SDCC Rathcoole Housing Development

Environmental Impact Assessment Scoping Report

South Dublin County Council

October 2025

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Quality information

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Revision history

Revision	Revision date	Details	Authorized	Name	Position
0	14/10/2025	Draft	N	Richard O'Callaghan	Project Director
0	14/10/2025	Final	Y	Richard O'Callaghan	Project Director

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1. Introduction

This informal Environmental Impact Assessment (EIA) Scoping Report has been prepared by AECOM Ireland Limited (AECOM) on behalf of South Dublin County Council (SDCC) (hereafter referred to as 'the Applicant') for the Rathcoole Housing Development (hereafter referred to as the 'Proposed Development') located in the townland of Rathcoole, under the administrative area of SDCC (Easting: 302873, Northing: 226634). The Proposed Development involves the construction of 118 no. residential properties set within a series of public open and recreational spaces.

The Proposed Development Site extends over approximately 17.8 hectares (ha) of greenfield land to the southeast of Rathcoole, on lands adjoining established residential areas. The extent of the Proposed Development Site is illustrated in Plate 1.1; however, it should be noted that this is a preliminary redline boundary and may be subject to change as the design of the Proposed Development becomes more detailed at the EIA stage.



Plate 1.1: Proposed Development Site and Context

2. The Proposed Development

2.1 The Site

The Proposed Development Site is situated within the Rathcoole urban area, approximately 18 km southwest of Dublin city centre, and benefits from its proximity to major transport routes, including the N7 and M50. The area is primarily residential in character, with a mix of commercial and community services available in the village centre. Rathcoole itself had a population of 4,351 persons in the 2022 Census.

There are six Natura 2000 designated sites within a 15 km radius of the site:

- Glenasmole Valley Special Areas of Conservation (SAC) (Site Code: 001209)
- Red Bog, Kildare SAC (Site Code: 000397)
- Rye Water Valley/ Carton SAC (Site Code: 001398)
- Wicklow Mountains SAC (Site Code: 002122)
- Wicklow Mountains Special Protection Area (SPA) (Site Code: 004040)
- Poulaphouca Reservoir SPA (Site Code: 004063)

The nearest Natura 2000 is the Glenasmole Valley SAC, approximately 7 km to the southeast of the Proposed Development. The AA Screening Report addresses the impacts upon these designated sites.

All of the Natura 2000 sites listed above (with the exception of the Wicklow Mountains SAC/ SPA) are also designated as proposed Natural Heritage Areas (pNHAs).

The existing Rathcoole Park serves the urban area of Rathcoole and may be considered an essential element of the urban area. The Proposed Development extends over a large portion of this park, with the remainder of the park located to the north of the Site. To the north/ northwest of the park, there is the residential area of Coolamber Drive and Beechwood Lawns. The land use zoning provisions are considered in further detail in Section 3.3.1 of this report.

The overall Site, as outlined in Plate 2.1, extends over approximately 17.8 ha, of which approximately 15.9 ha are owned by SDCC and 1.8 ha are under the ownership of the Department of Education. The site is reasonably flat and is well drained with a network of drainage ditches and streams. Coolmine Stream, which is the most significant stream, passes through the centre of the Site from southwest to northeast and is a first order tributary of the River Camac, which is located to the east of the Site. A smaller drainage ditch, approximately perpendicular to this stream, crosses the Site from north to south. Both of these features follow the lines of old field boundaries/ long-established tree lines/ hedgerows. In addition, the Site is bounded to the south and west by mature, diverse tree lines/ hedgerows. The Crockshane (Slade) Stream, which flows along the hedgerow on the southern/ eastern boundary, also flows into the River Camac to the east. Flood Zones A and B are located on the Site.

As illustrated in Plate 2.1, there is an Annex I priority Alluvial Woodland and Petrifying Springs to the southwest of the Site and an emerging WS2 Immature Woodland in the southwestern portion of the Site. There is an Annex I Lowland Hay Meadow in the norther part of the Site to the south of the Coolmine Stream. There are other areas of GS2 Dry Meadows and Grassy Verges/ WS1 Scrub. There is evidence of badger setts on-site. The site is located within a noise significant boundary due to its proximity to Baldonnell Airport.



Plate 2.1: Proposed Development Site Location and Biodiversity and Water Receptors in the Surrounding Environs

Planning permission was granted permission on 19 May 2025 for the construction of a new primary school and associated works (e.g., new access road) at a site is within the Proposed Development Site boundary (to the northwest) (SDCC Pl. Ref. SD23A/0336 / ACP Pl. Ref. 321696). The location of this development in relation to the Proposed Development is illustrated in Plate 2.2.

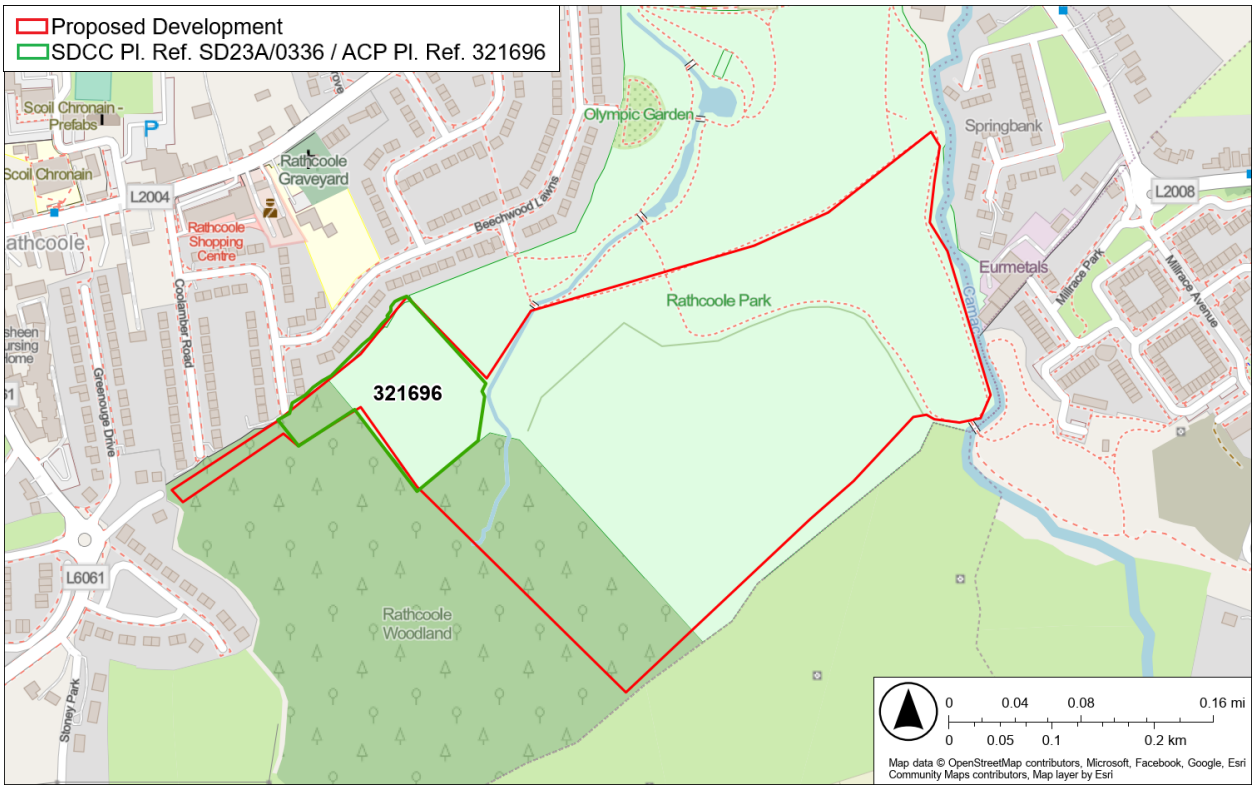


Plate 2.2: Proposed Development Site Location in relation to SDCC Pl. Ref. SD23A/0336 / ACP Pl. Ref. 321696

2.2 Development Details

The Proposed Development includes the following:

- 118 no. residential properties in a mix of 1- to 3-storey buildings, which include:
  - 60 no. social housing units comprised of:
    - 14 no. age-friendly units;
    - 5 no. traveller accommodation;
    - 5 no. social housing units; and
    - 36 no. walk-up apartment units (villa blocks).
  - 58 no. affordable units comprised of:
    - 34 no. housing units; and
    - 24 no. walk-up apartment units (villa blocks).
- A junior GAA pitch, two senior GAA pitches, and changing facilities;
- Public open and amenity spaces with links to existing and surrounding communities;
- Existing links will be retained and enhanced. A new pedestrian and cyclist route is proposed via Coolamber Road, with vehicle access through Coolamber Drive. This will serve as the temporary main access to the proposed school until a new junction at Mulally's Lane is delivered.
- Other associated works such as the provision car parking, landscaping, drainage (including Sustainable Urban Drainage Systems (SUDS)), and connections to local utility services, amongst others.



Plate 2.3: Illustrative Masterplan (Source: prepared by Metropolitan Workshop for the Proposed Development)

The Proposed Development Site strategy is landscape-led, with a strong emphasis on connection to the surrounding woodland and parkland. Green space is at the heart of the design of the Proposed Development, with 'green fingers' running through the site to retain and enhance existing desire lines and improve permeability. A network of green streets, tree-lined avenues, and shared surface squares will

create a rich, legible, and walkable environment. The Proposed Development will be anchored by a high-quality public realm that encourages social interaction and supports biodiversity.

Access to the Proposed Development will via a new road located along the northwestern boundary of the site. This road will extend east from Mulally's Lane (located to the east of the Peyton Roundabout (L6061)) and provide connection to the site via Coolamber Road and Coolamber Drive as well (located to the north of the site). The Applicant has engaged the Department of Education in consultation for the design of the access to the Proposed Development Site in relation to the approved development SDCC Pl. Ref. SD23A/0336/ ACP Pl. Ref. 321696.

2.2.1 Construction Phase

The Proposed Development construction phase activities include, amongst others, site mobilisation; set-up of temporary construction compounds; vegetation clearance; earthworks; removal of minor structures such as fences; breakthrough of existing surfaces; construction of residential units and proposed GAA pitches and facilities; connection to utility services; reinstatement of surfaces; and landscaping. The construction phase for the Proposed Development is anticipated to take approximately one year to complete and is currently programmed to commence in September 2026 (subject to planning approval).

2.2.2 Operational Phase

It is estimated that, subject to planning approval, the Proposed Development would be ready for commissioning from October 2027 onwards. The design working life of the main structures of the housing units (e.g., structural elements, roofs, walls, floors, etc.) would be 60 years, while the design life for other elements (e.g., waterproofing of roofs, electrical services, internal fittings such as kitchens and accessories) would range between 20 to 40 years.

During the operational phase, housing units will be occupied by residents. On-site activities will include those typical of residential areas, in addition to maintenance works (carried out by the relevant authority) such as landscaping and upkeep of communal amenity spaces and infrastructure, services and utilities.

2.2.3 Decommissioning Phase

The Proposed Development has been designed as a long-term asset addressing local housing needs in South Dublin. In this context, no decommissioning of the Proposed Development is envisaged.

3. Policy Context Applicable to the Proposed Development

This section provides an overview of the relevant planning policy framework in so far as it relates to the development of lands in Rathcoole at the Proposed Development Site.

3.1 National Planning Framework

The NPF was first published by the DHLGH in 2018, with the subsequent NPF First Revision published in April 2025. The latter highlights that Dublin must accommodate a significant share of Ireland's population growth within its metropolitan area, focusing on the development of compact, connected, and climate-resilient urban communities. Several National Policy Objectives (NPOs), such as the following, may be considered applicable to the Proposed Development:

- **NPO 7**: *"Deliver at least 40% of all new homes nationally, within the built-up footprint of existing settlements and ensure compact and sequential patterns of growth."*
- **NPO 8**: *"Deliver at least half (50%) of all new homes that are targeted in the five Cities and suburbs of Dublin, Cork, Limerick, Galway and Waterford, within their existing built-up footprints and ensure compact and sequential patterns of growth'."*
- **NPO 12**: *"Ensure the creation of attractive, liveable, well-designed, high quality urban places that are home to diverse and integrated communities that enjoy a high quality of life and well-being."*
- **NPO 37**: *"Ensure the integration of safe and convenient alternatives to the car into the design of our communities, by prioritising walking and cycling accessibility to both existing and proposed developments, and integrating physical activity facilities for all ages."*
- **NPO 45**: *"Increase residential density in settlements, through a range of measures including reductions in vacancy, re-use of existing buildings, infill development schemes, area or site-based regeneration, increased building height and more compact forms of development."*

3.2 Regional Spatial and Economic Strategy for the Eastern and Midland Region

The Eastern and Midland Regional Assembly's *'Regional Spatial and Economic Strategy 2019-2031'* (RSES), which is aligned with the NPF, sets ambitious targets to achieve compact growth, with 50% of new housing to be delivered within or contiguous to the built-up areas of Dublin City and suburbs. To meet this goal, the Dublin Metropolitan Area Strategic Plan (MASP) (contained within Chapter 5 of the RSES) identifies strategic residential and employment corridors along key public transport routes, both existing and planned. The aim of the MASP is to ensure a steady supply of serviced development lands to support Dublin's sustainable growth. Key principles of the MASP include compact sustainable growth and accelerated housing delivery, integrated transport and land use and alignment of growth and enabling infrastructure. The Proposed Development Site is located with the Dublin Metropolitan Area.

3.3 South Dublin County Development Plan

The CDP outlines a series of policies and objectives that are directly relevant to the delivery of the proposal on the site.

3.3.1 Zoning Objectives

Zoning at the site is provided under the SDCDP:

- **Objective RES-N**: *"To provide for new residential communities in accordance with approved area plans."*
- **Objective RU**: *"To protect and improve rural amenity and to provide for the development of agriculture."*
- **Objective OS**: *"To preserve and provide for open space and recreational amenities."*

The zoning and other objective are shown in Plate 3.1.

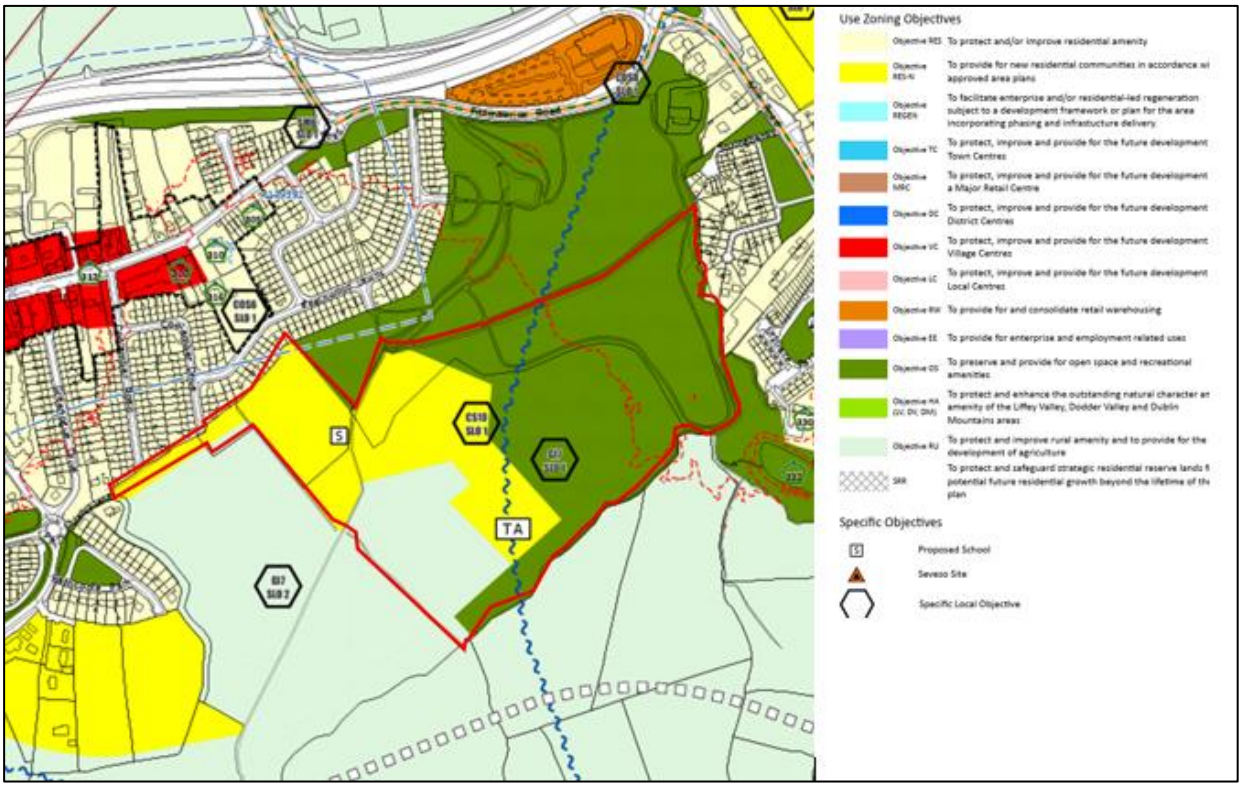


Plate 3.1: CDP Zoning Objectives Map (Source: SDCC CDP)

3.3.2 Specific Local Objectives

The following Specific Local Objectives (SLO) on the Rathcoole Lands are also noted:

- TA annotated on RES-N, which indicates an objective to provide for traveller accommodation (indicative sites).
- S annotated on RES-N, which indicates a proposed school (Refer to SD23A/0336 & APB-321696-25)
- **G17 SLO1**: *"The current green wildlife corridor between Saggart and Rathcoole be maintained and the need to preserve this wildlife corridor be incorporated into the design and development plans for Rathcoole Park."*

- **GI7 SLO2**: *"To ensure the adequate protection and augmentation of the identified Alluvial Rathcoole Woodlands within the zoning RU, and in recognising their value as green infrastructure and the potential linkages to Lugg Woods and Slade Valley and other amenity areas, provide for sensitive passive amenity uses which have regard to their Annex 1 status."*
- **CS10 SLO1**: *"To ensure that the provision of a primary school, library hub, 2 full sized GAA pitches and 1 junior pitch and associated pavilion, access road and open space is provided in tandem with new residential development having regard to the provisions of GI7 SLO2."*

3.3.3 Housing

Table 11 of the CDP sets a housing target of 15,576 units for South Dublin for the period Q3 2022 to Q3 2028, of which 487 units are allocated to Rathcoole.

- **CS10 Objective 1**: *"To facilitate the commencement and completion of development on zoned residential lands within and contiguous to the settlement boundary of Rathcoole which recognises natural heritage assets and facilitates connections to the village core and other areas to provide for active travel opportunities."*
- **CS10 Objective 3**: *"To proactively support and promote the highest levels of services, social infrastructure, facilities, retail and economic activity to meet the needs of current and future growth in line with the scale and function of Rathcoole within the settlement hierarchy."*
- **CS10 Objective 4**: *"To facilitate the delivery of new residential development in a coordinated manner, ensuring alignment with investment infrastructure and supporting amenities and services. Such measures shall be delivered through appropriate phasing in line with CS10 SLO1 and SLO2."*

3.3.4 Strategic Infrastructure and Public Transport Objectives

The CDP emphasizes the role of public transport and road infrastructure in facilitating the transition to sustainable development patterns. Relevant policies include:

- **Policy SM4**: "*Strategic Road Network: Improve and, where necessary, expand the Countywide strategic road network to support economic development and provide access to new communities and new development areas."*
- **SM4 Objective 4**: *"To ensure that developing areas have sufficient access to the County's road network."*

3.3.5 Active Land Management and Compact Growth

The CDP also promotes active land management measures, including the use of CPOs, to facilitate development and compact growth within strategic areas:

- **Policy CS4**: *"Active Land Management Facilitate the re-use and regeneration of vacant sites and landbanks through various measures to promote compact urban growth in line with the Core Strategy."*

4. Environmental Impact Assessment

4.1 EIA and Legislation

EIA is a process for identifying, describing and assessing the likely significant environmental effects which a development project would have on the environment, adequately considering such potential effects and avoiding, reducing or offsetting any significant adverse effects where appropriate (refer to Plate 4.1).

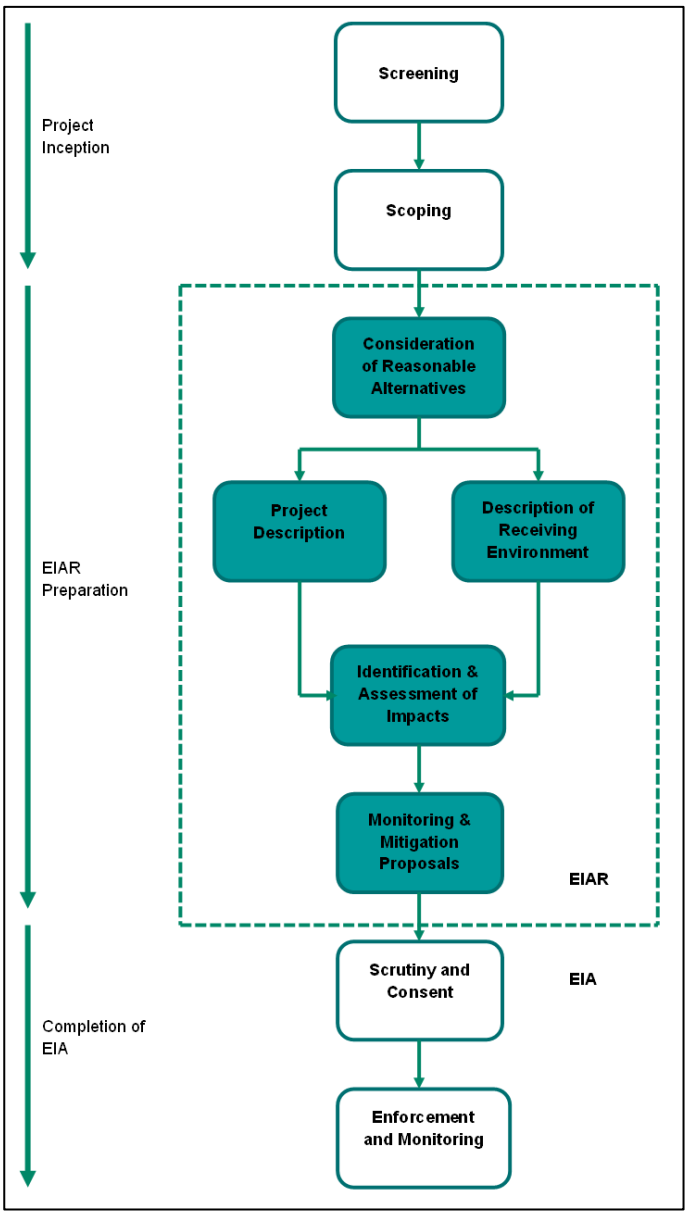


Plate 4.1: The EIA Process[1]

EIA requirements derive from Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment as amended by Council Directive 97/11/EC of 3 March 1997, Directive 2003/35/EC of 26 May 2003 and Directive 2009/31/EC of 23 April 2009, which were codified in Directive 2011/92/EU of the European Parliament and the Council on the assessment of the effects of certain public and private projects on the environment. Directive 2011/92/EU was

[1] EPA Guidelines (2022).

subsequently amended by Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014. Together, these comprise the EIA Directive.

The EIA Directive had direct effect in Ireland from May 2017 and was transposed into Irish planning law in September 2018 in the form of the European Union (EU) (Planning and Development) (Environmental Impact Assessment) Regulations 2018. The regulation sets out the amendments made to a number of Irish acts and regulations in line with the EIA Directive (as transposed into Irish legislation). This includes amendments to the Planning and Development Act 2000 (as amended) and the Planning and Development Regulations 2001 (as amended). The Planning and Development Act 2000 (as amended) and the Planning and Development Regulations 2001 (as amended) provide guidance as to the specific requirements for both public and private projects to assess their potential effects on the environment and the steps to be undertaken in relation to whether a full EIA (in the format of an EIA Report (EIAR)) is required.

Under the Planning and Development Regulations 2001 (as amended), EIA development fall into two Schedules. EIA is mandatory for developments listed within Schedule 5, Part 1, while Schedule 5, Part 2 developments require full EIA if they are a development of a type set out in Part 2 of Schedule 5 which equal or exceed, a limit specified within Schedule 5 Part 2 in respect of the relevant class of development.

Criteria to evaluate whether significant impacts on the receiving environment will arise from a proposed development are listed under Schedule 7 of the Planning and Development Regulations 2001 (as amended). A list of the relevant information to be provided by an applicant or developer for the purposes of sub-threshold EIA Screening is presented in Schedule 7A of the Regulations.

Additionally, the Roads Act 1993 (as amended) sets out EIA requirements for roads projects and has been amended to take account of the requirements of the EIA Directive in line with the European Union (Roads Act 1993) (Environmental Impact Assessment) (Amendment) Regulations 2019. Annex III of the EIA Directive is specifically referenced in Section 50(1)(e) of the Roads Act 1993 (as amended), as amended, to be considered when identifying any potential likely significant impacts of a project.

4.2 Relevant Policies and Guidance

This report was also cognisant of the following guidelines:

- Department Housing, Local Government and Heritage (DHLGH) (2018), *'Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment'*;
- DHLGH (2018), *'National Planning Framework – Ireland 2040 Our Plan'* (NPF);
- DHLGH (2023), *'Ireland's 4th National Biodiversity Action Plan 2023–2030'*;
- Department of Public Expenditure and Reform (2021), *'National Development Plan 2021-2030'* (NDP)*;*
- Department of the Environment, Climate and Communications (DECC) (2023), *'Climate Action Plan 2024'* (CAP2024);
- European Commission (EC) (2017), *'Environmental Impact Assessment of Projects: Guidance on Screening'*;
- Environmental Protection Agency (EPA) (2022), *'Guidelines on the information to be Contained in Environmental Impact Assessment Reports'* (hereafter referred to as the EPA Guidelines (2022));
- SDCC (2022), *'South Dublin County Development Plan 2022-2028'* (hereafter referred to as 'the CDP');
- SDCC (2022), *'Housing Delivery Action Plan 2022-2026'*;
- SDCC (2025), *'Traveller Accommodation Programme 2025-2029'*; and
- Office of the Planning Regulator (OPR) (2021), *'OPR Practice Note PN02 Environmental Impact Assessment Screening'*.

5. EIA Screening

This section has been prepared by MacCabe Durney Barnes (MDB) to support SDCC, who are the Competent Authority (CA) responsible for formal screening and scoping decisions, in undertaking a screening for EIA in respect of the Proposed Development.

5.1 Legislation and Guidance

The EIA Screening Section has had regard to the following:

- Planning and Development Act 2000 as amended
- Planning and Development Regulations 2001 as amended
- Directive 2014/52/EU of 16 April 2014 amending Directive 2011/92/EU
- The European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018)
- EPA Guidelines (2022)
- European Commission (2017), *'Environmental Impact Assessment of Projects – Guidance on Screening'*
- Department of Housing, Planning and Local Government (2018), *'Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment'*
- Department of Housing, Planning and Local Government (2018), *'Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment'*
- Circular Letter: PL 05/2018 27 August 2018 Transposition into Planning Law of Directive 2014/52/EU amending Directive 2011/92/EU on the effects of certain public and private projects on the environment (the EIA Directive)
- Circular Letter: PL 10/2018 22 November 2018 Public notification of timeframe for application to An Bord Pleanála for screening determination in respect of local authority or State authority development
- Office of the Planning Regulator (2021), *'OPR Practice Note PN02 Environmental Impact Assessment Screening'*

5.2 Methodology

The EIA Screening looks at the Proposed Development with reference to the relevant EIA legislation, including the EIA Directive and the Planning and Development Regulations. The methodology has particular regard to the '3-Step' assessment process set out in the OPR's Practice Note PN02 (2021):

- **Step 1** – Understanding the Proposal
- **Step 2** – Preliminary Examination
- **Step 3** – Formal Determination

Regard is also had to European and National guidance documents.

5.3 Stages in EIA Screening

5.3.1 Step 1: Establishing if Proposal is Sub-Threshold

The OPR's Practice Note PN02 (2021) aid planning authorities such as the CA in this area. It indicates that a series of series of question must be answered, as follows

Question A: Schedule 5 Part 1 – Does the development comprise a project listed in Schedule 5, Part 1, of the Planning and Development Regulations 2001 (as amended)?

No, the Proposed Development is not of a class of project listed in Schedule 5, Part 1 of the Regulations. The screening should proceed to the next question.

Question B: Schedule 5 Part 2 – Does the development comprise a project listed in Schedule 5, Part 2, of the Planning and Development Regulations 2001 (as amended) and does it meet/exceed the thresholds?

A list of the types or classes of development that require EIA or screening for EIA is provided in Part 2 of Schedule 5 of the Planning and Development Regulations 2001, as amended. 'Subthreshold development' comprises development of a type that is included in Part 2 of Schedule 5, but which does not equal or exceed a quantity, area or other limit (the threshold).

In Part 2 of Schedule 5, the following is the relevant to assessment of sub-threshold development:

> *"10. Infrastructure projects*
>
> *(b) (i) Construction of more than 500 dwelling units.*
>
> *[…]*
>
> *(iv) Urban development which would involve an area greater than 2 hectares in the case of a business district, 10 hectares in the case of other parts of a built-up area and 20 hectares elsewhere.*
>
> *("business district" means a district within a city or town in which the predominant land use is retail or commercial use.)"*

The development does not exceed 500 dwelling threshold. The question arises under 10(b)(iv) as to whether the Proposed Development falls within a 'business district', 'other parts of the built-up area' or 'elsewhere'. The predominant land use in the surrounding area is neither retail or commercial; therefore, the Proposed Development is not defined as one located within a business district.

The second question is whether the Proposed Development is considered to be located within 'other parts of a built-up area' where a 10 ha threshold applies. The OPR guidance indicates that a 'built-up area' means a 'city' or 'town' or an 'adjoining developed area'. An 'adjoining developed area' can be taken to mean contiguous suburbs". Schedule 2 of the Local Government Reform Act 2014 amended the definition of 'town' with reference to Section 84 (6) of the P&D Act: a 'town' means a municipal district with a population in excess of 2,000. However, as Rathcoole is not a municipal district, is does not fall within the statutory definition of either a 'town' or 'city'. Therefore, this threshold does not apply.

'Elsewhere' is not defined but can be taken to mean any area outside of the above, including all towns not identified in the Local Government Act 2001.

The site is 17.8 ha and therefore falls below this threshold of 20 ha as specified in Class 10(b)(iv). Accordingly, the project **is sub-threshold development** with reference to this threshold.

Question C: If Sub-threshold, has Schedule 7A information/ Screening Report been submitted?

No, Schedule 7A information/ Screening Report has not been submitted by the Applicant. A Preliminary Examination is required.

5.3.2 Step 2: Preliminary Examination

Under Article 120(1)(a) of the Planning and Development Regulations 2001 (as amended), where a Local Authority proposes to carry out a subthreshold development, the Local Authority shall carry out a preliminary examination of, at the least, the nature, size or location of the development. Preliminary examinations should consider at least the following:

- The nature of the development including the production of wastes and pollutants;
- The size of the development; or
- The location of the development including the potential to impact on certain ecologically sensitive sites and the potential to affect other environmentally sensitive sites in the area.

The OPR guidance states a number of questions to assist the preliminary examination, as discussed in the following sections.

5.3.2.1 Nature of the Development

Is the nature of the proposed development exceptional in the context of the existing environment?

The Proposed Development involves the construction of 118 no. units, three GAA pitches, ancillary parking, site infrastructure works, roads and all associated landscaping. The majority of the Proposed Development is consistent with the zoning objectives on the site in the CDP. However, some housing units are located within lands zoned for as Open Space (OS) which aim *"to preserve and provide for open space and recreational amenities"*. In addition, it introduces urban development in on the edge of Rathcoole which is currently characterised by immature woodland, scrub land, and Annex I Lowland Hay Meadow, with parts of the site having previously been used for agriculture, thereby changing the nature and character of the local environment. It has potential significant impacts on natural resources, namely land, soil, water, and/ or biodiversity.

Will the development result in the production of any significant waste, or result in significant emissions or pollutants?

The nature of the proposed use is primarily residential with community uses included. During the construction phase, any waste generated from the Proposed Development will be dealt with in the appropriate manner in accordance with the appropriate standards and best practice methodology. However, without mitigation measures during the construction phase, there is the potential for significant effects upon the ecology and hydrogeology associated with the surrounding water courses consisting of the Coolmine Stream, the Crockshane Stream and the River Camac. This is particularly the case given the sensitive hydro-ecology associated with the Petrified Springs and Alluvial Woodlands on the adjoining lands to the southwest.

Waste generated during the operational phase is anticipated to be typical for a medium scale residential development.

5.3.2.2 Size of the Development

Is the size of the proposed development exceptional in the context of the existing environment?

The Proposed Development Site covers 17.8 ha in area, which is just below the threshold of 20 ha for a mandatory EIAR for a project of this type. The overall size may be considered exceptional in the context of the built-up area footprint of Rathcoole itself. It introduces urban development in on a site which currently does not have it.

Are there cumulative considerations having regard to other existing and/or permitted projects?

Preliminary applications with potential to result in cumulative effects with the Proposed Development are discussed in Chapter 21 of this report. These include, for example:

- **SD23A/0336 & APB-321696-25**: There is planning permission for a new primary school on the site, which has not yet been constructed. There is the potential for cumulative effects with this permitted development in relation to impacts upon ecology and traffic and transport impacts, amongst others.
- **SHD3ABP-307698-20**: Permission for a Strategic Housing Development (SHD) application for the demolition of five existing residential properties and associated outbuildings and the construction of a residential development of 204 no. units, comprising 151 no. houses (including duplexes) and 53 no. apartments on Stoney Hill Road was initially granted by ABP. However, the decision was subsequently quashed by the High Court. Two key issues raised were that ABP failed to give lawful consideration to the materiality of the density contravention and the removal of 674 m of hedges.

  A revised Large-scale Residential Developments (LRD) proposal is being formulated for this site of 5.5 ha. An LRD pre-application submission has been made for the demolition of five existing dwellings and associated outbuildings on-site, and the construction of 177 no. dwellings on a site to the east of Stoney Hill Road. These would comprise 88 no. duplex units and 89 no. houses.

Therefore, there are other significant developments in the area which could give rise to potential significant cumulative effects.

5.3.2.3 Location

Is the proposed development located on, in, adjoining or does it have the potential to impact on an ecologically sensitive site or location?

The Proposed Development Site is not within a European site. The nearest Natura 2000 is the Glenasmole Valley SAC (Site Code: 001209), located approximately 7 km to the southeast. The AA Screening Report addresses the impacts upon these designated sites. The AA Screening Report considers pathways to the nearest European Sites, including surface water, foul water, groundwater, land and air. All of the Natura 2000 sites listed in this section (with the exception of the Wicklow Mountains SAC/ SPA) are also designated as pNHAs.

The Site is immediately adjacent to an Annex I Priority Alluvial Woodland (refer to Plate 2.1). Using the source-pathway-receptor model, it is concluded that there is the potential for significant effects upon these ecologically sensitive sites, particularly during the construction phase and in the absence of mitigation measures. Furthermore, there is an Annex I Lowland Hay Meadow within the Proposed Development Site. While it is not proposed to do works to this area, there are potential significant effects during the construction and operational phases.

Does the proposed development have the potential to affect other significant environmental sensitivities in the area?

The Proposed Development has the potential to affect other significant environmental receptors in the area, e.g., badgers and bats. Part of the Proposed Development extends within a Flood Risk Zone A and B. Other environmental sensitivities include material assets and the potential for road traffic impacts, particularly cumulative effects.

5.3.2.4 Conclusion

It is concluded that there is a real likelihood of significant effects on the environment arising from the Proposed Development.

Under Article 120 (1)(b) (iii) of the Planning and Development Regulation 2001 (as amended):

> *"Where the local authority concludes, based on the preliminary examination, that—… (iii) there is a real likelihood of significant effects on the environment arising from the proposed development, it shall—*
>
> *(i) conclude that the development would be likely to have such effects, and*

(ii) prepare, or cause to be prepared, an EIAR in respect of the development."

It is therefore concluded that an EIAR should be prepared in respect of the Proposed Development.

6. EIA Scoping

6.1 Introduction

This EIA Scoping Report provides a starting point for the EIA and identifies the potential for likely significant environmental effects that may result from construction and operational phases of the Proposed Development, and the methods by which these effects will be assessed. Thereafter, an EIAR will be prepared and submitted with the planning application for the Proposed Development.

The EIAR will include a description of the environmental baseline to determine the status of the existing environment, prediction of effects arising from the Proposed Development, and an evaluation of their likely significance. Mitigation measures designed to avoid or reduce any significant adverse effects will be proposed in the EIAR, where appropriate.

The function of the EIAR is to provide information in respect of the likely significant effects of the Proposed Development on the environment to allow the Planning Authority (i.e., SDCC) to determine the planning application.

6.2 Purpose of the Scoping Report

EIA scoping is the process of determining the content and extent of the matters which should be covered in the EIAR to be submitted to a competent authority for projects which are subject to EIA. The Applicant is now seeking to informally scope the EIA with relevant bodies, including SDCC. To this end, this informal EIA Scoping Report sets out the Project Team's view on which matters should be examined and the methodology to be used in the EIAR. The Applicant and the Project Team will make every effort to action comments received from SDCC on the proposed scope of the EIAR within the timeframe for submission of the planning application.

The EIAR will be prepared to comply with the requirements to identify, describe and assess the likely significant effects of the Proposed Development on the environmental factors as set out in Article 3 of the EIA Directive. The EIAR will consider effects not in isolation, but together; that is, cumulatively, as required.

6.3 Project Team

The Project Team led by AECOM is responsible for Proposed Development EIA matters. The Project Team collectively possesses extensive skills, knowledge and experience in all aspects of EIA and planning for infrastructure development projects. Specialist consultants Metropolitan Workshop are responsible for project management matters and will prepare the design of the Proposed Development while MDB will manage planning aspects of the planning application.

6.4 Approach to EIA Scoping Assessment

Scoping (in this case, informal scoping) is the process of determining the content and extent of the matters which should be covered in the EIAR to be submitted to a competent authority. It identifies the environmental matters to be considered during the EIA process, describes the assessment scenarios, and explains how environmental effect significance will be defined.

The aim is to focus the EIA on matters where the Proposed Development may have a likely significant effect upon the environment and to avoid unnecessary discussion of matters where there are evidently no environmental effects.

According to the EC[2], scoping *"defines the EIA Report's content and ensures that the environmental assessment is focused on the Project's most significant effects on the factors listed in Article 3 of the Directive, and that time and money are not spent on unnecessary examinations"*.

An EIAR must address all the factors (which cover broad environmental issues such as air, biodiversity or climate) defined in Article 3 of the EIA Directive; however, this does not mean that any or all factors will necessarily be impacted by a project, and it is best practice to scope the assessment having regard to those matters where significant effects are most likely to arise.

This EIA Scoping Report has been prepared to identify which matters (headings or topics[3], such as construction traffic emissions, operational phase noise emissions, or effects on water resources) require further assessment to confirm whether significant effects will occur.

6.5 EIA Scoping Report Preparation

The following EIA regulations have been followed during the preparation of this EIA Scoping Report and will be used during the preparation of the EIAR:

- Directive 2011/92/EU as amended by 2014/52/EU;
- The Planning and Development Regulations 2001 – 2024;
- The European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018;
- EC (2017), *'Environmental Impact Assessment of Projects – Guidance on Screening'*;
- EC (2017), *'Environmental Impact Assessment of Projects – Guidance on Scoping'*;
- EC (2017), *'Environmental Impact Assessment of Projects – Guidance on the preparation of the Environmental Impact Assessment Report'*; and
- EPA Guidelines (2022).

In addition to this, a number of specific guidance documents are also identified within the policy and legislation section of each environmental assessment chapter, where required.

6.6 Scoping the EIA

An EIAR is defined by the Planning and Development Act 2000 (as amended) as:

> *"…a report of the effects, if any, which proposed development, if carried out, would have on the environment and shall include the information specified in Annex IV of the Environmental Impact Assessment Directive".*

The EIAR must assess, where relevant, the direct effects and any direct and indirect; secondary; cumulative; transboundary; short-term, medium-term, and long-term; permanent and temporary; and positive and negative effects of the Proposed Development.

6.6.1 Identifying Potentially Significant Environmental Effects

The EPA Guidelines (2022) state that the identification of potential likely significant effects from different phases of a proposed development should be considered as far as reasonably possible. The environmental assessments will evaluate the effects of the Proposed Development and the likelihood, extent, magnitude, duration, reversibility and significance of any potential effects of the Proposed Development.

[2] EC (2017), *'Environmental Impact Assessment of Projects: Guidance on Scoping (Directive 2011/92/EU as amended by 2014/52/EU)'*.
[3] 'Matters' as referred to here are the same as 'Headings and Topics' in the EPA Guidelines (2022).

Where appropriate, specific criteria for certain technical disciplines have been utilised, giving due regard to the following criteria from the EPA Guidelines (2022):

- The magnitude and spatial extent of the impact (for example geographical area and size of the population likely to be affected);
- The nature of the impact;
- The transboundary nature of the impact;
- The intensity and complexity of the impact;
- The probability of the impact;
- The expected onset, duration, frequency, and reversibility of the impact;
- The accumulation of the impact with the impact of other existing and/or approved projects; and
- The possibility of effectively reducing the impact.

6.6.2 Assessment Terminology

In order to provide a consistent approach across the different environmental assessment chapters, the following terminology adapted from the EPA Guidelines (2022) will be used throughout the EIAR. Where individual environmental assessment chapters use different terminology due to specific guidance or legislative requirements, this is further described in the relevant chapter.

To define all effects, including residual effects (i.e. the effect after the application of any required additional mitigation measures), the following quality of effects terminology is used:

- **Positive effects** – A change which improves the quality of the environment (for example, by increasing species diversity; or improving the reproductive capacity of an ecosystem, or by removing nuisances or improving amenities);
- **Negative/ Adverse effects** – A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property or by causing nuisance); and
- **Neutral effects** – No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.

In all cases, these descriptions of the quality of effects will be used in the EIAR to inform the non-specialist reader as to whether an effect is positive, negative or neutral.

