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LANDS AT THE FORMER HOLY CROSS COLLEGE, CLONLIFFE ROAD, DUBLIN 3 AND DRUMCONDRA ROAD LOWER, DRUMCONDRA, DUBLIN 9

ENVIRONMENTAL IMPACT ASSESSMENT REPORT (EIAR) VOLUME 2: MAIN TEXT

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Environmental Assessment Built Environment

Client: CWTC Multi Family ICAV acting solely in respect of its sub fund the DBTR DR1 Fund

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1 Introduction

1.1 Overview

This Environmental Impact Assessment Report (EIAR) provides a statement of the effects that the proposed Large-scale Residential Development (LRD) at the former Holy Cross College, Clonliffe Road, Dublin 3 and Drumcondra Road Lower, Drumcondra, Dublin 9 ('the proposed development'), if carried out, would have on the environment.

This EIAR has been prepared in accordance with the provisions of the Planning and Development Act 2000, as amended ('PDA 2000'), the Planning and Development Regulations 2001, as amended ('PDR 2001') and the relevant guidance documents, as detailed herein.

1.2 The Applicant

The Applicant for the proposed development is CWTC Multi Family ICAV acting solely in respect of its sub fund the DBTR DR1 Fund.

1.3 The Proposed Development

1.3.1 Site of the Proposed Development

The site of the proposed development is located at Holy Cross College, Clonliffe Road, Dublin 3 and Drumcondra Road Lower, Drumcondra, Dublin 9 (refer to **Figures 1.1 & 1.2**). The overall area of the site is c. 8.71 ha, with a developable site area of c. 8.25 ha. The site is located c. 1.7 km north of Dublin City Centre. It is bound by Drumcondra Road Lower, Archbishop's House (a Protected Structure), Mater Dei College and Crosscare Family Hub to the west; Clonliffe Road to the south; Cornmill Apartments and Belvedere College Rugby Grounds to the east; and by the River Tolka and future GAA sports ground to the north.

The site is situated in the administrative area of Dublin City Council, in the townlands of Clonliffe East and Clonliffe West.

The proposed development sits as part of a site masterplan for a wider landbank which includes an under-construction hotel development off Clonliffe Road and potential future GAA facilities (which would be subject to future planning applications).

The site is located within the grounds of the former Holy Cross College seminary. These lands were acquired by the Archdiocese in 1859 and college facilities were developed. They housed a seminary for the Catholic Church in Ireland and administration offices for the Archdiocese and various diocesan activities. The seminary ceased operation in 2000. Thereafter, the site was predominantly used for offices and activities of the Archdiocese and charitable organisations, which occupied relatively little space in the large site, and they have now vacated the site. The land and buildings on the site are significantly underutilised at present.

The site comprises a number of green spaces and existing large institutional buildings (approx. 11,865 m^2) associated with its current / former use (some of which are Protected Structures). The site has many large mature trees, giving it a unique character in the context of the surrounding residential areas and busy roads. The northern portion of the site extending to the River Tolka is set back from the busy

Drumcondra Road, separated by large mature trees, while the southern part of the site fronts onto Clonliffe Road.

The site sits between the established residential communities of Drumcondra to the west and north and Clonliffe Road to the south. Both are established, mature suburbs of Dublin City with the surrounding area predominately developed. Apart from residential uses, the surrounding area also features other mix of uses, including scattered commercial / retail enterprise, light industrial and warehousing to the north, and sports facilities to the south-east (Croke Park), north-east (Belvedere Rugby ground, Dublin Port Stadium Stella Maris Football Club) and north (Shelbourne Football Club). The immediate area gives access to a range of public facilities including community centres, healthcare, libraries, shops and sports / recreation facilities.

The site is approximately 400m from the Drumcondra Rail Station to the south-west, and adjacent to Drumcondra Road, which is served by several public bus routes. As part of the *Greater Dublin Area* (GDA) *Transport Strategy 2022-2042*, there are planned improvements to both the road, public transport, walking and cycling networks within the vicinity of the proposed development site, which will directly benefit residents and visitors, further enhancing sustainable travel options. As described in the GDA Transport Strategy 2022-2042, the delivery of these projects shall be undertaken in phases - short-term projects (2022-2030), medium term (2031-2036) and longer term (2037-2042).These include Bus Connects Core Bus Corridor Dublin Swords to City centre Scheme (short-term), GDA's cycle network expansion (short-term), Dart+ West/South-west expansion (short-term) and new Metrolink (medium-term) that will run between Swords Estuary and Charlemont Station via Dublin Airport and the City Centre.

1.3.2 Overview of the Proposed Development

The development will consist of the construction of a residential development set out in blocks ranging in height up to 13 storeys, to accommodate 1131 no. apartments including retail and crèche units, residential tenant amenity spaces, community/cultural spaces, mobility hubs and public open space.

The proposed development sits as part of a Site Masterplan for a wider landbank which includes an under-construction hotel development and potential future GAA facilities. To facilitate the proposed development the scheme will involve the demolition of a number of existing structures on the site.

The application site contains a number of Protected Structures including The Seminary Building, Holy Cross Chapel, South Link Building, The Assembly Hall and The Ambulatory while the wider lands also include The Red House and the Archbishop's House (both Protected Structures). The application proposes the renovation and reuse of the Seminary Building and the South Link Building to accommodate residential units and the use of the existing Holy Cross Chapel, Assembly Hall and Cloister Garden for use as community/cultural uses.

The residential buildings are arranged around a number of proposed public open spaces and routes throughout the site with extensive landscaping and tree planting proposed. Communal amenity spaces will be located adjacent to residential buildings and at roof level throughout the scheme. To facilitate the proposed development the scheme will involve the removal of some existing trees on the site.

The site is proposed to be accessed by vehicles, cyclists and pedestrians from a widened entrance on Clonliffe Road, at the junction with Jones's Road and through the opening up of an unused access point on Drumcondra Road Lower at the junction with Hollybank Road. An additional cyclist and pedestrian

access is proposed through an existing access point on Holy Cross Avenue. The development will include both basement and podium parking under a number of blocks to accommodate car parking spaces, bicycle parking, storage, services and plant areas.

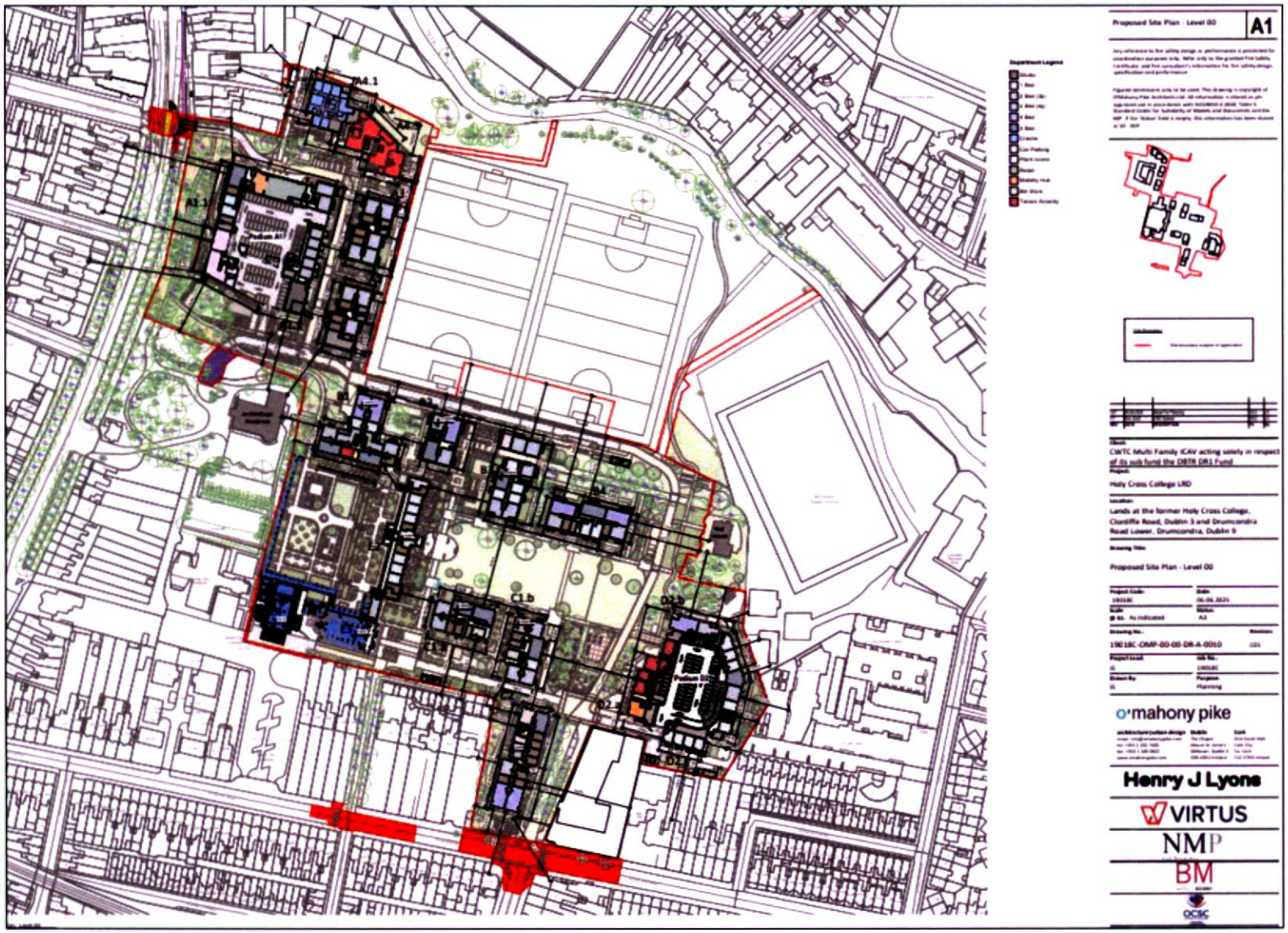
The proposed development includes all site landscaping works, green roofs, boundary treatments, lighting, servicing and utilities, signage, and associated and ancillary works, including site development works above and below ground.

Chapter 5 provides a detailed description of the proposed development.

Figure 1.1 Site location of the proposed development



Figure 1.2 Proposed site plan for the development (O'Mahony Pike, 2025)



1.3.3 Planning History

1.3.4 Planning History

A similar development, with a greater number of units to that proposed, was granted by An Bord Pleanála at the proposed development site, under the SHD process however was quashed following a Judicial Review ([2024] IESC 13).

- ABP Ref: TA29N.310860 (DCC Ref: SHD0015/21): Permission was sought by way of an SHD Application for the subject lands consisting of the demolition of a number of existing office/former college buildings on site and the construction of 12 no. residential buildings, ranging in height from 2 18 storeys to accommodate 1,614 BTR apartments with associated tenant amenity space, 1 no. retail unit, 1 no. café, 1 no. crèche and associated site development works.

1.4 Environmental Impact Assessment

Environmental Impact Assessment (EIA) is the *"process of examining the anticipated environmental effects of proposed project – from consideration of environmental aspects at design stage, through consultation and preparation of an Environmental Impact Assessment Report (EIAR), evaluation of the EIAR by a competent authority, the subsequent decision as to whether the project should be permitted to proceed, encompassing public response to that decision"*, as defined in the Environmental Protection Agency (EPA)'s 2022 *Guidelines on the information to be contained in Environmental Impact Assessment Reports* (Appendices, p. 73) ('the EPA guidelines'). The EIAR is prepared by the developer and is intended to assist the competent authority in carrying out of an EIA by reporting on the effects, if any, which the proposed development if carried out would have on the environment and includes the information specified in Article 5 and Annex IV of the EIA Directive.

An overview of the EIA process and steps involved is provided in **Table 1.1**. A detailed discussion of the EIA process is provided in Chapter 2.

Table 1.1 Overview of the EIA process

Stage	Description	Status
Screening	*Is an EIA required?*	Yes: Completed
Informal Scoping	Informal scoping, which has been considered throughout the preparation of the EIAR, assisted in identifying the significant issues which should be addressed in the EIAR, as well as the methods of carrying out the assessment	Completed
EIAR	This stage includes: ▪ Collection of baseline information ▪ Analysis of the proposed development ▪ Assessment of impacts ▪ Identifying appropriate mitigation and monitoring measures	Completed
Review & Decision	The EIAR accompanies the planning application to the planning authority (Dublin City Council) for determination of the application	Current Stage

Stage	Description	Status
Monitoring	Implementation of the proposed mitigation and monitoring measures	Implemented in case of development consent

1.5 Format & Structure of the Environmental Impact Assessment Report

This EIAR has been completed in accordance with the requirements as set out in the EIA Directive, (2011/92/EU), as amended by Directive 2014/52/EU and relevant guidelines and documentation. The composition of this EIAR is in accordance with EPA Guidelines (2022) which requires that information contained within an EIAR should be in accordance with Article 3(1), Article 5(1) and any additional information specified under Annex IV under the Directive 2014/52/EU. Refer to **Table 1.2** below for the structure of this EIAR.

Table 1.2 Structure of the EIAR

Section	Description
Volume 1:	**Non-technical Summary (NTS)**
A summary of the EIAR in non-technical language	
Volume 2:	**Main Report**
Chapter 1	Introduction
Chapter 2	The EIA Process
Chapter 3	Planning & Development Context
Chapter 4	Consideration of Alternatives
Chapter 5	Description of the Proposed Development
Chapter 6	Consultation
Chapter 7	Population & Human Health
Chapter 8	Biodiversity
Chapter 9	Land, Soils, Geology & Hydrogeology
Chapter 10	Hydrology
Chapter 11	Air Quality
Chapter 12	Climate
Chapter 13	Noise & Vibration
Chapter 14	Landscape & Visual
Chapter 15	Cultural Heritage - Architectural Heritage
Chapter 16	Cultural Heritage - Archaeology
Chapter 17	Microclimate – Daylight & Sunlight
Chapter 18	Microclimate – Wind
Chapter 19	Traffic & Transportation
Chapter 20	Material Assets – Waste
Chapter 21	Material Assets – Services
Chapter 22	Interactions
Chapter 23	Cumulative Impacts
Chapter 24	Mitigation Measures & Monitoring
Volume 3:	**Appendices**
Technical reference material supporting the EIAR chapters	

Article 5(1) and Annex IV of the EIA Directive and Article 94 and Schedule 6 of the PDR provides detail on the information to be included in an EIAR. **Table 1.3** provides a checklist of the information referred to in Article 5(1) of Annex IV and in Article 94 and Schedule 6 of PDR with a confirmation of where the relevant information is contained within the EIAR.

Table 1.3 Information required under Article 5(1) of Annex IV of the EIA Directive and Article 94 and Schedule 6 of PDR

Information Referred to in Article 5(1) of Annex IV of the EIA Directive and Article 94 and Schedule 6 of PDR	EIAR Section
1.Description of the project, including in particular:	
(a) a description of the location of the project;	Volume 2, Chapter 1
(b) a description of the physical characteristics of the whole project, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases;	Volume 2, Chapter 1 & Chapter 5
(c) a description of the main characteristics of the operational phase of the project (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used;	Volume 2, Chapter 5
(d) an estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation) and quantities and types of waste produced during the construction and operation phases.	Volume 2, Chapter 5 Volume 2, Chapter 7 to 21
2. A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied 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.	Volume 2, Chapter 4
3. A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the project as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.	Volume 2, Chapter 1, Chapter 4, Chapter 7 to 21
4. A description of the factors specified in Article 3(1) likely to be significantly affected by the project: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.	Volume 2, Chapter 7 to 24
5. A description of the likely significant effects of the project on the environment resulting from, inter alia:	
(a) the construction and existence of the project, including, where relevant, demolition works;	Volume 2, Chapter 7 to 24
(b) the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;	Volume 2, Chapter 7 to 24
(c) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;	Volume 2, Chapter 7 to 24
(d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);	Volume 2, Chapter 7, Chapter 15, Chapter 16 Chapter 2 (Section 2.5.1)
(e) 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;	Volume 2, Chapter 23

Information Referred to in Article 5(1) of Annex IV of the EIA Directive and Article 94 and Schedule 6 of PDR	EIAR Section
(f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;	Volume 2, Chapter 7 to 23
(g) the technologies and the substances used.	Volume 2, Chapter 5
The description of the likely significant effects on the factors specified in Article 3(1) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the project. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the project.	Volume 2, Chapter 7 to 24
6. A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.	Volume 2, Chapter 7 to 24
7. A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.	Volume 2, Chapter 7 to 24l
8. 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. Relevant information available and obtained through risk assessments pursuant to Union legislation such as Directive 2012/18/EU of the European Parliament and of the Council (*) or Council Directive 2009/71/Euratom (**) or relevant assessments carried out pursuant to national legislation may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.	Volume 2, Chapter 2 (Section 2.5.1), Chapter 7 to 24
9. A non-technical summary of the information provided under points 1 to 8.	Volume 1
10. A reference list detailing the sources used for the descriptions and assessments included in the report.	Volume 2, Chapter 7 to 24

1.5.1 EIAR Chapters Structure

Each of the chapters in Volume 2 of this EIAR, will be generally presented under the following headings:

Introduction

This section of each chapter provides an overview of aims and objectives of the chapter in assessing the proposed development and outlines the scope of the assessment.

Method

This section of each chapter provides detail on the guidelines and methodologies used to describe the baseline environmental conditions and to predict likely effects on the environment of the proposed development during both the construction and operational phase. The data and survey requirements

along with the study area for each chapter vary depending on the environmental topic and have been chosen by each specialist based on relevant legislation, best practise guidance, policy requirements, and professional judgement.

Baseline Environment

Each chapter provides a description of the existing environmental conditions, focusing on aspects of the project relevant to the individual assessment. This section describes the findings of the desktop assessment, field surveys and information gained through any consultations carried out.

Predicted Impacts

The main purpose of the EIAR is to identify, describe and evaluate the likely significant impacts of the proposed development on the environment both during construction and operational phase. Each specialist reviewed the details of the proposed development and along with the baseline information collected, predicted the impacts of the proposed development on the environment.

The EPA Guidance (2022) provides guidance on impact assessment methodology and has been describe further in **Section 1.6**.

Mitigation Measures

Each chapter provides a description of any specific mitigation measures envisaged to avoid, prevent, reduce or, if possible, offset any significant adverse effects on the environment identified under the assessment of potential impacts described above. Furthermore, Chapter 24 of the EIAR collates and summarises the mitigation measures that have been identified in the individual chapters.

Residual Impacts

The residual effects are the final predicted or intended effects which occur after the proposed mitigation measures have been implemented. Each chapter includes a section describing significant residual impacts that will continue to exist after mitigation has been implemented.

Monitoring

Each chapter includes a description (if any) of the proposed monitoring of effects on the environment which might be necessary, covering the monitoring methods and the agencies responsible for their implementation. Furthermore, Chapter 24 of the EIAR collates and summarises the monitoring measures that have been identified in the individual chapters.

Interactions

Each chapter of the EIAR provides a description of the key interactions and inter-relationships identified between the topics addressed within this EIAR. Chapter 22 of the EIAR provides an overview of the key interactions identified and addressed in the foregoing chapters of the EIAR.

Cumulative Impacts

Chapter 23 of the EIAR discusses the potential for cumulative impacts to arise as a result of the proposed development in combination with other projects. Each of the specialist contributors to this EIAR have considered the potential for cumulative impacts to arise, with particular reference to the projects listed in Chapter 23.

Difficulties Encountered

This section includes any limitations that may affect the reliability of baseline data and include the availability, completeness, accuracy, age and accessibility of data.

References

Each chapter provides a list of documents and information used to inform the assessment.

1.5.2 The Environmental Impact Assessment Team

The EIAR was coordinated by Brady Shipman Martin (BSM). Various environmental specialists were commissioned to complete the specialist chapters of the EIAR, as required by Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment:

> *"Experts involved in the preparation of environmental impact assessment reports should be qualified and competent. Sufficient expertise, in the relevant field of the project concerned, is required for the purpose of its examination by the competent authorities in order to ensure that the information provided by the developer is complete and of a high level of quality."*

A description of experts who have contributed to this EIAR, their qualifications, experience and any other relevant credentials is provided in **Table 1.4.**

Table 1.4 EIAR Contributors

Name	Company	Role / input	Qualifications
Thomas Burns	BSM	EIAR Project Manager; Landscape & Visual	▪ B.Agr.Sc. (Land.) Dip. EIA Mgmt., Adv. Dip. Plan. & Env. Law ▪ Environmental Planner and Landscape Architect ▪ Member of Irish Landscape Institute & Irish Environmental Law Association ▪ Over 30 years of experience in EIA and LVIA
Pauline Byrne	BSM	Project Manager	▪ BSc Mgmt., Adv. Dip. Marketing, MA Regional & Urban Planning ▪ Head of Planning ▪ Member of Royal Town Planning Institute (MRTPI) ▪ Member of Irish Planning Institute (MIPI) ▪ Over 20 years of experience
Sorcha Turnbull	BSM	Planner	▪ BSc (Spatial Planning), Dip. EIA Mgmt ▪ Associate & Senior Planner ▪ Corporate Member of the Irish Planning Institute (IPI) & Associate Member of the Royal Town Planning Institute (RTPI) ▪ Over 15 years of experience
Namrata Kaile	BSM	EIAR Co-ordinator; Background chapters; Population & Human Health; Material Assets - Services	▪ BSc Life Sciences, MSc Env. Sciences ▪ Environmental Consultant & Ecologist ▪ Full Member CIEEM (MCIEEM) ▪ Over 5 years of experience

Name	Company	Role / input	Qualifications
Matthew Hague	BSM	Biodiversity; Appropriate Assessment Screening	▪ BSc, MSc, Adv. Dip. Plan. & Env. Law ▪ Associate & Senior Ecologist ▪ Chartered Environmentalist – CEnv ▪ MCIEEM ▪ Member of Irish Environmental Law Association ▪ Over 20 years of experience
Sadye Goldfarb	BSM	Biodiversity; Appropriate Assessment Screening	▪ Bachelor's degree in Environmental Science and a master's degree in Biodiversity and Conservation from Trinity College Dublin. ▪ Ecologist ▪ Qualifying Member of the Chartered Institute of Ecology and Environmental Management ▪ Over 1 year of experience
Luke Maguire	AWN Consulting	Land, Soils, Geology & Hydrogeology; Hydrology	▪ B.Sc. in Geoscience (Geology, Hydrology, Hydrogeology, Climate Studies, Oceanology, Geochemistry, Geophysics) ▪ Environmental Consultant ▪ Experience in Environmental Impact Assessment (EIA), Flood Risk Assessment (Stage 1 & 2) and Hydrological and Hydrogeological Qualitative Risk Assessment (HRA), and WFD Assessment Reporting and Environmental Monitoring (Groundwater, Surface Water & Ground Gas) ▪ 4 years of experience in Environmental Consulting and water resources
Teri Hayes	AWN Consulting	Land, Soils, Geology & Hydrogeology	▪ Degree in Geology and a Masters in Hydrogeology ▪ Former President of the Irish Group of the Association of Hydrogeologists (IAH) ▪ Her specialist area of expertise is water resource management eco-hydrogeology, hydrological assessment and environmental impact assessment. ▪ Over 25 years of experience
Marcelo Allende	AWN Consulting	Hydrology	▪ Water Resource Civil Engineering (BEng, Hons), Bachelor of Science in Engineering (BSc, Hons) ▪ Principal Environmental Consultant ▪ Experienced in environmental investigations, geo-environmental impact assessments, surface and groundwater resource management, hydrological and hydrogeological conceptual and numerical modelling, strategic and site specific flood risk assessments (Stage 1,2 and 3), Due Diligence reporting, baseline studies, soils, surface water and groundwater monitoring and field sampling programmes ▪ Over 20 years of experience

Name	Company	Role / input	Qualifications
Ciara Nolan	AWN Consulting	Air Quality & Climate	▪ MSc (Applied Environmental Science), BSc Eng (Energy Systems Engineering) ▪ Principal Air Quality & Climate Consultant ▪ Member Institute of Air Quality Management (MIAQM), Member Institution of Environmental Sciences (MIEnvSc) ▪ 8 years
Tanmay Gojamgunde	AWN Consulting	Air Quality & Climate	▪ MSc (Air Pollution Management and Control) BTECH (Environmental Engineering) ▪ Air Quality & Climate Consultant ▪ Member Institute of Environmental Sciences (IES) ▪ 1 year
Alistair Maclaurin	AWN Consulting	Noise & Vibration	▪ Alistair Maclaurin (Senior Acoustic Consultant) ▪ Holds a BSc in Creative Music and Sound Technology and a Diploma in Acoustics and Noise Control. He is a member of the Institute of Acoustics. ▪ Alistair has worked in the field of acoustics since 2012. He has been the lead noise consultant across various sites on major infrastructure projects such as Crossrail and Thames Tideway Tunnel, specialising in construction noise assessment and control. ▪ Additionally, he has undertaken various other environmental noise assessments for infrastructure developments and planning reports.
Robert Holohan	AWN Consulting	Noise & Vibration	▪ Robert Holohan (Acoustic Consultant) ▪ BA(Hons) in Geography and Business Marketing from Maynooth University as well as an environmental science background from his MSc in Coastal and Marine Environments from the University of Galway. ▪ He has completed noise monitoring campaigns across numerous sites and has experience in modelling and building acoustics. ▪ Holds a certificate from the Institute of Acoustics in environmental noise monitoring and building acoustics testing.
Alex Craven	BSM	Landscape & Visual	▪ BSc, MLA ▪ University of Sheffield ▪ LVIA specialist ▪ Member of Irish Landscape Institute (MILI) ▪ Over 12 years of experience

Name	Company	Role / input	Qualifications
James Slattery	David Slattery Conservation Architects	Cultural Heritage - Architectural Heritage	▪ BArch DiplABRCons ▪ Conservation Architect (Principal) ▪ Member of the Royal Institute of Architects in Ireland ▪ 20 years of experience
Faith Bailey	IAC Archaeology	Cultural Heritage - Archaeology	▪ MA Cultural Landscape Management, BA (Hons) Archaeology ▪ Senior Archaeological and Cultural Heritage Consultant ▪ Licence eligible archaeologist, MIAI, MCIfA ▪ Over 21 years experience in the compilation of EIARs and assessments regarding the archaeological and cultural heritage resource, for all types of development nation-wide.
James Duff	Arup	Microclimate – Daylight/Sunlight	▪ Daylight Lead ▪ PhD (Physics) from TU Dublin ▪ Member Society of Light and Lighting (MSLL) ▪ 15+ years' experience in matters related to daylight for planning – acting on behalf of developers in completing designs, planning authorities and government bodies in drafting policy and reviewing assessments, and for various parties involved in the wider dispute resolution processes.
Rubina Ramponi	Arup	Microclimate - Wind	▪ MSc degree in building engineering and architecture from the University of Pavia (Italy) and a dual PhD from Eindhoven University (Netherlands) and Politecnico di Milano (Italy) with a focus on the computational modelling of urban wind flow and natural ventilation potential of buildings ▪ Associate in Arup's Wind Team in Dublin. ▪ CEng, MCIBSE ▪ Over 15 years of experience in building engineering and wind consulting, involved in wind microclimate studies to support the environmental impact assessment of high-profile projects across Ireland, the UK and USA. Example projects in Dublin have included Carrickmines Q3, Montrose LRD, Bailey Gibson SHD, and Guinness Quarter.
Glen Moon	Systra	Traffic & Transportation	▪ MA (Hons) Geography, University of Edinburgh 2000 ▪ Principal Transport Consultant ▪ Chartered Transport Planning Professional (CTTP) ▪ 18 years' experience as a transport planner.

Name	Company	Role / input	Qualifications
Chonaill Bradley	AWN Consulting	Material Assets - Waste	▪ Bsc ENV,PG Dip Circ Econ ▪ Principal Environmental Consultant ▪ AssocCIWM ▪ 10+ Years

1.6 Impact Assessment Methodology

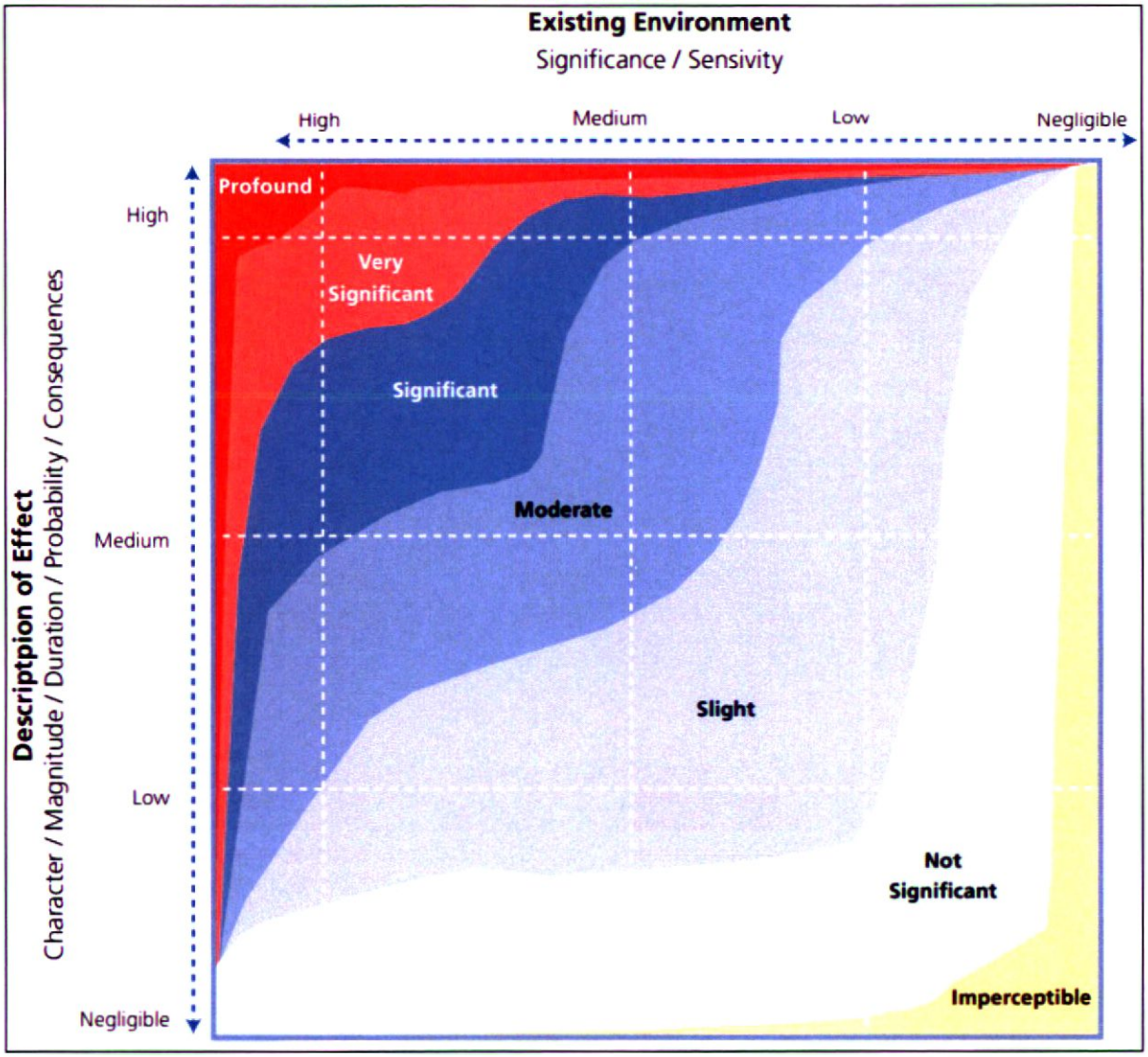
The impact assessment methodology is detailed in respect of the various environmental topics in the respective chapters herein. The assessment of impacts is based on the source-pathway-receptor model, which dictates that, for an environmental impact to occur, there must be a source, a receptor which is sensitive to the effect in question, and a pathway by which the effect can reach the receptor. Unless otherwise stated, effects/impacts will be described and characterised in accordance with the terminology and criteria set out in the EPA Guidance (as set out in **Table 1.5**). The significance of an impact is determined through comparison of the character of the predicted effect to the sensitivity of the environment / receptor in question (**Figure 1.3**).

Table 1.5 Description of effects (EPA, 2022)

Criteria	Definition
Quality of Effects	
Positive	A change that improves the quality of the environment (for example, by increasing species diversity, improving reproductive capacity of an ecosystem, removing nuisances or improving amenities).
Neutral	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
Negative / adverse	A change that reduces the quality of the environment (for example, lessening species diversity, diminishing the reproductive capacity of an ecosystem, damaging health / property or causing nuisance).
Significance of Effects	
Imperceptible	An effect capable of measurement but without significant consequences.
Not significant	An effect that causes noticeable changes in the character of the environment but without significant consequences.
Slight	An effect that causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
Significant	An effect that, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
Very significant	An effect that, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
Profound	An effect that obliterates sensitive characteristics.
Extent and Context of Effects	
Extent	The size of the area, number of sites, or proportion of a population affected by an effect.
Context	Describes whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions (i.e. *is it the biggest, longest effect ever?*)
Probability of Effects	

Criteria	Definition
Likely	The effects that can reasonably be expected to occur because of a proposed development if all mitigation measures are properly implemented.
Unlikely	The effects that can reasonably be expected not to occur because of a proposed development if all mitigation measures are properly implemented.
Duration, Reversibility & Frequency	
Momentary	Effects lasting from seconds to minutes.
Brief	Effects lasting less than a day.
Temporary	Effects lasting less than a year.
Short-term	Effects lasting one to seven years.
Medium-term	Effects lasting seven to fifteen years.
Long-term	Effects lasting fifteen to sixty years.
Permanent	Effects lasting over sixty years.
Reversible	Effects that can be undone (for example, through remediation or restoration).
Frequency	How often the effect will occur (e.g. once, rarely, occasionally, frequently, constantly, hourly, daily, weekly, monthly, annually, etc.).
Type of Effects	
Indirect / secondary	Impacts that are not a direct result of a proposed development, often produced away from the site or because of a complex pathway.
Cumulative	The addition of many minor or significant effects, including effects of other plans and / or projects, to create larger, more significant effects.
Do-nothing	The environment as it would be in the future should the proposed development not be carried out.
Worst-case	The effects arising from a proposed development in the case where mitigation measures substantially fail.
Indeterminable	When the full consequences of a change in the environment cannot be described.
Irreversible	When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.
Residual	The effect that will occur after the proposed mitigation measures have been implemented.
Synergistic	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).

Figure 1.3 Determination of significance of effect (EPA, 2022)



2 The Environmental Impact Assessment (EIA) Process

2.1 Legislation

The EIA Directive is the cornerstone of EIA legislation. It aims to ensure a high level of protection for the environment and human health and provides for public participation in relation to development consent and environmental matters. It requires that an assessment of the 'likely significant effects' a proposed development will have on the environment is carried out, where relevant, before development consent is given.

The EIA Directive entered into force in 1985 (Directive 85/337/EEC). It was amended three times (in 1997, 2003 and 2009) and subsequently replaced and codified by Directive 2011/92/EU, which was itself amended in 2014 by Directive 2014/52/EU ('the amending Directive'). The EIA Directive is transposed into Irish legislation by the PDA 2000, the PDR 2001 and the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018.

2.2 Guidelines

This EIAR has been prepared in accordance with the aforementioned legislative provisions and the following guidelines, among others, as specified in the various specialist EIAR chapters:

- EPA (2022). *Guidelines on the information to be contained in Environmental Impact Assessment Reports;*
- EC (2017). *Environmental Impact Assessment of Projects. Guidance on the preparation of Environmental Impact Assessment Report*;
- EC (2017). *Environmental Impact Assessment of Projects. Guidance on Scoping*;
- EC (2017). *Environmental Impact Assessment of Projects. Guidance on Screening*;
- Department of Housing, Planning and Local Government (DHPLG) (2019. *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment;*
- DHPLG (2017). Circular letter PL 1/2017 – Advice on Administrative Provisions in Advance of Transposition;
- European Commission (EC) (1999). *Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions;*
- EC (2013). *Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment.*

2.3 The EIA Process

EIA is the process of identifying, describing and assessing in an appropriate manner, the anticipated effects of a proposed project on the environment. It is defined in the amended Directive 2014/52/EU as follows:

> *"Environmental impact assessment means a process consisting of:*
>
> *(i) the preparation of an environmental impact assessment report by the developer, as referred to in Article 5(1) and (2);*
>
> *(ii) the carrying out of consultations as referred to in Article 6 and, where relevant, Article 7;*

(iii) the examination by the competent authority of the information presented in the environmental impact assessment report and any supplementary information provided, where necessary, by the developer in accordance with Article 5(3), and any relevant information received through the consultations under Articles 6 and 7;

(iv) the reasoned conclusion by the competent authority on the significant effects of the project on the environment, taking into account the results of the examination referred to in point (iii) and, where appropriate, its own supplementary examination; and

(v) the integration of the competent authority's reasoned conclusion into any of the decisions referred to in Article 8a."

In this case, 'the developer' refers to the Applicant, and 'the competent authority' refers to the planning authority, i.e. Dublin City Council in this instance. It is important to emphasise that 'EIA' refers to the overall process of Environmental Impact Assessment, as defined above and illustrated in **Figure 2.1**, below.

The EIAR is prepared by the Applicant and submitted to the competent authority as part of the development consent process, i.e. as part of the planning application.

The EIAR entails a systematic analysis and assessment of the potential environmental effects of a proposed development on its receiving environment. Article 3(1) of the amended Directive prescribes matters that must be identified, described and assessed in the EIA process. The range of environmental topics that must be addressed in the EIAR, are set out in Article 5 and Annex IV.

Article 3 states as follows-

"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:

(a) population and human health;

(b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC[1] and Directive 2009/147/EC[2];

(c) land, soil, water, air and climate;

(d) material assets, cultural heritage and the landscape;

(e) the interaction between the factors referred to in points (a) to (d)[3]."

Article 5(1) provides a non-exhaustive list of information that the EIAR shall contain, as follows:

"... the developer shall include at least:

(a) a description of the project comprising information on the site, design, size and other relevant features of the project;

(b) a description of the likely significant effects of the project on the environment;

[1] Directive 92/43/EEC on the conservation of natural habitats and wild fauna and flora ('the Habitats Directive')
[2] Directive 2009/147/EC on the conservation of wild birds ('the Birds Directive')
[3] Refer to Chapter 19 (Interactions)

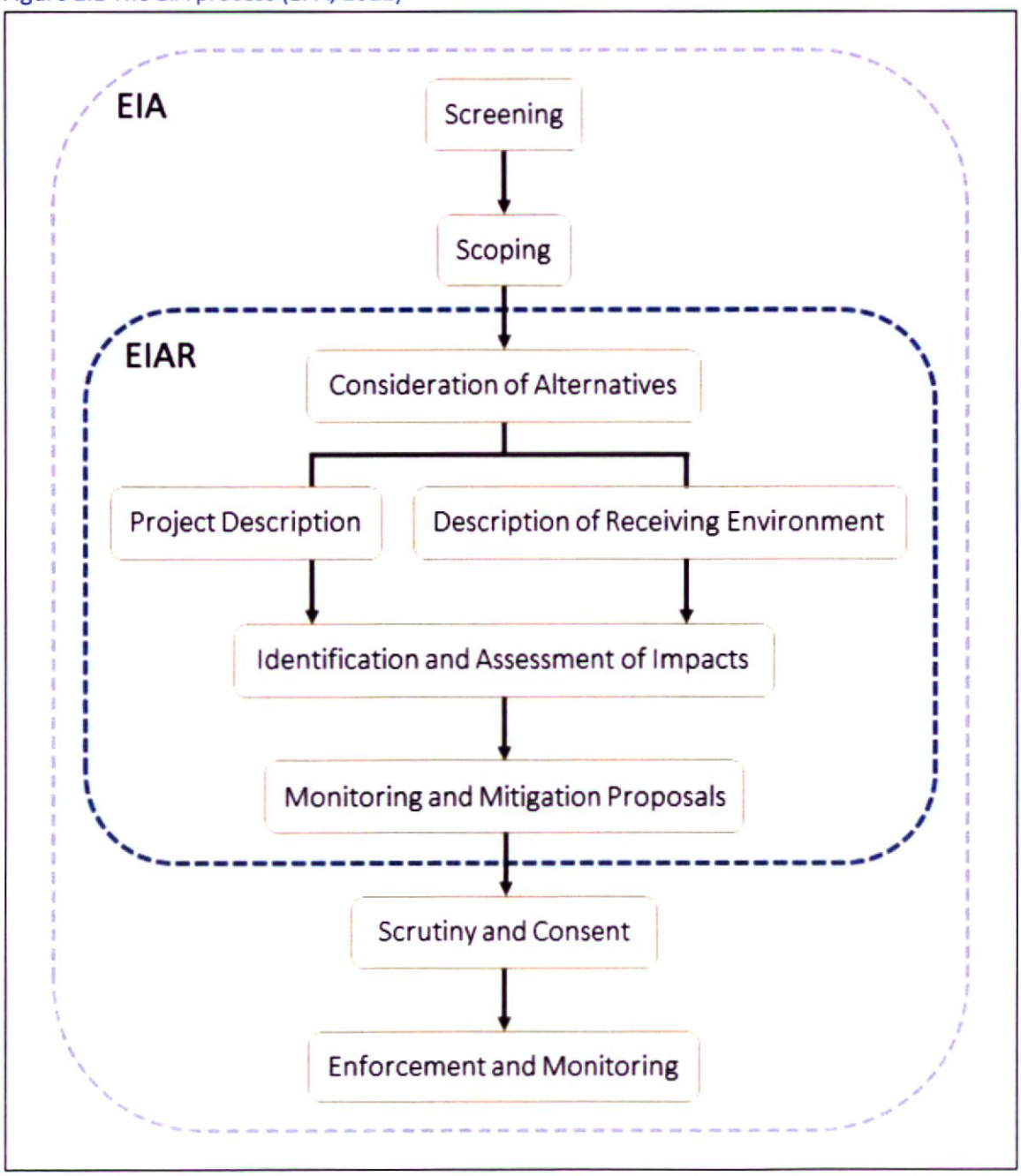
(c) a description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment;

(d) a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment;

(e) a non-technical summary of the information referred to in points (a) to (d); and

(f) any additional information specified in Annex IV relevant to the specific characteristics of a particular project or type of project and to the environmental features likely to be affected."

Figure 2.1 The EIA process (EPA, 2022)



Where significant effects (as per the definition provided in **Table 1.5**) are identified during the preparation of an EIAR, it may be possible for these to be avoided or minimised through design changes ('mitigation by design') or through the identification of mitigation measures.

The EIA process may be summarised as follows:

- **Screening:** The process of determining whether a proposed development should be subject to EIA;
- **Scoping:** The process of identifying the topics that should be addressed in the EIAR as well as the methods to do. This can be informal and is considered throughout the preparation of the EIAR;
- **Consideration of Alternatives:** The presentation and consideration of the various reasonable alternatives at several key stages during the EIA process;
- **Description of the receiving environment:** This stage aims to establish a robust baseline (a description of the environmental characteristics of the receiving environment plus any relevant trends in status), utilising a review of existing available information and undertaking surveys and analyses, where appropriate;
- **Impact assessment:** The primary purpose of the EIAR is to identify, describe[4] and present an assessment of the likely significant impacts of a proposed development on the environment;
- **Mitigation:** Where appropriate, mitigation measures are identified to avoid, prevent, reduce or offset any likely significant negative effects identified during the preparation of the EIAR or as part of the consultation process; as well as any proposed monitoring arrangements;
- **Consultation:** With statutory bodies, the public and other stakeholders, as appropriate;
- **Decision:** The competent authority (Dublin City Council, in this case) decides, in the context of other considerations (including the outcomes of the consultation process), whether development consent should be granted;
- **Implementation and monitoring/ enforcement of conditions of development consent:** Assuming the development is permitted, the schedule of environmental commitments (including the mitigation and monitoring measures set out in the EIAR and any additional environmental conditions of the development consent) needs to be implemented.

2.4 EIA Screening

Screening is the initial stage in the EIA process, where a decision is made as to whether an EIA is required for the development in question.

The amended Directive specifies the classes of project for which an EIA is required by default. In accordance with Article 4(1), all projects listed in Annex I are considered as having significant effects on the environment and shall be subject to EIA. For projects listed in Annex II of the Directive, the Member States may determine whether an EIA is needed, either on the basis of thresholds / criteria or case-by-case examinations. These Annexes have been transposed into Irish law by the provisions of the PDA 2000 and the PDR 2001.

Parts 1 and 2 of Schedule 5 of the PDR 2001 list the classes of development for which EIA is required by default. In Part 1, major project classes (including industrial, chemical, energy, waste, infrastructural and intensive agricultural projects) are identified for the purposes of mandatory EIA. In Part 2, specific thresholds are cited; EIA is a requirement for projects of a class listed here that also meet or exceed the

[4] In accordance with the criteria set out in **Table 1.5** of this EIAR / Table 3.4 of the EPA guidelines

corresponding threshold (e.g. wind farms *"with more than 5 turbines or having a total output greater than 5 megawatts"*).

