, 2010).

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

- Stage 1 *Screening* addresses:
  - whether a plan or project is directly connected to or necessary for the management of the 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).* The second stage of the AA process assesses the impact of the project or plan (either alone or in combination with other projects or plans) on the integrity of the European Site, having regard to the conservation objectives of the site and its ecological structure and function. A NIS must provide the objective scientific information to enable the competent authority to carry out an appropriate assessment of the proposed development. It should describe any mitigation measures to avoid and reduce significant negative impacts.
- 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.

2 METHODOLOGY

2.1 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),
- *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), and,
- *Appropriate Assessment Screening for Development Management, OPR Practice Note PN01, Office of the Planning Regulator March 2021.*

2.2 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.

2.3 Desk Study

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

- Information on the network of European Sites, boundaries, qualifying interests and conservation objectives, obtained from the National Parks and Wildlife Service (NPWS) at *www.npws.ie*,
- Text summaries of the relevant European Sites taken from the respective Standard Data Forms and Site Synopses available at *www.npws.ie*,
- 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 Environmental Protection Agency (EPA) at *www.gis.epa.ie*,
- Information on bedrock, groundwater, aquifers and their statuses, obtained from Geological Survey Ireland (GSI) at *www.gsi.ie*,
- Satellite imagery and mapping obtained from various sources and dates including Google, Digital Globe, Bing and Ordnance Survey Ireland,
- 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*.

2.4 Assessment of Significant Effects

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

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

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

3 STAGE 1 SCREENING

3.1 Management of European Sites

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

3.2 Description of Proposed Development

3.2.1 Site location

The Site of the Proposed Development, as shown in Figure 2, is 2.9Ha, located along Stoney Hill Road, approximately 170m west of the Four District Woodlands and 750m south of the N7. The Site is bounded along the west and partially along the north boundary by residential units, with the remaining borders abutted by agricultural land. The landscape to the north and northwest is urban, while the remaining environment is agricultural in nature.

3.2.2 Description of Development

The Proposed Development comprises of the demolition of 1 no. residential property and 1 no. ancillary outbuilding and will consist of the construction of a residential development of 42 no. 3 bedroom dwellings in a mix of terraced and semi-detached units. The proposed dwellings will comprise of 2 no. typologies (Typology F and Typology L). Typology F will comprise of 21 no. dwellings and Typology L will comprise of 21 no. dwellings. Typology L are two storey and typology F are two storey, plus second floor loft accommodation with front dormer windows. The total proposed residential development gross floorspace is circa: 5,622 sqm.

The Proposed Development also includes 84 no. in curtilage surface car parking spaces, circa 3,281 sq.m public open spaces in an eastern park and a western park, (including proposed play equipment), an additional large parkland to the south of the site of circa 11,797 sq.m comprising the first phase of a linear park, private domestic gardens, a new vehicular, pedestrian and cycle entrance from Stoney Hill Road, an internal road network, including footpaths / cycleways, 3 no. refuse/bin stores, public lighting, landscaping, boundary treatments, drainage and engineering works and all other associated and ancillary development / works.

