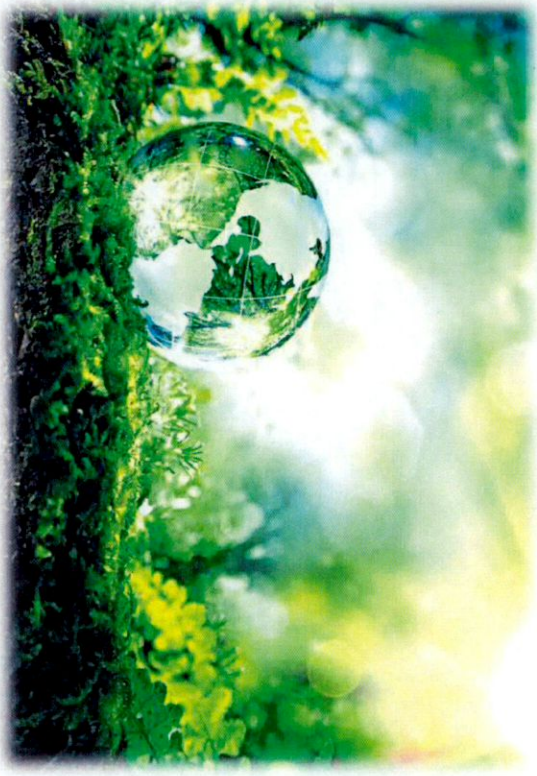




AVRIO



**Appropriate Assessment
Screening Report**
Knocklyon Road, Knocklyon,
Co. Dublin

Project Details

| | |
|---------------------------|--|
| Project Reference: | AEMP-162 (AH7-T1) |
| Date of Issue: | 26 th October 2022 V1; 7 th November 2022 V2 |
| Client: | Pathway Homes Ltd. |
| Company Address: | Dublin Road, Ballisodare, Co. Sligo |
| Site Address | Knocklyon Road, Knocklyon, Co. Dublin |
| Services Provided: | Preparation of an 'Article 6 (3) Appropriate Assessment Screening Report |

AVRIO Quality Information

| | | |
|---------------------|---|---|
| Prepared by: | Amy Gallagher (Ecological Consultant) AVRIO Environmental Management | Signed:  |
| Reviewed by: | Fergal Maguire (Environmental & Ecological Consultant) AVRIO Environmental Management | Signed:  |

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1. Introduction

1.1 Background

AVRIO Environmental Management Limited, hereafter "AVRIO", has been appointed by Pathway Homes Ltd. to undertake an Appropriate Assessment Screening and, if required, a Natura Impact Statement for a proposed development located at Knocklyon Road, Knocklyon, Co. Dublin (Grid Reference: O 11695 27404). The proposed development consists of the construction of 4 no. new build 2-storey 5-bedroom semi-detached houses on a site of 0.087 ha at Knocklyon Road, Knocklyon, Dublin.

1.2 Requirement for an Appropriate Assessment

This Appropriate Assessment Screening and Natura Impact Assessment was prepared for a proposed development at Knocklyon Road, Knocklyon, Co. Dublin. Having regard to the location of the proposed development site and its proximity to sites designated under the Natura 2000 network, an Appropriate Assessment of the proposed development was prepared in accordance with Article 6 of the Habitats Directive. This report will allow the Competent Authority, in this case, South Dublin County Council, to undertake an Appropriate Assessment of the proposed development, as required under Article 6(3) of the Habitats Directive¹.

The purpose of the assessment is to determine the appropriateness of the proposed project in the context of the conservation status of a European protected site or sites. In Ireland, an Appropriate Assessment takes the form of a Natura Impact Statement (NIS), which is a statement of the likely impacts of the plan or project on a Natura 2000 site. The NIS comprises a comprehensive assessment of the plan or project, and it examines the direct and indirect impacts that the plan or project might have on its own or in combination with other plans or projects on one or more Natura 2000 sites in view of the sites' conservation objectives.

1.3 The Aim of the Report

This Appropriate Assessment Screening Report has been prepared in accordance with the European Commission's Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC (EC, 2001) and Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018)² as well as the Department of the Environment's Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DOEHLG, 2010)³, and it provides an assessment of the potential effects of a proposed development at Knocklyon Road, Knocklyon, Co. Dublin.

An AASR should provide the information required in order to establish whether or not a proposed development is likely to have a significant impact on certain Natura 2000 sites in the context of their conservation objectives and specifically on the habitats and species for which the Natura 2000 conservation sites have been designated.

¹ EC (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg, European Commission

² EC (2001) Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC;

³DOEHLG (2010). Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. Revision, February 2010. Department of the Environment, Heritage and Local Government;

Accordingly, a comprehensive assessment of the potential impacts of this application was carried out in September 2022 by AVRIO. This assessment allowed areas of potential ecological value and potential ecological constraints associated with this proposed development to be identified and it also enabled potential ecological impacts associated with the proposed development to be assessed and mitigated for.

1.4 Regulatory Context

1.4.1 Relevant Legislation

1.4.1.1 *The Birds Directive*

- The Birds Directive (Council Directive 2009/147/EC) recognises that certain species of birds should be subject to special conservation measures concerning their habitats⁴. The Directive requires that Member States take measures to classify the most suitable areas as Special Protection Areas (SPAs) for the conservation of bird species listed in Annex 1 of the Directive. SPAs are selected for bird species (listed in Annex I of the Birds Directive), that are regularly occurring populations of migratory bird species, and the SPA areas are of international importance for these migratory birds.

1.4.1.2 *The EU Habitats Directive*

- The EU Habitats Directive (92/43/EEC) requires that Member States designate and ensure that particular protection is given to sites (Special Areas of Conservation) which are made up of or support particular habitats and species listed in annexes to this Directive.⁵ Articles 6(3) and 6(4) of this Directive also call for the undertaking of an Appropriate Assessment for plans and projects not directly connected with or necessary to the management of, but which are likely to have a significant effect on any European designated sites (i.e. SACs and SPAs).

1.4.1.3 *The Water Framework Directive*

- The Water Framework Directive (WFD) (2000/60/EC), which came into force in December 2000, establishes a framework for community action in the field of water policy. The WFD was transposed into Irish law by the European Communities (Water Policy) Regulations 2003 (S.I. 722 of 2003)⁶. The WFD rationalises and updates existing legislation and provides for water management on the basis of River Basin Districts (RBDs). RBDs are essentially administrative areas for coordinated water management and are comprised of multiple river basins (or catchments), with cross-border basins (i.e. those covering the territory of more than one Member State) assigned to an international RBD. The aim of the WFD is to ensure that waters achieve at least good status by 2021 and that status does not deteriorate in any waters.

⁴ European Communities (Conservation of Wild Birds) Regulations, 1985, SI 291/1985 & amendments – <http://www.irishstatutebook.ie>;

⁵ European Communities (Natural Habitats) Regulations, SI 94/1997, SI 233/1998 & SI 378/2005 – <http://www.irishstatutebook.ie>;

⁶ Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.

1.4.2 Appropriate Assessment & Habitats Directive

Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora – the ‘Habitats Directive’ - provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats and species of European Community interest at a favourable conservation status⁷. Articles 3 - 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000. Natura 2000 sites are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/EEC)⁸. Natura 2000 is a network of areas designated (or in the latter stages of designation) established to ensure the long-term survival of Europe’s most valuable and threatened species and habitats. Specifically:

- Special Areas of Conservation (SAC) designated under the European Union Habitats Directive for their habitats and/or species of European importance;
- Special Protection Areas (SPA) designated under the European Union Birds Directive for rare, vulnerable and regularly occurring migratory bird species and internally important wetlands;
- Candidate and proposed sites (cSAC and pSPA) submitted to the European Commission but not yet formally adopted; and
- Sites of Community Importance (SCI) adopted by the European Commission but not yet formally designated by the Member State.

Ramsar Sites have no legal protection as such under Irish legislation, their actual protection derives from other designations of the site such as SPAs or Nature Reserves. However, Ramsar sites listed under the 1971 Ramsar Convention on Wetlands of International Importance should receive the same protection as designated SPAs and SACs because Ireland was a contracting party to adopt the Convention of wetlands. The objective of the RAMSAR designation is the conservation of wetland habitats, especially for waterfowl. RAMSAR sites often overlap with SACs and SPAs. For the purpose of this assessment RAMSAR sites will also be given consideration.

The Habitats Directive requires competent authorities to carry out a ‘Habitats Directive Assessment’ of plans and projects that are likely to have a significant effect on Natura 2000 sites, either individually or in combination with other plans or projects.