The proposed development is not of a class of development listed in Part 1 of Schedule 5 of the PDR 2001 and, therefore, EIA is not a statutory requirement under this provision. However, the proposed development does correspond with the classes of development listed in paragraphs 10(b)(i) and 10(b)(iv) of Part 2 of Schedule 5 of the PDR 2001. The proposed development exceeds the thresholds specified in relation to Class 10(b)(i) of development, as detailed in **Table 2.1**, below.

Table 2.1 Statutory requirement for EIA under Part 2 of Schedule 5 of the PDR 2001

Provision (Part 2 of Schedule 5 of PDR 2001)	Proposed Development
Paragraph 10(b)(i): *"Construction of more than 500 dwelling units."*	c. 1,131 units
Paragraph 10(b)(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."*[5]	Total site area c. 8.71Ha

Therefore, under the provisions of the Section 176 PDA and Schedule 5 of PDR 2001, EIA is a statutory requirement for the proposed development, and the Applicant is required to prepare an Environmental Impact Assessment Report.

2.5 EIA Scoping (Informal)

The scoping stage of the EIAR is a process of determining the content and extent of the matters which should be covered in the environmental information to be submitted in the EIAR. Scoping requires the consideration of the nature and likely scale of the potential environmental impacts likely to arise from a proposed development or project. It is an iterative process that is ongoing throughout the development of the EIAR. Although Scoping can be considered as a discrete stage in the EIA process, one which ends with the issuing of the terms of reference for the EIA Report, the activity of Scoping continues throughout, so that the scope of work can be amended in light of new issues and new information during the process or as a result of design changes or through consultations, to be incorporated. The following topics, which include those stipulated in the amended Directive, have been scoped in for this assessment:

- Population and Human Health;
- Biodiversity;
- Land, Soils, Geology and Hydrogeology;
- Hydrology;
- Air Quality;
- Climate;
- Noise and Vibration;
- Landscape and Visual;
- Cultural Heritage - Architectural Heritage;
- Cultural Heritage - Archaeology;

[5] Where 'business district' refers to a district within a city or town in which the predominant land use is retail or commercial use.

- Microclimate - Daylight and Sunlight;
- Microclimate - Wind
- Traffic and Transportation;
- Material Assets - Waste;
- Material Assets - Services; and
- Interactions between the above-listed topics.

2.5.1 Major Accidents & Disasters

Reflecting the requirement set out in Article 3(2), Annex IV.8 requires that an EIAR shall provide -

> *"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. Relevant information available and obtained through risk assessments pursuant to Union legislation such as Directive 2012/18/EU of the European Parliament and of the Council (*) or Council Directive 2009/71/Euratom (**) or relevant assessments carried out pursuant to national legislation may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies."*

Further recital 15 states that –

> *(15) 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. In order to avoid duplications, it should be possible to use any relevant information available and obtained through risk assessments carried out pursuant to Union legislation, such as Directive 2012/18/EU of the European Parliament and the Council (4) and Council Directive 2009/71/Euratom (5), or through relevant assessments carried out pursuant to national legislation provided that the requirements of this Directive are met.*

The principal guidance and best practice documents used to inform the assessment of major accidents & disasters are as follows:

- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (hereafter referred to as the Environmental Protection Agency (EPA) Guidelines) (EPA, 2022);
- Environmental Impact Assessment (EIA) Directive Guidance on the Preparation of the Environmental Impact Assessment Report (European Commission, 2017);
- A Framework for Major Emergency Management, Department of Housing, Local Government and Heritage (published September 2021 and updated June 2025);
- LA 104 - Environmental Assessment and Monitoring, Design Manual for Roads and Bridges, Highways England, Revision 1, (August 2020);
- Guidance on technical land-use planning advice for planning authorities and COMAH establishment operators (Health and Safety Authority, 2021).

Additionally, the assessment of impacts in relation to Major Accidents and Disasters (MADs) refers to the 2020 Institute of Environmental Management and Assessment (IEMA) document, *Major Accidents and Disasters in EIA: A Primer*. In relation to scoping, the document states that *"A major accidents and/or disasters assessment will be relevant to some developments more than others, and for many developments it is likely to be scoped out of the assessment"* (p. 11). It is further stated that the topic may be scoped out in the event that:

1. There is no source-pathway-receptor linkage of a hazard that could trigger a major accident[6] and / or disaster[7], or potential for the proposed development to lead to a significant environmental effect; or
2. All possible MADs are adequately considered elsewhere in the assessment or covered by existing design measures or compliance with legislation and best practice.

Not all potential events will fall into the scope of a major accidents and/or disasters assessment. The level of risk therefore needs to be defined to inform what types of events are within the scope of the major accidents and/or disasters assessment. Events that have a high likelihood of occurring and would be of high consequence are a high risk and would be unacceptable for any development. These have already be managed or designed-out by a development. These might include, for example, an element of highway design that did not comply with standards leading to a major road traffic collision. These are therefore likely to be outside the scope of the assessment.

At the other end of the scale, low-impact events whatever the likelihood, such as minor spills, are low risk and are unlikely to be considered a major accidents and/or disasters risk. These events would not threaten immediate or delayed serious environmental effects to human health, welfare and/or the environment that require the use of resources beyond those of the client or its appointed representatives to manage. These are also therefore likely to be outside the scope of the assessment.

The assessment will typically focus on low likelihood but potentially high consequence events. The risks of feasible accidents and natural events are addressed, where relevant, in the various specialist chapters herein. Flood risk, for instance, is addressed in Chapter 10 (Hydrology), risk of Climate Change is addressed in Chapter 12 (Climate) and geohazards are addressed in Chapter 9 (Land, Soils, Geology & Hydrogeology).

The MADs impact assessment also includes an assessment of the potential effects in relation to 'Seveso sites', i.e. major industrial establishments, which, because of the presence of certain dangerous substances in sufficient quantities, are regulated under Directive 2012/18/EU (the 'SEVESO III Directive') on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC (the 'SEVESO II Directive'). The SEVESO III Directive has been transposed into Irish legislation through the Chemicals Act (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2015 (S.I. No. 209/2015) ('the COMAH Regulations').

The SEVESO III Directive provides that appropriate consultation distances must be put in place for Seveso sites, indicating the area that is liable to be affected by a major accident at the establishment in

[6] An event *"... that threaten immediate or delayed serious environmental effects to human health, welfare and/or the environment and require the use of resources beyond those of the client or its appointed representatives to manage"* (IEMA, 2020, p. 4).

[7] A *"... natural hazard (e.g. earthquake) or a man-made/external hazard (e.g. act of terrorism) with the potential to cause an event or situation that meets the definition of a major accident"* (ibid.).

question; and that technical advice is available to planning authorities in respect of relevant establishments. The Health & Safety Authority (HSA) is the Central Competent Authority responsible for providing such advice, where appropriate, in respect of planning applications that fall within consultation distances of SEVESO sites.

In identifying the locations of Seveso sites in the receiving environment, regard has been had to the *Dublin City Development Plan 2022 – 2028*, which states under Policy SI44 – *'To have regard to the provisions of the SEVESO III Directive (2012/18/EU) relating to the control of major accident hazards involving dangerous substances and its objectives to prevent major accidents and limit the consequences of such accidents. Dublin City Council will have regard to the provisions of the Directive and recommendations of the HSA in the assessment of all planning applications located on, or impacted by, COMAH establishments in accordance with Guidance on Technical Land-use Planning Advice: for planning authorities and operators of COMAH establishments (2021).'*

Volume 2, Appendix 8 of the Development Plan shows the locations of Seveso sites in the administrative area on their zoning maps. These sites, listed in **Table 2.2**, below. There are no Seveso sites situated in close proximity to the proposed development, and the proposed development does not fall within the consultation distance of any such site. Therefore, there is no real likelihood of the proposed development being affected by a MAD associated with any such site. Nor is it likely that the construction or operation of the proposed development would cause or exacerbate a MAD at any such site. Potential impacts related to Seveso sites are, therefore, discounted from further consideration.

Table 2.2 Seveso sites in the Dublin City Council administrative area

Tier	Establishment	Consultation distance[8]	Distance from proposed development
Upper	Calor Teoranta/ Calor Gas, Tolka Quay Road, Dublin Port, Dublin 1	600 m	c. 3.6km
	Fareplay Energy Ltd./ Circle K Energy Ltd., Fareplay Terminal Dublin, Promenade Road, Dublin Port, Dublin 3	400m	c. 2.6km
	Indaver Ireland Ltd., Tolka Quay Road, Dublin Port, Dublin 1	700m	c. 3.5km
	National Oil Reserves Agency Ltd./ NORA, Shellybanks Road, Ringsend, Dublin 4	300m	c. 4.0km
	National Oil Reserves Agency Ltd., Poolbeg Tankfarm, Pigeon House Road, Dublin 4	300m	c. 4.0km
	Tedcastles Oil Products/ TOP Oil, Yard 2, Tolka Quay Road, Dublin Port, Dublin 1	400m	c. 3.0km
	Tedcastles Oil Products, Yard 1, Promenade Road, Parish of St. Thomas, Dublin 3	400m	c. 3.0km
	Valero Energy Ireland Ltd., Dublin Joint Fuels Terminal, Alexandra Road/ Tolka Quay Road, Dublin Port, Dublin 1	400m	c. 2.9km
Lower	Electricity Supply Board, North Wall Generating Station, Alexandra Road, Dublin 1	300m	c. 3.0km
	Synergen Ltd. t/a ESB Dublin Bay Power, Pigeon House Road, Ringsend, Dublin 4	300m	c. 4.0km
	Iarnród Éireann, Alexandra Road, Dublin Port, North Wall, Dublin 1	300m	c. 2.1km

[8] From site perimeter

Tier	Establishment	Consultation distance[8]	Distance from proposed development
	Iarnród Éireann, Iarnród Éireann Maintenance Works, Inchicore, Dublin 8	300m	c. 5.5km
	Circle K/ Fareplay Energy Ltd., Terminal 1, Alexandra Road, Dublin Port, Dublin 1	400m	c. 2.6km
	Circle K/ Fareplay Energy Ltd., Yard 3, Alexandra Road, Dublin Port, Dublin 1	300m	c. 2.6km

Considering the nature of the proposed development and its receiving environment, there is no source-pathway-receptor linkage of a hazard that could trigger an event constituting a MAD. As such, an assessment of impacts specifically in relation to MADs has been scoped out of this Environmental Impact Assessment Report.

2.6 Other Assessments

2.6.1 Appropriate Assessment

European Sites, also known as 'Natura 2000' sites, include Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). These are a network of sites designated for nature conservation under Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive') and Directive 2009/147/EC on the conservation of wild birds (the 'Birds Directive'). The requirements for Appropriate Assessment (AA) are set out under Article 6 of the Habitats Directive, transposed into Irish law by the European Union (Birds and Natural Habitats) Regulations 2011 (as amended) (the 'Birds and Natural Habitats Regulations') and the PDA 2000.

Article 6(3) of the Habitats Directive states that:

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

The first test is to establish whether, in relation to a particular plan or project, AA is required. Sections 177U of the PDA 2000 requires that the AA screening test must be applied to a proposed development, as follows:

- To assess, in view of best scientific knowledge, if the development, individually or in combination with another plan or project is likely to have a significant effect on a European site; and
- AA is required if it cannot be excluded, on the basis of objective information, that the development, individually or in combination with other plans or projects, will have a significant effect on a European Site.

An Appropriate Assessment Screening Report has been prepared by BSM in respect of the proposed development, in accordance with the requirements of the Habitats Directive and the Birds Directive, and the PDA 2000. It has concluded:

"In view of best scientific knowledge this report concludes that the proposed development at the Holy Cross College site, individually or in combination with another plan or project, will not have a significant effect on any European sites. This conclusion was reached without considering or taking into account mitigation measures or measures intended to avoid or reduce any impact on European sites.

It is considered that this report provides sufficient relevant information to allow the Competent Authority (Dublin City Council) to carry out an AA Screening under Section 177(U) of the Planning Acts and reach a determination, under Article 6 of the Habitats Directive, that the proposed development will not have any likely significant effects on European sites in light of their conservation objectives."

Please refer to Appropriate Assessment Screening Report, submitted under separate cover as part of the planning application.

2.6.2 Hydrological and Hydrogeological Qualitative Risk Assessment

A Hydrological and Hydrogeological Qualitative Risk Assessment (HHQRA) has been prepared by AWN Consulting (2025) and separate as part of the planning submission. The HHQRA concludes that –

> *'A conceptual site model (CSM) has been prepared following a desk top review of the site and surrounding environs. Based on this CSM, plausible Source-Pathway-Receptor linkages have been assessed assuming an absence of any measures intended to avoid or reduce harmful effects of the proposed project (i.e., mitigation measures) in place at the proposed development site.*
>
> *The proposed development (design / drainage strategy) site has no direct hydrological pathway or connection to any of the above listed areas of protection and conservation which are located downgradient of the proposed development site. The proposed development would have an indirect hydrological pathway / linkage to the Tolka Estuary and Dublin Bay and the corresponding associated natura 2000 conservation / protection areas via the proposed surface water (stormwater) drainage and the foul (wastewater) network which outfalls to the River Tolka / surface water network at Clonliffe Road (post treatment onsite), albeit the source pathway linkage is over a significant distance allowing for significant attenuation and large dilution factor within the river catchment and estuary.*
>
> *There is no direct source pathway linkage between the Proposed Development site and any open waters or Natura 2000 sites (i.e., Tolka Estuary or Dublin Bay SAC/SPA/pNHA). There is an indirect source pathway linkage from the Proposed Development through the foul public sewer which will eventually discharge to the Ringsend WWTP and ultimately discharges to South Dublin Bay SAC/SPA/pNHA (4.4 km downgradient of the proposed site). The future development has a peak foul discharge that would equate to 0.166% of the licensed discharge at Ringsend WWTP (peak hydraulic capacity). It should be noted that the Ringsend WwTP has capacity for this proposed foul effluent (AER, 2023).*
>
> *Even disregarding the operation of design measures including an attenuation system and petrol interceptors on site, it is concluded that there will be imperceptible impacts from the proposed development to the water bodies due to emissions from the site stormwater drainage*

infrastructure to the wider drainage network. It should be noted the proposal also includes an attenuation system and petrol / hydrocarbon interceptors as part of best practice project design, and these features will provide additional filtration from the site to the drainage network.

It is concluded that there are no pollutant linkages as a result of the construction or operation of the Proposed Development which could result in a water quality impact which could alter the habitat requirements of the Natura 2000 sites within Tolka Estuary and Dublin Bay.

Finally, and in line with good practice, appropriate and effective mitigation measures will be included in the construction design, management of construction programme and during the operational phase of the proposed development. With regards to the construction phase, adequate mitigation measures will be incorporated in the Construction Environmental Management Plan (CEMP). These specific measures will provide further protection to the receiving soil and water environments. However, the protection of downstream European sites is in no way reliant on these measures and they have not been taken into account in this assessment.'

2.6.3 Site Specific Flood Risk Assessment

A Site-Specific Flood Risk Assessment (SSFRA) has been prepared in respect of the proposed development by Barrett Mahony Civil & Structural Consulting Engineers (2025), in accordance with the OPW guidelines *The Planning System and Flood Risk Management – Guidelines for Planning Authorities* (2009). The key findings and conclusions of the SSFRA are summarised as follows:

'Based on available and recorded information, the main portion of site has not been subject to flooding in recent history. (Only buried drainage outfalls are located in the flood zones).

The risk of tidal flooding is considered very low as the subject site lies outside the 0.1% AEP.

The risk of fluvial flooding in the area is currently under review by the OPW. However, this risk is considered low due the site located outside the 0.1% AEP fluvial coupled with the 50% AEP tidal flood extent. In addition, the considerable level difference between the proposed finished levels and the riverbank levels in the vicinity.

The risk of flooding due to ground water ingress to the proposed development is considered low. Waterproofing construction methods and measures will be employed to prevent ingress of ground water into the basements, in the normal manner.

The risk of pluvial flooding is considered low, due to the site location and proposed measures for the development.

Based on the flood risk identification in Stage 1, the proposed development falls in Flood Zone C. Hence, the proposed development is deemed 'Appropriate' in accordance with the guidelines of the OPW's publication.'

Please refer to the SSFRA (Barrett Mahony Civil & Structural Consulting Engineers, 2025) submitted under separate cover as part of the planning application. Refer also to Chapter 10 (Hydrology).

3 Planning & Development Context

3.1 Introduction

This Chapter sets out the policy in relation to proper planning and sustainable development in the context of the proposed development. It has been prepared by Namrata Kaile, Ecologist & Environmental Consultant at Brady Shipman Martin (BSM). A technical review was completed by Thomas Burns, Partner at BSM. Refer to **Table 1.4** in Chapter 1 (Introduction) for qualifications of authors and reviewers.

The following policy documents of relevance are discussed in relation to the proposed development herein:

International

- United Nations Sustainable Development Goals (2015)

European

- Environmental Impact Assessment Directive (consolidated 2011/92/EU and 2014/52/EU);
- Birds (2009/147/EC) and Habitats Directive (92/43/EEC);
- EU Water Framework Directive (2000/60/EC).

National

- Project Ireland 2040 – National Planning Framework (NPF) and National Development Plan (2021-2030) including the First Revision to the NPF (April 2025);
- Rebuilding Ireland – Action Plan for Housing and Homelessness (2016);
- Sustainable Urban Housing: Design Standards for New Apartments (July 2023);
- Urban Development and Building Heights – Guidelines for Planning Authorities (2018);
- Design Manual for Urban Roads and Streets (2019);
- Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (2010);
- Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities (2024);
- The Planning System and Flood Risk Management – Guidelines for Planning Authorities (2009);
- Climate Action Plan (2025);
- Childcare Facilities – Guidelines for Planning Authorities (2001);
- Housing for All – A New Housing Plan for Ireland (2021);
- Cycle Design Manual (2023);
- National Sustainable Mobility Policy (2022);
- Architectural Heritage Protection; Guidelines for Planning Authorities (2011).

Regional

- Eastern & Midland Regional Assembly Regional Spatial & Economic Strategy 2019 – 2031;
- Dublin City Development Plan 2022 – 2028;
- Transport Strategy for the Greater Dublin Area 2022 – 2042.

Topic-specific policies are addressed, where appropriate, in the relevant specialist chapters of this EIAR.

3.2 International Policy Context

3.2.1 United Nations Sustainable Development Goals (2015)

The United Nations' (UN) 17 Sustainable Development Goals (SDGs) provide a *"shared blueprint for peace and prosperity for people and the planet, now and into the future"* (**Figure 3.1**). They were adopted by the UN Member States – including Ireland – in 2015, as part of the adoption of the *2030 Agenda for Sustainable Development*. These high-level goals frame and inform Irish national agendas and policies to 2030, including (but not limited to) *Project Ireland 2040* (*National Planning Framework* and *National Development Plan*) and the Eastern and Midland Regional Assembly's *Regional Spatial and Economic Strategy*, discussed below.

Figure 3.1 United Nations sustainable development goals (SDGs)



3.3 European Policy Context

3.3.1 Environmental Impact Assessment Directive (consolidated 2011/92/EU and 2014/52/EU)

Environmental Impact Assessment (EIA) is a procedure under the terms of European Directives on the assessment of the effects of certain public and private projects on the environment. The EIA Directive (2014/52/EU) became applicable in Ireland from May 16th, 2017, and amends Directive 2011/92/EU. The EIA Directive(s) have been transposed into Irish legislation by the PDA 2000 and the PDR 2001. The most recent 2014 EIA Directive has been transposed into Irish Legislation, through the European Union (Planning and Development) (Environmental Impact Assessment) Regulations (S.I. 296 of 2018) which came into effect on 1 September 2018 and the EIAR has been prepared in accordance with all referenced legislation. Projects for which an EIA is mandatory under Annex I of the Directive have been listed under Part 1 of Schedule 5 of the PDR 2001. Similarly, Part 2 of Schedule 5 outlines classes of project which also require EIA upon meeting the threshold set out therein, as per Annex II of the Directive. In addition, a 'sub-threshold' Part 2 project may also require an EIA, if the Planning Authority determines that the development would be likely to have significant effects on the environment. Schedule 7 of the Regulations details the criteria for determining whether such a development would

or would not be likely to have significant effects on the environment considering the characteristics of the proposed development, its location and characteristics of potential impacts.

As detailed in Section 2 of this EIAR, the proposed development is not of a class of development listed in Part 1 of Schedule 5 of the PDR 2001 and, therefore, EIA is not a statutory requirement under this provision. However, the proposed development does correspond with the classes of development listed in paragraphs 10(b)(i) and 10(b)(iv) of Part 2 of Schedule 5 of the PDR 2001 and exceeds the thresholds specified in relation to Class 10(b)(i) of development. Therefore, under the provisions of the Part 2 of Schedule 5 of the PDR 2001, EIA is a statutory requirement for the proposed development.

3.3.2 Birds (2009/147/EC) and Habitats Directive (92/43/EEC)

Adopted in 1992, the Council Habitats Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora aims to promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements. It forms the cornerstone of Europe's nature conservation policy with the Birds Directive 2009/147/EC and establishes the EU wide Natura 2000 ecological network of protected areas, safeguarded against potentially damaging developments.

Please refer to Section 2.6.1, Section 3.4.6, and the AA Screening Report (BSM, 2025), submitted under separate cover as part of the planning application, for full details.

3.3.3 EU Water Framework Directive (2000/60/EC)

The Water Framework Directive (WFD) established a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater with the objective to protect and improve water quality in all waters to achieve good ecological status by 2027 at the latest.

Specifically, the WFD aims to:

- Prevent further deterioration and protect and enhance the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems;
- Promote sustainable water use based on a long-term protection of available water resources;
- Enhanced protection and improvement of the aquatic environment, through specific measures for the progressive reduction of discharges, emissions and losses of priority substances and the cessation or phasing-out of discharges, emissions and losses of priority hazardous substances;
- Ensure the progressive reduction of pollution of groundwater and prevents its further pollution; and
- Contribute to mitigating the effects of floods and droughts

The Water Framework Directive is linked to a number of other EU directives in several ways. These include Directives relating to the protection of biodiversity (Birds and Habitats Directives), directives related to specific uses of waters (drinking water, bathing waters and urban wastewater directives) and to directives concerned with the regulation of activities undertaken in the environment (Industrial Emissions and Environmental Impact Assessment directives). More recent directives on topics such as Floods and the Marine Strategy Framework have significant linkages with the WFD which is also supplemented by the Priority Substances Directive and the Groundwater Directive.

EU member states are required to implement the WFD through River Basin Management Plans (RBMPs). Ireland's approach to water quality management has developed over the first and second

RBMPs and will continue to evolve into the third cycle RBMP 2022 – 2027 to protect and improve water quality nationally and locally. The Minister for Housing, Local Government and Heritage, published the Water Action Plan 2024- A River Basin Management Plan for Ireland 2022-2027 in 2024.

The proposed development lies within the Tolka SC (020) sub-catchment, Liffey and Dublin Bay (09) catchment management unit within the Irish River Basin District and has considered the current water status of all relevant water bodies, and potential impacts have been considered in Chapter 9 Land, Soils, Geology and Hydrogeology and Chapter 10 Hydrology of this EIAR. With mitigation measures in place, it is concluded there will be no degradation of the current water body or any impact on its potential to meet the requirements and / or objectives of the RBMPs.

A Hydrological & Hydrogeological Qualitative Risk Assessment (HHQRA) (submitted as part of the planning submission) was undertaken by AWN (2025) in respect of the proposed development. The HHQRA concludes as follows -

> *"A conceptual site model (CSM) has been prepared following a desk top review of the site and surrounding environs. Based on this CSM, plausible Source-Pathway-Receptor linkages have been assessed assuming an absence of any measures intended to avoid or reduce harmful effects of the proposed project (i.e., mitigation measures) in place at the proposed development site.*
>
> *The proposed development (design / drainage strategy) site has no direct hydrological pathway or connection to any of the above listed areas of protection and conservation which are located downgradient of the proposed development site. The proposed development would have an indirect hydrological pathway / linkage to the Tolka Estuary and Dublin Bay and the corresponding associated natura 2000 conservation / protection areas via the proposed surface water (stormwater) drainage and the foul (wastewater) network which outfalls to the River Tolka / surface water network at Clonliffe Road (post treatment onsite), albeit the source pathway linkage is over a significant distance allowing for significant attenuation and large dilution factor within the river catchment and estuary.*
>
> *There is no direct source pathway linkage between the Proposed Development site and any open waters or Natura 2000 sites (i.e., Tolka Estuary or Dublin Bay SAC/SPA/pNHA). There is an indirect source pathway linkage from the Proposed Development through the foul public sewer which will eventually discharge to the Ringsend WWTP and ultimately discharges to South Dublin Bay SAC/SPA/pNHA (4.4 km downgradient of the proposed site). The future development has a peak foul discharge that would equate to 0.166% of the licensed discharge at Ringsend WWTP (peak hydraulic capacity). It should be noted that the Ringsend WwTP has capacity for this proposed foul effluent (AER, 2023).*
>
> *Even disregarding the operation of design measures including an attenuation system and petrol interceptors on site, it is concluded that there will be imperceptible impacts from the proposed development to the water bodies due to emissions from the site stormwater drainage infrastructure to the wider drainage network. It should be noted the proposal also includes an attenuation system and petrol / hydrocarbon interceptors as part of best practice project design, and these features will provide additional filtration from the site to the drainage network.*

It is concluded that there are no pollutant linkages as a result of the construction or operation of the Proposed Development which could result in a water quality impact which could alter the habitat requirements of the Natura 2000 sites within Tolka Estuary and Dublin Bay.

Finally, and in line with good practice, appropriate and effective mitigation measures will be included in the construction design, management of construction programme and during the operational phase of the proposed development. With regards to the construction phase, adequate mitigation measures will be incorporated in the Construction Environmental Management Plan (CEMP). These specific measures will provide further protection to the receiving soil and water environments. However, the protection of downstream European sites is in no way reliant on these measures and they have not been taken into account in this assessment.'

National Policy Context

3.3.4 Project Ireland 2040 – National Planning Framework (NPF)

Project Ireland 2040 is the Government's overarching planning and development policy for the country to 2040. It constitutes a "*strategy to make Ireland a better country for all of its people*" by setting public investment policy at a high level. It comprises two documents: the National Planning Framework (NPF), which details the strategy for development to 2040; and the National Development Plan 2021-2030 (NDP), which outlines the public expenditure required to implement this strategy and identifies priority future projects.

The NPF is the Government's high-level strategic plan for shaping the future growth and development of Ireland to 2040. It is a framework to guide public and private investment to create and promote opportunities, and to protect and enhance the environment. At its core are ten National Strategic Outcomes (NSOs), "*a shared set of goals for every community across the country*" (p. 10), which the plan aims to deliver. With a view to achieving these NSOs, the NPF identifies a suite of National Policy Objectives (NPOs). The ten NSOs are as follows:

1. *Compact Growth*
2. *Enhanced Regional Accessibility*
3. *Strengthen Rural Economies and Communities*
4. *Sustainable Mobility*
5. *A Strong Economy, supported by Enterprise, Innovation and Skills*
6. *High-Quality International Connectivity*
7. *Enhanced Amenity and Heritage*
8. *Transition to a Low Carbon and Climate Resilient Society*
9. *Sustainable Management of Water and other Environmental Resources*
10. *Access to Quality Childcare, Education and Health Services*

The objectives of the NPF seek to address ongoing negative development trends, including sprawling peri-urban growth, stagnation of inner-city and old suburban areas, and loss of farmland and habitats to greenfield development. In particular, one of the key objectives of the NPF, compact growth, seeks to carefully manage the sustainable growth of compact cities, towns and villages and to add value and create more attractive places in which people can live and work. The NPF specifies that housing developments should be based on employment growth, higher densities, access to amenities and

sustainable transport modes, in order to avoid long-distance commuting patterns and quality of life impacts within these areas.

First Revision - National Planning Framework (April 2025)

The National Planning Framework (NPF), published in 2018 has been revised and updated to take account of changes that have occurred since it was published in 2018 and to build on the framework that is in place. The final revised and approved NPF was published on 8th April 2025.

The revised NPF identifies that, as per updated projections, the population of Ireland will increase to approximately 5.7 million by 2030 and to 6.1 million by 2040, which is an increase of 250,000 people over that planned for in 2018. The scale of growth that is projected in Ireland to 2040 coupled with the need to transition to a lower carbon society requires an increased delivery of housing and the improved integration of land use and transport.

The Government's long-term vision for Ireland's housing future aims to balance the provision of good quality housing that meets the needs of a diverse population, in a way that makes our cities, towns, villages and rural areas good places to live now and in the future. The NPF sets out national core principles to guide the delivery of future housing at all levels of governance, as follows (p. 88):

- *Ensure a high standard quality of life to future residents as well as environmentally and socially sustainable housing and place-making through integrated planning and consistently excellent design.*
- *Allow for choice in housing location, type, tenure and accommodation in responding to need.*
- *Prioritise the location of new housing provision in existing settlements as a means to maximising a better quality of life for people through accessing services, ensuring a more efficient use of land and allowing for greater integration with existing infrastructure.*
- *Tailor the scale and nature of future housing provision to the size and type of settlement where it is planned to be located.*
- *Integrate housing strategies where settlements straddle boundaries (county and / or regional).*
- *Utilise existing housing stock as a means to meeting future demand.*

The NPF requires homes to be located in places that can support sustainable development; i.e. places that are served by existing infrastructure and a range of local services; and which can encourage the use of public transport, walking and cycling, in order to promote more efficient and low-carbon development. It notes under compact growth that– *'Targeting a greater proportion (40%) of future housing development to be within and close to the existing 'footprint' of built-up areas.'* Furthermore, the NPF has set out targets for delivery of housing under the National Policy Objective 42 – *'To target the delivery of housing to accommodate approximately 50,000 additional homes per annum to 2040.'*

NPF notes that sustainable models of urban development and regeneration can deliver quality and maximise the advantages and opportunities of more compact growth, based on increased population and employment density. Compact and sustainable development also involves a greater proportion of residential and mixed-use development within the existing built-up footprints of cities. It states under National Policy Objective 14 to – *'Regenerate and rejuvenate cities, towns and villages of all types and scale as environmental assets that can accommodate changing roles and functions, increased residential population and employment activity, enhanced levels of amenity and design and*

placemaking quality, in order to sustainably influence and support their surrounding area to ensure progress toward national achievement of the UN Sustainable Development Goals.'

The NPF identifies that to address the challenge of meeting the housing needs of a growing and more diverse population in key urban areas, we need to build inwards and upwards, rather than outwards. This means that apartments and compact housing models will need to become more prevalent, particularly in Ireland's cities. It states under National Policy Objective 45 to – *'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.'*

The NPF identifies a number of key future growth enablers for Dublin City, including to 'Deliver key public transport objectives of the Transport Strategy for the Greater Dublin Area 2022-2042 by investing in projects such as MetroLink, DART+, Luas and BusConnects in Dublin and Eastern Region and key rail and bus-based projects identified by the NTA in the other cities and towns', the delivery of which would further improve public transport connectivity across Dublin City and suburbs.

The NPF requires homes to be located in places that can support sustainable development this includes places that are accessible to a range of local services, can encourage the use of public transport, walking and cycling, and help tackle climate change. The proposed development will deliver a high-quality residential development on an underutilised site and is also responding to the existing strong demand in the area and in a location that is highly accessible to both existing local facilities and public transport routes within the urban extent of Dublin City.

The First Revision to the National Planning Framework focuses on delivering compact growth through unlocking state land and delivering large scale residential development. The proposed development will deliver 1,131 no. homes in accordance with the First Revision to the National Planning Framework (April 2025).

The Planning Report and Statement of Consistency for the proposed development, prepared by BSM and submitted under separate cover as part of the planning application, details the consistency of the proposed development with the NPOs.

3.3.5 Rebuilding Ireland – Action Plan for Housing and Homelessness (2016)

Rebuilding Ireland is the Government's Action Plan for Housing and Homelessness, launched in 2016. The Plan's aim is to accelerate housing supply by addressing the needs of homeless people and families in emergency accommodation, accelerate the provision of social housing, deliver more housing, utilise vacant homes and improve the rental sector.

The Plan contains five key pillars:

1. ***Address Homelessness***
   Provide early solutions to address the unacceptable level of families in emergency accommodation; deliver inter-agency supports for people who are currently homeless, with a particular emphasis on minimising the incidence of rough sleeping, and enhance State supports to keep people in their own homes.

2. ***Accelerate Social Housing***
   Increase the level and speed of delivery of social housing and other State-supported housing.

3. ***Build More Homes***
   Increase the output of private housing to meet demand at affordable prices.

4. ***Improve the Rental Sector***
   Address the obstacles to greater private rented sector delivery, to improve the supply of units at affordable rents.

5. ***Utilise Existing Housing***
   Ensure that existing housing stock is used to the maximum degree possible - focusing on measures to use vacant stock to renew urban and rural areas.

The proposed development at Clonliffe College gives effect to Pillars 2, 3 and Pillar 4 as the scheme is proposing to construct 1,131 no. apartments on a highly accessible site in Dublin City which includes for both 10% social housing in line with Part V requirements and an additional 10% affordable housing.

It is considered that while the Drumcondra area of Dublin is highly accessible to the City Centre and to existing public transport and local amenities, there has been limited opportunity for increasing the housing stock in the area due to limited sites for significant development. The provision of 1,131 residential units in a single site within an established neighbourhood is in line with the objectives of Rebuilding Ireland.

3.3.6 Sustainable Urban Housing: Design Standards for New Apartments (July 2023)

The Design Standards for New Apartments were published by the Minister for Housing, Planning & Local Government in March 2018, as an update of the Sustainable Urban Housing: Design Standards for New Apartments Guidelines, published in 2015. They were subsequently updated in December 2020, December 2022 and in July 2023. These Guidelines aim to ensure that the design and layout of new build apartments are appropriate, providing for different types and sizes of housing.

The Guidelines note that the ESRI projects a need for a minimum of 600,000 new homes to 2040, at least half of which are targeted for provision in Ireland's five cities and is therefore of particular relevance to this site. NPF notes a shift in Government policy towards securing more compact and sustainable urban development, to enable people to live nearer to where jobs and services are located, which requires at least half of new homes within Ireland's cities to be provided within the current built-up area of each, i.e. on sites within the existing urban 'envelope'.

Since the publication of the Guidelines in 2015, the Guidelines were subsequently amended in 2018 and 2020, particularly with regard to design quality safeguards such as internal space standards for 1, 2, or 3 bedroom apartments, floor to ceiling height, internal storage and amenity space and shared accommodation/co-living. A key update as a result of these amendments is the ability to reduce car parking standards. A further update was made in December 2022 which included significant changes in respect of Build to Rent (BTR) developments. Whilst not removing it completely, BTR is now no longer considered to be a distinct development type and all design standards must be in accordance with Appendix 1 of the Guidelines, as per all standard apartment development. The most recent amendment of these Guidelines, published in July 2023, included reference in relation to certain Transitional Arrangements for Build-to-Rent developments.

In order to give effect to their objectives, the Guidelines set out specific planning policy requirements (SPPRs), to which planning authorities must have regard; notwithstanding objectives and requirements of development plans, local area plans and Strategic Development Zone (SDZ) planning schemes. The

Guidelines set out requirements in relation to various apartment design parameters, including locational considerations, unit mix, internal dimensions, dual aspect ratios, amenity spaces, community facilities and parking, among others.

The Guidelines identify central and/or accessible urban locations, generally suitable for small-to large-scale and higher density development that may wholly comprise apartments, including:

- *Sites within walking distance (i.e. up to 15 minutes or 1,000-1,500m), of principal city centres, or significant employment locations, that may include hospitals and third-level institutions;*
- *Sites within reasonable walking distance (i.e. up to 10 minutes or 800-1,000m) to/from high capacity urban public transport stops (such as DART or Luas); and*
- *Sites within easy walking distance (i.e. up to 5 minutes or 400-500m) to/from high frequency (i.e. min 10 minute peak hour frequency) urban bus services.*

The subject site falls within this category as it is a '*Site within walking distance of significant employment centre*', a '*Site within reasonable walking distance to/from high capacity urban public transport stops*', and a '*Site within easy walking distance to/from high frequency urban bus services*'. The subject site is located within walking and cycling distance of significant employment centres of the Mater Hospital and Children's Health Ireland, Temple Streetto the City Cente and its significant employment areas such as the IFSC. Additionally, the site is a 5-minute walk from both the Drumcondra Rail Station, and existing high frequency bus corridor of the Drumcondra Road, in addition to the future Bus Connects Core Corridor.

The Planning Report and Statement of Consistency for the proposed development, prepared by BSM and submitted under separate cover as part of the planning application, details the consistency of the proposed development with the SPPRs of the Guidelines.

3.3.7 Urban Development and Building Heights – Guidelines for Planning Authorities (2018)

The Urban Development & Building Heights Guidelines were published in December 2018 by the Minster for Housing, Planning & Local Government. They have been published to support the objectives of the NPF, by securing a more compact and sustainable manner of development in urban areas.

The Ministers forward to the Guidelines sets out the Government policy on urban building heights, characterising the traditional settlement pattern of *"constantly expanding low-rise suburban residential areas resulting in ever longer commutes, more and more congestion, empty suburbs by day and empty city and town cores by night"* as *"completely unsustainable"*. The Guidelines support a departure from this trend, stating that *"our cities and towns must grow upwards, not just outwards"*

It is stated that:

> *"Reflecting the National Planning Framework strategic outcomes in relation to compact urban growth, the Government considers that there is significant scope to accommodate anticipated population growth and development needs, whether for housing, employment or other purposes, by building up and consolidating the development of our existing urban areas."* (p. 2)
>
> *"Securing compact and sustainable urban growth means focusing on reusing previously developed 'brownfield' land, building up infill sites (which may not have been built on before) and either reusing or redeveloping existing sites and buildings, in well serviced urban locations,*

particularly those served by good public transport and supporting services, including employment opportunities." (p. 4)

The Guidelines reference NPO 13 (from the NPF) which states:

'In urban areas, planning and related standards, including in particular building height and car parking will be based on performance criteria that seek to achieve well-designed high-quality outcomes in order to achieve targeted growth. These standards will be subject to a range of tolerance that enables alternative solutions to be proposed to achieve stated outcomes, provided public safety is not compromised and the environment is suitably protected'.

It recognises that in meeting the challenge set out above new approaches to urban planning and development are required and that securing an effective mix of uses within urban centres is critical. To bring about this increased density and increased residential development in urban centres the Guidelines state that '*significant increases in the building heights and overall density of development is not only facilitated but actively sought out and brought forward by our planning processes and particularly so at local authority and An Bord Pleanála levels'.*

The scheme seeks to achieve increased height and density on a highly accessible and large-scale site set within Dublin city's urban extent.

The proposed development features new residential buildings ranging in height from 3 to 13 storeys, to accommodate 1131 no. apartments including retail and crèche units, residential tenant amenity spaces, community/cultural spaces, mobility hubs and public open space. The application proposes the renovation of the Seminary Building and South Link Building to accommodate residential units and the renovation of the existing Holy Cross Chapel and Assembly Hall buildings for use as community/cultural uses.

The proposed scheme seeks to achieve increased height and density. The site's suitability for this approach is set out in detail, as considered against Appendix 3 of the Development Plan in the accompanying Planning Report. It is considered that the subject site is a prime example of the type of site anticipated in the Guidelines, and supported in the Development Plan, that can achieve increased building height and resulting increased density, on a highly accessible and large-scale site former institutional lands within Dublin City's urban extent.

The Planning Report and Statement of Consistency for the proposed development, prepared by BSM and submitted under separate cover as part of the planning application, details the consistency of the proposed development with these Guidelines.

3.3.8 Design Manual for Urban Roads and Streets (2019)

The Design Manual for Urban Roads and Streets (DMURS), was adopted by the Department of Transport and the Department of Environment in 2013 and was updated in 2019. In June 2022, National Guidelines and Standards (NGS) Circular 1 of 2022 issued updates in relation to Advice Note 2 on Materials and Specifications. DMURS sets out design guidance and standards for new / reconfigured urban roads and streets in Ireland. It also outlines practical design measures to encourage more sustainable travel patterns in urban areas.

The scheme proposals are the outcome of an integrated urban design and landscaping to create lower traffic speeds through the development and thereby facilitating a safer environment for pedestrians

and cyclists. The Transport Assessment, prepared by SYSTRA and submitted under separate cover as part of the planning application, provides further detail in respect of the compliance of the proposed development with DMURS.

3.3.9 Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (2010)

The Natura 2000 network is a pan-European Union network which provides for the protection of sites that are of particular importance for rare, endangered or vulnerable habitats and species. The Natura 2000 network in Ireland is comprised of Special Areas of Conservation (SAC) and Special Protection Areas (SPA). SAC are selected for the conservation and protection of habitats listed on Annex I and species (other than birds) listed on Annex II of Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora ('the Habitats Directive'), and their habitats. SPA are sites that have been selected and notified for the conservation and protection of bird species listed on Annex I of Directive 2009/147/EC on the conservation of wild birds ('the Birds Directive') and regularly occurring migratory species, and their habitats, particularly wetlands.

Appropriate Assessment (AA) examines the direct and indirect impacts that a plan or project might have on its own or in combination with other plans and projects, on one or more Natura 2000 sites in view of their conservation objectives. The obligation to undertake AA derives from Articles 6(3) and 6(4) of the Habitats Directive. The requirements of the Habitats Directive in relation to AA are similar in many respects to those associated with EIA, in respect of the obligation to explain environmental effects. However, the focus of AA is targeted specifically on Natura 2000 sites and their conservation objectives. Additionally, Articles 6(3) and 6(4) place strict legal obligations on Member States, ensuring that the outcome of an AA fundamentally affects the decision of whether or not a development consent will be granted.

The Ministerial Guidelines in relation to AA of plans and projects were published by the Minister for Environment, Heritage and Local Government in December 2009, and subsequently revised in February 2010. Their purpose is to assist and guide local and planning authorities in the application of Articles 6(3) and 6(4) of the Habitats Directive insofar as it relates to their roles, functions and responsibilities in the undertaking of AA of plans and projects.

An AA Screening Report has been prepared by BSM in respect of the proposed development, in accordance with the requirements of the Habitats Directive and the Birds Directive, the European Union (Birds and Natural Habitats) Regulations 2011 (as amended) and the PDA 2000.

Please refer to Section 2.6.1 and the AA Screening Report (BSM, 2025), submitted under separate cover as part of the planning application, for full details.

3.3.10 Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities (2024)

These new Guidelines replace the *Sustainable Residential Development in Urban Areas Guidelines for Planning Authorities* (2009) which in turn replaced the *Residential Density Guidelines* in 1999. The Guidelines set out policy and guidance in relation to the planning and development of urban and rural settlements, with a focus on sustainable residential development and the creation of compact settlements.

Since the publication of the Residential Density Guidelines 1999 and subsequent 2009 Guidelines, planning authorities have been recommended to promote increased residential densities at appropriate locations. The Guidelines noted that '*given the NPF priorities for compact growth [...] , the Government considers that it is necessary to expand on the number of density bands contained in the 2009 Guidelines in order to ensure that densities are efficient while, at the same time, tailored to settlement context.*'

Table 3.1 of the Guidelines sets out the area and density ranges applicable to Dublin and Cork City and Suburbs. The subject site in Clonliffe is considered as 'City – Urban Neighbourhood' as follows:

> *City - Urban Neighbourhood*
>
> *The city urban neighbourhoods category includes: (i) the compact medium density residential neighbourhoods around the city centre that have evolved overtime to include a greater range of land uses, (ii) strategic and sustainable development locations[7], (iii) town centres designated in a statutory development plan, and (iv) lands around existing or planned high-capacity public transport nodes or interchanges (defined in Table 3.8) – all within the city and suburbs area. These are highly accessible urban locations with good access to employment, education and institutional uses and public transport. It is a policy and objective of these Guidelines that residential densities in the range 50 dph* [dwellings per hectare] *to 250 dph (net) shall generally be applied in urban neighbourhoods of Dublin and Cork.*

The Site Strategy & Architects Design Statement prepared by O'Mahony Pike & Henry J Lyons details on the development of the design strategy for the proposed lands to generate a permeable, legible, placemaking strategy which respects the sites built and landscape heritage in line with these Guidelines. It emphasises on the key indicators of quality urban design & placemaking to create an inclusive and sustainable neighbourhood. For further details refer to the standalone design statement prepared by the Architects.