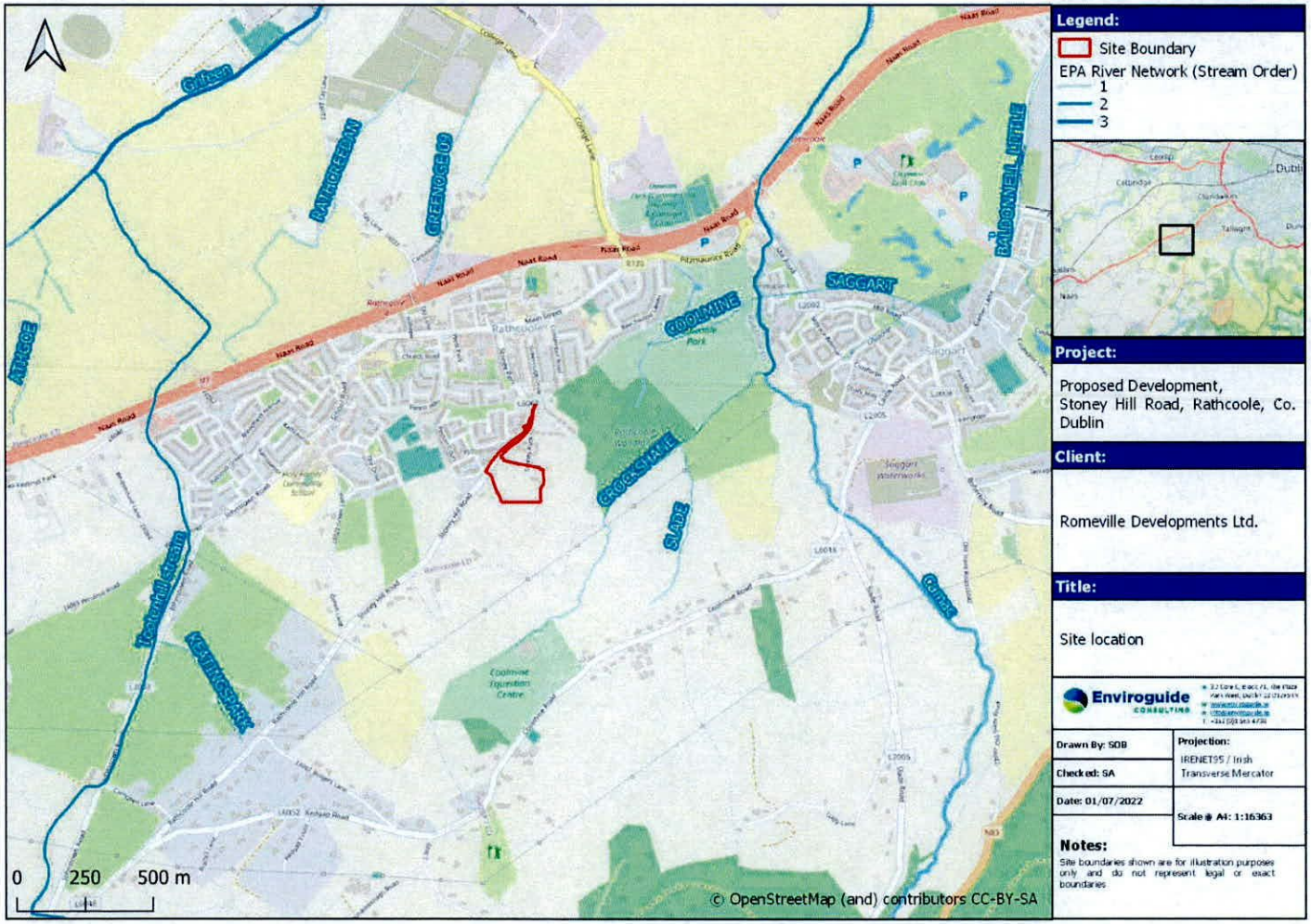

FIGURE 2. SITE LOCATION

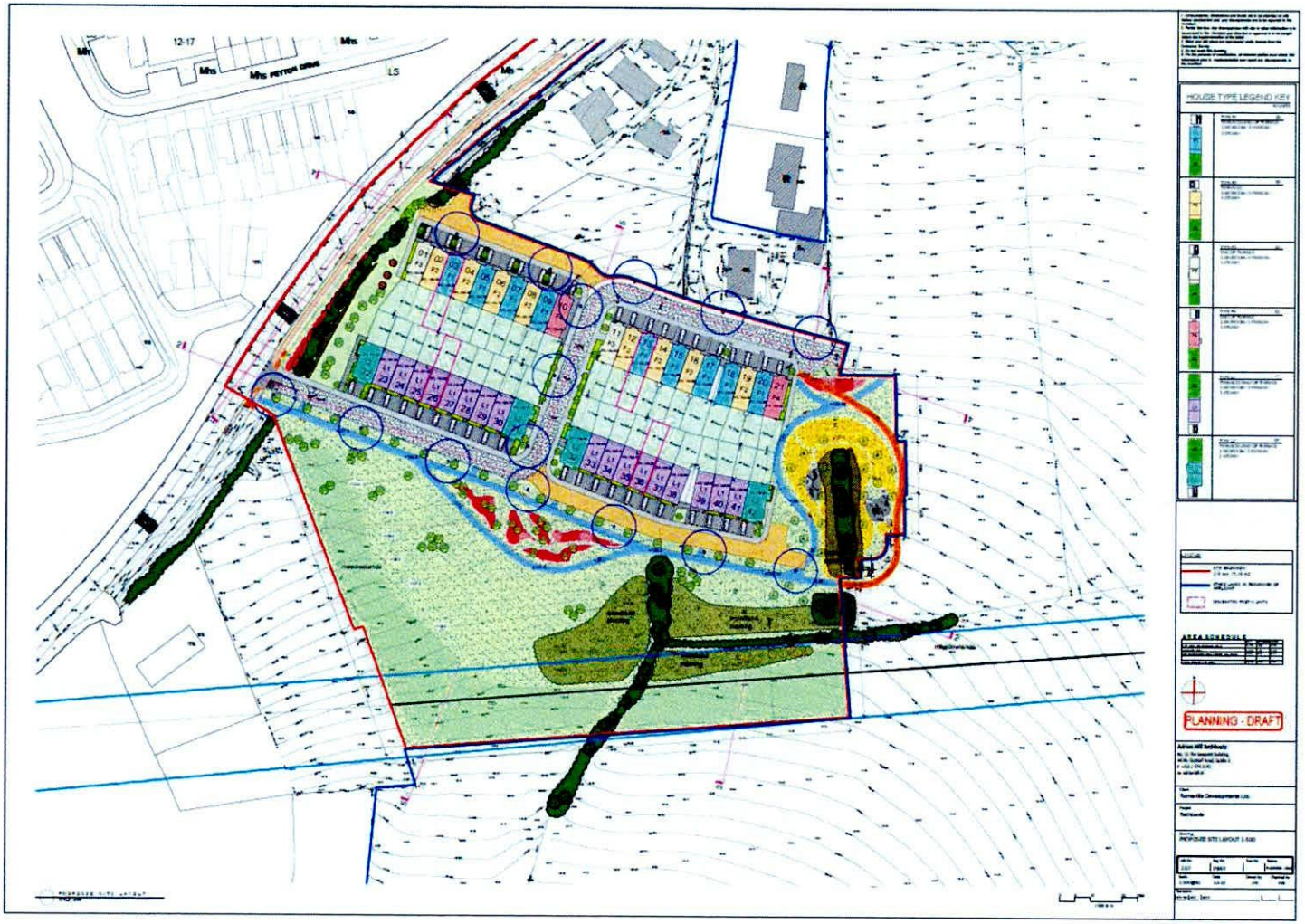

FIGURE 3. PROPOSED SITE LAYOUT (ADRIAN HILL ARCHITECTS, 2022).

3.3 Existing Environment

3.3.1 Geology, Hydrology and Hydrogeology

The Site of the Proposed Development is within the *Liffey and Dublin Bay* catchment and *Liffey_SC_090* sub catchment. The closest watercourse to the Site is the Crockshane Stream approximately 240m to the southeast, which flows into the River Camac almost 900m northeast of the Site of the Proposed Development. The EPA station located approximately 650m upstream of where these watercourses intersect designated the River Camac as *Poor* (Q-Value 3) by the EPA in 2019 (station code: RS09C020100). This watercourse is currently *At Risk* of not meeting its WFD objectives and was assigned a *Moderate* ecological status during the most recent 2013-2018 survey period. The River Camac flows into the River Liffey, and ultimately into Dublin Bay.