Within the general EIA methodology, where adverse or beneficial effects are identified, these are assessed against the following descriptors:

- **Imperceptible** – An effect capable of measurement, but without significant consequences;
- **Not significant** – An effect which causes noticeable changes in the character of the environment, but without significant consequences;
- **Slight effects** – An effect which causes noticeable changes in the character of the environment without affecting its sensitivities;
- **Moderate effects** – An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends;
- **Significant effects** – An effect which, by its character, magnitude, duration, or intensity, alters most of a sensitive aspect of the environment;
- **Very significant effects** – An effect which, by its character, magnitude, duration, or intensity, significantly alters most of a sensitive aspect of the environment; and
- **Profound effects** – An effect which obliterates sensitive characteristics.

There may be cases where topic-specific methodologies are used, and these will be defined where they arise in each EIAR chapter.

The extent and context of an effect will also be described, as this can affect the perception of effect significance. These terms are defined as:

- **Extent** – Describe the size of the area, the number of sites, and the proportion of a population affected by an effect; and
- **Context** – Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions (is it the biggest or longest effect ever?).

Finally, the probability of an effect will be defined to establish how likely it is to occur;

- **Likely effects** – The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented; and
- **Unlikely effects** – The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.

When addressing the duration of an effect, the following terminology will be used:

- **Momentary effects** – Effects lasting from seconds to minutes;
- **Brief effects** – Effects lasting less than a day;
- **Temporary effects** – Effects lasting less than a year;
- **Short-term effects** – Effects lasting one to seven years;
- **Medium-term effects** – Effects lasting seven to fifteen years;
- **Long-term effects** – Effects lasting fifteen to sixty years;
- **Permanent effects** – Effects lasting over sixty years;
- **Reversible effects** – Effects that can be undone, for example through remediation or restoration; and
- **Frequency of effects** – Describe how often the effect will occur (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually).

In addition to identifying the duration and frequency of effects, the EPA Guidelines (2022) also identify the type of effects, described as:

- **Indirect effects (i.e., secondary or off-site effects)** – Effects on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway;
- **Cumulative effects** – The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects;
- **Do-nothing effects** – The environment as it would be in the future should the subject project not be carried out;
- **Worst-case effects** – The effects arising from a project in the case where mitigation measures substantially fail;
- **Indeterminable effects** – When the full consequences of a change in the environment cannot be described;
- **Irreversible effects** – When the character, distinctiveness, diversity, or reproductive capacity of an environment is permanently lost;
- **Residual effects** – The degree of environmental change that will occur after the proposed mitigation measures have taken place; and

- **Synergistic effects** – Where the resultant effect is of greater significance than the sum of its constituents (e.g., combination of SO_X and NO_X to produce smog).

6.6.3 Significance Criteria

For each environmental assessment within the EIAR, the classification and significance of effects will be evaluated with reference to definitive standards, accepted criteria and legislation, where available. Where it is not possible to quantify effects, qualitative assessments will be carried out based on well-reasoned professional judgement supported by evidence. Where uncertainty exists, this will be noted in the relevant EIAR chapter.

Each chapter in the EIAR will consider the magnitude of impacts and the sensitivity of the resources/ receptors that could be affected in order to classify the effect. Each technical discipline has its own method of effect definition, based on applicable standards and approaches, which will be detailed in a transparent and understandable way within the EIAR chapter. Plate 6.1 shows how the magnitude of impact and the sensitivity of the receptor combine in order to evaluate the significance of the effect.

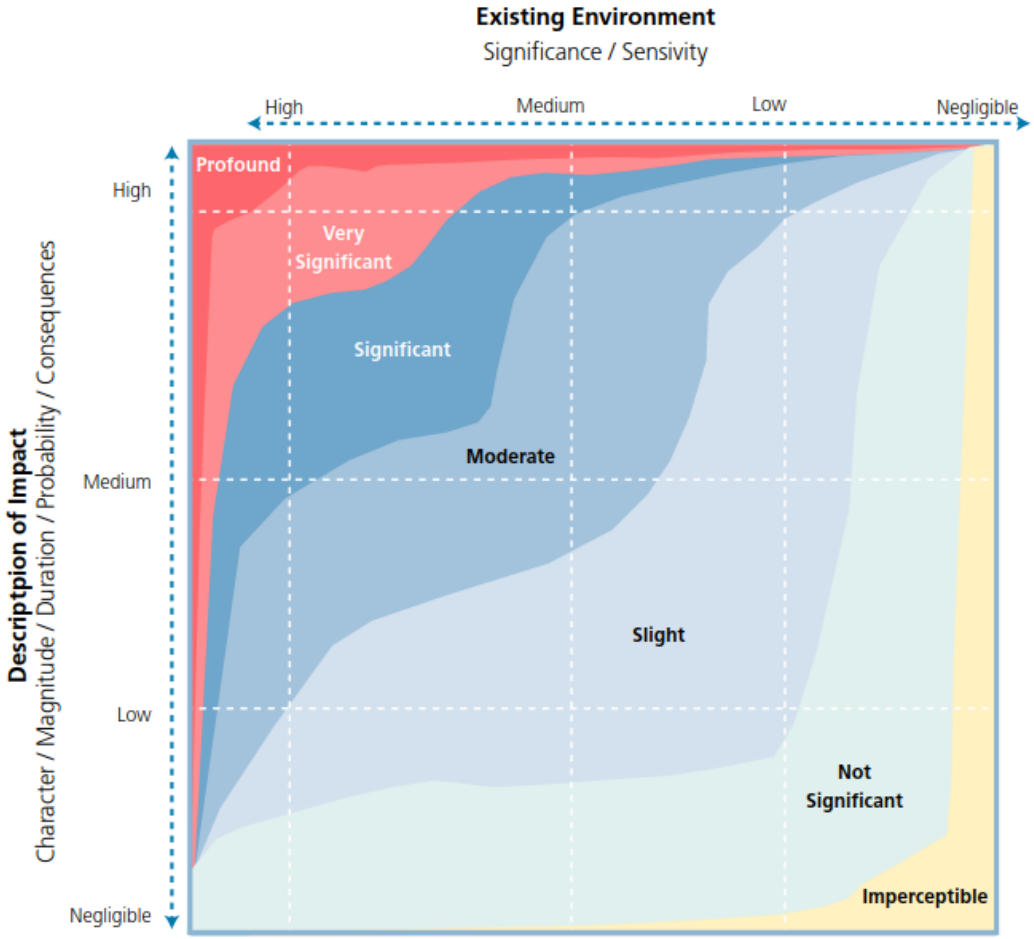


Plate 6.1: Determination of the Significance of an Effect (Source: EPA Guidelines (2022))

In general, effects found to be 'Profound', 'Very Significant' or 'Significant' are deemed to be significant, whilst effects found to be 'Moderate', 'Slight', 'Not Significant' or 'Imperceptible' are considered not to be significant. Where the significance of an effect is categorised in accordance with Plate 6.1, this will be further refined to assess and assert whether an effect is significant or not. There may be cases where chapters follow methodologies for the assessment of effect significance that depart from the approach set out here; where this occurs, it is to align with commonly accepted methodologies used in the discipline concerned.

6.6.4 Baseline

The baseline used in the EIAR is the current state of the environment, or the baseline conditions as they exist at the time of surveying and reporting as defined by individual technical disciplines. It is the description of the current environmental conditions, as required by the EIA Directive as determined through desk-studies and surveys. Details of baseline environmental conditions are described in the technical chapters included within this EIA Scoping Report and will be confirmed in the EIAR.

6.7 Associated Assessments

6.7.1 Habitats Regulation Assessment (HRA) - Appropriate Assessment

The European Communities Habitats Directive 92/43/EEC ('the Habitats Directive') provides, in Article 6 (3), the legal basis for Appropriate Assessment (AA) at European level. A biodiversity chapter will be included in the EIAR, thus overlapping in terms of its subject matter, although the aims of an AA are different.

An AA is triggered by an AA Screening determination where significant effects on protected European sites are likely to occur (or more specifically *"cannot be excluded on the basis of objective information"*). Collectively, the protected sites throughout the EU comprise a network known as Natura 2000.

If triggered by AA Screening, the competent authority must complete an AA to determine whether a proposed development will adversely affect the integrity of any European site, in light of the site's Conservation Objectives and in light of best scientific information. The competent authority's AA is typically informed by a Natura Impact Statement (NIS) prepared by a technical expert and submitted by a developer.

An AA Screening will be prepared for the Proposed Development. If likely significant effects are identified, then the next stage of detailed AA will be required, including the preparation of a NIS. The NIS will be drafted in accordance with relevant AA guidance including recent AA guidance issued by the EC[4] and online guidance published by the OPR[5].

6.7.2 Flood Risk Assessment

A Flood Risk Assessment (FRA) will be carried out in accordance with the guidance provided by the Office of Public Works (OPW)[6]. This will set out a three-stage process. Stage 1 is Flood Risk Identification which involves collation of data to identify areas at risk of flooding. Stage 2 then follows as the Initial FRA that will determine if Stage 3 is required. For projects not near any flooding sources, an FRA will normally conclude at Stage 2. Stage 3 is the Detailed FRA which would be applicable if a proposed development is potentially impacted by or has an impact on the existing flood regime.

[4] EC (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'*.
[5] OPR (2021), *'OPR Practice Note PN01 Appropriate Assessment Screening for Development Management'*.
[6] OPW (2009), *'The Planning System and Flood Risk Management – Guidelines for Planning Authorities'*.

7. Alternatives to the Proposed Development

The EIA Directive requires *"a description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studies by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects"*.

In its guidance for planning authorities and An Bord Pleanála (ABP)[7] (now An Coimisiún Pleanála (ACP)), the Department of Housing, Planning and Local Government adds:

> *"Scoping should consider information on 'reasonable alternatives' provided by the developer. These may include options for project design, technology, locations, size and scale, etc. Alternatives may end up becoming part of the project's final design, or its method of construction or operation, in order to avoid, reduce, prevent or remedy environmental effects. Any recommendation to study reasonable alternatives should focus on alternatives that are relevant to the specific development proposed and the likely effects of the development on the environment."*

A study of the Proposed Development site was carried out by Metropolitan Workshop, which considered and tested alternative layouts, densities and site arrangements, including alternative layouts and GAA pitches, alternative site locations, consideration of different numbers of housing units, alternative landscaping or housing units designs, and alternative site access routes. As the EPA Guidelines (2022) highlight, an *"analysis of high-level or sectoral strategic alternatives cannot reasonably be expected within a project level EIAR"*. The test will be that the alternatives discussed are 'reasonable' and *"relevant to the proposed project and its specific characteristics"*.

The EPA Guidelines (2022) outline different types of alternatives that should be studied in an EIAR. These include:

- Do Nothing scenario;
- Alternative processes;
- Alternative locations;
- Alternative layouts;
- Alternative designs; and
- Alternative mitigation measures.

The EC's Guidance for EIAR adds several other types of alternatives that might need consideration:

- Nature of the Proposed Development;
- Timeframes for construction or the lifespan of the Proposed Development;
- Process by which the Proposed Development is constructed;
- Equipment used either in the construction or running of the Proposed Development;
- Site layout (e.g., location of buildings, waste disposal, access roads);
- Operating conditions (e.g., working schedule, timing of emissions);
- Physical appearance and design of buildings, including the materials to be used; and

[7] Department of Housing, Planning and Local Government (2018), *'Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment'*.

- Means of access, including the surface access strategy (guided by the policy on modal shift public transport).

These alternatives will also be considered where deemed to be reasonable and applicable to the Proposed Development. In addition, where there is overlap with the EPA Guidelines (2022), they will be combined.

An indication of the main reasons for the option chosen, taking into account the effects of the Proposed Development on the environment and including a comparison of their environmental effects, as required by the EIA Directive, will be carried out in a qualitative fashion using a table to facilitate comparison. As the EPA Guidelines (2022) note, *"it is generally sufficient to provide a broad description of each main alternative and the key issues associated with each […]. A detailed assessment (or 'mini-EIA') of each alternative is not required"*.

8. Population & Human Health

8.1 Introduction

This chapter describes the scope of works and methods that will be applied to identify and assess the potential impacts of the Proposed Development on population and human health. The chapter should be read in conjunction with related technical chapters, such as air quality, noise and vibration, and landscape and visual.

The appraisal of likely significant effects of the Proposed Development on population and human health will be conducted by reviewing the current socio-economic environment and the potential impact of the Proposed Development on this environment at multiple spatial scales.

8.2 Potential Significant Effects

The population and human health assessment will take into account relevant policies and published guidance at the local, regional and national level. This will include:

- DHLGH's NPF (2018);
- Government of Ireland (2021), *'Healthy Ireland Framework 2019-2025'*;
- Department of Health (2019), *'Healthy Ireland Strategic Action Plan 2021-2025'*;
- City Edge Project Economic Strategy (City Edge Project, 2022);
- SDCC (2024), *'South Dublin County Economic and Community Plan 2024-2030'*; and
- SDCC CDP (2022).

These guidance documents include policies addressing economic development, employment, housing, access to services, social cohesion and deprivation amongst wider determinants of health which are essential to consider when assessing potential effects on the socio-economic environment and human health.

In November 2022, the Institute of Environmental Management and Assessment (IEMA) (now Institute of Sustainability and Environmental Professionals (ISEP)) published the following guidance on assessing human health as part of an EIA: *'Determining Significance for Human Health in Environmental Impact Assessment'* (IEMA, 2022a) and *'Effective Scoping of Human Health in Environmental Impact Assessment'* (IEMA, 2022b) (hereafter referred to as 'the IEMA Guidelines'). Previous to this, there was no consolidated methodology or practice for the assessment of effects on human health and wellbeing. England's National Health Service (NHS) Healthy Urban Development Unit's (HUDU) Rapid Health Impact Assessment (HIA) Toolkit identifies positive, neutral, negative, or uncertain effects without a judgement as to whether these effects are significant (London Healthy Urban Development Unit, 2019). The subsequently published IEMA Guidelines provide a methodology for determining the significance of health effects which is more robust in its assessment of human health and wellbeing effects. Therefore, the human health assessment will be based on IEMA Guidelines considering the potential impacts for each phase of the Proposed Development.

Other relevant guidance considered to inform the assessment include the Institute of Public Health in Ireland's (IPH) *'Health Impact Assessment Guidance: A Manual. Standalone Health Impact Assessment and Health in Environmental Assessment'* (2021).

For the assessment of potentially significant impacts, consideration will be given to the Proposed Development in terms of the following aspects:

- Population impacts:
  - The role of the Proposed Development in the provision of market and affordable housing;
  - The role of the Proposed Development in the generation of direct and indirect employment opportunities at the local and regional level, during construction and once the Proposed Development is complete and occupied;
  - The role of the Proposed Development in delivering public open space and recreational facilities for community use;
  - Local expenditure arising from new residents at the Proposed Development; and
  - Impacts arising from the Proposed Development on social infrastructure in the local area which could be used by future residents, including primary and secondary education, primary health care facilities, open space and child play space.
- Human health impacts:
  - Health related behaviours: physical activity; risk taking behaviour; and diet and nutrition.
  - Social environment: housing; relocation; open space, leisure and play; transport modes, access, and connections; community safety; community identity, culture, resilience and influence; and social participation, interaction and support.
  - Economic environment: education and training; and employment and income.
  - Bio-physical environment: climate change and adaptation; air quality; water quality and availability; land quality; noise and vibration; radiation.
  - Institutional and built environment: health and social care services; built environment; wider societal infrastructure and resources.

The methodology for assessing population and human health impacts will follow standard EPA Guidelines (2022) and will involve:

- Consideration of local policy, plans and development constraints;
- Assessment of the likely magnitude, permanence and significance of impacts; and
- An assessment of the residual and cumulative impacts of the Proposed Development.

The assessment will consider the likely direct and indirect impacts associated with population and human health during the construction and operational phases of the Proposed Development.

The assessment will consider the likely cumulative effects associated with socioeconomics during construction, as well as once the Proposed Development is complete and operational. The approach to assessing cumulative socio-economic effects will be in accordance with best practice guidelines and the methodology set out in Chapter 21: Cumulative Effects of this Scoping Report.

The EPA Guidelines (2022) suggest that the matters set out in Table 8-1 are typically addressed when considering the population and human health impacts of a new development, with a focus on the potential impacts and health determinants relevant to the Proposed Development.

Table 8-1: Matters to be considered under Population and Human Health

Matter		Comments
Construction		
Population	Direct, indirect and induced construction employment.	The Proposed Development will create construction employment during the construction phase.
Human Health and Wellbeing	Economic environment (employment and income, education and training opportunities).	The Proposed Development has the potential to create employment and supply chain opportunities during the construction phase.
	Air quality.	Chapter 12: Air Quality outlines that the Proposed Development could lead dust emissions from construction activities which could potentially have harmful impacts on human health.
	Noise and vibration.	Chapter 15 identifies that the Proposed Development could result in noise and vibration emissions which could potentially have harmful impacts on human health.
	Landscape and visual amenity.	As set out in Chapter 19: Landscape and Visual, the Proposed Development could result in physical changes to the landscape or views from construction infrastructure and activities. This could lead to changes in visual amenity at public areas of open space and active travel walking and cycling routes during construction.
	Climate change mitigation and adaptation.	As set out in Chapter 13: Climate, climate change poses a threat to the health, safety and security of the global population, both through direct hazards and indirectly due to damage to the living environment. greenhouse gas (GHG) emissions from the construction phase could potentially have an indirect impact on human health, as emissions will contribute towards changing climatic conditions which may lead to extreme weather, heat and flood risk and exacerbation of cardiovascular and respiratory conditions.
Operation		
Population	Local spending	The new residents of the Proposed Development will spend locally and therefore have a beneficial effect on the local economy.
	Housing supply	The Proposed Development includes 118 residential units which will contribute to meeting housing needs and will therefore have a positive effect on the local population.
	Social infrastructure including primary and secondary schools, healthcare and open space, and play space	The Proposed Development will have an impact on available social infrastructure in the area which could be used by any current and future residents, including primary health care (GP surgeries), primary and secondary education facilities, open space, and play space.
Human Health	Health and social care services.	The Proposed Development will have an impact on available social infrastructure in the area which could be used by any current and future residents, including primary health care (GP surgeries).
	Open space, play and leisure.	The Proposed Development will have an impact on available social infrastructure in the area which could be used by any current and future residents, including open space, and play space.
	Transport modes, access and connections.	The Proposed Development could lead to a change in access to sustainable travel modes and active travel opportunities.
	Economic environment (employment and income, education and training opportunities).	The Proposed Development will have an impact on available social infrastructure in the area which could be used by any current and future residents, including primary and secondary education facilities.
	Air quality.	Chapter 12: Air Quality outlines potential for operational traffic emissions as a result of increased traffic flow which could adversely impact human health.
	Noise and vibration.	Chapter 13: Noise and Vibration identifies potential permanent adverse effects in regard to operational noise emissions from the Proposed Development as well as increased traffic flows, which have the potential to negatively impact the wellbeing of residents.

Matter		Comments
	Landscape and visual amenity.	Chapter 19: Landscape and Visual identifies potential for landscape and visual effects from the introduction of permanent infrastructure once the Proposed Development is complete and operational. This could place pressure on recreational and amenity value of adjacent areas and potentially lead to the loss of tranquillity. As a result the Proposed Development could impact landscape and visual amenity as a determinant of human health.
	Climate change mitigation and adaptation.	Chapter 13: Climate identifies that GHG emissions from the operational phase could potentially have an indirect impact on human health, as emissions will contribute towards changing climatic conditions which may lead to extreme weather, heat and flood risk and exacerbation of cardiovascular and respiratory conditions. As a result, the Proposed Development could lead to impacts on climate as a determinant of human health.
	Housing	The Proposed Development includes 118 residential units which will contribute to meeting housing needs and will therefore have a positive effect on mental health and wellbeing.
	Community safety	The Proposed Development could promote natural surveillance and social interaction that contributes to reducing crime and the 'fear of crime', both of which impact the mental wellbeing of residents.
	Social participation, interaction and support	The Proposed Development could support community groups such as the GAA to help to build up networks for people who are isolated and disconnected, and to provide meaningful interaction to improve mental wellbeing.
	Physical activity	The Proposed Development could promote uptake of physical activity through the delivery of GAA pitches.

8.3 Assessment Methodology

8.3.1 Baseline Conditions

A baseline assessment will be undertaken as part of the population and human health EIAR chapter. The assessment will be a desk-based analysis of secondary data and key legislation and guidance and will include a review of baseline indicators such as population, employment, the labour market and the regional and local economy. The assessment will also include a review of the existing provision of community infrastructure (i.e., primary and secondary education facilities, healthcare facilities, open and play space) that is in close proximity to the Site. This will be undertaken using established statistical sources including but not limited to:

- Central Statistics Office (CSO) Census 2022 (CSO, 2022);
- CSO Census 2016 (CSO, 2016);
- Pobal HP Deprivation Index 2022 (Pobal, 2023);
- Department for Health National Healthcare Statistics 2024 (Department for Health, 2024); and
- Department of Education and Youth National School Annual Census for 2024/2025 (Department for Education, 2025).

8.3.2 Assessment Criteria for Population Impacts

Policy thresholds and professional judgment will be used to assess the magnitude and nature of the effects of the Proposed Development against demographic baseline conditions. For impacts on the population, there is no accepted definition of what constitutes a significant (or not significant) effect. However, it is recognised that 'significance' reflects the relationship between the magnitude of effect and the sensitivity (or value) of the affected resource or receptor.

- **Consideration of sensitivity to effects:** specific values in terms of sensitivity are not attributed to socio-economic resources/receptors due to their diverse nature and scale; however, the assessment takes account of the qualitative (rather than quantitative) 'sensitivity' of each receptor.
- **Scale of effect:** this entails consideration of the size of the effect on people or business in the context of the area in which effects will be experienced.
- **Scope for adjustment or mitigation:** the study is concerned in part with economies. These adjust themselves continually to changes in supply and demand, and the scope for the changes brought about by the Proposed Development to be accommodated by market adjustment will therefore be a criterion in assessing significance.

The assessment aims to be objective and quantifies effects as far as possible. However, some effects can only be evaluated on a qualitative basis. In line with the EPA Guidelines (2022), as discussed under Section 6.6 of this report, effects will be defined as follows:

- **Positive effects** – A change which improves the quality of the environment, such as delivering new homes to need local housing demand;
- **Negative/adverse effects** – A change which reduces the quality of the environment, such as introducing pressure on local community facilities; and
- **Neutral effects** – No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.

Based on consideration of the above, where an effect is assessed as being positive or negative/ adverse, the scale of the effect will be assigned using the descriptors discussed under Section 6.6.2 of this report.

Duration of effect is also considered, with more weight given to permanent changes than to temporary ones. The purposes of this assessment, the terminology outlined in Section 6.6.2 of this report will be used when describing the duration of effects.

8.3.3 Assessment Criteria for Health

The IEMA (now ISEP) guidance *'Determining Significance for Human Health in Environmental Impact Assessment'* will form the basis of the approach adopted to assess impacts on human health in this chapter. The World Health Organisation (WHO) defines health as a "*state of complete physical, mental and social wellbeing not merely the absence of disease or infirmity*" (ISEP, 2022a). Public health therefore encompasses general wellbeing not just the absence of illness.

The health and wellbeing of individuals is determined by a broad range of individual constitutional and behavioural factors (or 'determinants'), as well as broader environmental, social and economic factors. Some factors are direct and obvious, others are indirect. Within a population there can also be health inequalities, defined by the WHO as "*differences in health status or in the distribution of health determinants between different population groups. For example, differences in mobility between elderly people and younger populations or differences in mortality rates between people from different social classes*".

The IEMA guidance *'Guide to Effective Scoping of Human Health in Environmental Impact Assessment (EIA)'* lists 22 potential determinants of health, under five broad categories: health-related behaviours, social environment, economic environment, bio-physical environment, and institutional and built environment. This guidance describes how a consideration of source-pathway-receptor linkages assists in identifying where there is potential for health effects to be both likely and significant. Table 8-2 sets out a summary of the health determinants scoped into this assessment, and the source, pathway and receptor links relevant to each.

Table 8-2: Health Determinants Scoped into Human Health Assessment – Source-Pathway-Receptor links

Determinant	Source	Pathway	Receptor
Health and social care services.	Changes in access to and demand for healthcare services and other community facilities.	Increased demand for services from new residents at the Proposed Development.	Residents within the Proposed Development and local communities using these services and facilities within the Study Area.
Open space, play and leisure.	Changes in availability and quality of public areas of open space and recreational walking and cycling routes.	Changes in levels of use of open space and recreational assets, affecting physical activity and wellbeing outcomes.	Existing and new residents using local open spaces, route network and recreational assets.
Transport modes, access and connections.	Changes in vehicles on the local road network and public transport. Changes in access to sustainable travel modes and active travel opportunities.	Changes in severance, pedestrian amenity, public transport amenity, and road safety.	Existing and new residents using the local road network, public transport and active travel, including motor vehicle drivers as well as pedestrians and cyclists.
Economic environment (employment and income, education and training opportunities).	Direct and indirect job creation and economic activity, as well as educational opportunities and support.	Employment opportunities providing health-supporting resources and protecting against adverse mental health effects.	People of working age and their dependents.
Air quality.	Changes in air pollutants from construction activities.	Changes in diffusion through the air.	Residents of nearby residential receptors and users of local community facilities.
Noise and vibration.	Construction noise and vibration and road traffic noise.	Changes in pressure waves through the air, and ground for vibration.	Residents within the local communities and users of local community facilities.
Landscape and visual amenity.	Changes in visual amenity of public areas of open space, active travel walking and cycling routes.	Changes in the quality green space, affecting physical activity and wellbeing outcomes.	Residents within the local communities.
Climate change mitigation and adaptation.	Changes to Greenhouse Gas (GHG) emissions, extreme weather events, flood risk, sea level rise, temperature change and rainfall change.	Changes in exposure to GHG emissions, extreme weather events, flood risk, sea level rise, temperature change or rainfall change affecting human health and wellbeing.	Existing and new residents within the local communities as well as the wider population.
Housing	Changes to local housing provision.	Access to decent and adequate housing is critically important for health and wellbeing.	Existing and new residents within the local communities.
Community safety	Changes in local levels of crime and community safety.	Planning and urban design that promotes natural surveillance and social interaction can help to reduce crime and the ‘fear of crime’, both of which impact on the mental wellbeing of residents	Residents within the Proposed Development and neighbouring residential receptors.
Social participation, interaction and support	Changes in community participation and interaction associated with the Proposed Development	Changes to levels of community participation, interaction, and support that have implications for mental and physical health.	Residents within the local communities as well as the wider population.
Physical activity	Changes in access to and quality of opportunities for physical activity.	Changes in levels of physical activity and sports participation.	Residents within the local communities as well as the wider population.

The following health determinants have been scoped out of the assessment as they are unlikely to be relevant to the Proposed Development, and no source-pathway-receptor link has been identified:

- Health-related behaviours: risk taking behaviour; and diet and nutrition.
- Social environment: relocation; community identity; and culture, resilience and influence.
- Bio-physical environment: water quality and availability; and radiation.
- Institutional and built environment: built environment; wider societal infrastructure and resources.

In accordance with the determinants which are considered relevant to this assessment, the health assessment will draw upon the information reported within the following chapters of the EIAR:

- Air Quality;
- Climate;
- Landscape and Visual;
- Noise and Vibration; and
- Material Assets (Transport).

The specific magnitude and sensitivity criteria that will be applied for the human health assessment reflects the IEMA guidance, *'Determining Significance for Human Health in Environmental Impact Assessment'*. For human health, there is no accepted definition of what constitutes a significant (or not significant) effect. It is, however, recognised that effects are categorised based upon the relationship between the magnitude of effect and the sensitivity of the affected human receptor. As such, the significance criteria of human health effects during the construction and operation of the Proposed Development will be assessed based on expert judgement and professional experience of the author, relying on the following considerations:

- **Sensitivity of human health receptors including general populations and potentially vulnerable sub-populations**: specific values in terms of sensitivity are not attributed to population health due to the diverse range of determinants and indicators that can determine overall health. However, the assessment takes account of the qualitative (rather than quantitative) sensitivity of relevant populations and their likely ability to adapt to change; and
- **Magnitude of impact**: this entails consideration of the scale of the exposure of the population to an impact; whether the impact is one-off or continuous; the likely nature of the human health impact; the permanence of the change; and the proportion of the relevant Study Area population that would be affected.

The sensitivity of population health is driven by a number of factors which are set out in Table 8-3, and are based on guidance set out in Table 7.1 of the IEMA guidance *'Determining Significance for Human Health in Environmental Impact Assessment'*.

Table 8-3: Human Health Sensitivity Criteria – Population Health

Sensitivity Level	Sensitivity Criteria
High	High levels of deprivation (including pockets of deprivation); reliance on shared resources (between the population and the Proposed Development); existing wide inequalities between the most and least healthy; a community whose outlook is predominantly anxiety or concern; people who are prevented from undertaking daily activities; dependants; people with very poor health status; and/or people with a very low capacity to adapt.
Medium	Moderate levels of deprivation; few alternatives to shared resources; existing widening inequalities between the most and least healthy; a community whose outlook is predominantly uncertainty with some concern; people who are highly limited from undertaking daily activities; people providing or requiring a lot of care; people with poor health status; and/or people with a limited capacity to adapt.

Sensitivity Level	Sensitivity Criteria
Low	Low levels of deprivation; many alternatives to shared resources; existing narrowing inequalities between the most and least healthy; a community whose outlook is predominantly ambivalence with some concern; people who are slightly limited from undertaking daily activities; people providing or requiring some care; people with fair health status; and/or people with a high capacity to adapt.
Very Low	Very low levels of deprivation; no shared resources; existing narrow inequalities between the most and least healthy; a community whose outlook is predominantly support with some concern; people who are not limited from undertaking daily activities; people who are independent (not a carer or dependent); people with good health status; and/or people with a very high capacity to adapt.

Magnitude of impact is driven by a number of factors which are set out in Table 8-4, based on guidance set out in Table 7.2 of the IEMA guidance *'Determining Significance for Human Health in Environmental Impact Assessment'*.

Table 8-4: Human Health Magnitude of Impact Criteria

Magnitude Level	Magnitude Criteria
High	High exposure or scale; long-term duration; continuous frequency; severity predominantly related to mortality or changes in morbidity (physical or mental health) or very severe illness/injury outcomes; majority of population affected; permanent change; substantial service quality implications
Medium	Low exposure or medium scale; medium-term duration; frequent events; severity predominantly related to moderate changes in morbidity or moderate change in quality of life; large minority of population affected; gradual reversal; small service quality implications
Low	Very low exposure or small scale; short-term duration; occasional events; severity predominantly related to minor change in morbidity or moderate change in quality of life; small minority of population affected; rapid reversal; slight service quality implications
Very Low	Negligible exposure or small scale; very short-term duration; one off frequency; severity predominantly relates to minor change in quality of life; very few people affected; immediate reversal once activity completes; no service quality implications.

Human health effects reflect the relationship between the sensitivity of the relevant population health, and the magnitude of the impact, as set out in Table 8-5.

Table 8-5: Impact Assessment and Significance

Magnitude of Impact	Sensitivity of Receptor			
	High	**Medium**	**Low**	**Very Low**
High	Major	Major / Moderate	Moderate / Minor	Minor / Negligible
Medium	Major / Moderate	Moderate	Minor	Minor / Negligible
Low	Moderate / Minor	Minor	Minor	Negligible
Very Low	Minor / Negligible	Minor / Negligible	Negligible	Negligible

The assessment aims to be objective and quantifies effects as far as possible. However, some effects can only be evaluated on a qualitative basis. In line with Section 6.6 of this report, effects will be defined as follows:

- **Positive effects** – A change which improves the quality of the environment which improves or enhances human health and wellbeing;
- **Negative/adverse effects –** A change which reduces the quality of the environment and impacts human health and wellbeing; and

- **Neutral effects** – No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.

In accordance with the methodology set out in the IEMA guidance, the following criteria will be applied:

- 'Moderate' or 'Major' effects are classed '**significant**';
- 'Minor' effects are classed as '**not significant'**, although they may be a matter of local concern; and
- 'Negligible' effects are classed as '**not significant**'.

8.3.4 Scope for Mitigation

Mitigation measures will be included in the design where practicable to help avoid, prevent or reduce socio-economic effects. Where relevant, measures will be identified to ensure any adverse impacts on the local community are minimised. These could include embedded mitigation in the design of the Proposed Development such as provision of child play space or community use floorspace, with reference made to appropriate standards and guidance. Where known or expected, developer contributions will also be referenced, although these may not mitigate impacts in all cases.

8.4 Baseline

The Proposed Development is located in the town of Rathcoole, within the administrative area of SDCC, Ireland. The Site currently comprises open lane including Four District Woodlands and Rathcoole Park, with town centre located to the northwest.

According to CSO Census data, in 2022, the population of Rathcoole Electoral Division (ED) was approximately 6,590 (CSO, 2022). Between 2016 and 2022, the population in Rathcoole ED increased by approximately 31.6%, which represents a significantly greater increase than that seen in South Dublin (8.0%) and Ireland (8.1%) in the same time period (CSO, 2016). The proportion of residents aged 65 years or older (14.2%) in Rathcoole ED, is higher than the recorded rate in South Dublin (13.2%), although lower than that of Ireland (15.1%). The proportion of people of working age (defined as the population aged between 15 and 64) in Rathcoole ED is 60.1%, which is lower than that in South Dublin (65.5%) and in Ireland more widely (65.3%) (CSO, 2022).

According to Census 2022, 63.1% of the residents aged 15 years and over in Rathcoole ED were employed, which is a higher proportion than recorded for the wider geographies of South Dublin (57.8%) and Ireland (56.1%). 9.8% of Rathcoole residents at work or unemployed were 'Managers, Directors and Senior Officials', 21.8% were in 'Professional Occupations' and 13.3% were in 'Associate Professional and Technical Occupations' (CSO, 2022).

Of the residents aged 15 years and over in Rathcoole ED, in 2022 1.3% were recorded as having no formal education, which was lower than the equivalent rate for South Dublin (2.3%) and Ireland (2.4%). The proportion of the working age population in Rathcoole ED with an honours bachelor degree, professional qualification or higher was 27.3%, which was higher than the rate in South Dublin (25.2%) and Ireland (25.6%) (CSO, 2022).

According to the Census 2022, 83.2% of residents in Rathcoole ED identified themselves as having very good or good health. This is slightly higher than the average across South Dublin (83.0%) and Ireland as a whole (82.9%) (CSO, 2022).

The Pobal HP Deprivation Index is the primary source for deprivation in Ireland by combining three dimensions of affluence or disadvantage (demographic profile, social class composition and labour market situation) to provide a relative index score for every small area in Ireland. The eight classifications for deprivation range from extremely affluent to extremely disadvantaged. In 2022, according to data from the Pobal HP Deprivation Index, Rathcoole ED is considered 'marginally above average' (5th least deprived rank of the 8 classifications) in 2022 with a relative score of 5.2 (Pobal, 2023).

In terms of community facilities, there are three GP practices within 1 km of the Proposed Development. The nearest GP practice is Rathcoole Health Centre. Education services in the local area include Scoil Chrónáin Primary School, which is located approximately 280 m to the north of the Proposed Development, and Holy Family National School, which is located approximately 650 m to the northwest of the Proposed Development. As set out above the Site is located within the Four District Woodlands and Rathcoole Park open spaces. the next closest open space is Corbally Park located approximately 2 km east of the Site.

A detailed baseline will be provided as part of the population and human health chapter of the EIAR.

8.5 References

Government of Ireland, 2018. *National Planning Framework: Project Ireland 2040*.

Government of Ireland, 2021. *Healthy Ireland Strategic Action Plan 2021-2025*.

Department of Health, 2019. *Healthy Ireland Framework 2019 – 2025*.

South Dublin County Council, 2023. *South Dublin County Development Plan 2022 – 2028.*

IEMA, 2022a. *Guide to: Determining Significance for Human Health in Environmental Impact Assessment*. Available at: https://www.iema.net/resources/blog/2022/11/17/launch-of-the-eia-guidance-for-considering-impacts-on-human-health

IEMA, 2022b. *Guide to: Effective Scoping of Human Health in Environmental Impact Assessment.* Available at: https://www.iema.net/resources/blog/2022/11/17/launch-of-the-eia-guidance-for-considering-impacts-on-human-health

London Healthy Urban Development Unit, 2019. *HUDU Planning for Health: Rapid Health Impact Assessment Tool* (Fourth Edition, October 2019).

Public Health in Ireland, 2021. *Health Impact Assessment Guidance: A Manual.* Standalone Health Impact Assessment and Health in Environmental Assessment.

Central Statistics Office, 2022. *Census 2022*.

Central Statistics Office, 2016. *Census 2016.*

Pobal, 2023. *The 2022 Pobal HP Deprivation Index for Small Areas (SA).*

Department for Health, 2024. *National Healthcare Statistics 2024*. Available at: https://www.gov.ie/en/department-of-health/publications/national-healthcare-statistics-2024/

Department of Education and Youth, 2025. *National School Annual Census for 2024/2025.* Available at: https://www.gov.ie/en/department-of-education/collections/primary-schools-enrolment-figures/

9. Biodiversity

9.1 Introduction

This chapter describes the scope of works and methods that will be applied to identify and assess the potential biodiversity impacts and effects associated with the Proposed Development. Throughout this chapter, the term 'ecological feature' is used to refer to designated sites, habitats and species (see Section 9.3.2 for further information regarding 'important' ecological features).

A significant amount of baseline and updated ecological survey has been carried out at the Site to date, including survey work that was carried out by AECOM to inform options proposals for a mixed-used development, in addition to pre-existing survey work carried out by other ecologists. Further details on existing baseline are presented in Section 9.4.

Note that compliance with the Habitats Directive is not addressed through the EIA process; instead, a separate AA Screening will be prepared. In addition, and if required based on the outcome of the Screening, an NIS will be produced to accompany the planning application. However, the findings of the AA Screening and NIS will inform the EIAR.

9.2 Potential Significant Effects

The EPA Guidelines (2022) suggest that the matters set out in Table 9-1 are typically addressed for the EIAR biodiversity chapter. Baseline ecological desk study and field survey will inform whether these matters will be relevant in the context of the EIAR, and the potential for likely significant effects will be addressed as part of the Ecological Impact Assessment (EcIA), which will be included within the Biodiversity chapter of the EIAR.

Table 9-1: Matters to be Considered under Biodiversity

Matter	Comments
Habitats	Scoped in for assessment. Including identification of important habitat types, and assessment of impacts and effects such as the loss or degradation of habitats.
Breeding/ feeding/ roosting areas	Scoped in for assessment. Loss of such areas or disturbance to faunal species using such areas.
Routes and landscape features	Scoped in for assessment. Loss, degradation, or other impacts of features used by commuting or foraging faunal species (e.g. artificial illumination, noise disturbance).
Mammals/ birds/ fish/ invertebrates/ reptiles	Scoped in for assessment. Relevant faunal species which are considered important, for example, on basis of conservation status, legal protections, presence in the area. Desk study and field survey will determine what species are likely to occur onsite, or which are confirmed present.
Vascular plants/ bryophytes/ lichens/ fungi	Scoped in for assessment. Relevant floral species which are considered important, for example, on basis of conservation status, legal protections, presence in the area. Desk study and field survey will determine what species are likely to occur onsite, or which are confirmed present.
Population stability	Scoped out for assessment. The Proposed Development is very unlikely to affect the conservation status of species and therefore this matter is excluded.
Population management	Scoped out for assessment. The Proposed Development is very unlikely to require any management regimes for species populations and therefore this matter is excluded.
Critical resources	Scoped in for assessment. The baseline ecological survey will determine presence of important habitats, flora, and fauna. An assessment will be made of importance of the Site and its resources to flora and fauna.

Matter	Comments
Terrestrial/ aquatic/ marine	Scoped in for assessment. Potential for impacts and effects from the Proposed Development on terrestrial, freshwater, and marine environments will be considered and assessed, where these are determined as relevant.
Seasonality	Scoped in for assessment. Consideration of how impacts may vary depending on seasonal variations in species (e.g., breeding birds, bats etc.) will be undertaken. This will be informed by ecological baseline surveys.
Existing management	Scoped in for assessment. Existing management of habitats (and if relevant, fauna) will be considered, including how this may interact with any impacts from the Proposed Development
Ecosystem services	Scoped in for assessment. Where relevant, consideration should be given to how impacts and effects to biodiversity may affect provision of ecosystem services.
Legal protection	Scoped in for assessment. Relevant national and international legislation protecting habitats and species will be considered during the EIAR. In addition, all relevant national and local planning policy will be considered.

9.3 Assessment Methodology

9.3.1 Legislative and Policy Context

The following nature conservation legislation is potentially relevant to the Proposed Development:

- Directive 92/43/EEC of 21st May 1992 on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive').
- Directive 2009/147/EC on the conservation of wild birds (the 'Birds Directive').
- Directive 2000/60/EC establishing a framework for Community action in the field of water policy (the 'Water Framework Directive' (WFD)).
- Regulation 1143/2014 on the prevention and management of the introduction and spread of invasive alien species (the 'Invasive Alien Species Regulation').
- The European Union (EU) (Invasive Alien Species) Regulations 2024 (S.I. No. 374 of 2024).
- Convention on Wetlands of International Importance (the 'Ramsar Convention').
- The European Communities (Bird and Natural Habitats) Regulations 2011 and 2015 (the 'Habitats Regulations').
- The Wildlife Acts 1976-2024 (the 'Wildlife Acts').
- Flora (Protection) Order 2022 (the 'Flora Protection Order' (FPO)).
- EC Environmental Objectives (Surface Waters) Regulations 2009-2023.
- European Union (Invasive Alien Species) Regulations 2024 SI 374/2024 (the 'Invasive Alien Species Regulation').
- The Fisheries (Consolidation) Act 1959-2024.

The following planning policy and other documents are potentially relevant to the Proposed Development:

- DHLGH's NPF (2018).
- DHLGH (2023), *'Ireland's 4th National Biodiversity Action Plan 2023–2030'*;
- SDCC CDP.
- SDCC (2020), *'Draft Biodiversity Action Plan for South Dublin County 2020-2026'.*

9.3.2 Important Ecological Features

Ecological features comprise sites designated for nature conservation, habitats, species, and ecosystems (including ecosystem function and processes). The *'Guidelines for Ecological Impact Assessment in the UK and Ireland'*, published by the Chartered Institute of Ecology and Environmental Management (CIEEM) in 2018[8] recommend that only those ecological features that are 'important' and that could be significantly impacted by a development require detailed assessment, stating that "*it is not necessary to carry out detailed assessment of ecological features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable"*.