Furthermore, this underutilised, institutional site is approximately 400m from Drumcondra Commuter Railway Station to the south west, and to the main Drumcondra Road, which is a quality bus corridor (QBC) and is served by several Dublin Buses including: No's 13; 16; 41 & 41d; 41b; 41c; 1; 11; 33 & 33e; and 44. It is anticipated that the site will be served by Bus Connects 'Core Bus Corridor No. 2' (Swords to City Centre). As such is in an ideal location to maximise return on previous and future public transport investment. The site is located less than 10 minutes' walk from the proposed Glasnevin Metrolink site. Therefore, it is considered that the site is within proximity to a High Capacity Public Transport Node or Interchange. In this respect, a density of c. 145 uph is achieved within the density parameters 50 dph to 250 dph set out above. In addition, and as referenced in footnote 7 above, '(ii) strategic and sustainable development locations' can refer to Z12 zoned lands which are identified as Institutional Land (Future Development Potential) and are considered important in delivery of the core strategy for the city.

The Guidelines reinforce that the planning authority '*is required to have regard to the polices and objectives of the Guidelines and to apply the specific planning policy requirements (SPPRs)*'. Alignment with the following 4 no. SPPRs in relation to separation distances (SPPR 1), minimum private open space standards for houses (SPPR 2), car parking (SPPR 3) and cycle parking and storage (SPPR 4). SPPR 2 does not apply to the proposed development as it is applicable to houses only.

For further details on site accessibility with reference to these Guidelines, please refer to the Transport Assessment (standalone document) prepared by SYSTRA.

Please refer to the Planning Report and Statement of Consistency for the proposed development, prepared by BSM and submitted under separate cover as part of the planning application for further details.

3.3.11 The Planning System and Flood Risk Management – Guidelines for Planning Authorities (2009)

The *Planning System and Flood Risk Management – Guidelines for Planning Authorities* was published by the Office of Public Works (OPW) and Department of Environment, Heritage and Local Government in 2009. The Guidelines introduce comprehensive mechanisms for the incorporation of flood risk identification, assessment and management into the planning process. They aim to, among other things; avoid inappropriate development in areas at risk of flooding and avoid new developments increasing flood risk elsewhere. They mandate the preparation of Site-Specific Flood Risk Assessments (SSFRA) for development applications which relate to areas at risk of flooding and stipulate the content and level of detail to be presented therein.

A Site-Specific Flood Risk Assessment (SSFRA) has been prepared in respect of the proposed development by Barrett Mahony Civil & Structural Consulting Engineers (2025), in accordance with the OPW guidelines *The Planning System and Flood Risk Management – Guidelines for Planning Authorities* (2009). The key findings and conclusions of the SSFRA are summarised as follows:

> *'Based on available and recorded information, the main portion of site has not been subject to flooding in recent history. (Only buried drainage outfalls are located in the flood zones).*
>
> *The risk of tidal flooding is considered very low as the subject site lies outside the 0.1% AEP.*
>
> *The risk of fluvial flooding in the area is currently under review by the OPW. However, this risk is considered low due the site located outside the 0.1% AEP fluvial coupled with the 50% AEP tidal flood extent. In addition, the considerable level difference between the proposed finished levels and the riverbank levels in the vicinity.*
>
> *The risk of flooding due to ground water ingress to the proposed development is considered low. Waterproofing construction methods and measures will be employed to prevent ingress of ground water into the basements, in the normal manner.*
>
> *The risk of pluvial flooding is considered low, due to the site location and proposed measures for the development.*
>
> *Based on the flood risk identification in Stage 1, the proposed development falls in Flood Zone C. Hence, the proposed development is deemed 'Appropriate' in accordance with the guidelines of the OPW's publication.'*

Please refer to the SSFRA (Barrett Mahony Civil & Structural Consulting Engineers, 2025) submitted under separate cover as part of the planning application.

3.3.12 Climate Action Plan (2025)

The Climate Action Plan 2025 (CAP25) is the third annual update to Ireland's Climate Action Plan under the Climate Action and Low Carbon Development (Amendment) Act 2021. The Plan lays out a roadmap

of actions which will lead to meeting the national climate objective of pursuing and achieving, by no later than the end of the year 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy. It aligns with the legally binding economy-wide carbon budgets and sectoral emissions ceilings that were agreed by Government in July 2022.

Climate Action Plan 2025 builds upon the last year's Plan (CAP24) by refining and updating the measures and actions required to deliver the carbon budgets and sectoral emissions ceilings and it should be read in conjunction with Climate Action Plan 2024. The Plan provides a roadmap for taking decisive action to halve Ireland's emissions by 2030 and achieve climate neutrality by no later than 2050, as committed to in the Climate Action and Low Carbon Development (Amendment) Act 2021.

As with CAP24, the CAP25 Annex of Actions contains new, high-impact actions for delivery in 2025. The full set of measures and actions are set out in the Plan to provide the legally required roadmap of actions to reach climate targets while also supporting enhanced energy security with renewables, cleaner air, warmer homes with reduced energy bills, and better urban and rural transport services.

The proposed development has been designed to assist in achieving actions and policies as set out in the Climate Action Plan 2025 (CAP25) and is set out in documents supporting this LRD application including the Chapter 12 Climate of this EIAR. Furthermore, Climate Action Energy Statement Report has been prepared by O'Connor Sutton Cronin (2025) to comply with the relevant policies set out in the Dublin City Development Plan 2022-2028. Please refer to this standalone report submitted under separate cover as part of the planning application.

3.3.13 Childcare Facilities – Guidelines for Planning Authorities (2001)

The Childcare Facilities – Guidelines for Planning Authorities were published by the Government in 2001. They provide a framework to guide local authorities in both preparing development plans and assessing applications for planning permission, and developers and childcare providers in formulating development proposals. They state the Government policy on childcare provision, which is *"to increase the number of childcare places and facilities available and to improve the quality of childcare services for the community"* (p. 3).

The guidelines indicate that Development Plans should facilitate the provision of childcare facilities in appropriate locations. These include larger new housing estates, where planning authorities should require the provision of a minimum of one childcare facility (with 20 places) for every 75 dwellings.

However, the Sustainable Urban Housing: Design Standards for New Apartments (Department of Housing, Local Government and Heritage, 2023) state that:

> *"Notwithstanding the Planning Guidelines for Childcare Facilities (2001), in respect of which a review is to be progressed, and which recommend the provision of one child-care facility (equivalent to a minimum of 20 child places) for every 75 dwelling units, the threshold for provision of any such facilities in apartment schemes should be established having regard to the scale and unit mix of the proposed development and the existing geographical distribution of childcare facilities and the emerging demographic profile of the area. One-bedroom or studio type units should not generally be considered to contribute to a requirement for any childcare provision and subject to location, this may also apply in part or whole, to units with two or more bedrooms".* (pp. 20 – 21)

A Childcare Facilities and School Demand Assessment has been prepared by BSM and is submitted as part of this application under separate cover. It has assessed the provision and need for childcare facilities and schools in the area in light of the proposed development, in accordance with the requirements of the Dublin City Development Plan (2022 – 2028). The assessment found that the surrounding area (1.0 km radius) contains 14 childcare facilities that have a total capacity of c.785 no. places. Under the scope of the proposed development, it is also proposed to build a new crèche c. 587sqm. It has concluded on this basis that the proposed development, in combination with the existing provision in the area, will meet the demand of future childcare places.

The primary education sector includes a range of school types, including state-funded schools, special schools and private primary schools. The state-funded schools include religious schools, nondenominational schools, multi-denominational schools and Gaelscoileanna (Irish-medium schools). There are 29 no. primary schools within 2km of the subject site for future residents to avail of. The secondary schools in the area include a range of schools including boys, girls, all genders, Irish-medium schools and boarding schools. There are 12 no. secondary schools within the c.2km catchment area.

3.3.14 Housing for All – A New Housing Plan for Ireland (2021)

Housing for All, published in September 2021 by the Department of Housing, Local Government and Heritage, is the Government's new housing plan which aims to improve the housing delivery system for people with all different housing needs in Ireland through embedding environmental, economic and social sustainability in our housing system to 2030. It provides an overview of the existing housing scenario as follows:

- There are not enough houses to buy or rent in the private sector.
- There are not enough houses being built by the State for those who need social housing.
- Housing has become increasingly unaffordable for the 'squeezed middle' who would once have expected to be able to purchase their own home.
- Too many people are experiencing homelessness or are unable to access appropriate housing.
- The cost of building housing is too high.
- Too much vacant housing stock remains unused.
- Our housing stock needs to be more environmentally friendly.

The overarching aim of the Housing for All plan is that "*Everyone in the State should have access to a home to purchase or rent at an affordable price, built to a high standard and in the right place, offering a high quality of life*" (p. 17). With a view to achieving this aim, the plan sets out four overarching housing policy objectives as follows:

1. Supporting homeownership and increasing affordability;
2. Eradicating homelessness, increasing social housing delivery and supporting social inclusion;
3. Increasing new housing supply; and
4. Addressing vacancy and efficient use of existing stock.

A suite of actions are set out under the four above-listed headings. The Housing for All plan allocates a housing budget of in excess of €20 bn through the Exchequer, the Land Development Agency (LDA) and the Housing Finance Agency over the next five years. According to the plan, this constitutes the largest housing budget in the history of the State.

The plan provides for the following key targets / actions, among others:

- Increased supply of new housing overall, up to an average of at least 33,000 per year to 2030
- An average of 6,000 affordable homes to be made available every year for purchase or for rent
- Provision of more than 10,000 social homes each year, with an average 9,500 new-build Social Housing Homes to 2026
- Increased contribution by developers under Part V, up from 10% to 20%, to include affordable housing and cost rental housing

The estimates of housing demand which form the basis of the Housing for All plan's targets have been developed by the Department of Housing, Local Government and Heritage (DHLGH)'s Housing Need and Demand Assessment (HNDA) model, which has been adapted from the Scottish HNDA. The plan seeks to ensure that new housing is delivered in an environmentally sustainable manner, with a greater proportion of residential development in the existing built-up footprint of towns and cities, and all new homes being built to Nearly Zero Energy Building (NZEB) standards, as well as a policy of retrofitting existing housing stock.

The proposed development is consistent with the Government's New Housing for All plan, in that it will provide 1131 no. apartments including retail and crèche units, residential tenant amenity spaces, community/cultural spaces, mobility hubs and public open space on appropriately zoned lands in accordance with Government housing policy.

The Planning Report and Statement of Consistency for the proposed development, prepared by BSM and submitted under separate cover as part of the planning application, details the consistency of the proposed development with these Guidelines.

3.3.15 Cycle Design Manual (2023)

The Cycle Design Manual has been prepared by the National Transport Authority (NTA) and overseen by the Department of Transport. The Cycle Design Manual replaces the previous National Cycle Manual, published by the NTA in 2011.

This manual draws on the experience of delivering cycling infrastructure across Ireland over the last decade, as well as learning from international best practice, and has been guided by the need to deliver safe cycle facilities for people of all ages and abilities. This manual provides guidance on the design of both on-road and off-road cycle facilities for both urban and rural locations. The manual details on the requirements for cycle-friendly infrastructure, key design principles, types of cycle vehicles, types of cycle links, choosing appropriate facilities and widths. The manual also discusses planning, design and implementation and maintenance of cycling and cycling infrastructure and cycle parking.

As detailed in the Transport Assessment, there are three primary cycle routes within the site:

- Primary Route 1 links Clonliffe Road with Drumcondra Road Lower, passing through the Arrival Plaza and to the west of Block D2, before turning west to run along the north side of the B blocks. The route then turns north, passing between the A blocks before bearing west again to reach Drumcondra Road Lower.
- Primary Route 2 follows Holycross Avenue to enter the site via an existing gate to the south of Block E. It then runs along the eastern edge of the Seminary building to join Primary Route 1 to the east of Block 2. An improved pedestrian crossing is proposed on Clonliffe Road at the southern end of the Route. Within the site, the section of route between the entrance on Holycross Avenue and Primary Route 1 will be 3m-wide shared pedestrian / cycle facility.

- Primary Route 3 is an aspirational future route, which would run north from the site, cross the Tolka, and link into Richmond Road.
- In addition, the link between E1 and the Arrival Plaza is also an important cycle link within the site.

The proposed development includes 1,959 resident cycle spaces, 10 cycle spaces for staff at the creche and retail units and 566 visitor cycle spaces. A total of 40 bike EV charging spaces will be provided within the site, open to both visitors and residents of the scheme.

SYSTRA has developed a Mobility Management Plan (MMP) to further encourage active travel, and use of public transport, by residents of the site. The aim of these measures is to further reduce the proportion of car trips, from an already low base, and promote sustainable travel by future residents of the development.

3.3.16 National Sustainable Mobility Policy (2022)

The National Sustainable Mobility Policy was published in April 2022 by the Department of Transport and replaces Smarter Travel - A Sustainable Transport Future 2009 – 2020. This policy sets out a strategic framework to 2030 for active travel and public transport to support Ireland's overall requirement to achieve a 51% reduction in carbon emissions.

The Policy aims to improve the delivery of sustainable mobility by –

- *Implementing the accompanying action plan to 2025 and a reviewed and updated action plan for 2026 to 2030.*
- *Establishing a Leadership Group to oversee and drive implementation of the Policy and delivery of the action plan, and agree a programme of "pathfinder" projects at local level.*
- *Introducing a new annual National Household Travel Survey to measure progress against the Policy's targets.*
- *Convening a new National Sustainable Mobility Forum to provide a platform for collaborative engagement with national, regional and local stakeholders.*
- *Increasing public engagement around the benefits of sustainable mobility and raising awareness of the availability of alternative options to the private car.*
- *Establishing a new National Transport Authority Advisory Council to engage with the NTA around the discharge of its functions.*
- *Developing a transport research network to support existing research programmes and draw on the sustainable mobility expertise available across academia and industry, both in Ireland and internationally.*

The Policy is guided by three key principles which are underpinned by 10 high-level goals:

Principle 1 : Safe and Green Mobility

1. *Improve mobility safety.*
2. *Decarbonise public transport.*
3. *Expand availability of sustainable mobility in metropolitan areas.*
4. *Expand availability of sustainable mobility in regional and rural areas.*
5. *Encourage people to choose sustainable mobility over the private car.*

Principle 2 : People Focused Mobility

6. *Take a whole of journey approach to mobility, promoting inclusive access for all.*
7. *Design infrastructure according to Universal Design Principles and the Hierarchy of Road Users model.*
8. *Promote sustainable mobility through research and citizen engagement.*

Principle 3 : Better Integrated Mobility

9. *Better integrate land use and transport planning at all levels.*
10. *Promote smart and integrated mobility through innovative technologies and development of appropriate regulation.*

The policy is accompanied by an Action Plan with a total 91 actions organised by goal to be completed by 2025.

- **National Sustainable Mobility Policy Action Plan 2022-2025**: The action plan to 2025 contains actions to improve and expand sustainable mobility options across the country by providing safe, green, accessible and efficient alternatives to car journeys. It also includes demand management and behavioural change measures to manage daily travel demand more efficiently and to reduce the journeys taken by private car.

Various aspects of the design of the proposed development (e.g. provision of secure bike stores for residents and external stands for visitors, electric vehicle charging points and dedicated pedestrian and cycle routes) will facilitate walking and cycling among residents and visitors. The design of the internal road and street layout is consistent with the DMURS and Cycle Design Manual.

The site is extremely well connected by public transport with a wide array of both bus and rail services located nearby. The R132 Drumcondra Road Lower corridor is one of the core bus corridors in the City, with a high frequency of services running from North Fingal, Swords, Dublin Airport, and Ballymun, past the site and into the city. The corridor is served by Bus Service 41 which runs 24 hours a day. There are c. 11 other bus services that run in close proximity to the site, directly linking the site to many different locations across the wider Dublin Area. Drumcondra railway station is a five-minute walk from the development, and is served by services running between the City Centre and Maynooth, Hazelhatch, Longford, and Sligo.

As part of the *Greater Dublin Area Transport Strategy 2022-2042*, there are planned improvements to both the road, public transport, walking and cycling networks within the vicinity of the proposed development site, which will directly benefit residents and visitors, further enhancing sustainable travel options. These include Bus Connects Core Bus Corridor Dublin Swords to City centre Scheme, GDA's cycle network expansion, Dart+ West/South-west expansion and new Metrolink that will run between Swords Estuary and Charlemont Station via Dublin Airport and the City Centre.

For further information, refer to the Planning Report and Statement of Consistency, prepared by BSM and Transport Assessment, prepared by SYSTRA and submitted as part of the planning application under separate cover.

3.3.17 Architectural Heritage Protection Guidelines for Planning Authorities (2011)

The Architectural Heritage Protection Guidelines (2011) provide guidance regarding assessment of proposed new development within the setting and curtilage of a Protected Structure. Of direct relevance is Section 13.3: General Principles which sets out:

'Features within the curtilage and attendant grounds of a protected structure can make a significant contribution to the character of that structure. The designed landscape associated with a protected structure was often an intrinsic part of the original design concept and, as such, inseparable from the building. Where proposals are made for alterations to a designed landscape, ancillary buildings, structures or features within the curtilage or attendant grounds of a protected structure, a site inspection should be carried out by the planning authority in order properly to understand the potential effects of the proposed development.'

This section includes a number of matters that should be considered when assessing the contribution of structures or features within the curtilage or attendant grounds to the character of a protected structure, and when considering any proposals to alter such features.

The DoHLGH 2011 Architectural Heritage Protection Guidelines provide guidance in relation to the construction of new extensions, which can also be applied to the construction of new buildings within the curtilage of a Protected Structure, with Section 6.8.2 stating:

'If planning permission is to be granted for an extension, the new work should involve the smallest possible loss of historic fabric and ensure that important features are not obscured, damaged or destroyed. In general, principal elevations of a Protected Structure (not necessarily just the façade) should not be adversely affected by new extensions. The design of symmetrical buildings or elevations should not be compromised by additions that would disrupt the symmetry or be detrimental to the design of the protected structure.'

A detailed Architectural Heritage Impact Assessment has been carried out by David Slattery Historic Buildings Consultant, enclosed with the planning application and addresses these Guidelines.

3.4 Regional Policy Context

3.4.1 Eastern & Midland Regional Assembly Regional Spatial & Economic Strategy 2019 – 2031

There are three administrative Regions in Ireland: the Northern and Western Region, the Southern Region, and the Eastern and Midland Region and under national policy, Regional Assemblies are tasked with drafting Regional Spatial and Economic Strategies (RSESs). The primary statutory objective of the Strategy is to support implementation of Project Ireland 2040 and its accompanying documents- National Planning Framework and National Development Plan to provide a long-term strategic planning and economic framework for the Region to 2031. The proposed development is situated in the Eastern and Midland Region, which takes in Counties Longford, Westmeath, Offaly, Laois, Louth, Meath, Kildare, Wicklow and Dublin. The Region is the smallest in terms of land area but the largest in population size and is identified as the *"economic engine of the state"* because it contains the capital city (p. 14).

The current RSES for the Region was published in 2019. The RSES' vision statement for the Region is as follows:

> *"To create a sustainable and competitive Region that supports the health and wellbeing of our people and places, from urban to rural, with access to quality housing, travel and employment opportunities for all."* (p. 6)

The RSES is based on three key principles:

1. **Healthy Placemaking:** To promote people's quality of life through the creation of healthy and attractive places to live, work, visit and study in;
2. **Climate Action**: The need to enhance climate resilience and to accelerate a transition to a low carbon economy recognising the role of natural capital and ecosystem services in achieving this;
3. **Economic Opportunity**: To create the right conditions and opportunities for the region to realise sustained economic growth and employment that ensures good living standards for all.

Under the headings of these three principles, the RSES sets out 16 Regional Strategic Outcomes (RSOs), which are closely aligned with the NPF's NSOs and the United Nations' SDGs. With a view to realising the RSOs, the RSES sets out a suite of Regional Policy Objectives (RPOs) to guide the development of the Region.

Healthy Placemaking

- Sustainable Settlement Patterns;
- Compact Growth & Urban Regeneration;
- Rural Communities;
- Healthy Communities;
- Creative Places.

Climate Action

- Integrated Transport & Land Use;
- Sustainable Management of Water, Waste and other Environmental Resources;
- Build Climate Resilience;
- Support the Transition to Low Carbon and Clean Energy;
- Enhanced Green Infrastructure;
- Biodiversity & Natural Heritage.

Economic Opportunity

- A Strong Economy supported by Enterprise & Innovation;
- Improve Education, Skills & Social Inclusion;
- Global City Region;
- Enhanced Regional Connectivity;
- Collaboration Platform.

The subject site is located with the Dublin Metropolitan Area, as designated by the Strategy. The Metropolitan Area Strategic Plan (MASP) which is part of the RSES seeks to focus on a number of large-scale strategic sites, based on key corridors that will deliver significant development in an integrated and sustainable fashion.

In relation to 'Compact Growth and Urban Regeneration', the RSO of greatest relevance to the proposed development, it is stated that there is a need to *'Promote the regeneration of our cities, towns and villages by making better use of under-used land and buildings within the existing built-up urban footprint and to drive the delivery of quality housing and employment choice for the Region's citizens'* (p. 25). It is further stated that, in delivering compact urban growth, Local Authorities should *"Set out measures to reduce vacancy and the underuse of existing building stock and support initiatives that promote the reuse, refurbishment and retrofitting of existing buildings within urban centres"* (p. 39). 'Healthy Communities' is also relevant. This RSO aims to *"Protect and enhance the quality of our built and natural environment to support active lifestyles including walking and cycling ..."* (p. 25).

The RSES contains a Growth Strategy for the Region, which supports *"the continued growth of Dublin as our national economic engine"* (p. 26) and is supported by a Settlement Strategy and Economic Strategy. A key challenge in terms of housing provision in the Region is identified as "*the continued growth rates of household formation coupled with a severe slowdown in the development of new housing stock during the economic recession, resulting in housing supply and affordability pressures in both sale and rental markets, particularly in Dublin and urban areas but affecting all of the Region"* (p. 17). For the DMA specifically; housing supply, affordability, choice and quality / liveability are all identified as issues which need to be addressed *"to ensure Dublin can sustain its competitiveness, provide good quality of life for residents and continue to attract and retain talent and investment as a global city region"* (p. 100).

A number of 'growth enablers' for the Region are identified, which include promoting *"compact urban growth to realise targets of at least 50% of all new homes to be built, to be within or contiguous to the existing built up area of Dublin city and suburbs"* (p. 33). More specifically, growth enablers identified for the DMA include the following (p. 34):

- *"To sustainably manage Dublin's growth as critical to Ireland's competitiveness, achieving growth to 1.4 million people in Dublin City and Suburbs and 1.65 million people in the Dublin Metropolitan Area by 2031."*
- *"To realise ambitious compact growth targets of at least 50% of all new homes to be built, to be within or contiguous to the existing built up area of Dublin city and suburbs and a target of at least 30% for other metropolitan settlements, with a focus on healthy placemaking and improved quality of life."*
- *"To deliver strategic development areas identified in the MASP, located at key nodes along high-quality public transport corridors in tandem with the delivery of infrastructure and enabling services to ensure a steady supply of serviced sites and to support accelerated delivery of housing."*
- *"Enhance co-ordination across local authorities and relevant agencies to promote more active land management and achieve compact growth targets through the development of infill, brownfield and public lands, with a focus on social as well as physical regeneration and improved sustainability."*

The MASP seeks to focus housing delivery along high-quality public transport corridors (existing and planned) which have the capacity to accommodate significant development in an integrated and sustainable fashion. While the MASP remains at a high level, the subject site is broadly located along the 'Metrolink - LUAS Corridor' connecting Swords with the City Centre via Dublin Airport; and within 'Dublin City within the M50'. The route of the Metrolink is currently in planning, however the proposed development is strategically positioned to benefit from this future transport investment, given the

proposed current location of a Metrolink station at Glasnevin junction is c. a 20-minute walk from the subject site.

The RSES states that, for urban-generated development, development within or contiguous to existing urban areas (including on infill and brownfield sites); and which are well-served by walking, cycling and public transport; will be prioritised over that which does not meet these criteria.

As well as calling for increased residential density in Dublin City, the RSES emphasises the need for healthy placemaking, i.e. *"integration of better urban design, public realm, amenities and heritage to create attractive places to live, work, visit and invest in"* and *"sustainable communities to support active lifestyles including walking and cycling"* (p. 48). In built up areas, a general intention to minimise private car use in favour of public transport and walking or cycling, is expressed in the RSES. It is stated that new developments should *"give competitive advantage"* to these modes, for example by providing for filtered permeability and appropriately designed bicycle parking (p. 187).

The RSES also states that Sustainable Drainage Systems (SuDS) should be incorporated into public and private developments to minimise the extent of impermeable hard surfacing and reduce the associated potential for flood risk impacts.

The proposed development is aligned with the objectives of the Eastern and Midland Regional Assembly's RSES and the Dublin MASP, in that it will provide a large number of additional, high-quality and high-density residential units within the existing built-up footprint of Dublin City. The following characteristics of the proposed development are also in accordance with the vision and objectives of the NPF:

- Provision of a high quality, attractive, accessible and liveable residential hub, in accordance with the principles of healthy placemaking and the 'Asset Test' for the strategic location of new residential development, as set out in the RSES.
- Close proximity to community amenities and services, high capacity (existing and planned) public transport services, pedestrian and cycling infrastructure, and high density of employment opportunities.
- Provision of on-site amenities and services for residents, including attractive public realm, recreational areas / opportunities, childcare facilities and retail.
- Sensitive re-use of existing, underutilised building stock of architectural heritage and historic merit.
- Promotion, through design and location, of walking, cycling, EV use and public transport use as more sustainable and healthy alternatives to private car use.

The consistency of the proposed development with the relevant design standards is discussed in the Planning Report & Statement of Consistency, prepared by BSM and submitted as part of this application documentation under separate cover. Regarding RPOs related to specific environmental topics such as SuDS and waste management (refer to RPOs No. 7.12 and 10.25, respectively); these matters are considered herein in the relevant specialist EIAR Chapters.

3.4.2 Dublin City Development Plan 2022 – 2028

The subject site is located within the administrative area of Dublin City Council. The Dublin City Development Plan 2022-2028 sets the statutory planning policy for development within the city boundary, having regard to national and regional plans and policies. The Development Plan provides

the planning policy framework and design and development standards for development of the subject lands.

The Development Plan sets out *'an integrated, coherent spatial framework to ensure our city is developed in an inclusive way which improves the quality of life for its citizens, and ensures that it is an attractive place to live, work and visit'*. Section 1.2 outlines how to achieve this and the following is of relevance:

> *a) Social/Residential – creating a more compact city with a network of sustainable neighbourhoods (aligned with the principle of the 15 minute city) which have a range of facilities and a choice of tenure and house types, promoting social inclusion and integration of all ethnic/minority communities.*
>
> *d) Cultural/Built Heritage – making provision for cultural facilities throughout the city and increasing awareness of our cultural and built heritage and promoting safe and active streets through the design of buildings and the public realm.*
>
> *e) Urban Form – creating a connected, legible and liveable city with a distinctive sense of place, based on active streets, quality public spaces and adequate community and civic infrastructure.*
>
> *f) Healthy Placemaking - ensuring quality architecture, urban design and green spaces to provide quality of life and good health and wellbeing for all.*

Core Strategy

Chapter 2 sets out the Core Strategy for the Plan. The aim of the core strategy is to guide how and where development should happen in the city. This strategy sets out the long-term vision for the city and promotes 'compact growth'. Compact growth involves the better use of available land within built up areas close to public transport and the city centre for development opportunities. It is also growth that is in line with developments for public transport, including cycle paths and quality footpaths.

Table 2-7 of the Core Strategy identifies that the Development Plan must accommodate between 20,120 – 31,520 additional persons up to an overall population target of between 625,750 and 640,000 by 2028. The housing demand calculated sets a requirement for the Development Plan to provide for approximately 40,000 housing units between 2022 and 2028. Section 2.4.1 of the Core Strategy notes that Z12 lands have been identified as one of the nine zoning objectives which can accommodate residential development. Table 2-8 sets out the breakdown of zoned lands and primarily accounting for SDRA zoned lands. It also includes identified lands for Urban Consolidation on City Centre Sites within the M50, which would include the Clonliffe lands. Table 2-9 sets out the capacity of existing zoned lands outside of SDRAs. In this regard the subject Z12 zoned lands are included in Core Strategy calculations for achieving sufficient zoned lands to cater for targeted population growth. The development of the lands for residential purposes supports the achievement of Core Strategy targets.

Overall, the proposed development has had careful regard to the policies and objectives contained within the Development Plan. In particular the proposed development supports the achievement of Objective CS07:

> *CS07: Promote Delivery of Residential Development and Compact Growth - To promote the delivery of residential development and compact growth through active land management*

measures and a co-ordinated approach to developing appropriately zoned lands aligned with key public transport infrastructure, including the SDRAs, vacant sites and underutilised areas.

The design, layout and open space will result in a high-quality community and residential environment. Communal facilities have been included within the proposed development to serve future residents.

Zoning

The site is predominantly zoned *Z12 'Institutional Land (Future Development Potential)'*, as are the adjacent sports pitches, which have the stated aim – *'To ensure existing environmental amenities are protected in the predominantly residential future use of these lands.'* An area immediately adjacent to the River Tolka, abutting and partly within the Site, is zoned *Z9 'recreational amenity/open space/green networks'*. The River Tolka corridor also has a specific objective for 'Conservation Area'. The north-west corner of the Site is zoned *Z1 'Sustainable Residential Neighbourhoods'*. There are a number of Protected Structures within the proposed development area and in the area surrounding the Site. There is also a specific objective for 'roads, street and bridge schemes' transecting north-south through the site potentially connecting Clonliffe Road to Richmond Road alongside Tolka Park. Refer to **Figure 3.2**.

No residential development is proposed within the Z9 zoning in compliance with the requirements of LRD Applications.

Permissible uses and open for consideration use on Z12 lands include:

- Permissible Uses: *Assisted living/retirement home, bed and breakfast, buildings for the health, safety and welfare of the public, café/ tearoom, childcare facility, community facility, conference centre, cultural/recreational building and uses, delicatessen, education, embassy residential, enterprise centre, garden centre/ plant nursery, golf course and clubhouse, guesthouse, halting site, home-based economic activity, hostel (tourist), hotel, live-work units, media associated uses, medical and related consultants, open space, place of public worship, primary health care centre, public service installation, residential, residential institution, restaurant, shop (local), sports facility and recreational uses, training centre.*
- Open for Consideration Uses: *Boarding kennel, Build to Rent residential, car park ancillary to main use, civic and amenity/recycling centre, club house and associated facilities, crematorium, financial institution, funeral home, hostel (tourist), industry (light), municipal golf course, nightclub, office, off-licence (part), outdoor poster advertising, public house, science and technology-based industry, shop (neighbourhood), student accommodation.*

Figure 3.2 Land use zoning at the location of the proposed development (Source: Dublin City Development Plan 2022 – 2028 ; Mapset E)



The Development Plan identifies specific considerations for the development of Z12 lands which makes reference to a masterplan as follows:

> *'In considering any proposal for development on lands subject to zoning objective Z12, other than development directly related to the existing community and institutional uses, Dublin City Council will require the preparation and submission of a masterplan setting out a clear vision for the future for the development of the entire land holding.*
>
> *In particular, the masterplan will need to identify the strategy for the provision of the 25% public open space requirements associated with any residential development, to ensure a co-ordinated approach to the creation of new high-quality public open space linked to the green network and/or other lands, where possible. In addition, development shall have regard to the standards in Chapter 15'*

The Development Plan identifies a number of specific requirements arising from the Z12 zoning objective. These include:

- *Where lands zoned Z12 are to be developed, a minimum of 25% of the site will be required to be retained as accessible public open space to safeguard the essential open character and landscape features of the site. Where such lands are redeveloped, the predominant land-use will be residential.*
- *In considering any proposal for development on lands subject to zoning objective Z12, other than development directly related to the existing community and institutional uses, Dublin City Council*

will require the preparation and submission of a masterplan setting out a clear vision for the future development of the entire landholding.

- *In particular, the masterplan will need to identify the strategy for the provision of the 25% public open space requirement associated with any residential development, to ensure a co-ordinated approach to the creation of new high-quality public open space linked to the green network and/or other lands, where possible. In addition, development shall have regard to the standards in Chapter 15.*
- *On Z12 lands, the minimum 25% public open space shall not be split up into sections/fragmented and shall comprise soft landscape suitable for relaxation and children's play, unless the incorporation of existing significant landscape features and the particular recreational or nature conservation requirements of the site and area dictate that the 25% minimum public open space shall be apportioned otherwise.*
- *Where there is an existing sports pitch or sports facility on the Z12 lands subject to redevelopment, commensurate recreational/social infrastructure will be required to be provided and retained for community use where appropriate as part of any new development (see also Chapter 10: Green Infrastructure and Recreation, Policy GI49).*

As such a Masterplan has been prepared in respect of the Clonliffe Lands that are subject to the Z12 zoning. The Masterplan describes the future strategic vision and structure for the redevelopment of lands. The proposed residential development provides for in excess of the 25% public open space requirement and this excludes the wider lands, meaning that the Masterplan as a whole will deliver significantly more than 25% public open space.

Housing

Chapter 5 of the Development Plan relates to Quality Housing Objectives. The Development Plan identifies the provision of quality homes which provide for the needs of the city's population, and which contribute to the making of good, connected neighbourhoods as a key priority. In this regard it is the policy of DCC:

> *QHSN10: To promote residential development at sustainable densities throughout the city in accordance with the core strategy, particularly on vacant and/or underutilised sites, having regard to the need for high standards of urban design and architecture and to successfully integrate with the character of the surrounding area.*

The Development Plan further notes that, in Dublin City, it is envisaged that the majority of new housing in the city area will be apartments or another typology that facilitates living at sustainable urban densities. With regards apartments, the DCC policies area as follows:

> *QHSN36: To promote the provision of high quality apartments within sustainable neighbourhoods by achieving suitable levels of amenity within individual apartments, and within each apartment development, and ensuring that suitable social infrastructure and other support facilities are available in the neighbourhood.*
>
> *QHSN38: To encourage and foster the creation of attractive, mixed use, sustainable residential communities which contain a wide variety of housing and apartment types, sizes and tenures, in accordance with the Housing Strategy and HNDA, with supporting community facilities and residential amenities. Further detail in regard to unit mix is set out in Chapter 15: Development*

Standards. Unit mix requirements for the Liberties and the North Inner City are set out in Section 15.9.1 and Table 37 of the Housing Strategy in Appendix 1.

The scheme as proposed introduces a mix of residential unit types and sizes to an existing and established residential neighbourhood of the City.

The City Development Plan identifies as a policy:

> *'To secure the implementation of the Dublin City Council Housing Strategy in accordance with the provision of national legislation. In this regard, 10% of the land zoned for residential uses, or for a mixture of residential and other uses, shall be reserved for the provision of social and/ or affordable housing in order to promote tenure diversity and a socially inclusive city.'*

The proposed scheme has been designed in a manner to ensure an appropriate mix and location of social and affordable housing units. Refer to the Planning Report and Statement of Consistency for the proposed development, prepared by BSM for further details.

Built Heritage and Archaeology

The Development Plan, in Chapter 11, sets out its role in *'valuing and safeguarding built heritage and archaeology for future generations'* and how *'The plan guides decision-making through policies and objectives and the implementation of national legislation to conserve, protect and enhance our built heritage and archaeology'*. As set out in this report the proposed scheme sits within the context of the former Holy Cross College lands with a number of existing Protected Structures and historic landscape and setting.

As such there are a number of key policies which are considered to be of importance in considering the proposed development of the subject site. These include:

BHA2: Development of Protected Structures

That development will conserve and enhance protected structures and their curtilage and will:

a) *Ensure that any development proposals to protected structures, their curtilage and setting shall have regard to the Architectural Heritage Protection Guidelines for Planning Authorities (2011) published by the Department of Culture, Heritage and the Gaeltacht.*
b) *Protect structures included on the RPS from any works that would negatively impact their special character and appearance.*
c) *Ensure that works are carried out in line with best conservation practice as advised by a suitably qualified person with expertise in architectural conservation.*
d) *Ensure that any development, modification, alteration, or extension affecting a protected structure and/or its setting is sensitively sited and designed, and is appropriate in terms of the proposed scale, mass, height, density, layout and materials.*
c) *Ensure that the form and structural integrity of the protected structure is retained in any redevelopment and ensure that new development does not adversely impact the curtilage or the special character of the protected structure.*
d) *Respect the historic fabric and the special interest of the interior, including its plan form, hierarchy of spaces, structure and architectural detail, fixtures and fittings and materials.*
e) *Ensure that new and adapted uses are compatible with the architectural character and special interest(s) of the protected structure.*

f) Protect and retain important elements of built heritage including historic gardens, stone walls, entrance gates and piers and any other associated curtilage features.

g) Ensure historic landscapes, gardens and trees (in good condition) associated with protected structures are protected from inappropriate development.

h) Have regard to ecological considerations for example, protection of species such as bats.

BHA5: Demolition of Regional Rated Building on NIAH

That there is a presumption against the demolition or substantial loss of any building or other structure assigned a 'Regional' rating or higher by the National Inventory of Architectural Heritage (NIAH), unless it is clearly justified in a written conservation assessment that the building has no special interest and is not suitable for addition to the City Council's Record of Protected Structures (RPS); having regard to the provisions of Section 51, Part IV of the Planning and Development Act, 2000 (as amended) and the Architectural Heritage Protection Guidelines for Planning Authorities (2011).

A detailed Architectural Heritage Impact Assessment has been carried out by David Slattery - Historic Buildings Consultant, enclosed with the planning application and addresses these key policies and objectives.

Building Height

Appendix 3 of the Development Plan sets out a building height strategy for the city. It notes consideration of what constitutes a tall building can be subjective and also depends on surrounding context. The Development Plan sets out three general categories of height to be considered:

- *Prevailing Height: This is the most commonly occurring height in any given area. It relates to the scale, character and existing pattern of development in an area. Within such areas, there may be amplified height. This is where existing buildings within the streetscape deviate from the prevailing height context, albeit not to a significant extent, such as local pop up features. Such amplified height can provide visual interest, allow for architectural innovation and contribute to a schemes legibility.*
- *Locally Higher Buildings: These are buildings that are significantly higher than their surroundings and are typically up to 50 metres in height. Higher buildings can act as Local or District landmarks.*
- *Landmark/Tall Buildings: A landmark or tall building is one that is a significant intervention in the cityscape and skyline. They are typically located in an area that denotes a specific function such as a public transport interchange or a key urban quarter/ regeneration site. Landmark/tall buildings are typically in excess of 50 metres in height, of exceptional architectural quality, can help people navigate through the City and form memorable reference points.*

The proposed development aligns with the category of Locally Higher Buildings as the proposed scheme proposes an overall height ranging from 3-13 storeys which is higher than much of its surrounding context. The Development Plan in Section 4.1 of Appendix 3 states *'As a general rule, the development of innovative, mixed use development that includes buildings of between 5 and 8 storeys, including family apartments and duplexes is promoted in the key areas identified below. Greater heights may be considered in certain circumstances depending on the site's location and context and subject to assessment against the performance based criteria set out in Table 3'*. The majority of the scheme is within the 5-8 storey range (7 out of 12 blocks) with increased heights at specific locations throughout the scheme.

Through the current zoning objective, the subject site represents a sustainable location for new housing development which is serviced and well connected to a wide range of facilities, amenities and transport facilities. The site strategy and design evolution followed a number of key structuring principles and in response to site specific characteristics, with consideration of the previous application and the changes in planning policy that have occurred. Key design decisions were made in reviewing the previous scheme, the requirements of the Development Plan and pre-planning engagement with DCC. Refer to the Planning Report and Statement of Consistency for the proposed development, prepared by BSM and submitted under a separate cover.

3.4.3 Transport Strategy for the Greater Dublin Area 2022 – 2042

The Greater Dublin Area Transport Strategy 2022-2042 prepared by the National Transport Authority (NTA) sets out the framework for investment in transport infrastructure and services over the next two decades to 2042.

The overall aim of the Transport Strategy states- *"To provide a sustainable, accessible and effective transport system for the Greater Dublin Area which meets the region's climate change requirements, serves the needs of urban and rural communities, and supports the regional economy."* A key focus of the strategy is to enable increased use of other transport modes to meet environmental, economic and social objectives related to emissions, congestion and car dependency.

The strategy also provides the following strategy objectives:

- An enhanced natural and built environment;
- Connected communities and better quality of life;
- A strong sustainable economy;
- An inclusive transport system.

The Transport Strategy also includes the following measures for planning for sustainable modes:

- Consolidation of development, to ensure more people live close to services and public transport, and to minimise urban sprawl and long distance commuting;
- Transit-oriented development to guide the growth of our cities and towns on the basis of accessibility;
- Mixed use development, to minimise travel distances between homes and local services, and to ensure vibrancy of urban areas;
- Filtered Permeability so that people can move about more easily by walking and cycling than by car;
- Development of schools to support sustainable transport use for the majority of trips, through appropriate location selection, site design and transport network development; and
- The prioritisation of walking, cycling and public transport in urban street networks, in tandem with high quality public urban spaces, through the Area Based Transport Assessment (ABTA) process.

As per Section 8.4, the Strategy states that - *"Facilitating the delivery of large numbers of new housing units of high quality and diversity, in locations which maximise the number and the range of households who can travel by public transport, walking and cycling, is a critical aspect of integrated transport and land use planning in the GDA."*

The strategy also highlights how it is necessary for the expansion of attractive public transport alternatives to car travel, to reduce congestion and emissions and enable the transport sector to cater for the demands associated with longer term population and employment growth in a sustainable manner.

Forthcoming schemes of direct relevance to the proposed development are:

- The BusConnects Dublin new services network, the implementation of which commenced in 2023;
- The consented Swords Bus Connects Core Bus Corridor (CBC), which will run between Swords and the City Centre, passing the site on Drumcondra Road Lower.
- The GDA's Cycle Network expansion, which is underway;
- The Dart + West / South-West expansion programme, which will see reliable, and faster rail service with increased train frequencies passing through Drumcondra Station; and
- The new Metrolink 19km high-frequency automated metro line, that will run between Swords Estuary and Charlemont Station via Dublin Airport and the City Centre. The nearest station to the site which will be at Glasnevin junction, which is a 20-minute walk from the development.

The proposed development is broadly consistent with the principles of the Transport Strategy, in that it will deliver residential development at a location proximate to the urban centre and high-capacity public transport. The proposed development is fully permeable for pedestrians and cyclists, and contains cycle infrastructure that will promote and facilitate cycling as an alternative to private car use. Refer to the Transport Assessment, prepared by SYSTRA (2025) and submitted as part of the planning application under separate cover.

4 Consideration of Alternatives

4.1 Introduction

Consideration of alternatives is an important step in the EIA process, which is necessary to evaluate the likely environmental consequences of a range of development strategies for the delivery of the proposed development. This chapter provides an overview of the alternatives that have been considered for the proposed development.

4.2 Legislation

Article 5(1) of the amended Directive requires the consideration of reasonable alternatives that are relevant to the proposed development, taking into account the effects of the proposed development on the environment. Article 5(1)(d) states that the information contained in the EIAR shall include:

> *"... a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment."*

Further, Annex IV(2) states that the information for the EIAR shall include:

> *"A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied 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."*

Part 1(d) of Schedule 6 of the PDR 2001 transposes this requirement, stating that an EIAR shall include:

> *"A description of the reasonable alternatives studied by the person or persons who prepared the EIAR, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the proposed development on the environment."*

4.3 Method

In accordance with the EIAR guidelines, different classes of alternatives may be considered at key stages during the process. As environmental issues emerge during the preparation of the EIAR, alternative designs may need to be considered early on in the process, or alternative mitigation options may need to be considered towards the end of the process. The EPA guidelines state that:

> *"The objective is for the developer to present a representative range of the practicable alternatives considered. The alternatives should be described with 'an indication of the main reasons for selecting the chosen option'. It is generally sufficient to provide a broad description of each main alternative and the key issues associated with each, showing how environmental considerations were taken into account in deciding on the selected option. A detailed assessment (or 'mini-EIA') of each alternative is not required."* (p. 33)

The EPA Guidelines indicate that alternatives should be considered under the following headings:

1. 'Do-Nothing' Alternative;
2. Alternative Locations;

3. Alternative Layouts;
4. Alternative Designs;
5. Alternative Processes; and
6. Alternative Mitigation Measures

4.4 Do-Nothing Alternative

The 'Do-Nothing' alternative considers the likely scenario that would arise, assuming the proposed development was not progressed, i.e. if nothing were done. Note that this Chapter discusses the Do-Nothing scenario in terms of development (or lack thereof) in the absence of the proposed development. The likely impacts of a Do-Nothing scenario in relation to the various environmental topics (e.g. architectural heritage, biodiversity, traffic and so on) is discussed in the respective chapters of this EIAR. For instance, Chapter 15 (Cultural Heritage – Architectural Heritage) discusses the implications of a Do-Nothing scenario for the Protected Structures on the Site.