This report presents the results of the initial stage of this assessment i.e. screening stage and reports the outcomes and conclusions of assessments undertaken pursuant to the requirements of Article 6 of Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (the Habitats Directive).

⁷ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora

⁸ Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds

Articles 6(3) and 6(4) of the Habitats Directive sets out the decision-making tests for plans or projects affecting Natura 2000 sites⁹. Article 6(3) establishes the requirement for Appropriate Assessment:

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

Article 6(4) deals with the steps that should be taken when it is determined, as a result of appropriate assessment, that a plan/project will adversely affect a European site. Issues dealing with alternative solutions, imperative reasons of overriding public interest and compensatory measures need to be addressed in this case¹⁰.

Article 6(4) states:

“If in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.”

1.4.3 Screening for Appropriate Assessment

Screening is the process of determining whether an Appropriate Assessment is required for a plan or project. Under Part XAB of the Planning and Development Act, 2000, as amended, screening must be carried out by the Competent Authority. Section 177U of the Planning and Development Act, 2000, as amended, states¹¹

‘A screening for appropriate assessment 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’.

The Competent Authority’s determination as to whether an Appropriate Assessment is required must be made on the basis of objective information and should be recorded.

The Competent Authority may request information to be supplied to enable it to carry out a screening.

⁹ EC (2007a) Guidance document on Article 6(4) of the ‘Habitats Directive’ 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission. Office for Official Publications of the European Communities, Luxembourg. European Commission

¹⁰ EC (2007b) Interpretation Manual of European Union Habitats. Version EUR 27. European Commission, DG Environment;

¹¹ DoEHLG (2010). Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. Revision, February 2010. Department of the Environment, Heritage and Local Government;

Consultants or project proponents may provide for the Competent Authority with the information necessary for them to determine whether an Appropriate Assessment is required and provide advice to assist them in the Article 6(3) Appropriate Assessment Screening decision.

Where it cannot be excluded beyond reasonable scientific doubt at the Screening stage, that a proposed plan or project, individually or in combination with other plans and projects, would have a significant effect on the conservation objectives of a European site, an Appropriate Assessment is required.

1.4.4 Natura Impact Statement

Where an Appropriate Assessment is required, the Competent Authority may require the applicant to prepare a Natura Impact Statement. The term Natura Impact Statement (NIS) is defined in legislation¹². A NIS, where required, should present the data, information and analysis necessary to reach a definitive determination as to 1) the implications of the plan or project, alone or in combination with other plans and projects, for a European site in view of its conservation objectives, and 2) whether there will be adverse effects on the integrity of a European site. The NIS should be underpinned by the best scientific knowledge, objective information and by the precautionary principle. This Appropriate Assessment Screening Report has been prepared in compliance with the provision of section 177U of the Planning & Development Act 2010 as amended.

1.5 Statement of Authority

Amy Gallagher BSc (Hons), MSc, QCIEM: This report has been prepared by Amy Gallagher. Amy is an Ecologist at AVRIO Environmental Management. She holds a BSc (Hons) in Ecological Management and an MSc in Ecological Management and Conservation Biology from Queens University Belfast. Amy is an ecologist with over 3 years of experience within the environmental industry Amy is a qualifying member of the Chartered Institute of Ecology and Environmental Management (CIEEM), an organisation requiring peer review and a high standard of professional conduct. Amy has experience contributing to Ecological Impact Assessments (EIA) including assessments for priority species such as Bats, Badger, Otter, Marsh Fritillary, Dragonfly and Damselfly, and habitats assessments including Phase I and Fossitt Habitat Surveys. Amy has experience in Habitat Regulation Assessment (HRA/AASR/NIS), Invasive Species Surveys and Management and production of site-specific mitigation proposals for a range of developments throughout Northern Ireland and the Republic of Ireland.

Fergal Maguire NDA, BSc (Hons), PIEMA: This report has been reviewed by Fergal Maguire. Fergal is the General Manager at AVRIO Environmental Management and Principal Environmental and Ecological Consultant. He holds an NDA and BSc (Hons) in Environmental Science from the Institute of Technology, Sligo. Fergal is a member of the Institute of Environmental Management & Assessment (IEMA), an organisation requiring peer review and a high standard of professional conduct. He has over 9 years of experience within the environmental industry. He has experience contributing to a number of Environmental Impact Assessments, environmental licence and surrender applications,

¹² As defined in Section 177T of the Planning and Development Act, 2000 as amended, an NIS means a statement, for the purposes of Article 6 of the Habitats Directive of the implications of a proposed development, on its own and in combination with other plans and projects, for a European site in view of its conservation objectives. It is required to include a report of a scientific examination of evidence and data, carried out by competent persons to identify, and classify any implications for the European site in view of its conservation objectives.

including Industrial Emissions Licences (IEL), Integrated Pollution Control Licences (IPC) and Waste Licences for submission to the Irish Environmental Protection Agency (EPA), Northern Ireland Environment Agency (NIEA), Scottish Environment Protection Agency (SEPA), United Kingdom Environment Agency (E.A.) and a number of Local Authorities throughout the U.K. and Ireland. Fergal has extensive experience in the sustainable development and management of a number of IED licenced facilities throughout Ireland, the U.K. and greater Europe, as well as general consultancy within the waste management, environmental compliance and ecological sectors. Fergal has extensive experience in Ecological Impact Assessments (EcIA), including priority species such as Bats, Badger, Otter, Red Squirrel, Pine martin and breeding birds, and habitats assessments, including Phase I and Fossitt Habitat Surveys. Fergal has extensive experience in Habitat Regulation Assessments (HRA/AASR/NIS), Ecological Clerk of Works (ECoW), Invasive Species Surveys and Management and production of site-specific mitigation proposals for a range of developments throughout Northern Ireland and the Republic of Ireland.

2. Methodology

2.1 Appropriate Assessment

In addition to the guidelines referenced above, the following relevant documents were also considered in the preparation of this report:

1. Council of the European Commission (1992) Council Directive 92/43/EEC of 21st May 1992 on the conservation of natural habitats and of wild fauna and flora. Official Journal of the European Communities. Series L 20, pp. 7-49.¹³
2. EC (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg.¹⁴
3. European Commission (2001). 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.¹⁵
4. European Commission (2006). Nature and Biodiversity Cases: Ruling of the European Court of Justice.¹⁶
5. EC (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence. Opinion of the commission.¹⁷
6. EC (2013) Interpretation Manual of European Union Habitats. Version EUR 28. European Commission.¹⁸
7. European Commission (2018). Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.¹⁹
8. Department of Environment, Heritage and Local Government (2009). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities.²⁰
9. National Parks and Wildlife Service (2019). Article 17: The Status of EU Protected Habitats and Species in Ireland.²¹
10. European Communities (Natural Habitats) (Amendment) Regulations 2005.²²

¹³ EC (2002) 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, Office for Official Publications of the European Communities, Luxembourg; European Commission;

¹⁴ EC (2002) 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, Office for Official Publications of the European Communities, Luxembourg; European Commission;

¹⁵ EC (2001) Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC;

¹⁶ EC (2006) Nature and Biodiversity Cases: Ruling of the European Court of Justice, Office for Official Publications of the European Communities, Luxembourg; European Commission;

¹⁷ EC (2007a) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission, Office for Official Publications of the European Communities, Luxembourg; European Commission;

¹⁸ EC (2013) Interpretation Manual of European Union Habitats. Version EUR 28. Office for Official Publications of the European Communities, Luxembourg; European Commission;

¹⁹ EC (2018). Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC. Office for Official Publications of the European Communities, Luxembourg; European Commission

²⁰ DoEHLG (2010). Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. Revision, February 2010. Department of the Environment, Heritage and Local Government

²¹ NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. Volume 1: Summary Overview. Unpublished NPWS report.

²² EC (1997) 2006. The European Communities (Natural Habitats)(Amendment) Regulations 2005.

The EC Guidance sets out a number of principles as to how to approach decision-making during the process. The primary one is 'the precautionary principle, which requires that the conservation objectives of Natura 2000 should prevail where there is uncertainty'.²³

When considering the precautionary principle, the emphasis for assessment should be on objectively demonstrating with supporting evidence that:

- o There will be no significant effects on a Natura 2000 site;
- o There will be no adverse effects on the integrity of a Natura 2000 site;
- o There is an absence of alternatives to the project or plan that is likely to have an adverse effect on the integrity of a Natura 2000 site; and
- o There are compensation measures that maintain or enhance the overall coherence of Natura 2000.

This translates into a four-stage process to assess the impacts, on a designated site or species, of a policy or proposal.²⁴

The EC Guidance states that "each stage determines whether a further stage in the process is required". Consequently, the Council may not need to proceed through all four stages in undertaking the Appropriate Assessment.