The surface water drainage network surrounding the Site drains to the River Griffeen, 1.7km northwest of the Site. The River Griffeen is *At Risk* of not meeting its WFD objectives and was designated a *Moderate* ecological status during the most recent 2013-2018 survey period and a *Good* chemical surface water status. The most current EPA station assigned this watercourse a *Poor* (Q-Value 3) status in 2019 (station code: RS09G010600). The River Griffeen also enters the River Liffey and flows into Dublin Bay.

The Site is situated on the *Kilcullen* groundwater body, which is *At Risk* of not meeting its WFD objectives. The predominant aquifer type within the Site boundary is *Poor Aquifer* (Pl) on bedrock which is *Generally Unproductive except for Local Zones*, with small areas of the northwest and southeast of the Site on *Poor Aquifer* (Pu) on bedrock which is *Generally Unproductive*. The groundwater rock units underlying the aquifer are classified as *Silurian Metasediments and Volcanics* (GSI, 2022).

The level of vulnerability of the Site to groundwater contamination via human activities is predominantly *High*, with an area of *Extreme* within the east of the Site. The main soil is classified as *Drumkeeran*, with an area of *Urban* in the northwest and the predominant subsoil is Sandstone and shale till (Lower Paleozoic) (*TLPSsS*), with a small area of made ground (*Made*) within the northwest of the Site (EPA, 2022).

3.4 Identification of Relevant European Sites

In order to identify the European Sites that potentially lie within the Zone of Influence (ZOI) of the Proposed Development, a Source-Path-Receptor method (S-P-R) was adopted, as described in 'OPR Practice Note PN01 - Appropriate Assessment Screening for Development Management' (OPR, 2021), a practice note produced by the Office of the Planning Regulator, Dublin. This note was published to provide guidance on screening for appropriate assessment (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 Appropriate Assessment Screening Reports such as this.

The guidance document published by the Department of Housing, Planning and Local Government (then DEHLG) 'Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities' (2009) recommends an arbitrary distance of 15km as the

precautionary ZOI for a plan or project being assessed for likely significant effects on European Sites, stating however that this should be evaluated on a case-by-case basis.

As such, the 15km ZOI is used in this report as an initial starting point for collating European Sites for AA screening.

The methodology used to identify relevant European Sites comprised the following:

- 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;
- The catchment data were used to establish or discount potential hydrological connectivity between the Project Boundary and any European Sites.
- All European Sites within the zone of influence (within 15km of the Proposed Development Site) were identified and are shown in Figure 4.
- The potential for connectivity with European Sites at distances greater than 15km from the Proposed Development was also considered in this initial assessment. In this case, there is potential connectivity between the Proposed Development Site and four European Sites located at a distance greater than 15km from the Proposed Development based on the S-P-R model.
- Table 1 provides details of all relevant European Sites as identified in the preceding steps. The potential for pathways between European Sites and the Proposed Development Site was assessed on a case-by-case basis using the Source-Pathway-Receptor framework as per the OPR Practice Note PN01 (March 2021). Those European Sites where a pathway has been identified are highlighted in green. Pathways considered included:
    a. Direct pathways (e.g., proximity (i.e., location within the European Site), water bodies, air (for both air emissions and noise impacts).
    b. Indirect pathways (e.g., **disruption to migratory paths, 'Sightlines' where noisy or** intrusive activities may result in disturbance to shy species.
- The site synopses and conservation objectives of these sites, as per the NPWS website (www.npws.ie), were consulted and reviewed at the time of preparing this report.
- There is absolutely no reliance placed in this Appropriate Assessment Screening Report on measures intended to avoid/reduce harmful effects on the European Sites.

The result of this preliminary screening concluded that there is a total of six SACs and four SPAs located within the ZOI of the Proposed Development Site. The distances to each site listed are taken from the nearest possible point of the Proposed Development Site boundary to the nearest possible point of each European Site.

Potential pathways between the Proposed Development Site and four European Sites within the ZOI was identified. The European Sites linked to the Proposed Development are:

- South Dublin Bay SAC

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

TABLE 1. EUROPEAN SITES WITHIN THE 15KM PRECAUTIONARY ZONE OF INFLUENCE OF THE PROPOSED DEVELOPMENT AND POTENTIAL PATHWAYS BETWEEN THEM. THOSE EUROPEAN SITES FOR WHICH A S-P-R LINK WAS IDENTIFIED ARE HIGHLIGHTED IN GREEN.

Site Name & Site Code	Qualifying Interests (*= priority habitats)	Distance to Site	Connections (Source- Pathway- Receptor)
Special Areas of Conservation (SAC)			
Glenasmole Valley SAC (001209)	[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)*	6.4km	**None** – There is no hydrological connection. In addition, the intervening distance between the Site and the SAC is sufficient to exclude the possibility of significant effects on the SAC arising from: emissions of noise, dust, pollutants and/or vibrations emitted from the Site during the Construction Phase; increased traffic volumes during the Construction and Operational Phase and associated emissions; potential increased lighting emitted from the Site during Construction and Operational Phase; and increased human presence at the Site during Construction and Operational Phase.
Wicklow Mountains SAC (002122)	[3110] Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*); [3160] Natural dystrophic lakes and ponds; [4010] Northern Atlantic wet heaths with *Erica tetralix;* [4030] European dry heaths; [4060] Alpine and Boreal heaths; [6130] Calaminarian grasslands of the *Violetalia calaminariae*; [6230] Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe); [7130] Blanket bogs (* if active bog); [8110] Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*); [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)	7.3km	
Rye Water Valley/Carton SAC (001398)	[7220] Petrifying springs with tufa formation (Cratoneurion); [1014] *Vertigo angustior* (Narrow-mouthed Whorl Snail); [1016] *Vertigo moulinsiana* (Desmoulin's Whorl Snail)	9.5km	
Red Bog, Kildare SAC (000397)	[7140] Transition mires and quaking bogs	9.6km	
South Dublin Bay SAC (000210)	[1140] Mudflats and sandflats not covered by seawater at low tide; [1210] Annual vegetation of drift lines; [1310] Salicornia and other annuals colonising mud and sand; [2110] Embryonic shifting dunes	*>15km*	**Yes** – Weak hydrological pathway via surface water discharges to the River Camac both the Construction and Operational Phases and discharges from Ringsend WwTP into Dublin Bay