The most likely Do-Nothing scenarios in this case are:

a) A continuation of the existing status and use of the lands and buildings (i.e. very limited use by the Catholic Archdiocese); or
b) Development (likely residential) under the scope of a separate application / proposal, at some point in the future.

The current site is not in use other than the temporary use of the Assembly Hall by the Catholic Archdiocese, which in its current form has limited engagement with the public. The wider grounds are inaccessible to the public and the buildings remain vacant. The site would remain overgrown, underutilised and restricting permeability in the area.

In the context of the ongoing housing crisis in Dublin City, the former scenario (a) is considered to represent an inefficient, uneconomical and socially suboptimal use of the Holy Cross College lands. The opportunity cost, in this scenario, would include the 1131 proposed residential units, and the accommodation that these would otherwise provide.

The latter scenario (b) is considered somewhat more likely, taking into consideration the following contextual factors and trends:

- The Holy Cross College lands are zoned as Z12, 'Institutional Land (Future Development Potential)' under the Dublin City Development Plan (2022 – 2028), which states – '*Where lands zoned Z12 are to be developed, a minimum of 25% of the site will be required to be retained as accessible public open space to safeguard the essential open character and landscape features of the site. Where such lands are redeveloped, the predominant land-use will be residential*'.
- The lands are strategically located in terms of public transport / mobility, proximity to employment and community amenities;
- The lands and buildings (including Protected Structures) are increasingly underutilised and vacant and this trend is not likely to change in the absence of re-development for new purposes;
- Significant demand for housing in Dublin City; and
- The policy context at national and regional levels for 'compact urban development', whereby additional units are preferentially delivered within the existing built-up footprint of urban areas.

Given these contextual factors and the extent of the project need, it is very likely that an alternative residential development proposal would be submitted in a do-nothing scenario for this project. Like this project, such other proposal would be assessed on its merits.

4.5 Alternative Locations

The proposed development site is zoned predominately as Z12 – 'Institutional Land (Future Development Potential)' which has the objective - *"to ensure existing environmental amenities are protected in the predominantly residential future use of these lands"*. A small portion of the lands to the north adjacent the River Tolka is zoned Z9- Amenity/Open Space Lands/ Green Network and a small area of lands to the northwest are zoned Z1 Sustainable Residential Neighbourhoods.

Based on the zoning of the Holy Cross College lands, as described above, it is considered that the site is entirely suitable for the proposed nature of this LRD application. It is not considered that the consideration of alternative locations is relevant in this case. As stated in the EPA guidelines that:

> *"Some locations have more inherent environmental sensitivities than others. Depending on the type of project and the range of alternatives which the developer can realistically consider, it may be possible to avoid such sites in favour of sites which have fewer constraints and more capacity to sustainably assimilate the project. It can be useful to ensure that a range of options, that may reasonably be available, are included in the evaluation."* (p. 35)
>
> *[...]*
>
> *"Clearly in some instances some of the alternatives described below will not be applicable – e.g. there may be no relevant 'alternative location'..."* (p. 33)

At this location, the proposed development will deliver additional dwellings along with associated infrastructure and links to existing community facilities. The subject lands will gain benefit from existing transport, social and community infrastructure. It is considered that the site is entirely suitable for the nature of the proposed development, and it is not necessary to consider alternative locations or sites. Given the extent and urgency of the project need, it is considered that alternative suitable sites will be required to be developed in addition to this site rather than in the alternative.

4.6 Alternative Layouts & Design

The evolution of the design and layout for the proposed development has been an iterative process which involved the entire design team and thorough pre-planning engagement with Dublin City Council. The design has undergone rigorous appraisal, which has led to a final layout that responds appropriately to the site characteristics, opportunities and constraints. The final layout is presented in the Architectural Drawings and the Architectural Design Statement (O'Mahony Pike, 2025 and Henry J Lyons, 2025), which have been submitted under separate cover and should be read in conjunction with this chapter.

This EIAR demonstrates that the site and the surrounding area have the environmental capacity to accommodate the proposed development without significant risk of impact upon environmental sensitivities due to the location or nature of the proposed development.

The proposed layout is designed to function, in combination with the already permitted developments on the wider Masterplan site, as a mixed-use (predominantly residential) development on a significantly

underutilised and strategically located site. A detailed discussion of the architectural design rationale and strategy for the proposed development and wider Masterplan site is presented in the Site Masterplan Document and Architectural Design Statement, all of which have been prepared by OMP & HJL Architects and submitted under separate covers as part of this application.

This section sets out the intermediate design progressions of the proposed development, includes figures showing the proposed layout at each stage of this process, and summarises the main considerations that have influenced the progression of the design.

Given the sites location, proximate to Dublin City and significant employment centres, the site is suitable to an increased density and height of development in order to optimise residential development on strategic sites. This coupled with the constraints of the site in terms of its existing historic buildings and trees meant that an apartment scheme is appropriate where trying to provide housing typologies would represent an underutilisation of land. The scheme, within apartment only typologies, provides for a range of sized units from studios to 4-person units offering diversity of units for different demographics and typologies more typically found in the immediate area.

In terms of access to the site, again considering the constraints of existing features such as historic walls, existing trees and the nature of the adjacent roads, additional vehicular access points were not considered appropriate and existing (Clonliffe Road) and former (Drumcondra Rd) locations upgraded. This approach also is in keeping with the scheme focus of protecting the existing woodland and historic context by minimising roads and vehicular movements while prioritising pedestrian and sustainable modes of transport to and from the site.

As discussed in Chapter 6 (Consultation), the proposed development has also been subject to a series of consultation meetings with Dublin City Council (DCC).

4.6.1 Alternative Layout 1 – Masterplan Conceptual Design

This layout was an early-stage Masterplan proposal for the Holy Cross College lands, indicating early proposed massing and block arrangement. The blocks were placed in highlighted pockets of land identified through study and analysis of the site characteristics, history and site constraints. Refer to **Figure 4.1.**

The proposal put forward aimed to achieve the following key objectives:

- Create distinct neighbourhoods that responded to the nearby Drumcondra Road and Clonliffe Road;
- Integrate the proposal successfully with the mature landscape of the existing site; and
- Deliver 25% public open space across the site in accordance with the Dublin City Development Plan 2022-2028.

Further consideration was subsequently given to the following environmental aspects and site constraints:

- Proximity and impact on the existing trees, as further studies were undertaken;
- Daylight and sunlight levels in residential units;
- Positioning of blocks, height and massing relative to the site perimeter;
- Relationship of blocks to the existing historic buildings of the Holy Cross College;
- The design of the interface between public and private open space;
- Pedestrian and vehicular internal circulation; and

- Site access and egress.

This alternative design was not realised as further reduction of impact on existing trees was required, heights of buildings relative to the existing historic buildings needed further consideration and further review of the communal areas and public realm provisions was undertaken.

Figure 4.1 Alternative Layout 1



4.6.2 Alternative Layout 2 – Amended Masterplan Proposal

The proposal evolved from the initial conceptual design, and the amended design was cognisant of the issues relating to site conditions and landscaping. Refer to **Figure 4.2.**

The Masterplan amendments focused on:

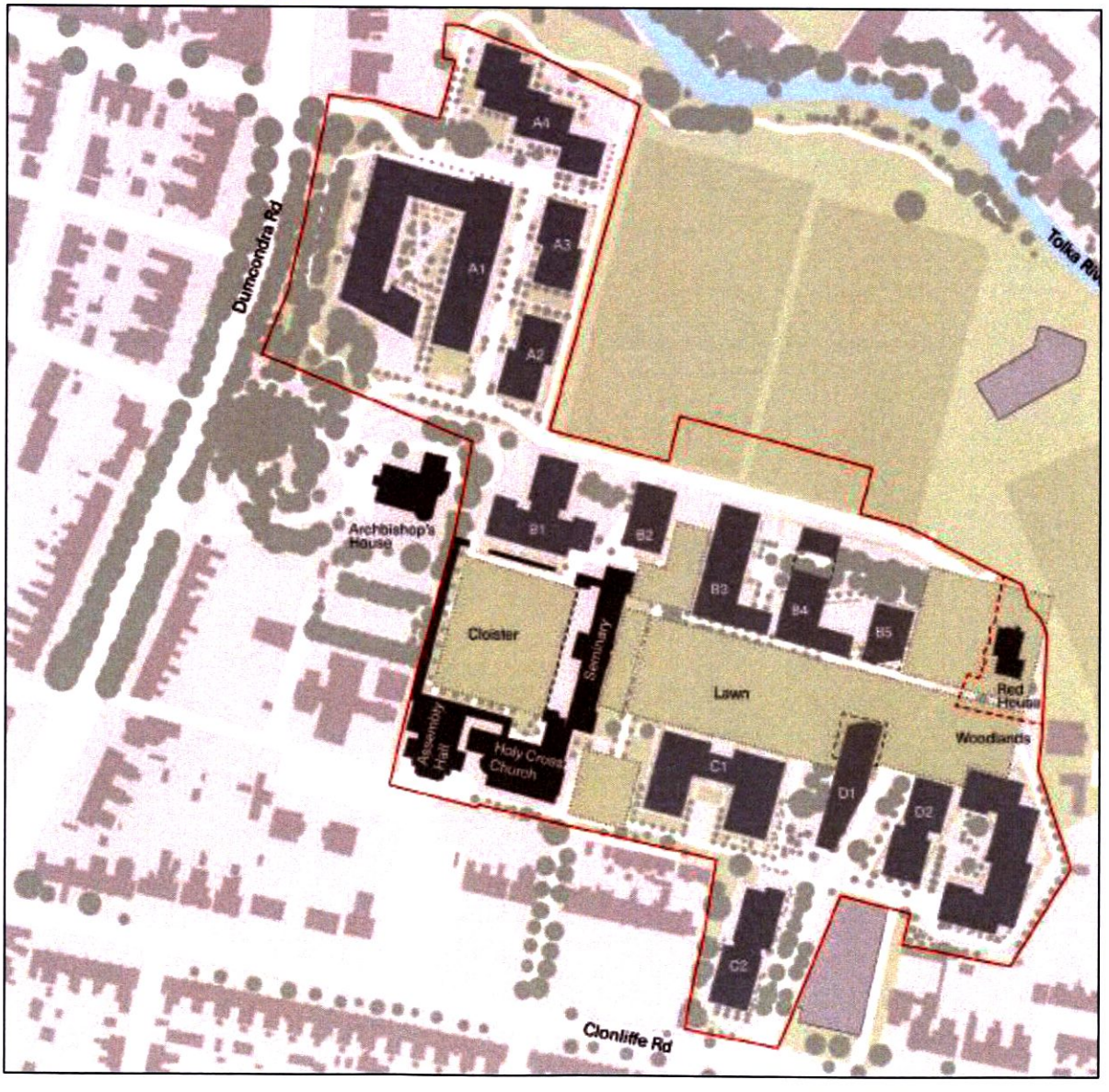
- Improving daylight and sunlight to residential units;
- Increasing sunlight to the proposed communal and public open spaces;
- Improving the relationship of blocks to the existing historic buildings of the Holy Cross College;
- Further consideration and development of the formal setting of the formal green to the front of the existing Seminary Building, through revised block massing and height;
- Development of key character areas across the scheme, identifying architectural form and materiality to identify neighbourhoods within the scheme; and

- Further development to the massing and block layout to retain existing trees on the site insofar as possible.

This alternative design was not realised as increase of daylighting performance of units was desired and a further review of appropriate block massing and building separation was required.

This design stage also prioritised historic conservation, DCC zoning, and placemaking. Environmental considerations such as landscape, visual impact, water management, movement, noise, air quality, and resource efficiency guided design evolution. Ecological surveys were undertaken to identify and protect habitats. Visual assessments helped to refine building massing. SuDS were integrated into the overall design for water management. Sustainable transport needs altered circulation patterns. Choice of materials to complement the historic buildings, and land use efficiency were also key factors. This iterative process, balancing initial goals with environmental findings, informed the design phases.

Figure 4.2 Alternative Layout 2



4.6.3 Alternative Layout 3

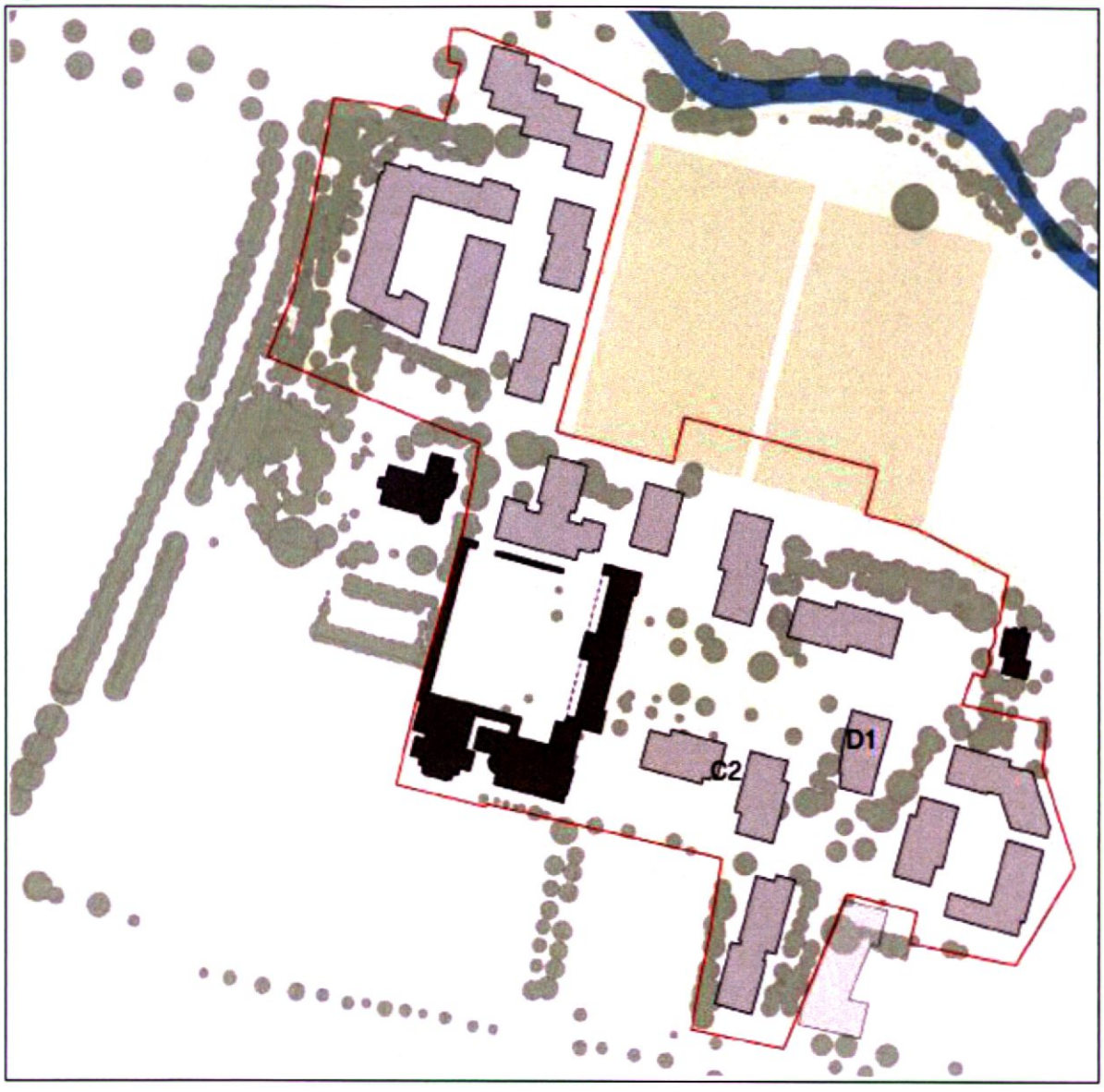
This emerging design iteration focused on minimising impact near the existing Red House building a Protected Structure and National Monument. Massing and the building footprint were adjusted to retain more trees and reduce overall site coverage. Specifically, Block D1 and C2, situated on the main seminary lawn, underwent scale reductions. This further facilitated the preservation of existing trees in that area and contributed to an overall decrease in the scheme's-built footprint. This alternative demonstrates a direct response to environmental concerns; prioritising tree retention and reduced site coverage compared to the initial proposal. Refer to **Figure 4.3.**

Furthermore, this emerging design resulted in:

- Resolution of building heights of those blocks in close proximity to existing buildings, both within and external to the site;
- Increased number of existing trees retained on site; and
- Development of the taller focal blocks at key appropriate locations on the site.

This alternative design was ultimately not realised due to proximity to neighbouring buildings, building materiality, and interface with the Red House, and required further review of appropriate massing and heights in such areas.

Figure 4.3 Alternative Layout 3



4.6.4 Final / Proposed Layout

The proposed design further evolved by entirely omitting Block D1. Block D2 also underwent a significant reduction in both its footprint and massing. This key change was implemented to further limit visual impact on the surrounding landscape and existing built environment, achieve a greater reduction in overall site coverage, and maximize the retention of existing trees across the development. This design iteration strongly emphasises minimising the built environment's presence and prioritizing the preservation of the site's natural elements. Refer to **Figure 4.4.**

The proposed layout being put forward in this application has had particular consideration to the following factors:

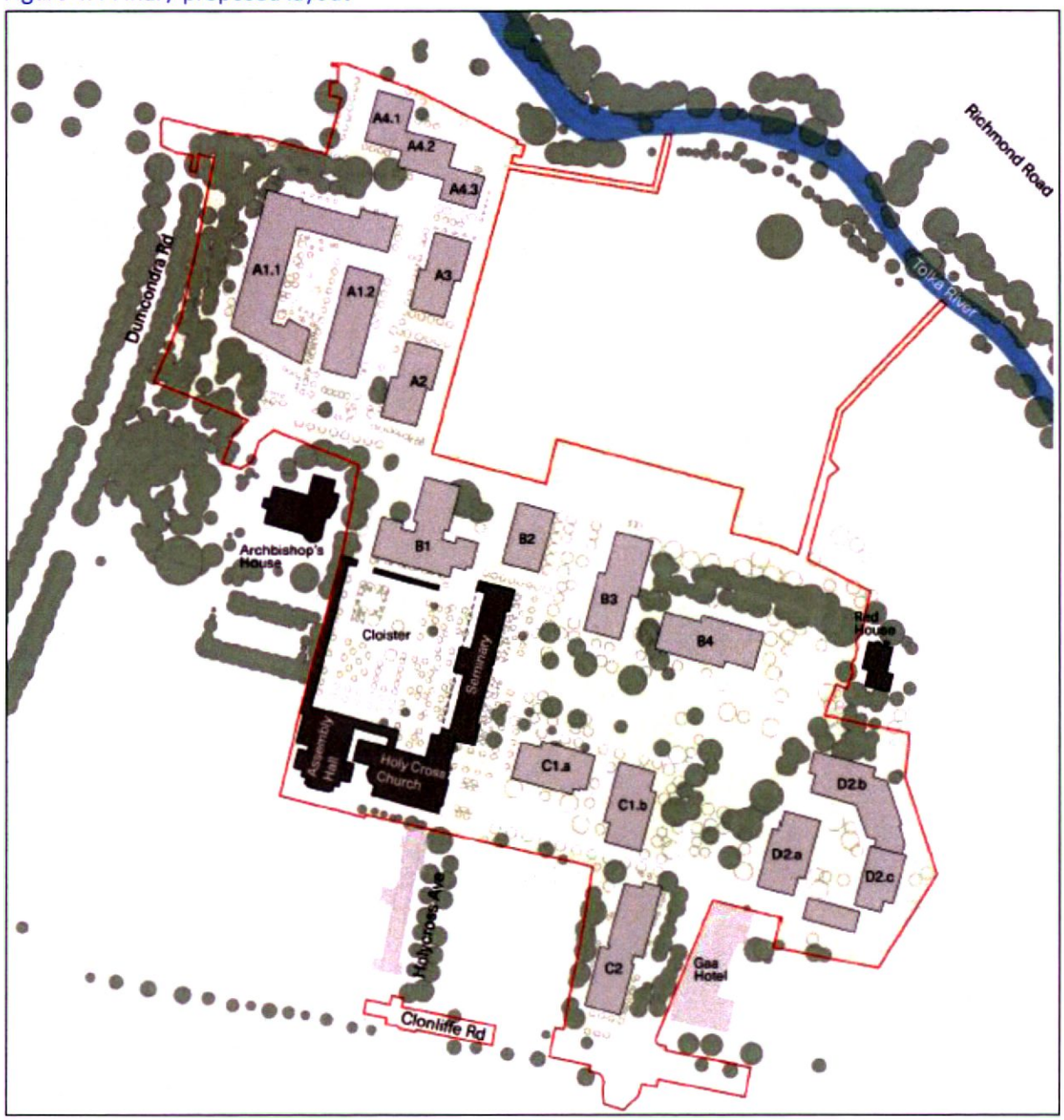
- Mass and heights of perimeter block to the east of the site;
- Relationship of perimeter blocks to neighbouring buildings and proximity to the boundary line;
- Impact on amenity spaces within the proposed development; and

- Strengthening connection of public open spaces to the wider area.

The design of the proposed development is detailed in the following Chapter (5 – Description of the Proposed Development).

The current design was arrived at in order to have less impact on mature trees, increase performance of daylighting to the units and sunlight to the public and communal open space, increase the separation distances between the proposed blocks and the distances and proximity to adjoining residences, enhance the setting of the protected structures, and also to further improve accessibility to the public realm, and enhance communal areas.

Figure 4.4 Final / proposed layout



4.7 Alternative Processes

Having regard to the nature of the proposed development, this is not considered a relevant class of alternatives in this case.

However, the residential units will be detailed designed to comply with building regulations framework and the requirement to achieve Nearly Zero Energy Building (NZEB) standard for new developments.

4.8 Alternative Mitigation Measures

Where appropriate, alternative mitigation measures will be considered by the relevant specialist contributors to the EIAR.

4.9 Reasons for Selecting the Preferred Alternative

The design of potential alternatives for the proposed development evolved through and iterative process and a number of key structuring principles. In following this process the preferred development alternative best allowed for:

- Preservation of the institutional and wooded character of the lands.
- Retaining existing trees and general site topograpghy
- Ability to enhance and protect the built heritage, historic setting, and strong landscape character of the lands, and responding to the scale of the existing buildings.
- Minimising impact on adjacent residential and other areas
- Positive delivery of public open space (in accordance with Z12 zoning), while retaining existing good quality trees and providing generous spacing between proposed buildings.
- Provision of pedestrian connectivity and permeability
- Minimising adverse environmental impacts and maximising positive effects.

The site has two key features, being existing and adjacent Protected Structures and existing trees. The proposed development has been designed to sit comfortably within its surrounds, minimising impact on adjacent developments and the Protected Structures. The trees for the most part exist in clusters as avenues or wooded areas with some specimens planted throughout. These are of ecological, environmental, historical and aesthetic value and are noted as one of the sites key assets and features. The significance of the existing trees is such that they have effectively shaped the proposed masterplan layout, ensuring that levels, services, access, foundations and construction of building footprints can take place and serve future residents whilst protecting root structures, overhanging limbs and the general health and longevity of trees.

The Architects Design Statement, jointly prepared by OMP & Henry J Lyons sets out the overall approach to the site and how it meets the objectives of the Masterplan as well as the specifics of the proposed development and how it complies with appropriate development standards.

5 Description of the Proposed Development

5.1 Introduction

This chapter provides a description of the proposed development in accordance with Article 5(1)(a) of the 2011 EIA Directive, as amended by Directive 2014/52/EU, the description should comprise *"...information on the site, design, size and other relevant features"*. It provides the basis against which the specialist assessments are undertaken. Note that specific details of the proposed development that are of relevance to particular specialist topics are also set out, where relevant, in the corresponding EIAR chapters.

5.2 Site of the Proposed Development

5.2.1 Site Location

The site of the proposed development is located at Holy Cross College, Clonliffe Road, Dublin 3 and Drumcondra Road Lower, Drumcondra, Dublin 9. The overall area of the site is c. 8.7 ha, with a developable site area of c. 8.2 ha. The site is located c. 1.7 km north of Dublin City Centre. It is bound by Drumcondra Road Lower, Archbishop's House (a Protected Structure), Mater Dei College and Crosscare Family Hub to the west; Clonliffe Road to the south; Cornmill Apartments and Belvedere College Rugby Grounds to the east; and by the River Tolka and future GAA sports ground to the north.

The site is situated in the administrative area of Dublin City Council, in the townlands of Clonliffe East and Clonliffe West.

The proposed development sits as part of a site masterplan for a wider landbank which includes an under-construction hotel development at Clonliffe Road and potential future GAA facilities (which would be subject to future planning applications).

The site is located within the grounds of the former Holy Cross College seminary. These lands were acquired by the Archdiocese in 1859 and college facilities were developed. They housed a seminary for the Catholic Church in Ireland and administration offices for the Archdiocese and various diocesan activities. The seminary ceased operation in 2000. The land and buildings on the site are significantly underutilised at present.

The site comprises a number of green spaces and existing large institutional buildings (approx. 11,865 m^2) associated with its former use (some of which are Protected Structures). The site has many large mature trees, giving it a unique character in the context of the surrounding residential areas and busy roads. The northern portion of the site extending to the River Tolka is set back from the busy Drumcondra Road, separated by large mature trees, while the southern part of the site fronts onto Clonliffe Road.

The site sits between the established residential communities of Drumcondra to the west and north and Clonliffe Road to the south. Both are established, mature suburbs of Dublin City with the surrounding area predominately developed. Apart from residential uses, the surrounding area also features other mix of uses, including scattered commercial / retail enterprise, light industrial and warehousing to the north, and sports facilities to the south-east (Croke Park), north-east (Belvedere Rugby ground, Dublin Port Stadium Stella Maris Football Club) and north (Shelbourne Football Club).

The immediate area gives access to a range of public facilities including community centres, healthcare, libraries, shops and sports / recreation facilities.

The site is approximately 400m from the Drumcondra Rail Station to the south-west, and adjacent to Drumcondra Road, which is served by several public bus routes. As part of the *Greater Dublin Area Transport Strategy 2022-2042*, there are planned improvements to both the road, public transport, walking and cycling networks within the vicinity of the proposed development site, which will directly benefit residents and visitors, further enhancing sustainable travel options. These include Bus Connects Core Bus Corridor Dublin Swords to City centre Scheme, GDA's cycle network expansion, Dart+ West/South-west expansion and new Metrolink that will run between Swords Estuary and Charlemont Station via Dublin Airport and the City Centre.

Refer to **Figure 1.1** and **Figure 1.2** in Chapter 1 (Introduction).

5.2.2 Site History

The Holy Cross College Lands were acquired by the Roman Catholic Archdiocese of Dublin in 1859. College facilities were developed, including a seminary for the Catholic Church in Ireland, and administration offices for the Archdiocese and various diocesan activities. The seminary ceased operation in 2000. Thereafter, the site was predominantly used for offices and activities of the Archdiocese and charitable organisations, which occupied relatively little space in the large site, and they have now vacated the site. The land and buildings on the site are significantly underutilised at present.

The Archdiocese has since entered into an agreement with the Gaelic Athletic Association (GAA) to acquire these lands. The GAA have subsequently entered into an agreement to onward sell these to the applicant (CWTC Multi Family ICAV acting solely in respect of its sub fund the DBTR DR1 Fund). The Archdiocese will retain the Archbishop's House and surrounding lands in the south-west corner of the Holy Cross College property, which includes the Mater Dei building and a large surface car park, currently permitted as a Crosscare Family Hub. The GAA are retaining a under construction hotel site, onto Clonliffe Road and lands adjacent the Tolka River for future proposed GAA facilities which are subject to a future planning application.

The site is part of the wider Holy Cross College lands, for which a Masterplan has been prepared on behalf of Hines and the GAA, in accordance with the requirements of the 'Z12' zoning of the lands under the scope of the Dublin City Development Plan 2022 – 2028. The Holy Cross College lands comprise a total masterplan area of c. 14.5 ha. For further information, refer to the Masterplan by OMP Architects, submitted under separate cover as part of this application.

5.2.3 Masterplan for the wider Holy Cross Lands

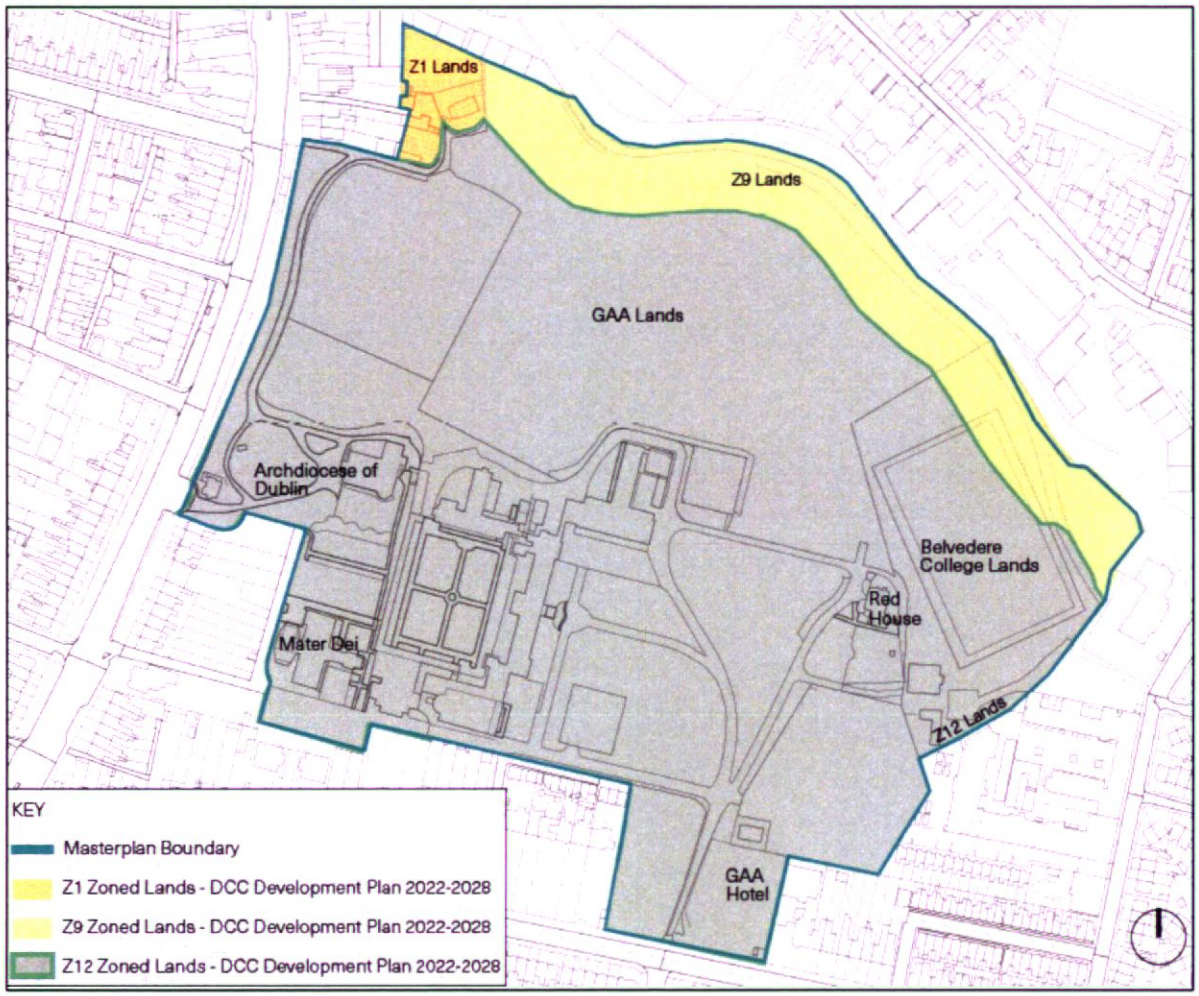
A Site Masterplan (O'Mahony Pike, 2025) has been prepared relating to all of the Clonliffe Lands that are subject to the Z12 zoning. The Masterplan describes the future strategic vision and structure for the redevelopment of lands to deliver a coordinated development in accordance with the Z12 zoning. It takes cognisance of key stakeholders such as the Archdiocese of Dublin, Belvedere College, Mater Dei Institute of Education, the local communities, the GAA and the applicant.

The lands that are the subject of this Master Plan, are predominately zoned Z12 – 'Institutional Land (Future Development Potential)' which has the objectives – '*to ensure existing environmental amenities are protected in the predominantly residential future use of these lands*'. A small portion of the lands to

the north adjacent the River Tolka is zoned Z9- Amenity/Open Space Lands/ Green Network and a small area of lands to the northwest are zoned Z1 Sustainable Residential Neighbourhoods. These lands are included in the Masterplan for completeness Refer to **Figure 5.1** for the Masterplan Lands.

The masterplan sets out the framework for development across the lands through the hierarchy of public, shared and private open space, amenity spaces, potential for residential development, heights, massing and placemaking and further intends to describe how the proposed development will connect with and enhance the surrounding communities. Refer to the standalone plan submitted as part of the planning application for further details.

Figure 5.1 Masterplan Lands (O'Mahony Pike, 2025)



5.3 Need for the Proposed Development

The development of the proposed site is supported by both national and regional policy and guidance documents, as detailed in Chapter 3 (Planning and Development Context) and in the Planning Report and Statement of Consistency prepared by BSM and submitted under separate cover as part of the planning application pack.

5.4 Characteristics of the Proposed Development

5.4.1 Overview

The development will consist of the construction of a residential development set out in blocks ranging in height up to 13 storeys, to accommodate 1131 no. apartments including retail and crèche units, residential tenant amenity spaces, community/cultural spaces, mobility hubs and public open space.

The proposed development sits as part of a Site Masterplan for a wider landbank which includes an under-construction hotel development and potential future GAA facilities. To facilitate the proposed development the scheme will involve the demolition of a number of existing structures on the site.

The application site contains a number of Protected Structures including The Seminary Building, Holy Cross Chapel, South Link Building, The Assembly Hall and The Ambulatory while the wider lands also include The Red House and the Archbishop's House (both Protected Structures). The application proposes the renovation and reuse of the Seminary Building and the South Link Building to accommodate residential units and the use of the existing Holy Cross Chapel, Assembly Hall and Cloister Garden for use as community/cultural uses.

The residential buildings are arranged around a number of proposed public open spaces and routes throughout the site with extensive landscaping and tree planting proposed. Communal amenity spaces will be located adjacent to residential buildings and at roof level throughout the scheme. To facilitate the proposed development the scheme will involve the removal of some existing trees on the site.

The site is proposed to be accessed by vehicles, cyclists and pedestrians from a widened entrance on Clonliffe Road, at the junction with Jones's Road and through the opening up of an unused access point on Drumcondra Road Lower at the junction with Hollybank Road. An additional cyclist and pedestrian access is proposed through an existing access point on Holy Cross Avenue. The development will include both basement and podium parking under a number of blocks to accommodate car parking spaces, bicycle parking, storage, services and plant areas.

The proposed development includes all site landscaping works, green roofs, boundary treatments, lighting, servicing and utilities, signage, and associated and ancillary works, including site development works above and below ground.

5.4.2 Detailed Development Description

The application boundary is a site of c. 8.7ha, with a developable area of c. 8.25ha. The application site contains a number of Protected Structures including The Main College Building (also referred to as The Seminary Building) (RPS Ref. 1901), Holy Cross Church (RPS Ref. 1901), South Link Building (RPS Ref. 1901), The Assembly Hall (RPS Ref. 1901), and The Ambulatory (RPS Ref. 1901). The site is bounded by Drumcondra Road Lower and the Archbishops House (a Protected Structure, RPS Ref. 2361) to the West, Clonliffe Road to the South, the Red House (a Protected Structure, RPS Ref. 1902 & National Monument Ref. DU018-019001), the Cornmill Apartments and Belvedere College Rugby Grounds to the East and by the Tolka River to the North.

The proposed development will consist of:

1. Demolition of a number of former office/college buildings on site, including the New Wing and Library Wing Buildings which are non-original/late 20th century addition, (total demolition of c. 6,327 sq.m) and the construction of a residential development with a gross floor area (GFA) of

c. 106,181 sq.m (including existing buildings and excluding basement and podium areas) set out in 12 no. new residential blocks, ranging in height from 3 to 13 storeys, and re-use of 1 no. existing building, to accommodate 1,131 no. apartments, with associated residential tenant amenity, 1 no. retail unit, 1 no. crèche and re-use of existing buildings for community/cultural use. The site will accommodate a total of 382 no. car parking spaces and 2,619 no. bicycle parking spaces in separate basement/podium areas and at surface level. Landscaping will include extensive new public open spaces and communal courtyards, podiums and roof terraces.

2. The 1,131 no. residential buildings range in height from 2-storeys to 13-storeys, accommodating 1,131 no. apartments comprising 268 no. studios, 282 no. 1-bed units, 392 no. 2-bed units (2 no. 2-bed (3P) & 390 no. 2-bed (4P)), 132 no. 3-bed units and 57 no. 4-bed units. The breakdown of residential accommodation is as follows:

- Block A1 is a 4 to 8 storey building, including setbacks and balconies, accommodating 234 no. units (47 no. studios, 98 no. 1-bed units, 56 no. 2-bed (4P), 25 no. 3-bed units and 8 no. 4-bed units);
- Block A2 is a 7 to 9 storey building, including setbacks and balconies, accommodating 68 no. units; (23 no. studios, 8 no. 1-bed units, 37 no. 2-bed (4P));
- Block A3 is an 8 to 10 storey building, including setbacks and balconies, accommodating 79 no. units; (26 no. studios, 9 no. 1-bed units, 44 no. 2-bed (4P));
- Block A4 is a 6 to 13 storey building, including setbacks, balconies and terraces, accommodating 97 no. units; (29 no. studios, 38 no. 2-bed (4P), 18 no. 3-bed units, 12 no. 4-bed units);
- Block B1 is a 5 to 7 storey building, including setbacks and balconies, accommodating 69 no. units; (5 no. studios, 15 no. 1-bed units, 26 no. 2-bed (4P), 10 no. 3-bed units, 13 no. 4-bed units);
- Block B2 is a 6 to 8 storey building, including setbacks and balconies, accommodating 37 no. units; (2 no. studios, 5 no. 1-bed units, 16 no. 2-bed (4P), 13 no. 3-bed units, 1 no. 4-bed units);
- Block B3 is a 6 to 10 storey building, including setbacks and balconies, accommodating 92 no. units; (16 no. studios, 25 no. 1-bed units, 45 no. 2-bed (4P), 6 no. 3-bed units);
- Block B4 is a 4 to 6 storey building, including setbacks and balconies, accommodating 53 no. units; (10 no. studios, 17 no. 1-bed units, 10 no. 2-bed (4P), 6 no. 3-bed units, 10 no. 4-bed units);
- Block C1A is a 5 to 6 storey building, including setbacks and balconies, accommodating 47 no. units; (18 no. studios, 7 no. 1-bed units, 10no. 2-bed (4P), 12 no. 3-bed units);
- Block C1B is a 6 to 8 storey building, including setbacks and balconies, accommodating 66 no. units; (15 no. studios, 8 no. 1-bed units, 35 no. 2-bed (4P), 8 no. 3-bed units);
- Block C2 is a 5 to 7 storey building, including setbacks and balconies, accommodating 88 no. units; (43 no. studios, 8 no. 1-bed units, 2 no. 2-bed (3P), 18 no. 2-bed (4P), 7 no. 3-bed units, 10 no. 4-bed units);
- Block D2 is a 3 to 7 storey building, including setbacks and balconies, accommodating 145 no. units; (14 no. studios, 48 no. 1-bed units, 53 no. 2-bed (4P), 27 no. 3-bed units, 3 no. 4-bed units);

- The Seminary Building and South Link Building (Block E2) are existing Protected Structures of 2 to 4 storeys, with a proposed conversion of both buildings to accommodate 56 no. residential units (20 no. studios, 34 no. 1-bed units, 2 no. 2-bed (4P)); and
- Residential Tenant Amenity Space is provided throughout the scheme in Blocks A4, B1 and D2, totalling c. 1,989 sq.m and Communal Open Space is provided adjacent each block and at roof level on Blocks A1, A2, A3 & A4, totalling c. 10,323 sq.m.

3. The site contains a number of Protected Structures including The Seminary Building, Holy Cross Chapel, South Link Building, The Assembly Hall and The Ambulatory (RPS Ref. 1901). The application proposes the renovation of the Seminary Building and South Link Building to accommodate residential units and the renovation of the existing Holy Cross Chapel and Assembly Hall buildings for use as community/cultural uses. The wider Holy Cross College lands also include The Red House (RPS Ref. 1902) and the Archbishop's House (RPS Ref. 2361) - these are not included in the application boundary and no works are proposed to these Protected Structures, with the exception of adjacent landscaping and the proposed works to the Drumcondra Road boundary wall, which is inscribed under the Protected Structure of the Archbishop's House as noted below. The works to the Protected Structures within the application site include:

- The Seminary Building (RPS Ref. 1901): The works include of the careful refurbishment and alteration of the existing 4-storey Seminary Building to provide residential accommodation. It is proposed that an existing adjacent element of the structure, the Library Wing on the northern elevation of the Seminary and the connecting corridors to the Seminary, will be demolished; new infill concrete walls are located to fill the gap where elements are removed. Materials that can be salvaged from this wing will be surveyed, their location noted, and re-used in the conservation and restoration works in The Seminary Building, where possible. The projecting WC blocks (modern addition to overall structure) to the rear (west) elevation of The Seminary Building are also proposed to be demolished. The external envelope of The Seminary Building, with existing chimneys, stone and render finishes, windows and doors is maintained and re-used; The scheme proposes 56 no. apartments installed within the existing shell on the East side of a corridor running along the rear of the plan;
- The South Link Building (RPS Ref. 1901): The South Link Building consists of a 2-storey stone and render block, with slate roof and bellcote between Holy Cross Chapel and The Seminary Building; this building will be conserved and restored. Alterations to the South Link Building include the insertion of a new doorway within the existing front (Eastern) façade to link the front of the building to the cloister garden, and the insertion of 2 no. apartments in the ground and first floor space. The existing organ at first floor level will be moved to a new location within the Holy Cross Chapel;
- Holy Cross Chapel (RPS Ref. 1901): Holy Cross Chapel is retained and restored as a community/cultural space. External alterations include a new metal door and interior alterations are limited to services and decoration; a section of the existing tiled floor will be lifted to allow for service connections to furniture installations.
- The Assembly Hall (RPS Ref. 1901): The Assembly Hall comprises a 2-storey hall with its front façade, steps and projecting porch orientated towards Clonliffe Road. The building is conserved and restored as a community/cultural space as a part of the proposal; Existing doors and

windows are retained and repaired. The existing Oratory located in the New Wing Building, will be relocated to within the Assembly Hall;

- The Ambulatory (RPS Ref. 1901): All of the above referenced buildings are linked by a cloister colonnade (i.e. the Ambulatory) around two sides of a central garden; there is a part section of the colonnade on the North side and an indented (enclosed) section directly outside Holy Cross Chapel; the fourth (east) side is completed by the rear elevation of The Seminary Building. The Ambulatory will be retained as part of the proposed development. The Cloister Garden will be restored and conserved as a part of the project for circulation, amenity and community/cultural use. The courtyard garden will be re-designed and re-planted as a part of the scheme; and
- Drumcondra Road Boundary Wall Entrance (Inscribed under Archbishop's House, RPS Ref. 2361): The existing entrance gates and the adjoining walls are part of the Archbishop's House Protected Structure. It is proposed to salvage and reuse, the existing stone gate pier to the south and reconstruct this pier in a new location further to the south, widening the gate opening in this location. This will involve the taking down of a small portion of the stone boundary wall.

4. Extensive areas of public open space of c. 23,842 sq.m or c. 29.89% of the site is provided for, including woodland walk, central seminary lawn, games area, and playground. The proposed landscaping scheme provides for the removal of some existing trees on the site as well as extensive new planting.

5. Non-residential uses include a crèche of c. 587 sq.m in Block A4 (with an external play area of 160 sq.m) and 1 no. retail unit of c. 306 sq.m in Block A1. The scheme includes for the renovation and reuse of the former Holy Cross Chapel and Assembly Hall buildings (c. 2,048 sq.m) and part of the Ambulatory and Cloister Garden (c. 1,952 sq.m) for use as community/cultural uses.

6. The site will accommodate a total of 382 no. car parking spaces (345 no. for residents and 41 no. for visitors/accessible use/car club) and 2,619 no. bicycle parking spaces including cargo bikes, EV charging and shared bikes (1,981 no. for residents and 638 no. for visitor/staff) in separate basement/podium areas and at surface level. It includes for a single level basement under Blocks B2, B3 & C1, containing 50 no. car spaces, cycle parking, plant, storage areas, waste storage areas and other associated facilities, a single level basement and podium parking under Block D2 containing 136 no. car spaces, cycle parking, plant, storage areas, waste storage areas and other associated facilities and a part podium level basement, part single level basement/part podium under Block A1, containing 155 no. car spaces, cycle parking spaces, plant, storage areas, waste storage areas and other associated facilities. A total of 1,646 no. resident's bicycle stores are provided at basement/podium/ground level within the blocks, and the remaining 240 no. spaces are located proximate to residential buildings in external bike stores. In addition, 41 no. car parking spaces are located at surface level to include visitor, accessible, EV, car club and 4 no. Block D resident spaces, as well as 638 no. short stay bicycle parking spaces. The scheme also includes for 2 no. mobility hubs located at the ground floor of Block A1 and D2.