The four-stage process is:

Stage 1: Screening – The process which identifies the likely impacts upon a Natura 2000 site of a project or plan, either alone or in combination with other projects or plans, and considers whether or not these impacts are likely to be significant;

Stage 2: Appropriate Assessment – The consideration of the impact on the integrity of the Natura 2000 site of the project or plan, either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts;

Stage 3: Assessment of Alternative Solutions – The process which examines alternative ways of achieving objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site;

Stage 4: Assessment where no alternative solutions exist and where adverse impacts remain – An assessment of the compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the project or plan should proceed.

²³ DEHLG (2009) Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. DEHLG, Dublin;

²⁴ DEHLG (2010). Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. Revision, February 2010. Department of the Environment, Heritage and Local Government;

In complying with the obligations set out in Articles 6(3) and following the guidelines described above, this Appropriate Assessment Screening Report has been structured as a stage-by-stage approach as follows:

- Description of the proposed project;
- Identification of the Natura 2000 sites close to the proposed development;
- Identification and description of any individual and cumulative impacts on the Natura 2000 sites likely to result from the project;
- Assessment of the significance of the impacts identified above on site integrity. Exclusion of sites where it can be objectively concluded that there will be no significant effects;
- Description of proven mitigation measures, if required.

2.2 Desk Study

Information pertaining to the proposed site and the surrounding environment was studied and assessed prior to the completion of this assessment. The following data sources were accessed in order to complete a thorough examination of potential impacts:

- National Parks and Wildlife Service (NPWS) online map viewer²⁵;
- Mammals, Amphibians and Reptiles website²⁶;
- Ordnance Survey Ireland Map Viewer: Geohive²⁷;
- Environmental Protection Agency Geographic Information System (EPAGIS)²⁸;
- National Biodiversity Data Centre (NBDC)²⁹;
- NPWS Article 17 Metadata and GIS Database³⁰;
- Geological Survey Ireland, Department of the Environment, Climate and Communications Map Viewer³¹;
- Pathway Homes³².

²⁵ National Parks and Wildlife Service: National Parks & Wildlife Service (npws.ie)

²⁶ Mammals, Amphibians and Reptiles: <http://www.habitas.org.uk/nimars/>

²⁷ Ordnance Survey Ireland Map Viewer - Geohive: <https://webapps.geohive.ie/mapviewer/index.html>

²⁸ Environmental Protection Agency Geographic Information System: <https://gis.epa.ie/EPAMaps/>

²⁹ National Biodiversity Data Centre: www.biodiversityireland.ie

³⁰ NPWS Article 17 Metadata and GIS Database: <https://www.npws.ie/maps-and-data/habitat-and-species-data/article-17>

³¹ Geological Survey Ireland Map Viewer: <https://dcenr.maps.arcgis.com/apps/MapSeries/index>

³² Pathway Homes - Development Information

2.3 Site Location & Current Use

The proposed development site is located at Knocklyon Road, Knocklyon, Co. Dublin (Grid Reference: O 11695 27404).

The site is located approximately 7.8km southwest of Dublin city centre, 17.4km northwest of Bray town centre, and 46.8km southeast of Navan town centre. The area surrounding the site consists of residential dwellings, commercial businesses, greenspace and access roads associated with Knocklyon.

The wider environs include interspersed areas of road, parkland, watercourses, residential dwellings, commercial properties, hedgerows and treelines.

The current site is used as an area of green space within a residential area. The site consists of habitats such as Scattered Trees and Parkland, Amenity Grassland, Hedgerows, shrub and Hardstanding. Picture 1- 4 below illustrates the proposed development area.



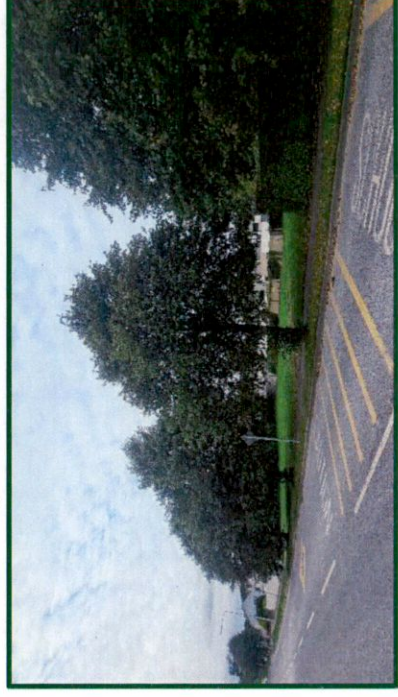
Picture 1: Amenity Grassland & Hardstanding On-site



Picture 2: Hedgerow, Shrub & Trees On-site



Picture 3: Amenity Grassland On-site



Picture 4: Trees On-site

Figure 2-1 details the site location within the environs of Churchtown, Dundrum, Co. Dublin, and additionally details the site boundary location within the immediate environs.

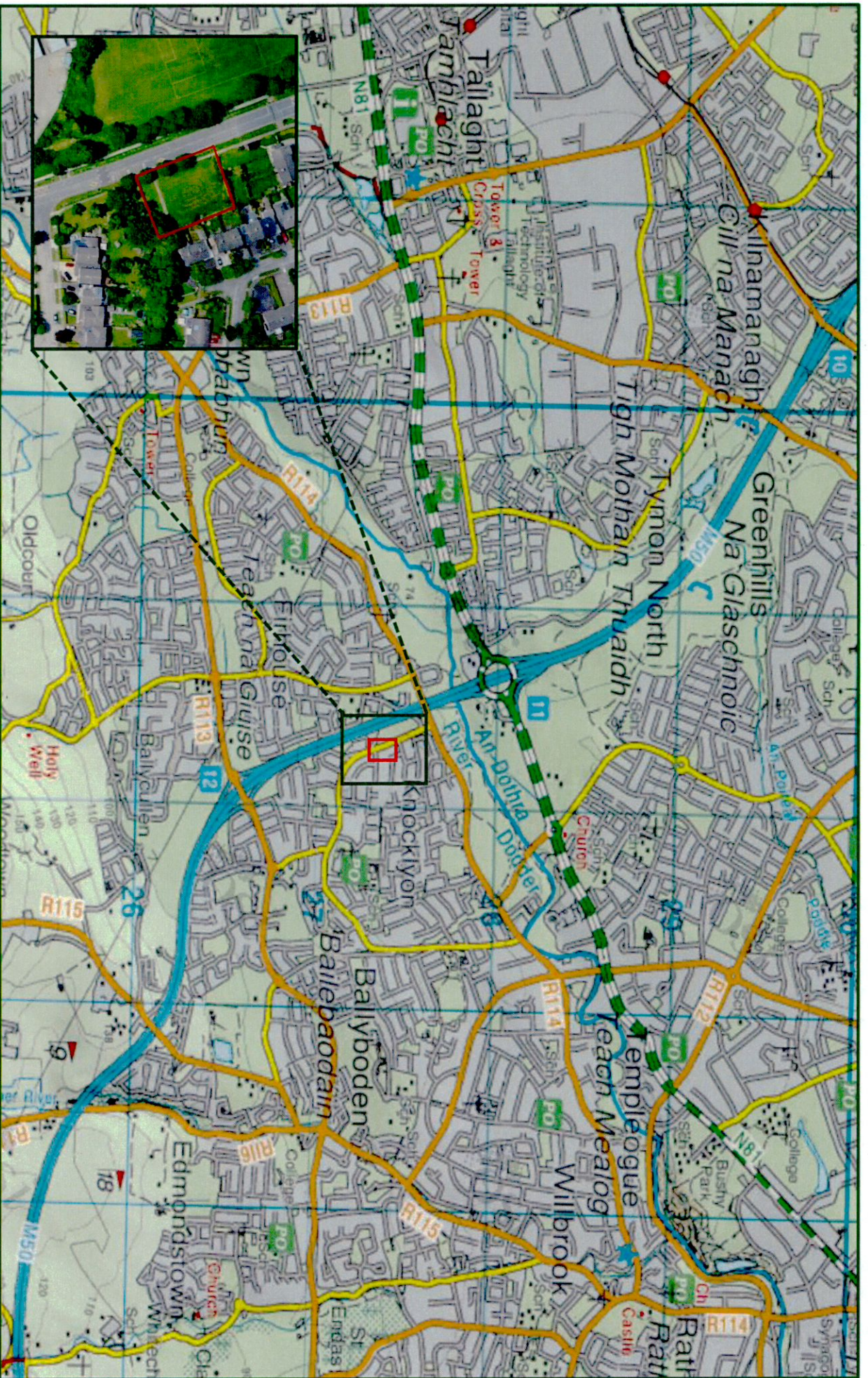


Figure 2-1: Site Location

2.4 Characteristics of the Proposed Development

2.4.1 Description of the Project

Permission is sought for:

1. 4 no. new build 2.5-storey 5-bedroom semi-detached houses;
2. Hard and soft landscaping and all associated development works;
3. A new water main connection to the public network which runs by the front of the site will provide a clear potable water supply;
4. Foul wastewater will be discharged to the foul network via a new foul connection from the dwellings, the exact details of which are set out in the engineer's report and associated drawings;
5. Surface water will be discharged to local gravity-fed public surface water network. This system will be designed and constructed in line with SuDS best practice guidance;
6. To carry out all ancillary site works.