Site Name & Site Code	Qualifying Interests (*= priority habitats)	Distance to Site	Connections (Source- Pathway- Receptor)
North Dublin Bay SAC (000206)	[1140] Tidal Mudflats and Sandflats; [1210] Annual Vegetation of Drift Lines; [1310] Salicornia Mud; [1330] Atlantic Salt Meadows; [1410] Mediterranean Salt Meadows; [2110] Embryonic Shifting Dunes; [2120] Marram Dunes (White Dunes); [2130] Fixed Dunes (Grey Dunes)*; [2190] Humid Dune Slacks; [1395] Petalwort (*Petalophyllum ralfsii*)	*>15km*	during the Operational Phase. There is also a potential hydrogeological pathway to the River Camac via groundwater flow.
Special Protected Area (SPA)			
Poulaphouca Reservoir SPA (004063)	[A043] Greylag Goose *Anser anser*; [A183] Lesser Black-backed Gull *Larus fuscus*	10.5km	**None** – There is no hydrological connection. In addition, the intervening distances between the Site and the SPAs are sufficient to exclude the possibility of significant effects on the SPAs arising from: emissions of noise, dust, pollutants and/or vibrations emitted from the Site during the Construction Phase; increased traffic volumes during the Construction and Operational Phase and associated emissions; potential increased lighting emitted from the Site during Construction and Operational Phase; and increased human presence at the Site during Construction and Operational Phase. The Site does not provide significant *ex-situ* habitat for QI/SCI species within the Site of the Proposed Development.
Wicklow Mountains SPA (004040)	[A098] Merlin *Falco columbarius*; [A103] Peregrine *Falco peregrinus*	10.7km	
South Dublin Bay and River Tolka Estuary SPA (004024)	[A046] Light-bellied Brent Goose *Branta bernicla hrota;* [A130] Oystercatcher *Haematopus ostralegus;* [A137] Ringed Plover *Charadrius hiaticula;* [A141] Grey Plover *Pluvialis squatarola;* [A143] Knot *Calidris canutus*; [A144] Sanderling *Calidris alba*; [A149] Dunlin *Calidris alpina alpina*; [A157] Bar-tailed Godwit *Limosa lapponica;* [A162] Redshank *Tringa tetanus;* [A179] Black-headed Gull *Chroicocephalus ridibundus*; [A192] Roseate Tern *Sterna dougallii;* [A193] Common Tern *Sterna hirundo*; [A194] Arctic Tern *Sterna paradisaea*; [A999] Wetlands and Waterbirds	*>15km*	**Yes** – Weak hydrological pathway via surface water discharges to the River Camac both the Construction and Operational Phases and discharges from Ringsend WwTP into Dublin Bay during the Operational Phase. There is also a potential hydrogeological pathway to the River Camac via groundwater flow.
North Bull Island SPA (004006)	[A046] Light-bellied Brent Goose *Branta bernicla hrota*; [A048] Shelduck *Tadorna tadorna*; [A052] Teal *Anas crecca;* [A054] Pintail *Anas acuta ;* [A056] Shoveler *Anas clypeata;* [A130] Oystercatcher *Haematopus ostralegus;* [A140] Golden Plover *Pluvialis apricaria;* [A141] Grey Plover *Pluvialis squatarola;* [A143] Knot *Calidris canutus;* [A144]	*>15km*	

Site Name & Site Code	Qualifying Interests (*= priority habitats)	Distance to Site	Connections (Source- Pathway- Receptor)
	Sanderling *Calidris alba;* [A149] Dunlin *Calidris alpina alpine;* [A156] Black-tailed Godwit *Limosa limosa;* [A157] Bar-tailed Godwit *Limosa lapponica;* [A160] Curlew *Numenius arquata;* [A162] Redshank *Tringa tetanus;* [A169] Turnstone *Arenaria interpres;* [A179] Black-headed Gull *Chroicocephalus ridibundus;* [A999] Wetlands and Waterbirds		