7. The site is accessed by vehicles, cyclists and pedestrians from a widened existing entrance on Clonliffe Road, at the junction with Jones's Road (which is already permitted as part of the under construction hotel - DCC Reg. Ref. 2935/20 and ABP Reg. Ref. 308193), and through the

widening and reopening of an existing access point on Drumcondra Road Lower at the junction with Hollybank Road to act as a left in/left out access. There is no vehicular access through the site for the public or occupants of the sites, other than for maintenance and operations. An additional cyclist and pedestrian access is proposed through an existing access point on Holy Cross Avenue. A relocated entrance to the Archbishop's House through the site is provided on the northern boundary of the Archbishop's House.

8. The proposed application includes all site landscaping works, green roofs, boundary treatments, lighting, servicing, signage, ESB Substations, solar PV panels at roof level on all residential blocks (excluding The Seminary Building (E2)), and all associated and ancillary works, including site development works above and below ground including site drainage and infrastructure.

5.4.3 Design Rationale

The site strategy and design evolution followed a number of key structuring principles and in response to site specific characteristics, with consideration of the previous application and the changes in planning policy that have occurred. Key design decisions were made in reviewing the previous scheme, the requirements of the Development Plan and pre-planning engagement with DCC. Key design parameters include:

- Site characteristics: To enhance and protect the built heritage and protected structures, historic setting, and strong landscape character of the lands
- Site Context: ensuring minimal impact on adjacent residential areas
- Topography: respond to the characteristics of the site.
- Open space strategy: to deliver public open space provision of 25% in accordance with Z12 zoning while retaining existing good quality trees and enhancing and adding to the wooded landscape where feasible
- Connectivity and Permeability: Provision of pedestrian links into and through the site, and with future pitches and the River Tolka.
- Location and orientation of apartment blocks in the institutional setting and historic buildings.
- Massing and positioning of apartment blocks to ensure good daylight levels to all apartment units, open space and existing dwellings.
- Passive supervision to all open space to ensure they are safe and well used spaces.

The proposed development has been designed to sit comfortably within its surrounds, minimising impact on adjacent development and on the Protected Structures and National Monument (Red House).

The Architects Design Statement, jointly prepared by OMP & Henry J Lyons sets out the overall approach to the site and how it meets the objectives of the Masterplan developed for the Z12 lands, as well as the specifics of each of the blocks and how they comply with residential development standards.

5.4.4 Landscape Strategy and Design

The approach to the site has evolved to protect and enhance the historic buildings and structures, arrivals route and to retain as many existing trees as is possible. As such, the 25% public open space requirement stipulated in the Dublin City Development Plan (2022 – 2028) has been conceived as a necklace of spaces which seamlessly blend together, unifying the public realm whilst transitioning from

one landscape character typology to another. This approach creates a variety of memorable spatial experiences, diversity of use and a celebration of place. Refer to **Figure 5.2**.

The landscape design of the proposed development promotes health and wellbeing through active and passive measures including the provision of allotment gardens, nature trails, dog parks and a variety of spatial typologies, which have a positive mental impact both to look upon and to be in. These are the key building blocks to encourage a healthy neighbourhood.

The landscape design of the proposed development is diverse and appropriate to its location in terms of responding to specific character areas. For example, woodland play is proposed in the woodland areas and kickabout for the formal lawn. Flexibility of space will allow residents and visitors to use space informally and invent programme. A series of multi-use games areas (MUGAs) are proposed throughout the proposed development to cater for basketball, kickabouts, climbing walls or walls to hit a tennis ball against. Exercise stations will be dotted along the various walking and jogging loops, as well as sculpture, picnic tables and BBQ area, and areas for yoga, meditation or quiet contemplation, reading, etc.

By the nature of its location, the site is well connected to its context, public transport and key arteries into and out of the City Centre. It has access to rail and bus networks within walking distance. The proposed development leans more on cycle, walking and car sharing than the provision of parking for private car ownership. Pedestrian permeability, public or resident, is critical to the success of a vibrant 'place' and thus finds itself as a key driver at the heart of the landscape strategy.

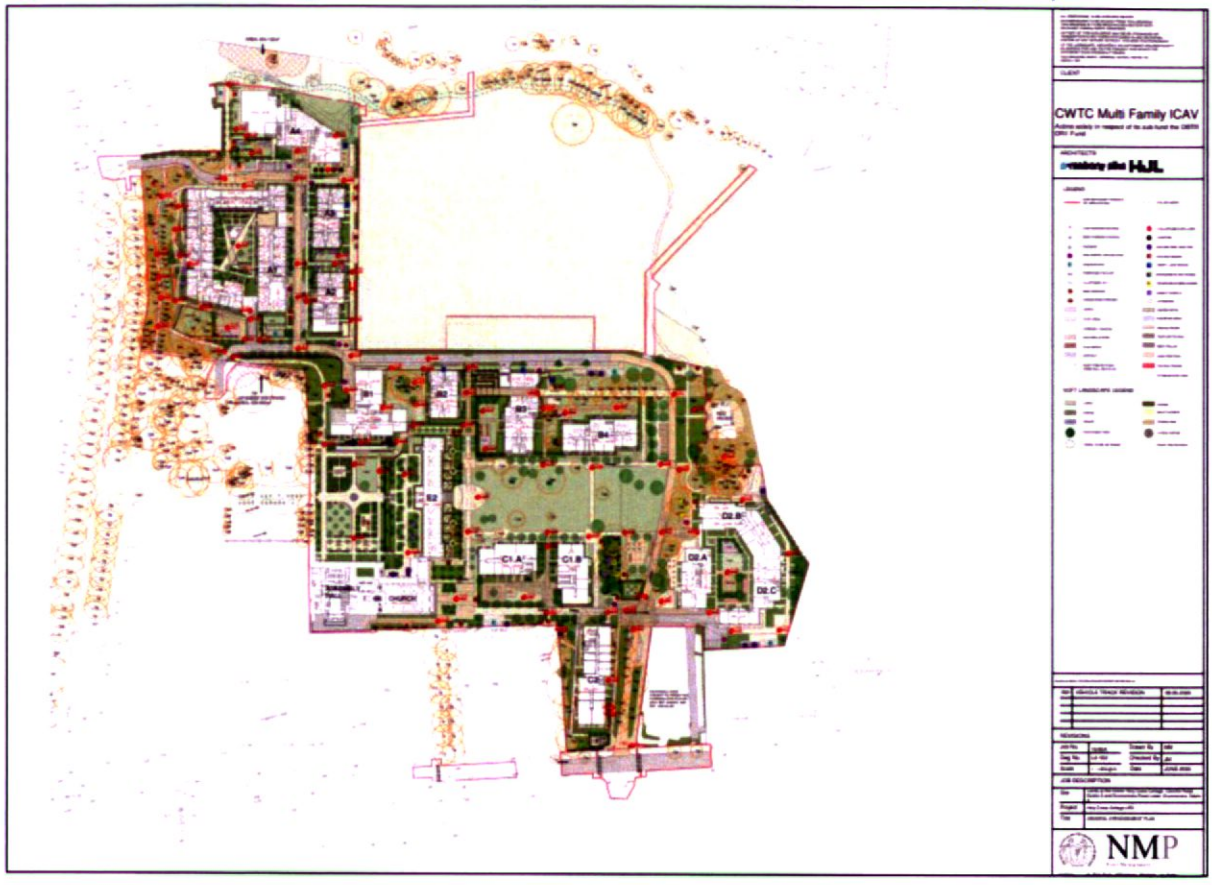
The open space for the proposed development has been planned without boundaries as an open permeable and welcoming piece of public realm. The semi-private space will bleed into the public open space with a series of smaller pocket spaces designed for seating, exercise or play. Some roof garden has been proposed to capture views and create a unique amenity for residents. Communal open space – whilst visually permeable – will have defined boundaries to secure it – a 1.1m high railing with hedge either side to ensure residents' safety, and tree planting with pergola surrounding it.

The proposed hierarchy of space radiates out from the Formal Lawn, the primary space. With highly active areas, secondary spaces and a series of smaller tertiary spaces arranged throughout the wider Masterplan area tie the area together as one cohesive Masterplan and a series of interconnected spaces.

It is proposed to re-plant approximately 815 no. new trees to compensate the loss of c. 93 out of 295 existing trees on site as well as define spaces, enhance character and bio-diverse credentials. These will vary in specification of size and species. There will be a majority of selected native tree species, and they will be deciduous and evergreen in nature and varying habit.

For a more detailed description of the proposed landscape design, refer to the Landscape Design Statement (2025) prepared by NMP Landscape Architecture, submitted under separate cover as part of this application.

Figure 5.2 Landscape Design – General Arrangement (NMP Landscape Architecture, 2025)



5.4.5 Tree Felling & Tree Protection

A tree survey and arboricultural impact assessment have been carried out by the Tree File Consulting Arborists ('the Arborist' hereafter) in respect of the proposed Project, in accordance with *BS5837:2012 – Trees in Relation to Design, Demolition and Construction – Recommendations*. Please refer to the Arboricultural Report prepared by the Arborist and submitted under separate cover as part of this application.

The existing site features a large number of mature trees, and the design and layout of the proposed Project has aimed to retain as many of these as is feasible and practicable. However, in order to facilitate the build and for reasons of safety, it has been established that a number of existing trees will need to be felled. As stated in the Arboricultural Report:

> *In respect of tree constraints, it is noted that the current tree population asserts a "root protection zone" constraint over more than circa 22% of available space within the red line area. The provision of planning required development densities and a development proposal including some blocks over basements, access roads and underground infrastructure, as well as associated ground modifications to provide workable levels across the site, will unavoidably consume space. The efficient development of the site must be considered in respect of the apparent availability of only circa 78% of the total site space. This must also be considered, in light of the dispersed nature of trees across the site, which is often unsympathetic to the efficient use of space. The efficient development of the site appears impossible without the loss of some trees.*

The tree survey has identified a total of c. 500 trees on the wider Holy Cross College lands, of which 295 are situated within the proposed development. Of these 295 trees, it has been estimated that 93 (31.5%) will need to be removed under the scope of the proposed works. This number includes the removal of 22no. poor quality 'category U' trees that are recommended for removal regardless of any development works. It follows that there will be a loss of 71 trees (24%) that might otherwise have been suitable for retention as a result of the proposed works. It is proposed to plant c. 815 new trees under the scope of the proposed works, thereby mitigating the loss of 93 trees and increasing the site's tree population by a further 722 trees. As described in the Landscape Design Statement (NMP, 2025), the new tress will vary in specification of size and species, selected from native trees species and will be deciduous and evergreen in nature and varying habitat.

In order to maximise tree retention, where feasible, amendments have been made to the design of the proposed development, including bespoke structures, such as elevated access on minimal foundations and retaining walls to avoid grading and earthworks near trees. In order to protect trees to be retained from damage during the construction phase, a suite of tree protection measures shall be implemented, as detailed in the Arboricultural Report, including protective fencing, use of 'low-impact' / 'no-dig' processes in certain areas.

The Arboricultural Report includes a Tree Protection Plan and Arboricultural Method Statement, which shall be implemented in full during the proposed works.

5.4.6 Drainage

The proposed drainage design is detailed in the Infrastructure Planning Report (2025) prepared by Barrett Mahony Civil & Structural Consulting Engineers (BMCE) and the corresponding drawings from BMCE, submitted under separate cover as part of this application.

The design of the drainage system will be detailed in accordance with Part H of the Building Regulations, *EN 752: Drain and Sewer Systems outside Buildings*, the *Greater Dublin Regional Code of Practice for Drainage Works*, Irish Water's *Code of Practice for Wastewater*, and in accordance with all Dublin City Council Drainage Division and Uisce Éireann requirements.

A Pre-connection Enquiry application was submitted to Uisce Éireann to confirm capacity in the network and a confirmation of feasibility was obtained as well as a Statement of Design Acceptance (refer to appendices of BMCE's Infrastructure Planning Report, submitted under separate cover).

5.4.6.1 Foul Drainage System

There is an existing 375mm foul network sewer on Clonliffe Road. There is an existing 675mm foul network sewer which crosses the site at the northern corner heading in a south-western direction.

The proposed foul drainage system will be designed to take discharges from the new residential units. Drainage from any non-residential uses such a retail unit or creche (with likely kitchen) will discharge through a grease separator designed in accordance with IS EN 1825 Part 1 and Part 2 and / or to Uisce Éireann requirements. The foul system will connect to the Uisce Éireann network at three locations, including two connection points into the existing 675 mm combined sewer below the potential future GAA pitches, and a third connection on Clonliffe Road. Refer to BMCE drawings CLN-BMD-00-ZZ-DR-C-1008 – Sheets S1 – S4 (submitted under separate cover) for layout of the proposed foul drainage.

It is calculated that the proposed development will have a total hydraulic loading of 719m^3 per day during the operational phase. This equates to an average flow of 6.15 litres/second (over a 24-hour period) and a peak flow of 18.45 litres/second.

A Pre-connection Enquiry application was submitted to Uisce Éireann to confirm capacity in the receiving network and a confirmation of feasibility was obtained as well as a Statement of Design Acceptance (refer to appendices of BMCE's Infrastructure Planning Report, submitted under separate cover).

5.4.6.2 Surface Water Drainage System

The existing drainage systems on the site are mainly combined systems (carrying foul and surface water). There are connections from the site to the existing sewerage network on Clonliffe Road and also to the 675mm diameter combined sewer, which traverses the north-east quadrant of the masterplan lands. There is an existing 225mm combined sewer on Holy Cross Avenue which discharges in a southerly direction and connects to the 375mm diameter combined sewer on Clonliffe Road. This 375mm sewer on Clonliffe Road discharges in an easterly direction and connects into a 450mm diameter combined sewer downstream. There also is a 675mm diameter combined sewer in the north-east quadrant of the masterplan lands, crossing the lower lying grassed area in a south easterly direction. The existing sewerage network in the vicinity of the site eventually discharges to the Poplar Row pumping station (to the east) and from there sewage is pumped to the municipal wastewater treatment at Ringsend.

On site, there is a combination of combined drains and surface water drains. There is an existing surface water system which collects run-off from the internal access roads, via road gullies, before discharging in a southerly direction into the 375mm diameter combined sewer on Clonliffe Road. There is an existing combined system serving the cluster of Seminary Buildings, majority of which discharges in a southerly direction, into the 225mm combined sewer on Holy Cross Avenue, and from there into the 375mm combined sewer on Clonliffe Road. A small portion of the combined drainage system discharges in a northerly direction and into the 675mm diameter combined public.

Surface water run-off from the proposed development will drain by gravity and will be attenuated prior to discharge into the River Tolka via two new surface water outfalls, with the exception of Building C2 adjacent to Clonliffe Road, which will discharge at a restricted attenuated flow into the Uisce Éireann combined sewer on Clonliffe Road. The surface water has been redesigned with an outfall rate equal to Qbar for any surface out falling into the River Tolka and surface water outfall to Clonliffe Road is restricted to 2 l/s/ha.

In line with the DCC Development Plan 2022-2028, blue roofs have been introduced to all new roof areas over 100m^2 in size, and the capacity of buried attenuation systems has been reduced as much as possible. The design seeks to place greater emphasis on integrating increased opportunities for interception of surface water at source, through natural retention measures, such as tree pits, infiltration trenches and bio retention areas.

The development will be served by 3 no. separated surface water drainage sub catchment areas (refer **Figure 5.3**). Each sub catchment will be served by a gravity drainage network, with run-off attenuated in each catchment prior to discharging to the River Tolka or the public network in Clonliffe road. The proposed catchment division is as follows: 1. Blocks A and surrounds (will drain by gravity towards the

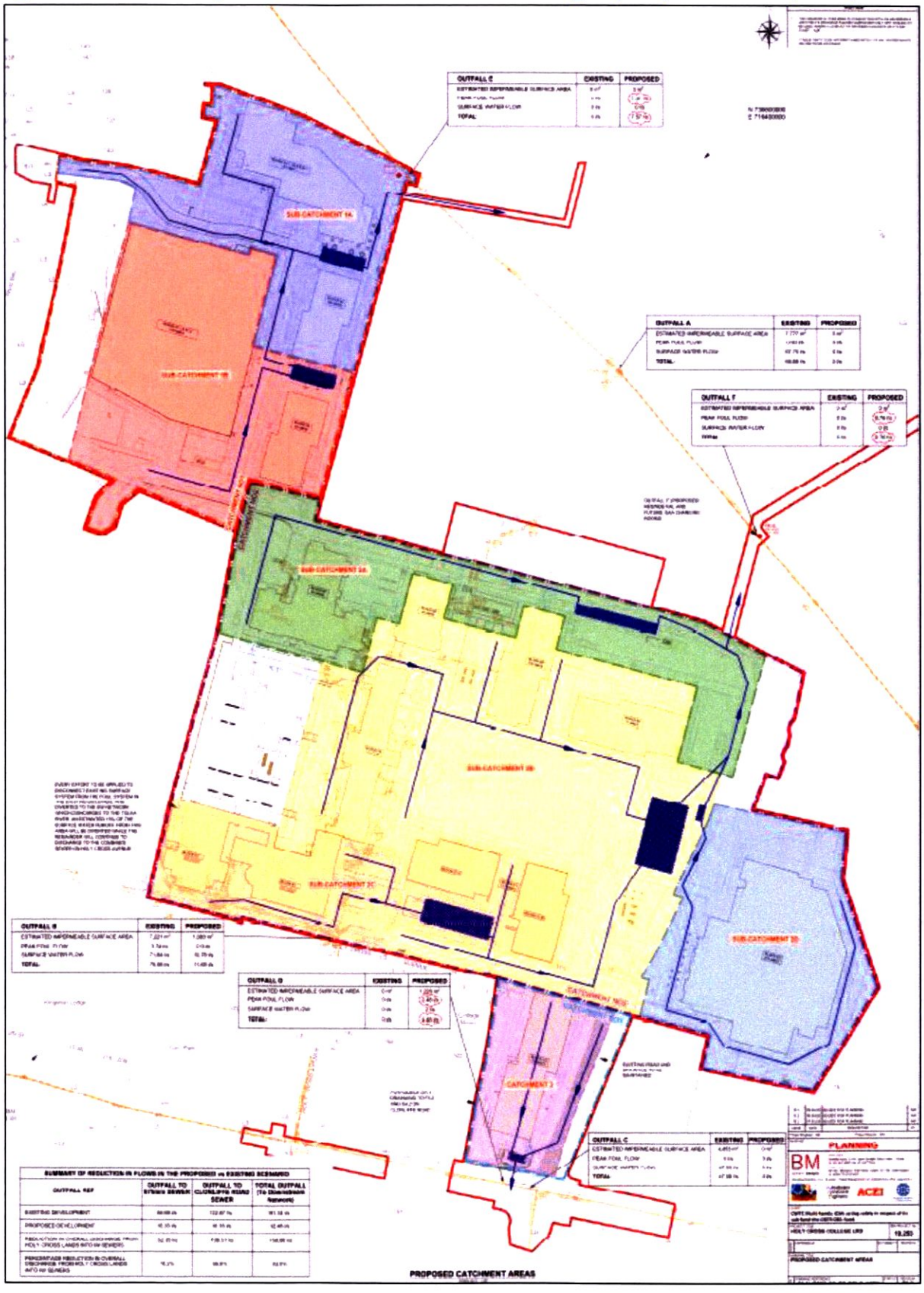
River Tolka) 2. Blocks B, C, D, E – with the exception of block C2, which will drain towards the River Tolka. 3. Block C2 – which will drain to the existing network in Clonliffe Road.

The proposed Surface Water Management Plan for the development is in line with the requirements of the Dublin City Drainage Division and the Dublin City Development Plan 2022-2028 with respect to Sustainable Drainage Systems. SuDS will be incorporated into the development and will include green blue roofs, permeable paving, filter drains, rain garden and shallow infiltration systems. Surface water run-off will go through a minimum of two-stage treatment prior to discharge by gravity into the receiving systems. The design seeks to place greater emphasis on integrating increased opportunities for interception of surface water at source, through natural retention measures, such as tree pits, infiltration trenches and bio retention areas.

Owing to constraints on the site arising from the existing mature trees and protection of these tree root zones, pavement run-off will be intercepted and treated using a variety of SuDS components including gravel filter drains, permeable paving and rain gardens, which have been strategically selected and positioned where space permits. The majority of pedestrianised areas and footpaths are proposed to be permeable paving or will be constructed such that the impermeable paths drain to gravel trenches adjacent to the path, allowing for full interception and full infiltration of rainwater back to source. To ensure the risk of pollutants entering the River Tolka has been minimised significantly, roads for the most part will either discharge to gravel filter drains along the verges, tree pits, or raingardens. Where adjacent to existing tree root protection zones, the run-off will discharge to trapped road gullies with sumps. Pipework from these will discharge into catchpit (silt trap) manholes followed by proprietary treatment systems such as Hydro International 'Downstream Defender' and bypass petrol interceptors which will remove any final silts and oils to discharge into the River Tolka.

For further information on the proposed drainage design, please refer to the aforementioned documents submitted as part of the application pack.

Figure 5.3 Catchment layout and indicative surface water drainage layout (Source: BMCE, 2025)



5.4.7 Water Supply

There are numerous Uisce Éireann watermains in the vicinity of the site including, a 100mm, 150mm and 800mm diameter watermains, to the south of the proposed development, on Clonliffe Road, a 150mm watermain on Holy Cross Avenue, to the south-west of the proposed development and a 600mm and a 225mm watermain on Drumcondra Road Lower, to the north-west of the proposed development. In addition, there is a network of existing on-site watermains serving the various existing buildings across the Holy Cross lands.

The proposed water supply connection to the new development will be from the existing 600mm public main on Drumcondra Road Lower with a cross-connection to the existing 225mm public main on Drumcondra Road Lower, as directed by Uisce Éireann. In addition, it is proposed that the development will be serviced by a second connection to the 800mm diameter public main on Clonliffe Road.

The proposed watermain system through the site will be 250mm diameter. Refer to drawings CLNBMD-00-ZZ-DR-C-1009 Sheets 1-4 for the layout of the proposed watermains. The peak flow demand during the operational phase of the development will be c. 34.95 litres/second, equivalent to an average daily demand of 604 m^3. The installation of low flow fittings and a rainwater harvesting system for the development will reduce the demand on the existing water supply network.

The proposed water main layout is arranged such that all buildings are a maximum of 46m from a hydrant in accordance with the Department of the Environment's Building Regulations "Technical Guidance Document Part B Fire Safety". Hydrants are to be installed in accordance with Uisce Éireann's Code of Practice and Standard Details. Final positions of hydrants will be agreed as part of the Fire Safety Certificate requirements.

A Pre-connection Enquiry application was submitted to Uisce Éireann to confirm capacity in the network and a confirmation of feasibility was obtained as well as a Statement of Design Acceptance (refer to appendices of BMCE's Infrastructure Planning Report, submitted under separate cover).

5.4.8 Incorporated Design Mitigation

The proposed development incorporates comprehensive individual and specific measures that are required by legislation, regulations and guidelines, by Dublin City Development Plan 2022-2028, and by applicable standards and construction best practices that are generally required for proposed developments of this nature.

The design of the proposed development has evolved through a process of design iteration, with particular emphasis on minimising the potential for environmental impacts, where practicable, whilst ensuring that the objectives of the proposed development are attained and that the environment of the completed development is enhanced insofar as possible. Mitigation incorporated within the design of the proposed development, includes:

- Consideration and incorporation of the ecological, environmental, historical and aesthetic features of the lands within the design;
- Retention of the historic fabric of protected structures, including restoration and adaptation of the Seminary Building for residential use, and revitalisation of the Chapel and Assembly Hall as community, cultural, and arts venues;
- Minimising impact on surrounding lands and properties;
- Minimising removal of existing trees, especially better quality trees and stands of trees;

- Provision of a high quality landscape setting and public realm for existing and proposed development on the site; and
- Providing access and connectivity between the lands and surrounding areas and residents.

While these measures, and others, are inherent in the design development of the proposed development, appropriate mitigation is also detailed in the relevant chapters of this EIAR where likely significant environmental effects have been identified during the environmental impact assessment process.

5.5 Construction Phase

A Construction & Environmental Management Plan (CEMP) and Development Construction Management Plan (CMP) has been prepared in respect of the proposed development by DCON Safety Consultants (refer to standalone document submitted under separate cover). They contain best practice measures and protocols to be implemented during the construction phase of the proposed development to avoid / minimise environmental impacts.

The appointed contractor will be responsible for the implementation of the CEMP & CMP. To ensure these documents remain fit for purpose, they will be maintained as live documents. The appointed contractor will be responsible for updating the CEMP & CMP, as required; e.g. to reflect the publication of relevant new or revised guidelines and / or new statutory requirements. The full schedule of environmental commitments (i.e. all mitigation measures set out in the CEMP and Environmental Impact Assessment Report as part of the planning application, as well as any applicable conditions of development consent) will be included in the CEMP & CMP by the appointed contractor.

5.5.1 Indicative Construction Methodology

The following indicative construction methodology has been adapted from the Construction Management Plan, drafted by DCON Safety Consultants (2025) on the basis of initial scheme design inputs. Specific methodologies of work will be defined in advance of commencement of works by each contractor.

Temporary construction surface drainage and sediment control measures, including the use of SUDS, will be provided before earthworks commence. The drainage design follows the natural topography of the site and utilises the existing storm water infrastructure within the surrounding infrastructure where possible including The River Tolka.

5.5.1.1 Preparatory and Site Set-up Works (all Blocks)

These enabling works are expected to include the following elements:

- Site cabin delivery and placement;
- Completion of all outstanding required surveys;
- Contractor temporary service installations;
- Construction of appropriate hoarding to neighbouring properties;
- Establishment of tree protection measures;
- Installation of CCTV coverage or other agreed security measures;
- Set-up of noise / dust / vibration monitoring stations in predetermined areas closest to sensitive receptors, as required by conditions of planning permission;
- Review of pest control needs by specialist contractor;

- New builders' supply main board to be installed in appropriate determined location, agreed between the mechanical and electrical (M&E) designer, contractor and temporary works electrician.

The site preparation works will also include setting up of access control to the various block site areas, secure compounds for the storage of all on-site machinery and materials, tree protection means, permanent and temporary hoarding/fencing and erection of signage.

5.5.1.2 Invasive Species Management Plan

Japanese knotweed (*Reynoutria japonica*) has been detected on the perimeters of the north-west and south-west boundaries of the site. The Management of Japanese knotweed on site shall be overseen by a competent specialist. A specific Invasive Species Management Plan has been prepared by Invas Biosecurity (2025) (and included in Appendix 8.3) and kept for site owners.

Japanese knotweed is subject to restrictions under Regulations 49 and 50 of the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477), being listed in the Third Schedule (Part 1) of this legislative Act. Soil taken from a place that is infested with Japanese knotweed (vector material) is also restricted under Part 3 of this Third Schedule.

In addition to the ISMP, the following measures have been set out in the CEMP (DCON Safety Consultants, 2025):

- All Knotweed on site will be treated following Best Practice Guidelines while also following guidance on the Herbicides label;
- All Knotweed infested soil to be stockpiled on a ground membrane and stored on site to await haulage to the e.g., IMS landfill facility in Naul, County Dublin. Loading machine will not be allowed track/wheel over infested soils;
- All Knotweed areas on site had temporary barrier fencing and signage;
- Excavation pits when backfilling will be backfilled in layers of 20cm. Each layer will be compacted sufficiently with plant machine;
- Following Best Practice when building near to or over Knotweed it is envisaged that to cover the hardstanding with a Knotweed Root Barrier; and
- Prevention of further spread - All Japanese knotweed areas to be isolated prior to any work being carried out on site. This should include an area of ~ 7.00m laterally from above ground stems to ensure that any underground parts are also isolated.

5.5.1.3 Substructure Construction

Substructure works will include groundworks, formwork, basement creation (up to ground flood podium), rising concrete elements, attenuation and drainage. Where possible, an overlap of substructure works between blocks will be sought to maximise supply chain efficiencies for the works contractor. Refer to the Basement Impact Assessment (BMCE, 2025) that details the construction methodology for the works proposed for basements.

5.5.1.4 Residential Block Construction

Residential block construction is expected to proceed as follows:

- Cores will be installed initially. These are central to each block footprint. For the upper-level slabs to be completed, the core must be cast to that level. To minimise program impact, zones will be created to each basement or podium slab level to allow it to be cast without the core being complete to that level. For example, a proprietary vertical wall formwork system that is self-climbing may be used to cast the core. The core system will be supported by a tower crane for lifting of materials, an Alimak or alterative means, to get construction personnel and tools to the system, and its own satellite concrete placing boom to place concrete.
- Lobby slabs, header beams and stairs will follow the core walls and will be cast as soon as practical to maintain structural stability of the core walls and provide access to cast the core slabs. When the last vertical wall elements are cast, the jump form will be removed in a strategic sequence, for safety reasons, and to allow the lift motor rooms to be cast as early as possible to get builders' lifts operating.
- Structure trades and works will be supported by tower cranes for lifting of materials, formwork hoists for the lifting of recycled formwork, Alimaks or alterative means for the transportation of operatives and materials to decks, satellite placing booms for the placement of concrete, and proprietary perimeter edge screens for provision of fall protection to operatives.
- The façade will be erected as soon as practical to commence waterproofing floors, so that finishes and fit-out can commence. The roof embellishments will commence when the structure is complete. These works will not be completed until all plant has been lifted into the plant rooms and the façade has been installed to the corresponding level to complete the water tightness of the fabric.
- When slabs are cast and the formwork is stripped, service installation will commence. These works will not be completed until the façade to the corresponding level is completed, for reasons of personnel safety and weatherproofing.
- Once façades and services are installed, internal finishes will be completed. Plant, equipment and materials will be lifted to the floors via several means (tower cranes, Alimaks or builders' lifts), depending on what stage the building is at.
- When the fabric of the tower is complete, and the tower cranes have been removed, the gantries will also be removed, allowing external works to be completed. As some of the external works will be to footpaths and roads to mesh them in with the new building, some footpath and lane closures will be required. These will be coordinated with DCC.

5.5.1.5 Demolition Works

The proposed development will include demolition of a number of former office/college buildings on site, including the New Wing (c. 2476.4 m^2), Library Wing Buildings (c. 3601.6m^2), later additions to the seminary building (c. 249m^2), resulting in a total demolition area of c. 6,327m^2. There will be c. 7508.3 m^3 of demolition material generated as a result of the proposed development. These are set out below in **Figure 5.4**, below. The site contains a number of Protected Structures including The Seminary Building, Holy Cross Chapel, South Link Building, The Assembly Hall and The Ambulatory. The application proposes the renovation of the Seminary Building and South Link Building to accommodate residential units and the renovation of the existing Holy Cross Chapel and Assembly Hall buildings for use as community/cultural uses.

Demolition works will be carried out, comprising of four principal stages:

1. Preparatory works;
2. Asbestos removal;
3. Soft strip; and
4. Hard demolition.

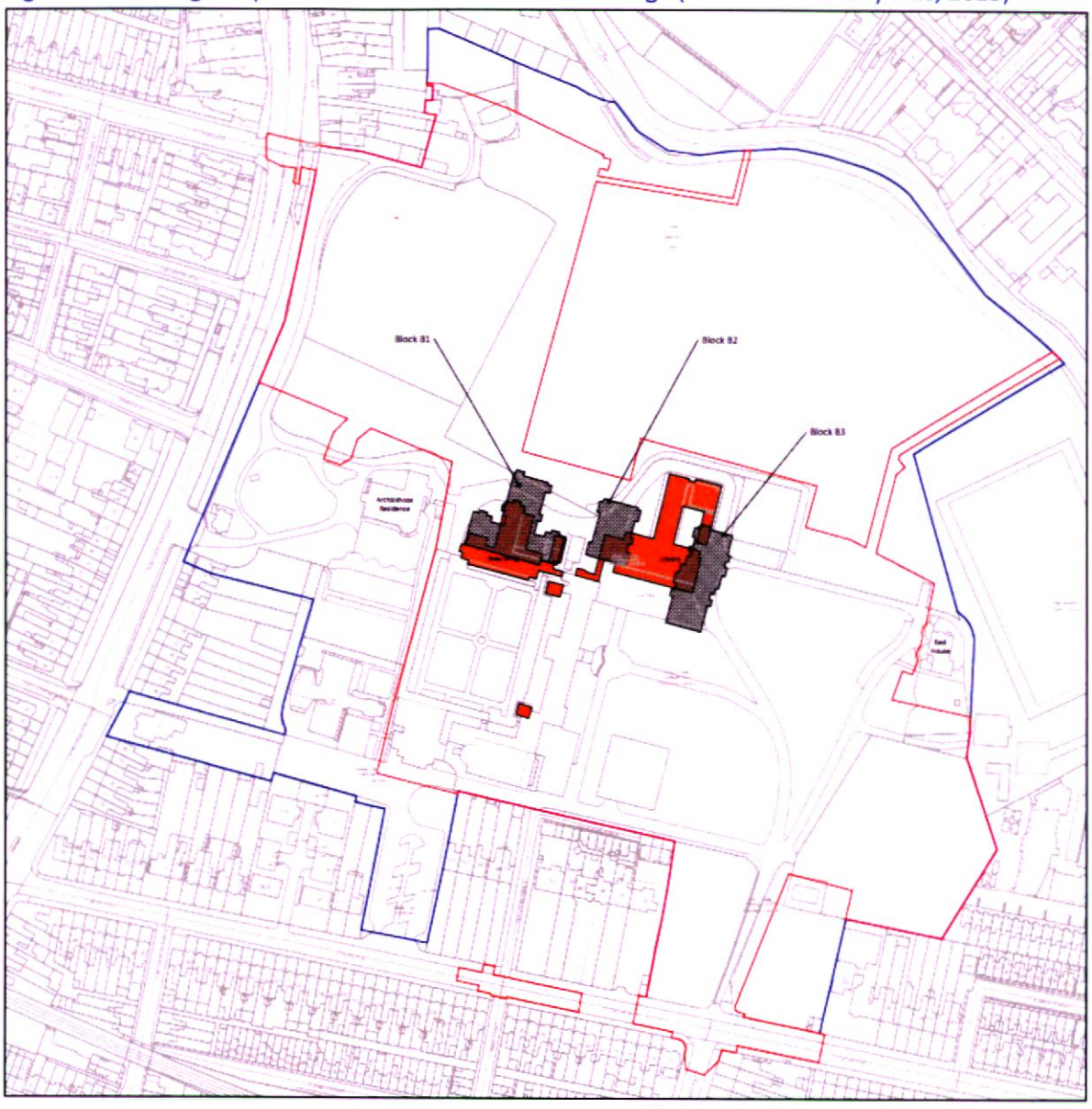
Preparatory works will include completion of structural assessment and services surveys, review of completed asbestos survey, installation of contractor's temporary services, construction of appropriate hoarding to site areas, establishment of noise/dust/vibration monitoring stations (in line with Best Practice as set out in Chapter 24 Mitigation Measures & Monitoring and the CEMP prepared by DCON Safety Consultants 2025 and also as required by conditions of planning permission) and isolation of all services (including but not limited to heating, sprinklers, local electrical distribution boards, water, drainage, soil pipes, lighting, control panels, fire alarms circuits, fire boards, gas mains, etc.).

An Asbestos Survey Report was prepared by Phoenix Environmental Safety Limited in May 2020 (Refer to **Appendix 5.1**). During the asbestos survey, asbestos containing materials (ACMs) were detected in several locations within some of the buildings, including in floor tiling, insulating boards, downpipes, bitumen and stair nosings. Asbestos removal works will be carried out to structures prior to demolition, as set out in the Development Construction Management Plan prepared by DCON and submitted under separate cover. This will involve removal of asbestos and asbestos containing materials (ACMs) under licence, and reoccupation certification for all areas prior to soft strip.

Soft strip works will be carried out to structures following asbestos removal (where required) and prior to demolition, subject to safe isolation of energy services. This will include the removal of all non-load-bearing internal structures, finishes, fixtures, furniture and equipment.

Following soft strip works, hard demolition of all non-protected structures to be removed will be carried out, including removal of all building structural members, external façades and roof finishes. Disposal or re-use of demolition materials will be carried out in accordance with the Resource & Waste Management Plan prepared by AWN (2025) and submitted under separate cover at **Appendix 20.1**.

Figure 5.4 Building footprint for demolition denoted in orange (Source: O'Mahony Pike, 2025)



5.5.1.6 Refurbishment Works (Seminary, Library and Church)

In advance of the commencement of refurbishment works, isolation of services (including but not limited to heating, sprinklers, local electrical distribution boards, substation, water, drainage, soil pipes, lighting, control panels, fire alarms circuits, fire boards, gas mains, etc.), asbestos removal and soft strip works will be carried out to the structures in question. Refurbishment works are generally expected to proceed as follows:

- An external independent scaffold will be erected, designed for alterations to facilitate other trades cleaning or repointing the external façade;
- Appropriate temporary works will be carried out, as required, to stabilise external walls prior to any internal remodelling taking place;
- Construction materials will be loaded out by crane;
- Replacement windows, as required, will be fixed as the frame progresses to maintain water-tightness;

- Internal works will commence, including services, carpentry, decoration, floor finishes and installation of fitted furniture.

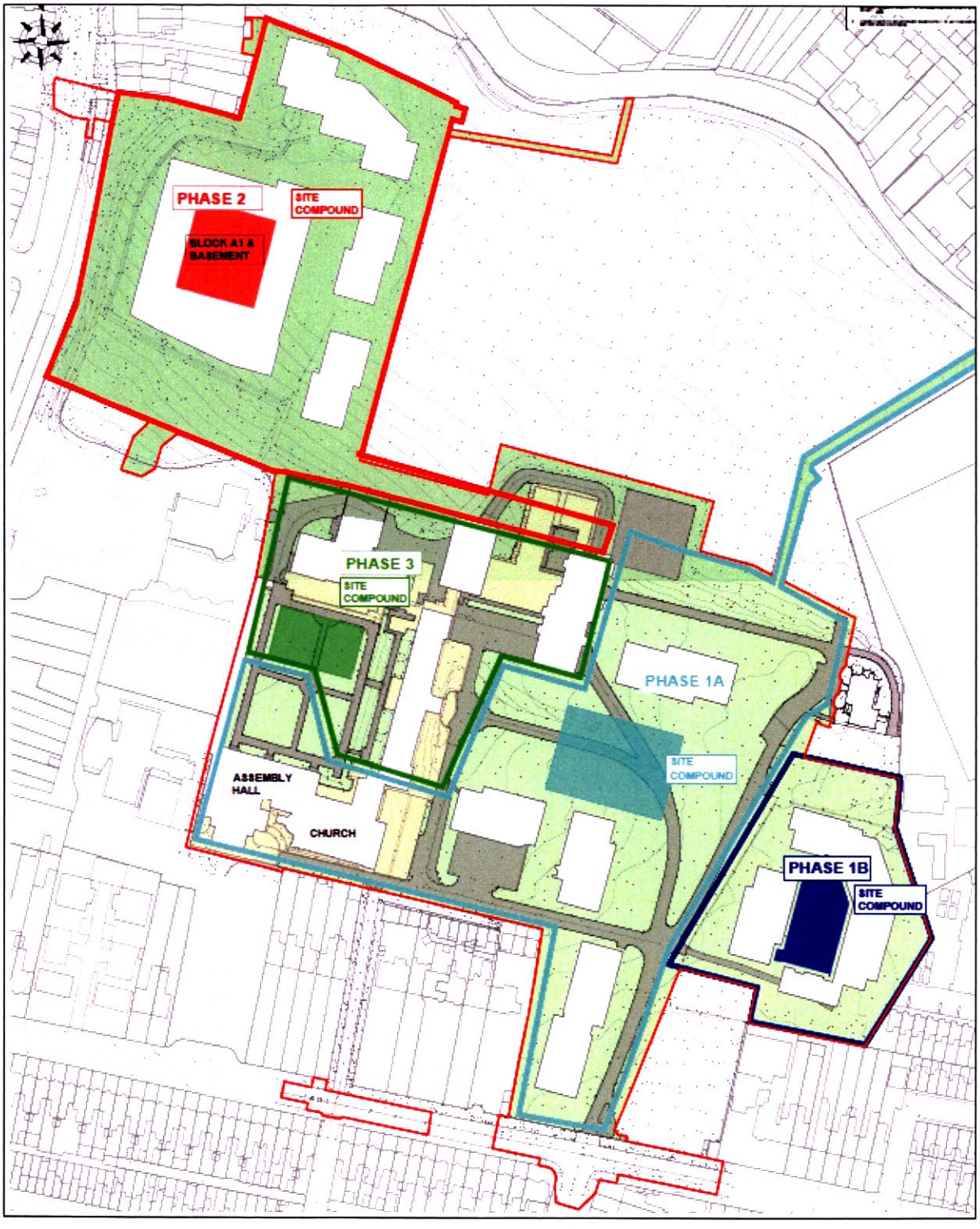
5.5.1.7 Surface Water Outfalls

Two new surface water connections will be made from the proposed development to the River Tolka. This will require the creation of two new outfall channels. The locations of the outfalls have been selected by the design team (including the engineer, ecologist and landscape architect) in order to minimise any potential for impacts on the River Tolka. The outfalls will be constructed in consultation and agreement with IFI and set back from the riverbank. The vast majority of works will be on the bankside, right up and including the headwall detail, which is set back from the bank edge. All of the outfall works will be constructed in advance (with the riverbank unaffected), with the last piece of work to be done to 'break through' the riverbank for the last few metres to open new channels to the river itself. On completion of the works, the newly created outfall areas will be landscaped and planted to match the existing riverbanks.

5.5.2 Construction Compound

The indicative site compound locations of the construction compound are shown in **Figure 5.5**. Block site compounds will include as a minimum office, accommodation and welfare facilities. Compounds will be serviced with electrical power, water supply and toilet facilities. Haul routes and storage/staging areas will be established within each Block site area. Storage/staging areas will vary, depending on Block spatial allocation and their exact locations will be decided taking ecology, proximity to The Tolka River and archaeology into consideration. Fuel storage areas will not be located within 50m of any watercourse. Suitably robust hoarding will be erected around the perimeter of each storage/staging area; hoarding will typically be standard plywood to a height of 2.40m.

Figure 5.5 Indicative Site Compound Locations (Source: BMCE, 2025)



5.5.3 Construction Access

Construction Site access will be provided for construction personnel and pedestrians via a number of entrances / exits on a phased basis, as illustrated in **Figures 5.6 – 5.8**, below.

It is anticipated that the majority of construction vehicles accessing the sites will come from the M50 via the Drumcondra Road. Traffic bound for Blocks A1-A4 will enter via the existing Drumcondra site entrance gateway. Blocks B, C, D and E site traffic, will travel further down Drumcondra Road and turn

left on to Clonliffe Road. Site access for Blocks B, C, D and E will be at the Clonliffe Road and Jones Road junction. The traffic signals at this junction may need to be temporarily modified in agreement with the DCC Transportation Department.

To exit the site and return to the M50, vehicles exiting the Drumcondra (left in and left out only) and Clonliffe Road site entrances will travel towards Annesley Road. From here the majority of vehicles will turn left towards Fairview and Marino and travel towards the M50 or alternatively travel along East Wall Road to the M1 tunnel.

The construction site access strategy will be such as to avoid / minimise impacts on members of the public. Construction traffic will be limited to specific haulage routes. Where possible, site deliveries will be scheduled in a staggered manner, avoiding peak traffic hours.

Access to neighbouring properties will be maintained throughout the proposed works. In order to minimise impacts to the public bus services using the QBC on Drumcondra Road, proximate works will be carried out at times agreed with TII, subject to the terms of the EIAR and relevant conditions attached to a grant of planning permission

To minimise non-essential traffic associated with the proposed works, construction personnel will be encouraged to travel to site using public transport or other sustainable modes of personal mobility, and on-site parking will be limited. In order to avoid overspill issues on the surrounding road network, proximate on-street parking will be managed / restricted in agreement with local residents and DCC.

As stated in the Development Construction Management Plan (CMP), it will be a condition of works that maintenance of access to local roadways, footways and Dublin Bus stops will be secured. With the exception of hoarding construction works, temporary traffic management interventions, and utility connection works, it is not expected that the proposed works will impact on the use of bounding roadways and footways.