Consequently, for the purposes of this Scoping Report, future desk study and field survey, and assessment of impacts and effects, 'important' ecological features will be taken to include:

- Sites designated for nature conservation, including those designated at international (i.e. European), national, and local levels.
- The qualifying features of European sites, i.e., SAC, SPA and Wetlands of International Importance (Ramsar sites), and the notified features of national sites, i.e., National Heritage Areas (NHA) and pNHA, where there is connectivity with the Site.
- Ancient and Long-established Woodland listed on the Ancient Woodland Inventory (AWI) in Ireland.
- Habitats listed on Annex I of the Habitats Directive (also referred to as 'priority habitats').
- Species listed on Annex II of the Habitats Directive.
- Bird species listed on Annex I of the Birds Directive.
- Protected fauna species scheduled under the Habitats Regulations and the Wildlife Acts.
- Protected plant species scheduled under the Habitats Regulations and the Flora (Protection) Order.
- Invasive non-native plant species, which herein comprise:
  - Species listed on the Third Schedule of the Habitats Regulations (i.e. 'Scheduled invasive species').
  - Species considered to be of EU concern under the Invasive Alien Species Regulation.
  - Species commonly considered to be invasive as listed by the National Biodiversity Data Centre (NBDC) as invasive in Ireland (i.e. of Medium and High risk of impact).
- Bird species listed as Red or Amber as per the Birds of Conservation Concern in Ireland (BoCCI) (Gilbert *et al.*, 2021).

This list is not exhaustive, and additional features may be considered important based on professional judgement, for example due to their inclusion in local biodiversity action plans or in species red data books.

9.3.3 Study Area

The Study Area will be defined with reference to the zone of influence (ZoI). The ZoI for a project is the area over which ecological features may affected by biophysical changes as a result of the Proposed Development and associated activities, and therefore the area for which ecological features be subject to significant effects. As recommended by the CIEEM Guidance (2018), professionally accredited or published studies will be used to determine the ZoI for different important ecological features.

The ZoI will, in many cases, extend beyond the boundary of the Proposed Development, e.g., in the context of downstream hydrological effect pathways. Activities associated with the construction and operation phases will be separately identified where relevant in the EIAR. The ZoI will vary for different ecological features depending on their sensitivity to an environmental change. It is therefore appropriate to identify different ZoI for different ecological features, and types of potential impact. For instance:

[8] N.B. Guidance updated to v1.3 in September 2024 but still cited as CIEEM (2018).

- In the context of determining the ZoI for potential pollution effects from the Proposed Development, a conservative approach will be adopted to include all areas downstream which are within the same surface water catchment.
- The ZoI for habitats is at the Site (and may extend beyond Site if the desk study indicates groundwater dependent terrestrial ecosystems (GWDTE) or species are potentially present).
- The ZoI for breeding or resting sites of mammals including badger *Meles meles* and otter *Lutra lutra* is generally 25 m and 30 m respectively from the Site, and up to 150 m from the Site in cases of piling.
- The ZoI for wintering birds may extend up to 500 m from the Site, to reflect the distances over which birds may be affected from a source of disturbance (Cutts et al., 2013).

It is important to acknowledge, as per the EPA Guidelines (2022), "*that the absence of a designation or documented feature does not mean that no such feature exists within the site*". As such, ZoIs should be identified for all features potentially occurring within the Site, in addition to any known to occur. Desk study areas for the Proposed Development will correspond, as a minimum, to the ZoI of potentially significant effects for each ecological feature.

9.3.4 Ecological Baseline

The ecological baseline of the Site will be determined by desk study and ecological field survey within the Site and, where relevant, the ZoI of the Proposed Development. The desk study element will aim to identify sites with designations for nature conservation and records of important habitats and species potentially relevant to the Site, and a search for all other relevant information, including the following:

- Internationally designated for nature conservation i.e. SPA, SAC, and Ramsar sites.
- Nationally designated for nature conservation i.e. NHA and pNHA.
- Locally (non-statutory) designated for nature conservation.
- Ancient or Long-established Woodland parcels.
- Records of important habitats (e.g. Annex I, wetlands).
- Records of species within 2 km of the Site.

The ecological surveys in Table 9-2 are proposed to determine the baseline and inform the EIAR.

Table 9-2: Proposed Baseline Biodiversity Surveys to Inform EIAR

Survey	Overview	Timing
Habitats	A habitat survey in accordance with Fossitt (2000) and Smith *et al*. (2011) will be conducted, whereby the land within the Site will be classified, recorded, and mapped. Where important habitats are identified, further botanical survey with reference to relevant guidance (e.g. Perrin *et al*., (2021), specific guidance for Annex I habitats) will be carried out.	Ideally April to October but can be completed anytime.
Invasive species	Completed in tandem with the habitat survey, this survey will establish the presence and extent of invasives species on site.	June to September.
Bat roost assessment and emergence survey	A ground-level tree assessment (GLTA) in accordance with Collins (2023) to assess the suitability of trees for roosting bats. Subsequent emergence surveys will be carried out, it required, the scope of which will be determined during the GLTA.	Can be completed all year round (GLTA). May to September (emergence surveys).
Bat activity transects	Walked transect surveys in accordance with Collins (2023), to determine the level of bat activity across the Site, species assemblage, and how the Site is used by bats.	May to September, with at least one survey per season (i.e. spring, summer, autumn).
Badgers	Specific survey to determine the use of the Site by badger and establish if any setts are present within the Site, with reference to Harris *et al*. (1989). Survey will extend up to 100 m from the Site (where accessible).	Can be completed at any time of year.

Survey	Overview	Timing
Otters	Specific survey to determine the use of the site by otter and establish if any holts or layups are present, with reference to Chanin (2003). Survey will comprise watercourses within the Site extending up to 30 m from the Site, and terrestrial habitats within at least 100 m of watercourses (where accessible).	Can be completed at any time of year.
Breeding birds	Walked transect surveys within the Site to identify evidence of breeding birds, their nests and young, suitable habitat and non-breeding species within the Site. Based on the standard adaptation of the Common Bird Census (CBC) method (Bibby *et al*., 2000)	Two visits in spring / summer (April to July).
Wintering birds	Walked transect surveys within the Site to identify use of the habitats onsite by wintering birds and note their activity. Based on CBC method (Bibby *et al*., 2000).	Four visits spread in winter (October to March).

9.3.5 Ecological Impact Assessment

The results of the completed field surveys in combination with the outcomes of the desk study and any consultation with relevant stakeholders, will be used to inform the EcIA component of the Biodiversity chapter of the EIAR. The EcIA will comprise the identification and assessment of impacts and significant effects and will follow the CIEEM Guidance (2018) which sets out a process of identifying the baseline ecology and value of ecological receptors, identifying and characterising the impacts and likely significant effects, describing the mitigation measures required, and assessing the significance of the residual effects once mitigation is considered.

The EPA Guidelines (2022) note that "w*hile guidelines and standards help ensure consistency, the professional judgement of competent experts plays a role in the determination of significance"*. Taking this into consideration, the geographic valuation applied to determining effect significance by the CIEEM Guidance (2018) in Ireland will be adopted in the EIAR (i.e., important ecological features are valued at a geographic scale, e.g. local, county, national).

Potential impacts of the Proposed Development (both positive and negative) will be predicted for all important ecological features and will specify if the impact is related to either the construction or operational phase of the Proposed Development. Where types of potential impact are not predicted to result in significant effects to significant ecological features, these potential impacts will be scoped out of the EIAR.

Potential impacts will be characterised with consideration of embedded (design) mitigation measures that are inherent to the Proposed Development, including any avoidance through relocating infrastructure and design features such as sustainable drainage features.

In accordance with the EPA Guidelines (2022) and the CIEEM Guidance (2018), potential impacts will be characterised by considering the parameters along with the impact under assessment:

- 'Quality' of effects, i.e., positive vs negative.
- Magnitude or extent (e.g., size of area, proportion of population impacted).
- Duration (e.g., temporary, long-term).
- Frequency of timing, i.e., how often the effect will occur (e.g., once, frequently, daily) or if it is relevant to critical life stages or seasonality (e.g., during the bird nesting season).
- Probability, i.e., likely or no likely.
- Significance, i.e., the importance of the outcome of the effects.

According to the EPA Guidelines (2022), significance of effects is usually understood to mean the importance of the outcome of the effects and is determined by a combination of objective (scientific) and subjective (social) concerns. Therefore, the geographic valuation applied to determining effect significance recommended by the CIEEM Guidance (2018) will be adopted in this chapter. The geographic valuation is

suitable for assessments of biodiversity impacts and effects because it allows clear judgements to be made about the scale of significance, with reference to published estimates for the population size of a given species at county, national, and/ or international scales or areas of habitats at such scales.

Where significant effects on an ecological feature are predicted by the EcIA, appropriate mitigation measures will be proposed. Enhancement measures that are proportionate to the scale and impacts of the Proposed Development will also be identified.

9.3.6 Potential Impacts and Likely Significant Effects

The process of predicting ecological impacts and effects considers relevant aspects of ecosystem structure and function. The Proposed Development could have a range of impacts upon important ecological features during its construction and operational phases. Impacts are described in the absence of specific ecological mitigation measures which may be prescribed for the Proposed Development.

These could comprise direct impacts, which occur where the changes to an ecological feature are directly attributable to an action, such as habitat loss, or indirect impacts, such as those which usually arise as a 'knock-on' effect, such as displacement of mammals as a result of habitat loss.

Potential impacts and significant effects from the construction and operational phases of the Proposed Development on ecological features may include:

- Permanent habitat loss (e.g., due to new housing and roads).
- Temporary habitat loss (e.g., due to temporary construction compounds).
- Habitat degradation, e.g., due to pollution incidents (e.g., fuel or oil spills) or construction works (e.g., machine tracking).
- Permanent or temporary changes to hydrological conditions which may affect vegetation and habitats (e.g., indirect impacts on GWDTE or Annex I habitats).
- Indirect impacts to important faunal species (e.g., due to loss of habitats, disturbance).
- Creation of barriers to animal movements (e.g., artificial lighting (which could inhibit mammal activity), fragmentation of habitats).
- Temporary disturbance and/ or displacement of species during the construction phase (e.g., due to noise, visual disturbance, artificial lighting).
- Disturbance and/ or displacement of species during the operational phase (e.g., due to permanent artificial lighting).
- Potential for injury or mortality of species during the construction phase (e.g., as a result of increased vehicular traffic, entrapment in temporary excavations, result of a pollution incident).

In addition to impacts within the Site, the Proposed Development could affect designated sites that may occur within the ZoI of the Proposed Development.

9.4 Baseline

A significant amount of baseline and subsequent updated survey work has carried out at the Site to date; this includes surveys detailed in Table 9-3. This is considered to form a strong baseline which can be used to inform the EIAR, in addition to the specific ecological surveys proposed in Section 9.3.4.

Table 9-3: Ecological Surveys carried out to date

Survey Type	Survey Method	Surveyor(s)	Survey Date(s)
Habitats and flora	Fossitt	Brady Shipman Martin	17/09/2018 19/03/2020
	Fossitt	F. Wilson, J. Denyer	29/05/2020 08/06/2020 02/07/2020
	Hedgerow Appraisal System	F. Wilson, J. Denyer	02/07/2020
	IVC – detailed woodland plots (including springs)	F. Wilson, J. Denyer	08/06/2020
	IVC – detailed grassland plots	F. Wilson, J. Denyer	02/07/2020
	Fossitt	AECOM	31/08/2021
Invasive species	Incidental sightings	F. Wilson, J. Denyer	29/05/2020 08/06/2020 02/07/2020
	Walkover survey	AECOM	31/08/2021
Bats	Preliminary roost assessment (trees)	Brady Shipman Martin	17/09/2018 19/03/2020
	Preliminary roost assessment (trees)	AECOM	31/08/2021
	Activity surveys	F. Wilson, J. Denyer	16/07/2020 24/08/2020
Badger	Incidental sightings / signs	Brady Shipman Martin	17/09/2018 19/03/2020
	Walkover survey	F. Wilson, J. Denyer	16/07/2020 22/07/2020 24/08/2020
	Incidental sightings / signs	AECOM	31/08/2021
	Walkover survey	AECOM	21/03/2023
Otter	Incidental sightings / signs	Brady Shipman Martin	17/09/2018 19/03/2020
	Walkover survey	F. Wilson, J. Denyer	16/07/2020 22/07/2020 24/08/2020
Other mammals	Incidental sightings / signs	F. Wilson, J. Denyer	29/05/2020 08/06/2020 16/07/2020 22/07/2020 24/08/2020
Breeding birds	Incidental sightings / signs	Brady Shipman Martin	17/09/2018 19/03/2020
	Incidental sightings / signs	F. Wilson, J. Denyer	29/05/2020 08/06/2020 02/07/2020 16/07/2020
Wintering birds	Transect and spot counts	JBA Consulting	17/12/2020 14/01/2021 09/02/2021 23/03/2021
	Transects	AECOM	15/02/2023 21/03/2023

From the information gathered from previous ecological desk study, field surveys, and associated reports to date, a summary of the existing Site baseline conditions is presented in the following paragraphs.

The Site comprises an open green space and a range of semi-natural habitats, including wet and dry woodlands, scrub, mature hedgerows, and neutral grasslands with some open space used as a public park with a high number of recreational users (walkers, dogs, etc.). The park has a boundary hardstanding path, hedgerows, and scattered trees. The River Camac flows along the eastern boundary and the Coolmine Stream is present to the west of the Site.

There are no designated sites within or in proximity to the Site; however, Slade of Saggart and Crooksling Glen pNHA is hydrologically linked (upstream) of the Site via the River Camac. In addition, the Site is also indirectly hydrologically linked to Dublin Bay by the River Camac (and subsequently the Rivery Liffey) at a distance of over 22 km (approximately 17 km as the crow flies). Dublin Bay hosts a number of European sites, including South Dublin Bay and River Tolka Estuary SPA, Bull Island SPA, North Dublin Bay SAC, and South Dublin Bay SAC.

Two Annex I habitats have been identified onsite, comprising 91E0 Annex I Alluvial Woodland (to the west of the Site, and contiguous with further alluvial woodland beyond the Site) and 6510 Annex I Lowland Hay Meadows (located within open grassland in the park area of the Site). Other habitats include well-maintained amenity grassland, used as sports pitches, wet and dry grassland parcels (of varying species richness), immature woodland and scrub, scattered trees, and boundary hedgerows. Japanese knotweed *Reynoutria japonica*, a Scheduled invasive species, was previously recorded to the south of the Site.

The Site provides potential habitat for a range of terrestrial species. During bat activity transects, five bat species were recorded within the Site, comprising common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, Leisler's bat *Nyctalus leisleri*, brown long-eared bat *Plecotus auritis*, an unidentified *Myotis* species, and an unidentified pipistrelle species, though no bat roosts were confirmed onsite. Evidence of badger, including several badger setts, were identified within the Site and in proximity to the Site. The watercourses on-site provide suitable habitat for otter, though no evidence was recorded during field surveys.

The Site also provides potential habitat for a variety of terrestrial birds. A number of bird species were identified as breeding or potentially within the Site, including Amber-listed bird species greenfinch *Chloris chloris*, linnet *Carduelis cannabina*, and kestrel *Accipiter nisus*. Wintering bird surveys identified relatively common species; however, six species of conservation concern were identified, including the Red-listed redwing *Turdus iliacus* and snipe *Gallinago gallinago*.

9.5 References

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NRA (2009). *Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes*. National Roads Authority: Ireland.

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10. Land and Soils

10.1 Introduction

This chapter describes the scope of work and methods that will be applied to identify and assess the potential land and soils impacts associated with the Proposed Development. The assessment will consider both the importance of the attributes and the predicted scale and duration of likely impacts. The principal objectives of the Land and Soils Chapter of the EIAR will be to identify and mitigate potential issues of the Proposed Development to ensure that the impact on the environment is minimised.

10.2 Potential Significant Effects

The EPA Guidelines (2022) suggests that the matters set out in Table 10-1 are typically addressed for the land and soils assessment.

Table 10-1: Matters to be Considered under Land and Soils

Matter	Comments
Land (e.g. land take)	The EIAR Study Area will primarily focus on the Proposed Development Site and surrounding area.
Soil (e.g. organic matter, erosion, compaction, sealing)	The EIAR Study Area will primarily focus on the Proposed Development's site boundary. Potential loss of soils and impacts on peatlands will be identified, if relevant.
Agricultural Capability	The EIAR will consider land quality in the context of agricultural value and potential.
Geology	Geological impacts will be investigated.
Hydrology/ Hydrogeology	To be addressed within the Chapter 11: Water of this EIAR Scoping Report.

10.3 Assessment Methodology

The methodology for the land and soils assessment will be in accordance with the relevant legislation and guidance. The following is a list of sources of information that will be consulted for use in the assessment:

- Institute of Geologists of Ireland (IGI) (2013), '*Guidelines for the Preparation of Soils, Geology and Hydrogeology Chapters of Environmental Impact Statements'*;
- Ordnance Survey of Ireland (OSI) historical maps of 1:2,500 scale and 1:10,560 scale, and aerial photographs;
- OSI Discovery Series of 1:50,000 scale;
- Geological Survey Ireland (GSI) (2025), *'Data and Maps'*[9];
- Environmental Protection Agency (EPA) (2025), *'EPA Maps'*[10];
- EPA and Teagasc (2024), *'Irish Soil Information System Map Viewer'*[11];
- Tailte Éireann GeoHive (2024), *'Quarry Directory (2014)'*[12];
- Corine Landcover mapping[13];
- Local Authority web portals;

[9] Available at: https://www.gsi.ie/en-ie/data-and-maps/Pages/default.aspx [Last accessed: September 2025]
[10] Available at: https://gis.epa.ie/EPAMaps/ [Last accessed: September 2025]
[11] Available at: http://gis.teagasc.ie/soils/map.php [Last accessed: September 2025]
[12] Available at: https://www.geohive.ie/maps/c9355767383546fb9c7cfe740471c8f1/about [Last accessed: September 2025]
[13] Available at: https://land.copernicus.eu/en/products/corine-land-cover [Last accessed: September 2025]

- National Parks and Wildlife Services (NPWS);
- Topography maps; and
- Existing site investigation information.

The assessment will be carried out in accordance with:

- A full desktop study of the soils, superficial deposits, bedrock and geological and hydrogeological conditions will be undertaken with information obtained from previous site investigations and published by GSI and other referenced sources of information, as appropriate. In addition, where borehole information is available in and around the Study Area, general information on depth to bedrock and bedrock type will be taken into consideration.

Desktop assessments will include:

- Review of applicable online sources, such as the EPA and GSI web mapping sites looking at geology, soil type, hydrogeology, waste facilities and potential contaminated land at the Proposed Development; and
- Description of the geology, soils and hydrogeology of the Proposed Development Site.

Soil sampling and subsequent laboratory analysis may also be completed to determine baseline conditions at the Proposed Development Site and identify potential pollutant linkages as well as appropriate mitigation measures.

Based on the site investigation findings and the likely impacts and risks that may be anticipated, as well as the potential cumulative effects that may arise, guidance will be provided towards the mitigation of these impacts and minimisation of the associated risks during construction.

10.4 Baseline

10.4.1 Land

According to the Land and Soil mapping available on the EPA Maps site (EPA, 2025):

- Corine Landcover (2018) classifies the land use at site and surrounding areas consists of ‘Heterogeneous agricultural areas’ consisting of *“land principally occupied by agriculture with significant areas of natural vegetation”*.
- SIS National Soils mapping identifies the soil type as ‘Clayey drift with siliceous stones’ equating to surface-water gley soils (poorly drained mineral soil)
- EPA/ Teagasc Soil Association Mapping indicates that the predominant soil association across the proposed site to be ‘Sandstone’ and ‘Clayey shale till’,

While there is no universally accepted definition of land quality, it is nonetheless common to describe lands along a range of good, average and poor. While many factors contribute to the productive capacity of agricultural soils, including parent geology, topography and drainage characteristics, Table 10-2 lists the criteria to be used for this assessment. Lands at the Proposed Development Site typically fall into the Poor-Quality category (being in part scrubland and forested areas).

Table 10-2: Description of Land Quality Status

Land Quality	Characteristics
Good quality land	High agricultural value and potential. Accessibility is good and the maintenance level is very high. The drainage is very good, or the soil is free draining. It is suitable for a wide range of arable and livestock enterprises, at an intensive level.
Average quality land	Average agricultural value with a high agricultural potential. There may be drainage problems in these areas. These areas may require maintenance work to increase productivity. It is suitable for a wide range of arable and livestock enterprises.
Poor quality land	Low agricultural value and potential. These areas are unsuitable for intensive grazing by livestock enterprises. They are suitable for extensive stocking, rough grazing, forestry or peat production.

Following the completion of the construction of the Proposed Development, acquired lands that are not subject to permanent works would potentially be available to return to agricultural use.

10.4.2 Soils and Geology

This section describes the geology and soils within 5 km of the site, to encompass all proximal areas of geological importance.

10.4.2.1 Statutory & Non-Statutory Designated Sites

There are no SPAs or SACs in the immediate area of the Proposed Development or within 5 km of the proposed Development.

There are two pNHA within 5 km of the Proposed Development. The closest is the Slade Of Saggart And Crooksling Glen pNHA (Site Code: 000211), located approximately 1.5 km to the southeast, comprising diverse habitats, including woodlands. The second is the Lugmore Glen pNHA (Site Code: 001212), located approximately 3.5 km to the east, characterised by narrow hazel woodland.

10.4.2.2 Superficial Geology and Made Ground

This land is mainly occupied by agriculture with significant areas of natural vegetation. According to SIS National soils mapping, the soil are classified as ‘Clayey drift with siliceous stones’ equating to surface-water gley soils, a poorly drained mineral soil.

Subsoils in the area are mapped by GSI as predominantly glacial till derived from Sandstone and Shale.

10.4.2.3 Solid Geology

The majority of the Proposed Development is underlain by the Pollaphuca Formation, consisting of medium-grey, coarse, graded greywackes and dark-grey shales. A north-south oriented bedrock fault is present in the northwest corner of the Proposed Development. West of this fault lies a small area underlain by the Carrighill Formation, consisting of calcareous greywacke siltstone and shale. There are no other bedrock faults mapped within the Proposed Development (GSI, 2025).

10.4.2.4 Hydrogeology and Groundwater Vulnerability

The Proposed Development extends over the Pollaphuca Formation and the Carrighill Formation, both of which are classified as ‘Poor’ aquifers which are generally unproductive, although the Pollaphuca Formation is noted to be potentially productive in local zones.

Groundwater vulnerability across most of the Proposed Development is classified as ‘High’, with a portion in the southwest classified as ‘Moderate’.

There are no mapped karst features within or within 5 km of the Proposed Development. However, there are reportedly protected geological/ hydrogeological features of ecological significance, Petrifying Springs

or Calcareous Springs, located near or at the Proposed Development Site boundary[14,15]. These occur in the woodland to the west of the Proposed Development and along the stream in the east, near the proposed sports pitches. These springs discharge groundwater saturated with calcium carbonate, forming porous calcite deposits (Tufa), which support unique ecosystems. Their sensitivity to disturbance depends on the source and chemistry of the contributing groundwater, and construction activies within their zone of contribution (ZOC) may pose a risk.

10.4.2.5 Potentially Contaminated Land

There are no historic landfills within or within 5 km of the Proposed Development Site.

Two waste licences applications are recorded within 5 km, both situated in Greenogue Business Park North. However, EPA records indicate that neither facility ever became operational (Enviro Star Solutions, Waste Licence W0288 (licence application withdrawn) and Ormonde Organics, Waste Licence W0237 (never commenced)).

10.4.2.6 Assessment Methodology

Targeted site investigation works within and adjacent to the Proposed Development Site will be undertaken to inform the baseline and impact assessment for infor inclusion in the soils and geology EIAR chapter. The methodology will also consider advice set out in the following guidance document:

- EPA Guidelines (2022);
- EC (2017) '*Environmental Impact Assessment of Projects — Guidance on the preparation of the Environmental Impact Assessment Report*';
- EPA (2003), '*Advice Notes on Current Practice in the Preparation of Environmental Impact Statements*'; and
- IGI (2023), '*Guidelines for Preparation of Soils, Geology, Hydrogeology Chapters of Environmental Impact Statements*'.

There is potential for impacts from the Proposed Development to soils, the underlying bedrock geology and groundwater and surface water receptors. Therefore, it is proposed that Soils and Geology be 'Scoped In' to the EIAR. Assesment of available data will establish what impact avoidance and/or mitigation measures are required during the works.

[14]Available at: https://www.woodlandsofireland.com/wp-content/uploads/Annie-Flynn-Rathcoole-Rewilded-Woodlands-Campaign_compressed.pdf [Last accessed: September 2025]
[15]Available at: https://consult.sdublincoco.ie/en/system/files/materials/6271/7082/Rathcoole%20Woodlands%20-%20Policy%20and%20Zoning%20in%20the%20Draft%20County%20Development%20Plan%202022-2028.pdf [Last accessed: September 2025]

11. Water (Hydrology and Hydrogeology)

11.1 Introduction

This chapter describes the scope of works and methods that will be applied to identify and assess the potential impacts from the Proposed Development on the water environment (hydrology, hydromorphology, hydrogeology and flood risk). The assessment will consider both the importance of the identified water features within the Proposed Development Site and the wider Study Area, and the predicted scale and duration of likely impacts as a result of the Proposed Development.

The EPA Guidelines (2022) set out the matters to be considered for the water topic as part of an EIAR. These are summarised in Section 6.6 alongside how these matters will be addressed within the assessment.

The potential effects are presented in Section 11.2, while the water environment baseline is outlined in Section 11.4. A summary of the scoping conclusions is outlined in Section 23.2.

An FRA will also form part of the Proposed Development planning application, and its findings will be reported in the EIAR.

This chapter is supported by the following figures:

- Plate 11.1: Surface water features and their attributes;
- Plate 11.2: Bedrock formations in the Study Area;
- Plate 11.3: Aquifer classification within the Study Area;
- Plate 11.4: Groundwater vulnerability in the Study Area; and,
- Plate 11.5: Fluvial flood risk.

11.2 Potential Significant Effects

The EPA Guidelines (2022) outline the matters to be considered for the water topic during EIA scoping, as set out in Table 11-1.

Table 11-1: Matters to be Considered for the Water Topic

Matter	Comments
Water (e.g., hydromorphological changes, quantity, and quality)	Scoped in: Water quantity and quality will be considered in the assessment. Construction activities have the potential to impact on the water quality and related WFD status of watercourses both directly and indirectly, as well as groundwater bodies, where vulnerable to contamination. Potential impacts to water-dependent designated sites will also be considered. Alterations to watercourses for proposed structures have the potential to impact on morphology, hydrological flows and water quality. Any impacts to watercourses or groundwater bodies have the potential to indirectly affect any connected water-dependent habitats and species or water users. Operational activities, such as routine runoff, have the potential to impact on the water quality and quantity of watercourses and of groundwater bodies.
Ground / Surface / Estuarine / Marine water	Scoped in: Ground, surface, estuarine and transitional waterbodies will be considered in the assessment, where applicable, and where there is the potential for direct or indirect impacts resulting from the Proposed Development. Construction activities have the potential to impact on the water quality and related WFD status of waterbodies both directly and indirectly (downstream) of the Site, as well as groundwater bodies, where vulnerable to contamination. Operational activities, such as routine runoff, have the potential to impact on the water quality and quantity of watercourses and of groundwater bodies.

Matter	Comments
Physical characteristics	Scoped in: Physical characteristics of the water environment will be considered in the assessment.
Chemical characteristics	Scoped in: Water quality will be considered in the assessment based on publicly available information; water sampling will not be completed as part of planning approvals stage of this project but will be a requirement pre-construction.
Q value	Scoped in: The baseline water quality for biota will be reported using publicly available EPA biotic indices ('Q values') and aquatic baseline data collected for the ecological assessment, where available.
Beneficial uses	Scoped in: The use of watercourses for fisheries, aquifers for drinking water and other public uses, and contribution of surface and groundwater to ecosystems will be considered in the assessment. Any impacts to watercourses or groundwater bodies have the potential to indirectly affect any connected water-dependent habitats or water users.
Flooding	Scoped in: A FRA will be undertaken for the EIAR.

11.3 Assessment Methodology

This section describes the methodology proposed for the assessment of effects on the water environment and flood risk as a result of the Proposed Development, including the criteria for the determination of the importance of the receptor and the magnitude of change from baseline conditions.

Potential impacts of the Proposed Development on the water environment and flood risk will be assessed by:

- Considering the existing (baseline) status of the water environment within the Site and relevant surrounds with respect to flood risk, surface water and groundwater, following the source-pathway-receptor approach;
- Identifying potential impacts of the Proposed Development on the water environment and flood risk during the operational and construction phases, as well as cumulative effects;
- Proposing suitable mitigation measures to be incorporated into the Proposed Development design, construction, and operation to offset any adverse impacts (i.e., embedded mitigation); and,
- Reviewing any residual impacts and presenting additional mitigation measures to limit impacts.

11.3.1 Legislation and Guidance

The water assessment will be carried out in accordance with the following legislation of relevance to water, including but not limited to the following:

- European Union (EU) (Water Policy) (Amendment) Regulations, 2025 (S.I. No. 52 of 2025);
- Environmental Objectives (Surface Waters) (Amendment) Regulations 2023, (S.I. No. 410 of 2023);
- EU (Water Policy) (Abstractions Registration) Regulations, 2018 (S.I. No. 261 of 2018);
- Environmental Objectives (Groundwater) (Amendment) Regulations 2022 (S.I. No. 287 of 2022);
- EU (Drinking Water) Regulations 2023 (S.I. 99 of 2023);
- European Communities (EC) (Environmental Impact Assessment) (Amendment) Regulations 2006 (S.I. 659 of 2006);
- EU (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018, No. 404 of 2018 and No. 646 of 2018);
- EC (Assessment and Management of Flood Risks) Regulations, 2010 (S.I. No. 122 of 2010);

- EC (Environmental Liability) (Amendment) Regulations 2015 (S.I. No. 293 of 2015);
- EC (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477/2011);
- EU (River Basin Management) Regulations 2017 (S.I. No. 534 of 2017);
- EC (Quality of Shellfish Waters) (Amendment) Regulation 2009 (S.I. No. 55 of 2009);
- European Communities (Good Agricultural Practice for Protection of Waters) (Amendment) Regulations, 2011, (S.I. No. 125 of 2011);
- Planning and Development Acts, 2000 to 2019; and,
- Inland Fisheries Act, 1959-2017.

The water assessment will be carried out in accordance the relevant guidance, including but not limited to the following:

- Transport Infrastructure Ireland (TII) (formerly the National Road Authority (NRA)) (2008), *'Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes'*;
- TII (2015), *'Road Drainage and the Water Environment'*;
- TII (2024), *'Project Appraisal Guidelines, Unit 13.0 – Appraisal of Active Modes'*;
- TII (formerly NRA) (2008), *'Environmental Impact Assessment of National Roads Schemes – A Practical Guide'*;
- EPA Guidelines (2022);
- European Commission (EC) (2017), *'Environmental Impact Assessment of Projects: Guidance on Screening'*;
- Department of Environment, Housing and Local Government/OPW (2009), *'The Planning System and Flood Risk Management - Guidelines for Planning Authorities'*; and
- Working Group on Groundwater (2005), *'Guidance on the Application of Groundwater Risk Assessment Sheets SWRA 1-6 and GWDTERA 1-9 to areas Designated for the Protection of Habitats and Species'*.

11.3.2 Sources of Information

The following sources of information will be consulted for the assessment:

- GSI (2025), *'GSI Spatial Resources Map Viewer'*[16];
- EPA (2025), *'Water Maps'*[17];
- EPA (2025), *'EPA Maps'*[18],
- NPWS (2025), *'NPWS Map Viewer'*[19];
- NPWS. Irish Wildlife Manuals 142 (2023), *'Guidelines for the Assessment of Annex I Priority Petrifying Springs in Ireland'*;
- Tailte Éireann (2025), *'GeoHive Map Viewer'*[20];

[16] GSI (2024), *'GSI Spatial Resources Map Viewer'*. Available at: https://dcenr.maps.arcgis.com/apps/MapSeries/index.html?appid=a30af518e87a4c0ab2fbde2aaac3c228 [Last accessed: September 2025]
[17] EPA (2024), *'Water Maps'*. Available at: https://gis.epa.ie/EPAMaps/Water [Last accessed: September 2025]
[18] EPA (2025), *'EPA Maps'*. Available at: https://gis.epa.ie/EPAMaps/default [Last accessed: September 2025]
[19] NPWS (2024), *'NPWS Map Viewer'*. Available at: https://www.npws.ie/maps-and-data [Last accessed: September 2025]
[20] Tailte Éireann (2024), *'GeoHive Map Viewer'*. Available at: https://www.arcgis.com/apps/webappviewer/index.html?id=3ae19cc156bf4706a929304bf8fcc4f6 [Last accessed: September 2025]

- Met Éireann (2025), *'Monthly data*[21]*'*;
- OPW (2025), *'Flood Maps – Floodinfo.ie'*[22];
- Wetland Surveys Ireland (2025), *'Map of Irish Wetlands'*[23].; and
- Envirologic (2022), *'Hydrological Impact Assessment; Rathcoole, Co. Dublin'*[24];
- Faith Wilson and Dr Joanne Denyer (2021), *'Appendix 2B: Rathcoole Lands Ecology Assessment'*[25]; and,
- Nimbosa Ecology (2021), *'A survey to assess the woodlands and associated semi-natural habitats at Rathcoole, Co. Dublin'*[26]*.*

11.3.3 Desk-based Study

A desk-based study will be conducted following a walkover site visit to develop an understanding of the Site's hydrological regime and potential impacts on the water environment. No water quality sampling and testing is proposed. The EIA chapter will include:

- A baseline of the receiving environment, including outcomes of a site walkover survey;
- Characteristics of the Proposed Development;
- Predicted impacts on receiving waterbodies from both construction and operational phases;
- Identification of mitigation measures to be implemented, both embedded and, where required, additional and site-specific;
- Construction and operational stage controls to prevent deterioration on the water environment; and,
- Incorporation of FRA findings and any additional mitigation measures required.

The desk study will consist of a review of existing baseline data from the relevant sources, including water quality (Q values) and WFD watercourse, lake and transitional waters from the EPA, geological and hydrogeological data from the GSI, designated (and undesignated) water dependent sites from the NPWS and Wetland Surveys Ireland, flood risk data from the OPW, and drainage (natural or artificial) from the OPW, OSI data, and satellite imagery. The review will include the relevant city and county development plans and consideration of the policies and objectives of the plans in relation to surface water, flooding and water resources.

11.3.4 Site Visit

A site visit will be undertaken to establish the constraints relating to hydrology and hydrogeology and to acquire a basic knowledge of proposed water management at the Site. The information gained on the site visit will feed into the design layout to mitigate potential impacts to the water environment.

11.3.5 Source-Pathway-Receptor Approach

The water environment and flood risk impact assessment will be based on a source-pathway-receptor model. For an impact on the water environment to exist, the following is required:

- An impact source (such as the release of polluting chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or the loss or damage to all or part of a waterbody);

[21] Met Éireann (2025), *'Monthly data'*. Available at: https://www.met.ie/climate/available-data/monthly-data [Last accessed: September 2025]
[22] OPW (2024), *'Flood Maps – Floodinfo.ie'*. Available at: https://www.floodinfo.ie/map/floodmaps/ [Last accessed: September 2025]
[23] Wetland surveys and Foss Environmental Consulting, *'Map of Irish Wetlands'*. Available at: https://www.wetlandsurveys.ie/miw-intro [Last accessed: September 2025]
[24] Envirologic (2022), *'Hydrological Impact Assessment; Rathcoole, Co. Dublin'*
[25] Faith Wilson and Dr Joanne Denyer (2021), *'Appendix 2B: Rathcoole Lands Ecology Assessment'*
[26] Nimbosa Ecology (2021), *'A survey to assess the woodlands and associated semi-natural habitats at Rathcoole, Co. Dublin'*

- A receptor that is sensitive to that impact (i.e., waterbodies and the services they support); and
- A pathway by which the two are linked.

The impact sources will be identified through a review of the details of the Proposed Development, including the size and nature of the Proposed Development, potential construction and operation methodologies and timescales. The next step is to undertake a review of the potential receptors, that is, the water environment receptors that have the potential to be affected. Waterbodies (including their attributes) will be identified through a desk study and site surveys, building on the baseline information provided in this chapter. The last stage of the model is to determine if there is a viable exposure pathway or a 'mechanism' linking the source to the receptor. This will be undertaken in the context of local conditions relative to the water receptors within the Study Area, such as topography, geology, climatic conditions and the nature of the impact (e.g., the mobility of a liquid pollutant or the proximity to works that may physically impact a waterbody).

The assessment of the likely significant effects is qualitative and will consider the construction and operational phases, as well as cumulative effects with other developments. It is described in more detail in Section 6.6.3.

To support the assessment of effects on the water environment some sub-topic specific assessments will be undertaken. These are described in more detail in the following sections.

11.3.5.1 Hydrogeology Assessment

The EIAR will assess the potential significant impacts of the Proposed Development on the existing groundwater or hydrogeological environment. The principal goal will be to ensure that negative effects on the hydrogeological regime are avoided, reduced or minimised.

Relevant components of the baseline assessment will include characteristics such as aquifer classification, subsoil cover and groundwater vulnerability, karst landform features and traced underground connections, groundwater abstractions, GWDTEs, WFD groundwater bodies and groundwater-surface water interactions.

Impacts to be considered will include the potential deterioration of water quality (groundwater or connected surface water) as a result of construction activities, reduction in groundwater levels and flows as a result of dewatering and indirect reduction in groundwater contributions to abstractions and GWDTEs. Where available, ground investigation results will be used to consider current groundwater conditions and identify any additional constraints or opportunities.

Potential impacts on water dependent species and habitats will be assessed in the biodiversity chapter of the EIAR. The potential impacts in terms of WFD are not assessed as part of this EIA Scoping Report.

11.3.5.2 Water Quality Assessment

A Site walkover survey will be undertaken by a hydromorphologist and a water resources specialist. This will be to observe surface water features in the Study Area and to make observations about their current condition and character, the presence of existing risks and any potential pathways for construction and operation impacts as a result of the Proposed Development.

Water quality data for the more important watercourses in the area will be drawn from the publicly available EPA information. The importance of waterbodies will be determined from a holistic review of waterbody features and does not rely on water quality due to the principle that no controlled water may be polluted. Water quality impacts will be based on a risk assessment basis that does not require input of raw background water quality data. Water quality monitoring is also only effective when there is a clear purpose for it and may require monitoring over a long period of time to ensure reliable and robust results. Therefore, no water quality sampling is proposed to support the water environment assessment.

A qualitative assessment of potential effects on surface water quality from construction and operation of the Proposed Development will be undertaken. This will consider the risk to surface water features resulting from construction works or future operation activity using the source-pathway-receptor approach. Where

there is a risk of pollution, mitigation measures will be described with reference to best practice guidance (TII, 2008).

The appropriateness of the surface water drainage measures in terms of providing adequate treatment of diffuse pollutants will be assessed with reference to the Simple Index Assessment method described in Construction Industry Research and Information Association's (CIRIA) *'The SuDS Manual'* (C753F) (2015). The Simple Index Approach follows three steps:

- **Step 1** – Determine suitable pollution hazard indices for the land use(s);
- **Step 2** – Select SuDS with a total pollution mitigation index that equals or exceeds the pollution hazard index (for three key types of pollutants: total suspended solids, heavy metals and hydrocarbons). Only 50% efficiency should be applied to second, third etc. treatment train components; and
- **Step 3** – If the discharge is to a waterbody protected for drinking water, consider a more precautionary approach.

The SuDS Manual only provides a limited number of land use types and so those selected will be the most suitable for the components of the Proposed Development, based on professional judgement. Where more than one pollution hazard category applies to a component of the Proposed Development, the worst pollution hazard will be selected.

11.3.5.3 Hydromorphology and WFD Assessment

Due to the potential for impacts upon WFD designated waterbodies, a WFD Scoping Assessment will be conducted. It will determine the potential for any non-compliance of the Proposed Development with WFD objectives for affected waterbodies, using readily available information and Site observations. This will include a qualitative examination of the potential construction and operational phase impacts of the Proposed Development on relevant WFD hydromorphological, biological and physio-chemical parameters. Depending on the outcomes of the assessment, more detailed investigations may be required.

11.3.5.4 Surface Water Drainage Strategy

A Surface Water Drainage Strategy will be prepared to ensure the risk of surface water flooding is not increased as a result of the Proposed Development, including any increased land take for foundations and any access roads. It will include careful consideration of the SuDS features to ensure that the Surface Water Drainage Strategy adequately attenuates and treats runoff from the Proposed Development, whilst minimising flood risk to the Site and surrounding areas.

11.3.5.5 Flood Risk Assessment

A site-specific FRA will be prepared for the Proposed Development which will be a technical appendix to the EIAR. The FRA will include a review of the current and future flood risk to the Study Area from all sources (including surface water, groundwater, tidal and fluvial sources and residual flood risks), in keeping with the relevant guidance (i.e., OPW's *'The Planning System and Flood Risk Management - Guidelines for Planning Authorities'* (2009)), to inform the Proposed Development design and set out any proposed mitigation requirements that are to be addressed within the Surface Water Drainage Strategy.

11.3.6 Determining Significance of Effects (including classification criteria)

The assessment of the potential impacts of the Proposed Development on the water environment will include:

- Rating of identified water environment constraint importance/sensitivity using criteria from the EPA Guidelines (2022);
- Identification of potential impacts of the Proposed Development on hydrology and hydrogeology;
- Identification of the potential cumulative impacts of the Proposed Development on the water environment with any planned or proposed development;
- Consideration of outfall drainage from the Proposed Development;

- Assigning of potential impact magnitude/ scale/ duration using criteria from the EPA Guidelines (2022);
- Identification of mitigation measures for flooding and pollution of receiving waters;
- Identification of opportunities to improve water quality and the overall water environment; and
- Identification of residual impacts.

The methodology and criteria used to identify impacts are described in more detail in Sections 5.6.1, 5.6.2 and 5.6.3.