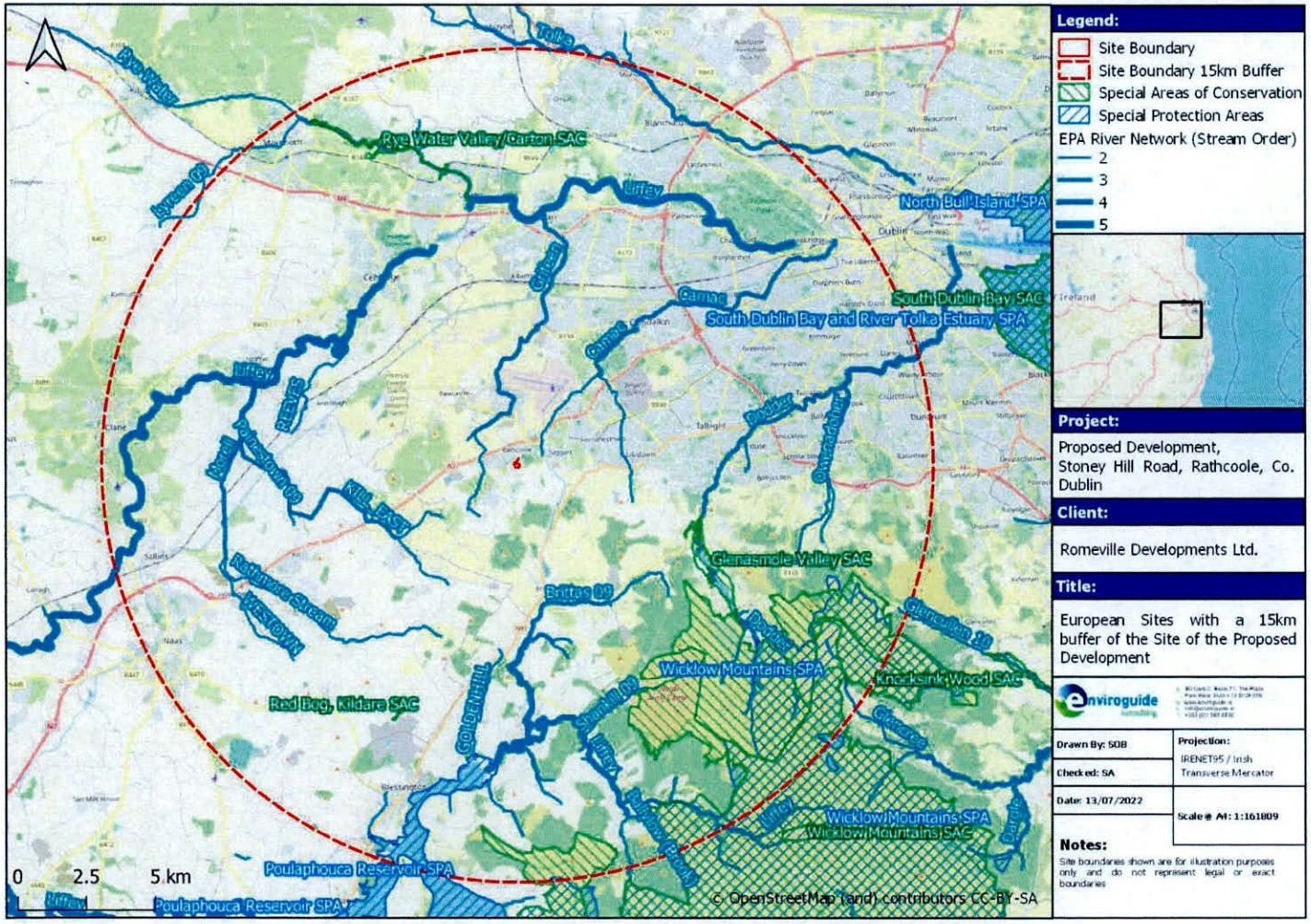

FIGURE 4. EUROPEAN SITES WITHIN 15KM OF THE PROPOSED DEVELOPMENT SITE.

3.5 Assessment of Likely Significant Effects

A European Site will only be at risk from likely significant effects where the Source-Pathway-Receptor link exists between the Proposed Development and the European Site. As such, the remainder of this AA Screening report will focus on the European Sites for which a S-P-R link was identified, namely:

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

3.5.1 Conservation objectives

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them.

Site specific conservation objectives (SSCO) have been compiled for the European Sites listed above. Site-specific conservation objectives aim to define favourable conservation condition for habitats or species at a site.

The maintenance of habitats and species within European Sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

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

The favourable conservation status of a species is achieved when:

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

3.5.2 Identification and Assessment of Likely Significant Effects

The conservation objectives of the European Sites within the zone of influence were reviewed and assessed to establish whether the construction and operation of the Proposed Development has the potential to have a negative impact on any of the qualifying interests and/or conservation objectives of the European Sites listed above.

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 resulting from the Proposed Development during the Construction and Operational Phases was determined based on a range of indicators, including:

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

The following elements of the Proposed Development were assessed for their potential for 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.
  - Surface water run-off containing silt, sediments and/or other pollutants into the local groundwater.
  - Waste generation during the Construction Phase comprising soils, construction and demolition wastes.
  - 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.

- **Operational Phase**
  - Surface water drainage from the Site of the Proposed Development.
  - Increased lighting in the vicinity emitted from the Proposed Development; and
  - Increased human presence in the vicinity as a result of the Proposed Development.

3.5.2.1 *Habitat Loss and Alteration*

The project is not located within any European Site and therefore there will be no loss or alteration of habitat as a result of the Proposed Development.

3.5.2.2 *Habitat / Species Fragmentation*

As there will be no direct habitat loss within any European Sites, no habitat fragmentation will arise as a result of the Proposed Development.

3.5.2.3 *Changes in Water Quality and Resource*

The Proposed Development will be served by the existing surface water network via a new connection which discharges to the River Griffeen. Therefore, there is a weak hydrological link between the Site and South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA and North Bull Island SPA via surface water discharges to the River Griffeen from the Site during the Construction and Operational Phases.

- SuDS Measures are included in the Project Design however, they **are not** being relied upon in any way to mitigate against likely significant effects on a European Site:
    - It is a policy of South Dublin County Council (IE2 Obj-**4) to "incorporate** Sustainable Urban Drainage Systems (SuDS) as part of Local Area Plans, Planning Schemes, Framework Plans and Design Statements". **As such, the** Proposed Development design will entail a suite of SuDS measures that will be incorporated into the Proposed Development.