All construction activities on-site will adhere to best practice environmental guidance such as:

- o Guidance for Pollution Prevention (GPP's):
 - GPP 1: Understanding your environmental responsibilities - Good environmental practices;
 - GPP 2: Above ground oil storage tanks;
 - GPP 4: Treatment and disposal of wastewater where there is no connection to the public foul sewer;
 - GPP 5: Works and maintenance in or near water;
 - GPP 8: Safe storage and disposal of used oils;
 - GPP 13 Vehicle washing and cleaning;
 - GPP 21: Pollution incident response planning;
 - GPP 22: Dealing with spills;
 - GPP 26 Safe storage - drums and intermediate bulk containers;
- o Pollution Prevention Guidance Notes (PPG's)
 - PPG 3: Use and design of oil separators in surface water drainage systems;
 - PPG 6: Working at construction and demolition sites;
 - PPG 7: Safe Storage – The safe operation of refuelling facilities;

- PPG 18: Managing fire water and major spillages;
- CIRIA Report C532 Control of Water Pollution from construction sites;
 - CIRIA Report C741 Environmental Good Practice on Site guide (4th Edition);
 - BS6031:2009 Code of Practice for Earthworks; and,
 - BS 5930 2015: Code of Practice for Site Investigations.

Storage of fuels and lubricants to include the following:

- All fuels to be stored in a bunded area at least 10m from any drainage ditch or stream;
- Refuelling to be undertaken in a designated area over hardstanding at minimum 10m from any field drain or stream;
- Fuels to be stored in plastic containers and stored in a locked contained within the site compound area;
- Spill kits should be stored and readily available, close to the designated refuelling area;
- All construction activities will be restricted to daytime hours. Works associated with the proposal will not be undertaken during dusk/dawn and periods of darkness;
- Any materials excavated from the site (i.e., during construction) must either be removed from the site to limit stockpiling or should be located at a distance of >10m from any ditch, stream or watercourse; and,
- Construction activities that require the excavation of materials should avoid periods of heavy and/or prolonged rainfall to ensure that silt and sediment is not washed into ditches, streams or watercourses.

All areas of retained vegetation will be protected according to B.S. 5837:2012 Trees in relation to design, demolition, and construction. This guidance outlines the steps involved in protecting retained trees to ensure that accidental damage or asphyxiation of the roots does not occur.

Appendix A attached details the Site Layout Plan.

2.4.2 Description of the Baseline Ecological Environment

Assessing the impacts of any project and associated activities requires an understanding of the ecological baseline conditions prior to and at the time of the project proceeding. Ecological baseline conditions are those existing in the absence of proposed activities³⁴.

³⁴ CIEEM, 2018, Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine;

A walkover of the site was undertaken on 14th September 2022 by a qualified ecologist, and habitats present were identified in accordance with the Heritage Council's 'Guide to Habitats in Ireland'³⁵. Plant nomenclature for vascular plants follows 'New Flora of the British Isles, while mosses and liverworts nomenclature follows 'Mosses and Liverworts of Britain and Ireland - a field guide'.

The walkover survey was designed to detect the presence, or likely presence, of a range of protected species and habitats. The walkover survey comprehensively covered the entire study area of the subject development and surrounding habitats.

2.4.2.1 Habitats

A Fossitt Habitat survey was undertaken on the 14th of September 2022. The weather during the survey was dry and cloudy. A habitat map is detailed in Figure 2-2 below.

GA2 - Amenity Grassland

The majority of grassland on the site was dominated by Amenity Grassland indicator species including Korean Lawn Grass (*Zoysia japonica*), Annual Bluegrass (*Poa annua*), and Creeping Buttercup (*Ranunculus repens*). Species noted within this habitat on-site include:

- Annual Bluegrass (*Poa annua*);
- Bitter Dock (*Rumex obtusifolius*);
- Common Dandelion (*Taraxacum officinale*);
- Creeping Buttercup (*Ranunculus repens*);
- Curly Dock (*Rumex crispus*);
- Field Mustard (*Brassica rapa*);
- Korean Lawn Grass (*Zoysia japonica*);
- Orchard Grass (*Dactylis glomerata*);
- Perennial Ryegrass (*Lolium perenne*);
- Rugosa Rose (*Rosa rugosa*) and,
- Spear Thistle (*Cirsium vulgare*).

WD5 - Scattered Trees & Parkland

Broadleaf trees are scattered around the boundary of the site. Trees are generally in good condition with some trees clad with thick ivy. The tree species are diverse and the majority of species are native, species noted include:

- Ash (*Fraxinus excelsior*);
- Small Leaved Lime (*Tilia cordata*); and
- Sycamore (*Acer pseudoplatanus*);

WS1 - Scrub

There is a small area of scrub on site, that consists of a number of common species including:

- Bitter Dock (*Rumex obtusifolius*);
- Cleavers (*Galium aparine*);
- Common Nettle (*Urtica dioica*);
- Creeping Thistle (*Cirsium arvense*);
- Poison Hemlock (*Conium maculatum*);
- Ribwort Plantain (*Plantago lanceolata*);

³⁵ Fossitt, J. A. (2000). A Guide to Habitats in Ireland. Dublin: The Heritage Council;

- Common Dandelion (*Taraxacum officinale*);
- Elmleaf Blackberry (*Rubus ulmifolius*);
- Scarlet Firethorn (*Pyracantha coccinea*); and
- Common Ivy (*Hedera helix*);
- Perennial Ryegrass (*Lolium perenne*);
- Stinging Nettle (*Urtica dioica*).

WS3 – Ornamental Non-native Shrub

There was a number of non-native species identified along the stone wall including Virginia Creeper (*Parthenocissus quinquefolia*), Scarlet Firethorn (*Pyracantha coccinea*), Rugosa Rose (*Rosa rugosa*) and Japanese Barberry (*Berberis thunbergii*). All non-native species on site have been listed below:

- Japanese Barberry (*Berberis thunbergii*);
- Scarlet Firethorn (*Pyracantha coccinea*);
- Korean Lawn Grass (*Zoysia japonica*);
- Sycamore (*Acer pseudoplatanus*); and
- Rugosa Rose (*Rosa rugosa*);
- Virginia Creeper (*Parthenocissus quinquefolia*).

BL3 – Buildings and Artificial Surfaces

A concrete brick wall was present to the north and east of the site. This wall was vegetated in some areas. Notable species include:

- Common Ivy (*Hedera helix*);
- Scarlet Firethorn (*Pyracantha coccinea*); and
- Japanese Barberry (*Berberis thunbergii*);
- Virginia Creeper (*Parthenocissus quinquefolia*).