11.3.6.1 Limitations and Assumptions

The assessment of the potential impacts of the Proposed Development on the water environment have considered the following limitations and assumptions:

- Visual surveys will be undertaken of accessible water/ drainage features to inform the Surface Water Drainage Strategy, impact assessment and WFD assessment. However, it may not be possible to survey all significant locations (such as crossing locations) or structures due to access constraints or visibility issues (e.g., dense vegetation). Where this is the case, a survey close to the area of interest will be attempted and this data used as a proxy. In addition, some watercourses may be small, ephemeral and flow only intermittently, and these may not be identified in the field or observed when flowing;
- Other than the site walkover survey, the FRA and Surface Water Drainage Strategy will be based on desktop surveys and best available site layout proposals in line with best practice. Where available, topographical data will be used to support the FRA. In the absence of topographical data, LiDAR data will be used to inform the FRA and the Surface Water Drainage Strategy;
- Temporary works will not be assessed unless they are of a potentially significant scale and have the potential to adversely affect flood risk or impact the quality or form of water features. The temporary works where such risks are considered significant will be identified and assessed within the FRA, Screening and Scoping WFD Assessment and impact assessment reported in the EIAR; and,
- As part of the EIAR, the risk from surface water drainage to surface or groundwater features from new above ground development will be assessed according to the Simple Index Approach presented in the SuDS Manual. Given the very low risk the need for treatment measures is expected to be minimal. Furthermore, given the availability of space it is not anticipated that there would be any issues providing any treatment of diffuse pollutants, should the Simple Index Approach assessment identify such a need.

11.3.7 Study Area

The Study Area will encompass the entire area within the Site and water features within a 1 km radius. The Study Area is considered appropriate based on professional judgement of the potential spatial extent of potential impacts, and takes account of waterbodies (both surface and groundwater) within and adjacent to the Proposed Development, their immediate catchments, and any water-dependent habitats which could reasonably be affected, as well as and downstream waterbodies and water-dependent habitats which are hydraulically connected to these waterbodies in which potentially significant impacts could arise.

11.4 Baseline

11.4.1 Topography, Land Use and Climate

The topography of the Liffey and Dublin Bay WFD catchment is generally low lying (< 150 m) around the west, north and central areas. In the east around Dublin, the relief is around < 50 m; however, in the southeast upland areas elevations are in the range of 500-700 m AMSL[27]. Land use within the catchment is predominantly agricultural (arable land and pastures) in the north, west, and southern areas; however,

[27] Google Earth (2025). Available at: https://earth.google.com/web/

it is densely populated around the east where Dublin is situated. The southeastern areas of the catchment just south of Dublin are dominated by a mixture of forest, scrub, moors/ heathland, and inland wetlands[18]. The Liffey catchment contains the largest population of any catchment in Ireland, mainly around the eastern lowlands around Dublin, but is characterised by a sparsely populated, upland southeastern area.

The nearest Met Éireann weather monitoring station[21] to the Proposed Development is Casement Aerodrome, which is located close to Dublin, approximately 2.5 km to the northeast of the Proposed Development. Based on the long-term average for this weather station, it is estimated that the area would receive annual rainfall totals of 783.5 mm. According to Met Éireann, rainfall over the eastern half of the country averages between 750–1,000 mm per year, while rainfall in the west averages between 1,000–1,400 mm. The LTA annual rainfall for Casement Aerodrome is therefore in the range for the east.

11.4.2 Hydrology

11.4.2.1 Water Framework Directive Waterbodies

The Proposed Development is located primarily within the Liffey and Dublin Bay WFD catchment (Catchment ID: 09). This catchment covers an area of approximately 1,624 km^2. This catchment is drained by the River Liffey, and all streams enter tidal waters between Sea Mount and Sorrento Point, Co. Dublin.

The Proposed Development is located within Liffey_SC_090 WFD sub-catchment (Sub-Catchment ID: 09_15). This sub-catchment which contains 10 river waterbodies, one canal waterbody (the Grand Canal Main Line), one lake (Leixlip Reservoir), and one transitional waterbody. Only one WFD river waterbody (Camac_020) and one unnamed, non-WFD watercourse flows through the Proposed Development. The Camac_020 river waterbody is currently at moderate Ecological Status (2016-2021) and is ‘At risk’ of not meeting WFD objectives.

All surface waterbodies (including tributaries) within the Study Area are listed in Table 11-2 and illustrated on Plate 11.1. The identification of any smaller unnamed drains and ditches within the Study Area will be subject to a site visit.

The EIAR will be used to determine whether the construction and operational phases of the Proposed Development will impact water quality or result in WFD objectives not being met.

Table 11-2: Surface Waterbodies within the Study Area

Waterbody name	Associated EPA WFD River Waterbody	Segment Code	WFD Ecological Status (2016-2021)	WFD Risk	Flow	Comments
Liffey	Liffey_170	09_1587 09_590	Poor	At Risk	Flows south to north	There are two tributaries of the Liffey_070 located approximately 1.2 and 1.3 km from the Proposed Development. Both tributaries appear to be culverted for the majority of their length. The waterbody does not appear to be hydrologically connected to the Proposed Development.
Camac	Camac_020	09_643 09_597 09_596 09_558 09_559 09_595 09_36 09_37 09_435 09_2202 09_396	Moderate	At Risk	Flows south to north to join Camac (09_499).	The river borders the Proposed Development outside the southeastern and eastern boundary. A small tributary to the rivers main channel flows through the northern edge of the Proposed Development for approximately 725 m
	Camac_010	09_472	Poor	At Risk	Flows south to north to join Camac (09_2202).	The river flows from south to north and joins the Camac_020 outside of the Proposed Development's Red Line Boundary
Unnamed watercourse	No assigned WFD	N/A	N/A	N/A	Flows south to north through the Proposed Development	There is a non-WFD watercourse that rises in Rathcoole Woodland and flows south to north through the Proposed Development. The watercourse flows through both ponds located north of the Red Line Boundary and is then culverted under Fitzmaurice Road.
Unnamed cluster of lakes and ponds associated with golf course	No assigned WFD	N/A	N/A	N/A	N/A	There are a number non-WFD lakes/ponds located approximately 950 m northeast of the Proposed Development within a golf course complex (Citywest Resort Golf Club). The waterbodies do not appear to be hydrologically connected to the Proposed Development.
Unnamed ponds located east of the Proposed Development	No assigned WFD	N/A	N/A	N/A	N/A	There are two non-WFD ponds both located within 160 m east of the Red Line Boundary, based on a review of online mapping[28]. The outflow to one lake joins the Camac_020.

[28] Bing Maps (2025). Available at: https://www.bing.com/maps/?cp=53.280893%7E-6.454793&lvl=16.4

Waterbody name	Associated EPA WFD River Waterbody	Segment Code	WFD Ecological Status (2016-2021)	WFD Risk	Flow	Comments
Unnamed ponds located north of the Proposed Development	No assigned WFD	N/A	N/A	N/A	N/A	There are two non-WFD ponds both located within 155 m north of the Red Line Boundary, based on a review of aerial imagery[27]. Both ponds are hydrologically connected with the unnamed watercourse that flows through the Proposed Development.

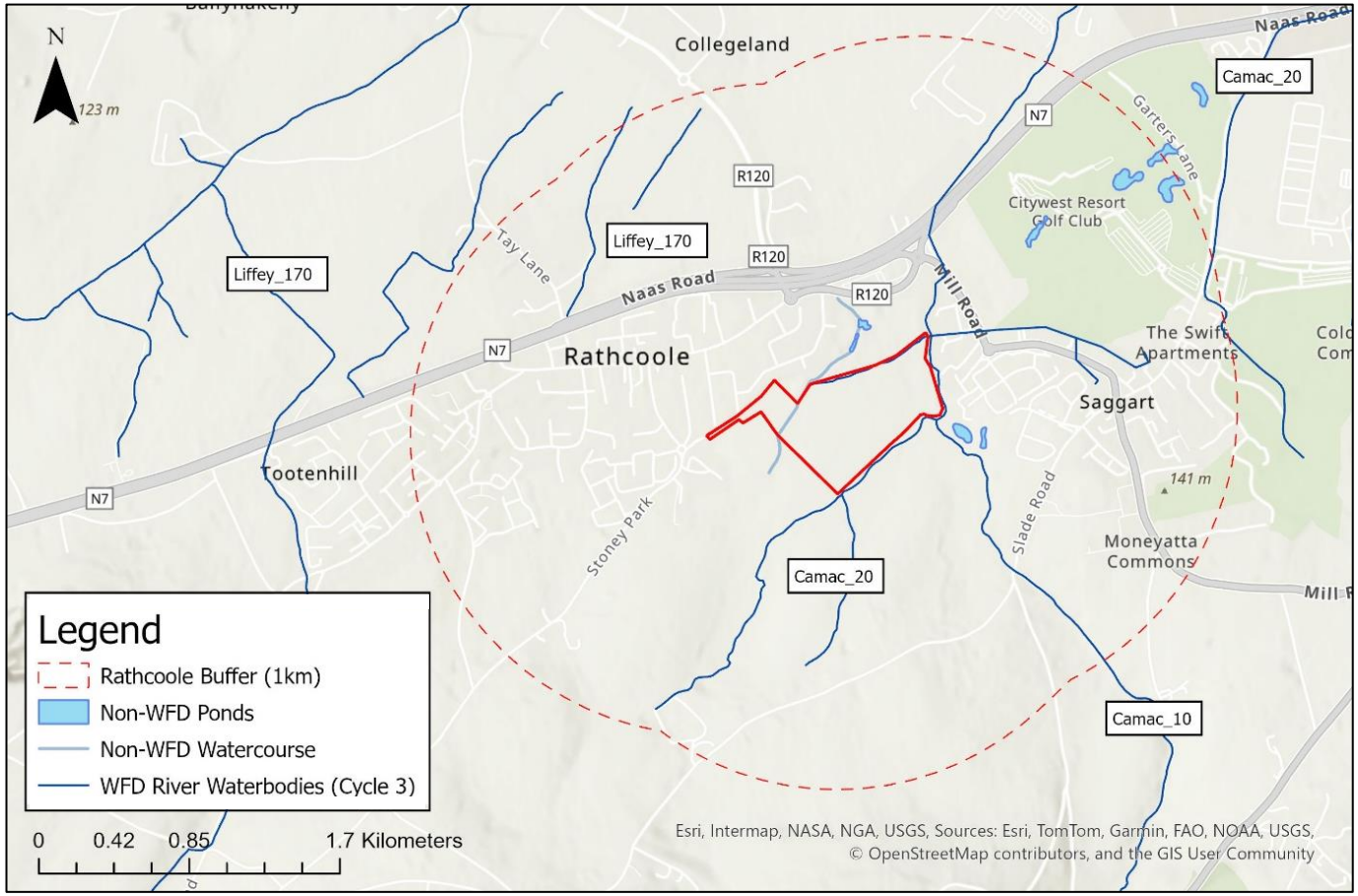


Plate 11.1: Surface Water Features and their Attributes within the Study Area

11.4.2.2 Designated Sites and Protected Areas

There are no surface water dependent designated sites located within the Study Area. The Camac_020 waterbody is hydrologically connected to the South Dublin Bay SAC and the South Dublin Bay and River Tolka Estuary SPA; however, these sites are approximately 38 km downstream from the Proposed Development, and so it is not considered plausible that they would be impacted by the Proposed Development given the large capacity for dilution and dispersal of pollutants in the intervening river network.

There are no designated salmonid rivers located within the Study Area or downstream of the Proposed Development.

The EIAR will determine whether the construction or operational phases of the Proposed Development will impact any surface water dependent designated sites.

11.4.2.3 Waterbody Pressures

All three river waterbodies located within the Study Area are subjected to significant pressures affecting their water quality status. Table 11-3 shows the significant pressures affecting each river waterbody; all three waterbodies are 'At risk' of not meeting WFD objectives. There is a storm water overflow located on the Liffey_170 within the Study Area (Easting: 301891, Northing: 226887) and is associated with the Ringsend WwTW (Reg No. D0034-02). There are no other discharges located within the Study Area.

Both Camac_020 and Liffey_170 are identified on the EPA's Water Map[17] as areas for targeting agricultural measures. The Camac_020 river waterbody basin is 'Navy Flagged' which highlights that excess sediment and phosphorus pressures require additional measures to restore water quality. The Liffey_170 is 'Orange Flagged' which highlights that excess nitrate pressures require additional measures to restore water quality.

The EIAR will determine whether the construction or operational phases of the Proposed Development has the potential to impact on these waterbody pressures.

Table 11-3: River Significant Pressures

WFD River Waterbody name	River Significant Pressure
Liffey_170	Urban run-off Urban wastewater Hydromorphology
Camac_010	Invasive species Hydromorphology
Camac_020	Agriculture Urban run-off

11.4.2.4 Priority Areas for Action

The Local Authorities Water Programme (LAWPRO) undertook a comprehensive selection process in 2017 to identify Priority Areas for Action (PAA) which involved collaboration from several organisations and Northern Ireland counterparts such as the EPA, all local authorities, Inland Fisheries Ireland (IFI) and OPW. PAAs capture all focused activity that may lead to water quality protection and improvement, the framework is divided into three overarching categories[29]:

- Areas for Restoration: targets 'at risk' and sometimes 'review' waterbodies to undertake restoration activities;
- Areas for Protection: targets waterbodies that have since achieved water quality objectives to undertake activities to maintain good status; and

[29] Catchments.ie (2025) Taking Action. Available at: https://www.catchments.ie/taking-action/

- Catchment Projects: waterbodies where there are existing large-scale community-led initiatives, projects, or research ongoing within a catchment which LAWPRO will act to support.

None of the waterbodies within the Study Area are located within a PAA.

11.4.2.5 High Status Objective and Blue Dot Waterbodies

Ireland has seen a long-term trend of decline in the number of high status (Q5 and Q4-5) river sites in recent decades. Of monitored river sites, 19% had high status in the 2017-2019 assessment period compared to 31.6% in the 1987-1990. As a result of the decline, the protection of high-status waters was highlighted as one of the main priorities of the River Basin Management Plan (RBMP). The Plan places particular emphasis on the protection and, where possible, looks to provide the framework for restoration to high status of some waterbodies, where deterioration has occurred since the beginning of the first RBMP cycle in 2007-2009.

There are no high-status waterbodies located within the Study Area or downstream.

11.4.2.6 Catchment Projects

There are several existing Catchment Projects ongoing in Ireland where funding or plans are in place which will have benefits for water quality protection/restoration during WFD Cycle 3. They include community initiatives (such as the Rivers Trust), Waters of LIFE, Europea Innovation Partnership (EIP), European Territorial Cooperation (INTERREG), and public body research projects.

Catchment projects are identified on the EPA's Water Map[17], there are two Catchment Projects located within the Study Area, these are highlighted in Table 11-4.

Table 11-4: Catchment Projects located within the Study Area

Catchment Project Name	Project Description	Start Year	Affected River Sub-basin	URL
Dublin Urban Rivers LIFE (DURL)	Aims to improve water quality and aquatic biodiversity in urban areas by finding domestic misconnections and by building wetlands in public parks to treat and improve water quality.	2022	Liffey_170 river sub-basin (part of the Proposed Development Red Line Boundary is located within this area)	https://www.sdcc.ie/en/services/environment/dublin-urban-rivers-life/
Camac Dublin City Council	No information provided on EPA Water map	2022	Camac_020 river sub-basin (majority of hr Proposed Development Red Line Boundary is locate within this area)	https://gis.epa.ie/EPAMaps/Water

11.4.2.7 Water Abstractions

There are no surface water abstractions listed on the EPA's Abstraction Register[30] within the Study Area. An information request to the EPA should be considered at the EIAR stage to request the latest abstractions, consented discharges and pollution incident within the Study Area.

There are no designated Drinking Water Rivers or Lakes within the Study Area or downstream[17].

11.4.2.8 Geomorphology

WFD hydromorphological quality elements (i.e., morphology and hydrological regimes) have not been assessed or monitored in the CAMAC_020 surface waterbody.

Hydromorphological conditions, using the River Habitat Assessment Technique (RHAT), were last assessed in LIFFEY_170 waterbody at O 03498 35517 (approximately 12.5 km downstream of the Study Area) in 2024 and in CAMAC_010 waterbody at O 03419 26064 (approximately 0.8 km upstream of the Study Area) in 2013. Overall hydromorphological conditions were considered moderate in the LIFFEY_170 waterbody, as a result of poor channel form, bank structure and floodplain connectivity but moderate in-

[30] EPA (2025), *Water Abstraction Register*. Available at: https://leap.epa.ie/abstractions/ (Last accessed: September 2025)

channel vegetation, bed substrate, and riparian vegetation. Overall hydromorphological conditions were considered poor in the CAMAC_010 waterbody, as a result of poor channel form, bed substrate, in-channel vegetation, floodplain connectivity, and in-channel barriers to continuity,

All three of the WFD surface waterbodies within the study area are classified as 'At Risk'. In CAMAC_010 and LIFFEY_170 hydromorphological (i.e., hydrological and morphological) pressures, specifically the issues associated with water storage, regulation and longitudinal connectivity, have been identified as causing a decline in water quality and physical habitats within the waterbodies, resulting in a deterioration of their overall ecological status. Both CAMAC_010 and LIFFEY_170 are also designated as Heavily Modified Water Bodies (HMWB).

11.4.2.9 Summary

The desk study suggests that there are two WFD river waterbodies which may be at risk from any uncontrolled construction or routine runoff from the Proposed Development. Any further hydrological constraints identified during site visit will be recorded in the EIAR. Mitigation measures will be developed in reference to best practice guidelines to avoid hydrological impacts.

11.4.3 Hydrogeology

11.4.3.1 Aquifers

The Proposed Development is predominantly underlain by the Pollaphuca Formation, which is classified as Silurian Metasediments and Volcanics under the GSI's hydrostratigraphical rock unit mapping[31] and as a poor aquifer with a bedrock generally unproductive except for local zones (Pl).

The westernmost part of the Proposed Development is underlain by the Carrighill Formation, which is also classified as Silurian Metasediments and Volcanics under the GSI's hydrostratigraphical rock unit mapping, but is considered a poor aquifer only capable of supplying small supplies (e.g., domestic supplies, small group schemes) (Pu).

The northeastern corner is underlain by the Lucan Formation, which is classified as Dinantian Upper Impure Limestones and as a locally important aquifer with a bedrock moderately productive only in local zones (Ll). The bedrock formation is provided in Plate 11.2 and the aquifer classification is provided in Plate 11.3.

There are no mapped sand and gravel aquifers within 1 km of the Proposed Development.

[31] The GSI's Hydrostratigraphic Rock Unit Groups map is a simplified version of the Bedrock Geology map, created to help to understand how groundwater flows through the rocks, which rocks produce particular groundwater chemistries, or which rocks are best at conducting or storing heat.

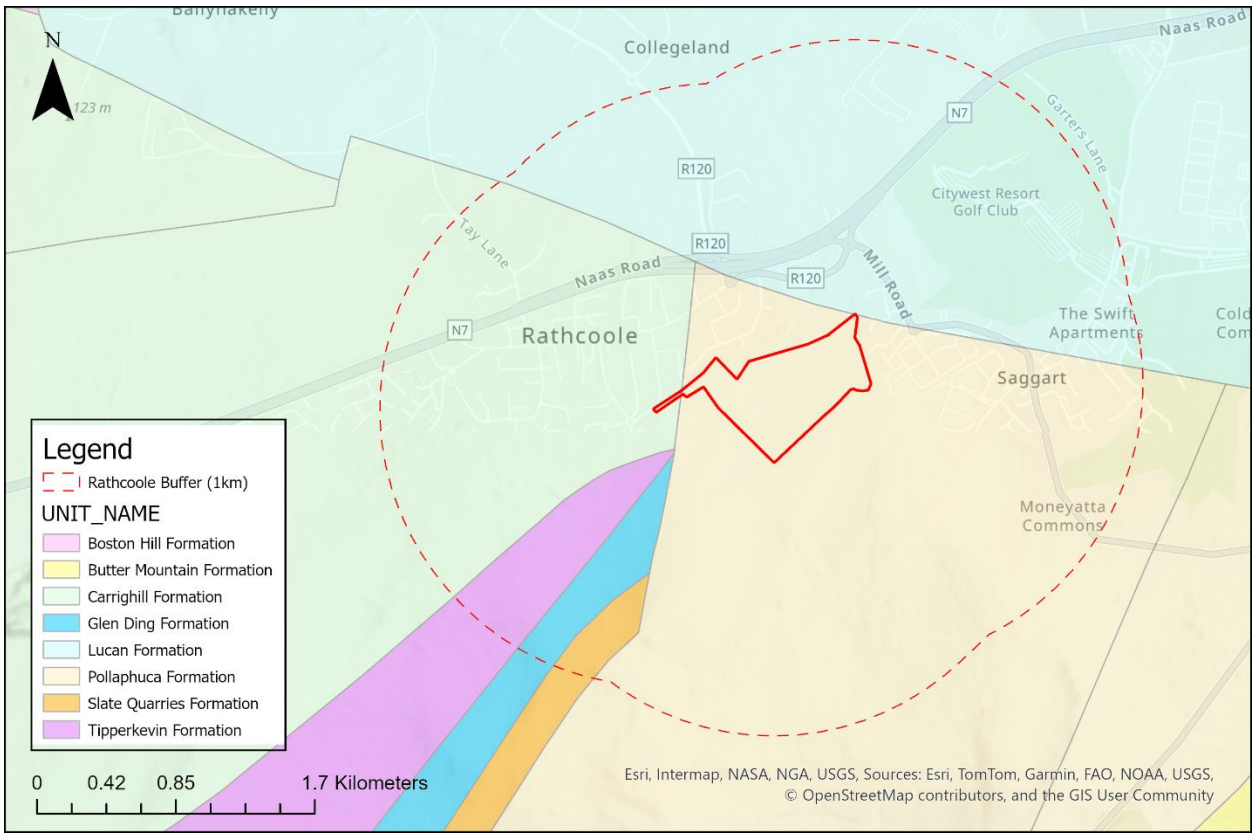


Plate 11.2: Bedrock Formations in the Study Area

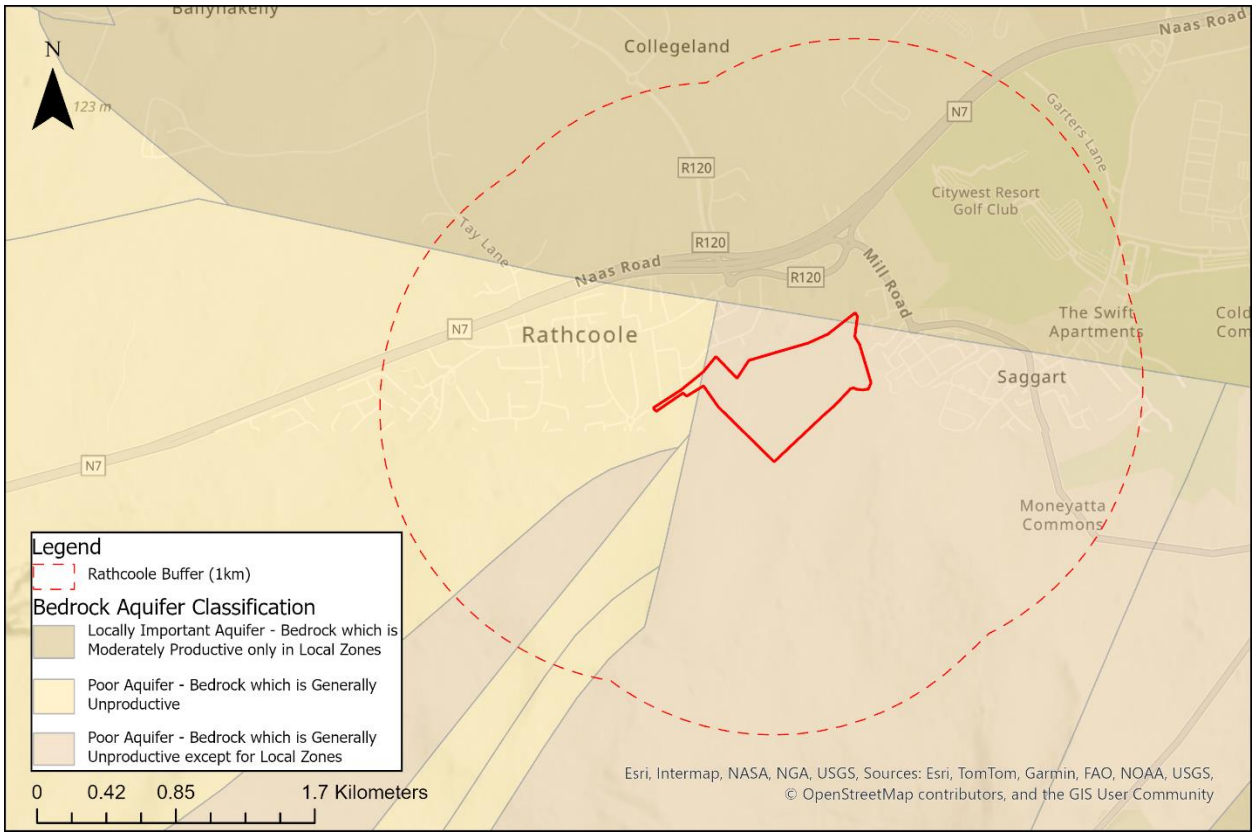


Plate 11.3: Aquifer Classification within the Study Area

Groundwater vulnerability, as classified by the GSI (refer to Plate 11.4), is mapped as being predominantly High Vulnerability within the Proposed Development. The south corner is mapped as being of Moderate Vulnerability while the northeastern corner is mapped as being of Extreme Vulnerability, meaning that bedrock and/ or groundwater is within 3 m of the surface. Subsoil permeability, as classified by the GSI, is

mapped as Moderate (M). The average recharge is mapped by the GSI as 51 to 100 mm/yr within the Proposed Development Site.

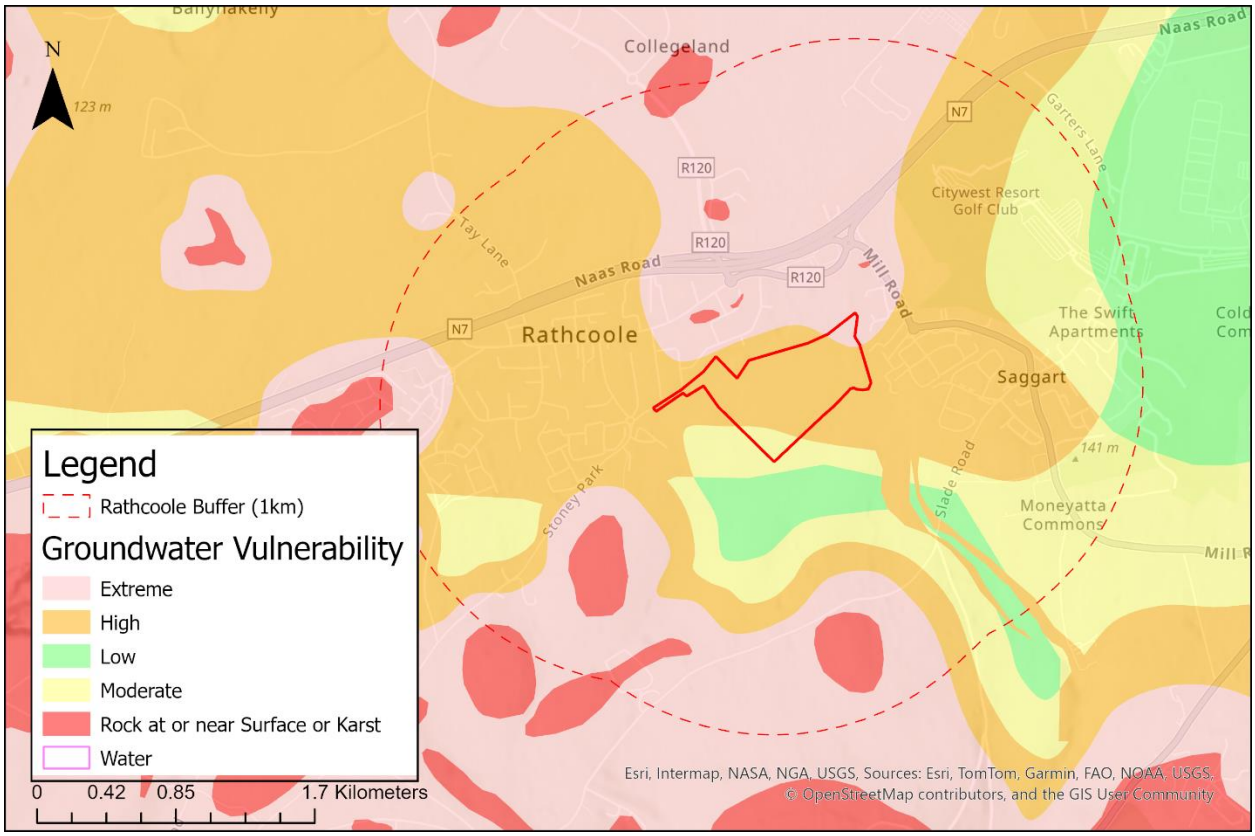


Plate 11.4: Groundwater Vulnerability within the Study Area

11.4.3.2 WFD Groundwater Bodies

The Proposed Development is predominantly underlain by the Kilcullen WFD ground waterbody. The northeastern corner of the Proposed Development is underlain by the Dublin WFD ground waterbody. Table 11-5 summarises the characteristics of these WFD groundwater bodies.

Table 11-5: WFD Groundwater Bodies Underlying the Study Area

Groundwater (GWB) Name	GWB ID	GSI Rock Units	WFD Overall Status (2016-2021)	WFD Risk Status (3rd Cycle)
Kilcullen	IE_EA_G_003	Silurian Metasediments and Volcanics	Good	At risk
Dublin	IE_EA_G_008	Dinantian Upper Impure Limestones	Good	Under review

11.4.3.3 Groundwater Quality and Significant Pressures

Significant pressures are identified by the EPA for waterbodies that are deemed to be 'At Risk' of not meeting their water quality objectives under the WFD. While there are a multitude of pressures in every waterbody, the significant pressures are those pressures which need to be addressed in order to improve water quality. Although its status is considered Good, the Kilcullen WFD ground waterbody is considered at risk due to a decline in the chemical quality of its samples. There are no listed significant pressures for Dublin WFD groundwater body.

There is one EPA groundwater monitoring station that monitors the chemistry of Kilcullen WFD groundwater body, but it is located approximately 26 km southwest of the Proposed Development. According to the GSI's WFD ground waterbody descriptions[32], the groundwater is expected to have a very

[32] GSI, 2004. *'Kilcullen GWB: Summary of Initial Characterisation'*. Available at: https://gsi.geodata.gov.ie/downloads/Groundwater/Reports/GWB/KilcullenGWB.pdf [Last accessed: September 2025]

low alkalinity, total hardness values of 100 and 150 mg/l, and electrical conductivity values between 300 and 500 µS/cm.

There are multiple EPA groundwater monitoring stations that monitors the Dublin WFD ground waterbody located approximately 14 km to the southwest of the Proposed Development. According to the GSI's WFD ground waterbody descriptions[33], the groundwater is expected to have a calcium bicarbonate signature, with high alkalinities and hardness (in the order of 300 and 350 mg/l $CaCO_3$). Electrical conductivity is also expected to be very high, between 550 and 900 µS/cm.

11.4.3.4 Groundwater Abstractions, Source Protection Zones and Zones of Contribution

As with the whole of the Republic of Ireland, the WFD groundwater bodies underlying the Site are registered under Article 7 Abstraction for Drinking Water as drinking water groundwater bodies.

There are no mapped GSI Source Protection Areas delineated for public water supplies, or EPA ZOCs mapped for monitoring boreholes within 1km of the Proposed Development.

There is one groundwater abstraction recorded by the GSI located within the Study Area. St Bridget's Well (2921NWW007) is located approximately 550 m to the northeast of the Proposed Development. It is a spring but there are no details regarding its use and the yield.

11.4.3.5 Groundwater Dependant Terrestrial Ecosystems

There is no central or comprehensive repository of Groundwater Dependant Terrestrial Ecosystems (GWDTE) data in Ireland. The mapping of designated/ protected sites by the NPWS, karst landforms by the GSI and wetland habitats by Wetland Surveys Ireland[23] has been examined. There are no designated sites of groundwater interest located within the Study Area; however, there are four non-designated GWDTEs that are presented in Table 11-6.

Recent surveys[24,25,26] have identified the presence of several Priority Annex I habitats within the non-designated GWDTE at Rathcoole wet woodland, which is located within the Study Area. Specifically, these include 91E0 Alluvial woodland, 7220 Petrifying springs, and 6510 Lowland hay meadows. These habitats are of high conservation value and are protected under the EU Habitats Directive. The presence of such habitats highlights the ecological importance of the site, despite its lack of formal designation. The studies further conclude that the area is not suitable for any form of development, and any proposed works in the vicinity should incorporate robust mitigation measures to protect the integrity of the GWDTE and associated habitats.

Table 11-6: WFD Groundwater Bodies Underlying the Study Area

Name	Status	Wetland Type	Approx. distance from the Proposed Development
Rathcoole wet woodland	C+ rating: County conservation value	River, wet woodland (oak ash or willow alder), scrub, wet grassland, calcareous spring	Traversed
Rathcoole Park ponds	C+ rating: County conservation value	Artificial pond, river, reed swamp, scrub	Adjacent
Saggart citywest golf course ponds west	F rating: Unknown value – survey required	Artificial pond, scrub, reed swamp	450 m
Saggart citywest golf course ponds east	F rating: Unknown value – survey required	Artificial pond, scrub, reed swamp	970 m

11.4.3.6 Karst Landforms and Underground Connections

According to the GSI's National Karst Database, there are no karst landforms within the Study Area.

[33] GSI, 2004. *'Dublin GWB: Summary of Initial Characterisation'*. Available at: https://gsi.geodata.gov.ie/downloads/Groundwater/Reports/GWB/DublinGWB.pdf [Last accessed: September 2025]

11.4.3.7 Summary

The desk study suggests that the Proposed Development is located on the Kilcullen WFD groundwater body, which is High Vulnerability. Surveys have confirmed the presence of Priority Annex I habitats within the Rathcoole wet woodland non-designated GWDTE, reinforcing its ecological sensitivity and the need to avoid development in the area, with strict mitigation measures required for any nearby works. Any further hydrogeological constraints identified during the ground investigation and surveys, will be recorded in the EIAR. Mitigation measures will be developed in reference to best practice guidelines to avoid hydrogeological impacts.

11.4.4 Flood Risk

11.4.4.1 Fluvial Flood Risk

Several historical and predictive flood indicator datasets have been reviewed, using existing data[22] from Catchment-based Flood Risk Assessment and Management (CFRAM), National Indicative Fluvial Mapping (NIFM) and National Coastal Flood Hazard Maps (NCFHM) to analyse flood extents for the Project.

Plate 11.5 shows the surface water flood extents within the Study Area. River flood extents from the CFRAM were obtained from the OPW Flood Maps[22]. It is noted that a section of the Study Area is 'under review', this is highlighted by the grey square within Plate 11.5.

CFRAM fluvial flood extents were created using methodologies based on historic flood data without taking account of potential changes due to climate change. Flood probability has been split into three probabilities:

- **Low probability** – Modelled extent of land that might be flooded by rivers in a severe flood event (approximately 1-in-a-1,000 chance or being exceeded in any given year. This is also referred to as an Annual Exceedance Probability (AEP) of 0.1%).
- **Medium probability** - Modelled extent of land that might be flooded by rivers in a severe flood event (approximately 1-in-a-100 chance or 1-in-a-200 (coastal) chance of being exceeded in any given year. This is also referred to as an AEP of 1% and 0.5% respectively).
- **High probability** - Modelled extent of land that might be flooded by rivers in a moderate flood event (approximately 1-in-a-10 chance or being exceeded in any given year. This is also referred to as an AEP of 10%).

NIFIM flood extents were developed by OPW under the EU Floods Directive and national flood policy. The modelled extent of land that may be flooded by rivers (fluvial flooding) during a theoretical or 'design' flood event with an estimated probability of occurrence, rather than information for actual floods that have occurred in the past.

The NIFM mapping provides present day flooding extents for two different categories of probability: Medium Probability (1% AEP) and Low Probability (0.1% AEP).

As illustrated in Plate 11.5, there is evidence of fluvial flood risk at all probabilities (low to high) for the Camac_010 and Camac_020 watercourses based on CFRAM mapping. There are also small flood risk extents associated with the unnamed non-WFD watercourse that flows through the Proposed Development. The extent of fluvial flood risk does not completely cover the Proposed Development area. There is no evidence of fluvial flood risk within the Study Area based on NIFM mapping. This will be further reviewed to support the FRA at the EIAR stage.

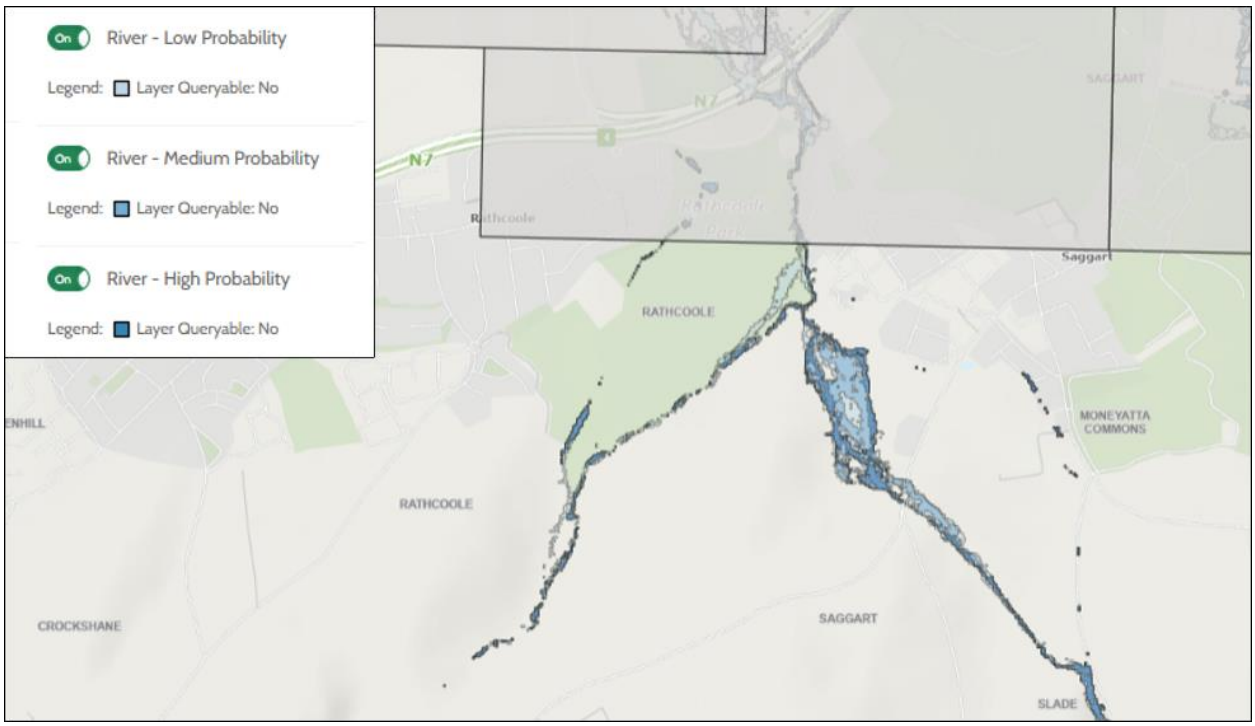


Plate 11.5: Fluvial Flood Risk (CFRAM) (Source: OPW Flood Maps[34])

11.4.4.2 Coastal Flood Risk

There is no risk from coastal flooding within the Study Area based on both CFRAM and NCFHM mapping[22].

11.4.4.3 Pluvial Flood Risk

There is no risk from pluvial flooding based on CFRAM rainfall flood extent mapping[22].

11.4.4.4 Groundwater Flood Risk

The GSI have developed Groundwater Flood Probability Maps which show the probabilistic flood extent of groundwater flowing as well as historic groundwater flooding extents. According to the GSI's Groundwater Flooding Data Viewer, there are no areas with a probability of groundwater flooding and no historic flooding within the Study Area.

However, the north of the Proposed Development and the area further north are under review because the hydraulic conditions have changed. There is currently no information available in this area.

[34] Available at: https://www.floodinfo.ie/map/floodmaps/ [Last accessed: September 2025]

12. Air Quality

12.1 Introduction

This chapter describes the scope of work and methods that will be applied to identify and assess the potential air quality impacts associated with the Proposed Development. The chapter does not address effects associated with the emission of GHG which are considered in Chapter 13: Climate.

12.2 Potential Significant Effects

The EPA Guidelines suggests that the matters set out in Table 12-1 are typically addressed for the air quality factor.

Table 12-1: Matters to be Considered for Air Quality

Matter	Comments
Construction dust emissions	Scoped in. Construction activities have the potential to generate dust emissions, including PM_{10} and $PM_{2.5}$ (particles with diameters of 10 µg/m^3 or less, or diameters of 2.5 µg/m^3 or less, respectively), which could potentially have harmful impacts on human health, as well as affecting sensitive designated ecological habitats.
Construction non-road mobile machinery and small plant emissions	Scoped out. The Institute of Air Quality Management's (IAQM) *'Guidance on the Assessment of Dust from Demolition and Construction V2.2'* (2024) suggests that impacts from exhaust emissions from on-site plant machinery are unlikely to make a significant impact on local air quality.
Construction traffic emissions	Scoped out. Emissions associated with construction traffic are limited to combustion emissions from construction vehicles. Such emissions will be temporary (for the duration of the construction programme) and the number of construction traffic movements considered unlikely to exceed the IAQM's *'Guidance on the Assessment of Dust from Demolition and Construction V2.2'* (2024) criteria to suggest that a detailed assessment of this source is required. This will be validated when construction phase traffic data is made available by the Project Transport Consultant.
Operational traffic emissions	Scoped in. Combustion emissions (including nitrogen dioxide (NO_2) and particulate matter (PM_{10} and $PM_{2.5}$) have the potential to impact sensitive receptors adjacent to the roads which are likely to experience an increase in traffic flow which exceed the IAQM's '*Guidance on Land-use Planning and Development Control: Planning for Air Quality'* (2017) criteria, due to the Proposed Development. Impacts include harm to human health and to designated nature conservation sites.

12.3 Assessment Methodology

An air quality desktop study will be undertaken with reference to:

- IAQM (2024), *'Guidance on the Assessment of Dust from Demolition and Construction V2.2'*; and
- IAQM (2017), '*Guidance on Land-use Planning and Development Control: Planning for Air Quality'*.