In advance of the commencement of works, contractors will be required to draft Traffic Management Plans in accordance with the requirements of the Department of Transport's 2018 manual, *Temporary Traffic Measures and Signs for Roadworks*, and in agreement with the Transportation Department of DCC. All contractors will also be required to appoint a Traffic Management Coordinator, who will be responsible for the oversight of Site traffic management and the implementation of the corresponding Traffic Management Plan.

Figure 5.6 Construction Vehicle Access – Phases 1, 2 & 3 (Source: BMCE, 2025)

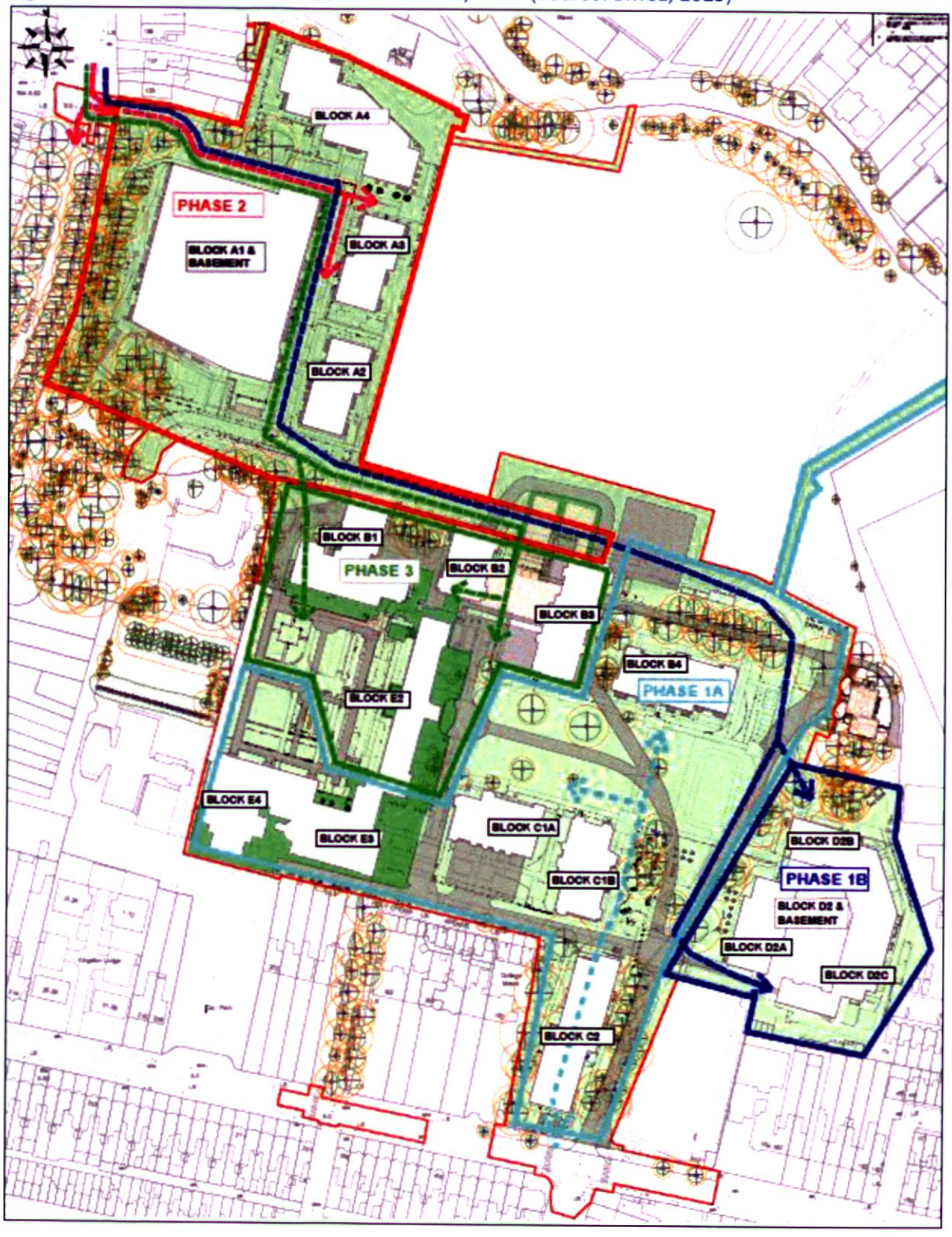


Figure 5.7 Construction Vehicle Access – Phase 1 (Construction of Temporary Access Road) (Source: BMCE, 2025)

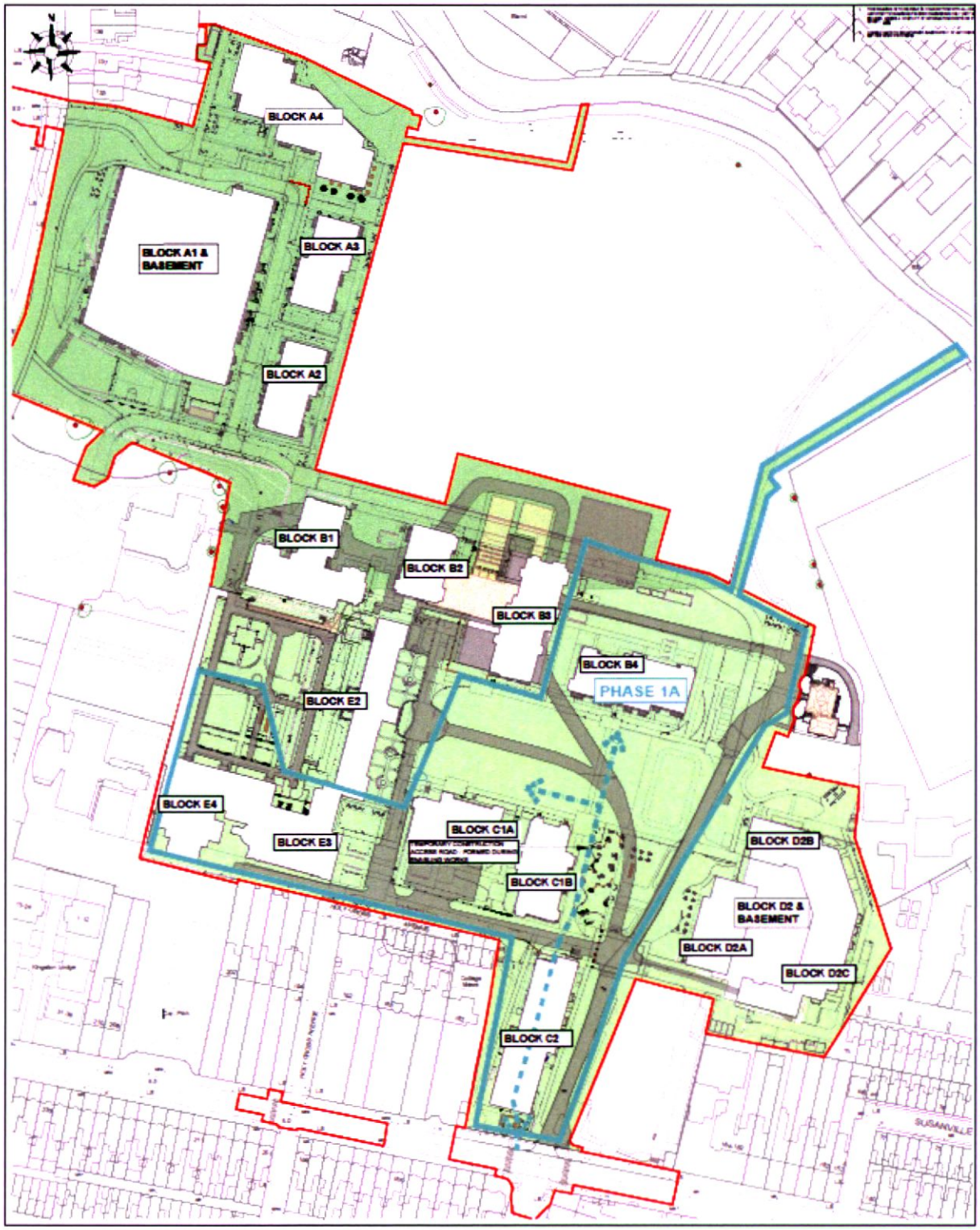
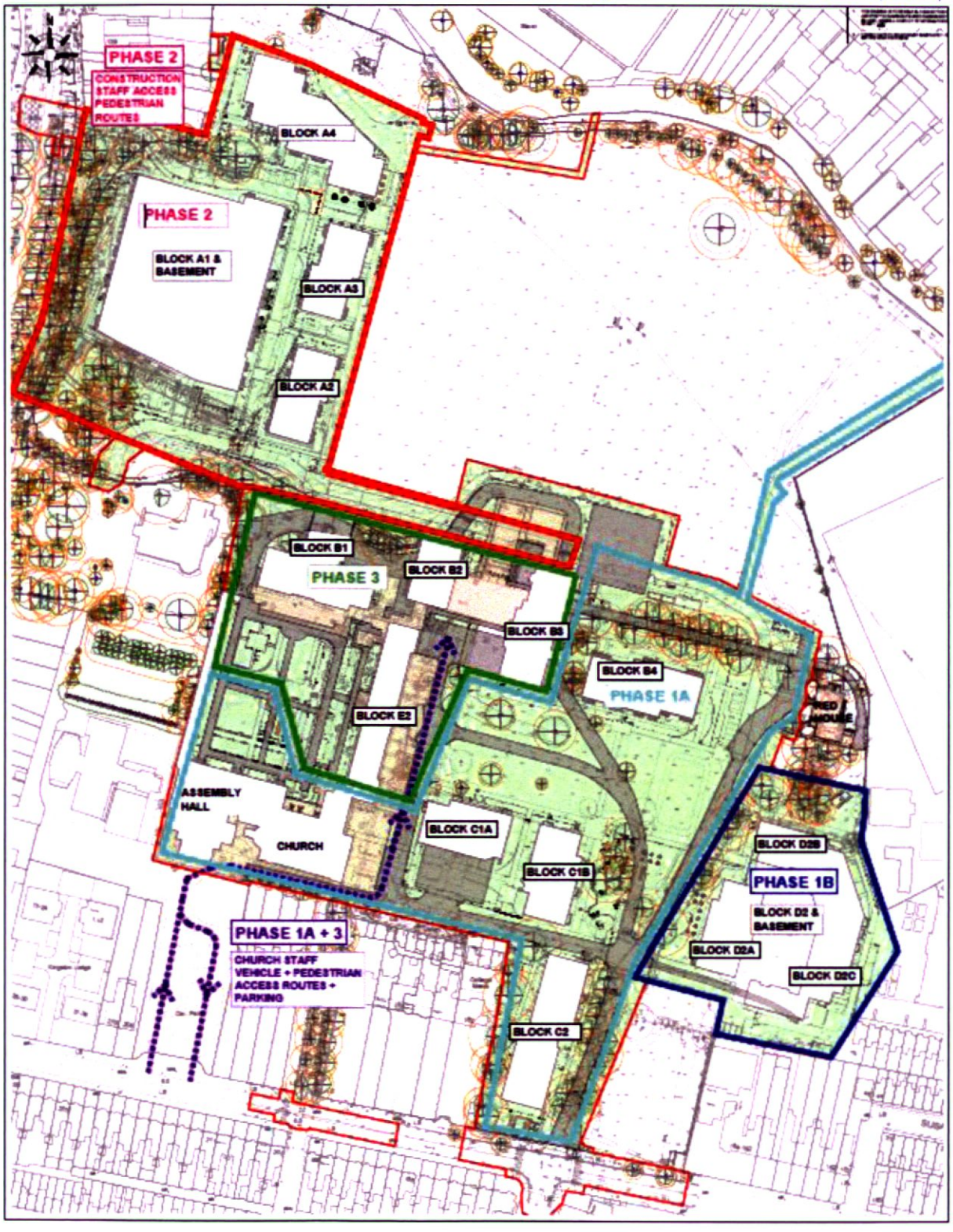


Figure 5.8 Church staff vehicle, pedestrian access routes & parking – Phase 1 & 3 (Source: BMCE, 2025)

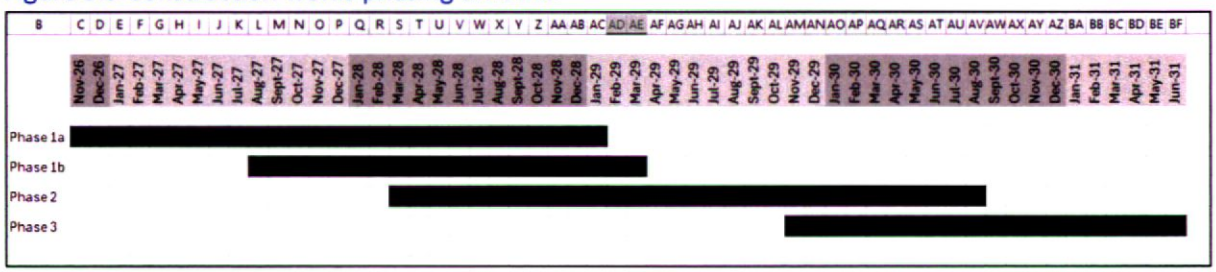


5.5.4 Construction Phasing & Duration

It is estimated that new build construction (Phase 1 construction starting in Nov 2026 (associated site works might commence earlier in April 2026), will take approximately 60 months to complete. The construction programme is dependent on contractor appointment, market and other considerations. The overall delivery programme has been estimated on the basis that the construction of the development will be completed by a number of contractors under separate appointments. The project schedule above is therefore indicative only. Refer to **Figures 5.5 & 5.9**.

The first construction activity on the development will be a series of enabling works. Enabling works accounts for the provision of site, tree and invasive species protective means, construction of a temporary segregated onsite vehicular roadway and Block A1 basement excavation and piling. Each site/phase CMP, in keeping with the project CMP submitted as part of this planning application, will be prepared to reflect the specific details of relevant phase of works scheduled for completion and will be submitted to Dublin City Council (DCC).

Figure 5.9 Construction works phasing timeline



5.5.5 Excavation work

Excavation works will take place on each Block site to achieve formation levels for e.g., basement, car park ramp access, modification of existing services and the construction of new foundations and services. The volume of excavation required for the three basement car parks is estimated to total c.30,000m^3. Most of this material will be natural clay material as identified in the site investigation report. There will also be significant quantities of topsoil. It is estimated that c. 10,000m^3 of the excavated material will be stockpiled and re-used in other areas of the site. The balance will be disposed of off-site. The stockpiled topsoil - clay will be retained for landscaping and should be carefully stored in segregated piles on the site until subsequent reuse.

5.5.6 Construction Working Hours

Construction works will be limited to the times below, as per the Development Construction Management Plan (CMP) and Chapter 12 (Noise & Vibration), unless otherwise stipulated in the conditions to the planning permission:

- Monday to Friday 07:00 to 18:00 hrs
- Saturdays 08:00 to 14:00 hrs
- Sundays and Public Holidays No work on site*

*However, where required for specific circumstances (e.g. exceptional / emergency circumstances, such as connections to public service systems or utilities), it may be necessary for certain construction

operations to be undertaken outside these times. The timing of such works will be agreed in advance with Dublin City Council.

5.5.7 Construction Phase Plans

During the construction phase, all on-site contractors and subcontractors of the project and all works carried out regarding the upkeep and management of the development will also be required to adhere to the below identified Plans. These plans are being submitted under separate cover as part of this application in outline/draft form and will be finalised to reflect the specific, final terms of the EIAR in accordance with the terms of the planning permission and all conditions attached thereto.

5.5.7.1 Development Construction Management Plan

A Construction Management Plan (CMP) (also referred to as the 'Development Construction Management Plan (DCMP)) has been prepared in respect of the proposed development by DCON Safety Consultants and submitted under separate cover as part of this application. The aim of the CMP is to ensure that all works are planned and managed in a safe and organised manner, undertaken and coordinated by competent contractors, and while obtaining the necessary confidences of all project stakeholders. It presents:

- A construction programme sequence supported by projected construction methodologies;
- Techniques that will be adopted by the contractor during the construction of the proposed development;
- A summary of foreseeable potential impacts resulting from the proposed works and mitigating factors; and
- A pro forma construction management plan boiler plate for each contractor prior to works commencing on site.

The CMP shall be finalised by the successful Contractor prior to the commencement of the construction phase, in accordance with any corresponding conditions of the planning permission and will be prepared in having regard to the CMP and any mitigation identified in this EIAR.

5.5.7.2 Construction Environmental Management Plan

A Construction Environmental Management Plan (CEMP) has been prepared in respect of the proposed development by DCON Safety Consultants and submitted under separate cover as part of this application. The CEMP identifies the control measures to alleviate environmental impacts and specifies an environmental monitoring programme. It addresses construction phase measures in relation to:

- Direct impacts – those impacts associated directly with the environmental aspect, such as increased dust, noise or vibration levels.
- Indirect impacts – those impacts associated indirectly with the environmental aspect, such as transport and disposal of waste.
- Normal situations – progress according to plan.
- Abnormal situations – the Project programme not progressing as planned because of unforeseen or unpredictable circumstances.
- Emergency situations – an unplanned or unwanted situation has occurred, such as fire, explosion or malicious damage.

The final CEMP will be prepared by the Contractor prior to the commencement of the construction phase and issued to all on-site contractors and subcontractors as part of their contract. The final CEMP shall include a full Schedule of Environmental Commitments, including all of the mitigation measures stipulated in this EIAR and any additional conditions attached to the planning permission

Construction Phase Health & Safety Plan

The appointed Contractor will be required to prepare a Construction Phase Health and Safety (H&S) Plan in advance of the commencement of works, and all on-site contractors and subcontractors will also be required adhere to this Plan.

5.5.7.3 Tree Protection Plan & Arboricultural Method Statement

As discussed in Section 5.4.4, above, the Arboricultural Report (prepared by the Arborist and submitted under separate cover as part of this application) includes a Tree Protection Plan and Arboricultural Method Statement, which include measures for the protection of trees to be retained during the proposed works. The successful Contractor shall be responsible for ensuring that these are fully implemented during the construction phase.

5.5.7.4 Construction Surface Water Management Plan

An Outline Construction Surface Water Management Plan (CSWMP) has been prepared by BMCE and submitted under separate cover as part of this application. The CSWMP aims ensure that surface water quality and quantity is managed throughout the construction process to mitigate impacts off site (and in particular on the nearby River Tolka). It provides the water management principles and minimum measures to be implemented by the Contractor to ensure that work is carried out with minimal impact on the water environment during the proposed works. The CSWMP shall be finalised by the successful Contractor prior to the commencement of works, in accordance with any corresponding conditions of the planning permission and shall be implemented by all on-Site contractors and subcontractors, as appropriate, throughout the construction phase.

5.5.7.5 Community Liaison Plan

Given the nature of the proposed development and that there may be, at any given stage, multiple contractors on site, there is a need to have an effective management of public relations and complaint handling to ensure good relations and a mutual trust between all key stakeholders during construction. These key stakeholders will include but not be limited to potentially impacted residents and neighbouring businesses, Dublin City Council, An Garda Síochána, the NTA, TII, etc.

The dissemination of accurate and timely information in relation to ongoing and proposed works, changes to traffic layouts and other activities, in advance to the key stakeholders will lend itself to reducing queries, complaints and nuisance during construction.

Accordingly, the Applicant shall develop a Community Liaison Plan in advance of the commencement of the proposed works, in accordance with the requirements set out in the CMP, as well as any corresponding conditions of the planning permission. The Community Liaison Plan will include a Good Neighbour Policy covering the following areas:

- Designated Community Liaison Official (CLO);
- Early implementation;

- Good client, staff and neighbourhood liaison;
- Reduction of nuisance factors;
- Clear access for neighbouring premises; and
- Clear and concise and accurate information.

The Applicant will establish a Designated Community Liaison Officer (CLO) so that particular issues / complaints raised by local residents may be quickly identified and responded to. The details of the CLO will be shared with local residents once appointed. The CLO shall be responsible for the preparation and implementation of the Community Liaison Plan.

The Community Liaison Plan will be updated, as required, taking in to account:

- Changes in the design and construction programme;
- Changes in stakeholder and community needs; and
- Changes in contractor activities and stakeholder and community information requirements.

The Community Liaison Plan will include, as sub–plans, separate 'Stakeholder and Community Involvement Plans' that are specific to separate projects and contractor activities.

Further details of the Community Liaison Plan are set out in the CMP, submitted under separate cover.

5.5.7.6 Construction Traffic Management Plans

As stipulated in the CMP, a site-specific construction Traffic Management Plan will be prepared by each contractor in advance of their respective works commencing on-Site. These will be in accordance with the Dublin City Council document '*Directions for the Control & Management of Roadworks in Dublin City*', with Chapter 19 of this EIAR (Traffic & Transportation) and any corresponding conditions attached to the planning permission. They will address the movement of construction traffic, machinery and plant, and loading / unloading areas, with a view to minimising disruption and other construction traffic-related impacts.

Prior to works commencing on-site, a Construction Traffic Management Plan will be prepared by the appointed contractor in accordance with the following guidance documents:

- Department of Transport, Tourism and Sport (DTTS) (2019). Chapter 8: Temporary Traffic Measures and Signs for Roadworks, in Traffic Signs Manual;
- DTTS (2013). Design Manual for Urban Roads & Streets ('DMURS');
- Department of Transport (2010). Guidance for the Control and Management of Traffic at Road Works (Second Edition);
- NRA (2015). Design Manual for Roads and Bridges ('DMRB').

5.5.7.7 Construction Travel Plan

As stipulated in the CEMP & CMP (DCON Safety Consultants, 2025) a Construction Travel Plan shall be developed by appointed Contractor, addressing access to / from the Site for construction personnel and detailing how more sustainable mobility modes (e.g. carpooling, public transport use, walking and cycling) will be promoted, and individual private car use minimised, among construction personnel.

5.5.7.8 Resource and Waste Management Plan (RWMP)

A Resource & Construction Waste Management Plan (prepared by AWN Consulting Ltd., 2025) will be implemented during the construction phase, and is submitted as part of the planning application. This document shall be finalised by the appointed contractor, in agreement with Dublin City Council, prior to the commencement of the proposed works. For further information, refer to Chapter 20 (Material Assets – Waste & **Appendix 20.1** (Volume 3) RWMP).

5.6 Operational Phase

During the operational phase, all on-site contractors and subcontractors of the project and all works carried out regarding the upkeep and management of the development will also be required adhere to the below identified Plans. These plans are being submitted under separate cover as part of this application in outline/draft form and will be finalised to reflect the specific, final terms of the EIAR in accordance with the terms of the planning permission and all conditions attached thereto. It is proposed to implement the following plans of pertinence to the Environmental Impact Assessment Report:

5.6.1.1 Mobility Management Plan

A Mobility Management Plan (MMP) has been prepared by SYSTRA (2025) for the operational phase of the proposed development (refer to standalone document submitted under separate cover), to promote sustainable mobility among the residents of the proposed development through a range of measures. The appointed Mobility Manager of the site during the operational phase will be responsible for ensuring – allocating personnel and resources, as needed – the ongoing implementation of the MMP. This is intended to be a live document, to be updated by the Applicant / Operator, where appropriate, e.g. to ensure the Plan remains fit for purpose and up-to-date with relevant policy.

5.6.1.2 Operational Waste Management Plan

An Operational Waste Management Plan (OWMP) has been prepared by AWN Consulting Ltd. (submitted as part of the planning application – **Appendix 20.2,** Volume 3), containing measures to promote operational phase waste management in accordance with the waste hierarchy, i.e. high rates of reuse, recycling and recovery. The Operator / Facilities Management of the site during the operational phase will be responsible for ensuring – allocating personnel and resources, as needed – the ongoing implementation of this OWMP. This is intended to be a live document, to be updated by the Applicant / Operator, where appropriate, e.g. to ensure the Plan remains fit for purpose and up-to-date with relevant policy

6 Consultation

6.1 Introduction

Consultation is a key element in the EIA process. The *"carrying out of consultations"* is included in the definition of EIA as set out in Article 1(a) of the amended EIA Directive. Consultation at various stages of the EIA process provides for timely and proportionate consideration of potential significant effects, early identification of stakeholder concerns, and facilitates public participation in the development consent process. Consultations may be statutory (i.e. required by law) or non-statutory / informal. Consultations may be undertaken by the Applicant or the Competent Authority, as appropriate and as required.

The United Nations Economic Commission for Europe (UNECE) *Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters* (the Aarhus Convention), which came into force in October 2001, establishes a number of rights of the public with regard to the environment, including the right to access to environmental information and the right to access to public participation in environmental decision-making.

The non-technical summary (NTS) (**Volume 1**) is particularly important in disseminating the information contained in the EIAR to the wider public and facilitating public participation in the development consent process. As stated in the EPA guidelines:

> *"Compliance with the Aarhus Convention requires that the structure, presentation and the non-technical summary of the EIAR, as well as the arrangements for public access, all facilitate the dissemination of the information contained in the EIAR. The core objective of public consultation is to ensure that the public is made as fully aware as possible of the likely environmental impacts of projects prior to a decision being made by the CA [Competent Authority]."*

In addition, where required specialists have consulted relevant Departments and Bodies in order to acquire additional information to undertake the assessment.

6.2 The LRD Process

On 17 December 2021, the Large-scale Residential Development (LRD) planning process came into effect under the Planning and Development (Amendment) (Large-scale Residential Development) Act 2021, thereby replacing the previous Strategic Housing Development (SHD) process. The reform of the dedicated planning process for larger residential developments is intended to continue to expedite the delivery of housing, while restoring decision-making powers to Local Authorities. Certain elements of the previous SHD process, such as mandatory pre-application consultation with the Local Authority and mandatory decision timelines, have been retained; while others have been reformed.

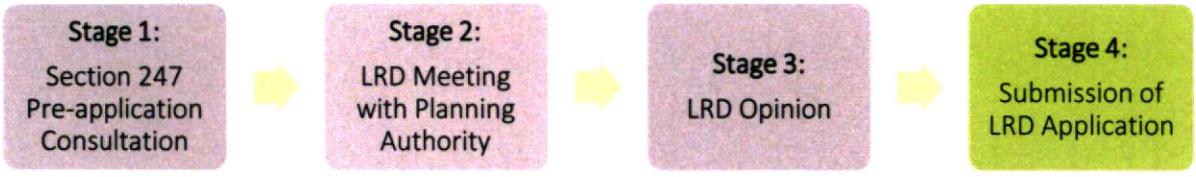
In the Irish planning system, 'Large-scale Residential Development' refers to the following classes of development:

- Housing development of 100 or more units;
- Student accommodation development comprising 200 or more beds; or
- A combination of the two where the threshold is met for either element.

LRD applications are restricted to residential zoned lands and do not apply to lands designated as Strategic Development Zones (SDZ). Any other proposed uses within an LRD are required to be compliant with the land use zoning objectives designated under the Local Authority Development Plan. Non-residential elements proposed within an LRD are restricted to 30% of the total floor area.

The stages in the LRD application process are outlined in **Figure 6.1**, below.

Figure 6.1 Overview of LRD application process



6.3 Consultation

Both the context and approach to the application site and the design rationale for the proposed development, have been subject to consultation with the DCC Planning Department under Section 247 of the *Planning and Development Act 2000* (as amended).

A formal pre-application meeting on the substance of the proposed development, was held on the 12th September 2024.

An LRD Opinion Request was subsequently submitted to DCC on 22nd November 2024 with an Opinion Meeting taking place on 18th December 2024 and an LRD Opinion issuing on 23rd January 2025. A response to the issues raised in the LRD Opinion is summarised in the *Response to LRD Opinion* prepared by Brady Shipman Martin with individual responses also contained in individual consultant reports.

Throughout all stage of pre-planning, discussions on the proposed development have taken place with the Council's Conservation Department, Traffic & Transportation Department, Drainage Department and the Parks Department.

6.4 Submission of LRD Application

The Stage 4 of the LRD application process, the submission of the planning application to the Planning Authority (Dublin City Council), will allow for public consultation. The Applicant will make copies of the application documents (including this Environmental Impact Assessment Report) available for public viewing on a dedicated website [www.holycrosscollegelrd.ie]. Members of the public, Prescribed Bodies and elected Council members may submit observations on the proposed development within five weeks from the date when the application was registered.

Planning Authority decisions on LRD applications may be appealed directly to An Bord Pleanála within four weeks of decision, by Applicants and parties that have submitted observations / submissions at Stage 4.

7 Population & Human Health

7.1 Introduction

This chapter of the EIAR presents an assessment of the likely impacts on the local population during both the construction and operational phases of the proposed Large-scale Residential Development (LRD) at the former Holy Cross College, Clonliffe Road, Dublin 3 and Drumcondra Road Lower, Drumcondra, Dublin 9 ('the proposed development').

The proposed development is described in Chapter 5, and these details are reiterated in this chapter only insofar as is relevant to population and human health.

This chapter has been prepared by Namrata Kaile, Ecologist & Environmental Consultant at Brady Shipman Martin. A technical review was completed by Thomas Burns, Partner at Brady Shipman Martin. Refer to **Table 1.4** in Chapter 1 (Introduction) for qualifications of authors and reviewers.

This chapter considers and assesses the potential effects of the proposed development on the people and businesses in the surrounding community, during the construction and operational phases.

7.2 Method

Amended Directive 2014/52/EU updated the list of topics to be addressed in an EIAR and has replaced '*human beings*' with '*population and human health*'. The term '*human health*' is not defined in the amended Directive; however, the European Commission *Guidance on the Preparation of the Environmental Impact Assessment Report* states that:

> *"Human health is a very broad factor that would be highly Project dependent. The notion of human health should be considered in the context of other factors in Article 3(1) of the EIA Directive and thus environmentally related health issues (such as health effects caused by the release of toxic substances to the environment, health risks arising from major hazards associated with the Project, effects caused by changes in disease vectors caused by the Project, changes in living conditions, effects on vulnerable groups, exposure to traffic noise or air pollutants) are obvious aspects to study. In addition, these would concern the commissioning, operation, and decommissioning of a Project in relation to workers on the Project and surrounding population" (p. 37).*

The EPA guidelines state that:

> *"In an EIAR, the assessment of impacts on population and human health should refer to the assessments of those factors under which human health effects might occur, as addressed elsewhere in this EIAR e.g. under the environmental factors of air, water, soil etc.." (p. 28).*

The EPA guidelines advise that the topics of employment, human health, baseline population and amenity should be addressed in this chapter of the EIAR. It is noted that "*The transposing legislation does not require assessment of land-use planning, demographic issues or detailed socio-economic analysis" (p. 28).*

There is significant potential for interactions between population and human health and other topics addressed in the EIAR, since impacts on the local population may arise due to effects in relation to traffic and transportation, air quality and climate, noise and vibration, landscape and visual amenity,

microclimate, material assets, and flood risk, among others. These interactions are addressed in this chapter and, where appropriate, in the relevant other specialist chapters.

The EPA guidelines also state that:

> *"Assessment of other health & safety issues are carried out under other EU Directives, as relevant. These may include reports prepared under the Industrial Emissions, Waste Framework, Landfill, Strategic Environmental Assessment, Seveso III, Floods or Nuclear Safety Directives. In keeping with the requirement of the amended Directive, an EIAR should take account of the results of such assessments without duplicating them." (p. 28).*

This chapter has been prepared with reference to the following guidance documents:

- EPA (2022). *Guidelines on the information to be contained in Environmental Impact Assessment Reports* ('the EPA guidelines');
- IEMA (2022). *Effective Scoping of Human Health in Environmental Impact Assessment;*
- IEMA (2022). *Determining Significance for Human Health in Environmental Impact Assessment*;
- IEMA (2017). *Health in Environmental Impact Assessment: A Primer for a Proportionate Approach*;
- Institute of Public Health (2021). *Health Impact Assessment Guidance: A Manual. Standalone Health Impact Assessment and health in environmental assessment.*

A desk study was carried out to develop a description of the receiving environment (baseline) in relation to population and human health. The following sources were referred to, among others:

- Central Statistics Office (CSO) census data from 2011, 2016 and 2022;
- Dublin City Council (2022). *Dublin City Development Plan 2022 – 2028*;
- Department of Housing, Planning & Local Government (DHPLG) (2025). *My Plan Map Viewer*;
- Department of Health (2025). *Health in Ireland – Key Trends 2024*;
- Department of Health (2019). *Healthy Ireland Framework 2019-2025*;
- AIRO Census Mapping;
- Eastern and Midlands Regional Assembly (2019). *Regional Spatial and Economic Strategy 2019-2031.*

The proposed development is materially consistent with the DCC Development Plan 2022-2028 which was the subject of separate assessments under the SEA Directive (SEA), the Habitats and Birds Directives (AA), the Water Framework Directive and the Floods Directive (see SFRA), and this Plan and the results of those assessments have been considered in the preparation of this EIAR. The SEA Report for the Development Plan addresses Population and Human Health at section 5.3 and Table 6.1 sets out the Strategic Environmental Objectives (SEOs) for the Development Plan.

This assessment has also considered the potential indirect and direct socio-economic impacts of the construction and operation of the proposed Project.

Receptors were identified and assessed for sensitivity, magnitude and significance to provide an appropriate and adequate assessment of how they could be impacted by the construction and operational phases of the proposed development.

Effects have been characterised in accordance with the EPA guidelines (refer to **Section 1.6** in Chapter 1).

7.3 Baseline Environment

The site of the proposed development is located at Holy Cross College, Clonliffe Road, Dublin 3 and Drumcondra Road Lower, Drumcondra, Dublin 9 (refer to Figures 1.1 & 1.2 in Chapter 1). The site is located c. 1.7 km north of Dublin City Centre. It is bound by Drumcondra Road Lower, Archbishop's House (a Protected Structure), Mater Dei College and Crosscare Family Hub to the west; Clonliffe Road to the south; Cornmill Apartments and Belvedere College Rugby Grounds to the east; and by the River Tolka and future GAA sports ground to the north. The site is situated in the administrative area of Dublin City Council, in the townlands of Clonliffe East and Clonliffe West.

The site comprises a number of green spaces and existing large institutional buildings associated with its current / former use (some of which are Protected Structures). The site has many large mature trees, giving it a unique character in the context of the surrounding residential areas and busy roads. The northern portion of the site extending to the River Tolka is set back from the busy Drumcondra Road, separated by large mature trees, while the southern part of the site fronts onto Clonliffe Road.

The proposed development sits as part of a site masterplan for a wider landbank which includes an under-construction hotel development off Clonliffe Road and potential future GAA facilities.

Development objectives applicable to the location of the proposed development are discussed in Chapter 3 (Planning & Development Context).

This section provides a description of the relevant aspects of the baseline environment in relation to population and human health. The baseline environment is considered in this section under the following headings:

7.3.1 Land Use Zoning

As detailed in **Section 3.5** in Chapter 3 (Planning & Development Context), the site is predominantly zoned *Z12 'Institutional Land (Future Development Potential)'*, as are the adjacent sports pitches, which have the stated aim – *'To ensure existing environmental amenities are protected in the predominantly residential future use of these lands.'* An area immediately adjacent to the River Tolka, abutting and partly within the Site, is zoned *Z9 'recreational amenity/open space/green networks'*. The River Tolka corridor also has a specific objective for 'Conservation Area'. The north-west corner of the site is zoned *Z1 'Sustainable Residential Neighbourhoods'*. There are a number of Protected Structures within the proposed development area and in the area surrounding the Site. There is also a specific objective for 'roads, street and bridge schemes' transecting north-south through the site potentially connecting Clonliffe Road to Richmond Road alongside Tolka Park. Refer to **Figure 7.1**.

The Development Plan identifies specific considerations for the development of Z12 lands which makes reference to a masterplan as follows:

> *'In considering any proposal for development on lands subject to zoning objective Z12, other than development directly related to the existing community and institutional uses, Dublin City Council will require the preparation and submission of a masterplan setting out a clear vision for the future for the development of the entire land holding.*
>
> *In particular, the masterplan will need to identify the strategy for the provision of the 25% public open space requirements associated with any residential development, to ensure a co-ordinated approach to the creation of new high-quality public open space linked to the green network*

and/or other lands, where possible. In addition, development shall have regard to the standards in Chapter 15'

As such a Masterplan has been prepared in respect of the Clonliffe Lands that are subject to the Z12 zoning. The Masterplan describes the future strategic vision and structure for the redevelopment of lands. The proposed residential development provides for in excess of the 25% public open space requirement and this excludes the wider lands, meaning that the Masterplan as a whole will deliver significantly more than 25% public open space. No residential development is proposed within the Z9 zoning in compliance with the requirements of LRD Applications.

Figure 7.1 Land use zoning at the location of the proposed development (Source: Dublin City Development Plan 2022 – 2028 ; Mapset E)



7.3.2 Population

The Central Statistics Office (CSO) is the authority responsible for carrying out national censuses and publishing official population statistics to inform decision-making. The CSO provides data on population and socio-economic aspects of the population at different levels from the State, county level, Local Electoral Area (LEA), individual Electoral Districts (ED) to Small Areas (SA) within each County. The 2016 Census undertaken by CSO provides detailed results and reports. Most recent census was undertaken in April 2022. CSO published preliminary results for 'Census of Population 2022' on 23 June 2022 (updated September 2022) which have been superseded by the main results published from May 2023 onwards. A series of themed reports, Small Area Population Statistics (SAPS), population distribution and movements, housing, households, families and childcare, disability, health and carers, diversity and migration, homelessness, employment, occupations, commuting, Irish language and education and their detailed statistical analysis have been provided as per the latest data published by CSO. This

chapter uses the most up to date and detailed statistical data that is available at the time of writing this chapter.

The site of the proposed development is situated mainly within the Electoral Division (ED) of Drumcondra South B. The adjoining EDs comprise of Drumcondra South A, Drumcondra South C, Botanic B, Botanic C and Ballybough A and Ballybough B. The CSO census population statistics for national, regional and local levels are set out in **Table 7.1** below.

The rate of growth has increased from 3.8 % to 8.1% as compared to the previous census, with the largest inward migration to Dublin. The economy has recovered since the last census with consequent population growth predominantly attributed to natural increase, greater economic activity, increased job opportunities and continued immigration.

In the period between 2016 and 2022, the population in the administrative area of Dublin City Council (DCC) increased by 6.9% as compared to the previous increase of 5.1% between 2011 and 2016. At the ED level, all the EDs have shown growth, with the exception of Drumcondra South C between 2016 and 2022 as shown in **Table 7.1** below.

Table 7.1 CSO census population statistics 2011 – 2022 (CSO 2011, 2016 and 2022 Census Data)

Area	Number of persons			
	2011	2016	2022	Change
Ireland	4,588,252	4,761,865	5,149,139	**+3.8%** (2011-2016) **+8.1%** (2016-2022)
Dublin City Council	527,612	554,554	592,713	**+5.1%** (2011-2016) **+6.9%** (2016-2022)
Drumcondra South B	1,526	1,697	1,889	**+11.2%** (2011-2016) **+11.3%** (2016-2022)
Drumcondra South A	4,571	5,064	5,923	**+10.7%** (2011-2016) **+17%** (2016-2022)
Drumcondra South C	3,191	3,517	3,337	**+10.2%** (2011-2016) **-5.1%** (2016-2022)
Botanic B	3,264	3,481	3,606	**+6.6%** (2011-2016) **+3.6%** (2016-2022)
Botanic C	1,967	2,222	2,362	**+13%** (2011-2016) **+6.3%** (2016-2022)
Ballybough A	3,482	3,718	4,004	**+6.8%** (2011-2016) **+7.7%** (2016-2022)
Ballybough B	3,349	3,698	4,184	**+10.4%** (2011-2016) **+13.1%** (2016-2022)

7.3.3 Land Use and Settlement Patterns

The site of the proposed development is located at Holy Cross College, Clonliffe Road, Dublin 3 and Drumcondra Road Lower, Drumcondra, Dublin 9. The overall area of the site is c. 8.71 ha, with a developable site area of c. 8.25 ha, which features extensive undeveloped, open, greenfield areas and trees, and a number of buildings (including Protected Structures[9]) associated with the Roman Catholic Archdiocese of Dublin. Chapter 15 of this EIAR (Cultural Heritage – Architectural Heritage) includes

[9] Structures listed on the DCC Record of Protected Structures in the Dublin City Development Plan (2022 – 2024)

detailed accounts of the historic development of the site as a Roman Catholic Seminary and administrative centre of the Archdiocese.

The site is located on the north side of Dublin City, c. 1.7 km north of the City Centre, in the mature inner suburb of Drumcondra, which has a well-established residential community and supporting services. Also in close proximity is the residential and commercial hub of Phibsborough (c. 1 km south-west). The site is bound by Drumcondra Road Lower, Mater Dei College and the Archbishop's House (a Protected Structure) to the west; Clonliffe Road to the south; Cornmill Apartments and Belvedere College Rugby Grounds to the east; and the River Tolka to the north.

The site is located within the grounds of the former Holy Cross College seminary. These lands were acquired by the Archdiocese in 1859 and college facilities were developed. They housed a seminary for the Catholic Church in Ireland and administration offices for the Archdiocese and various diocesan activities. The seminary ceased operation in 2000. Thereafter, the site was predominantly used for offices and activities of the Archdiocese and charitable organisations, which occupied relatively little space in the large site, and they have now vacated the site. The land and buildings on the site are significantly underutilised at present.

The site sits between the established residential communities of Drumcondra to the west and north and Clonliffe Road to the south. Both are established, mature suburbs of Dublin City with the surrounding area predominately developed. Apart from residential uses, the surrounding area also features other mix of uses, including scattered commercial / retail enterprise, light industrial and warehousing to the north, and sports facilities to the south-east (Croke Park), north-east (Belvedere Rugby ground, Dublin Port Stadium Stella Maris Football Club) and north (Shelbourne Football Club). The immediate area gives access to a range of public facilities including community centres, healthcare, libraries, shops and sports / recreation facilities.

The dominant settlement pattern in the surrounding area comprises a mix of apartments and low-rise (two-storey) and relatively low density housing estates / rows, with predominantly terraced and semi-detached houses with private gardens, of mixed age and tenure. Refer to **Figure 7.2.**

As detailed in Chapter 19 of this EIAR (Traffic & Transportation), the area is well served by transport infrastructure and public transport services. The R132 Drumcondra Road Lower corridor is one of the core bus corridors in the City, with a high frequency of services running from North Fingal, Swords, Dublin Airport, and Ballymun, past the site and into the city. The corridor is served by Bus Service 41 which runs 24 hours a day. There are c. 11 other bus services that run in close proximity to the site, directly linking the site to many different locations across the wider Dublin Area. Drumcondra railway station is a five-minute walk from the development and is served by services running between the City Centre and Maynooth, Hazelhatch, Longford, and Sligo. The Luas light rail Phibsborough stop is a c. 30 minute walk (or 10 minutes cycle) and operates between Broombridge and Bride's Glen, stopping in the City Centre and at Ranelagh, Dundrum and Sandyford, among others.

As part of the *Greater Dublin Area Transport Strategy 2022-2042*, there are planned improvements to both the road, public transport, walking and cycling networks within the vicinity of the proposed development site, which will directly benefit residents and visitors, further enhancing sustainable travel options. These include Bus Connects Core Bus Corridor Dublin Swords to City centre Scheme, GDA's cycle network expansion, Dart+ West/South-west expansion and new Metrolink that will run between Swords Estuary and Charlemont Station via Dublin Airport and the City Centre.

Figure 7.3 presents the principal means of travel to work, school or college among residents of the Drumcondra South B ED at the time of the 2022 Census. It indicates that residents in the immediate vicinity predominantly use a mix of walking, driving, bus and cycling for personal mobility. Walking is the most popular option, reflecting the close proximity of the neighbourhood to hubs of employment and educational facilities.