Legend:

- WS1 - Scrub
- WDS - Scattered Trees and Parkland
- WS3 - Ornamental/Non-native Shrub
- GA2 - Amenity Grassland
- BL3 - Building and Artificial Surfaces
- Hardstanding
- Target Note - Virginia Creeper
- Target Note 2 - Path
- Site Boundary

| | |
|---------------------------------------|-------------------|
| Project Title: | |
| AEMP - 2000162 | |
| Knocklyon Road, Knocklyon, Co. Dublin | |
| Redevelopment | |
| Drawing Title: | |
| Fossitt Habitat Map | |
| Drawn By: | Checked By: |
| AG | FM |
| Project no: | Drawing no: |
| 2000162 | Drawing 2-1 |
| Scale: | Date: |
| 1/250 | 26th October 2022 |

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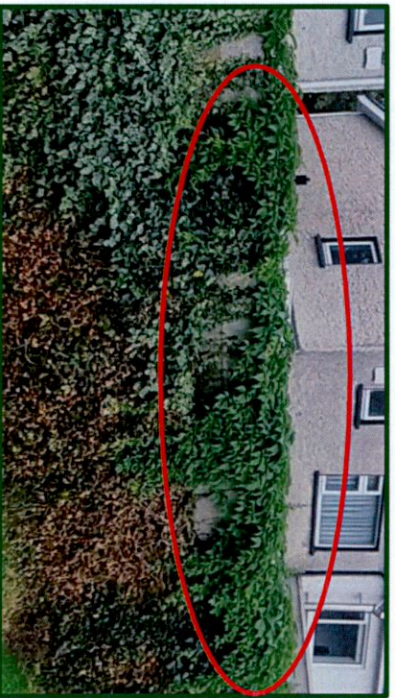
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Figure 2-2: Fossitt Habitat Map

2.4.2.2 Invasive Species (Flora) Survey

Throughout the habitat survey, the site was searched for invasive weed species, focusing on those species listed on the Third Schedule of Regulations 49 and 50 of the European Communities (Birds and Natural Habitats) Regulations 2011³⁶. Invasive species included in this list include Japanese Knotweed (*Fallopia japonica*), Giant Hogweed (*Heracleum mantegazzianum*), Giant Knotweed (*Fallopia sachalinensis*), Giant Rhubarb (*Gunnera manicata*), Himalayan Balsam (*Impatiens glandulifera*), Himalayan Knotweed (*Polygonum polystachyum*), Bohemian Knotweed (*Fallopia bohemica*) and Rhododendron (*Rhododendron ponticum*).

The invasive species survey carried out by AVRIO identified Virginia Creeper along the eastern wall that has encroached onto the site from a neighbouring property. Virginia Creeper is not listed under on the Third Schedule of Regulations 49 and 50 of the European Communities (Birds and Natural Habitats) Regulations 2011, however should be managed appropriately. Virginia Creeper has been target noted in Figure 2-2 above.



Picture 5: Virginia Creeper On-site

2.4.2.3 Species

Bat Roost Assessment for Trees

All trees on-site have been assessed as having Negligible Suitability for roosting bats due to insufficient roosting features.

The site is deemed optimal for commuting and foraging bats.

Bat Roost Assessment for Walls

³⁶ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora [Habitats Directive] and Directive 2009/147/EC [codified version of Directive 79/409/EEC as amended] [Birds Directive] transposed into Irish law as European Communities [Birds and Natural Habitats] Regulations 2011 [SI 477/2011].

The stone wall on-site have been assessed as having Negligible Suitability for roosting bats due to insufficient roosting features.

Badger (*Meles meles*) Survey

The site and immediate environ are sub-optimal for this species to create setts within due to the urban nature of the site, and no Badger setts, latrines or snuffle holes were identified within the site's boundary or within a 30m buffer of the site.

Breeding Birds Survey

No nests or breeding birds were identified on-site. Treelines and areas of scrub are considered optimal locations for breeding birds. Any removal or facing of trees and scrub will need to be undertaken outside of the breeding season (March-August inclusive).

Otter (*Lutra lutra*) Survey

No Otter Spraints, Footprints, Paths/slides, Holts or Urination 'green spots' were identified within the immediate vicinity of the site. No field drains were present on-site. The site itself is considered sub-optimal for commuting and foraging otters.

Red Squirrel (*Sciurus vulgaris*)

No specific evidence of this species was noted within the application boundary itself or in the immediate environs. That habitat on-site and within the surrounding environment was deemed to be of poor suitability for Red Squirrel.

Pine Marten (*Martes martes*)

No specific evidence of this species was noted within the application boundary itself or in the immediate environs. That habitat on-site and within the surrounding environment was deemed to be of poor suitability for Pine Marten.

Common Frog (*Rana temporaria*)

A survey of the site and the immediate environs did not reveal evidence of this species. Assessments conclude the habitat on-site is sub-optimal for common frog.

2.4.3 Description of the Baseline Geological Environment

2.4.3.1 Bedrock Geology

Bedrock under the site is comprises of Dark limestone & shale (calp) which is known as the Lucan Formation. The formation comprises dark-grey to black, fine-grained, occasionally cherty, micritic limestones that weather paler, usually to pale grey. There are rare dark coarser grained calcarenitic limestones, sometimes graded, and interbedded dark-grey calcarenitic limestones within this bedrock³⁷.

2.4.3.2 Aquifer Classification

The aquifer classification at the site is classed as a 'Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones'. A description of this aquifer is detailed below:

Aquifer with a limited and relatively poorly connected network of fractures, fissures and joints, giving a low fissure permeability which tends to decrease further with depth. A shallow zone of higher permeability may exist within the top few metres of more fractured/weathered rock, and higher permeability may also occur along fault zones. These zones may be able to provide larger 'locally important' supplies of water. In general, the lack of connection between the limited fissures results in relatively poor aquifer storage and flow paths that may only extend a few hundred metres.

Due to the low permeability and poor storage capacity, the aquifer has a low 'recharge acceptance'. Some recharge in the upper, more fractured/weathered zone is likely to flow along the relatively short flow paths and rapidly discharge to streams, small springs and seeps. Groundwater discharge to streams ('baseflow') can significantly decrease in the drier summer months.

2.4.3.3 Groundwater Vulnerability

Groundwater Vulnerability is a term used to represent the natural ground characteristics that determine the ease with which groundwater may be contaminated by human activities. More scientifically, groundwater vulnerability embodies the characteristics of the intrinsic geological and hydrogeological features at a site that determine the ease of contamination of groundwater. The vulnerability category assigned to a site, or an area is thus based on the relative ease with which infiltrating water and potential contaminants may reach groundwater in a vertical or sub-vertical direction. As all groundwater is hydrologically connected to the land surface, it is the effectiveness of this connection that determines the relative vulnerability to contamination. Groundwater that readily and quickly receives water (and contaminants) from the land surface is considered to be more vulnerable than groundwater that receives water (and contaminants) more slowly, and consequently in lower quantities. Additionally, the slower the movement and the longer the pathway, the greater is the potential for attenuation of many contaminants³⁸.

³⁷ British Geological Survey: <https://decent.maps.arcgis.com/apps/MapSeries/index.html?appid=330a1518e87a4c0ab2fbde2aaac3c228>

³⁸ Geological Survey Ireland - Groundwater Vulnerability: <https://www.gsi.ie/en-ie/programmes-and-projects/groundwater/activities/understanding-ireland-groundwater/groundwater-vulnerability/Pages/default.aspx>

The Geological Survey Ireland classifies the groundwater vulnerability at the site to be 'Low'³⁹.

2.4.3.4 Groundwater Flow Direction

Exact directions of groundwater flow have not been established for the site in question, however, for the purposes of this assessment the precautionary principle is implemented, and a worst-case scenario is used.

The direction of groundwater flow follows a path through an aquifer from areas of high-water levels to areas where water levels are low. Water flows through aquifers to discharge points some distance down-gradient at a spring or offshore into the sea⁴⁰.

³⁹ Geological Survey Ireland Map Viewer: <https://dcenr.maps.arcgis.com/apps/MapSeries/index>

⁴⁰ UK Groundwater Forum (Groundwater Flow): http://www.groundwateruk.org/downloads/groundwater_flow_and_quality.pdf

3. Identification of Relevant European Sites

3.1 Identification of the European Sites within the Likely Zone of Impact

The following methodology was used to establish which European Sites are within the Likely Zone of Impact of the proposed development:

- The most up-to-date GIS spatial datasets for European designated sites and water catchments were downloaded from the NPWS website⁴¹ and the EPA website⁴² on the 26th of October 2022. These datasets were utilised to identify European Sites that could feasibly be affected by the proposed development;
- All European Sites within a distance of 15km surrounding the development site were identified and are detailed in Figure 3-1 below. In addition, the potential for connectivity with European Sites at distances greater than 15km from the proposed development was also considered. In this case, the proposed project does not give rise to the potential for likely significant effects on European Sites located beyond the 15km zone;
- In relation to Special Protection Areas, in the absence of any specific European or Irish guidance in relation to such sites, the Scottish Natural Heritage (SNH) Guidance, 'Assessing Connectivity with Special Protection Areas (SPA)' (2016) was consulted⁴³. This document provides guidance in relation to the identification of connectivity between proposed developments and Special Protection Areas. The guidance considers the distances species may travel beyond the boundary of their SPAs and provides information on dispersal and foraging ranges of bird species that are frequently encountered when considering plans and projects;
- Table 3-1 provides details of all relevant European Sites identified in the preceding steps and assesses which are within the Likely Zone of Impact. The assessment considers any likely direct or indirect impacts of the proposed development, both alone and in combination with other plans and projects, on European Sites by virtue of the following criteria: size and scale, land-take, distance from the European Site or key features of the site, resource requirements, emissions, excavation requirements, transportation requirements and duration of construction, operation and decommissioning were considered in this screening assessment;
- The site synopses and conservation objectives, as per the appropriate datasets, were consulted and reviewed when preparing this report (26th October 2022). Figure 3-1 details the location of the proposed development in relation to all European sites within 15km in the Republic of Ireland.