Taking into consideration the type of Proposed Development and the potential air quality effects, a proportionate assessment will be undertaken and reported in the EIAR, consisting of the following tasks:

- Undertake a qualitative assessment of construction-phase dust and particulate emissions in line with the IAQM Guidelines (2024); and
- Undertake a quantitative assessment of operational-phase road traffic emissions in line with the IAQM Guidelines (2017).

12.3.1 Construction Dust Emissions

Construction activities during the Proposed Development construction phase have the potential to generate dust and finer particulate (PM_{10}) emissions that could impact sensitive receptors located in proximity to the construction site boundary and public roads used by construction traffic. A qualitative assessment will be undertaken to consider these impacts in line with guidance published by the IAQM (2024). Any impacts would be temporary, i.e., during the construction phase only.

According to the IAQM, the main air quality impacts that may arise during construction activities are:

- Dust deposition, resulting in the soiling of surfaces;
- Visible dust plumes, which are evidence of dust emissions;
- Elevated PM_{10} and $PM_{2.5}$ concentrations from construction activities; and
- An increase in concentrations of airborne particles and NO_2 due to exhaust emissions from vehicles and equipment used on site (non-road mobile machinery) and vehicles accessing the site.

Activities on construction sites are classified into four types to reflect their different potential impacts:

- Demolition (however, for the Proposed Development, no demolition works are required and therefore are not considered further);
- Earthworks;
- Construction (erection of buildings and structures); and
- Track-out (the deposition of material onto the public road network by construction vehicles leaving site).

The following steps, as defined by the IAQM, will be followed as part of the construction dust assessment:

- **Step 1:** Screen the need for a more detailed assessment. Human and ecological receptors will be identified and the distance to the Proposed Development and construction route determined;
- **Step 2:** Assess the risk of dust impacts. This is done separately for each of the four construction activities and considers the scale and nature of the works to determine the potential dust emission magnitude, and the sensitivity of the area;
- **Step 3:** Determine the site-specific mitigation for each of the four potential activities. Based on the risk of impacts occurring, site-specific mitigation measures will be determined; and
- **Step 4:** Examine the residual effects and determine whether or not these are significant for each activity.

For amenity effects from coarser dust (>PM_{10}), the aim of the IAQM guidance method is to bring forward a scheme, including mitigation measures where necessary, that would control impacts so that they give rise to negligible or minor effects (at worst) at the closest sensitive receptors. Measures that reduce dust emissions will also reduce emissions of finer particles (PM_{10}). Determination of whether an effect is likely to be significant or not is based on professional judgement (based on experience of similar projects), taking account of whether effects are permanent or temporary, direct or indirect, constant or intermittent and whether any secondary effects are caused (in this instance, ‘secondary effects’ refers to dust that is generated and deposited (primary impact) and then re-suspended and deposited again by further activity).

Sensitive human and ecological receptors will be identified within the Study Area and the risk of dust impacts occurring at these receptors will be determined based on the potential dust magnitude and sensitivity of the area. Taking into consideration the risk of impacts occurring, appropriate mitigation measures will be recommended to ensure the effect of any dust impact is not significant.

12.3.2 Operational Traffic Emissions

The IAQM Guidelines (2017) include the following screening criteria based on the number of additional traffic movements generated by a Proposed Development to determine whether a quantitative air quality assessment of road traffic emissions is required:

- Annual average daily traffic (AADT) flows of light duty vehicles (LDV) change by 500 or more; or
- AADT of heavy-duty vehicle (HDV) (vehicles greater than 3.5 tonnes, including buses and coaches) flows change by 100 or more.

Based on the current information available, it is considered likely that the screening criteria will be exceeded and a quantitative air quality assessment of operational phase road traffic emissions will be required.

A simple level the air quality assessment will be undertaken, utilising the TII Road Emissions Model (REM) tool. Annual mean concentrations of NO_2, PM_{10} and $PM_{2.5}$ will be predicted with the impacts and significance of effects defined with reference to IAQM Guidelines (2017). This is considered a proportionate approach, taking into considered the scale of the Proposed Development and existing air quality in the area which is less than 90% of the 2030 air quality limit value as defined in the EU Ambient Air Quality Directive[35].

12.4 Baseline

12.4.1 Air Quality Sensitive Receptors

The IAQM Guidelines (2024) state that for human receptors, the Study Area for the construction dust assessment extends up to 250 m from the boundary of the Site and/ or 50 m of the routes used by construction vehicles, up to 250 m from the site entrance. For ecological receptors, the Study Area extends 50 m from the boundary of the site and/ or 50 m from the routes used by construction vehicles, up to 250 m from the site entrance.

Residential properties are located to the north and east of the Proposed Development, with properties on Mulally's Lane, Coolamber Road, Coolamber Drive, Rathcoole Park and Beechwood Lanes located adjacent to the Proposed Development.

No sensitive designated ecological habitats have been identified within 250 m of the site boundary or within 50 m of the access routes.

The study area for the operational traffic assessment will extends up to 200 m from roads which meet the screening criteria (Section 12.3.2) as air quality concentrations are considered to be at background levels beyond this distance. Sensitive human receptors include residential properties, schools, hospitals, places of worship, sport centres, and shopping areas, while ecological receptors would include SPA, Proposed SPA (pSPA), SAC, Proposed SAC (pSAC), Natural Heritage Areas (NHA), and pNHA.

At this stage, the Study Area for the operational phase is unknown as traffic data is not yet available. However, access to the Proposed Development will be from Mulally's Lane, Coolamber Road and Coolamber Drive; therefore, the residential properties adjacent to these roads are likely to be within the Study Area.

[35] EU Directive 2024/2881 on ambient air quality and cleaner air for Europe

12.4.2 Receiving Environment

The EPA manages the national ambient air quality network in Ireland, which consists of 115 monitoring stations located across the country that monitor a range of pollutants. EU legislation on air quality (CAFE Directive (2008/50/EC[36]) and Daughter Directives) requires that Member States divide their territory into zones for the purpose of monitoring, assessment and management of air quality. The EPA has designated the following four Air Quality Zones for Ireland:

- Zone A: Dublin City and environs;
- Zone B: Cork City and environs;
- Zone C: Other cities and large towns; and
- Zone D: Remainder of the country (rural Ireland).

The Study Area lies within Zone A; however, Rathcoole is located outside of Dublin and on the outer fringes of Zone A and air quality is therefore likely to be better than in Dublin itself. The most recent EPA Air Quality in Ireland Report available was published in 2025[37] and is based on information gathered in 2024 and earlier. The report is supported by the Summary Data Tables 2024, which contain the 2024 monitoring data.

The findings of this report and summary data tables are described as follows:

- NO_2 was measured at 37 monitoring stations in Ireland in 2023, of which 15 were in Zone A. The highest annual mean NO_2 concentration in Zone A in 2023 was at Pearse Street, which is located within the city centre of Dublin. An annual mean NO_2 concentration of 38.2 µg/m^3 was measured which is above the 2024 EU legislative limit, 2030 target of 20 µg/m^3. However, at the monitoring site in Tallaght which is located closest to the Proposed Development (approximately 7 km east), an annual mean NO_2 concentration of 12.1 µg/m^3 was measured which is well below the limit values for annual mean NO_2 concentration. Of the baseline data available, the air quality measured at Tallaght is considered most representative of existing air quality at the Proposed Development Site. Based on the available EPA monitoring data, exceedances of the NO_2 EU Limit Value (EULV) may not be a key constraint for the implementation of the Proposed Development.
- PM_{10} was measured at 68 monitoring stations in 2023, of which 20 were in Zone A. There were no exceedances of the EU legislative limit value for annual mean PM_{10} in Zone A in 2023. The highest annual mean PM_{10} concentration monitored in Zone A was 16.8 µg/m^3 at Davitt Road (with two exceedances of 50 µg/m^3). At Tallaght, which is considered representative of the existing air quality at the Proposed Development Site, an annual PM_{10} concentration of 10.4 µg/m^3 was measured. Both concentrations are well below the 2030 limit value for annual mean PM_{10} (20 µg/m^3). Based on the available EPA monitoring data, exceedances of the PM_{10} EULV may not be a key constraint for the implementation of the Proposed Development.
- $PM_{2.5}$ was measured at 63 monitoring stations in 2023, of which 20 were in Zone A. There were no exceedances of the EU legislative limit value for annual mean $PM_{2.5}$ in Zone A in 2023. The highest annual mean $PM_{2.5}$ concentration monitored in Zone A was 8.1 µg/m^3 at Amiens Street. At Tallaght, which is considered representative of the existing air quality at the Proposed Development Site, an annual an $PM_{2.5}$ concentration of 6.2 µg/m^3 was measured. Both monitored concentrations were below the 2030 limit value for annual mean $PM_{2.5}$ (10 µg/m^3). Based on the available EPA monitoring data, exceedances of the $PM_{2.5}$ EULV may not be a key constraint for the implementation of the Proposed Development.

[36] EU Directive 2008/50/EC on ambient air quality and cleaner air for Europe eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008L0050

[37] EPA 2024, *Air Quality in Ireland.* Available at: https://www.epa.ie/publications/monitoring--assessment/air/air-quality-in-ireland-2024.php

13. Climate

13.1 Introduction

This section describes the scope of work and methods that will be applied to identify and assess the potential impact climate change will have on the construction and operation of the Proposed Development, as well as the impact the Proposed Development will have on the climate.

The assessment of climate impacts can be divided into three categories as required by the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018) and in line with the ISEP's (formerly IEMA) *'Environmental Impact Assessment Guide to: Climate Change Resilience and Adaptation'* (2020):

- Lifecycle GHG Assessment: assessment of the impact of GHG emissions arising over the life of the Proposed Development on the climate;
- Climate Change Risk (CCR) Assessment: assessment of the vulnerability and risk of the Proposed Development to the projected impacts of climate change; and
- In-combination Climate Change Impact Assessment (ICCI): assessment of the resilience of receptors in the surrounding environment to the combined impact of future climate conditions and the Proposed Development.

The GHG assessment will be an estimation of GHG emissions resulting from the construction and operational phases of the Proposed Development. The CCR Assessment will consider the vulnerability of the Proposed Development to potential climate change impacts and associated risks. The ICCI assessment will consider the vulnerability of other receptors, as identified by other technical disciplines, in the surrounding environment to combined impacts of the Proposed Development and climate change impacts.

13.2 Potential Significant Effects

The EPA Guidelines (2022) suggests that the matters set out in Table 13-1 are typically addressed for the climate chapter of an EIAR.

Table 13-1: Matters to be Considered under Climate

Matter	Comments
GHG emissions	The impact of GHG emissions on the climate will be assessed in the lifecycle GHG impact assessment. Construction activities including the use of fossil fuels in plant and vehicles as well as embodied carbon in materials would result in GHG emissions being emitted. Operational requirements including maintenance, repair and replacement, energy use and water use will also be considered. An assessment of GHG emissions will therefore be undertaken to understand the impact of the Proposed Development on the climate.
Acid Rain	Acid rain is not an impact considered within the best practice approach to CCR or ICCI assessments. There are unlikely to be any significant acid rain effects associated with emissions from the Proposed Development.
Thermal Pollution	Thermal pollution, sometimes called 'thermal enrichment', is the degradation of water quality by any process that changes ambient water temperature. It is not anticipated that there would be any impact on thermal pollution as a result of the Proposed Development due to its water requirements or impacts on surface water runoff. As such, this aspect will be scoped out of the GHG and CCR assessments, though may be considered as a potential ICCI risk.

Matter	Comments
Climate change trends (Macro and Mirco)	The impact of macro climate change trends will be assessed through the CCR assessment. Microclimate change trends and impacts are not assessed as part of the best practice approach within CCR or ICCI assessments. A separate microclimate risk assessment is not considered necessary for assessment of the impacts of the Proposed Development.
Carbon Accounting/ Carbon Balance	The carbon balance will be considered as part of the GHG assessment. It is one of the seven Kyoto Protocol GHGs accounted for within the lifecycle GHG impact assessment.

13.3 Assessment Methodology

This section presents the methodology to be applied for the climate assessment to be reported in the EIAR. In line with best practice, separate approaches are followed for the assessment of GHG, CCR and ICCI. The GHG, CCR and ICCI assessments will be carried out in accordance with the following key documents:

- ISEP (formerly IEMA) (2020), *'Environmental Impact Assessment Guide to: Climate Change Resilience and Adaptation*';
- ISEP (2022), *'IEMA Climate Change Adaptation Practitioner Guidance'*;
- ISEP (2022), *'Assessing Greenhouse Gas Emissions and Evaluating their Significance'*;
- National Transport Authority (NTA) Environmental Appraisal Module; and
- European Union (EU) (2021), *'Technical guidance on the climate proofing of infrastructure in the period 2021-2027'*.

13.3.1 Lifecycle GHG Assessment

To assess the impact of the Proposed Development on the climate, a whole life GHG assessment will be undertaken which will consider the impact of the Proposed Development during the construction and operational phases.

Where data is available, a quantified GHG emissions footprint will be developed, while a qualitative assessment is proposed where data is unavailable and estimation of emissions is not possible. The outputs of the GHG assessment will be used to determine GHG emission hotspots and identify appropriate mitigation measures. Emissions from the Proposed Development will be contextualised in line with Ireland's national budgets and any other sectoral budgets available at the time of the assessment to determine the magnitude of the GHG emissions

13.3.1.1 Study Area

The GHG assessment Study Area will consider all GHG emissions arising over the lifecycle of the Proposed Development. This includes direct GHG emissions arising from activities within the Proposed Development Site boundary and indirect emissions from activities outside the site boundary (e.g., the transportation of materials to the site, embodied carbon within construction materials, and the impact on vehicle journeys within the wider road network).

The sensitive receptor for the GHG assessment is considered to be the global climate as GHGs contribute towards climate change which is a global-scale cumulative effect, but do not cause direct local or regional effects Therefore, no specific receptor locations are assessed in the GHG assessment.

UK Carbon Budgets will be used as a proxy for the global climate when considering the impact of GHG emissions from the Proposed Development.

13.3.1.2 Assessment Methodology

Emissions for the Proposed Development will be calculated where possible using project-specific information provided by the design team including, but not limited to a construction bill of quantities, details on construction workforce and activities, and operational energy and water requirements.

GHG emissions will be assessed using a calculation-based methodology as per the below equation:

Activity Data x GHG Emissions Factor = GHG Emissions Value

In line with applicable guidelines from the World Business Council for Sustainable Development (WBCSD)/ World Resources Institute (WRI) GHG Protocol initiative, the GHG emissions assessment will be reported as tonnes of carbon dioxide equivalent (tCO_{2e}) and consider the seven Kyoto Protocol gases:

- Carbon-dioxide (CO_2);
- Methane (CH_4);
- Nitrous oxide (N_2O);
- Hydrofluorocarbons (HFCs);
- Perfluorocarbons (PFCs);
- Sulphur hexafluoride (SF_6); and
- Nitrogen Trifluoride (NF_3).

These GHGs are broadly referred to in this Chapter under an encompassing definition of 'GHG emissions', with the unit of tCO_{2e} (tonnes CO_2 equivalent) or $MtCO_{2e}$ (Mega tonnes of CO_2 equivalent).

Where possible, Environmental Product Declarations (EPDs) will be reviewed to assess the latest most applicable emission factors, while others will be sourced from publicly available databases including the UK Department of Energy Security and Net Zero (DESNZ) and Inventory of Carbon and Energy (ICE) v4. Where data is not available, relevant industry standard benchmarks (London Energy Transformation Initiative (LETI), Chartered Institution of Building Service Engineers (CIBSE), Royal Institute of Chartered Surveyors (RICS)) will be utilised to estimate emissions. The assessment of GHG emissions arising from the construction of the Proposed Development will consider the following emissions sources:

- Emissions arising from land use change;
- Cut/ fill balances of earthworks including peat and area of excavation;
- Construction activities: fuel used in construction vehicles, generators, and site equipment;
- Construction machinery/ plant, the number of days/hours of operation;
- Embodied carbon in construction materials, i.e., carbon associated with the materials used for construction and their associated transport;
- Emissions associated with the disposal and transportation of waste to and from the Proposed Development Site;
- Emissions from transport of workers to/ from the Proposed Development;
- Emissions from water used; and
- The variation in carbon sequestration as a result of land use change.

The assessment of GHG emissions arising from the operation and maintenance of the Proposed Development will consider emissions sources such as:

- Embodied carbon in materials used for the maintenance of the Proposed Development;
- Grid electricity used in the operation of the Proposed Development;
- Emissions relating to water provision and treatment;
- Emissions from plant/ vehicles used during the maintenance of the Proposed Development;
- Emissions arising from resident use of the transport network;
- Emissions arising from residential waste; and

- Replacement of assets, vehicle emissions and waste emissions during operation of the Proposed Development.

13.3.1.3 Significance

The significance of the effects of the Proposed Development on the climate will be determined in line with ISEP's (formerly IEMA) '*Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance Assessment Methodology and Significance Criteria'* (2022), which considers how a project aligns with the Ireland's net zero targets, how it contributes and aligns with net zero policy, and the level to which mitigation is integrated.

When evaluating the scale and significance of the GHG emissions, all new GHG emissions contribute to a negative environmental impact; however, some projects will replace existing development or baseline activity that has a higher GHG profile. The scale of a project's emissions should therefore be based on its net impact over its lifetime, which may be beneficial, adverse or negligible. The crux of scale is therefore not whether a project emits GHG emissions, nor even the magnitude of GHG emissions alone, but whether it contributes to reducing GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050.

The different significance levels will be applied as per the latest version of the ISEP (formerly IEMA) guidance which emphasises that *"…a project that follows a 'business-as-usual' or 'do minimum' approach and is not compatible with the UK's net zero trajectory, or accepted aligned practice or area-based transition targets, results in a significant adverse effect. It is down to the practitioner to differentiate between the 'level' of significant adverse effects, e.g., 'moderate' or 'major' adverse effects"*. Major or moderate adverse effects and beneficial effects are considered to be Significant. Minor adverse and negligible effects are not considered to be Significant.

13.3.1.4 Baseline

The GHG assessment baseline will consider an alternative scenario if the Proposed Development were not to go ahead, in line with ISEP guidance. As the Proposed Development's location is considered a 'green field' site, it is assumed that there are currently no ongoing activities that would generate emissions, and the baseline GHG activity with the site boundary is considered to be zero. This is a conservative worst-case approach, where all emissions resulting from the Proposed Development are considered as additional.

13.3.2 Climate Change Risk Assessment

The CCR assessment will identify the potential climate change impacts that may pose a risk to the Proposed Development. The CCR assessment will assess the sensitivity and exposure of assets and human receptors associated with the Proposed Development to climate change during construction and operation.

13.3.2.1 Study Area

The study area for the CCR assessment will be the area within the site boundary of the Proposed Development, with the receptors including all components of the Proposed Development itself and any associated users.

13.3.2.2 Assessment Methodology

While undertaking the CCR assessment, qualitative and quantitative climate data will be gathered at a national and local level. Projections for future Irish climate conditions will be sourced from the Met Éireann TRANSLATE project, which provides climate projections at a national level for a variety of climate variables. Information from the Met Éireann TRANSLATE project will be supplemented by published scientific articles, historical reports of extreme weather, and OPW data where relevant. Climate projections are available for 30-year time periods up to 2100, for the representative concentration pathway (RCP)2.6, RCP4.5 and RCP8.5 climate change scenarios. Suitable RCPs and time periods will be chosen at a later stage.

Based on the findings from the qualitative and quantitative climate change data, climate risks that may impact the Proposed Development will be identified and evaluated.

The assets considered as part of the assessment will include all elements of the Proposed Development within the Site boundary. This includes, but is not limited to, pavements, drainage, earthworks, landscaping, signs and fences and structures, in addition to the human receptors, e.g. construction workers, maintenance workers and end users.

Wider disciplines will be engaged with to determine if any existing embedded measures or planned controls to mitigate the impacts of climate change have been implemented within the design of the Proposed Development, e.g., drainage measures to combat flooding. Taking these embedded measures into consideration, an initial likelihood and consequence will be assigned to each climate risk. The combination of likelihood and consequence will be used to inform the significance of each individual risk. Where significant risks are identified, further adaptation measures will be recommended to increase the Proposed Development's resilience to the impacts of climate change. An assessment of residual risk will then consider these additional recommended measures.

The climate hazards considered in the CCR assessment will include, but are not limited to, flooding (coastal, pluvial, fluvial), extreme heat, extreme cold, snow and ice, wildlife, drought, storm events and landslides.

13.3.2.3 Significance

Significance of identified climate risks will be determined as a function of the likelihood and consequence of a climate impact occurrence. The significance matrix has been adapted from the *'Technical guidance on the climate proofing of infrastructure in the period 2021-2027'* and is displayed in Table 13-2. Risks that are rated as 'high' or 'extreme' are considered to be Significant.

Table 13-2: Matters to be Considered under Climate

	Consequence				
Likelihood	**Insignificant**	**Minor**	**Moderate**	**Major**	**Catastrophic**
Rare	Low	Low	Medium	High	Extreme
Unlikely	Low	Low	Medium	High	Extreme
Moderate	Low	Medium	High	Extreme	Extreme
Likely	Medium	High	High	Extreme	Extreme
Almost certain	High	High	Extreme	Extreme	Extreme

13.3.2.4 Baseline

The baseline for the CCR assessment describes the average Irish climate for the baseline time period 1976-2005. This baseline period is utilised as it is consistent with the reference data utilised in the Met Éireann TRANSLATE climate projections. These data will be sourced from the publicly available Climate Ireland Data Explorer.

13.3.3 In-Combination Climate Change Impact Assessment

The methodology and climate data used for the ICCI assessment will be similar to that on the CCR assessment. The difference in approach is that the risks statements and receptors are already defined by other technical topic leads within their chapters. The ICCI will then assess whether the combined impact of climate change and the Proposed Development will increase the severity (and resulting significance) of any particular risk.

14. Noise and Vibration

14.1 Introduction

This chapter sets out the scope and methodology for the noise and vibration assessment of the Proposed Development. The purpose of the assessment is to identify and characterise any relevant noise sensitive locations (NSLs), to consider the nature and scale of potential noise and vibration impacts arising from the Proposed Development, and to assess the significance of any likely effects.

Note that the scope of this chapter considers noise and vibration effects on human receptors and excludes the assessment of noise and vibration on heritage or ecological receptors. In-combination effects on heritage or ecological receptors due to the introduction of the Proposed Development are considered in Chapter 9: Biodiversity and Chapter 15: Cultural Heritage of this EIA Scoping Report.

14.2 Potential Significant Effects

Potential noise and vibration impacts which could arise from the Proposed Development are listed in Table 14-1.

Table 14-1: Matters to be Considered under Noise and Vibration

Matter	Comments
Construction noise and vibration	Potential temporary to short-term effects due to increased noise and vibration levels from construction. Likely to occur during daytime hours.
Road traffic noise during the construction	Potential temporary to short-term effects due to increased traffic flow associated with the construction.
Operational noise from new plant	Potential permanent adverse effects due to noise emissions from the Proposed Development, which may occur during daytime and night-time.
Road traffic noise during the operation phase	Potential permanent adverse effects due to increased traffic flows generated by the operation of the Proposed Development.
Site suitability for residential development	Potential for significant effects to be experienced by the occupants of a proposed sensitive development.

14.3 Assessment Methodology

The Study Area for on-site construction and operational noise and vibration is defined as an area extending from the Proposed Development Site up to and including the nearest NSLs. If significant effects are predicted at these NSLs, the Study Area will be expanded to include all locations where such effects are perceptible.

The Study Area for off-site traffic noise is the same as identified in the transport assessment detailed in Chapter 18: Material Assets (Transport).

Site suitability for a residential development will be determined using a 3-dimensional noise model and noise contour maps of the site using noise modelling software. The model will be used to establish ambient noise levels across the undeveloped site using road traffic data which will be validated using the baseline survey results.

Site suitability for a residential development will be assessed using the guidance contained within the *'Professional Practice Guidance on Planning and Noise – New Residential Development'* (ProPG) published by a Working Group consisting of representatives of the Association of Noise Consultants (ANC), the Institute of Acoustics (IOA) and the Chartered Institute of Environmental Health (CIEH) in 2017.

Guidance documents relevant to the noise and vibration assessment include:

- Environmental Protection Agency Act (1992) (as amended);
- Environmental Protection Agency Act, 1992 (Noise) Regulations (1994);
- Protection of the Environment Act (2003) (as amended);
- British Standards Institution (BSI) (2014), *'British Standard BS 5228-1:2009+A1:2014 Code of Practice for noise and vibration control on construction and open sites – Part 1: Noise'* (BS 5228-1);
- BSI (2014), *'British Standard BS 5228-2:2009+A1:2014 Code of Practice for noise and vibration control on construction and open sites – Part 2: Vibration'* (BS 5228-2);
- BSI (2019), *'British Standard BS 4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound'* (BS 4142);
- BSI (2014), *'British Standard BS 8233:2014 Guidance on sound insulation and noise reduction for buildings'* (BS 8233);
- International Organization for Standardization (ISO) (2024), *'ISO 9613-2 Acoustics – Attenuation of sound during propagation outdoors – Part 2: Engineering method for the prediction of sound pressure levels outdoors'* (ISO 9613);
- Department of Transport and the Welsh Office (1988), *'Calculation of Road Traffic Noise'* (CRTN);
- ISEP (2014), *'Guidelines for Environmental Noise Impact Assessment'*;
- Highways England (2020), *'Design Manual for Road and Bridges LA 111 Noise and Vibration'* (hereafter referred to as the 'LA 111');
- IOA, ANC and CIEH (2017), *'Professional Practice Guidance on Planning and Noise – New Residential Development'* (ProPG);
- EPA Guidelines (2022);
- EPA Office of Environmental Enforcement (OEE) (2016), *'Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities'* (hereafter referred to as 'NG4');
- TII (formerly NRA) (2004*), 'Guidelines for the Treatment of Noise and Vibration in National Road Schemes'* (hereafter referred to as the 'NRA 2004 Guidelines);
- TII (formerly NRA), *'Good Practice Guidance for the Treatment of Noise during the Planning of National Road Scheme'* (2014);
- Sport England (2015), *'Artificial Grass Pitch (AGP) Acoustics – Planning Implications, New Guidance for 2015'* (hereafter referred to as 'AGP 2015').

The description of potential effects will follow the guidance set out in the EPA Guidelines (2022) which aim to facilitate the implementation of Directive 2011/92/EU as amended by EU Directive 2014/52/EU in Ireland, which covers the assessment and description of environmental impacts as described in Chapter 6: EIA Scoping.

14.3.1 Establishing the Baseline

To identify the NSLs which may be affected by the Proposed Development and to identify suitable locations at which baseline monitoring has been carried out, a desk-based study has been conducted.

A baseline sound survey has been undertaken, including measurements of existing sound levels at the locations in Table 14-2.

Table 14-2: Proposed Sound Monitoring Locations

ID	Approximate Coordinates	Representative of
ML1	53°16′50″N, 006°27′43″W	Existing residential properties at Coolamber Drive (north of the Proposed Development)
ML2	53°16′52″N, 006°27′33″W	Existing residential properties at Beechwood Lawns (north of the Proposed Development)
ML3	53°16′56″N, 006°27′17″W	Existing residential properties at Springbank Saggart (east of the Proposed Development)
ML4	53°16′51″N, 006°27′16″W	Existing factory at Millrace Park (east of the Proposed Development)
ML5	53°16′41″N, 006°27′30″W	Existing sound levels on the southern boundary of the Rathcoole Park site.
ML6	53°16′47″N, 006°27′40″W	Existing sound levels on the western boundary of the Rathcoole Park site.

The land use in the vicinity of the Proposed Development Site is primarily recreational (i.e. Rathcoole Park) and there are also clusters of residential properties located adjacent to the Proposed Development Site boundary. The main sources of sound in the Study Area identified with aerial mapping through desktop analysis and site survey are traffic on the local road network and an existing factory (Eurometals Dublin HQ) to the eastern side of the boundary.

Baseline sound monitoring has been undertaken by National Vibration Monitoring Ltd (NVM Limited) on behalf of AECOM on the 26 and 27 June 2025 at selected locations to define representative baseline data at NSLs around the Proposed Development Site. Six monitoring locations have been selected with the locations illustrated in Plate 14.1.

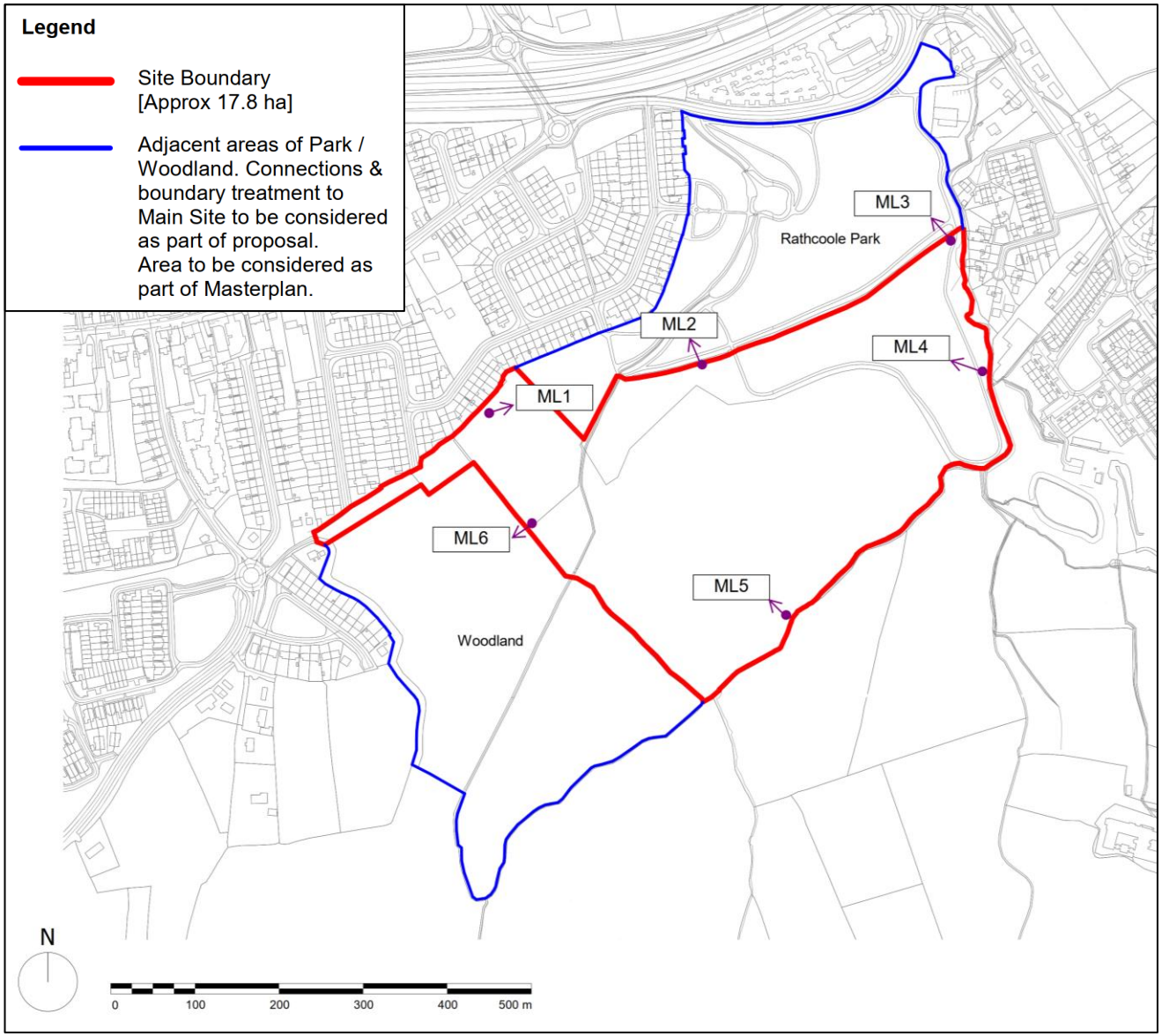


Plate 14.1: Monitoring Locations (Source: extract from SDCC Architects Department's Drawing no. 2306-SDCC-ZZ-ZZ-DR-A-SK001)

14.3.2 Assessment Methodology for Construction Works

There is no published statutory Irish guidance relating to the maximum permissible noise and vibration level that may be generated during the construction phase of a project. The activities with the greatest potential to cause noise would occur during the early stages of the Proposed Development. It is anticipated that the majority of construction activities would occur within the recommended hours of construction set out in BS 5228-1 (07:00 to 19:00 Mondays to Fridays, 07:00 to 13:00 on Saturdays). Occasional work outside these hours may be required, in which case advice on construction hours will be sought from SDCC.

If works that may result in significant effects (such as night-time works or any construction which may be audible at NSLs) are anticipated to be required, a detailed construction noise and vibration assessment will be undertaken using the data, procedures, and criteria in relevant guidance including BS 5228-1 and BS 5228-2.

14.3.3 Assessment Methodology for Construction Road Traffic Noise

The construction of the Proposed Development may have an impact on traffic flows on local roads around the site. The change in road traffic noise levels during the construction phase at a selection of relevant NSLs will be predicted using the standard methodology outlined in CRTN. The predictions will be based on baseline and with construction traffic data.

The significance of the effects of road traffic noise levels will be assessed based on a range of relevant guidance including the NRA 2004 Guidelines.

14.3.4 Assessment Methodology for Operational Noise

Sound sources associated with the operation of the Proposed Development are expected to comprise some fixed plant which is likely to be required as part of the development.

The significance of the noise impact of fixed plant will be assessed using the method given in BS 4142. These standards details a method for rating the acceptability of increases in existing noise levels at NSLs affected by noise from fixed plant at proposed developments. Where appropriate, the noise assessment methods will be supplemented with the guidance contained in NG4.

At the EIA stage, if details of fixed plant are not available, a recommendation of maximum noise levels from fixed plant based on measured background noise levels will be made.

The baseline sound level data measured as part of the EIAR will be used to determine representative background sound levels at each NSL. BS4142 is interpreted differently by different Local Authorities; therefore, the assessment methodology will be discussed with the SDCC Environmental Health Department to determine any local requirements.

14.3.5 Assessment Methodology for Operational Road Traffic Noise

The Proposed Development may have an impact on traffic flows on local roads around the Site. Changes in road traffic noise levels during the operational phase at a selection of relevant NSLs will be predicted using the standard methodology outlined in the CRTN. The predictions will be based on the existing baseline and with development traffic data. The significance of the effects of road traffic noise levels will be assessed based on a range of relevant guidance including LA 111 and the NRA 2004 Guidelines.

14.3.6 Assessment Methodology – Site Suitability for Residential Development

The suitability of the Proposed Development Site for residential use will be assessed with reference to the ProPG. This provides a criterion for internal and external sound levels at new residential developments and provides advice on the incorporation of good acoustic design into a proposed residential development.

The potential for noise associated with the sport pitches will be assessed with relevant guidance including AGP 2015 to assess the significance of effects on the Proposed Development.

BS 8233 provides criteria for the assessment of internal noise levels for various uses, including dwellings and commercial properties.

14.4 Scope for Mitigation

14.4.1 Construction Noise

In order to mitigate potential noise impacts, and as part of industry good practice, 'Best Practicable Means' would be adopted during the construction phase of the Proposed Development in order to mitigate against the construction noise and vibration impacts at any of the NSLs.

14.4.2 Construction Road Traffic Noise

Options available for mitigation of traffic noise are limited but may include the rerouting of the vehicles or the use of temporary noise barriers. It is unlikely that noise barriers would significantly mitigate the sound of the vehicles due to the access requirements for the properties. Depending on the conclusions of the assessment, alternative routes may be considered if they would result in fewer affected NSLs. It is not anticipated that such measures would be required for the Proposed Development.

14.4.3 Operational Noise

Noise mitigation advice in terms of the layout of the development and orientation of the buildings will be provided to feed into the development of the proposed site layout. In addition, advice regarding potential noise mitigation measures to be incorporated into the design of the Proposed Development will be provided where necessary (e.g., noise barriers or sound insulation of residential properties). Details of fixed plant are unknown at this time; however, mitigation may include micro-siting of the plant to take advantage of potential acoustic screening by other compound structures or landform in the locality, the use of inherently quieter plant and introduction of plant enclosures or noise barriers to reduce the noise propagation towards the affected NSLs.

14.4.4 Operational Road Traffic Noise

Options available for the mitigation of traffic noise are limited but may include the use of noise barriers. Depending on the conclusions of the assessment, noise barriers may be incorporated into the design; however, it is not anticipated such measures would be required for the Proposed Development.

14.4.5 Site Suitability for a Residential Development

Once the site layout and design of the properties have been formalised, calculations will be required to determine the exact mitigation requirements. Mitigation options may include enhanced glazing, acoustic ventilation and sound insulation to achieve the internal noise levels recommended in ProPG. In addition, the use of appropriate site layout and building orientation can achieve reduced noise exposure contributing to a robust acoustic design.

15. Cultural Heritage

15.1 Introduction

This chapter describes the scope of works and methods that will be applied to identify and assess potential impacts on cultural heritage associated with the Proposed Development.

15.2 Potential Significant Effects

The EPA Guidelines (2022) suggests that the matters set out in Table 15-1 are typically addressed in the cultural heritage chapter of an EIAR.

Table 15-1: Matters to be Considered under Cultural Heritage

Matter	Comments
Archaeology	Scoped in
Architectural heritage	Scoped in
Historic planned landscapes	Scoped in
Folklore and history (intangible heritage)	Scoped in

15.3 Assessment Methodology

15.3.1 Study Area

A Study Area extends 500 m from the Proposed Development Site boundary has been selected for the identification of known and potential cultural heritage assets. This was used to provide baseline information for the assessment (archaeological, architectural heritage and designed landscapes). A wider Study Area will be used to identify designated assets which may have their setting affected at EIAR stage. The Study Area for the assessment on setting will be limited to 1 km. Some assets beyond this distance may also be considered where elements of their setting extend closer to the Proposed Development.

15.3.2 Legislation, Policies, and Guidelines

The assessment will be based on relevant legislation, policies, guidelines and publicly available information including, but not limited to:

- National Monuments Acts 1930 to 2014 (as amended);
- The Heritage Act (1995);
- Planning and Development Act (2024);
- Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023;
- Planning and Development Act (2024);
- Department of Arts, Heritage, Gaeltacht, and Islands, (1999a), Framework and Principles for the Protection of the Archaeological Heritage;
- Archaeology and Development Guidelines for Good Practice for Developers prepared by ICOMOS for the Heritage Council (2000);
- Cork County Council Heritage Unit (2007) Guidance Notes for the Appraisal of Historic Gardens, Demesnes, Estates and their Settings;

- EPA (2002), *'Guidelines on the Information to be Contained in Environmental Impact Statements'*;
- EPA (2003), *'Advice Notes on Current Practice (in preparation of Environmental Impact Statements)'*;
- EPA (2015), *'Advice Notes for Preparing Environmental Impact Statements'*; and
- TII (2024), *'Guidelines for Cultural Heritage Impact Assessment of TII National Road and Greenway Projects'*.

15.3.3 Proposed Methodology and Assessment Scope

The assessment will be undertaken in accordance with all relevant legislation, policies and guidelines as outlined in Section 15.3.2. Publicly available information will be reviewed in order to identify archaeological and cultural resources, including but not limited to:

- Recorded Monuments (including National Monuments under State Care and Preservation Order) (RMP);
- SDCC Record of Protected Structures (RPS);
- Architectural Conservation Areas (ACA);
- Buildings and landscapes recorded on the National Inventory of Architectural Heritage (NIAH), which provides the basis for recommending the inclusion of particular structures in the RPS;
- Historical Cartographic sources; and
- Aerial photographic evidence.

Baseline data compiled as part of the noise and transport assessment will also be used to inform the assessment of the setting of heritage assists where applicable.

The impact assessment will involve:

- Assigning the receptor sensitivity;
- Identifying and characterising the magnitude and significance of any potential impacts;
- Incorporating measures to mitigate and avoid, where possible, impacts during the construction and operational phases; and,
- Assessing the significance of any residual effects after mitigation.

15.3.3.1 Impact Assessment Methodology

A heritage asset is defined as a monument, building, group of buildings or sites, which are the combined works of nature and man constituting the historic or built environment (World Heritage Convention, 1972). A heritage asset's value is not solely expressed through any designated status but can also be exhibited through a series of values or special interests. These include architectural, historical, artistic, archaeological, cultural, scientific, social or technical interests. In order to assess the potential effects of a development upon a heritage asset, it must first be assigned a level of importance. This can be done in accordance with a four-point scale (refer to Table 15-2). This table has been derived from the following guidance, with reference to relevant legislation and policy, and using professional judgement:

- Department of Arts, Heritage and the Gaeltacht (2013), *'NIAH Handbook'*;
- EPA Guidelines;
- TII (2024), *'Guidelines for Cultural Heritage Impact Assessment of TII National Road and Greenway Projects'* (particularly Information Box 10: Describing Significance of Effect).

Table 15-2: Factors Determining the Importance of Heritage Assets

Importance	Criteria
International/ Very High	World Heritage Sites. Protected Structures deemed to be of very high importance using legislation, EPA Guidelines, NIAH rating criteria and professional judgement. Structures and Designed Landscapes recorded by the NIAH. Building and Garden Survey with an International Rating.
National/ High	National Monuments. Recorded Monuments deemed to be of high importance using legislation, EPA Guidelines, NRA Significance Criteria and professional judgement. Protected Structures deemed to be of high importance using legislation, EPA Guidelines, NIAH rating criteria and professional judgement. Structures recorded by the NIAH Building Survey with a National Rating or deemed to be of high importance using legislation, EPA Guidelines, NIAH rating criteria and professional judgement. Designed landscapes recorded by the NIAH Garden survey with main features substantially present and deemed to be of high importance using legislation, EPA Guidelines, NIAH rating criteria and professional judgement. ACAs containing structures and/or designed landscapes of predominantly national importance.
Local/ Low	Structures recorded by the NIAH Building Survey with a Local or Record Only Rating or deemed to be of low importance using legislation, EPA Guidelines, NIAH rating criteria and professional judgement. Designed landscapes recorded by the NIAH garden survey with only peripheral features surviving, and deemed to be of low importance using legislation, EPA Guidelines, NIAH rating criteria and professional judgement. Townland Boundary Features. Undesignated architectural heritage assets which are deemed to be of low importance using legislation, EPA Guidelines, NIAH rating criteria and professional judgement. Undesignated archaeological features which are particularly common or in poor condition, and deemed to be of low importance using legislation, EPA Guidelines, NRA Significance Criteria and professional judgement. Townland Boundary Features. Parks/ Gardens/ Demesnes recorded by the NIAH Garden Survey which have poor historic legibility. Undesignated architectural heritage assets. Undesignated archaeological features which are particularly common or in poor condition.