The level of vulnerability of the Site to groundwater contamination via human activity ranges from *High* to *Extreme*, and therefore, there is also a potential hydrogeological pathway from the Site to the River Camac via groundwater during the Construction Phase of the Proposed Development.

The potential for pollutants to enter the River Griffeen via surface water and River Camac via groundwater from the Site of the Proposed Development to reach European Sites within Dublin Bay and cause significant effects, during both the Construction and Operational Phase, is negligible due to:

- The distance and consequent potential for dilution in the River Griffeen, River Liffey and Dublin Bay. Surface water discharges would have to travel over 32km along the River Griffeen and River Liffey before discharging into Dublin Bay.
- The distance and consequent potential for dilution in the River Camac, River Liffey and Dublin Bay. Surface water discharges would have to travel approximately 23km along the River Camac and River Liffey before discharging into Dublin Bay.
- The potential for dilution in the surface water network during heavy rainfall events.

The Site will be served by a public foul sewer via a newly constructed connection, where it will be treated at Ringsend WwTP. Therefore, there is a weak hydrological link between the Site and South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA and North Bull Island SPA via discharges from Ringsend WwTP during the Operational Phase.

The potential for foul waters generated at the Site of the Proposed Development to reach European Sites within Dublin Bay and cause significant effects, during the Construction and Operational Phases, is negligible due to:

- The upgrade works to Ringsend WWTP which will increase the capacity of the facility from 1.6 million PE to 2.4 million PE (see section 3.5.2.6 below for more details).
- It is considered that effects on marine biodiversity and the European Sites within Dublin Bay from the current operation of Ringsend WwTP are unlikely (see section 3.5.2.6 for more details).
- The main area of dispersal of the treated effluent from Ringsend WwTP is in the Tolka Basin and around North Bull Island. South Dublin Bay is unaffected by the effluent from the plant (Irish Water, 2018).
- The increase of the Population Equivalent (PE) load at the facility as a result of the Proposed Development, assuming each PE unit was not previously supported by the WwTP, is considered to be an insignificant increase in terms of the overall scale of the facility. The increased load does not have the capacity to alter the effluent released

from the WwTP to such an extent as to result in likely significant effects on European sites in Dublin Bay.

3.5.2.4 *Disturbance and / or Displacement of Species*

As outlined in section 3.5.2.3 above, the hydrological link between the Site and the European Sites in Dublin Bay assessed here will not result in significant effects on the water quality and resource indicator during both the Construction and Operational Phases. In addition, there is no potential for negative impacts on the species within the European Sites associated with the Proposed Development due to the intervening distances between them.

3.5.2.5 *Changes in Population Density*

For the same reasons outlined in section 3.5.2.4 above, the Proposed Development does not have the capacity to cause any significant changes in the population density of any species within any European Site.

3.5.2.6 *Potential for In-combination Effects*

Existing Planning Permissions

There are several existing planning permissions on record in the area ranging from small-scale extensions and alterations to existing residential properties to some larger-scale developments. The larger-scale developments identified within the vicinity of the Proposed Development are as follows:

Planning Application Reference: SHD3ABP-307698-20

Demolition of 5 existing residential properties and associated outbuildings and the construction of a residential development of 204 units, comprising 151 Houses (including Duplexes) and 53 Apartments. The basement for the apartment block includes 49 car parking spaces, 87 bicycle parking spaces, circulation, plant areas, refuse storage areas and other associated facilities. There are an additional 12 visitor bicycle parking spaces for the apartment block provided at surface level. Access to the apartment block is directly from Stoney Hill Road via a new access from an existing dropped kerb. The development also includes 306 surface car parking spaces, 169 bicycle parking spaces (comprising of 99 spaces at basement and surface for the apartment block, 60 secure spaces for the apartments in the duplex units and 10 visitor parking spaces at surface level), communal open space for the apartments, public open space including a childrens playground and a linear park to the south of the site. New vehicular entrances from Stoney Hill Road (one to the apartment building to the north of Stoney Hill Road and a second to the remainder of the development further south on Stoney Hill Road). The proposed development also includes a 2 storey creche building plus and outdoor play area located on an existing undeveloped portion of the Peyton site located to the west of Stoney Hill Road. **(Decision: Grant Permission. Decision Date: 21/09/2020).**

Planning Application Reference: SD16A/0029/EP

(1) Phased demolition of existing school buildings (a) Block 1: single storey main school building 3,720sq.m (b) Block 2: two storey PE hall 771sq.m (c) Block 3: single storey temporary classroom 400sq.m (d) Block 4: single storey temporary classroom 1155sq.m. (2) Phased construction of a new part three, part two and part single storey school building (10,429sq.m). (3) The refurbishment of the existing vehicular entrance and the provision of a new pedestrian entrance off Kilteel Road and the provision of a new vehicular entrance (emergency and service vehicles) off St. Anne's Terrace. (4) The provision of 97 car parking spaces. (5) The

provision of a new ESB substation to the south east of the site with access off St. Anne's Terrace. (6) Associated ancillary site works including new landscaping and hardplay areas. **(Decision: Grant Extension of Duration of Permission. Decision Date: 15/06/2021).**

Planning Application Reference: SD21A/0231

Removal of all existing temporary accommodation and construction of a new 16 classroom part three storey, part two storey primary school (Roll No 19503H); including GP Hall, 2 classroom Special Educational Needs Unit and all ancillary site works. The proposed project also incorporates associated staff car parking, delivery aces, drop off areas, pedestrian/bicycle access, construction of 2 external ball courts, acoustic boundary wall plus additional boundary treatments, landscaping, connection to public services and all associated site works. **(Decision: Grant Permission. Decision Date: 12/10/2021).**