Where potential pathways for Significant Effect are identified, the site is included within the Likely Zone of Impact, and further assessment is required.

⁴¹NPWS Protected Site Synopses and maps available on <http://www.npws.ie/en/ProtectedSites/>;

⁴² EPA maps available on [EPA Maps](http://www.epa.ie)

⁴³ Scottish Natural Heritage (SNH) (July 2013) Assessing Connectivity with Special Protection Areas (SPA);

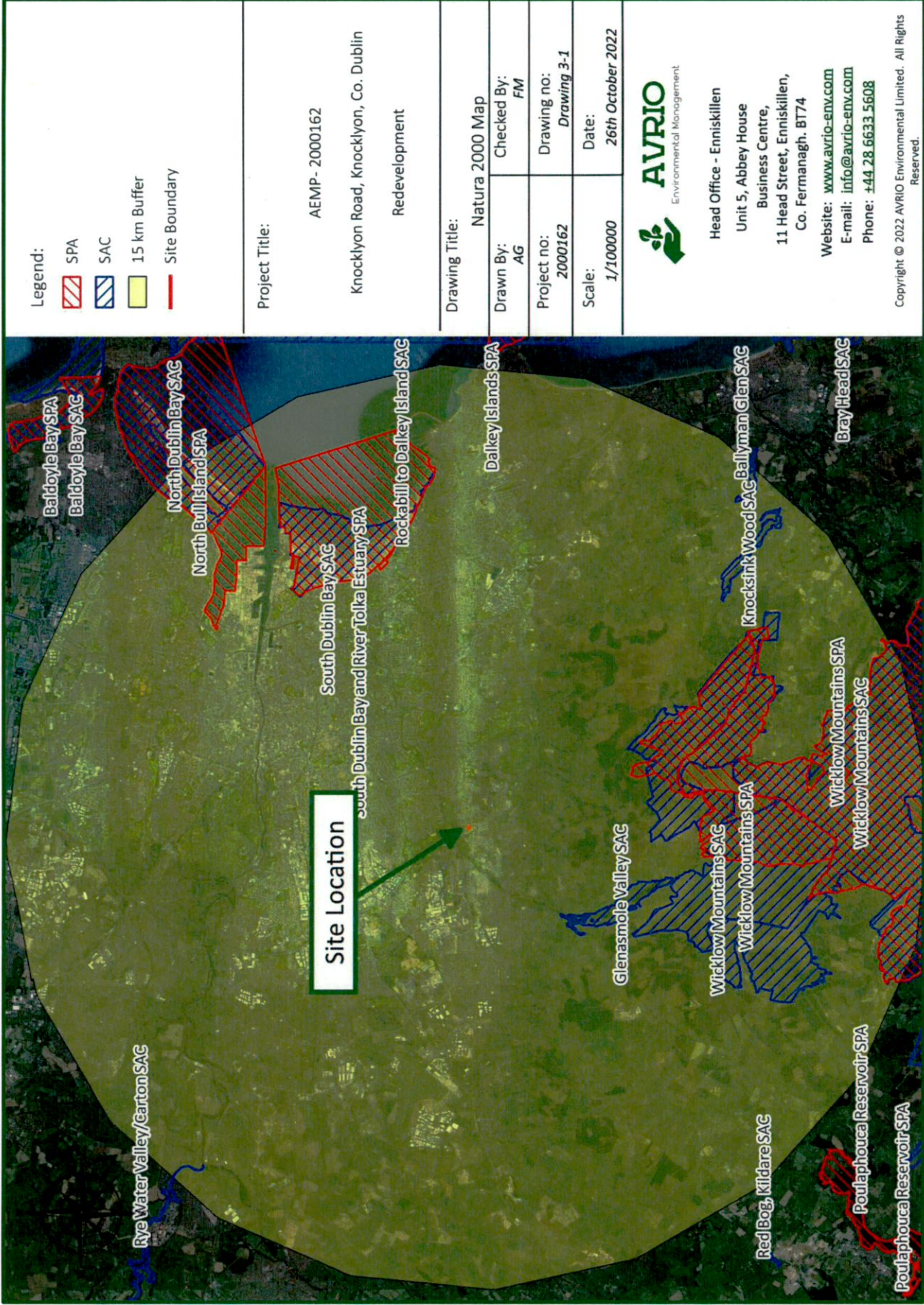


Figure 3-1: Natura 2000 Sites within a 15km Buffer

Table 3-1: Identification of designated sites within 15km

| European Sites and distance from subject development | Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 22/02/2022 | Conservation Objectives | Likely Zone of Impact Determination |
|--|---|---|--|
| <p>Special Areas of Conservation (SAC)</p> <p>Glenasmole Valley SAC [001209] Distance: 4.1km</p> | <ul style="list-style-type: none"> ➤ Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210] ➤ Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caerulea</i>) [6410] ➤ Petrifying springs with tufa formation (Cratoneurion) [7220] | <p>Detailed conservation objectives for this site (Version 1, October 2016) were reviewed as part of the assessment and are available at www.npws.ie</p> | <p>This development is located 4.1km to the northeast of this SAC. There is no spatial overlap or no direct land take from this SAC. No direct impacts are anticipated.</p> <p>No hydrological or hydrogeological connection exists between the site of the proposed development and the SAC, therefore, there is no pathway for significant effects via direct or indirect impacts.</p> <p>This SAC is not within the likely zone of impact, and no further assessment is required.</p> |
| <p>Wicklow Mountain SAC [002122] Distance: 5.7km</p> | <ul style="list-style-type: none"> ➤ [1130] Estuaries ➤ [1140] Tidal Mudflats and Sandflats ➤ [2110] Embryonic Shifting Dunes ➤ [2120] Marram Dunes (White Dunes) ➤ [2130] Fixed Dunes (Grey Dunes)* ➤ [2190] Humid Dune Slacks ➤ [1014] Narrow-mouthed Whorl Snail (<i>Vertigo angustior</i>) ➤ [1365] Common (Harbour) Seal (<i>Phoca vitulina</i>) | <p>Detailed conservation objectives for this site (Version 1, October 2016) were reviewed as part of the assessment and are available at www.npws.ie</p> | <p>This development site is located 5.7km to the north of this SAC. There is no spatial overlap or no direct land take from this SAC. No direct impacts are anticipated.</p> <p>No hydrological or hydrogeological connection exists between the site of the proposed development and the SAC, therefore, there is no pathway for significant effects via direct or indirect impacts.</p> <p>This SAC is not within the likely zone of impact, and no further assessment is required.</p> |
| <p>South Dublin Bay SAC [000210] Distance: 8.7km</p> | <ul style="list-style-type: none"> ➤ Mudflats and sandflats not covered by seawater at low tide [1140] ➤ Annual vegetation of drift lines [1210] ➤ Salicornia and other annuals colonising mud and sand [1310] ➤ Embryonic shifting dunes [2110] | <p>Detailed conservation objectives for this site (Version 1, October 2016) were reviewed as part of the assessment and are available at www.npws.ie</p> | <p>This development is located 8.7km to the southwest of this SAC. There is no spatial overlap or no direct land take from this SAC. No direct impacts are anticipated.</p> <p>No hydrological connection exists between the site of the proposed development and this SAC.</p> <p>The proposed development site is hydrogeologically connected to this SAC via a Locally Important Aquifer with a Low groundwater vulnerability status (See Appendix B).</p> <p>This feature is a potential pollutant pathway from the development site to South Dublin Bay SAC. However,</p> |