15.3.3.2 Criteria for Assessing the Magnitude of Impact

Having identified the importance of the heritage asset, the magnitude of the impact from the Proposed Development is assessed. Potential impacts are defined as a change resulting from the Proposed Development which affects a heritage asset. Impacts may arise during construction or operation and can be temporary or permanent. The level and degree of impact takes into account mitigation measures which have been embedded within the Proposed Development as part of the design development process. The assessment of the magnitude of impact uses guidance contained within the EPA Guidelines which categorises impacts in terms of quality, extent, context, probability, significance and duration (refer to Section 6.6.2 of this report). The impact upon the setting of an asset is also taken into account.

The quality of an impact can be reported on a three-point scale:

- **Positive** – a change which improves the quality or the special interests of the asset, for example the removal of an element of the surrounding setting which detracts from the appreciation of an asset;
- **Neutral** – a change which does not affect the quality or special interests of the asset; and
- **Negative/adverse** – a change which reduces the quality or special interest of the asset, for example the removal of a below-ground archaeological deposit through construction.

The significance of an impact can be judged on a seven-point scale, as outlined in Section 6.6.2 of this report.

The extent and context of impacts can be assessed by the following two descriptions:

- **Extent** – the description of the size of the area and number of assets affected by the impact; and
- **Context** – the description whether the extent, duration, or frequency will conform or contrast with established baseline conditions relating to an asset.

The probability of impacts can be described as likely and unlikely impacts (refer to Section 6.6.2 of this report).

The duration of an impact can be defined by the criteria outlined in Section 6.6.2 of this report.

Impacts can also be identified as permanent, i.e., an impact lasting over 60 years and reversible impact, i.e. can be reversed through remediation or restoration. Another consideration is the frequency of the impact, i.e. how often will the impact occur; once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually.

Taking these criteria into consideration, the magnitude of impact can be assigned by reference to a four-point scale (refer to Table 15-3).

Table 15-3: Factors Determining the Magnitude of Impact

Magnitude	Criteria
Very High	Change such that the special interests or qualities of the asset are totally altered or destroyed. Comprehensive change to setting affecting importance of asset, resulting in a serious loss in our ability to understand and appreciate the asset
High	Change such that the special interests or qualities of the asset are affected. Noticeably different change to setting affecting importance, resulting in erosion in our ability to understand and appreciate the asset
Medium	Change such that the special interests or qualities of the asset are slightly affected. Slight change to setting affecting significance resulting in a change in our ability to understand and appreciate the asset
Low	Minimal change to the asset that has little effect on its special interests or qualities. Does not affect our ability to understand and appreciate the asset

The level of impact takes into account mitigation measures, which have been embedded within the proposed development as part of the design development process.

15.3.3.3 Significance of Effect

Once the magnitude of the impact has been identified, this can be cross-referenced with the importance of the asset to derive the overall significance of the effect, or the consequence of the change resulting from the proposed development (refer to Plate 6.1). Effects can be neutral, adverse of beneficial.

Moderate to profound effects will be considered as significant. Once a significant effect has been identified, additional mitigation may be used to offset or compensate for any significant adverse effects, or to enhance positive effects. Reassessing the significance of the effect after applying additional mitigation allows the level of residual effect to be assessed.

15.4 Baseline

Baseline data has been gathered to inform the scoping report and identify heritage assets that may require detailed assessment. The baseline data has identified all archaeological assets, architectural heritage and designed landscapes such as gardens and demesnes, within a defined Study Area of 500 m for undesignated assets and designated heritage assets. The baseline also considers the setting of these heritage assets which can be described as the surroundings in which the heritage assets are experienced and appreciated.

The main objectives of the baseline assessment are:

- To identify cultural heritage assets within the Proposed Development Site and Study Area;
- To assess the baseline information for the potential for currently unrecorded heritage assets to survive within the Proposed Development Site;
- To assess the importance of the cultural heritage assets;
- To assess the potential impact of the Proposed Development on cultural heritage assets within the Proposed Development Site and Study Area and their setting;
- To consider whether field survey/ evaluation will be required to verify the presence/ absence of cultural heritage assets within the Proposed Development Site to enhance the baseline; and
- To inform an archaeological mitigation strategy, if required.

The preparation of the baseline was informed by material gathered and collated from various sources, including:

- National Monuments Service (NMS) and Archaeological Survey of Ireland (ASI);
- NIAH; and
- SDCC RPS; Online sources were also consulted, including Ordnance Survey Ireland (OSi) historic mapping and the Heritage Council online mapping.

15.4.1 Designated Heritage Assets

15.4.1.1 Protected Structures

There are a total of 14 no. protected structures listed on the CDP, of which 11 are located within Rathcoole (refer to Plate 15.1). These five include the Rathcoole Church of Ireland church, graveyard and walled enclosure (RPS 310); the Rathcoole Garda Station (RPS 311); House (RPS 312); the Rathcoole Health Centre (RPS 316); House (RPS 305); Rathcoole Glebe House (RPS 313); Rathcoole Library (RPS 319); Hillview (RPS 318); the Rathcoole Inn (RPS 326); House (RPS 317); and House (RPS 323).

The remaining three Protected Structures are located in Saggart and represent the area's prominent industrial heritage. These include the Former Paper Mill (RPS 330) and associated Mill Pond and Tail Race (RPS 332). The final Protected Structure is the Gates and Mill Wall (RPS 314) that formed the entrance to the former paper mill.

15.4.1.2 Architectural Conservation Areas

The Proposed Development is not located within any ACAs; however, the Rathcoole Village ACA (ACA001) is located within the 500 m Study Area (refer to Plate 15.1). Rathcoole Village is designated as an ACA due to the concentration of historic buildings dating to the 18th and 19th century, and due to the village retaining its urban focus despite modern development especially with the drive to expand the village during the 20th century.

15.4.2 Undesignated Heritage Assets

15.4.2.1 Archaeological Assets

There is a total of 10 archaeological assets located within the 500 m Study Area, with seven being located within the historic core of Rathcoole, two being located on the outskirts of Rathcoole, and one being located within Saggart (refer to Plate 15.1).

The following seven archaeological assets were all located within the historic core of Rathcoole, including the Redundant Record (DU021-030006) which was recorded on the 1998 RMP as a possible dwelling; however, there is no strong evidence that this site was present and has been removed from the RMP.

The Graveslab (DU021-030005) was mentioned as being located within Rathcoole Church; however, the exact location of this asset is unknown.

Rathcoole Church of Ireland Church (DU021-030001) is also a protected structure and is discussed in Section 15.4.1.1.

The Holed Stone (DU021-030009) is embedded in a sloping ground surface to the southeast of Rathcoole Church of Ireland Church (DU021-030001). It consists of a circular slab, approximately 10 cm deep, 0.73 m high and 0.62 m wide with a sub-circular opening in the centre.

The Cross Slab (DU021-030003) is decorated with a ringed-cross that was later converted into a free-standing cross. It was first identified in 1780 and was a former graves lab that was cut down to form the free-standing cross and is believed to date to the 9th century.

Rathcoole Graveyard (DU021-030002) is a walled graveyard that encloses the medieval parish church of Rathcoole. The graveyard contains a number of grave markers, including the Cross Slab (DU021-030003) and Holed Stone (DU021-030009), as well as a number of 18th and 19th century vaults, table tombs and grave markers.

Rathcoole (DU021-030008) was established as a borough by the Archbishops of Dublin as early as the 13th century. The historic core of the settlement is linear and consists of one main street with a triangular marketplace located at the western extent of the street.

Two archaeological assets located within the 500 m Study Area surrounding the Proposed Development are located within the outskirts of Rathcoole. These include the Redundant Record (DU021-033), which was noted in 1943 as a curving depression on the common lands south of Rathcoole which were close to a ‘winding passage’; however, there are no above surface indications of any man-made features located at the site.

The Font (DU021-031) is a hemispherical piece of granite that has a hollowed upper surface and narrows to a point along the inner base. According to local tradition it was used as a holy water font that was attached to a local church.

The final archaeological asset located within the 500 m Study Area surrounding the Proposed Development Site is the Tower House (DU021-034010). The asset was one of three castles that were once located within Saggart and mentioned in the Civil Survey of Dublin, undertaken between 1654 and 1656. No surface trace of the castle remains, having been demolished in 1972 and a modern house now situated on the site.

15.4.2.2 National Inventory of Architectural Heritage

There is a total of 20 structures recorded on the NIAH buildings database located within the 500 m Study Area surrounding the Proposed Development Site (refer to Plate 15.1). Nine of these are also Protected Structures, including Rathcoole Church (NIAH 11213025), Rathcoole Garda Station (NIAH 11213029), Rathcoole House (NIAH 11213027), Rathcoole Health Centre (NIAH 11213024), Glebe House (NIAH 11213013), Rathcoole Library (NIAH 11213015), House (NIAH 11213018), Hillview (NIAH 11213016) and Rathcoole Inn (NIAH 11213017).

The remaining NIAH structures include the Mausoleum (NIAH 11213026) at Rathcoole Church, the Vent Pipe (NIAH 11213028), five Houses (NIAH 11213022, 11213021, 11213020, 11213019, 11213023), two Post Boxes (NIAH 11213014, 11213031), the Water Pump (NIAH 11213030) and Dam (NIAH 11213039).

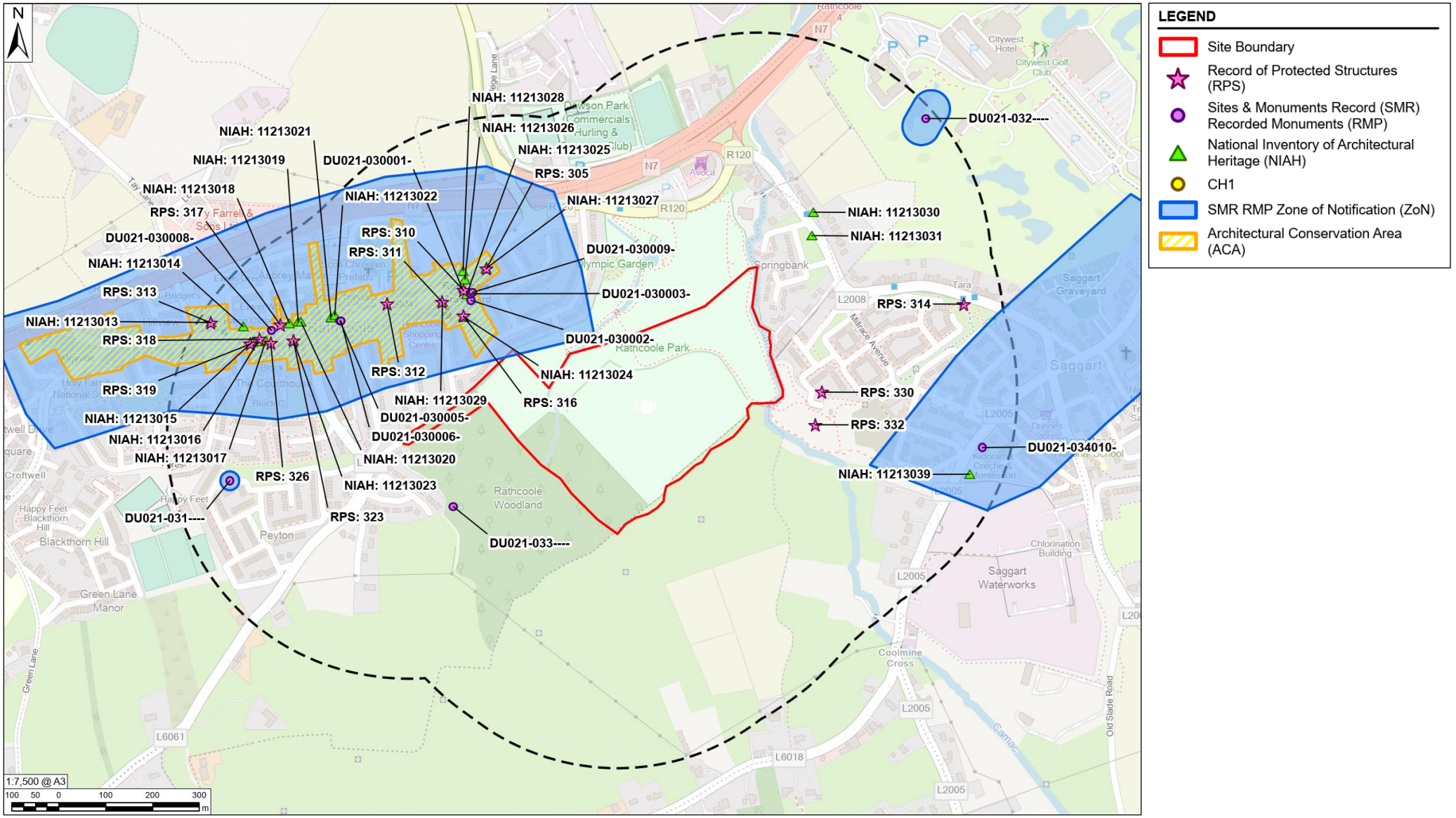


Plate 15.1: Cultural Heritage Assets within the Study Area of the Proposed Development

16. Material Assets (Built Services)

16.1 Introduction

The EIA Directive states that *"the environmental impact assessment shall identify, describe and assess in an appropriate manner, in the light of each individual case the direct and indirect significant effects of a project on the following factors …material assets..."*. The EPA Guidelines (2022) explain that the term material assets can be taken to refer to: built services (as detailed in this chapter), waste management (refer to Chapter 17: Material Assets (Waste)), and roads and traffic (refer to Chapter 18: Material Assets (Transport)).

16.2 Potential Significant Effects

The EPA Guidelines (2022) do not specify the matters to be investigated in an EIAR in relation to material assets (built services); however, this EIAR chapter will consider the likely environmental impacts upon built services/ infrastructure resulting from the construction and operation of the Proposed Development. These includes effects from such matters as:

- Energy infrastructure;
- Water infrastructure;
- Gas infrastructure;
- Electricity, gas and water supply and usage;
- Drainage;
- Public lighting; and
- Telecommunications.

16.3 Assessment Methodology

The potential impacts will be assessed as per the methodology for the assessment of significant effects-evaluation criteria in the EPA Guidelines (2022).

The impact of construction on the existing built services will be examined and, where any significant effects on utilities are identified, this will be highlighted. The baseline and the assessment of the material assets (built services) will be informed by the following sources of information:

- Utility information detailing the locations of underground services within and in the vicinity of the Proposed Development to be requested from service providers;
- EPA (2025), *'EPA Maps'*[38];
- OpenStreetMap (OSM) Foundation (2025), *'Open Infrastructure Map'*[39];
- OSi (2025), *'Discovery Series Maps'*[40]; and
- SDCC and ACP's Planning Portals.

[38] Available at: https://gis.epa.ie/EPAMaps/ (Last accessed: September 2025)
[39] Available at: https://openinframap.org/ (Last accessed: September 2025)
[40] Available at: https://experience.arcgis.com/experience/ca514d04c83c453e9469d0263d30a72c (Last accessed: September 2025)

It is assumed that the appointed construction Contractor will also confirm the exact location of services via ground investigation/ surveys.

16.4 Baseline

There is limited information available at the time of writing this report regarding the presence of utility services on-site. According to the Open Infrastructure Map, there are no major gas, electrical, or water services infrastructure within the Proposed Development Site boundary; however, this information will need to be confirmed at a later stage of development by utility providers. Planning documents associated with the recently approved school (SDCC Pl. Ref. SD23A/0336 / ACP Pl. Ref. 321696), which is located within the Proposed Development Site boundary (to the northwest), provide the following information regarding existing utility services in proximity to this application's site:

- 225 mm diameter foul sewer located along Coolamber Road, to the northwest of this site;
- Surface water sewer located in Coolamber Drive, to the northwest of this site;
- 600mm diameter culvert on the northwest of this site;
- 100mm diameter uPVC watermain located along Coolamber Road, to the northwest of the subject site;
- Overhead 400 V ESB Networks powerlines outside of this site's redline boundary (to the north);
- Local Eir infrastructure which appears to be in the footpath just outside of boundary of this site (to the north);
- The nearest Virgin Media infrastructure is approximately 100 m to the north of this site; and
- Gas Networks Ireland Medium Pressure Distribution Pipe running along Coolamber Drive, to the west of the site.

Other infrastructure in proximity to the site includes:

- 110 kV powerlines approximately 100 m south of the Proposed Development which run in a generally parallel direction to the southern boundary of the site;
- A pumping station located within Rathcoole Park, approximately 180 m north of the site boundary; and
- Low voltage powerlines along Coolamber Road and Coolamber Drive, which also run parallel to the northwestern boundary of the site where the access road is proposed.

17. Material Assets (Waste)

17.1 Introduction

This chapter describes the scope of works and methods that will be applied to consider the generation and management of waste during the construction and operation of the Proposed Development.

For the purpose of this EIA Scoping Report, waste is defined as per Article 3(1) of the European Waste Framework Directive (Directive 2008/98/EC) as *"any substance or object which the holder discards or intends or is required to discard"*.

17.2 Potential Significant Effects

The EPA's *'Guidelines on the information to be contained in EIAR'* (2022) do not specify matters to be investigated in an EIAR in relation to material assets (waste), as this topic is listed within the overall material assets factor.

The criteria used for assessing the magnitude of impacts and significance of effects for waste combine the guidance provided in the EPA Guidelines (2022) on generalised degrees of effect significance that are commonly used in EIA and the guidance on magnitude and significance in the ISEP's *'Guide to Materials and Waste in Environmental Impact Assessment'* (2020). The full ISEP Guidance cannot be applied in Ireland as total landfill void capacity data is not publicly available; therefore, estimated waste generation is compared to national arisings.

A project would have to meet the following in order for the effect to be considered Significant:

- Achieves less than 60% overall material recovery/ recycling (by weight) of non-hazardous construction and demolition (C&D) waste, excluding naturally occurring material defined in category 17 05 04 in the List of Wastes; and
- Project waste arisings are more than 5% of national waste arisings (for the relevant categories of waste).

Relevant national waste arisings are provided in Section 17.4 (Baseline).

Considering the above and using professional judgement, the nature and scale of the Proposed Development is not expected to give rise to significant waste effects that would warrant detailed assessment within the EIAR. Waste generation during construction will be typical of residential development projects and will be managed through adherence to the waste hierarchy, as well as standard and good practice mitigation measures that will be outlined in a Resource and Waste Management Plan (RWMP) that will accompany the planning application.

Operational waste generated from the 118 no. dwellings will be domestic in nature and will be managed in line with South Dublin County Council's (SDCC) byelaws via approved service providers from the National Waste Collection Permit Office. An Operational Waste Management Plan (OWMP) will also accompany the planning application.

All waste generated during the construction and operational phases will be managed in accordance with the relevant provisions of the Waste Management Act 1996 and associated amendments and regulations, particularly with regard to the use of appropriately permitted waste contractors and appropriately authorised destinations for waste materials. Therefore, construction and operational waste is expected to be Not Significant in the context of national waste arisings.

The Applicant is committed to implementing the RWMP and OWMP in full, with regular monitoring and reporting to ensure compliance with all relevant waste legislation and environmental standards.

17.3 Proposed Mitigation

Waste minimisation will be considered at the design stage in line with circular economy principles and green procurement strategies.

The RWMP, structured in line with the EPA's *'Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects'* (2021), will incorporate measures to reduce waste generation through efficient material use, off-site prefabrication where feasible, and reuse of excavated materials where appropriate. Estimated quantities of construction waste will be included, as well as expected management routes for both non-hazardous and hazardous waste.

The OWMP will be prepared for the Proposed Development which will include details of the methodology used to calculate refuse, recycling and food waste storage capacities, details of the storage, management and collection arrangements for refuse, recycling, food waste and bulky waste, and marked-up plans showing the locations and layouts of all waste storage areas.

17.4 Baseline

The current state of the environment comprises baseline information on waste arisings and waste management in Ireland. The baseline information has been sourced from the most recent data collated and published by the EPA.

In 2023, approximately 9 million tonnes of C&D waste was collected, with the majority comprising soil, stones and dredging spoil (81%). Excluding soils, stones and dredging spoil, the total national C&D waste collected was approximately 1.7 million tonnes (EPA, 2025a).

The EPA Hazardous Waste Statistics for Ireland webpage reported that 381,764 tonnes of hazardous waste was generated in Ireland in 2023 (EPA, 2025b). Hazardous C&D waste can include smaller quantities of asbestos-containing material, asphalt, as well as contaminated wood, concrete, bricks, metals, and tiles.

Ireland generated approximately 1.76 million tonnes of household waste in 2022 (EPA, 2024). In South Dublin, 474 kg per household of residual waste and 182 kg per household of dry recyclables were generated (EPA, 2024).

The EPA's Progress to EU Waste Targets webpage (EPA, 2022) reports Ireland's performance against targets set out in European Directives. In terms of the Waste Framework Directive (2008/98/EC) (European Parliament and The Council of the European Union, 2008) target of "*Preparing for reuse, recycling and other material recovery (incl. beneficial backfilling operations using waste as a substitute) of 70% by weight of non-hazardous construction and demolition waste (excluding natural soils and stone), by 2020"* a performance of 78% was reported for 2020, exceeding the 70% target.

17.5 References

EPA (2021), *'Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects'*. Available at: https://www.epa.ie/publications/circular-economy/resources/best-practice-guidelines-for-the-preparation-of-resource--waste-management-plans-for-construction--demolition-projects.php

EPA (2022), *'Progress to EU Waste Targets'*. Available at: https://www.epa.ie/our-services/monitoring--assessment/waste/national-waste-statistics/progress-to-eu-targets/ [Last accessed: September 2025]

EPA (2024), *'Household Waste Statistics for Ireland'*. Available at: https://www.epa.ie/our-services/monitoring--assessment/waste/national-waste-statistics/household/ [Last accessed: September 2025]

EPA (2025a), *'Construction & Demolition Waste Statistics for Ireland'*. Available at: https://www.epa.ie/our-services/monitoring--assessment/waste/national-waste-statistics/construction--demolition/ [Last accessed: September 2025]

EPA (2025b), *'Hazardous waste statistics for Ireland'*. Available at: https://www.epa.ie/our-services/monitoring--assessment/waste/national-waste-statistics/hazardous/ [Last accessed: September 2025]

ISEP (2020), *'IEMA guide to: Materials and Waste in Environmental Impact Assessment'*. Available at: https://www.isepglobal.org/content/materials-and-waste-in-environmental-impact-assessment-march-2020/

18. Material Assets (Transport)

18.1 Introduction

This chapter describes the scope of work and methodology that will be applied to identify and assess the potential traffic and transportation impacts associated with the Proposed Development.

The Traffic Impact Assessment (TIA) section of the EIAR will address the traffic impacts on the road network from the construction and operation of the Proposed Development. The assessment will include the supply of materials, plant and equipment, the turbine elements and the components of the substation. Traffic arising from the construction and operations workforce will also be considered.

18.2 Potential Significant Effects

The EPA Guidelines (2022) do not specify matter to be investigated in an EIAR in relation to material assets (transport). However, it is clear that both the construction and the post-construction traffic impacts need to be identified and the effects on the road network assessed. All new developments generate trips on the existing transport network, either by car, commercial vehicle, cycling, walking or public transport. In the case of the Proposed Development, the Site is anticipated to generate construction and delivery vehicle trips (temporary to short-term duration) and post-construction vehicle trips associated with the residential development (permanent).

Whilst the construction traffic demand may result in temporary to short-term effects, this demand has the potential to result in negative impacts for the surrounding road network. The post-construction traffic will be comprised mostly of residents and visitors to the GAA pitches, although it is anticipated that visitors to the GAA pitches will generally occur outside of peak times.

A detailed assessment of how the construction vehicle trips travelling to the Site might affect the Site's immediate transport network will be undertaken. Without appropriate mitigation measures, the proposed construction works have the potential to lead to negative impacts on the road network including:

- Delay and disruption to road users;
- Road safety issues; and
- Soiling of the public roads, leading to a general lack of cleanliness and poor skid resistance on roads.

18.3 Assessment Methodology

The TIA will address the traffic impacts on the road network during the construction and operational phases of the Proposed Development, taking into consideration specific requirements of the Local Authority (i.e., SDCC). The TIA will be completed in accordance with:

- SDCC CDP;
- TII (2014), *'Traffic and Transportation Assessment Guidelines'* (PE-PDV-02045);
- TII (2023), *'Project Appraisal Guidelines for National Roads Unit 5.2 – Data Collection'* (PE-PAG-02016);
- TII (2021), *'Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections'* (PE-PAG-02017);
- TII (2016), *'Project Appraisal Guidelines for National Roads Unit 16.1 – Expansion Factors for Short Period Traffic Counts'* (PE-PAG-02039);
- Department of Transport, Tourism and Sport (2019), *'The Design Manual for Urban Roads and Streets'* (DMURS); and

- EPA Guidelines (2022).

18.3.1 Delay and Disruption to Road Users

18.3.1.1 Data Collection

Traffic surveys (junction turning counts (JTCs)) are proposed at the locations outlined in Table 18-1. The data collected will be used to identify the surrounding road network's AM and PM peak hour traffic existing (baseline) traffic flows.

Table 18-1: Proposed Traffic Surveys

Matter	Junction Name	Junction Type
Junction 1	Main Street / Naas Road https://maps.app.goo.gl/aijimPSNiykgRb9q8	Priority Controlled – 3 arm
Junction 2	Main Street / Johnstown Road https://maps.app.goo.gl/1kQe8R3zcuYfhYB47	Priority Controlled – 3 arm
Junction 3	Main Street / Stoney Lane https://maps.app.goo.gl/JcZg4riGGe3r3izLA	Priority Controlled – 3 arm
Junction 4	Peyton Roundabout https://maps.app.goo.gl/GtSVFaogz4w6G5bD9	Priority Controlled Roundabout – 5 arm
Junction 5	Main Street / Coolamber Road https://maps.app.goo.gl/5Rps8BgRsBkjsNz88	Priority Controlled – 3 arm
Junction 6	Main Street / R120 College Lane / R120 Fitzmaurice Rd https://maps.app.goo.gl/cWEDK5YcGEBkZtFH9	Priority Controlled Roundabout – 3 arm
Junction 7	R120 Fitzmaurice Road / Beechwood Lawns https://maps.app.goo.gl/Eu5EKJTzcGLbGB73A	Priority Controlled – 3 arm
Junction 8	R120 Fitzmaurice Rd / Mill Rd / N7 Slip roads https://maps.app.goo.gl/yonyhtz7sV7WfmxcA	Priority Controlled Roundabout – 4 arm

18.3.1.2 Construction and Operational Traffic

Construction data and information in relation to programme and associated timescales will be provided by the Applicant. This information will be used to forecast the construction vehicle traffic generation and operational traffic generation for the Proposed Development Site.

The TTA will address the traffic impacts on the road network for the construction and operation of the Proposed Development. The assessment will include the supply of materials, plant and equipment, and traffic arising from the construction workforce. The forecasts/ estimates will be used to assess the impact on the road network in numerical terms in the form of AADT.

The Study Area for the assessment of construction traffic will be established based on the anticipated vehicle routing to the site for construction vehicles at locations in which traffic could be most intensive, i.e., in proximity to the site.

Operational phase traffic volumes, i.e., associated with the residential development, will be estimated using the TRICS database. This traffic will be assigned to the surrounding network in line with existing traffic patterns.

18.3.1.3 Future Scenarios

Central Growth Rates will be extracted from Table 6.2 (Link-Based Growth Rates: County Annual Growth Rates[41]) for light goods vehicles (LGV) and heavy goods vehicles (HGV). Rates will be applied to growth traffic flows from the baseline survey year (2025) to forecast flows for the following assessment scenarios:

[41] TII's PE-PAG-02017 (2021)

planned operational year and future design years +5 years and +15 years in accordance with TII's PE-PDV-02045.

18.3.1.4 Cumulative Developments

A review of committed developments (i.e., developments with planning permission) that are in proximity to the Proposed Development and that are anticipated to generate significant traffic demands/ increases will be undertaken.

18.3.1.5 Network Distribution Impact Analysis

The percentage increase/ impact at each of the surveyed junctions will be assessed against TII's PE-PDV-02045 thresholds for junction analysis:

- *"Traffic to and from the development exceeds 10% of the existing two-way traffic flow on the adjoining road network"*; and
- *"Traffic to and from the development exceeds 5% of the existing two-way flow on the adjoining road network, where traffic congestion exists or will exist within the assessment period or in other sensitive locations."*

The operational capacity of the junctions that exceed the aforementioned thresholds will be assessed.

18.3.2 Road Safety Issues

The forecast increased number of HGVs (construction traffic) will be considered in the context of local traffic volumes, on haulage routes. The data of which will be extracted from traffic surveys and traffic count point data.

18.3.3 Public Road Damage Prevention

The potential for soiling or damage to the public road infrastructure through poor construction practices as well as potential health and safety hazards through poor traffic management will also be identified.

The effects of the Proposed Development on the existing road network will then be considered and described in terms of quality, duration, and significance. Mitigation measures will be proposed followed by identification of residual impacts. The assessment will use a combination of desktop studies, an examination of existing traffic count data and reference to existing reports and studies carried out as part of the Proposed Development, as well as a review of SDCC's development management policies in line with current best practice and policy advice.

An Outline Construction Traffic Management Plan (CTMP) will be prepared and submitted in support of the Proposed Development. This Outline CTMP will form key mitigation, outlining construction measures and practices to prevent public road damage throughout the construction phase. Furthermore, it is anticipated that, upon appointment of a Contractor, a detailed CTMP, which may include pre- and post-condition surveys, would be prepared by the Contractor, secured by planning condition, if consent is granted.

18.4 Baseline

This section sets out transport characteristics of the Study Area for traffic and transportation impact assessment. The receiving environment has been categorised under the following headings:

- Road network;
- Road safety; and
- Active and sustainable transport infrastructure.

18.4.1 Road Network

This section reviews the local road network in proximity of the Proposed Development Site to establish the existing transport conditions across the surrounding existing network.

18.4.1.1 Mullally's Lane

Mullally's Lane is a narrow two-way single lane cul-de-sac which starts at the Peyton Roundabout and serves three residential properties. No footways are present along the carriageway. Street lighting is present on the northern side of the carriageway. There is an uncontrolled pedestrian crossing located on the Peyton Roundabout at the Mullally's Lane arm; however, the tactile paving does not align.

18.4.1.2 Beechwood Lawns

Beechwood Lawns is a residential estate road that connects Main Street to the Proposed Development Site. Throughout the residential estate, two-way single lane carriageways are present, along with footways on both sides of the carriageway. In the vicinity of the Proposed Development Site, street lighting is present along the southern side of the carriageway. Dropped kerbs are provided throughout; however, no tactile paving is present.

18.4.1.3 Greenogue Drive

Greenogue Drive is a two-way single lane carriageway accessed via Peyton Roundabout serving multiple residential dwellings. A footway is present on the western side of the carriageway along the entire length, with the footway on the eastern side serving the length of the residential units. A footway is provided for pedestrians to join Greenogue Drive from Main Street. Street lighting is present along the eastern side of the carriageway. There is an uncontrolled pedestrian crossing located on the Peyton Roundabout at the Greenogue Drive arm.

18.4.1.4 Stoney Lane

Stoney Lane is a local road which connects to Stoney Hill Road at the Peyton Roundabout. Footpaths are provided along both sides of the carriageway. Public street lighting is provided along the western side of Stoney Lane. Dropped kerbs and tactile paving are provided across local accesses.

18.4.1.5 Main Street

Main Street connects to Stoney Lane to form a T-junction. Footpaths are provided along both sides of Main Street and public street lighting is provided along both sides of the carriageway. And eastbound and westbound bus stop is provided along Main Street within walking distance to the Proposed Development.

18.4.1.6 Road Safety

A review of the Road Safety Authority's (RSA) Traffic Collision Database was not possible at the time of preparing this report due to RSA Collision Mapping and GDPR website issues.

18.4.2 Active and Sustainable Transport Infrastructure

18.4.2.1 Pedestrian and Cycle Facilities

The Proposed Development Site is situated in an urban area where provision for pedestrian movement is generally good. Locally, footways are provided on both sides of the carriageway and range from 1.5 m to 2.5 m in width.

Within Beechwood Lawns, footways are provided in front of residential properties.

Connections to the Proposed Development Site can be made from Main Street through Stoney Lane, Greenogue Drive, Coolamber Drive and Beechwood Lawns. Footways are provided along all these routes.

There are no footways provided along Mullally's Lane.

An uncontrolled pedestrian crossing with dropped kerbs and tactile paving is provided across the Mullally's Lane and Greenogue Drive arms of the Peyton Roundabout.

18.4.2.2 Bus

Plate 18.1 illustrates the location of bus stops in relation to the Proposed Development Site. It demonstrates that the Site benefits from a good bus transport connection, operated by Dublin Bus and Go-Ahead Ireland.

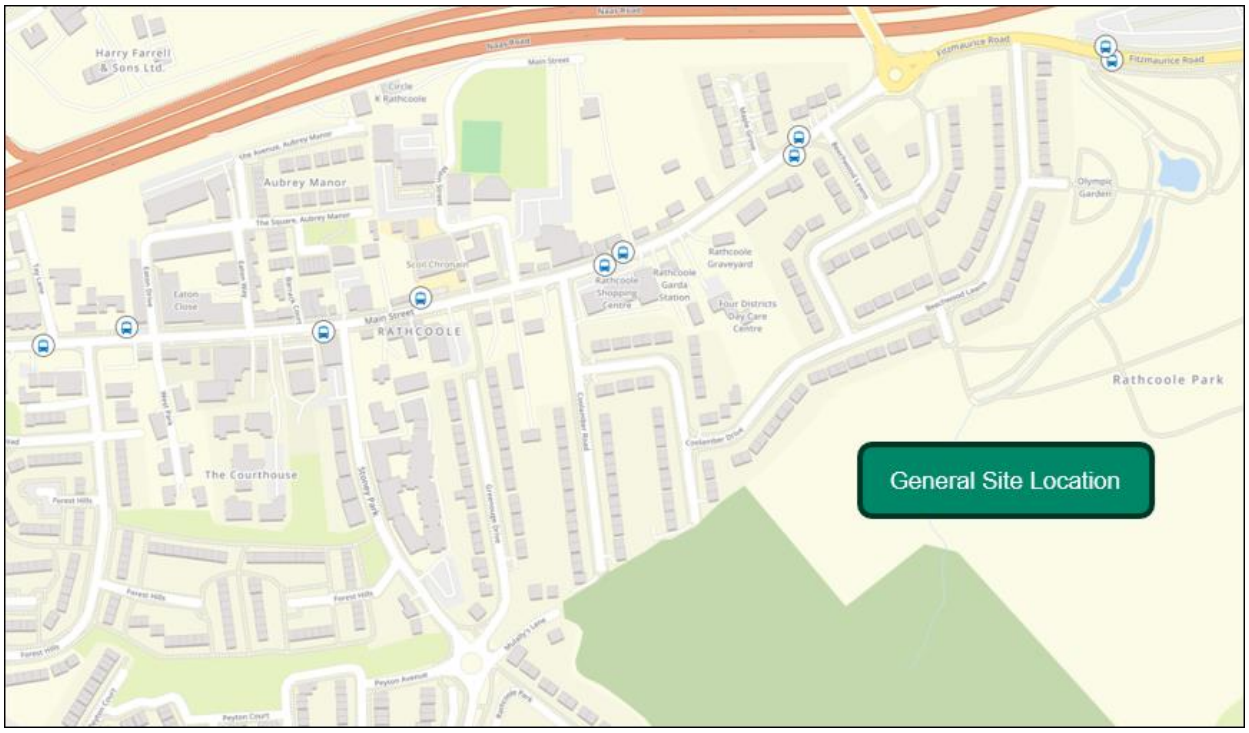


Plate 18.1: Existing Bus Stops (Source: https://www.transportforireland.ie/ © OpenStreetMap contributors)

Dublin Bus operates two routes (one of which is an express route) that serve the Proposed Development Site, including the route number 69 and 69X (Rathcoole – Clondalkin Village Towards Dublin City Centre). These routes provide links from Rathcoole to Dublin city centre and intermediate destinations.

Go-Ahead Ireland operates another route within the vicinity of the Site which runs from Maynooth to Tallaght. The associated bus stops are all within convenient walking distance (approximately 550 m) of the subject Proposed Development Site. The scheduled frequency for buses to and from Dublin city centre is outlined in Table 18-2.

Table 18-2: Existing Bus Services

	Weekdays		Saturdays		Sundays/ Bank Holidays	
Bus Route	**To City Centre**	**From City Centre**	**To City Centre**	**From City Centre**	**To City Centre**	**From City Centre**
69	20	18	21	18	12	12
69X	1	1	-	-	-	-
69N	-	-	-	3	-	-
	To Tallaght	**To Maynooth**	**To Tallaght**	**To Maynooth**	**To Tallaght**	**To Maynooth**
W6	36	36	34	34	30	30

Source: https://www.transportforireland.ie/

18.4.2.3 Rail Network

The Proposed Development Site is located approximately 8.5 km away from the Hazelhatch and Celbridge Rail Station which providers services between Dublin City Centre and various destinations, including Portlaoise, Kilkenny, Carlow and Waterford. The Hazelhatch and Celbridge Rail Station benefits from a Park and Ride facility incorporating 400 no. car parking spaces, making travel by rail a feasible alternative

to future residents of the Proposed Development. In addition, 30 no. sheltered cycle parking spaces are available as well as bike lockers.

Furthermore, the Saggart LUAS station and Cheeverstown LUAS Park and Ride station are located approximately 3 km and 6 km respectively to the northeast of the subject site, providing access to the LUAS Red Line services operating between Saggart and Connolly Station/ The Point via Dublin City Centre.

A summary of the average LUAS frequency by day of the week is presented in Table 18-3.

Table 18-3: LUAS Red Lins Service Frequency

	Frequency (minutes)		
Time	**Monday-Friday**	**Saturday**	**Sunday**
Earlier than 07:00	7	-	-
07:00-10:00	4	9	9-12
10:00-16:00	4	6	
16:00-19:00	4	6	
Later than 19:00	11	11	11

18.4.3 Car Share / Car Club

There is an existing GoCar hire station located on Main Street approximately 600 m from the Proposed Development Site, as shown in Plate 18.2, which is considered to be sufficient to serve and accommodate the potential demand generated from the Proposed Development Site. According to GoCar, each vehicle can replace up to 20 private cars.

Car club/ car-share provide an alternative means of travel for existing and prospective residents, encouraging car-free and/ or car-lite lifestyles. Car club members can book cars online or via an app for durations of as little as an hour. They, then unlock the car with their phone or a membership Card; the keys are in the car, with fuel, insurance and city parking all included.

The benefits of such car sharing services include:

- They aid in the reduction of cars on the road and therefore traffic congestion, noise, and air pollution.
- They have the potential to free up land traditionally used for private parking spaces.
- They encourage and potentially increase the use of public transport, walking, and cycling as the need for car ownership is reduced.
- They allow those who cannot afford a car the opportunity to drive, encouraging social inclusivity.
- They replace approximately 20 no. private car parking spaces.

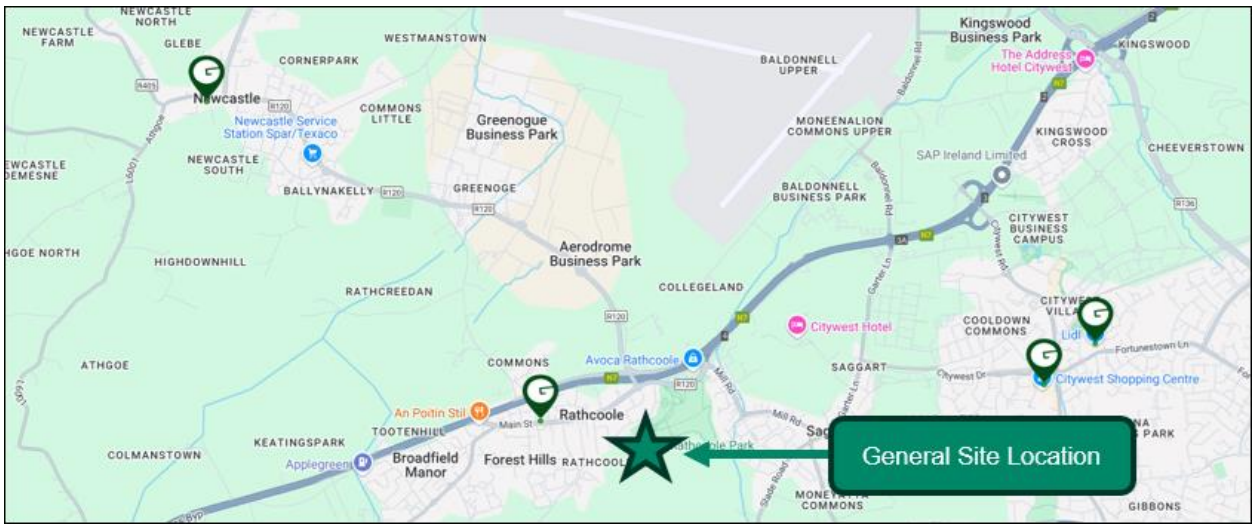


Plate 18.2: Existing GoCar Provisions (Source: https://www.gocar.ie/locations/)

18.4.4 Emerging Transport Infrastructure

18.4.4.1 Cycle Network Proposals

The NTA's *'Greater Dublin Area Cycle Network Plan'* (2022) presents a comprehensive framework for cycling infrastructure across the region, including rural areas such as Rathcoole. Within this plan, a Secondary inter-urban cycle route 'D5' is proposed along the R120/Main Street, passing through Rathcoole and providing direct connections to Newcastle to the north and Kill to the south, as well as linking to the broader Cycle Network. The development of inter-urban and greenway routes is designed to enhance connectivity between urban centres and rural communities, offering significant benefits to both Rathcoole and the proposed site by improving accessibility and promoting sustainable travel option. Plate 18.3 illustrates the proposed cycle network in relation to the Proposed Development Site.