Planning Application Reference: SD20A/0080

Temporary single storey prefabricated building to be linked to the existing single storey prefabricated building granted under Ref. SD19A/0075; 2 general classrooms each with toilet accommodation (one containing accessible WC); 1 store; entrance lobbies; 1 user assisted toilet; 2 staff toilets and 4 car park spaces all located to the north-rear of the existing school and existing prefabs together with all other ancillary and associated siteworks. **(Decision: Grant Permission. Decision Date: 03/07/2020).**

Planning Application Reference: SD19A/0214

Raising the height of the fascia on the existing shopfront canopy and cladding it with a new varnished hardwood finish to accommodate new signage consisting of built up lettering with the name "Rathcoole Shopping Centre"; the existing circular steel columns to the single storey canopy will be clad with varnished hardwood panels to match the existing shopfronts; installation of a new curved top totem sign at the Main Street car park entrance, measuring 1.5 meters wide x 5 metres overall height; raising of the front boundary wall facing Main Street and the side boundary wall facing Coolamber Road; replacing the existing dashed wall finish on these walls with a pigmented render finish; installing reconstituted stone cappings on these walls; installation of new stainless steel handrails to the top of part of the front and side boundary walls; resurfacing the existing car park area; reduction in width of the existing Main Street car park entrance; provision of new trees on site together with all associated site works. **(Decision: Grant Permission. Decision Date: 27/08/2019).**

Planning Application Reference: SD21A/0171

Land recontouring/infilling works on C. 38,000sq.m of a folio size of C.5.3HA (allowing buffers); the volume of material to be placed on the site C.91,000m3 with an average fill level of C.3.5m above existing. **(Decision: Grant Permission. Decision Date: 28/02/2022).**

Planning Application Reference: SD20A/0153

Permission for 609.5sq.m, 16-bed extension to existing Nursing Home which consists of new 443sq.m two storey 14 bedroom extension adjoining existing building to the west, new 64.3sq.m single storey 2 bedroom extension to south west wing of existing, new 102.2sq.m 2 storey extension of existing dining areas to the north, new garden lawns and walkway with hard landscaped areas to north west of site, 8 new car parking spaces to existing car park to

east of site and all associated site works. **(Decision: Grant Permission. Decision Date: 14/01/2021).**

Planning Application Reference: SD21A/0301

Additional floor area of 82sq.m ground floor and 35sq.m first floor to allow reconfiguration of 4 double rooms to 8 single rooms, new ground floor storeroom and enclosing fire exit stairs; relocation of 8 car parking spaces to extended existing car park; all associated site works; proposed material finishes to match previously approved changes to previously granted permission SD20A/0153. **(Decision: Grant Permission. Decision Date: 02/03/2022).**

These sites lie within 500m from the Proposed Development Site. The distance between the Proposed Development Site, the permitted development sites above and the closest European Site is approximately 5.9km. This distance, in addition to the significant urban buffer between the sites and European Sites, is sufficient to exclude the possibility of significant effects on the European Site arising from combined emissions of noise, dust, pollutants and/or vibrations emitted from the Site during the Construction Phase; increased traffic volumes during the Construction and Operational Phase and associated emissions; potential increased lighting emitted from the Site during Construction and Operational Phase; and increased human presence at the Site during Construction and Operational Phase.

At the time of writing, there are no proposed or permitted forestry operations (thinning, clear felling, road construction) in close proximity to the Site of the Proposed Development[1].

Relevant Policies and Plans

The following policies and plans were reviewed and considered for possible in-combination effects with the Proposed Development.

- Connecting with Nature – Draft Biodiversity Action Plan for South Dublin County 2020-2026
- South Dublin County Council Development Plan 2016-2022
- Draft South Dublin County Development Plan 2022-2028

The Connecting with Nature – Draft Biodiversity Action Plan for South Dublin County 2020-2026 is set out to protect and improve biodiversity, and as such will not result in negative in-combination effects with the Proposed Development. The South Dublin County Council Development Plan 2016-2022 has directly addressed the protection of European Sites through specific policies (HCL12 Obj1-Obj2, HCL13 Obj1-Obj2), as has the Draft South Dublin County Council Development Plan 2022-2028 (NCBH3, NCBH3 Obj1). The relevant recommendations and mitigation measures have been integrated into the plan.

On examination of the above it is considered that there are no means for the Proposed Development to act in-combination with any plans or projects, that would cause any likely significant effects on any European Sites.

Operation of Ringsend WWTP

In June 2018 Irish Water applied for and subsequently received planning permission in 2019 for upgrade works to the Ringsend WwTP facility. The first phase of upgrade works to

[1] https://forestry-maps.apps.rhos.agriculture.gov.ie/

Ringsend WWTP was completed in December 2021, which increased the capacity of the facility by 400,000 P.E. These works, together with the further works permitted in 2019 will ultimately increase the capacity of the facility from 1.6 million PE to 2.4 million PE. This plant upgrade will result in an overall reduction in the final effluent discharge of several parameters from the facility including BOD, suspended soils, ammonia, DIN and MRP. An Environmental Impact Assessment Report (EIAR) was submitted by Irish Water as part of that application. The EIAR contains sections relating to Marine Biodiversity and Terrestrial Biodiversity, and each contains a section on the 'do-nothing scenario'. These review the effects of the WwTP on biodiversity in Dublin Bay *in the absence of the upgrade works* and so are relevant to this report.