| | | | |
|---|--|---|---|
| <p>Knocksink Wood SAC [000725] Distance: 11km</p> | <ul style="list-style-type: none"> ➤ Petrifying springs with tufa formation (Cratoneurion) [7220] ➤ Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] ➤ Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] | <p>Detailed conservation objectives for this site (Version 1, October 2016) were reviewed as part of the assessment and are available at www.npws.ie</p> | <p>sufficient mitigation measures detailed within the proposal negates any such impact to this SAC. No Indirect impacts are anticipated. This SAC is not within the likely zone of impact, and no further assessment is required.</p> |
| <p>North Dublin Bay SAC [000627] Distance: 12.7km</p> | <ul style="list-style-type: none"> ➤ Mudflats and sandflats not covered by seawater at low tide [1140] ➤ Annual vegetation of drift lines [1210] ➤ Salicornia and other annuals colonising mud and sand [1310] ➤ Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] ➤ Mediterranean salt meadows (Juncetalia maritimi) [1410] ➤ Embryonic shifting dunes [2110] ➤ Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120] ➤ Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] ➤ Humid dune slacks [2190] ➤ Petalophyllum ralfsii (Petalwort) [1395] | <p>Detailed conservation objectives for this site (Version 1, October 2016) were reviewed as part of the assessment and are available at www.npws.ie</p> | <p>This development site is located 12.7km to the southwest of this SAC. There is no spatial overlap or no direct land take from this SAC. No direct impacts are anticipated. No hydrological connection exists between the site of the proposed development and this SAC. The proposed development site is hydrogeologically connected to this SAC via a Locally Important Aquifer with a Low groundwater vulnerability status (See Appendix B). This feature is a potential pollutant pathway from the development site to North Dublin Bay SAC. However, sufficient mitigation measures detailed within the proposal negates any such impact to this SAC. No Indirect impacts are anticipated. This SAC is not within the likely zone of impact, and no further assessment is required.</p> |
| <p>Ballyman Glen SAC [000713] Distance: 13.7km</p> | <ul style="list-style-type: none"> ➤ Petrifying springs with tufa formation (Cratoneurion) [7220] ➤ Alkaline fens [7230] | <p>Detailed conservation objectives for this site (Version 1, October 2016) were reviewed as part of the assessment and are</p> | <p>This development site is located 13.7km to the northwest of this SAC. There is no spatial overlap or no direct land take from this SAC. No direct impacts are anticipated. No hydrological or hydrogeological connection exists between the site of the proposed development and the SAC, therefore, there is no pathway for significant effects via direct or indirect impacts.</p> |

| | | | |
|---|---|--|---|
| | | available at www.npws.ie | This site is not within the Likely Zone of Impact, and no further assessment is required. |
| Rye Water Valley/Carton SAC [001398] Distance: 13.9km | <ul style="list-style-type: none"> ➤ Petrifying springs with tufa formation (Cratoneurion) [7220] ➤ Vertigo angustior (Narrow-mouthed Whorl Snail) [1014] ➤ Vertigo moulinsiana (Desmoulin's Whorl Snail) [1016] | Detailed conservation objectives for this site (Version 1, October 2016) were reviewed as part of the assessment and are available at www.npws.ie | This development site is located 13.9km to the southeast of this SAC. There is no spatial overlap or no direct land take from this SAC. No direct impacts are anticipated. No hydrological or hydrogeological connection exists between the site of the proposed development and the SAC, therefore, there is no pathway for significant effects via direct or indirect impacts. This site is not within the Likely Zone of Impact, and no further assessment is required. |
| Special Protected Areas (SPA) | | | |
| Wicklow Mountain SPA [004040] Distance: 5.5km | <ul style="list-style-type: none"> ➤ Merlin (Falco columbarius) [A098] ➤ Peregrine (Falco peregrinus) [A103] | Detailed conservation objectives for this site (Version 1, October 2016) were reviewed as part of the assessment and are available at www.npws.ie | This development is located 5.5km to the north of this SPA. There is no spatial overlap or no direct land take from this SPA. No direct impacts are anticipated. No hydrological or hydrogeological connection exists between the site of the proposed development and the SPA, therefore, there is no pathway for significant effects via direct or indirect impacts. This SPA is not within the Likely Zone of Impact, and no further assessment is required. |
| South Dublin Bay and River Tolka Estuary SPA [004024] Distance: 8.8km | <ul style="list-style-type: none"> ➤ Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] ➤ Oystercatcher (<i>Haematopus ostralegus</i>) [A130] ➤ Ringed Plover (<i>Charadrius hiaticula</i>) [A137] ➤ Grey Plover (<i>Pluvialis squatarola</i>) [A141] ➤ Knot (<i>Calidris canutus</i>) [A143] ➤ Sanderling (<i>Calidris alba</i>) [A144] ➤ Dunlin (<i>Calidris alpina</i>) [A149] ➤ Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] ➤ Redshank (<i>Tringa totanus</i>) [A162] ➤ Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] ➤ Roseate Tern (<i>Sterna dougalii</i>) [A192] ➤ Common Tern (<i>Sterna hirundo</i>) [A193] ➤ Arctic Tern (<i>Sterna paradisaea</i>) [A194] | Detailed conservation objectives for this site (Version 1, October 2016) were reviewed as part of the assessment and are available at www.npws.ie | This development is located 8.8km to the west of this SPA. There is no spatial overlap or no direct land take from this SPA. No direct impacts are anticipated. No hydrological connection exists between the site of the proposed development and this SAC. The proposed development site is hydrogeologically connected to this SPA via a Locally Important Aquifer with a Low groundwater vulnerability status (See Appendix B). This feature is a potential pollutant pathway from the development site to South Dublin Bay and River Tolka Estuary SPA. However, sufficient mitigation measures detailed within the proposal negates any such impact to this SAC. No indirect impacts are anticipated. |

| | | |
|--|---------------------------------|--|
| | ➤ Wetland and Waterbirds [A999] | This SPA is not within the likely zone of impact, and no further assessment is required. |
|--|---------------------------------|--|

3.2 Natura 2000 Impact Assessment

The potential impacts of the proposed development on the Natura 2000 sites identified above are described in table 3-2 below.

Table 3-2: Natura 2000 Impact Assessment

Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on nearby Natura 2000 site:

The proposed works will have no impact upon the integrity of the site structure of the designated sites identified, i.e., South Dublin Bay SAC, Wicklow Mountain SAC, Glenasmole Valley SAC, Knocksink Wood SAC, North Dublin Bay SAC, Ballyman Glen SAC, Rye Water Valley/Carlton SAC, South Dublin Bay and River Tolka Estuary SPA, and Wicklow Mountain SPA.

There are no individual elements of the proposed project that are likely to give rise to negative impacts on these sites if designed in mitigation in section 2.4 above is implemented.

The application site is, at its closest to Glenasmole Valley SAC, a distance of 4.1km; however, it is considered that the designed in mitigation in section 2.4 above, will prevent a direct source – pathway – receptor linkage between the works site and the designated sites identified, therefore, no impacts will occur.

Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the nearby Natura 2000 sites by virtue of:

Size & Scale: Given the size and scale of the works and no direct source – pathway – receptor linkage between the works site and any designated site, no impacts will occur.

Land-take: There will be no land-take from any designated site. There will be no interference with the boundaries of any designated site.

Distance from Natura 2000 Site (or key features of the site): At its closest point, the proposed works site is situated at a distance of 4.1km from Glenasmole Valley SAC which is the closest designated site. This distance is adequate to predict that there will be no impacts upon these designated sites, provided measures detailed within in section 2.4 above are adhered to. The project design implementing the above measures removes any direct source-pathway-receptor linkages between designated sites and the development site.

Resource Requirements (water abstraction etc.): No resources will be taken from any Natura 2000 site, and there are no resource requirements that will impact any designated site.

Emissions: Neither the construction nor the operation of the proposed works will result in any emissions to the identified SACs. There will be no run-off (untreated or other) from the works site directly to any SAC, SPA, pSPA or RAMSAR site provided environmental mitigation measures detailed within in section 2.4 above are adhered to. The project design implementing the above measures removes any direct source-pathway-receptor linkages between designated sites and the development site.

Excavation Requirements: Excavated material from the construction will be used on-site. Any remaining material will be disposed of in a responsible manner at a licensed facility away from any designated sites or areas of conservation value.

Transportation requirements: There will be no additional transportation requirements resulting from the proposed development and associated works that will have any impact upon the Natura 2000 sites identified.

In-Combination / Cumulative Impacts: The proposed application was considered in combination with other developments or proposed developments in the area, and potential cumulative impacts were considered. A number of planning applications associated with the development of Dundrum, have been granted planning permission or are under review in the preceding five years, and where necessary, these applications were accompanied by Appropriate Assessment reports (Stage I / Stage II). Any future individual application that has the potential to impact upon a Natura 2000 site will be subject to Appropriate Assessment (AA) as required under Articles 6(3) of the Habitats Directive. The proposed development will not lead to any cumulative impacts upon any designated site when considered in combination with other developments that have been adequately screened for AA or where mitigation measures have been included as part of a Stage 2 AA for these developments.

Duration of Construction, Operation & Decommissioning: Once construction begins, the development should be complete within 18 months.