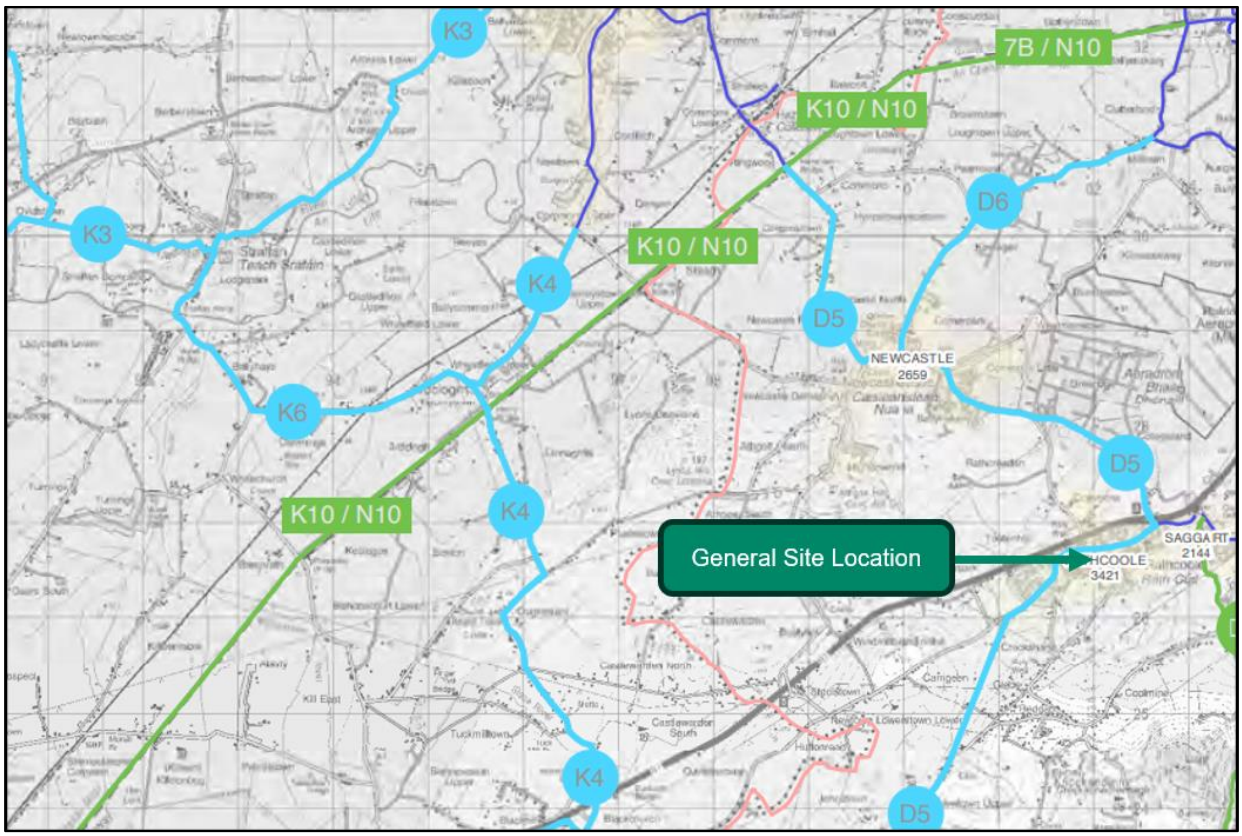


Plate 18.3: Greater Dublin Area Cycle Network Plan (Source: *https://www.nationaltransport.ie/wp-content/uploads/2021/02/English_04d_Proposed_Network_Rural.pdf*)

18.4.4.2 BusConnects

BusConnects is an initiative launched by the NTA with the aim of overhauling the bus system in the Dublin Region. This initiative includes review of bus services and the definition of the core bus network which comprises radial, orbital, and regional core bus corridors. It also includes enhancements to ticketing and fare systems as well as transition to a new low emission vehicle fleet.

This initiative proposes to implement a redesign of the existing bus network. The fundamental changes to the network expected would be as follows:

- Increasing the overall amount of bus services. Providing new and frequent orbital services connecting more outer parts of the city together.
- Simplifying the bus services on the key radial into “spines” where all buses will operate under a common letter system and buses will run very frequently and be more evenly spaced.
- Increasing the number of routes where buses will come every 15 minutes or less all day.
- The frequent network would become a web-shaped grid, with many interchange opportunities to reach more destinations. Everywhere that two frequent routes cross, a fast interchange is possible.
- Additional service would be provided at peak hours to limit overcrowding.

The BusConnects project will improve connectivity to Rathcoole by introducing the express service ‘X58,’ which will operate between Rathcoole and Dublin City Centre during peak hours. This service will run twice per hour in the morning peak and once per hour in the evening peak. The existing service will be replaced by the ‘58,’ an hourly route linking Rathcoole to both Dublin City Centre and the City Port.

Additionally, the new orbital service ‘W6’ will connect Maynooth, Celbridge, Citywest, and Tallaght with a frequency of two buses per hour. The nearest stop will be within a 15-minute walk from the Proposed Development Site on Fitzmaurice Road. Plate 18.4 illustrates the proposed BusConnects routes in relation to Rathcoole and the Proposed Development Site. These enhancements will significantly improve public transport accessibility for the Proposed Development.

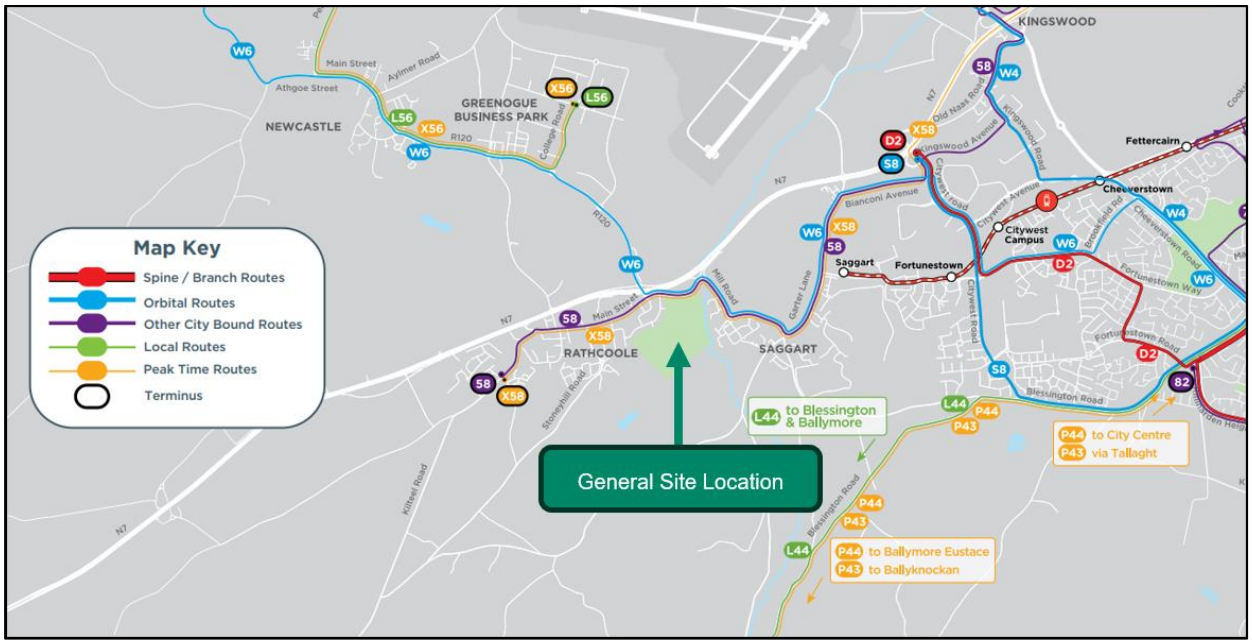


Plate 18.4: BusConnects Rathcoole (Source: *https://busconnects.ie/wp-content/uploads/2021/01/saggart-area-map.pdf*)

The Bus Network Redesign is the first step in a series of transformative changes to Dublin’s bus network over the coming years. However, the next steps in this initiative are the improvements to the infrastructure and operation of the proposed bus network which include:

- Building a network of “next generation” bus corridors on the busiest bus lines to make bus journeys faster, predictable, and reliable;

- Developing a state-of-the-art ticketing system using credit and debit cards or mobile phones to link with payment accounts and making payment much more convenient;
- Implementing a cashless payment system to vastly speed up passenger boarding times;
- A simpler fare structure, allowing seamless movement between different bus services without financial penalty;
- New bus stops with better signage and information and increasing the provision of additional bus shelters; and
- Transitioning to a new bus fleet using low-emission vehicle technologies.

19. Landscape & Visual

19.1 Introduction

This chapter describes the scope of works and methods that will be applied to identify and assess potential effects on the landscape character and the visual amenity associated with the Proposed Development.

19.2 Potential Significant Effects

The EPA Guidelines (2022) suggest that the matters set out in Table 19-1 are typically addressed for landscape and visual impacts within an EIAR.

Table 19-1: Matters to be Considered under Landscape and Visual

Matter	Comments
Landscape appearance and character	Scoped in
Landscape context including trees, hedgerows and woodlands	Scoped in
Ditches and streams	Scoped in
Views and prospects	Scoped in
Landscape significance (designation and protection) and sensitivity	Scoped in
Interactions with other environmental aspects, especially, biodiversity and ecology	Scoped in
Interactions with historical landscapes and landscape assets	Scoped in

19.3 Assessment Methodology

This section sets out the methodology used to assess the potential landscape and visual impacts associated with Proposed Development.

The landscape and visual effects of the Proposed Development have been assessed for the following phases:

- Construction phase, anticipated to occur over a period of approximately one year; and
- Operational phase.

The decommissioning stage will not be assessed as the Proposed Development is considered permanent. However, decommissioning effects would be considered to be similar in nature as effects described at construction stage but shorter in duration.

19.3.1 Study Area

A Study Area radius of 2 km has been set from the boundary of the Proposed Development Site. The extent of the Study Area has been informed by a desktop study and was verified on-site during fieldwork surveys. This included desk-based reviews of published landscape assessments and the wider landscape setting to determine the area which might be influenced by the Proposed Development.

It is acknowledged that the Proposed Development may be visible from locations beyond the 2 km Study Area, and as such it is important to note that the Study Area defines the area within which potential effects could be most likely to be significant, rather than defining the extent of visibility. Beyond 2 km, it is not considered that likely effects on views will be significant due to the effects of distance, topography, intervening existing vegetation, and existing built structures.

19.3.2 Data Sources

Baseline data for the Landscape and Visual Impact Assessment (LVIA) has been compiled from aerial imagery (Google Earth), publicly available documents including the CDP's Landscape Character Assessment, and the SDCC Rathcoole Lands (2021) land-use concept. A site visit on 30 May 2025 reviewed the existing landscape character and recorded a range of views from representative viewpoints (VPs) within the Study Area.

19.3.3 Landscape and Visual Impact Assessment Criteria

This scoping report outlines the framework for a future LVIA which will follow EPA Guidelines (2022), the *'Guidelines for Landscape and Visual Impact Assessment'* (GLVIA3) published by the Landscape Institute and IEMA (now ISEP) in 2013 (hereafter referred to as 'the GLVIA3 Guidelines'), and professional judgment. The assessment will identify, predict, and evaluate the significance of potential effects on landscape features and established views, considering both receptor sensitivity and the magnitude of change. Effects are recognised to evolve over time as the landscape and proposed planting mature. Significance is determined by the receptor's value, susceptibility, and sensitivity, alongside the size, extent, duration, reversibility, and quality of the effect (positive, neutral, or negative).

The duration of both landscape and visual effects will be as described in Section 6.6.2 of this report. The quality of both landscape and visual effects is defined in Table 19-2.

Table 19-2: Definition of Quality of Effects

Quality of Effects	Description
Neutral	This will neither enhance nor detract from the landscape character or view
Positive (Beneficial)	This will improve or enhance the landscape character or view
Negative (Adverse)	This will reduce the quality of the existing landscape character or view

19.3.4 Assessment Process

This scoping report assessment has been undertaken based on the following key tasks and structure:

- Establishment of the baseline or receiving environment;
- Appreciation of the Proposed Development; and
- Assessment of effects.

19.3.4.1 Establishment of the Baseline

A baseline study has been undertaken through a combination of desk-based research and site assessment in order to establish the existing conditions of the landscape and visual resources of the Study Area. Desk-based research has involved a review of mapping and aerial photography, relevant planning and policy documents, the relevant Landscape Character Assessment and other relevant documents and publications.

19.3.4.2 Appreciation of the Proposed Development

In order to be able to accurately assess the full extent of likely effects on the landscape character and visual amenity, it is essential to develop a thorough and detailed knowledge of the Proposed Development. This includes a comprehensive understanding of its location, nature and scale and is achieved through a review of detailed descriptions of the Proposed Development and drawings (refer to Chapter 2: The Proposed Development) and an on-site assessment. The proposed LVIA will consider all elements of the Proposed Development.

19.3.4.3 Assessment of Effects

The LVIA will seek to identify, predict and evaluate the significance of potential effects to landscape characteristics and established views. The assessments are based on an evaluation of the sensitivity to change and the magnitude of change for each landscape or visual receptor.

The assessment acknowledges that landscape and visual effects change over time as the existing landscape internal and external to the Proposed Development evolves. The assessment therefore reports on potential effects during both construction and operation of the Proposed Development. The prominence of the Proposed Development in the landscape or view will vary according to the existing screening effects of local topography, intervening existing vegetation and building structures.

The GLVIA3 Guidelines require that a clear distinction is drawn between landscape (which includes the urban landscape) and visual effects:

- Landscape effects relate to the degree of change to characteristics or physical components of a landscape or in this case a suburban area, which together form the character of that landscape, e.g. topography, streets, buildings and open space; and
- Visual effects relate to the degree of change to an individual receptor's or a receptor group's view of that landscape, e.g., local residents, users of public open space, footpaths or motorists passing through the area.

Construction and operational phases of the Proposed Development are assessed separately, with temporary to short-term and permanent effects considered, the latter typically of greater importance. Residual effects account for proposed landscape design/ mitigation measures. The assessment will be iterative, informing design decisions and incorporating mitigation from site selection, consultation, and design, as to be described in the Design Statement. Key landscape elements that define character, including buildings, structures, spaces, and patterns of use, are considered in evaluating effects. Cumulative effects from other similar developments with consent, under construction, or pending will be also addressed in the full LVIA.

19.3.5 Assessing Landscape Effects

Landscape effects describe the impact on the fabric or structure of a landscape or landscape character. For this project, landscape includes also suburban townscape. The assessment of landscape effects firstly requires the identification of the components of the landscape. The landscape components are also described as landscape receptors and comprise the following:

- Individual landscape elements or features;
- Specific aesthetic or perceptual aspects; and
- Landscape character, or the distinct, recognisable and consistent pattern of elements (natural and man-made) in the landscape that makes one landscape different from another.

The assessment identifies the interaction between these components and the Proposed Development during the construction and operational phases. The condition of the landscape and any evidence of current pressures causing change in the landscape are also documented and described, where relevant.

19.3.5.1 Landscape Receptors

The landscape resources within the Study Area that could be affected by the Proposed Development include:

- Physical resources such as buildings, open space, trees, watercourses, etc.;
- Designated, valued or recognised components that contribute to landscape character; and
- Cultural heritage interests that contribute to landscape character.

Landscape receptors are defined as those landscape resources within the Study Area from which the Proposed Development may be visible or where potential visibility of the Proposed Development in one

part of the landscape resource affects the experience of another part. On-site assessment studies were used to check the potential visibility of the Proposed Development from landscape resources within the study area. Within this section, specific consideration is also given to changes to landscape elements such as the built fabric, open space or trees.

19.3.5.2 Landscape Character

Landscape character is a complex mix of physical features and patterns and cultural elements. Buildings, structures and spaces and the resulting layout and settlement grain, the density and mix, scale and appearance, human interaction and cultural and historic features combine to create a common 'sense of place' and identity that is experienced as landscape character. Definable units (character areas and character zones) can be used to categorise the landscape, and the level of detail and size of unit can be varied to reflect the scale of definition required. It can be applied at national, regional and local levels.

The quality or condition of a landscape character receptor is a reflection of its attributes, such as the condition of the buildings and spaces or vegetative components and the attractiveness and landscape quality of the area as well as its sense of place. A landscape with consistent, intact and well-defined, distinctive attributes is generally considered to be of higher quality and in turn, higher sensitivity, than a landscape where the presence of inappropriate or discordant elements has detracted from its inherent attributes. The higher the quality of a receptor, the greater is its sensitivity to the Proposed Development.

19.3.5.3 Landscape Value

Landscape value is frequently addressed by reference to international, national, regional and local designations, determined by statutory and planning agencies. However, absence of such a designation does not necessarily imply a lack of quality or value. Factors such as accessibility and local scarcity can render areas of nationally unremarkable quality, highly valuable as a local resource. The quality and condition are also considered in the determination of the value of a landscape. The evaluation of landscape value has been undertaken with reference to the definitions stated in Table 19-3.

Table 19-3: Landscape Value

Classification	Criteria
Very High 	The landscape is likely to be valued for one or more of its attributes at a national or regional level and may be protected by a statutory landscape designation. The landscape may contain elements/ features which are rare or perceived as very representative of the national or regional attributes and cultural associations. The landscape may provide a high scenic and landscape quality.
Medium	The landscape is likely to be valued for one or more of its attributes at a community or local level and may be designated by a landscape policy designation. The landscape may contain elements/ features which are representative of the community or local level attributes and cultural associations. The landscape may provide some scenic and landscape quality.
 **Very Low**	The landscape is likely to be valued at a limited level only and not covered by any landscape designations. The landscape may contain features which are common and therefore do not specifically contribute to the wider landscape or cultural association. The landscape may provide a limited scenic and landscape quality.

19.3.5.4 Landscape Susceptibility

Landscape susceptibility relates to the ability of a particular landscape to accommodate the Proposed Development. Landscape susceptibility is appraised through consideration of the baseline characteristics of the landscape, and in particular the scale or complexity of a given landscape.

The evaluation of landscape susceptibility has been undertaken with reference to a three-point scale, as outlined in Table 19-4.

Table 19-4: Landscape Susceptibility Criteria

Classification	Criteria
Very High 	The receptor has a low capacity to accommodate the Proposed Development without effects upon its overall integrity. The landscape is likely to have a strong pattern/ texture or is a simple but distinctive landscape. Undue consequences are likely to arise from the Proposed Development.
Medium	The receptor has some capacity to accommodate the Proposed Development without effects upon its overall integrity. The pattern of the landscape is mostly intact and/ or with a degree of complexity and with features mostly in reasonable condition. Undue consequences may arise from the Proposed Development.
 **Very Low**	The receptor is robust; it can accommodate the Proposed Development without effects upon its overall integrity. The landscape is likely to be simple, monotonous and/ or partially degraded with common/ indistinct features and minimal variation in landscape pattern. Undue consequences are unlikely to arise from the Proposed Development.

19.3.5.5 Landscape Sensitivity

Landscape sensitivity to change is determined by employing professional judgment to combine and analyse the identified landscape value, quality and susceptibility and has been defined with reference to the scale outlined in Table 19-5.

Table 19-5: Landscape Sensitivity to Change Criteria

Classification	Criteria
High	• Landscape characteristics or features with little or no capacity to absorb change without fundamentally altering their present character. • Landscape designated for its international or national landscape value or with highly valued features. • Outstanding example in the area of well cared for landscape or set of features that combine to give a particularly distinctive sense of place. • Few detracting or incongruous elements.
Medium-High	• Landscape characteristics or features with a low capacity to absorb change without fundamentally altering their present character. • Landscape designated for regional or county-wide landscape value where the characteristics or qualities that provided the basis for their designation are apparent or a landscape with highly valued features locally. • Good example in the area of a well-cared for landscape or set of features that combine to give a clearly defined sense of place.
Medium	• Landscape characteristics or features with moderate capacity to absorb change without fundamentally altering their present character. • Landscape designated for its local landscape value or a regional designated landscape where the characteristics and qualities that led to the designation of the area are less apparent or are partially eroded or an undesignated landscape which may be valued locally, e.g. an important open space. • An example of a landscape or a set of features which is relatively coherent, with a good but not exceptional sense of place; occasional buildings and spaces may lack quality and cohesion.
Medium-Low	• Landscape characteristics or features which are reasonably tolerant of change without determent to their present character. • No designation present or of little local value. • An example of an un-stimulating landscape or set of features; with some areas lacking a sense of place and identity.
Low	• Landscape characteristics or features which are tolerant of change without determent to their present character. • An area with a weak sense of place and/ or poorly defined character/ identity. • No designation present or of low local value or in poor condition. • An example of monotonous unattractive visually conflicting or degraded landscape or set of features.

19.3.5.6 Magnitude of Landscape Change

Magnitude of change is an expression of the size or scale of change in the landscape, the geographical extent of the area influenced and the duration and reversibility of the resultant effect. The variables involved are:

- The extent of existing landscape elements that will be lost, the proportion of the total extent that this represents and the contribution of that element to the character of the landscape;
- The extent to which aesthetic or perceptual aspects of the landscape are altered either by removal of existing components of the landscape or by addition of new ones;
- Whether the effect changes the key characteristics of the landscape, which are integral to its distinctive character;
- The geographic area over which the landscape effects will be felt (within the Proposed Development Site itself; the immediate setting of the Proposed Development Site; at the scale of the landscape type or character area; on a larger scale influencing several landscape types or character areas); and
- The duration of the effects and the reversibility of the effect.

Changes to landscape characteristics can be both direct and indirect. Direct change occurs where the Proposed Development will result in a physical change to the landscape within or adjacent to the Proposed Development Site. Indirect changes are a consequence of the direct changes resulting from the Proposed Development. They can often occur away from the Proposed Development Site (e.g., off-site construction staff parking) and may be a result of a sequence of interrelationships or a complex pathway (e.g., a new road or footpath construction may increase public access and associated problems such as littering). They may be separated by distance or in time from the source of the effects. The indicative criteria applied to determine the magnitude of landscape effects are set out in Table 19-6. These are indicative and provide an example of considerations, supported and modified by explanative text in the LVIA.

Table 19-6: Indicative Criteria for Magnitude of Landscape Change (Landscape Effects)

Magnitude	Typical Criteria Descriptions
High	Large alteration to the landscape receptor or may impact an extensive area or unique characteristics at a local level. May be longer term impacts, permanent or reversible.
Medium	Partial alteration to the landscape receptor or may impact a wide area or characteristics at a local level. May be medium term impacts, permanent or reversible.
Low	Slight alteration to the landscape receptor or may impact a restricted area and few key characteristics. May be short to medium term impacts, permanent or reversible.
Very Low	Very slight alteration to the landscape receptor or may impact a limited area or no key characteristics. May be short-term impacts, permanent or reversible.
None	No change to the landscape receptor.

19.3.6 Assessing Visual Effects

Visual effects are determined by the extent of visibility and the nature of the visibility (i.e. how a development is seen within the landscape), e.g. whether it appears integrated and balanced within the visual composition of a view or whether it creates a focal point.

Negative visual effects may occur through the intrusion of new elements into established views, which are out of keeping with the existing structure, scale and composition of the view. Visual effects may also be beneficial, where an attractive focus is created in a previously unremarkable view or the influence of previously detracting features is reduced. The significance of effects will vary, depending on the nature and degree of change experienced and the perceived value and composition of the existing view.

19.3.6.1 Receptors

For there to be a visual impact, there is the need for a viewer. Views experienced from locations such as settlements, recognised routes and popular vantage points used by the public have been included in the assessment. Receptors are the viewers at these locations. The degree to which receptors, i.e., people, will be affected by changes as a result of the Proposed Development depends on a number of factors, including:

- Receptor activities, such as taking part in leisure, recreational and sporting activities, travelling or working;
- Whether receptors are likely to be stationary or moving and how long they will be exposed to the change at any one time;
- The importance of the location, as reflected by designations, inclusion in guidebooks or other travel literature, or the facilities provided for visitors;
- The extent of the route or area over which the changes will be visible;
- Whether receptors will be exposed to the change daily, frequently, occasionally or rarely;
- The orientation of receptors in relation to the Proposed Development and whether views are open or intermittent;
- Proportion of the developments that will be visible (full, sections or none);
- Viewing direction, distance (i.e., short-, medium- and long-distance views) and elevation;
- Nature of the viewing experience (e.g., static views, views from settlements and views from sequential points along routes);
- Accessibility of VP (public or private, ease of access);
- Nature of changes (e.g., changes in the existing skyline profile, creation of a new visual focus in the view, introduction of new man-made objects, changes in visual simplicity or complexity, alteration of visual scale, landform and change to the degree of visual enclosure); and
- Nature of visual receptors (type, potential number and sensitivity of viewers who may be affected).

19.3.6.2 Value of the View

Value of the view is an assessment of the value attached to views and is often informed by the appearance on Ordnance Survey of tourist maps and in guidebooks, literature or art. Value can also be indicated by the provision of parking or services and signage and interpretation. The nature and composition of the view is also an indicator. The value of the view is determined with reference to the definitions outlined in Table 19-7.

Table 19-7: Value of the View

Classification	Criteria
Very High	Recognised or iconic views within nationally/internationally designated landscapes, such as National Parks, and/ or national/ international landmarks with views recognised in planning policy and/ or management plans.
High	Views or viewing places identified in regional strategies.
Medium	Views across high quality landscape which might include features of interest, such as landmarks, which may be identified in a Local Area Plan.
Low	Views of relatively common landscape elements, likely to be valued by the communities which experience the view.

19.3.6.3 Visual Susceptibility

The GLVIA3 Guidelines identify that the susceptibility of visual receptors to changes in views and visual amenity is a function of:

- The occupation or activity of people experiencing the view at a particular location; and
- The extent to which their attention or interest may therefore be focused on the views and visual amenity they experience at particular locations.

For example, residents in their home, walkers whose interest is likely to be focused on the landscape or a particular view, or visitors at an attraction where views are an important part of the experience often indicate a higher level of susceptibility. Whereas receptors occupied in outdoor sport, where views are not important, or at their place of work, are often considered less susceptible to change. Visual susceptibility is determined with reference to the three-point scale and criteria outlined in Table 19-8.

Table 19-8: Visual Susceptibility

Classification	Criteria
Very High	People visiting areas where the view is a very important part of the experience and specific to the reason for visiting the location.
High	People visiting areas where the view is an important part of the experience and/ or residents with an expectation of enjoyment of the view.
Medium	People passing through the area where views are relevant to the experience of the journey but are not specific to the reasons for visiting.
Low	People passing through the area on secondary roads, where the view is not relevant to the activity. People working outdoors where the view is not relevant to the activity but may enhance it.
Very Low	People working in buildings where the view is not relevant to the activity or passing through the area of main road and rail networks, such that views are variable and expectation of enjoyment of them is secondary.

19.3.6.4 Visual Sensitivity

Sensitivity to change considers the nature of the receptor, e.g., a person occupying a residential dwelling is generally more sensitive to change than someone working in a factory unit. The importance of the view experienced by the receptor also contributes to an understanding of the susceptibility of the visual receptor to change as well as the value attached to the view.

A judgement is also made on the value attached to the views experienced. This takes account of:

- Recognition of the value attached to particular views, e.g., in relation to heritage assets, or through planning designations;
- Indicators of the value attached to views by visitors, e.g., through appearance in guidebooks or on tourist maps, provision of facilities for their enjoyment (sign boards, interpretive material) and references to them in literature or art; and
- Possible local value: it is important to note that the absence of view recognition does not preclude local value, as a view may be important as a resource in the local or immediate environment due to its relative rarity or local importance.

The visual sensitivity to change is based on interpretation of a combination of all or some of the criteria outlined in Table 19-9.

Table 19-9: Sensitivity to Change Criteria

Classification	Criteria
High	• Users of outdoor recreational facilities, on recognised national cycling or walking routes or in nationally designated landscapes. • Residential buildings.
Medium-high	• Users of outdoor recreational facilities, in highly valued landscapes or locally designated landscapes or on local recreational routes that are well publicised in guidebooks. • Road and rail users in nationally designated landscapes or on recognised scenic routes, likely to be travelling to enjoy the view.
Medium	• Users of outdoor recreational facilities including public open space in moderately valued landscapes. • Users of primary transport road network, orientated towards the Proposed Development, likely to be travelling for other purposes than just the view.
Medium-Low	• People engaged in active outdoor sports or recreation and less likely to focus on the view. • Primary transport road network and rail users likely to be travelling to work with oblique views of the Proposed Development or users of minor road network.
Low	• People engaged in work activities indoors, with limited opportunity for views of the Proposed Development.

19.3.6.5 Magnitude of Visual Change

Visual effects are direct effects as the magnitude of change within an existing view have been determined by the extent of visibility of the Proposed Development. The magnitude of the visual effect resulting from the Proposed Development at any particular VP or receptor is based on the size or scale of change in the view, the geographical extent of the area influenced and its duration and reversibility. The variables involved are:

- The scale of the change in the view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the Proposed Development;
- The degree of contrast or integration of any new features or changes in the landscape form, scale, mass, line, height, sky lining, back-grounding, visual clues, focal points, colour and texture;
- The nature of the view of the Proposed Development, in relation to the amount of time over which it will be experienced and whether views will be full, partial or glimpses;
- The angle of view in relation to the main activity of the receptor, distance of the VP from the Proposed Development and the extent of the area over which the changes will be visible; and
- The duration of effects and the reversibility of effects.

The magnitude of visual effect resulting from the Proposed Development at any particular VP or receptor is based on the interpretation of the above range of factors and is set out in Table 19-10.

Table 19-10: Indicative Criteria of Magnitude of Visual Change (Visual Effects)

Classification	Criteria
High	The Proposed Development will cause a pronounced change to the composition of the view or may be viewed in the foreground or directly. May be longer term effects, permanent or reversible and could include glint and glare effects.
Medium	The Proposed Development will cause a noticeable change to the composition of the view or may be viewed in the middle ground or indirectly. May be medium term effects, permanent or reversible and could include glint and glare effects.
Low	The Proposed Development will cause an unobtrusive change in the composition of the view or may be viewed in the background or obliquely. May be short to medium term effects, permanent or reversible and is not likely to include glint and glare effects.

Classification	Criteria
Very Low	The Proposed Development will cause a barely perceptible change in the composition of the view or may be viewed in the background and very obliquely. May be short-term effects, permanent or reversible and would not include glint and glare effects.
None	No change to the view.

19.3.7 Significance of Effects

The objective of the assessment process is to identify and evaluate the potentially significant effects arising from the Proposed Development. The assessment identifies the residual effects likely to arise from the Proposed Development taking into account mitigation measures and the change over time.

The significance of effects is assessed by considering the sensitivity of the receptor and the predicted magnitude of effect in relation to the baseline conditions. In order to provide a level of consistency and transparency to the assessment and allow comparisons to be made between the various landscape and visual receptors subject to assessment, the assessment of effect significance is informed by pre-defined criteria as outlined in Table-19-11. When assessing effect significance, individual effects may fall across several different categories of significance and professional judgement is therefore used to determine which category of significance best fits the overall effect to a landscape or visual receptor.

The significance of the effects can be adverse (negative) or beneficial (positive) according to the definitions set out in Section 6.6.2 of this report. The significance of the effect is determined by considering the magnitude of the effect and the quality of the baseline environment affected by the Proposed Development. The basis for consideration of the significance of effects is included in Plate 6.1 of this report.

Effects will be assessed for all phases of the Proposed Development. Construction effects are considered to be temporary to short-term, while effects from the operational phase will be permanent and occurring as a result of the presence and operation of the Proposed Development.

The quality of each effect is based on the ability of the landscape character or visual receptor to accommodate the Proposed Development, and the impact of the Proposed Development within the receiving context. Once this is done, the quality of the effect is then assessed as being neutral, beneficial or adverse. A change to the landscape or visual resource is not considered to be adverse simply because it constitutes an alteration to the existing situation.

19.4 Baseline

Below is an overview of landscape and visual baseline conditions to provide context and inform the proposed scope of the assessment. The LVIA will review relevant policy, landscape character and sensitivity, and scenic views, drawing on guidance and designations outlined in local planning documents.

19.4.1 Landscape Baseline

19.4.1.1 Landscape Character Types

Appendix 9 of the CDP features a Landscape Character Assessment which allows identification of the different landscape character types in the county. According to this Landscape Character Assessment, Landscape Character Types (LCT) are described as: *"distinct types of landscape that are relatively homogenous in character. They are generic in nature in that they may occur in different localities throughout the county. Nonetheless, where they do occur, they commonly share similar combinations of geology, topography, landcover and historical land use. For example, limestone farmland is a distinct landscape character type and as such, whether they occur in South Dublin or other counties"*.

The LCTs within SDCC and the approximate location of the Proposed Development within are illustrated in Plate 19.1.

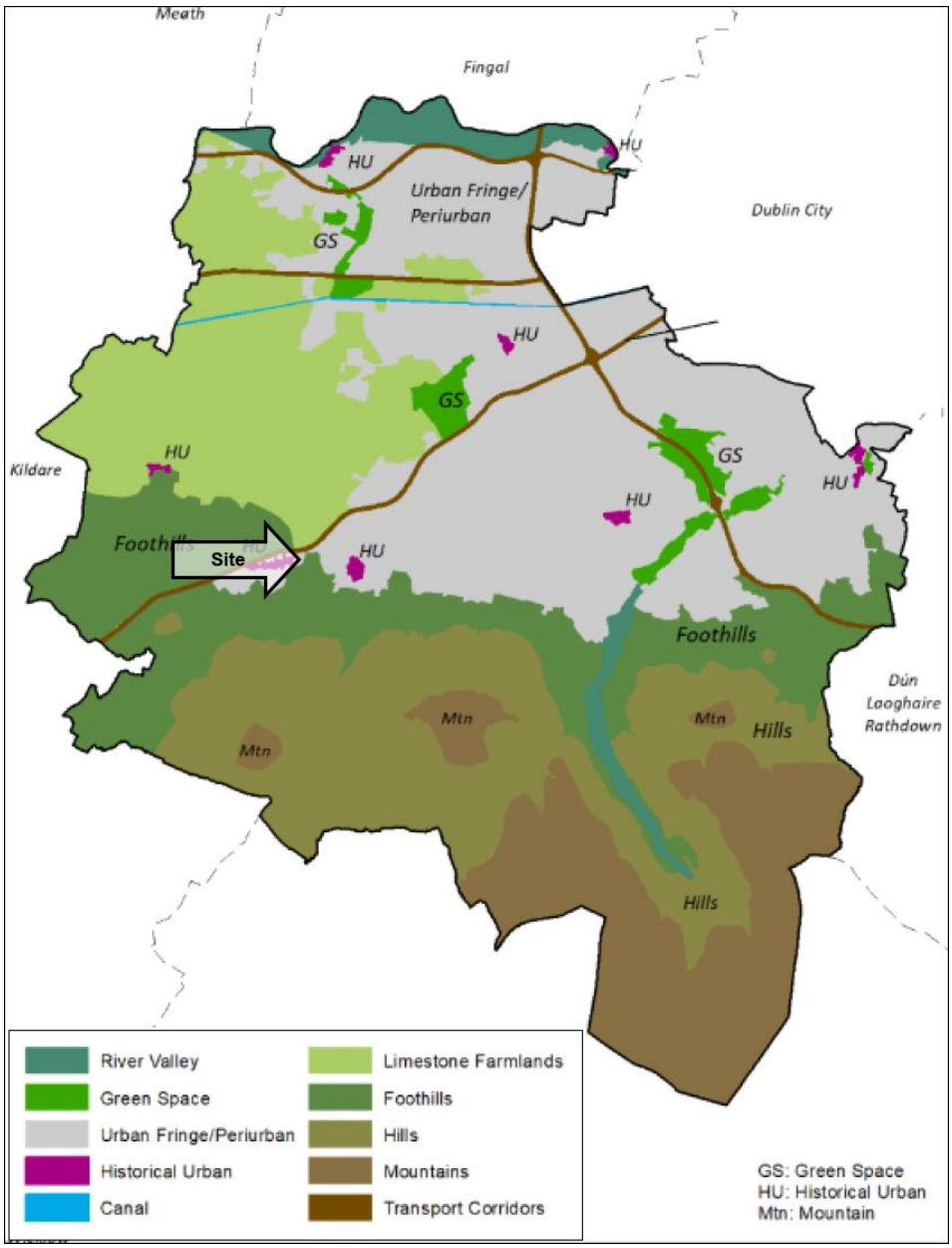


Plate 19.1: Landscape Character Types within the administrative area of SDCC and approximate Proposed Development Location (Source: extract of CDP Appendix 9 p.46)

The Proposed Development Site sits within the 'Foothills' Landscape Character Type. The wider 2 km Study Area also covers areas north of the Site which are of the 'Urban Fringe/Peri-urban' and 'Historical Urban' LCT, and an area to the south of the Study Area sitting within the 'Hills' LCT.

Table 19-11: Landscape Character Types within the administrative area of SDCC

LCT	Location / Context	Key Characteristics
Foothills LCT	Across South Dublin County; below Limestone Farmlands LCT (east), Urban Fringe/Peri urban LCT (centre/west), Dublin Hills (south)	Elevation 100–200 m AOD; bedrock of sandstone, shales, greywackes; landcover mainly pasture/rough grazing; dispersed rural housing with single-storey farmhouses and vernacular round gate pillars; golf courses and forest walks present
Limestone Farmlands LCT	Rural setting north of Site, above N7 Dublin–Limerick road	Gently undulating low-lying land (<100 m AOD); limestone bedrock; land use includes tillage and pasture; generally dispersed settlement; areas near N7 include industrial/business parks

LCT	Location / Context	Key Characteristics
Urban Fringe / Peri-urban LCT	Around Rathcoole and Saggart	Built land around historic settlements; nucleated villages/towns with historic cores; surrounded by 20th-century residential development and recent developments in past two decades
Historical Urban LCT	Within Rathcoole and Saggart (2 km Study Area)	Nucleated settlements with historic cores, often early Christian or medieval origins; includes Newcastle, Rathcoole, Saggart
Hills LCT	South of Study Area, east–west across County	Elevation >200 m; similar bedrock to Foothills; increasing forestry (coniferous plantations); sparse settlement with elevation; recreational forest walks present
Other LCTs	South Dublin County	Includes River Valley, Canal, Mountains, Transport Corridors, and Green Spaces

The LCTs provide information which will be considered as part of any future LVIA for this Proposed Development, such as the landscape sensitivity of each throughout the administrative area of SDCC. According to Appendix 9 of the CDP, sensitivity is used as a term to measure a landscape's *"sensitivity to development and capacity to accommodate development activities".* A landscape with a high sensitivity having a low capacity for new development while a landscape with a low sensitivity has a higher capacity for new development. The sensitivity categories of LCTs within the administrative area of SDCC are illustrated in Plate 19.2; as observed, the Proposed Development Site sits within an area of medium to high sensitivity.

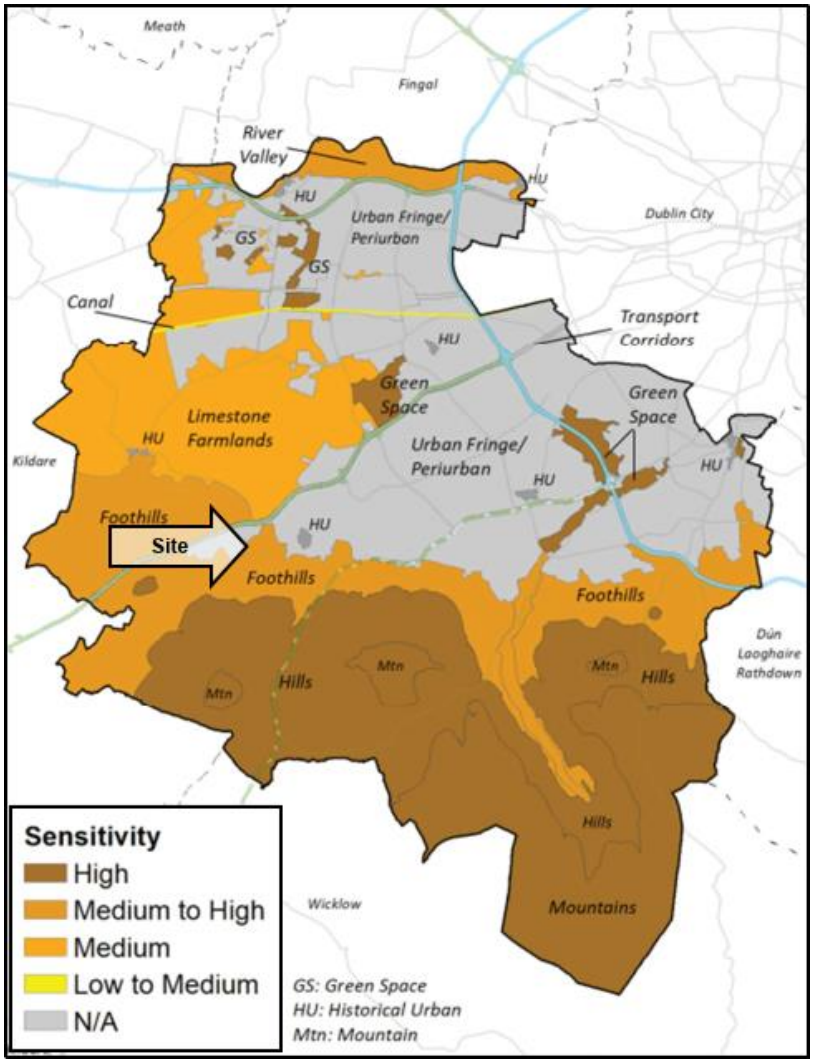


Plate 19.2: Landscape Sensitivity within the administrative area of SDCC and approximate Proposed Development Location (Source: extract of CDP Appendix 9 p.91)

19.4.1.2 Landscape Character Areas

Appendix 9 of the CDP also identifies the different Landscape Character Areas (LCAs) in the county. Note that there may be several LCTs within each LCA. The LCA provides an insight into the areas capacity for change by considering the ability of the landscape to accommodate different amounts of change without the loss of the intrinsic character of its landscape.

In addition to landscape sensitivity categories for the overall administrative area of SDCC, the CDP also includes 'LCAs of Sensitivity' (refer to Plate 19.3). In association with these areas, the CDP establishes **Policy NCBH14** (Landscapes) which seeks to: *"Preserve and enhance the character of the County's landscapes, particularly areas that have been deemed to have a medium to high Landscape Value or medium to high Landscape Sensitivity and to ensure that the landscape considerations are an important factor in the management of development".* This map and policy will be used to assess the Proposed Development impact as part of a LVIA to be carried out for the EIAR.