The EIAR report acknowledges that under the do-nothing scenario "*the areas in the Tolka Estuary and North Bull Island channel will continue to be affected by the cumulative nutrient loads from the river Liffey and Tolka and the effluent from the Ringsend WwTP*", which could result in a decline in biodiversity and the deterioration of the biological status of Dublin Bay (Irish Water, 2018). Nevertheless, these negative impacts of nutrient over-enrichment are considered "unlikely" (Irish Water, 2018). This is because historical data suggests that pollution in Dublin Bay has had little or no effect on the composition and richness of the benthic macroinvertebrate fauna. The EIAR notes that "*although a localised decline could occur, it is not envisaged to be to a scale that could pose a threat to the shellfish, fish, bird or marine mammal populations that occur in the area.*" Indeed, the results of the marine macroinvertebrate studies undertaken for the EIAR show that "*the Inner Tolka Basin is host to macroinvertebrate communities as rich (if not richer) than those found in the north Dublin Bay and south Dublin Bay mudflats and sandflats*". Furthermore, the EIAR notes that significant impacts on waterbird populations foraging on invertebrates in Dublin Bay due to nutrient over-enrichment are "*unlikely*" to occur (Irish Water, 2018). What is important in the context of this AA screening report is that the do-nothing scenario predicts that nutrient and suspended solid loads from the WwTP will "*continue at the same levels and the impact of these loadings should maintain the same level of effects on marine biodiversity*" and that "*if the* status *quo is maintained there will be little or no change in the majority of the intertidal faunal assemblages found in Dublin Bay which would likely continue to be relatively diverse and rich across the bay.*"

Therefore, it can be concluded that significant effects on marine biodiversity and the European Sites within Dublin Bay from the current operation of Ringsend WwTP are unlikely. Importantly, this conclusion is not dependent upon any future works to be undertaken at Ringsend. Thus, in the absence of any upgrading works, significant effects to European Sites are not likely to arise.

On examination of the above it is considered that there are no means for the Proposed Development to act in-combination with any plans or projects, that would cause any likely significant effects on any European Sites.

TABLE 2. 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	None	None	NO
Wicklow Mountains SAC (002122)	No	No	No	None	None	None	NO
Rye Water Valley/Carton SAC (001398)	No	No	No	None	None	None	NO
Red Bog, Kildare SAC (000397)	No	No	No	None	None	None	NO
South Dublin Bay SAC (000210)	No	No	No	None	None	None	NO
North Dublin Bay SAC (000206)	No	No	No	None	None	None	NO
SPA							
Wicklow Mountains SPA (004040)	No	No	No	None	None	None	NO
Poulaphouca Reservoir SPA (004063)	No	No	No	None	None	None	NO
South Dublin Bay and River Tolka Estuary SPA (004024)	No	No	No	None	None	None	NO
North Bull Island SPA (004006)	No	No	No	None	None	None	NO

4 APPROPRIATE ASSESSMENT SCREENING CONCLUSION

The Proposed Development at Stoney Hill Road, Rathcoole, Co. Dublin has been assessed taking into account:

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

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

Glenasmole Valley SAC (001209)

Wicklow Mountains SAC (002122)

Rye Water Valley/Carton SAC (001398)

Red Bog, Kildare SAC (000397)

South Dublin Bay SAC (000210)

North Dublin Bay SAC (000206)

Wicklow Mountains SPA (004040)

Poulaphouca Reservoir SPA (004063)

South Dublin Bay and River Tolka Estuary SPA (004024)

North Bull Island SPA (004006)

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, on the basis of the best scientific knowledge available, that the possibility of any significant effects on any European Sites, whether arising from the project itself or in combination with other plans and projects, can be excluded. Thus, there is no requirement to proceed to Stage 2 of the Appropriate Assessment process; and the preparation of a Natura Impact Statement (NIS) is not required.

5 REFERENCES

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

Environmental Protection Agency. (2022). Environmental Protection Agency Online Mapping [ONLINE] Available at: http://www.epa.ie/ [Accessed June 2022].

European Commission. (2000). Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC. European Communities, Luxembourg.

European Communities. (2021). 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 Communities, Luxembourg.

Fossitt, J. (2000). A *Guide to Habitats in Ireland*. The Heritage Council, Kilkenny.

Franklin, A. N. (2002). What is Habitat Fragmentation? Studies in Avian Biology, 20-29.

Geological Survey Ireland. (2022). Geological Survey of Ireland website [ONLINE] Available at: http://www.gsi.ie/ accessed [Accessed June 2022].

Irish Water (2018) Ringsend Wastewater Treatment Plant Upgrade Project Environmental Impact Assessment Report. Volume 3 - Ringsend Wastewater Treatment Plant Part A: Report

NPWS. (2010). Circular NPW 1/10 & PSSP 2/10. Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Department of Environment, Heritage and Local Government.

NPWS. (2013a). Conservation Objectives: South Dublin Bay SAC [000210]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS. (2013b). Conservation Objectives: North Dublin Bay SAC [000206]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS. (2015a). Conservation Objectives: South Dublin Bay and River Tolka Estuary SPA [004024]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS. (2015b). Conservation Objectives: North Bull Island SPA [004006]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS. (2017). Conservation Objectives: Wicklow Mountains SAC [002122]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

NPWS. (2019). Conservation Objectives: Red Bog, Kildare SAC 000397. Version 1. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.

NPWS. (2021a). Conservation objectives for Glenasmole Valley SAC [001209]. Generic Version 8.0. Department of Housing, Local Government and Heritage.

NPWS. (2021b). Conservation objectives for Rye Water Valley/Carton SAC [001398]. Generic Version 8.0. Department of Housing, Local Government and Heritage.

NPWS. (2021c). Conservation objectives for Wicklow Mountains SPA [004040]. Generic Version 8.0. Department of Housing, Local Government and Heritage.

NPWS. (2021d). Conservation objectives for Poulaphouca Reservoir SPA [004063]. Generic Version 8.0. Department of Housing, Local Government and Heritage.

Office of the Planning Regulator (2021). Appropriate Assessment Screening for Development Management, OPR Practice Note PN01