Describe any likely changes to the nearby Natura 2000 sites arising as a result of:

Reduction of habitat area: The proposed development lies outside the boundaries of any Natura 2000 site identified above. There will be no reduction of designated habitat area within any SAC, SPA, pSPA or RAMSAR site. There will be no impacts upon the habitat qualifying interests of the designated sites within 15km of the development. All of the site features are outside of the zone of influence of the development provided measures detailed within in section 2.4 above are adhered to. The project design implementing the measures detailed within in section 2.4 above, removes any direct source-pathway-receptor linkages between designated sites and the development site. There will be no interference with the boundaries of any SAC, SPA, pSPA or RAMSAR site.

Disturbance to Key Species: All designated sites identified lay outside of the zone of influence of the development; therefore, there will be no disturbance to key species associated with any designated site.

Habitat or species fragmentation: There will be no habitat or species fragmentation within any SAC, SPA, pSPA or RAMSAR site. No ecological corridors between the proposed site and any designated site exist, which could cause habitat, or species fragmentation, therefore, no habitat or species fragmentation will occur.

Reduction in species density: There will be no reduction in species density within any SAC, SPA, pSPA or RAMSAR site.

Changes in key indicators of conservation value (water quality etc.): There will be no negative impacts upon surface or groundwater quality within any SAC, SPA, pSPA or RAMSAR site. The project design implementing the measures detailed within in section 2.4 above, removes any direct source-pathway-receptor linkages between designated sites and the development site. There will be no negative impacts upon the water quality in any designated site.

Describe any likely impacts on the nearby Natura 2000 sites as a whole in terms of:

Interference with the key relationships that define the structure or function of the site: It is not considered likely that there will be any impacts on the key relationships that define the structure or function of any Natura 2000 sites identified.

Provide indicators of significance as a result of the identification of effects set out above in terms of:

Loss - Estimated percentage of lost area of habitat: None

Fragmentation: None

Disruption & disturbance: None

Change to key elements of the site (e.g. water quality etc.): None

4. Article 6(3) Appropriate Assessment Screening Statement & Conclusions

4.1 Screening Statement

The findings of this Screening Assessment are presented following the European Commission's Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC (EC, 2001) and Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018).

In order to assess the impact on the Natura 2000 sites, a standard source-pathway-receptor model is utilised. Therefore, in order for an impact to be established, all three of these elements must be present. Where mitigation measures are put in place to ensure that one or all of these elements are removed, the potential impact is deemed to be not relevant or significant.

9 Natura 2000 sites are present within 15km of the site, including:

- South Dublin Bay SAC;
- Wicklow Mountain SAC;
- Glensmole Valley SAC;
- Knocksink Wood SAC;
- North Dublin Bay SAC;
- Ballyman Glen SAC;
- Rye Water Valley/Carton SAC
- South Dublin Bay and River Tolka Estuary SPA;
- Wicklow Mountain SPA;

The test of likely significance (TOLS) has concluded that the source-pathway-receptor mechanism in addition to considering other elements highlighted above, cannot be established for these sites provided, the projects designed-in mitigation measures detailed within in section 2.4 above are adhered to as part of the works. These measures remove any direct source-pathway-receptor linkages between these designated areas and the works site removing any potential impact. Due to the benign nature of the development, all these designations highlighted above can be screened out.

4.2 Screening Conclusions

This initial Stage 1 assessment has concluded that there will be no likely significant direct or indirect impacts on any Natura 2000 site, individually or in combination, as a result of the proposal. Therefore, there is no requirement to progress to Stage 2 (Appropriate Assessment) in this instance.

5. Appropriate Assessment Conclusions

In accordance with Article 6(3) of the Habitats Directive, the relevant case law established best practices and the precautionary principle, this Appropriate Assessment Stage 1 Screening Report has examined the details of the project in relation to the relevant Natura 2000 sites within 15km of the works site.

In view of the best scientific knowledge and on the basis of objective information, it can be concluded that this application, whether individually or in combination with other plans and projects, will have no impact upon any Natura 2000 sites. The integrity of these sites will be maintained, and the habitats and species associated with these sites will not be adversely affected. It is of the opinion of this author that this application does not need to proceed to Stage II of the Appropriate Assessment process.

Appendix A - Site Layout



| <div style="text-align: center;"> <h3>Proposed Site Plan : 1:200</h3> <p>Site Area = 843 Msq</p> </div> | <div style="border: 1px solid blue; padding: 5px; margin-bottom: 10px;"> <p>NOTE:</p> <ul style="list-style-type: none"> • ALL SERVICES, LEVELS AND TOLERANCES TO BE ADVISED BY ALL PARTICIPANTS. • SEE THE PLAN FOR THE DETERMINATION OF LIMITS FOR CONSTRUCTION MARKERS. </div> <div style="margin-bottom: 10px;"> <p>House Type A(1) - 5 Bed, 7 person</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Order</th> <th>Orientation</th> <th>Area (sqm)</th> <th>Permitted</th> <th>Comments</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>20m x 15m</td> <td>300</td> <td>✓</td> <td></td> </tr> <tr> <td>2</td> <td>12m x 12m</td> <td>144</td> <td>✓</td> <td></td> </tr> </tbody> </table> </div> <div> <p>Other House Types</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td>House Type A(2) - 4 Bed, 6 person</td> <td>10m x 12m</td> <td>120</td> <td>✓</td> <td></td> </tr> <tr> <td>House Type A(3) - 3 Bed, 5 person</td> <td>8m x 10m</td> <td>80</td> <td>✓</td> <td></td> </tr> <tr> <td>House Type A(4) - 2 Bed, 4 person</td> <td>7m x 8m</td> <td>56</td> <td>✓</td> <td></td> </tr> <tr> <td>House Type A(5) - 1 Bed, 2 person</td> <td>5m x 7m</td> <td>35</td> <td>✓</td> <td></td> </tr> </tbody> </table> </div> | Order | Orientation | Area (sqm) | Permitted | Comments | 1 | 20m x 15m | 300 | ✓ | | 2 | 12m x 12m | 144 | ✓ | | House Type A(2) - 4 Bed, 6 person | 10m x 12m | 120 | ✓ | | House Type A(3) - 3 Bed, 5 person | 8m x 10m | 80 | ✓ | | House Type A(4) - 2 Bed, 4 person | 7m x 8m | 56 | ✓ | | House Type A(5) - 1 Bed, 2 person | 5m x 7m | 35 | ✓ | |
|---|--|------------|-------------|------------|-----------|----------|---|-----------|-----|---|--|---|-----------|-----|---|--|-----------------------------------|-----------|-----|---|--|-----------------------------------|----------|----|---|--|-----------------------------------|---------|----|---|--|-----------------------------------|---------|----|---|--|
| Order | Orientation | Area (sqm) | Permitted | Comments | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 20m x 15m | 300 | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 12m x 12m | 144 | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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PLANNING

WA ARCHITECTS
 Vincent Mariani
 Project: Proposed Residential Development at
 Moultonville, CO, Dallas
 Drawing: Proposed S24 Plan
 Scale: 1:200
 Drawing No: 180201

PLANNING

1:200

Appendix B - Hydrogeology of the site

| Bedrock Aquifer: Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones | | Bedrock Polygons 100k ITM 2018: Lucan Formation | | | | National Groundwater Vulnerability: | | | |
|---|---|---|--------------------|-------------------------------------|-----------------|--|----------------------------|--------------------------|----------------------------|
| Aquifer Category: | Category Description: | New Code: | Unit Name: | Description: | Formation: | Lithological Description: | Soil Permeability Code: | Depth to Bedrock (m): | Vulnerability Category: |
| Locally Important - LI | Bedrock which is Moderately Productive only in Local Zones | CDLUCN | Lucan Formation | Dark limestone & shale (calp) | Lucan Formation | Dark-grey to black, fine-grained, occasionally cherty, micritic limestones that weather paler, usually to pale grey. Dark coarser grained calcareneitic limestones, sometimes graded, and interbedded dark-grey calcarenitic limestones. | L | N/A | Low |
| | | | | | | | | | |
| Project Title: AEMP - 2000162 Knocklyon Road, Knocklyon, Co. Dublin Redevelopment | | | | | | | | | |
| Drawing Title: Hydrogeology Map | | | | | | | | | |
| Drawn By: AG | | Checked By: FM | | | | | | | |
| Project no: 2000162 | | Drawing no: Appendix B | | | | | | | |
| Scale: 1/15000 | | Date: 26th October 2022 | | | | | | | |
| Environmental Management Head Office - Enniskillen Unit 5, Abbey House Business Centre, 11 Head Street, Enniskillen, Co. Fermanagh. BT74 Website: www.avrio-env.com E-mail: info@avrio-env.com Phone: +44 28 6633 5608 | | | | | | | | | |