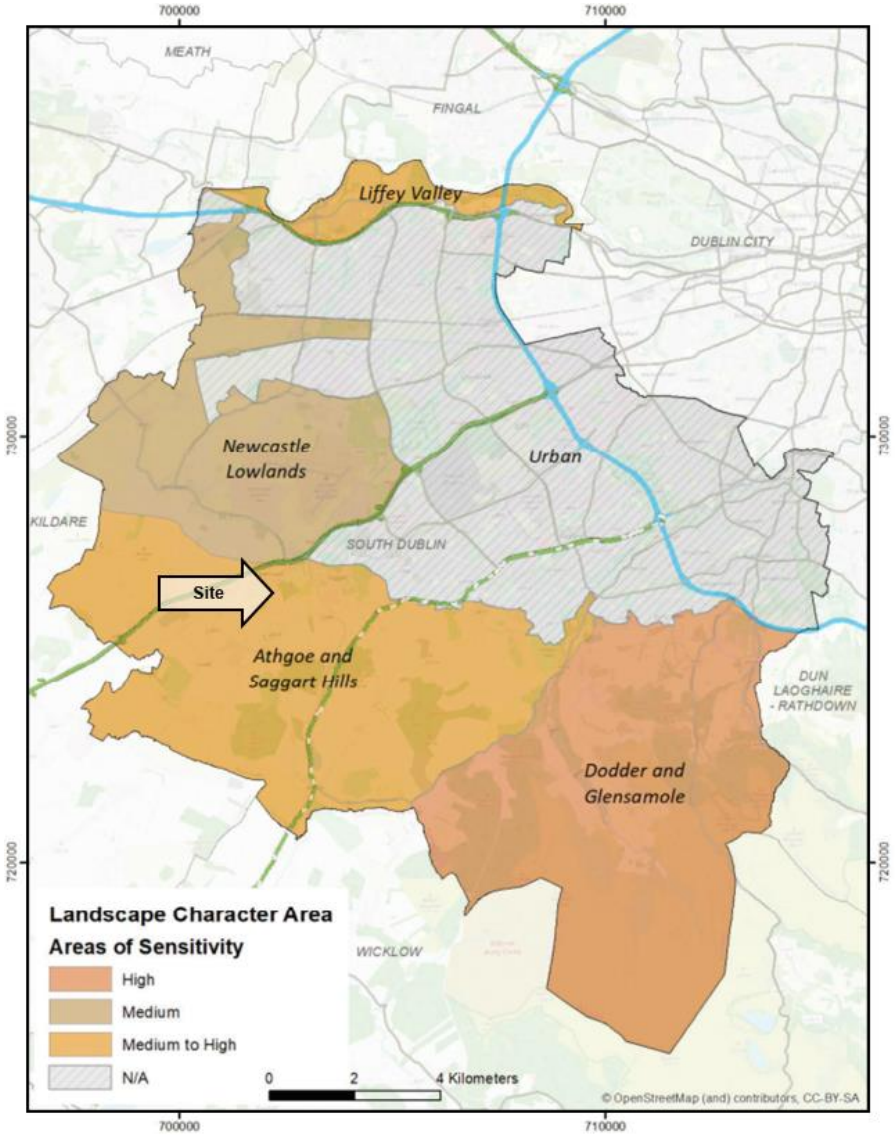


Plate 19.3: LCAs of Sensitivity within the administrative area of SDCC and approximate Proposed Development Location (Source: extract of CDP p.112)

The Proposed Development Site and its immediate surroundings sit within the LCA of 'Athgoe and Saggart Hills' which has a medium to high landscape sensitivity. The wider 2 km Study Area covers two additional LCAs: the area north of the N7 road is within 'Newcastle Lowlands' (which is a landscape of medium sensitivity), and the area of South Dublin to the east of the study area is defined as 'Urban' so it does not have a defined landscape sensitivity.

The LCAs are described in detail within SDCC's Landscape Character Assessment (2022), the details of which can be found in Appendix 9 of the CDP. The key characteristics and details of the LCAs Sensitivity and Principals for Development are outlined in Table 19-12 and Table 19-13.

Table 19-12: Newcastle Lowlands LCA - Summary of Key Characteristics

Category	Key Characteristics
Topography and Landform	Low-lying and gently undulating agricultural lands over limestone; rolling hills and foothills shaped by glacial activity.
Enclosure and Field Pattern	Predominantly pasture with some tillage; areas of forestry and hedgerow networks; agricultural land-use dominant.
Land Use and Cover	Grand Canal and railway corridor traverse east–west; proximity to motorways, national and regional roads; two aerodromes at Weston and Baldonnel.
Cultural and Built Heritage	Long history of settlement; medieval landscape complex around Newcastle village; number of demesnes and former country houses (e.g., Peamount, Baldonnel) often reused.
Ecology	Supports diverse habitats including woodlands, grasslands, and riparian zones.
Historical Features	Prehistoric and medieval settlement patterns; archaeological features such as standing stones and ringforts; historic field boundaries and rural road networks.
Landscape Sensitivity and Value	Landscape Sensitivity: Medium to high; Landscape Value: High (scenic views, biodiversity, cultural heritage).
Development Capacity and Planning Principles	Classified as a 'Landscape for Change' – can accommodate carefully managed development; development must respect topography and visual character and protect ecological corridors and historic features.

Table 19-13: Athgoe and Saggart LCA - Summary of Key Characteristics

Category	Key Characteristics
Topography and Landform	Flat to gently undulating terrain typical of lowland agricultural landscapes; long views across surrounding lowlands to the north and east.
Enclosure and Field Pattern	Enclosure varies: open and expansive on hills (Athgoe, Saggart) to more intimate, enclosed areas on slopes with high earth banks and hedgerows; medium to large rectangular field patterns with evidence of recent removal/rationalisation of boundaries.
Land Use and Cover	Dominated by pasture and arable farmland; hedgerows, tree lines, and occasional woodland patches; sheep grazing.
Cultural and Built Heritage	Round pillars associated with vernacular style; Newcastle village designated as an Architectural Conservation Area; vernacular rural structures.
Ecology	Hedgerows and field boundaries function as important ecological corridors.
Historical Features	Rich in archaeological features, including historic field systems; heritage of rural settlement patterns.
Landscape Sensitivity and Value	Landscape Sensitivity: Medium; Landscape Value: Moderate to high (rural character, ecological features, cultural heritage).
Development Capacity and Planning Principles	Classified as a 'Landscape for Change' – can accommodate sensitive development; development must protect open landscape, preserve field patterns, integrate with rural settlement, avoid disruption to ecological corridors, and protect local built heritage.

19.4.1.3 Specific CDP Local Objectives

Appendix 8 of the CDP outlines the Specific Local Objectives for the administrative area of SDCC for each of the CDP's Chapters. The following are relevant to the Study Area:

- **Natural, Cultural and Built Heritage (NCBH 19 SLO 3)**: the CDP highlights the need to protect Glebe House (RPS Ref. 313), a former Mary Mercer Trust Charter School for Girls on Main Street (Rathcoole).

- **NHAs**: the Slade of Saggart and Crooksling Glen, located within the Study Area, is identified as a pNHA. SDCC's policy seeks to protect the ecological, visual, recreational, environmental, and amenity value of such areas and their associated habitats and species.
- **Green Infrastructure (GI7 SLO 2 and GI7 SLO 1)**: Protect and enhance the Alluvial Rathcoole Woodlands within the Rural and Agriculture (RU) zoning, recognising their value as green infrastructure and their potential linkage to Lugg Woods, Slade Valley, and other amenity areas. Sensitive passive amenity uses may be supported, subject to their Annex 1 status. RU zoning seeks to protect rural amenity and support agricultural use.

  Maintain a key green infrastructure link between Saggart and Rathcoole through Rathcoole Park (refer to Plate 19.4). This forms part of the wider River Camac Corridor (refer to Plate 19.5), a primary green infrastructure corridor marking the transition between urban and rural South Dublin.

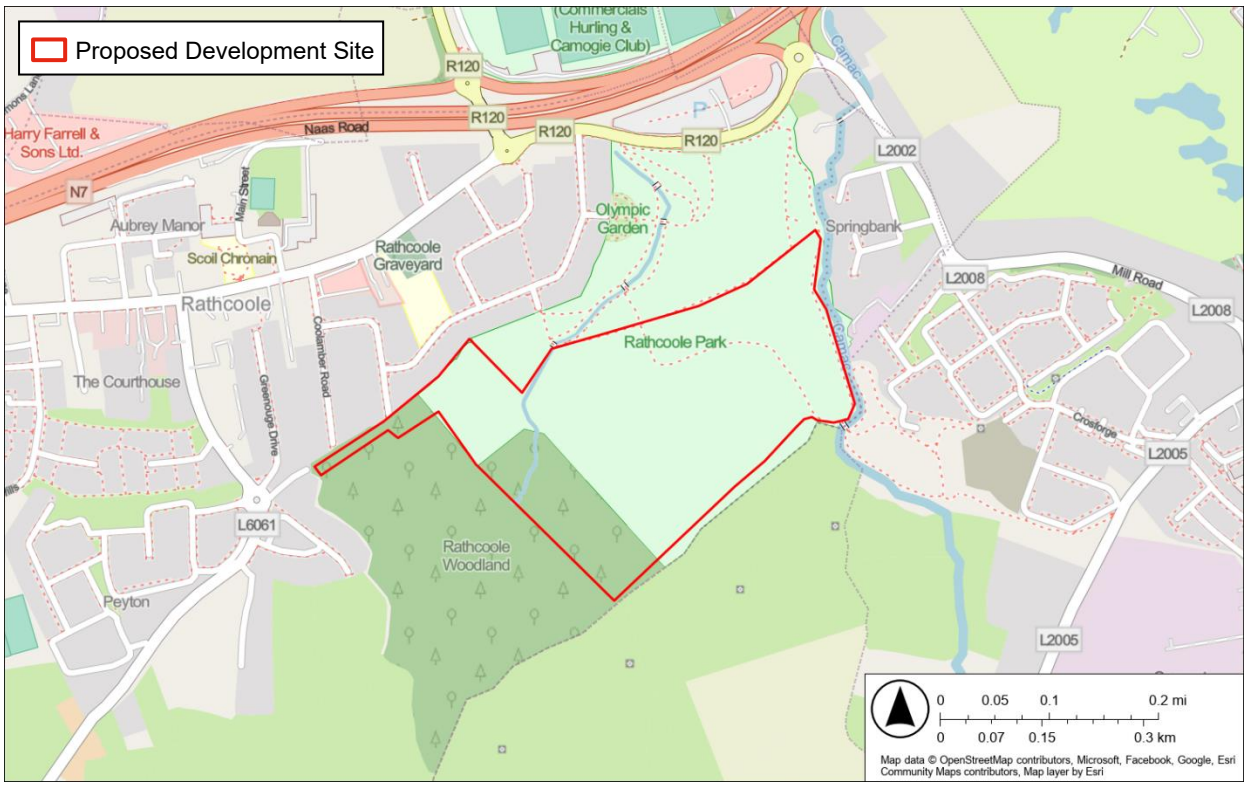


Plate 19.4: Proposed Development Site in relation to Rathcoole Park

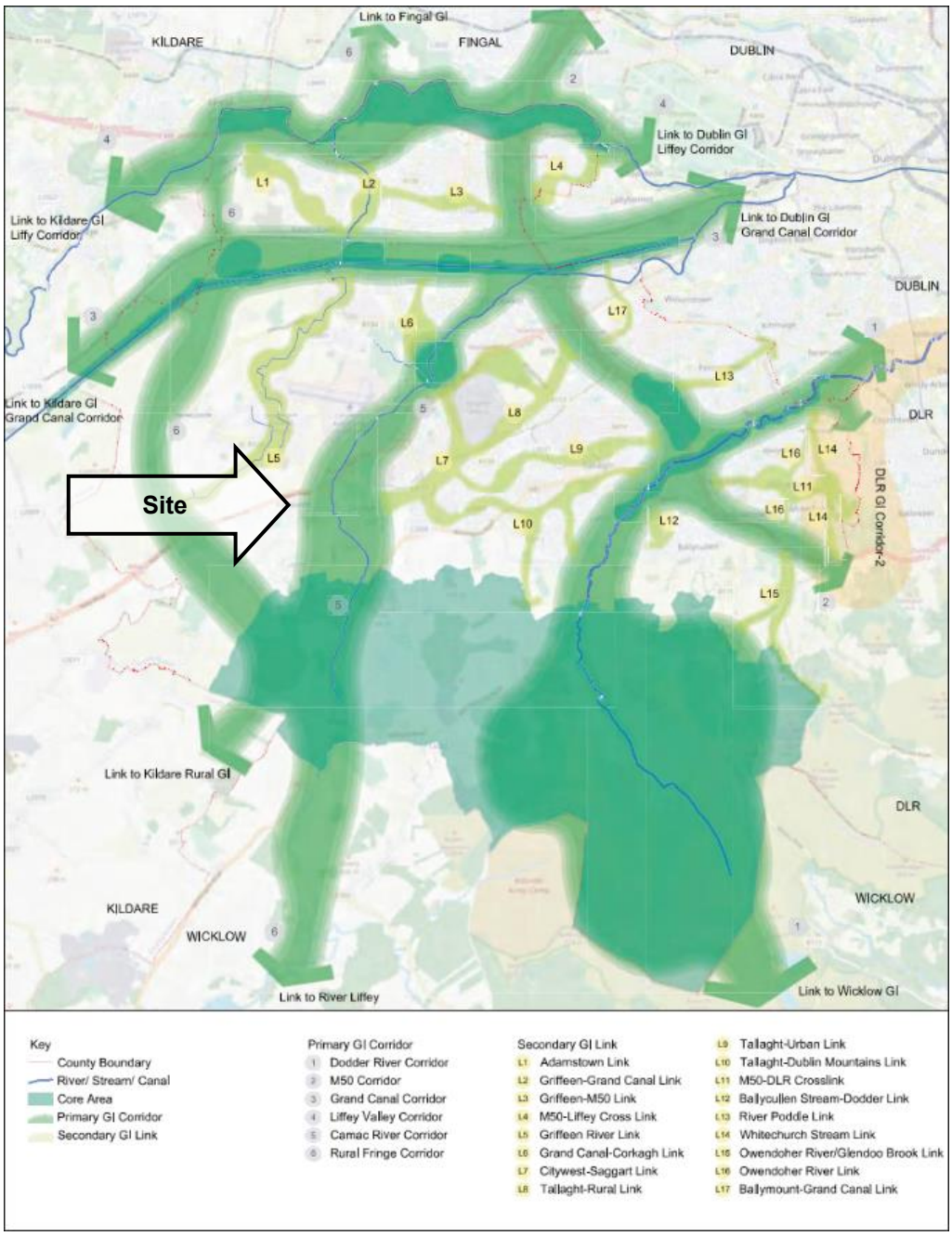


Plate 19.5: Proposed Development Site in relation to the River Camac Primary Green Infrastructure Corridor (Source: extract of CDP p.163)

- Zoning Objectives and Specific Local Objective: the CDP identifies zoning and specific objectives for the western part of the County, including the Proposed Development Site. The wider 2 km Study Area is covered by Land-Use Zoning Maps no. 07, 08, 11a, and 11, which also highlight the presence of 'Protected and Preserved Significant Views'.

A full review of all zoning objectives, scenic views, and prospects will be undertaken as part of the LVIA.

19.4.1.4 Summary of the Landscape Baseline

The landscape baseline describes the existing context against which potential effects of the Proposed Development will be assessed. The Site lies on greenfield land to the south of Rathcoole, gently sloping from 136 m AOD in the south to 124 m AOD in the north, with a shallow gradient of approximately 12 m across the Site. The River Camac forms the eastern boundary, while the Crockshane (Slade) Stream runs along the southern boundary. A dry drainage ditch and a nearby pond, as well as Saggart and Boherboy Reservoirs, contribute to the Site's hydrological features.

The Site sits within the Athgoe and Saggart Hills Landscape Character Area to the south and northwest and is adjacent to the Newcastle Lowlands LCA to the northeast. Land cover includes regenerated alluvial woodland, areas of immature woodland, hay meadows, orchid-rich grasslands, and established hedgerows along watercourses. Informal walking paths cross the Site, connecting to local recreational networks.

The surrounding context includes residential areas in Rathcoole to the north and the village of Saggart to the east, with Newcastle located approximately 2.8 km to the north. The Site is close to major transport routes including the N7 and M50, and local roads linking villages, business parks, and recreational amenities. The area contains cultural heritage assets such as Rathcoole House, Mercer's Charter School, the Old Courthouse, Swiftbrook Paper Mill, Saggart Castle ruins, and historic bridges. Recreational amenities include Rathcoole Park, sports pitches, a golf course, National Cycle Network routes, and the Slade Valley Trail.

Overall, the landscape is a mix of gently undulating lowlands, foothills, watercourses, semi-natural vegetation, and urban-fringe settlements, providing a setting of moderate to high landscape and visual sensitivity.

19.4.2 Visual Amenity

19.4.2.1 Scenic Views and Prospects

Chapter 3 of the CDP identifies scenic views and prospects of places of natural beauty or special interest across the administrative area of SDCC. These include:

- Long-Distance Prospects:
  - Prospect Points 4 (Slade), 5 (Coolmine), 7 (Crooksling), and 8 (Saggart Hill) on the hills south of Saggart, offering potential views towards Rathcoole (approximately 1.6 to 3.4 km southeast).
  - Prospect Points 1 (Athgoe Castle, approximately 3.6 km), 2 (Busty Hill, approximately 3.9 km), and 3 (Windmill Hill, approximately 3.9 km) west of Rathcoole, with possible views towards Rathcoole.
- Scenic Routes:
  - From Saggart Hill over the Slade Valley (popular recreational area).
  - From west of Rathcoole towards Athgoe Hill.
- Local Views:
  - View northwest over Rathcoole village from hill slopes above Coolmine (approximately 1.3 km).
  - View northwest over Rathcoole village from N81 Blessington Road, south of Saggart (approximately 1.5 km).



Plate 19.6: Panoramic view west and north from Saggart Hill – Scenic Route and Prospect (Source: Appendix 9 of the CDP p. 163)

19.4.2.2 Zone of Theoretical Visibility Mapping

As part of the LVIA, a terrain-based Zone of Theoretical Visibility (ZTV) will be produced for the 2 km Study Area to identify locations from which the Proposed Development may be visible.

The results of the ZTV analysis will provide the basis for selection of key VPs from which to study in the visual and landscape impact of the Proposed Development. For the purpose of this Scoping Report, a general indication of appropriate VPs will be discussed.

VPs should represent a variety of location types that would provide views of the Proposed Development from different distances, different angles and different contexts. These locations are significant because they comprise, for example, centres of population and important communication routes whether due to traffic volume or their scenic value. Considerations include the following:

- Key views - from features of international or national importance;
- Amenity views from important heritage or amenity locations;
- Designated scenic routes and views;
- Local community views;
- Centres of population; and
- Major routes.

19.4.3 Assessment of Visual Effects

A range of views should consider close distance (adjacent streets to the Proposed Development), middle distant views (within Rathcoole and Rathcoole Park), and long distances (as identified from Prospect points identified in the Dublin County Council's (DCC) CDP). Receptor will largely comprise of local residents, recreational users, and road users. Some VPs may be applicable to several receptor categories, in which case, they will be assessed under the group that best reflects that location's particular sensitivities.

For the LVIA, fieldwork will be undertaken using the broad set of potential VPs in order to systematically identify those that would actually provide a view of the Proposed Development and those from which potential views would be screened by vegetation or structures. It is also an opportunity to experience the character and features of each location and make initial value judgements in relation to the sensitivity and therefore the significance of each VP. The actual VP used to carry out the assessment for a given location may not be at the centre of a town or village or fall within a particular designation in a County Development Plan. The VPs will be used to represent such areas, locations or routes that are close by but which perhaps do not provide as clear a view. Where two or more potential VPs are within close proximity to each other, the most sensitive VP may be selected in lieu of the others to represent the visual impact from that general viewing distance and angle.

Table 19-14 provides an indication of preliminary VP and the applicable receptor types associated with each.

Table 19-14: Athgoe and Saggart LCA - Summary of Key Characteristics

Distance from Proposed Development	Name	Receptor type
Close	Range of views from within the Site	Amenity view from amenity location/ Local community views
Close	Location within Rathcoole Park	Amenity view from amenity location
Close	Public green adjacent to the site	Amenity view from amenity location/ Local community views
Close	Beechwood Lawns (residential road adjacent to the northern boundary of the Proposed Development)	Local community views

Distance from Proposed Development	Name	Receptor type
Close	Rathcoole Park Road (residential road adjacent to the eastern boundary of the Proposed Development)	Local community views.
Close	Saggart from the opposite bank of the Camac River to the Site	Amenity view from scenic location.
Middle	Coolmine Road	Main route. Local community views.
Middle	N7 Naas Road	Main route. Local community views.
Middle	Stoney Hill Road	Main route. Local community views.
Long	Hillside of Coolmine Covert (hill to the south of the site above Coolmine Road)	Identified Prospect from the CDP. Amenity view from amenity location.
Long	Saggart Hill (hill to the south of the Site)	Identified Prospect from the CDP. Amenity view from amenity location.
Long	Windmill Hill (hill to the east of the Site)	Identified Prospect from the CDP. Amenity view from amenity location.
Long	Athgoe Castle (hill to the northwest of the Site)	Identified Prospect from the CDP. Amenity view from amenity location. Amenity view from heritage location.

19.5 Potential Significant Impacts

An assessment of the potential impacts on landscape and visual receptors during the construction and operational phases of the Proposed Development will be undertaken.

A summary of potential change resulting from the Proposed Development and with the potential to result in construction and operational phase landscape and visual impacts is provided in the following sections.

19.5.1 Construction Phase

The construction phase of the Proposed Development may result in the following temporary impacts which have the potential to result in significant effects on the landscape and visual receptors:

- Physical change to the landscape or to views as a result of introduction of temporary construction compounds, material storage areas, access tracks, etc.
- Change to the landscape or views as a result of the introduction of construction activity, both stationary and moving machinery and vehicles, and traffic management elements.
- Temporary clearance of vegetation to facilitate construction access and/ or compounds or to construct the Proposed Development.
- Lighting.

19.5.2 Operational Phase

Operational phase impacts resulting from the Proposed Development with the potential to result in significant effects on landscape and visual receptors include:

- Permanent change to land cover and land use, with replacement of greenfield or semi-natural areas by built development.

- Loss or fragmentation of alluvial woodland and parkland character, affecting biodiversity, ecological connectivity, and the green infrastructure network.
- Alteration of landscape character through the introduction of urban form, density, and associated infrastructure.
- Visual intrusion from new housing, particularly where visible from designated Scenic Routes, local VPs, and surrounding elevated areas.
- Changes to skyline and views, with potential interruption of open vistas or prospects towards the Athgoe and Saggart Hills.
- Lighting and night-time visual effects, introducing artificial illumination into darker rural edges.
- Pressure on recreational and amenity value of adjacent parkland and woodland areas, with potential to reduce their perceived natural quality.
- Potential loss of tranquillity and sense of place, due to increased activity, traffic, and human presence within and around the site.
- Cumulative changes to settlement pattern, reinforcing suburban expansion and reducing separation between Rathcoole, Saggart, and Newcastle.

19.6 Conclusion

The Study Area is a sensitive transitional landscape on the northern fringe of the Dublin Mountains, influenced by rural, natural, and urban elements. It contains valued ecological habitats, protected heritage features, and scenic views recognised within the CDP. The Proposed Development lies within the Athgoe and Saggart Hills LCA, of medium–high sensitivity and high value, with the Newcastle Lowlands LCA to the north of medium sensitivity and moderate–high value.

This scoping has identified potential for both temporary construction impacts (including compounds, machinery, vegetation clearance, and lighting) and permanent operational impacts (such as urbanising effects on land cover and character, loss of ecological connectivity, visual intrusion in scenic views, and cumulative settlement expansion). The forthcoming LVIA will be required to evaluate these impacts in detail, supported by ZTV analysis, fieldwork, and assessment from representative VPs. It will also consider mitigation and design measures to reduce or positively integrate the Proposed Development within its wider landscape setting.

20. Major Accidents & Disasters

20.1 Introduction

The 2014 EIA Directive introduced the requirement for an assessment of the risk of major accidents and disasters into the scope of an EIA. As explained by the below recital of the EIA Directive:

> *"In order to ensure a high level of protection of the environment, precautionary actions need to be taken for certain projects which, because of their vulnerability to major accidents, and/or natural disasters (such as flooding, sea level rise, or earthquakes) are likely to have significant adverse effects on the environment. For such projects, it is important to consider their vulnerability (exposure and resilience) to major accidents and/or disasters, the risk of those accidents and/or disasters occurring and the implications for the likelihood of significant adverse effects on the environment."*

Article 3 of the EIA Directive requires that the vulnerability of a project to *"the risk of major accidents and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge"* is assessed. In Annex IV of the EIA Directive, this requirement is extended to cover *"… (d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters) …"*.

Annex IV, point 8 of the EIA Directive requires a *"description of the expected significant adverse effects of the project on the environment deriving from the vulnerability of the project to risks of major accidents and/or disasters which are relevant to the project concerned"*.

Therefore, the EIAR chapter will examine the degree to which the Proposed Development is at risk from, or of causing, major accidents and disasters including taking account of existing assessments under other regimes where applicable.

20.2 Potential Significant Effects

The EPA Guidelines do not suggest any matters under the heading of major accidents and disasters that are commonly considered in an EIAR. It is proposed that the EIAR chapter covers the following matters:

- The vulnerability of the Proposed Development to natural disasters or a major accident from existing sources of hazards;
- The risk of the Proposed Development creating a new source of a major accident; and
- The environmental consequences of these events, should they take place.

20.3 Assessment Methodology

The potential impacts will be assessed as per the methodology for the assessment of significant affects-evaluation criteria in the EPA Guidelines.

A risk analysis-based methodology will be used in the assessment scope, covering identification, likelihood and consequence of major accidents and/ or natural disasters. The assessment of the risk of major accidents and/ or disasters will consider all factors defined in the EIA Directive, i.e., population and human health, biodiversity, land and soil, water, air quality, climate change, material assets, cultural heritage, and the landscape. The approach is based on the EPA's *'Guidance on Assessing and Costing Environmental Liabilities'* (2014) and the DEHLG's '*Guide to Risk Assessment in Major Emergency Management'* (2010).

20.4 Baseline

The Study Area for the purposes of identifying risk of major accidents and disasters is the Proposed Development Site extent. The distance and buffers used for the assessment will be informed by professional judgement aligned with experience from assessment of potential major accidents and disasters at similar facilities. The assessment will also take into consideration the Study Areas from other chapters of the EIAR.

The Study Area and receptors will be kept under review as the Proposed Development progress through the process of preparing the EIAR as more information becomes available, but it is likely to comprise the Proposed Development Site itself.

There are several categories of weather-related hazard with the potential to cause a natural disaster. This includes:

- Extreme rainfall events and subsequent flooding;
- Strong winds;
- High temperatures, heat waves and drought;
- Snow and ice; and
- Lightening.

Met Éireann[42] documented that was *"provisionally the fourth warmest year on record in Ireland"* since the beginning of records in 1900, with seven of the ten warmest years having occurred since 2005. It also notes that *"Ireland experienced seven named storms in 2024, which brought strong winds and heavy rainfall"*, with two storms (i.e., Isha and Darragh) producing *"violent storm-force winds, while other storms brought notable impacts, including heavy rain, flooding, and coastal erosion"*.

As noted within the EPA's *'National Climate Change Risk Assessment'* (NCCRA) (2025), the frequency and severity of extreme weather events has changed, with projections indicating that Ireland's climate will continue and intensify. The NCCRA identifies four priority risks needing more action:

- *"Risk of disruption and damage to energy transmission and distribution infrastructure due to extreme wind;*
- *Risks of disruption and damage to communication infrastructure due to extreme wind;*
- *Risk of disruption, damage, and loss of transport infrastructure due to sea level rise, coastal erosion, and coastal flooding; and*
- *Risk of damage and loss of buildings due to sea level rise, coastal erosion, and coastal flooding."*

More specifically, according to SDCC's *'Climate Action Plan 2024-2019'* (2024), severe windstorms, river flooding and pluvial flooding pose the highest levels of risk for South Dublin in the current period. In addition, *"heatwave, drought, cold spell and heavy snowfall have also impacted South Dublin, but less frequently and hence are a lower risk"*.

Geological hazards such as ground instability, landslides and ground collapse and sinkholes can result in natural disasters. However, according to the GSI Maps[43], no previous landslide events or karst features are documented within the locality of the Proposed Development and landslide susceptibility within the Proposed Development Site and immediate surrounding environs is low. Data from the Irish National Seismic Network indicate that earthquakes in Ireland are rare and of minor strength[44].

[42] Met Éireann (2025), *'Ireland's Climate 2024 Provisional Summary Report'*. Available at: https://www.met.ie/irelands-climate-2024-provisional-summary-report/ [Last accessed: September 2025]
[43] GSI (2025), *'Data and Maps'*. Available at: https://www.gsi.ie/en-ie/data-and-maps/Pages/default.aspx [Last accessed: September 2025]
[44] Irish National Seismic Network (2025), *'Catalogue of Local Earthquakes'*. Available at: https://www.insn.ie/confirmed/. [Last accessed September 2025]

The Global Facility for Disaster Reduction and Recovery (GFDRR) ThinkHazard! Tool[45], which provides information for the overall Dublin region, identifies coastal flooding as a potential 'high' risk hazard, with tsunami and wildfires considered 'low' risk; all other types of hazards (e.g., river and urban flooding, landslides, extreme heat, etc.) are considered 'very low' risk hazards.

A detailed baseline will be provided as part of the major accidents and disaster chapter of the EIAR.

[45] Available at: https://thinkhazard.org/en/report/1587-ireland-dublin [Last accessed September 2025]

21.Cumulative Effects

The EIA Directive states an EIAR should contain:

> *"A description of the likely significant effects of the project on the environment resulting from…the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources."*

Therefore, the EIA Directive makes clear that the description of the likely significant effects should cover cumulative effects.

The two types of cumulative effects will be assessed in the EIAR as follows:

- Interactions of several impacts arising from the Proposed Development (refer to Chapter 21: Interactions): these are effects resulting from the interaction of several different impacts (e.g., noise, air quality, etc.) arising from the Proposed Development that may collectively cause an effect or increase the magnitude of existing effects on any single environmental receptor. Individually, the effects resulting from these impacts may not be significant, but the accumulation of effects may collectively cause an overall significant effect; and
- Cumulative effects of the Proposed Development with other existing or permitted projects: these occur when the environmental impacts of the Proposed Development interact with those associated with other planned projects and developments located within a realistic geographical and temporal scope, where environmental impacts could act together to result in a greater effect on environmental receptors.

For clarity, cumulative effects of the Proposed Development with other existing or permitted projects will be examined and assessed in the technical chapters, whereas interactions will be assessed in their own dedicated chapter of the EIAR.

A four-stage approach for undertaking a cumulative effects assessment with regard to other permitted projects is proposed:

- **Stage 1 – Long List**: a long list of third-party schemes will be drawn up using information provided by the Applicant and sourced from the planning applications lodged with SDCC and national projects determined by ACP. This will include third party schemes that may be under construction or become operational in the same timeframe as the Proposed Development;
- **Stage 2 – Short List**: an initial sift of the long list of schemes will be undertaken to eliminate those unlikely to interact with the Proposed Development by virtue of their nature, size, geographical, or temporal scope, the zone of influence of environmental effects attributable to the Proposed Development, and the nature of the receiving environment;
- **Stage 3 – Information Gathering**: details of the design and location of short list schemes will be collected. Any available environmental information will be identified and consulted to inform the assessment stage; and
- **Stage 4 – Assessment of Cumulative Effects**: the assessment of cumulative effects will be undertaken as part of the EIAR.

Preliminary applications with potential to result in cumulative effects with the Proposed Development include (but are not limited to):

- **SDCC Pl. Ref. SD23A/0336 / ACP Pl. Ref. 321696:** granted permission on 19 May 2025, this application involves the construction of a new primary school and associated works (e.g., new access road). This site is contained within the Proposed Development Site boundary (to the northwest).

- **SDCC Pl. Ref. SD24A/0092W / ACP Pl. Ref. 322539:** located at a site approximately 160 m southeast of the Proposed Development, decision is pending for this residential development which seeks to build 73 no. residential units set around a central amenity space.
- **ACP Pl. Ref. 312501:** permission was granted on 2 August 2022 for a residential development consisting of 274 no. residential units, a creche, and associated site works at a site located approximately 170 m northeast of the Proposed Development.
- **SDCC Pl. Ref. SD22A/0323 and SD24A/0048:** permission was granted on 12 September 2023 for this application, with subsequent changes also granted permission on 10 June 2024. Located approximately 210 m northwest of the site, this application involves the construction of 14 no. residential units and associated works.
- **SDCC Pl. Ref. SD23A/0100:** permission was granted on 20 February 2024 for a solar farm and associated works within a site of 6.7 ha located approximately 400 m northeast of the Proposed Development.
- **SDCC Pl. Ref. SD21A/0230:** permission was granted on 29 November 2021 for the construction of two logistics/ warehouse units, including car parking, landscaping, photovoltaic panels, internal roads, etc., at a site located approximately 490 m north of the Proposed Development.
- **SDCC Pl. Ref. SD24A/0187W / ACP Pl. Ref. 321950:** permission was granted on 15 July 2025 for Primary Care Centre building and associated site works at a site located approximately 590 m east of the Proposed Development.
- **SDCC Pl. Ref. SD22A/0457 / ACP Pl. Ref. 317989:** permission was granted on 22 December 2020 for the construction of 224 no. apartments and associated site works at a site located approximately 1 km northeast of the Proposed Development.
- **ACP Pl. Ref. 308088:** permission was granted on 3 September 2024 for a cemetery located approximately 880 m northeast of the Proposed Development.
- **SDCC Pl. Ref. SD21A/0087 / ACP Pl. Ref. 310688:** permission was granted on 4 March 2022 for construction of a residential development with 98 residential units at a site located approximately 1.2 km west of the Proposed Development.
- **SDCC Pl. Ref. SD23A/0286:** permission was granted on 15 October 2024 at the Greenogue Recycling site (located approximately 1.2 km north of the Proposed Development) for the demolition of the existing structures and construction of seven warehouse units, including all other ancillary works.

The Applicant would welcome comment on the list above and any additional schemes that consultees are aware of, taking into consideration that a full search of proposed and planned application within 2 km of the Proposed Development will be carried out at a later stage for the EIAR. Other schemes will be identified based on a ‘zone of influence’ approach, once it is understood what the environmental zone of influence of the Proposed Development comprises.

22.Interactions

This chapter of the EIAR will identify potential interrelationships and interactions between environmental aspects as addressed in the EIAR, i.e., interactions between one environmental section will have described the potential impact of the Proposed Development under a variety of different topic headings.

The purpose of this EIAR chapter will be to take a more holistic view of the inter-relations and interactions between different aspects of the Proposed Development and topics discussed in other EIAR chapters. This will ensure that there is adequate coverage in the EIAR of the potential for the Proposed Development to cause overall effects and potential cumulative impacts. This process will examine whether interactions between the different effects themselves may cause effects that are greater than those discussed individually.

This EIAR chapter will responds to the requirement of the legislation governing the EIA process for the cumulative effects and the inter-relationship or interaction between the various topics to be considered and described.

An example Interactions Table as per the EPA Guidelines (2022) is shown in Plate 22.1.

Interaction	Population & Human Health		Biodiversity		Land, Soils & Geology		Hydrology & Hydrogeology		Air Quality & Climate		Noise & Vibration		Landscape		Material Assets		Roads, Traffic & Transportation		Waste Management		Archaeology		Architectural Heritage	
	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con	Op
Population & Human Health			✘	✘	✘	✘	✘	✘	✘	✘	✓	✓	✓	✓	✘	✘	✓	✓	✘	✘	✘	✘	✘	✘
Biodiversity					✘	✘	✓	✘	✘	✘	✓	✘	✘	✘	✘	✘	✘	✘	✘	✘	✘	✘	✘	✘
Land, Soils & Geology							✔	✔	✘	✘	✘	✘	✘	✓	✘	✘	✘	✘	✘	✘	✓	✘	✘	✘
Hydrology & Hydrogeology									✘	✘	✘	✘	✘	✘	✔	✔	✘	✘	✘	✘	✘	✘	✘	✘
Air Quality & Climate											✘	✘	✘	✘	✘	✘	✓	✘	✘	✘	✘	✘	✘	✘
Noise & Vibration													✔	✔	✘	✘	✔	✓	✘	✘	✘	✘	✘	✘
Landscape															✘	✘	✘	✘	✘	✘	✘	✘	✓	✓
Material Assets																	✔	✔	✔	✔	✘	✘	✘	✘
Roads, Traffic & transportation																			✘	✘	✘	✘	✘	✘
Waste Management																					✘	✘	✘	✘
Archaeology																							✘	✘
Architectural Heritage																								

Con.	Construction Phase
Op.	Operational Phase
✘	No Interaction

✓	Weak Interaction
✔	Some Interaction
✔	Strong Interaction

Figure 3.5 Sample Matrix to show Interactions between Factors

Plate 22.1 : Proposed Development Site and Context (Source: EPA, 2022)

23. Conclusions

23.1 Introduction

This chapter describes the conclusions reached in the scoping process and sets out the proposed structure of the EIAR.

23.2 Scoping Conclusions

Table 23-1 summarises the key finds in relation to this EIA Scoping Report. More details are available within each of the technical discipline chapters within this report.

Table 23-1: Scoping Conclusions Summary

Topic Area	Scoping Conclusions Summary
All topics	Decommissioning phase: specific decommissioning assessments are not proposed to be undertaken given that, once operational, the Proposed Development is anticipated to be owned by different property owners and is therefore unlikely that residential units will be decommissioned all together at once at any given point. In the future, should any developer seek to significantly alter and/ or demolish any properties built under with the Proposed Development, and/or change the land use in open spaces and/or GAA pitches, a new planning application, which shall include all relevant documentation and assessments, will be required.
Chapter 7 – Population and Human Health	Scoped in: Population effects on construction employment, local spending, housing supply and social infrastructure. Human health and wellbeing effects on health and social care services, open space, play and leisure, transport modes, access and connections, economic environment, air quality, noise and vibration, landscape and visual amenity, climate change mitigation and adaptation, housing, community safety, social participation, interaction and support, and physical activity. Scoped out: Human health and wellbeing effects on risk taking behaviour, diet and nutrition, relocation, community identity, culture, resilience and influence, water quality and availability, radiation, built environment, and wider societal infrastructure and resources.
Chapter 8 – Biodiversity	Scoped in: habitats, routes and landscape features, mammals/ birds/ fish/ invertebrates/ reptiles (relevant species to be determined through desk and field study), vascular plants/ bryophytes/ lichens/ fungi (relevant species to be determined through desk and field study), critical resources, terrestrial/ aquatic/ marine (relevance to be determined through desk and field study), seasonality, existing management, ecosystem services, legal protection. Scoped out: population stability and population management.
Chapter 9 – Land and Soils	Scoped in: Land, soil and, geology assessment. Desktop information and limited soil investigation data from the geotechnical ground investigation will be used to assess baseline conditions and potential impacts. Scoped out: Agricultural capability.
Chapter 10 – Water (Hydrology and Hydrogeology)	Scoped in: Water (quantity and quality), ground, surface, estuarine and marine waterbodies, physical characteristics, chemical characteristics based on publicly available information only (chemical water sampling is not proposed as part of the EIA phase of the project), Q value's based on EPA data and aquatic baseline data collected by the project ecology team, beneficial uses, flooding (Stage 1 FRA). Scoped out: Hydromorphological changes will not be considered in the assessment. This aspect of the water environment will require assessment prior to construction. Chemical water sampling.
Chapter 11 – Air Quality	Scoped in: Construction dust emissions and operational traffic emissions. Scoped out: Non-Road Mobile Machinery and construction traffic emissions.
Chapter 12 – Climate	Scoped in: GHG emissions in lifecycle of project, macro climate change trends, carbon balance, CCRA, ICCI Scoped out: Acid rain, thermal pollution, microclimate changes trends.
Chapter 13 – Noise and Vibration	Scoped in: Construction noise and vibration, road traffic during construction and operation, site suitability for residential development. Scoped out: Operational vibration.
Chapter 14 – Cultural Heritage	Scoped in: Archaeology, architectural heritage, historic planned landscapes, folklore and history (intangible heritage).

Topic Area	Scoping Conclusions Summary
Chapter 15 – Material Assets (Built Services)	Scoped in: Energy, water, gas, and telecommunications infrastructure; electrical, gas, and water supply and usage; and public lighting. Scoped out: Drainage.
Chapter 16 – Material Assets (Waste)	Scoped out: Construction and operational waste.
Chapter 17 – Material Assets (Transport)	Scoped in: Construction traffic, operational traffic, road safety.
Chapter 18 – Landscape and Visual	Scoped in: Landscape appearance and character, landscape context including trees, hedgerows and woodlands, waterways context, views and prospects, landscape significance (designation and protection) and sensitivity, interactions with other environmental aspects, especially, biodiversity and ecology, interactions with historical landscapes and landscape assets.
Chapter 19 – Major Accidents and Disasters	Scoped in: Extreme rainfall events and subsequent flooding, strong winds, high temperatures, heat waves and drought, snow and ice, and lightening. Scoped out: Volcanic activity

23.3 Proposed Structure & Content of EIAR

A summary of the proposed structure of the EIAR, together with matters to be investigated, is set out below; please consult the topic chapters and the overall methodology above for further details.

1. Introduction
2. Need and Planning Policy
3. Site and Surroundings
4. Alternatives
5. Proposed Description
6. EIA Process and Methodology
7. Population and Human Health
8. Biodiversity
9. Land and Soils
10. Water
11. Air Quality
12. Climate
13. Noise and Vibration
14. Cultural Heritage
15. Material Assets (Built Services)
16. Material Assets (Transport)
17. Landscape and Visual
18. Major Accidents and Disasters
19. Interactions of the Foregoing
20. Schedule of Environmental Commitments

In addition, the EIAR will include a Non-Technical Summary of the above information, together with supporting technical appendices.

24. Scoping Request

In accordance with best practice guidance and based on the information presented within this EIA Scoping Report, we would welcome feedback and opinions in relation to the proposed content and methodology of the EIAR for the Proposed Development.

We are currently completing the baseline assessment phase and will shortly commence the impact assessment phase. We would therefore appreciate a response if relevant by end of November 2025, or earlier if possible.