Figure 7.2 Private households by type of accommodation – Drumcondra South B (2022 census)

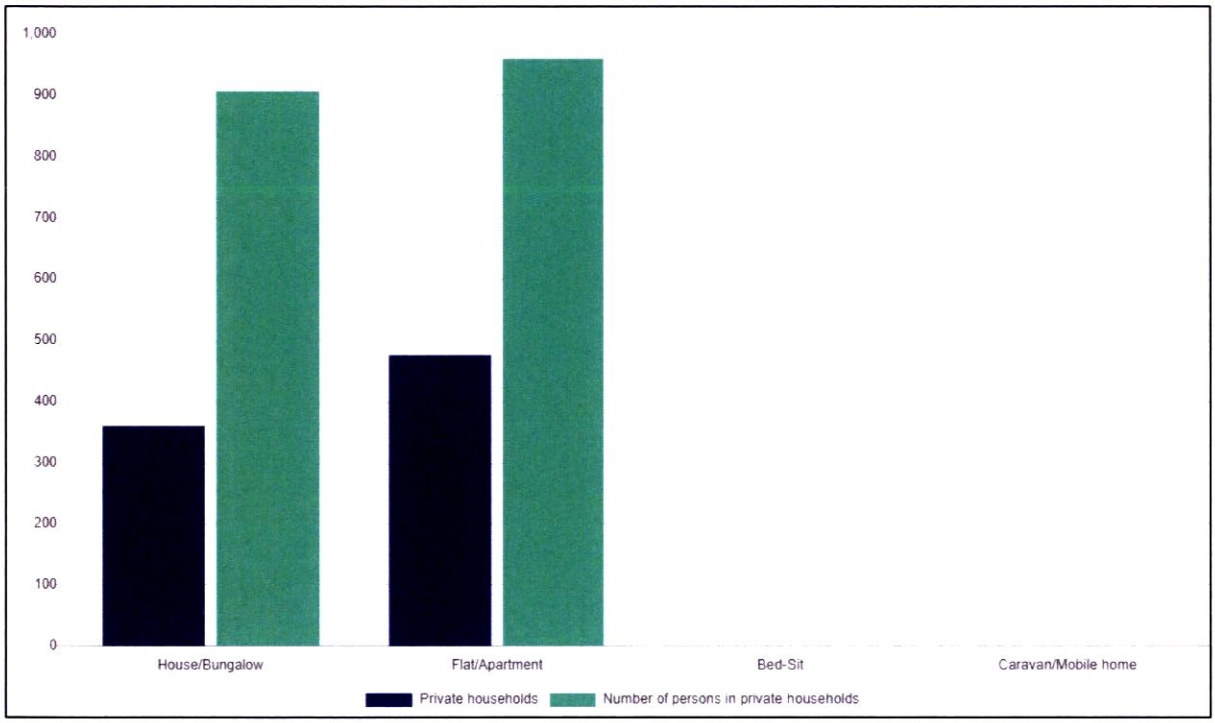
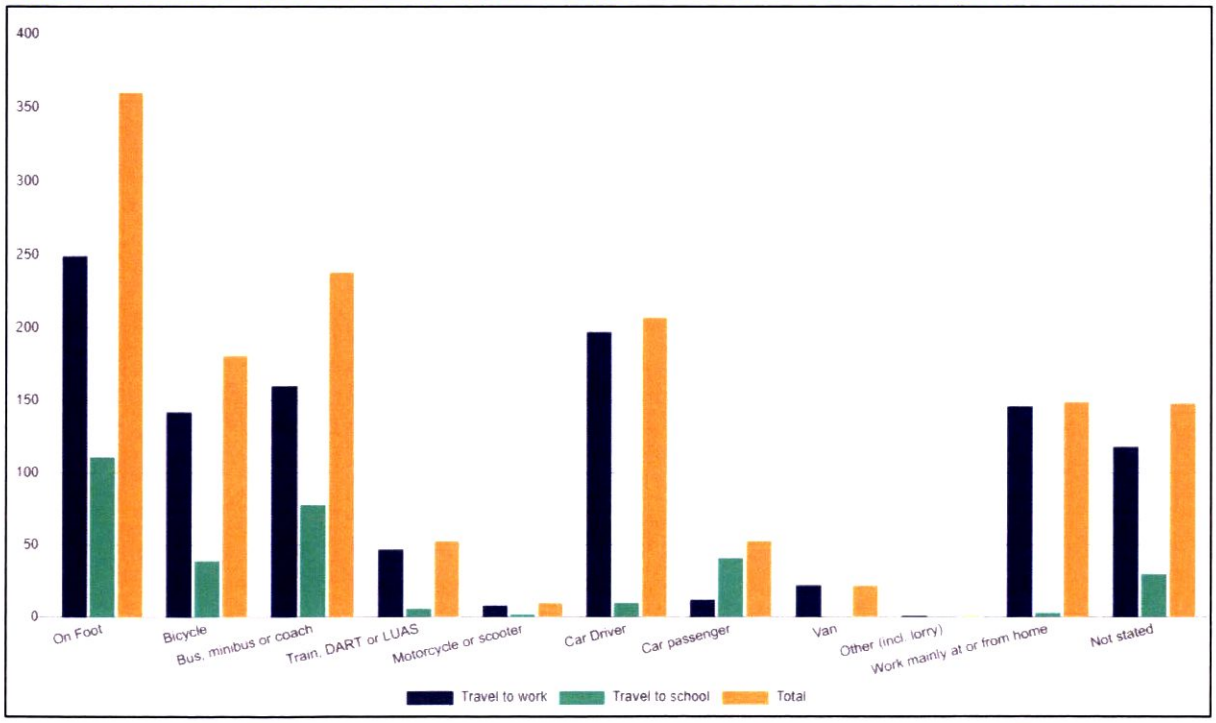


Figure 7.3 Means of Travel to Work, School or College – Drumcondra South B ED (2022 Census)



7.3.4 Economic and Employment Activity

The CSO's Labour Force Survey (LFS) is the official source of labour market statistics for Ireland, including the official rates of employment and unemployment. The LFS data are based on the International Labour Organisation (ILO) methodology. The most recent national employment rate (from Q1 of 2025) reported an employment rate of 74.7%. It is estimated that employment rate increased by 0.9% between Q1 2024 and Q1 2025 Refer to **Table 7.2.**

Table 7.2 Labour Force Survey Data for Ireland (CSO)

Indicator	Status	
	Q1 2024	Q1 2025
Employment rate among 15 – 64 year olds	73.8%	74.7%
Unemployment rate among 15 – 74 year olds	4.1%	4.3%

The Economic & Social Research Institute (ESRI)'s Quarterly Economic Commentary for Q1 2025 forecasts that, consumer spending increased by 2.5% in 2024 and much of that momentum should carry through to 2025. Irish GDP is expected to increase by 2.1% in 2026 (Ibec Economic Outlook Q1 2025). Refer to **Table 7.3.**

Table 7.3 Ibec Quarterly Economic Outlook – Q1 2025

Indicator (annual % change)	2024	2025	2026 (Forecast)
Consumer spending	2.5%	3.1%	2.8%
Employment	3.1%	2.4%	2.0%
GDP	0.4%	1.7%	2.1%

Figure 7.4, below, provides an indication of the employment status of the population in the local area, presenting the principal economic status of residents of the Drumcondra South B ED (i.e. in the immediate vicinity of the proposed development). **Figure 7.5**, below, presents the occupational classes of residents in the ED at the time of the 2022 Census.

Figure 7.4 Principal Economic Status – Drumcondra South B (2022 Census)

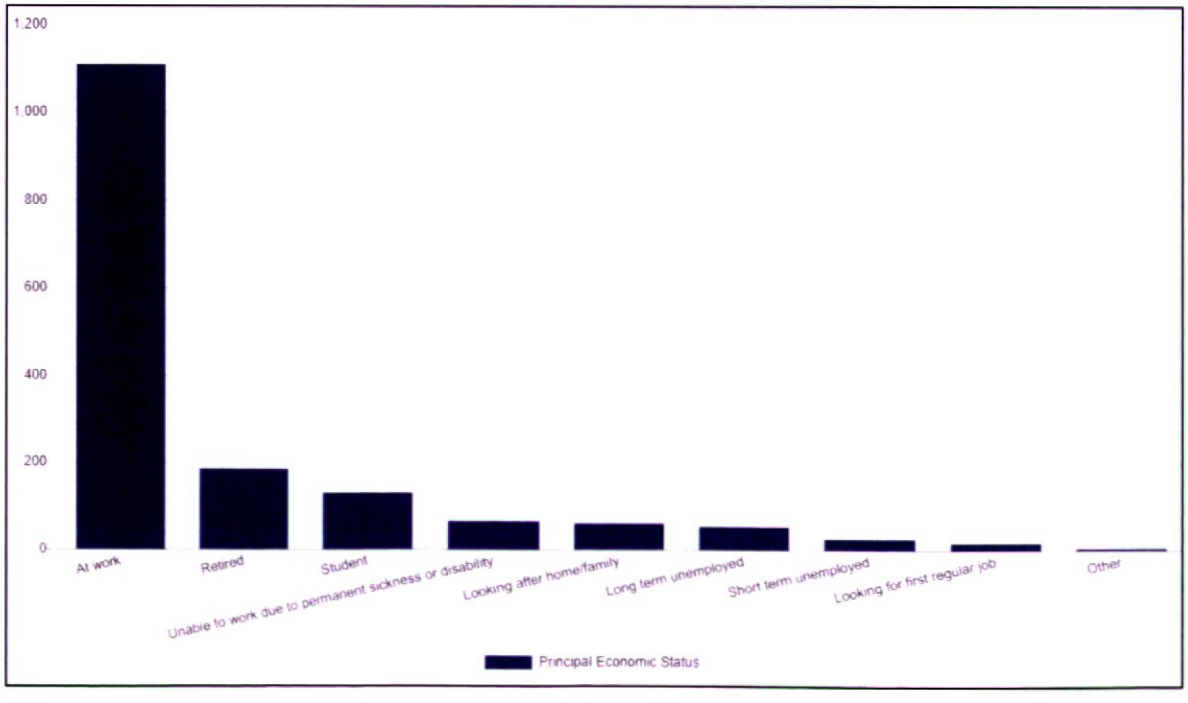
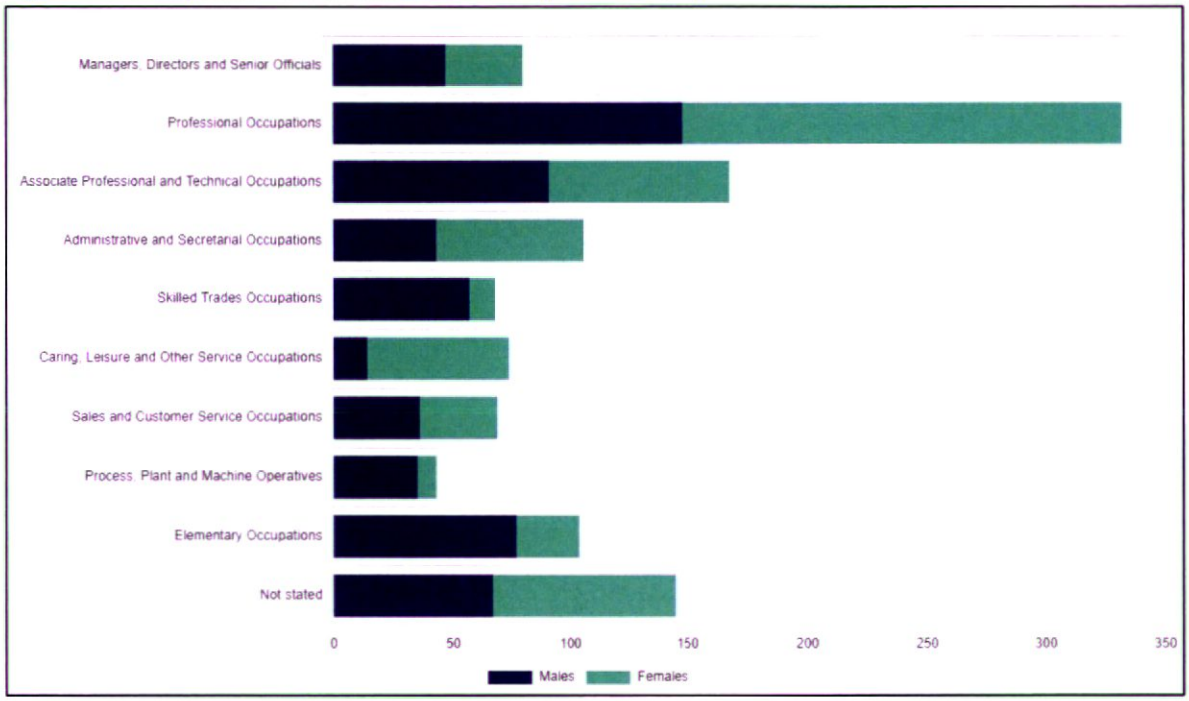


Figure 7.5 Occupation – Drumcondra South B (2022 Census)



7.3.5 Tourism and Amenity

Dublin's tourism industry relies largely on the City's built heritage, with its unique character and identity as a City of neighbouring but distinct quarters. Tourism, including business tourism and the attraction of international conferences and events, is one of the key economic pillars for the City.

Relative to other parts of the City, the Drumcondra area is not a major tourism destination. However, there are a number of attractions in the immediate environs of the site; including Croke Park (c. 500 m south-east), which contains a conference centre, and Tolka Park / Shelbourne Football Club (c. 500 m north). In terms of tourism, the immediate vicinity of the site is equally if not more likely to be used for accommodation and dining than as an attraction / destination in and of itself, and there are a number of hotel, B&B and self-catering options available in the area. As part of the Masterplan for the wider Holy Cross College lands, a hotel development off Clonliffe Road was granted planning permission on the 8th of March 2021 (ABP case reference PL29N.308193), and will no doubt attract additional tourists into the area.

Leisure and amenity resources / facilities in the immediate area include scattered restaurants, bars and cafés; grocery shops; sports facilities (including various gyms, Croke Park, Tolka Park / Shelbourne Football Club, the National Handball Centre, and Dublin Port Stadium / Stella Maris Football Club), Our Lady's Park, Griffith Park, the River Tolka and the Royal Canal. There are also a number of cultural and arts facilities within a 1.5 km radius of the proposed development site, including theatres, artists' studios, galleries and exhibition spaces.

7.3.6 Community Infrastructure

Drumcondra has a strong network of community facilities. Those within 1.0 km of the proposed development are listed in **Table 7.4**, below. Healthcare facilities are discussed in the following section.

Table 7.4 Community Facilities in the Surrounding Area – 1.0 km Radius

No.	Community Facility:	Facility Type:	Address:	Distance:
750m				
1.	Permanent TSB - Drumcondra	Bank	130 Drumcondra Rd Lower, Botanic, Dublin 9	c.0.37km
2.	Bank of Ireland - Drumcondra	Bank	43 Drumcondra Road Lower, Drumcondra, Dublin 9	c.0.38km
3.	Barbara Ward Clonliffe & Croke Park Community Hall	Community Centre	9A Richmond Industrial Estate, Distillery Road, Dublin 3	c.0.39km
4.	ARTs and Business Campus Drumcondra	Community Centre	40 Drumcondra Road Lower, Botanic, Dublin 9, D09 V5R9	c.0.40km
5.	AIB - Drumcondra	Bank	140 Lower Drumcondra Road, Drumcondra, Dublin 9	c.0.40km
6.	An Post- Drumcondra Road Lower Post Office	Post Office	153 Drumcondra Road Lower, Drumcondra, Dublin 9, D09 WN56	c.0.40km
7.	An post-Centra Drumcondra	Post Office	32_38 Drumcondra Road Lower, Drumcondra, Dublin 9, D09 DT62	c.0.40km
8.	EBS - Drumcondra	Bank	8 Drumcondra Road Upper, Drumcondra, Dublin 9, D09 HY29	c.0.54km
9.	National Handball & Croke Park Community Centre	Community Centre	Sackville Avenue, Ballybough, Dublin	c.0.56km
10.	ATM Drumcondra, Tesco	ATM	Tesco Local, 22 Drumcondra Road Upper Dublin 9, D09 R286	c.0.58km
11.	Bottle Bank - Drumcondra, Tesco	Recycling Facility	Tesco Local, 22 Drumcondra Road Upper Dublin 9, D09 R286	c.0.58km
12.	CASPr - Community After School Programme	Youth Club	Portland Square, 1 Campbells Row, Dublin 1, D01 VP03	c.0.59km
13.	ATM- Circle K	ATM	279 Richmond Rd, Drumcondra, Dublin 3, D03 X2P9	c.0.68km
14.	Ballybough Community Centre	Community Centre	49 Ballybough Road, Ballybough, Dublin 3	c.0.74km
15.	Garda Station - Fitzgibbon Street	Garda Station	23-28 Fitzgibbon Street, Mountjoy, Dublin 1, D01 XT54	c.0.75km

No.	Community Facility:	Facility Type:	Address:	Distance:
1km				
16.	Drumcondra Library	Library	Millmount Avenue, Drumcondra, Dublin 9, D09 PT78	c.0.80km
17.	Charleville Mall Library	Library	Charleville Mall, N Strand Rd, Dublin 1, D01 AX99	c.0.85km
18.	Swan Youth Services Development Group	Youth Club	St. Agatha's Hall, Dunne Street, Dublin 1, D01 E395	c.0.90km
19.	ATM- Spar	ATM	44 Philipsburgh Avenue, Fairview, Dublin, D03 CK03	c.0.86km
20.	Credit Union Limited - Ballygall	Credit Union	36A Fitzgibbon Street, Mountjoy, Dublin 1, D01 XP77	c.0.80km
21.	Pavee Point Travellers Centre	Community Centre	46 Charles Street Great, Mountjoy, Dublin 1, D01 XC63	c.0.80km
22.	The Foroige HAY Project	Youth Club	Unit 1 Bailey's Court, Summerhill, Mountjoy, Dublin 1, D01 P9X3	c.0.87km
23.	Credit Union – Fairview	Credit Union	36-38, Fairview Strand, Clontarf West, Dublin 3, D03 F681	c.0.87km
24.	Mud Island Community Garden	Community Garden	Newcomen Court, N Strand Road, North Strand, Dublin 3	c.0.90km
25.	Crosscare's Portland Café	Youth/Community Organization	35 Dunne Street, Portland Row, Dublin 1, D01 T102	c.0.95km
26.	North Strand Fire Station	Fire Station	North Strand Road, North Strand, Dublin 3	c.0.98km
27.	Post Office – Marino	Post Office	2 Fairview Strand, Clontarf West, Dublin 3, D03 R8P3	c.0.99km

7.3.7 Human Health

Health, as defined by the World Health Organization (WHO), is *"a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity"*. The Healthy Ireland Framework 2013 – 2025 defines health as *"everyone achieving his or her potential to enjoy complete physical, mental and social wellbeing"*.

The Department of Health's 2025 report, *Health in Ireland – Key Trends 2024*, provides summary statistics on health and health care in Ireland and touches on several areas, including demographics, population health, hospital and primary care, health sector employment and expenditure. Each section has a series of detailed charts and tables relevant to that aspect of healthcare in Ireland. It highlights the significant achievements that Ireland has made for key health outcomes in the past decade.

However, it also highlights the challenges that persist in terms of the accessibility of timely and efficient healthcare across the population.

The report highlights the following key trends:

- Ireland has the highest self-perceived health status in the EU, with c. 80.0%[10] of people rating their health as good or very good;
- The population in Ireland in 2024 is estimated to be 5.15 million, an increase of 2.6% on Census 2022 and the largest change was seen in the over 65 age group which increased by 36.5%[11] since 2014;
- Life expectancy has improved in Ireland since the past decade, however the rate of increase of life expectancy has been declining;
- Over the past decade, both cigarette and alcohol consumption has declined. The alcohol consumption has declined at a slower rate than cigarette consumption.

At the national level, population health data presents a picture of decreasing mortality rates and high self-perceived health over the past ten years. Ireland has the highest self-perceived health status in the EU, with 80% of people rating their health as good or very good. In 2023, 80.0% of males and 79.1% females rated their health as being good or very good. However, health status reflects income inequality, people in higher income brackets tend to report better health than those in lower income brackets.

Human health has the potential to be affected by exposure to toxic substances or pathogens in environmental media, such as air, water and soil. Human health impacts can also arise due to anthropogenic or naturally occurring accidents or disasters; such as landslides, flooding or structural failures. Nuisance and negative psychosocial impacts can also arise as a direct result of environmental factors; e.g. as a result of noise, dust, unsafe environments and / or crime; or indirectly, e.g. as a result of economic hardship. Occupational health and safety risks to construction site personnel are also inherent where demolition and construction works are proposed.

The baseline environments in terms of air, surface water and groundwater / soil are detailed in Chapter 11 (Air Quality), Chapter 10 (Hydrology) and Chapter 9 (Land, Soils, Geology & Hydrogeology), respectively.

The risks of accidents and disasters are addressed, where relevant, in the various specialist chapters herein. Flood risk, for instance, is addressed in Chapter 10 (Hydrology); while geohazards are addressed in Chapter 9 (Land, Soils, Geology & Hydrogeology).

In relation to the potential human health risks associated with the proposed works, a Construction Management Plan (CMP) has been prepared by DCON Safety Consultants (2025) and submitted under separate cover as part of this application. It outlines how the proposed works will be delivered safely and in a manner which minimises risk to human health, including that of site personnel.

Healthcare within the study area is provided by a range of different organisations including public, voluntary and private agencies. The Health Services Executive is the primary agency responsible for delivering health and personal social services in Ireland. In recent years, primary care has been identified as the most effective and cost-efficient way to treat patients. This offsets dependence on the

[10] Population health - https://assets.gov.ie/static/documents/chapter-2-population-health.html#health-status
[11] Demographics - https://assets.gov.ie/static/documents/chapter-1-demographics.html

hospital system allowing most patient care to take place at local, community locations which feature multi-disciplinary teams of healthcare professionals working together.

The proposed development is located within the DCC administrative area which has access to national public hospitals, private hospitals, high-tech hospitals, accident and emergency services, psychiatric hospitals, rehabilitation centres, orthopaedic hospital and hospices.

There are a range of healthcare facilities in the study area within a 1.0 km distance of the proposed development, as listed in **Table 7.5**, below.

Table 7.5 Healthcare Facilities in the Surrounding Area – 1.0km Radius

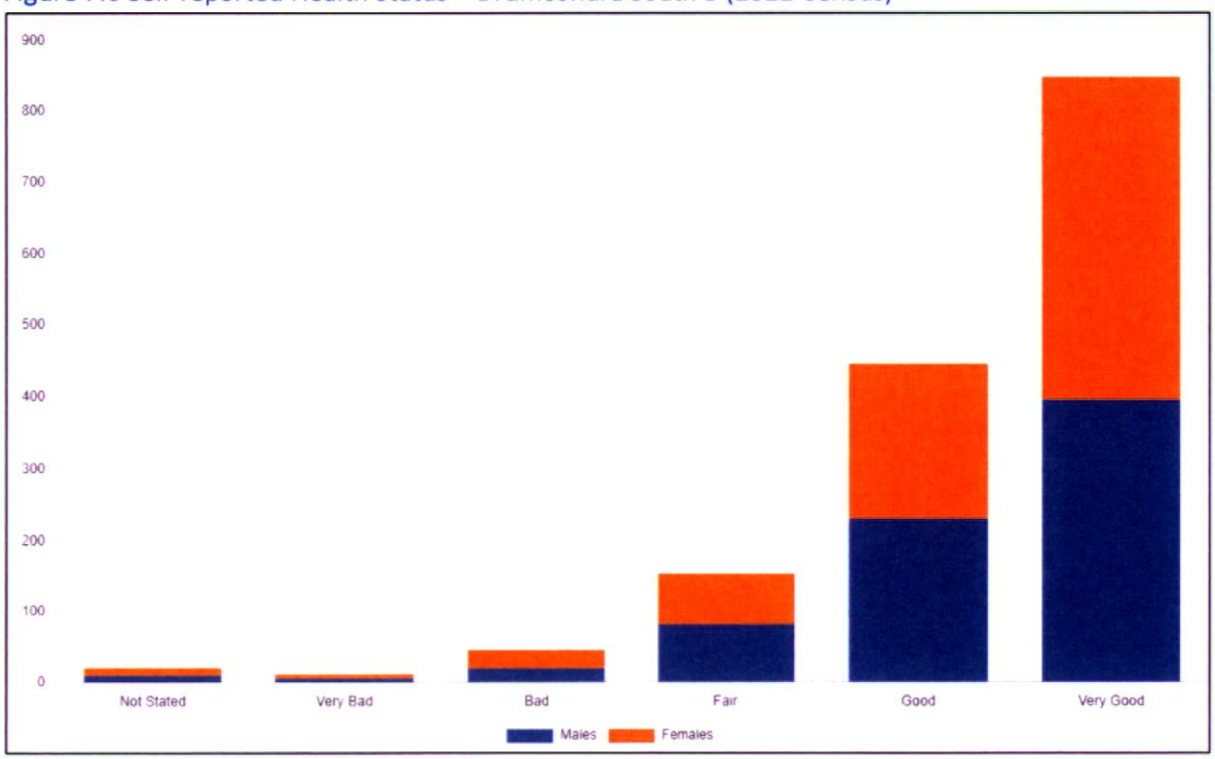
No:	Healthcare Facility:	Facility Type:	Address:	Distance:
750m				
1.	Drumcondra Physiotherapy- The Physio Company- Spectrum Health	Other	130 Drumcondra Road Lower, Botanic, Dublin 9, D09 TY86	c.0.37km
2.	Drumcondra Village Dental	Dentist	159 Drumcondra Road Lower, Drumcondra, Dublin 9, D09 ND86	c.0.43km
3.	A.C Boles Pharmacy	Pharmacy	20 Drumcondra Road Lower, Phibsborough, Dublin 9, D09 Y773	c.0.50km
4.	Advance Pharmacy (Late Night)	Pharmacy	Drumcondra Road Lower, Phibsborough, Dublin 9, D09 E2H2	c.0.52km
5.	Daly & Manning Opticians	Other	6 Drumcondra Road Upper, Drumcondra, Dublin 9, D09 H6K8	c.0.53km
6.	Drumcondra Village Medical Centre	Doctor	10 Drumcondra Road Upper, Drumcondra, Dublin 9, D09 H3C5	c.0.54km
7.	McCabe's Pharmacy	Pharmacy	10 Drumcondra Road Upper, Drumcondra, Dublin 9, D09 H3C5	c.0.54km
8.	Drumcondra Dental & Orthodontics	Other	14 Upper Drumcondra Road, Drumcondra, Dublin 9, D09 K6C1	c.0.56km
9.	St. Vincent's Hospital-Psychiatric Unit	Hospital	Convent Avenue, Richmond Road, Fairview, Dublin 3, D03 XK40	c.0.58km
10.	Park's Late-Night Pharmacy	Pharmacy	62 Dorset Street Lower, Phibsborough, Dublin 1, D01 P5V9	c.0.60km
11.	Mountjoy Family Practice	Doctor	2-3, Baker's Yard, Portland Street North, Dublin 1	c.0.61km
12.	Pure Pharmacy-Summerhill	Pharmacy	Portland Street North, Dublin	c.0.62km
13.	Dr Edward J Cox	Doctors	25 Belvedere Road, Dublin 1, D01 F438	c.0.64km
14.	D1 Dental Care	Dentist	565 North Circular Road, Drumcondra, Dublin 1, D01 N242	c.0.65km

No:	Healthcare Facility:	Facility Type:	Address:	Distance:
15.	Drumcondra Medical	Doctor	40 Drumcondra Road Upper, Drumcondra, Dublin 9, D09 C4H3	c.0.69km
16.	Whitworth Medical Centre	Primary Care Centre	St. Brigid's Road Lower, Drumcondra, Dublin 9, D09 R2K2	c.0.70km
17.	Glasnevin Orthodocitcs	Other	64 Drumcondra Road Upper, Drumcondra, Dublin 9, D09 EV24	c.0.72km
18.	Allcare Pharmacy Dorset Street	Pharmacy	50 Dorset Street Lower, Dublin 1, D01 W524	c.0.73km
19.	Dublin-Dentist Clinic	Dentist	43-44 Dorset Street Lower, Dublin 1, D01 F3C6	c.0.73km
20.	Millmount Avenue Health Centre	Primary Care Centre	Millmount Avenue, Drumcondra, Dublin 9	c.0.74km
1km				
21.	Allen's Pharmacy	Pharmacy	10 Summerhill Parade, Dublin 1, D01 W526	c.0.81km
22.	St. Vincent's Community Unit, Nan Foley	Hospital	Convent Avenue, Ballybough, Dublin 3, D03 AOP8	c.0.82km
23.	McCarton's Pharmacy Fairview	Pharmacy	34 Fairview Strand, Clontarf West, Dublin 3, D03 HY42	c.0.88km
24.	Summerhill Pharmacy	Pharmacy	88 Summerhill, Mountjoy, Dublin 1, D01 YP92	c.0.90km
25.	Fairview Medical Centre	Primary Care Centre	37-39 Fairview Strand, Clontarf West, Dublin 3	c.0.90km
26.	Royal Dental Clinic (Maria)	Dentist	17 Dorset Street Lower, Rotunda, Dublin 1, D01 T1W4	c.0.91km
27.	O'Donnell Dental Strategy	Dentist	35 Fairview Strand, Clontarf West, Dublin 3, D03 A7Y4	c.0.92km
28.	Da Vinci Dental	Dentist	400 N Circular Rd, Inns Quay, Dublin 1, D01 E9N9	c.0.94km
29.	NCR Osteopathy	Other	398 North Circular Road, Dublin 7, D07 ER26	c.0.94km
30.	Summerhill Family Practice	Primary Care Centre	46-69 Summerhill, Mountjoy, Dublin 1, D01 T6C2	c.0.95km
31.	Smile Dentist	Dentist	63 N Strand Road, Dublin 3, D03 EA38	c.0.96km
32.	DentiCare	Dentist	63 N Strand Road, Dublin 3, D03 EA38	c.0.96km
33.	Fairview Family Practice	Doctor	17 Fairview Strand, Clontarf West, Dublin 3, D03 A5Y9	c.0.97km

No:	Healthcare Facility:	Facility Type:	Address:	Distance:
34.	Morgan's Pharmacy	Pharmacy	2-4 Fairview Strand, Fairview, Dublin, D03 P9Y3	c.0.98km
35.	Central Dental Care	Dentist	37 North Strand Road, North Strand, Dublin 3, D03 YT50	c.0.99km
36.	Mater Misericordiae University Hospital	Hospital	Eccles Street, Phibsborough, Dublin 7, D07 R2WY	c.1km
37.	Meagher's Pharmacy, Mater Hospital	Pharmacy	Ground Floor Retail, Whitty Building, Mater Misericordiae University Hospital, 7 North Circular Road, Dublin 7	c.1km

Figure 7.6, below, presents the self-reported health status of the population in the Drumcondra South B ED, as reported in the 2022 Census. While the data are self-reported and, therefore, do not provide an entirely accurate picture of the health profile of the area, they do indicate a relatively high level of individual wellbeing in the area. Furthermore, the high levels of walking as a principal means of personal mobility in the area (Figure 7.3, above) would indicate a relatively active lifestyle among a large proportion of residents.

Figure 7.6 Self-reported Health Status – Drumcondra South B (2022 Census)



7.4 Predicted Impacts of the Proposed Development

7.4.1 Do-Nothing Impact

The 'Do-Nothing' alternative considers the likely scenario that would arise, assuming the proposed development were not progressed, i.e. if nothing were done. In this case, the Do-Nothing scenario might entail:

- A continuation of the existing status and use of the lands and buildings (i.e. land and buildings on the site are significantly underutilised at present); or
- Development (likely residential as per the Dublin City Development Plan 2022-2028) under the scope of a separate application / proposal, at some point in the future.

In the context of the ongoing housing crisis in Dublin City and the zoning of the site, the former scenario (a) is considered to represent an inefficient, uneconomical and socially suboptimal use of the Holy Cross College lands. The opportunity cost, in this scenario, would include the 1,131 proposed residential units, and the accommodation that these would otherwise provide. In this scenario, the long-term impacts associated with the operation of the proposed development on population and human health (as assessed below) would not arise. The short-term construction phase impacts (as assessed below) would also be avoided.

The latter scenario (b) is considered somewhat more likely, considering the nature of the lands, their zoning status, and the ongoing trends and policies in relation to housing and residential development at the national and regional levels. It is not possible to assess in full, the likely impacts of scenario (b), as the nature and scale of any potential future proposals for the site (in the absence of the proposed development) are not known. However, in the light of the zoning objectives and requirements of the Development Plan 2022-2028 for this site, it is likely that any such development will be materially consistent with the Plan's requirements and the effects are likely to be similar to the effects of the proposed development.

7.4.2 Construction Phase

The duration of the construction phase is anticipated to be somewhere in the region of 60 months (or five years). As such, associated impacts are expected to be short-term in duration according to the EPA Guidelines. During this time, there will be no severance of land, loss of rights of way or amenities as a result of the proposed development.

As part of this assessment, the other specialist chapters of the Environmental Impact Assessment Report have been reviewed to identify potential interactions. In the absence of standard good construction practice and mitigation measures, the following potential impacts have been identified during the construction phase:

- Nuisance / health impacts related to exposure to dust;
- Impacts due to greenhouse gas emissions and climate vulnerability;
- Nuisance / disturbance related to elevated noise levels;
- Impacts on traffic / parking due to presence of construction traffic;
- Potential negative impacts on landscape and visual amenity due to presence of construction site and effects of construction activities (e.g. dust, dirt, stockpiling of soils, removal of vegetation, etc.);
- Health impacts related to improper waste management;
- Health impacts related to improper safety protocols, e.g. related to diversions of gas / power lines;
- Nuisance / impacts on residential amenity due to potential service / power outages;
- Impacts due to changes to daylight and sunlight availability on the receiving environment;
- Economic impacts related to construction employment / increased demand for goods and services.

These are discussed and characterised, where relevant, in the following sections.

7.4.2.1 Air Quality & Climate

Dust-generating activities during the proposed works may create nuisance and human health impacts for local residents, workers and passers-by in the immediate vicinity of the site.

As stated in Chapter 11 (Air Quality), the German TA-Luft standard for dust deposition (non-hazardous dust) (German VDI, 2002) sets a maximum permissible emission level for dust deposition of 350 mg/(m^2*day) averaged over a one month period at any receptors outside the site boundary. Recommendations from the Department of the Environment, Health & Local Government (DoEHLG, 2004) apply the Bergerhoff limit value of 350 mg/(m^2*day) to the site boundary of quarries.

The extent of dust generation is dependent on the type of dust; the nature of construction activities; and meteorological factors, such as rainfall, wind speed and wind direction. As such, the degree and severity of dust generation is expected to fluctuate across the duration of the proposed works. However, dust generation of some degree may be anticipated throughout.

Chapter 11 (Air Quality) has rated the sensitivity of the area to dust soiling is considered high and the sensitivity of the area to human health is considered low. Chapter 11 (Air Quality) states that there is an overall high to medium risk of dust soiling impacts on people & property and a low risk of dust-related human health impacts as a result of the proposed construction phase (demolition, earthworks, construction and trackout) in the absence of mitigation. This is described in accordance with the UK Institute of Air Quality Management (IAQM) guidance document '*Guidance on the Assessment of Dust from Demolition and Construction*' (IAQM, 2024), please refer to Tables 11.10 and 11.11 and detailed assessment presented in Chapter 11. There is also the potential for traffic emissions to affect air quality in the short-term over the construction phase, particularly due to the increase in HGVs accessing the site. The movements of construction vehicles on the site and off-site shall also generate wind-blown dust emissions. Furthermore, construction traffic to and from the site shall result in a short-term increase in the volume of diesel fuelled HGVs along the local road network, which will generate additional hydrocarbon and particulate emissions from the vehicle exhausts.

In the absence of mitigation, it has predicted an overall **negative, slight, short-term and localised impact** on population and human health, resulting from the air quality effects of the construction phase.

There is the potential for release of a number of greenhouse gas emissions to atmosphere during the construction of the proposed development. As detailed in Chapter 12 Climate, the impact of the proposed development in relation to GHG emissions prior to mitigation measures being put in place is considered **long-term, negative and slight.** There is also potential for impacts due to climate change on the proposed development. As detailed in Chapter 12, in relation to climate change vulnerability, climate change impacts are already occurring with significant periods of drought and more intensive storms and pluvial flooding. The impact of the proposed development in relation to construction phase climate vulnerability emissions is therefore considered **long-term, negative and imperceptible.**

Corresponding mitigation measures have been set out in Chapter 11 and 12 and are discussed further below.

7.4.2.2 Noise & Vibration

Chapter 13 (Noise & Vibration) has assessed the potential noise and vibration impacts of the proposed development during the construction phase in relation to construction activities, plant and equipment, and construction traffic. The surrounding environment in the vicinity of the project site is primarily

residential, with sports fields to the north and north-west, and a mixture of offices and light industrial buildings to the north and north-east of the River Tolka.

As described in Chapter 13, an environmental noise survey has been conducted at the site in order to quantify the existing noise environment. The noise measurement locations were selected to represent the noise environment at noise sensitive locations surrounding the proposed development. The closest noise sensitive locations to construction works are the residential buildings on Clonliffe Road, Susanville Road, Distillery Road, Holycross Avenue and at Cian Park, at distances ranging from 20m to 40m from the site boundary.

For the purposes of the noise impact assessment, 'Category A' noise threshold level with threshold value of 65 dB(A) will be applied to the nearest noise sensitive locations. In the absence of mitigation, the most intrusive early-stage activities relating to demolition and piling works will have **negative, significant to very significant and temporary effect** for residential noise sensitive locations immediately within 20m to 40 m (as described above) of the site boundary. During structural works including those associated with basement excavation and foundation works the impact without mitigation will be **negative, moderate to significant and short-term** at noise sensitive locations immediately within 40m of the activity. Once the most intrusive ground works have been completed on site, noise levels associated with the general construction of the superstructure will be significantly reduced. The impact without mitigation during this phase will be **negative, slight to moderate and short-term** at noise sensitive locations. It should also be noted that construction works will not consistently take place along the site boundary; therefore, the predicted levels represent a worst-case scenario.

Traffic data provided by the traffic consultants indicates that the additional construction traffic on local roads will have a minimal impact in terms of noise generation. The traffic assessment indicates that the worst affected road will see an increase of 16.8% HGV's and 0.5% increase in traffic overall. An increase in traffic volumes of around 25% would be needed to raise noise levels by just 1 dB. The impact is therefore considered **negative, imperceptible, and short-term**.

In relation to construction vibration, any construction activities undertaken on the site will be required by the Contractor to operate below the recommended vibration criteria set out in the Chapter 13. The impact without mitigationfor human response is **negative, moderate to significant and temporary** during any vibration works at NSLs at 40m of the activity.

7.4.2.3 Traffic

Additional traffic on the road network as a result of the proposed works has the potential to cause or exacerbate congestion, resulting in impacts on journey characteristics (i.e. amenity, duration and / or length) for local residents, workers and road users.

Chapter 19 (Traffic & Transportation) state that the access to the Phase 1 construction site would be via the Clonliffe Road, all movements, access junction. Access for Phases 2 and 3 would be from the left in – left-out access junction on Drumcondra Road Lower. The full site would be constructed over a period of 60 months. The busiest period in terms of construction activity is expected to be between March 2028 and January 2029, when Phases 1a, 1b and 2 will be under construction at the same time assuming Phase 1 commences construction in November 2026 and associated site works might commence earlier in April 2026. Chapter 19 further estimates that during the peak construction period in 2028, when Phases 1a, 1b and 2 are active on site at the same time, it is anticipated that there will be a daily average of 68 inbound HGV trips and 51 inbound car / van trips. Refer to Chapter 19 that

provides a breakdown of the total number of expected inbound vehicle trips per construction phase, broken down to an average daily basis.

Chapter 19 has estimated that, in terms of HGV traffic, HGVs are expected to increase by 5.3% and 5.4% on Drumcondra Road Lower, to the north and south of R131 Clonliffe Road respectively. The predicted increase in HGVs on R131 Clonliffe Road between the R132 and the site access junction during the construction stage is 46%. There is also a predicted 13.4% increase in HGV traffic on Clonliffe Road to the east of the site access. Accordingly, the worst-case impacts of construction phase traffic on road users (in terms of severance, road vehicle driver and passenger delay, non-motorised user delay and amenity, fear and intimidation on and by road users, road user and pedestrian safety) is expected to be ***negative, short-term, slight to moderate.***

The need for construction site personnel to travel to and potentially park in the vicinity of the proposed development site could also result in negative impacts on the local community in terms of parking availability. In the absence of appropriate mitigation, the predicted impact on the local community is ***negative, localised, slight, short-term and reversible***.

7.4.2.4 Landscape and Visual Amenity

The transformation of the existing site into a substantial construction site for the duration of the proposed works will result in **negative, very significant and short-term effects on the townscape and negative, moderate to significant and short-term** in the immediate vicinity of the site.

Site hoarding, machinery and plant (including cranes) and buildings at various stages of completion (i.e. standard features of urban construction Sites) will be visible in the vicinity of the site.

7.4.2.5 Waste

During the construction phase, improper storage and management of on-site waste materials can result in negative impacts on Site personnel and neighbouring population, e.g. due to vermin/flies, odour, litter and / or exposure to hazardous materials, such as asbestos. Chapter 19 (Material Assets – Waste) assesses the impacts of the proposed development in this regard. In the absence of proper waste management procedures (e.g. use of non-permitted waste contractors / facilities), a **negative, significant and short-term to long-term impact** is predicted. Corresponding mitigation measures have been proposed in Chapter 19, and are discussed in Section 7.5, below.

7.4.2.6 Interruptions to Services

As detailed in Chapter 21, works to existing utilities infrastructure will be required during the construction phase to provide connections to the proposed development. Such works have the potential to result in interruptions to supply / services in neighbouring areas, e.g. power outages. All works will be carried out in a strictly controlled and coordinated manner, in accordance with the relevant standards and codes of the respective service providers / authorities (i.e. Uisce Éireann, ESB, GNI, Eir, Virgin Media), in order to avoid / minimise interruptions insofar as practicable. In the absence of mitigation measures the worst-case impacts in this regard are predicted to be **negative, slight to moderate and short-term impacts** in relation to built services or infrastructure during the construction phase.

7.4.2.7 Economic Impacts

It is likely that several hundred construction site personnel will be needed over the course of the proposed works. This job creation will result in a **positive, local to regional, moderate, short-term** socio-economic impact. The presence of site personnel in the area during the construction phase will create additional demand in the area for services, particularly for food from local shops, restaurants and cafés. There will also be economic benefits for providers of construction materials and other supporting services, e.g. key building and design materials, plant and equipment, skilled labour, etc. . This is predicted to result in a **positive, local to regional, indirect, slight to significant, short-term** socioeconomic impact.

Nuisance created by construction works (e.g. noise, dust, litter and other visual impacts) have the potential to negatively affect general amenity in an area, thereby diminishing the attractiveness of certain local businesses (hotels, cafés, restaurants, etc.), particularly where proper construction good practice and good housekeeping measures are not implemented. Access / egress issues associated with construction works can also negatively affect local businesses. In this case, however, significant negative impacts of this nature are not expected to arise, considering that:

- Access and egress will be maintained to all local businesses throughout the proposed works;
- Standard good construction practice and good housekeeping measures will be implemented throughout; and
- There are relatively few such businesses in the immediate vicinity of the site which could be affected.

7.4.3 Operational Phase

The duration of the operational phase of the proposed development is assumed to be long-term in duration, as per the definitions in the EPA guidelines.

The proposed development will comply with the statutory land use zoning policies and objectives of the Dublin City Development Plan (2022 – 2028) and the Government's National Planning Framework (NPF). Development of the site will align with the NPF's high-level objective to achieve compact, sustainable growth and, in doing so, will realise the efficient use of currently underutilised former institutional lands with higher housing density. Refer to Chapter 3 (Planning & Development Context) for an in-depth discussion of the proposed development's consistency with national and regional planning and development policy.

In the absence of mitigation, potential impacts on population and human health as a result of the operational phase of the proposed development may be summarised as follows:

- Potential impacts due to greenhouse gas emissions and climate vulnerability;
- Potential nuisance and disturbance of residents due to noisy building services plant and vehicular deliveries / collections within the site
- Potential negative impacts on journey characteristics due to additional operational phase traffic generated by the proposed development;
- Positive impacts on journey characteristics due to enhanced permeability across the site;
- Potential visual impacts due to completion of proposed development, establishing substantial new residential development;

- Potential positive impacts by retention and enhancement of the landscape and biodiversity value of the parts of the site;
- Potential positive impact of the proposals to retain and improve existing architectural and cultural heritage while demolishing structures which detract from that heritage, making it more accessible and visible to the local population and future occupants;
- Health impacts related to improper waste management;
- Potential impacts due to daylight and sunlight availability for the proposed development;
- Potential socio-economic impacts due to demand for goods and services locally;
- Positive socio-economic impacts due to provision of significant additional housing;
- Positive impacts on existing and new residents due to provision of new community amenities and facilities.

These are discussed and characterised, where relevant, in the following sections and in the corresponding chapters of the EIAR.

7.4.3.1 Air Quality and Climate

During the operational phase, Chapter 11 Air Quality identifies that the impact of traffic emissions on air quality and human health during the operational phase will **be direct, long-term, negative and not significant.**

The proposed development is committing to reducing climate impacts, where feasible, and the development will comply with the Do-Minimum standards set through regulation – many of which are embedded design mitigations. The impact of the proposed development in relation to GHG emissions prior to mitigation measures being put in place is considered **long-term, negative and slight.**

In addition, the proposed development has been designed to reduce the impact to climate where possible (see the project Residential Climate Action Energy Statement prepared by OCSC (2025) for full details).

Furthermore, Chapter 12 Climate has considered the following climate hazards in the context of the proposed development: flooding (coastal, pluvial, fluvial); extreme heat; extreme cold; wildfire; drought; extreme wind; lightning, hail, landslides and fog. With design mitigation in place, there are no significant risks to the proposed development due to climate change and the impact of the proposed development in relation to climate vulnerability emissions is considered **long-term, negative and imperceptible.**

7.4.3.2 Noise

Once operational, there will be building services plant items required to serve the commercial and residential aspect of the proposed development. These will typically be limited to heating and cooling plant, pumps and extraction units, depending on the building design and user requirements. Certain areas are likely to require mechanical services during the daytime hours only, however, there may be requirement for night-time operational plant, depending on specific requirements.

As stated in Chapter 13, the plant items will be selected and located such that there are no significant negative impacts on on-site or off-site receptors. In order to ensure that this is the case, Chapter 13 states that building services plant will be designed or attenuated to meet the relevant BS 8233 noise criteria for day-time and night-time.

As stated in Chapter 13 and based on the baseline noise data collected for this assessment it is considered an appropriate external design criterion is the order of 45dB $L_{Aeq,15min}$ at the façade of any noise-sensitive location. This limit is set in order to achieve acceptable internal noise levels within residential spaces based on prevailing noise levels in the area. Taking into account that sensitive receptors within the development are much closer than off-site sensitive receptors, once the relevant noise criteria are achieved within the development it is expected that there will be no negative impact off site and the operational noise level from building services will be well below this threshold value. The associated likely noise impact is described as **negative, not significant, local and long-term.**

During the operational phase of the proposed development, there will be a small increase in vehicular traffic on surrounding roads associated with the proposed development and other planned developments. As described in Chapter 13, a review of the potential traffic flow increases attributable to the proposed development indicates that the proposal will not give rise to significant increase of noise levels on the surrounding road network during the operational phase. The associated likely noise impact is described as **neutral, imperceptible, local and permanent.**

An inward noise impact was also undertaken to assess noise generated by the traffic volumes on the N1 and Clonliffe Road, refer to Chapter 13. Consideration has been given to the location of both the buildings and external amenity areas. The orientation of the site is such that the buildings themselves screen the majority of common external amenity areas associated with the development. Considering the constraints of the site, in so far as possible and without limiting the extent of the development area, the principles of Good Acoustic Design (refer to Chapter 13) have been applied to the development. In terms of viable alternatives to acoustic treatment of façade elements, there are no further options for mitigation outside of proprietary acoustic glazing and mechanical ventilation. The assessment has demonstrated that the recommended internal noise criteria can be achieved with windows closed assuming standard double glazing. No further mitigation required.

7.4.3.3 Traffic

Additional traffic generated by a residential development has the potential to create or exacerbate congestion on the local road network, resulting in negative impacts on journey characteristics (i.e. amenity, duration and length) for other road users.

Chapter 19 has assessed the impact of the operational phase of the proposed development on the local road network by modelling the projected traffic flows with and without the proposed development in place in the envisaged opening year (2029), 2034 and in 2044, at peak traffic times. The assessment assumes that Phases 1a and 1b of the development are operational in 2029, and that Phase 2 of construction is also ongoing on site. The assessment assumes that the whole development is fully complete by 2034. This modelling exercise has determined that the predicted percentage increase in Annual Average Daily Traffic flows (AADT) as a result of the development, in all scenarios, ranges between 1% and 4%, except for Link E - the section of Clonliffe Road between R132 Drumcondra Road Lower and Jones' Road. On this link, the predicted impact is 9.3% in 2034, and 8.9% in 2044.

Chapter 19 and the accompanying Transport Assessment (prepared by SYSTRA, 2025) also assessed the travel demand from the development has been calculated using the TRICS trip-rate database to calculate the number of trips by mode, in each hour between 07:00 and 19:00 across a typical day. The proposed development is expected to generate in the region of 45 arrivals and 135 departures (180 two-way trips) by car in the AM peak hour, and in the region of 114 arrivals and 61 departures (175

two-way trips) in the PM peak. Junction capacity modelling was also undertaken for Drumcondra Road Lower / Hollybank Road priority junction, Drumcondra Road Lower / Clonliffe Road signalised junction; and Clonliffe Road / Jones's Road signalised junction. The modelling found that each of the junctions is expected to operate within capacity with the development in place, in the future years. The overall effect during the operational phase is assessed to be **negative, likely and long-term, and of slight significance**.

The proposal includes a network of internal roads and public realm areas that will promote and prioritise walking and cycling and will prohibit through-traffic for non-residents. This is expected to result in a **positive, localised, slight, long-term impact** on pedestrians and cyclists during the operational phase.

7.4.3.4 Landscape and Visual Amenity

As stated in Chapter 14 (Landscape & Visual), the completed development will give rise to significant impacts on townscape and visual amenity due to the establishment of a new residential development resulting in the following effects:

- Overall change in character from enclosed historic institutional parkland to a developed contemporary residential neighbourhood;
- Change in existing views from within Holy Cross lands and from surrounding areas – especially from the north, east and south of the site – both during daytime and at night;
- Change in the setting of Red House and the Archbishop's House, being Protected Structures; and
- Change in character of the site as viewed from Clonliffe Road and from areas further south, east and north.
- The planting and long-term management proposed in the Landscape Design Statement will enhance the biodiversity resource on the proposed development site by creating new, pollinator-friendly habitats.

Furthermore, as stated in the Architectural Heritage Impact Assessment (David Slattery, 2025) the current proposals represent a new phase in the evolution of an historic, formerly ecclesiastical complex that has already undergone transformative and adaptive change in a number of phases throughout the 19th and 20th Centuries. The proposals recognize the special interest on the site, both in terms of its built forms and interiors and in terms of the settings and landscape qualities that surround them. The proposals seek to reinstate appropriate new and much-needed uses (residential and community/cultural) to the site which has now been vacant for some time. The adaptations required will not impact significantly on the character of important original interiors and the impacts on the setting will enhance the landscape and open up new views of the Protected Structures (including the adjacent Red House) and create connections on the site, in particular to the north all described by CGIs, photomontages and landscape drawings by NMP. There are some significant demolitions proposed on the site but these represent a small proportion of the overall fabric and the 1960s era New Wing and Library building proposed for demolition are neither protected nor worthy of retention. Their removal – with the oratory joinery and northern section of ambulatory retained - will allow for an enhanced and interconnected setting with new apartment buildings. Interventions within the seminary to adapt it residential use are significant but considered in light of the internal reconstruction in the 1960s cannot be considered detrimental to the architectural character. The proposals overall will profoundly enhance

the amenity and architectural character of a site of some architectural significance and should be welcomed.

7.4.3.5 Waste

Incorrect management of waste material during the operation phase can result in littering, presence of vermin and / or pollution, with associated potential for negative impacts on human health and residential amenity. Chapter 19 (Material Assets – Waste) assesses the impacts of the proposed development in this regard. In the absence of proper waste management procedures (e.g. littering or use of non-permitted waste contractors / facilities), a **negative, significant and long-term impact** is predicted. Corresponding mitigation measures have been proposed in Chapter 19, and are discussed in Section 7.5, below.

7.4.3.6 Microclimate – Wind

Chapter 18 Microclimate – Wind assessed the potential effects on wind microclimate at the site during the operational phase for the proposed development in the absence of landscaping elements. Overall, the proposed development is expected to provide a suitable environment for pedestrians and occupants to carry out a wide variety of 'sitting', 'standing' and 'strolling' activities. Mitigation measures to reduce excessive windiness have been developed through the design process and embedded in the building design. These include the use of solid balustrades or side screens in balconies that were exposed to excessive windiness. The existing and proposed mature landscaping is expected to further mitigate the wind effects in and around the proposed development, especially during the spring and summer seasons when trees are in full foliage. **No significant impacts** are predicted.

7.4.3.7 Microclimate- Daylight & Sunlight

Chapter 17 Microclimate – Daylight & Sunlight assessed the level of impact and state that No properties experience moderate adverse or major adverse effects. Of all the surrounding points tested for vertical sky component (VSC), 96.5% experienced a negligible impact and only 3.5% experienced a minor adverse impact. Of the points tested for probable annual sunlight hours, 98.5% experienced a negligible impact. No rooms required no sky line (NSL) assessment. Of the gardens tested for sunlight availability 100% experienced a negligible impact. A minor adverse effect is experienced at No 15 Corn Mill Rows, No 1 College Mews, No's 133-137 Drumcondra Road Lower and No 182 Clonliffe Road. Mitigation measures have been incorporated as the design progressed. All other surrounding properties will experience negligible effects. Further mitigation measures are not suggested.

7.4.3.8 Economic Impacts

By creating additional demand for goods and services, population growth contributes positively to the local economy and creates critical mass that supports the viability of further community infrastructure. This is expected to result in a **positive, moderate, long-term** socioeconomic impact.

Additionally, the proposed development is expected to increase the local population by the order c. 2,219 persons[12], creating additional demand for goods and services in the local area, benefitting local businesses and resulting in a **positive, moderate and long-term** socioeconomic impact.

[12] The proposed development is comprised 1,131 no. units. As noted in the planning pack (BSM, 2025), the average household size for Dublin City Council is c.2.48 people. Using the relevant Small Area Population Statistics within c. 1km Radius around

The most significant positive impact of the proposed development will be the provision of a large number (1,131 no.) of high-quality apartments with supporting amenities and facilities, providing a high standard of housing for a variety of household sizes. In the context of the ongoing housing crisis in Dublin City, the predicted impact is **moderate to significant and positive**.

At the same time, a substantial new residential population can place strain on the capacity of existing infrastructure, goods, services and amenities in an area. In this regard, Community & Social Infrastructure and Childcare Facilities and School Demand Assessment reports have been prepared and submitted under separate cover as part of the planning application. The assessment concluded that there is sufficient infrastructure in the area to meet the resultant demand for school places and community amenities. Significant negative impacts are not predicted in this regard.

The operation of the proposed development is expected to significantly enhance the community amenities and facilities offering in the area. The proposed development will include a high-quality network of public realm areas, featuring outdoor exercise areas, a dog park and play areas, among other assets; as well as a café, shop, crèche, cultural/community space; all of which will be accessible to on-site residents and neighbouring residents and workers alike. The design of the proposed development will also facilitate cycling as a healthy means of personal mobility and as an alternative to the private car, thereby promoting healthy and more environmentally sustainable lifestyles among its residents. Thus, the proposed development is expected to create opportunities for recreation, socialisation and physical activity, as well as providing practical community amenities (i.e. shopping and childcare), resulting in a **positive, moderate, long-term impact on the local population**.

7.5 Mitigation Measures

Mitigation measures have been prescribed elsewhere in this EIAR which will avoid / minimise the predicted impacts detailed above. These are measures required by law, by the Development Plan 2022-2028, by guidance and regulations, and by standards for good construction practice and operational standards that are generally applicable to developments of this nature. In order to avoid, where possible, and in other cases minimise, negative impacts on population and human health, it is imperative that all of the mitigation measures set out in this EIAR are properly implemented in full. These mitigation measures (set out in the specialist chapters of the EIAR and also within Ch 24 that includes the schedule of mitigation measures) are summarised as follows, insofar as they relate to population and human health.

7.5.1 Construction Phase

- A Construction & Environmental Management Plan (CEMP) and Construction Management Plan (CMP) have been prepared in respect of the proposed development by DCON Safety Consultants, 2025 (refer to standalone document submitted as part of the planning pack). They contain best practice measures and protocols to be implemented during the construction phase of the proposed development to avoid / minimise environmental impacts.
  - The appointed contractor will be responsible for the implementation of the CEMP & CMP. To ensure these documents remain fit for purpose, they will be maintained as live documents. The appointed contractor will be responsible for updating the CEMP & CMP, as required; e.g. to

site the average household size is c.2.40 people. An average household size for studios and 1-bed units is taken at 1.5 (being the median figure). The estimated population for the scheme is therefore 2,219 people.

reflect the publication of relevant new or revised guidelines and / or new statutory requirements. The full schedule of environmental commitments (i.e. all mitigation measures set out in the CEMP and Environmental Impact Assessment Report as part of the planning application, as well as any applicable conditions of development consent) will be included in the CEMP & CMP by the appointed contractor.

- A Community Liaison Officer (CLO) will be appointed by the contractor for the duration of the construction phase. They will be responsible for keeping the local community and businesses informed of the timing and duration of potentially disruptive works, and for receiving and addressing concerns of local residents and businesses in relation to the proposed works;

- Chapter 11 (Air Quality) & Chapter 12 (Climate) include a suite of mitigation measures to minimise air quality (including dust) impacts during the construction phase. Dust minimisations measures are included in Chapter 11 and shall be finalised by the appointed contractor in agreement with Dublin City Council, and implemented during the proposed works. Other mitigation measures are included in relation to community liaison, site management, maintenance of site, control of construction machinery, waste management especially demolition works, earthworks and measures specific to trackout. Further, as detailed in Chapter 5 & CEMP, adequate surface water drainage and management during construction phase shall be undertaken so as to avoid impacts on local population and human health;

- Chapter 13 (Noise & Vibration) includes a suite of mitigation measures to minimise noise impacts during the construction phase. Mitigation measures are included in relation to selection of quiet plant, noise control at source, screening, adherence to noise limits and community liaison;

- Chapter 14 (Landscape & Visual) includes a number of mitigation measures to minimise the impacts of the proposed works on landscape and visual amenity. These include measures in relation to visual impact of construction works, landscape character and existing vegetation;

- Chapter 19 (Traffic & Transportation) includes measures in relation to construction traffic and parking management to minimise the impacts of construction traffic on the local community and the operation of the existing road network in the area.

  Additionally, each appointed contractor will ensure that their compound set up accounts for appropriate spatial provision for waste management segregation, logistical deliveries and day to day contractor car parking. Appropriate overflow contractor carparking can be made available in areas of client landholding. This area(s) may change subject to works phasing and ongoing construction activities.

- Chapter 20 (Material Assets - Waste) includes a suite of measures in relation to management of construction waste to minimise the impacts of all site construction activities. A Resource and Waste Management Plan (**Appendix 20.1**, Volume 3) prepared as part of the application shall be implemented throughout the construction phase of the proposed development;

- Chapter 21 (Material Assets – Services) includes a suite of measures in relation to management of services in the vicinity of the works and regard shall be had to the Gas Networks Ireland *Guidelines for Designers and Builders – Industrial and Commercial (Non-Domestic) Sites (2018),* the Health & Safety Authority (HSA) *Code of Practice for Avoiding Danger from Underground Services (2016)*, and the ESB Networks & Health and Safety Authority *Code of Practice for Avoiding Danger from Overhead Electricity Lines (2019).*

7.5.2 Operational Phase

- Chapter 19 (Traffic & Transportation) includes measures in relation to mobility management and car parking management during the operational phase. It requires the implementation of a Mobility Management Plan, to encourage sustainable travel patterns among residents of the proposed development;

- Chapter 14 (Landscape & Visual) includes a number of mitigation measures to minimise the impacts of the proposed works on landscape and visual amenity. These include measures in relation to good quality architectural design, retained setting for Red House, provision of open spaces, retention, enhancement and management of existing mature trees, tree groups and woodland blocks, enhanced and additional tree planting etc;

- Chapter 11 (Air Quality) & Chapter 12 (Climate) includes a suite of mitigation measures to minimise future climate change impacts during the operational phase. These measures have been incorporated into the design of the development to mitigate against the impacts of future climate change. For example, adequate attenuation and drainage have been incorporated into the design of the development to avoid potential flooding impacts as a result of increased rainfall events in future years. The proposed development has been designed to reduce the impact on climate as a result of energy usage during operation;

- Chapter 20 (Material Assets- Waste) includes a suite of measures in relation to management of operational phase waste to minimise the impacts of the operational phase of the proposed development. An Operational Waste Management Plan (**Appendix 20.2**, Volume 3) prepared as part of the application shall be implemented throughout the operational phase of the proposed development.

7.6 Residual Impacts

7.6.1 Construction Phase

Assuming the proper and full implementation of the mitigation measures in this EIAR (summarised above in relation to population and human health), the following significant, negative, residual impacts on population and human health are predicted:

The application of binding noise limits and hours of operation, along with implementation of appropriate noise and vibration control measures (as set out in Chapter 13), will ensure that noise and vibration impacts are minimised as far as practicable. Appropriate mitigation measures will be implemented in this regard. The predicted impact for the demolition and construction period will be **negative, slight to significant and temporary,** depending on the proximity of the works to the site

boundary. For the remaining phases of construction work, structural development and general construction, the residual construction noise and vibration effects will be **negative, slight to moderate and short-term** depending on the proximity of the works to the site boundary. As such, it is considered that this potentially significant, negative, residual impact on the local population is commensurate with the proposed development and acceptable considering the net merit of the proposal, and that the likely alternative to this proposed development is a development of a similar nature in accordance with the land use zoning objectives and requirements for the site as set out in the DCC Development Plan 2022-2028, which was subject to SEA, AA and SFRA prior to its adoption

The landscape and visual residual impacts on surrounding areas as a result of the proposed works, as follows:

- The impact of the construction phase on the wider townscape would be **moderate, negative and short-term**.
- The visual impact on the college lands, including Red House and the Archbishop's Residence would be **very significant, negative and short-term.**
- The visual impact from the construction phase on properties along the site boundary off Clonliffe Road, Susanville Road, and at Corn Mill and Distillery Apartment (i.e. to south and east) would be **significant, negative and short-term** at most. This effect will be most pronounced for properties with views towards the site from upper floors of mid-rise apartments, with the enclosed nature of the streetscapes for terraces providing a greater degree of screening.
- The visual impact from the construction phase on properties along the site boundary off Drumcondra Road Lower and Clonliffe Road west of the existing entrance (i.e. to south and west) would be **significant, negative and short-term** at most.
- The visual impact from the construction phase on properties off Richmond Road (i.e. to north) would be **significant, negative and short-term** at most. Generally, most properties are well screened by vegetation along the River Tolka corridor, however, the higher rise properties will afford clearer views over on to the Site and receptors will be significantly affected.
- The visual impact from the construction phase on Drumcondra Village and areas west of Drumcondra Road Lower (i.e. to west) would be **slight to moderate, negative and short-term** at most.
- The visual impact from the construction phase on wider surrounds (i.e. south of Clonliffe Road, east of Distillery Road and north of Richmond Road) would be slight, negative and short-term at most, decreasing with distance and frequent intervening screening from built form.

As stated in Chapter 20, the potential significant impact in relation to construction waste management identified in Section 7.4, above, will be mitigated by the measures set out in Chapter 19 and Appendix 20.1 such that the residual impact is predicted to be ***neutral, imperceptible and short-term***.

No other significant, negative residual impacts are predicted in relation to population and human health during the construction phase.

7.6.2 Operational Phase

Assuming the proper and full implementation of the mitigation measures in this EIAR (summarised above in relation to population and human health), **no significant, negative, residual impacts are predicted to occur during the operational phase in the long-term.** However, as discussed below, there is the potential for **significant, negative, short-term visual impacts** to occur.

As stated in Chapter 20, the potential significant impact in relation to operational waste management identified in Section 7.4, above, will be mitigated by the measures set out in Chapter 20 and Appendix 20.2 such that the residual impact is predicted to be **neutral, imperceptible and long-term**.

As stated above, there is the potential for **short-term significant, negative visual impacts** to viewpoints in the surrounding area upon the completion of the proposed development, but that these are expected to ameliorate to an **overall neutral to positive visual impact in the long-term**, once the proposed development has become established in its surroundings.

As stated above, the net operational phase impact on population and human health is predicted to be positive, principally because the proposed development will deliver a high volume of high-quality housing in accordance with the development objectives for the site as set out in the DCC Development Plan 2022-2028 and in the context of an ongoing housing crisis and predicted continued increase in housing demand in the area, in a manner that is consistent with national and regional-level policy.

7.7 Indirect and /or Secondary Impacts

It is not envisaged that there will be any indirect and/or secondary impacts outside of the items covered in this chapter.

7.8 Monitoring

Monitoring and maintenance recommended in Chapters 11 (Air Quality), 13 (Noise & Vibration), 14 (Landscape & Visual), 19 (Traffic & Transportation), 20 (Material Assets - Waste) and 21 (Material Assets – Services) shall be implemented in full during the construction and / or operational phases of the proposed development, as specified in those respective chapters. Beyond that which has been recommended elsewhere in this EIAR, no additional monitoring is considered necessary in respect of population and human health.

7.9 Interactions

Population and human health is an EIA topic which tends to interact with numerous other environmental topics addressed elsewhere in the EIAR. Where the potential for impacts on population and human health has been identified as a result of such interactions, these have been addressed comprehensively above.

The noteworthy interactions with population and human health and other topics are summarised below. All of these interactions have been addressed above and, where feasible, appropriate mitigation measures have been prescribed in the corresponding specialist chapter.

Air Quality (Chapter 11)

There is potential for nuisance impacts on the local receptors due to dust-generating activities of proposed development during construction phase. With appropriate mitigation measures in place the interaction will be **negative, not significant and short-term impact.** During operation phase of the proposed development the predicted impact on population and health due to air quality and climate will be **long-term, not significant and negative**.

Noise & Vibration (Chapter 13)

The interaction between population and human health and noise and vibration during construction phase is due to potential nuisance and disturbance due to noisy construction activities, plant and equipment and construction traffic noise. Appropriate mitigation measures will be implemented in this regard. The predicted impact for the demolition and construction period will be **negative, slight to significant and temporary,** and will vary depending on the proximity of the works to the site boundary. For the remaining phases of construction work, structural development and general construction, the residual construction noise and vibration effects will be **negative, slight to moderate and short-term** depending on the proximity of the works to the site boundary.

During the operational phase there is no potential for significant nuisance and potential disturbance due to additional operational phase traffic. With appropriate mitigation measures in place, **no significant impacts** are predicted in relation to this interaction.

Landscape & Visual (Chapter 14)

During the construction phase there is potential for interaction between population and human health and landscape and visual due to negative impacts due to presence of construction site and effects of construction activities (e.g. dust, dirt, stockpiling of soils, removal of vegetation, etc.). The predicted impact will be **significant to slight, negative and short-term**.

The operational phase will result in positive contribution to the emerging residential community of the wider area, as well as enhancing green infrastructure and green space connectivity. The overall assessment of the impact on townscape effects is that the development is consistent with emerging trends in development within the city and that key characteristics are not adversely altered, therefore, the impact is assessed as being moderate, neutral and long-term. The predicted visual impact will be **significant to moderate, negative in the short-term, and significant, neutral / positive in the long-term** as the landscape (including replacement tree planting) matures and the views become more residential.

Traffic & Transportation (Chapter 18)

There is potential for impacts on population and human health during the construction phase due to negative impacts on journey characteristics due to additional (construction) traffic on road network and the potential for nuisance and disturbance due to construction traffic noise. With appropriate mitigation measures in place such as warning signage and designated haul route for HGVs the predicted impact will be **negative**, **slight to moderate**, over the **short term**.

During the operational phase there is potential for negative impacts on population and human health due to journey characteristics and additional traffic on road network during the operational phase. However, the development will create additional road network and enhance connectivity in the area with the provision of active travel measures. With appropriate mitigation measures in place the predicted impact will be **positive, slight and long-term**.

Microclimate- Daylight & Sunlight (Chapter 17)

There is potential impacts due to changes to daylight and sunlight availability on the population and human health e.g. overshadowing of neighbouring buildings, can negatively or positively affect residential amenity in the receiving environment. As described in Section 7.4, **no significant impacts** to neighbouring residential areas are predicted, and the proposed development itself will provide well-lit homes and amenity areas.

Microclimate – Wind (Chapter 18)

There is a potential interaction between Chapter 7 (Population & Human Health) and Chapter 17 (Microclimate – Wind), since the wind conditions at the proposed development site can affect the amenity and safety of residents and visitors. The proposed development will deliver a wind microclimate that is either suitable for all intended pedestrian uses, or calmer than required for the intended uses. In a number of instances, the proposed development will result in an improved (i.e., calmer) wind microclimate relative to the baseline scenario. Therefore, **no significant impacts** on population and human health are predicted as a result of the wind effects of the proposed development.

Material Assets- Waste (Chapter 20)

During the construction and operational phase there is potential for impacts on human beings in relation to the generation of waste and if wastes are not managed correctly and in accordance with the RWMP or the OWMP could result in fly-tipping, littering and reduced recycling, and re-use opportunities which could cause a nuisance to the public and attract vermin. The implementation of the RWMP and the OWMP, will ensure appropriate the impact of waste arisings are impacts on the local population and human health are **neutral, imperceptible and long-term**.

Material Assets- Services (Chapter 20)

In worst-case scenarios (e.g. where works are not carried out safely or in accordance with the applicable codes and standards), accidents during works (e.g. contact with live powerline or gas explosions) or water quality impacts resulting from works to utilities infrastructure, have the potential to result in human health impacts. Service outages resulting from works can temporarily affect the residential amenity of local residents and / or the operation of local businesses. The mitigation measures that will be put in place at the proposed development will ensure that the impact of the proposed development complies with all the specifications and guidelines of the relevant service providers. Therefore, the predicted impact **no likely significant impact** is envisaged with respect to population and human health during construction or operational phase.

7.10 Cumulative Impacts

The potential for cumulative impacts to arise as a result of the proposed development in combination with other existing / proposed plans and projects, as listed in **Table 23.1** in Chapter 23 (Cumulative Impacts) in respect of the EIA topics and environmental media of relevance to population and human health, has been discussed in the respective EIAR chapters – refer to Chapters 11 (Air Quality) & 12 (Climate), 13 (Noise & Vibration), 14 (Landscape & Visual), 17 (Microclimate- Daylight and Sunlight), 18 (Microclimate – Wind) and 19 (Traffic & Transportation).

It is considered that the potential impacts of the proposed development on population and human health have been mitigated by the design of the proposed development, and mitigation measures set out herein, such that significant negative cumulative impacts on population and human health are not likely to occur as a result of the proposed development in combination with one or more of the plans / projects set out in Chapter 23 (Cumulative Impacts).

7.11 Difficulties Encountered

As outlined in the chapter above, this chapter uses the most up to date and detailed statistical data that is available at the time of writing this chapter. More up-to-date information might become available at a later stage.

No other difficulties were encountered in the preparation of this chapter.

7.12 References

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8 Biodiversity

8.1 Introduction

This chapter of the EIAR comprises an assessment of the likely effects on Biodiversity (Flora & Fauna) of the proposed Large-scale Residential Development (LRD) at Holy Cross College, Clonliffe Road, Dublin 3 and Drumcondra Road Lower, Drumcondra, Dublin 9. The proposed development is described in detail in Chapter 5 of this EIAR (and in the Statutory Notices).

The potential for any impacts on sites designated as European (Natura 2000) sites under the EU Habitats and Birds Directives was also appraised, and the results of that study are presented in a separate Appropriate Assessment Screening report (AASR) that accompanies this application under separate cover.

8.2 Expertise and Qualifications

Brady Shipman Martin was commissioned to prepare this report on behalf of the applicant. The work was carried out by Sadye Goldfarb, Ecologist at Brady Shipman Martin. She holds a bachelor's degree in Environmental Science from the University of Vermont and a master's degree in Biodiversity and Conservation from Trinity College Dublin. She is a Qualifying Member of the Chartered Institute of Ecology and Environmental Management and is experienced in drafting and reviewing EIAR Biodiversity chapters, AA Screening Reports, EIA Screening Reports and SEA Screening Reports. She is also experienced in undertaking baseline ecological surveys and preparing Ecological Impact Assessments Reports (EcIA).

This report has been technically reviewed by Ecologist Matthew Hague BSc MSc Adv. Dip. Plan. & Env. Law CEnv MCIEEM. Matthew is an Associate with Brady Shipman Martin and is a highly experienced and qualified ecologist, with a master's degree in Ecosystem Conservation and Landscape Management. He has over 20 years of experience in ecological and environmental consultancy, across a wide range of sectors. He has prepared numerous reports for AA Screening as well as Natura Impact Statements, for projects of all scales, from small residential developments to nationally important infrastructure projects. Matthew is a Chartered Environmentalist (CEnv) and a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM). Matthew has also completed an Advanced Diploma in Planning and Environmental Law, at King's Inns and is a member of the Irish Environmental Law Association (IELA).

8.3 Methodology

A comprehensive desk-based assessment has been undertaken, and numerous site visits have been carried out by the authors and other specialist ecologists, between September 2019 and June 2025, as detailed below.

8.3.1 Desk Study

This Ecological Impact Assessment (EcIA) and EIAR Biodiversity chapter has been prepared in accordance with the following **publications**:

- EPA *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports* (EPA, 2022);
- *Environmental Impact Assessment of Projects – Guidance on Screening* (European Commission, 2017);
- *Environmental Impact Assessment of Projects: Guidance on the Preparation of the Environmental Impact Assessment Report* (European Commission, 2017);
- OPR Practice Note PN02: Environmental Impact Assessment Screening (Office of the Planning Regulator (OPR) (2021);
- *EPA Advice Notes of Current Practice (in the Preparation of Environmental Impact Statements)* (EPA, 2003) (and revised advice notes 2015);
- *Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment* (European Commission, 2013);
- *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment* (Department of Housing, Local Government and Heritage, 2018);
- *Guidelines for Assessment of Ecological Impacts of National Road Schemes* (Transport Infrastructure Ireland (formerly the National Roads Authority), 2009); and
- Chartered Institute of Ecology and Environmental Management (CIEEM). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*, September 2018, updated in September 2019 (V1.1), further updated in April 2022 (V1.2) and again in September 2024 (V1.3);

The proposed development complies with the following **legislative instruments**:

- The Planning and Development Act 2000, as amended (the "Planning Acts");
- The Planning and Development Regulations 2001, as amended (the "Planning Regulations");
- The Wildlife Act 1976 to 2022 and the Wildlife (Amendment) Act 2000;
- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the "Habitats Directive");
- Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (the "Birds Directive");
- European Communities (Birds and Natural Habitats) Regulations 2011, as amended;
- Flora (Protection) Order 2022 (SI No. 235 of 2022);
- Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (the "EIA Directive");
- European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018).

The chapter has regard to the following **Policies and Plans**:

- *Ireland's Fourth National Biodiversity Plan 2023-2030* (National Parks and Wildlife Service, 2023);
- *Planning for Watercourses in the Urban Environment* (Inland Fisheries Ireland, 2020);
- *Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters* (Inland Fisheries Ireland, 2016);
- *All-Ireland Pollinator Plan 2021 – 2025* (National Biodiversity Data Centre, 2021); and
- *Dublin City Development Plan 2022 – 2028*, including the accompanying Appropriate Assessment documentation (Natura Impact Report), and specifically the numerous policies relevant to

biodiversity and sustainable development, such as Policy Objective CA9, SI21, SI22, GI3, GI5, GI8, GIO7, GIO8, GI16, GI24, GI32, GI34 and GI41; and

- *Masterplan for the Clonliffe College Lands*. (HJL and OMP, 2025 (submitted under separate cover with this planning application).

Information was collated from the **sources** listed below:

- Data on rare and protected plant and animal species contained in the following databases:
  - The National Parks and Wildlife Service (NPWS) of the Department of Culture, Heritage and the Gaeltacht (npws.ie);
  - The National Biodiversity Data Centre (NBDC) (biodiversityireland.ie);
  - Birdwatch Ireland (birdwatchireland.ie); and
  - Bat Conservation Ireland (batconservationireland.org);
- Recent aerial photography and photographs taken at the site;
- Recent and historic ordnance survey (OSi) mapping (geohive.ie);
- Information on protected areas, as well as watercourses, catchments and water quality in the area available from the EPA (gis.epa.ie/EPAMaps/);
- Information on soils, geology and hydrogeology in the area available from the Geological Survey of Ireland (GSI) (gsi.ie);
- The NPWS Article 17 Reports:
  - The Status of EU Protected Habitats and Species in Ireland – Volume 1 (NPWS, 2019a);
  - The Status of EU Protected Habitats and Species in Ireland – Volume 2 (Habitat Assessments) (NPWS, 2019b);
  - The Status of EU Protected Habitats and Species in Ireland – Volume 3 (Species Assessments) (NPWS, 2019c);
- Information on land-use zoning from the online mapping of the Department of the Environment, Community and Local Government (myplan.ie/en/index.html);
- Gilbert, G., Stanbury, A. and Lewis, L. (2021) *Birds of Conservation Concern in Ireland 4: 2020 – 2026* (Irish Birds 43: 1-22; and
- Benson, L. (2009). *Use of Inland Feeding Sites by Light-bellied Brent Geese in Dublin 2008 – 2009: A New Conservation Concern?* Irish Birds 8: 563-570.
- EU Biodiversity Strategy to 2030;
- Technical Guidance Note on Biodiversity for Development Management in Dublin City (DCC 2021);
- Dublin City Council Parks Strategy 2017-2022

This chapter of the EIAR takes full account of the design of the proposed development, and a detailed examination of all relevant elements of the proposal as it currently stands, was undertaken. This includes the following documents, among others submitted with the planning application:

- Hydrological & Hydrogeological Qualitative Risk Assessment (HHQRA) (AWN Consulting, 2025).
- Masterplan for the Clonliffe College Lands. (HJL and OMP, 2025).
- Infrastructure Planning Report (Barrett Mahony Consulting Engineers (BMCE), 2025);
- Site Specific Flood Risk Assessment (BMCE, 2025);
- Outline Construction Surface Water Management Plan (BMCE, 2025);
- Landscape Design Statement (NMP Landscape Architecture, 2025);

- Resource and Waste Management Plan (AWN Consulting, 2025);
- Construction Environmental Management Plan (DCON Safety Consultants, 2025);
- Construction Management Plan (DCON Safety Consultants, 2025).

8.3.2 Field Surveys – historic and recent biodiversity surveys

8.3.2.1 Habitats and Flora

In order to provide a comprehensive baseline on the local ecological environment, ecological surveys were first undertaken at the subject site, including habitat, invasive species, mammal and day-time bat surveys, by the Matthew Hague of Brady Shipman Martin on **29 January 2020**. These surveys were repeated on **24 March** and **8 June 2020**. An additional site walkover survey was undertaken by Mr Hague on **7 May 2021**.

A final, dedicated habitat and botanical survey was undertaken by Ecologists Sadye Goldfarb and Namrata Kaile of Brady Shipman Martin, to inform the current application, on **16 May 2025**.

During the course of the site visits, the habitats were identified, described and mapped. Habitats were surveyed using the *Best Practice Guidance for Habitat Survey and Mapping*[13] and were classified using *A Guide to Habitats in Ireland*[14] with due regard to the *Interpretation Manual of European Habitats*[15]. Vascular plant nomenclature follows that of the *New Flora of the British Isles 4th Edition*[16].

On each visit, the site was searched for evidence of large mammals, such as badger and otter, both within the site itself and in the riparian corridor of the River Tolka on the northern boundary of the wider Masterplan lands. A note was also made of any lepidoptera (butterflies and moths) present on site during the surveys.

8.3.2.2 Birds and bats

Bird surveys, in addition to dusk and dawn bat surveys, were first carried out at the site on **10 - 11 June 2020**, **30 June - 1 July 2020** and on **20 - 21 April 2021** by specialist bat and bird ecologist Mr Brian Keeley of Wildlife Surveys Ireland (WSI). WSI also carried out internal surveys of buildings at the site on **3 September 2020**, and additional dedicated bat surveys were undertaken by WSI on **5-6 and 18-19 September 2023**.

WSI has undertaken a full resurvey of the proposed development site in support of the current planning application (on **4-5 June 2025**).

- The detailed bat survey report is included at **Appendix 8.1** of this EIAR.

A total of four seasons of winter bird surveys were undertaken by Scott Cawley Ltd at the subject site in support of the planning application. The first season of winter bird surveys covered the period

[13] Smith, G. F., O'Donoghue, P., O'Hora, K., and Delaney, E. (2010) "*Best Practice Guidance for Habitat Survey and Mapping*". Available at: https://www.heritagecouncil.ie/content/files/best_practice_guidance_habitat_survey_mapping_onscreen_version_2011_8mb.pdf [accessed June 2025]
[14] Fossitt, J. (2000) "*A Guide to Habitats in Ireland*". Heritage Council. Available at: https://www.npws.ie/sites/default/files/publications/pdf/A%20Guide%20to%20Habitats%20in%20Ireland%20-%20Fossitt.pdf [accessed June 2025]
[15] European Commission (2007) "*Interpretation Manual of European Union Habitats*". Available at: https://www.miteco.gob.es/content/dam/miteco/es/biodiversidad/temas/espacios-protegidos/doc_manual_intp_habitat_ue_tcm30-207191.pdf [accessed June 2025]
[16] Stace, C. (2019) "*New Flora of the British Isles, 4th Edition*". Cambridge University Press.

September 2019 to March 2020, with four visits per month in September, October and November 2019, and January and February 2020. Three visits were undertaken in December 2019, and two visits were undertaken in March 2020. The second season of winter bird surveys covered the period **October 2020 to March 2021**, with four visits per month between October 2020 and February 2021, and five visits in March 2021.

The third season of winter bird surveys covered the period **September 2023 to March 2024**. The fourth season of winter bird surveys covered **October 2024 through March 2025** and commenced three hours before high tide and three hours after high tide, once per month. The purpose of these surveys was to build upon the surveys undertaken between 2019 and 2021, and to provide a comprehensive and up-to-date baseline of data on bird activity at the subject site.

The winter bird surveys were supplemented by a fifth suite of bird surveys – Scott Cawley carried out breeding bird and kingfisher surveys at the subject site on **14 March, 4 April, 29 April and 22 May 2025**.

The bird surveys carried out by Scott Cawley are included as **Appendix 8.2** of this EIAR.

- **Appendix 8.2** comprises the following reports:
  - Wintering Bird Survey Report 2019/2020 (Scott Cawley, 2020);
  - Wintering Bird Survey Report 2020/2021 (Scott Cawley, 2021);
  - Wintering Bird Survey Report 2023/2024 (Scott Cawley, 2024)
  - Wintering Bird Survey Report 2024/2025 (Scott Cawley, 2025);
  - Breeding Bird and Kingfisher Survey Technical Note (Scott Cawley, 2025).

The ecological surveys undertaken covered the entire subject site, both within the red line boundary of the proposed development and including the stretch of the River Tolka that flows along the northern boundary of the wider Clonliffe College lands.

- **Appendix 8.3** comprises an Invasive Species Management Plan, prepared by Invas Biosecurity, 2025.

8.3.2.3 Watercourses

There are no watercourses within the proposed development site itself however, the River Tolka[17], a very significant habitat corridor within Dublin City, runs along the northern boundary of the wider Masterplan lands and two outfalls from the proposed development will discharge into the river. The proposed development site is located within the River Liffey and Dublin Bay catchment (in the Tolka sub-catchment and the Tolka sub-basin)[18]. The River Tolka is the second biggest river in Dublin, after the Liffey, and is of note for its varied habitats and species. Among the policies and objectives of the Dublin City Development Plan 2022-2028[19] are several that seek to maximise the value of existing green infrastructure such as river corridors.

The River Tolka, as noted in the Dublin City Biodiversity Action Plan 2021-2025[20] is a highly significant regional catchment for protected fish, amphibian, and bird species. The river was surveyed as part of

[18] https://gis.epa.ie/EPAMaps/

[19] https://www.dublincity.ie/residential/planning/strategic-planning/dublin-city-development-plan/development-plan-2022-2028

[20] https://www.dublincity.ie/sites/default/files/2022-07/dcc-bioap-2021-2025-webv_21.07.22.pdf

the Dublin City Otter Survey 2019[21] (an Action of the Dublin City Biodiversity Action Plan 2015-2020 – now superseded). The otter survey recorded significant otter activity all along the Tolka, including otter prints on the riverbank where it passes along the northern boundary of the Holy Cross College lands.

A review of the proposed site drainage and potential links to the Tolka (and other watercourses) was undertaken in conjunction with the project engineers[22].

8.3.3 Evaluation of Ecological Features

The methodologies used to determine the value of ecological resources, to characterise impacts of the proposed development, and to assess the significance of impacts and any residual effects are consistent with the EPA *EIAR Guidelines* (2022) and are in accordance with the NRA (TII) *Guidelines for Assessment of Ecological Impacts of National Road Schemes* (2009) (the '*NRA Guidelines*' hereafter). This methodology is in turn consistent with the *Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland – Terrestrial, Freshwater, Coastal and Marine* (Version 1.3) (2018, updated 2024) (the '*CIEEM Guidelines*' hereafter). The methodology allows the baseline to be comprehensively evaluated. This then makes it possible to assess the potential impacts (including cumulative impacts) of the proposed development, to set out appropriate mitigation measures and to assess the residual impacts of the proposed development.

In accordance with the NRA Guidelines, impact assessment is undertaken of sensitive ecological receptors ('Key Ecological Receptors') within the Zone of Influence of a proposed development. According to the Guidelines, the Zone of Influence is the 'effect area' over which change resulting from the proposed development is likely to occur, and the Key Ecological Receptors are defined as features of sufficient value as to be material in the decision-making process for which potential impacts are likely. In the context of the proposed development, a Key Ecological Receptor is defined as any feature valued as follows:

- International Importance;
- National Importance;
- County Importance; and
- Local Importance (Higher Value).

Features of local importance (Lower Value) and features of no ecological value are not considered to be Key Ecological Receptors, in accordance with the *NRA Guidelines*.

8.4 Baseline Environment

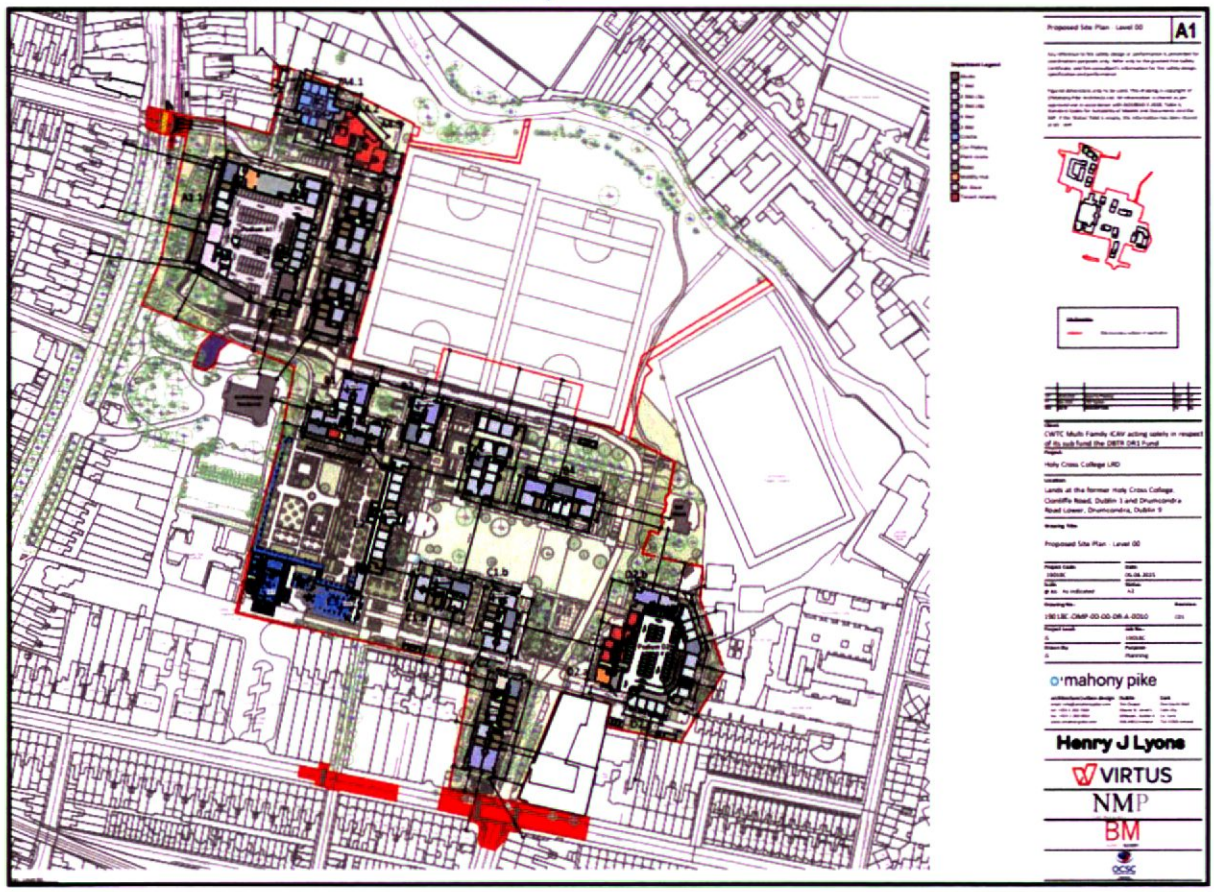
8.4.1 General Description of the subject site

The overall site of the proposed development comprises a complex of habitats, including planted woodland (primarily along the western boundary) as well as open fields subject to limited management (and substantially outside the proposed development site itself, see **Figure 8.1**). Other habitats include parkland and individual trees as well as large buildings and areas of hardstanding. Some parts of the site contain small pockets of unmanaged scrub.

[21] https://a.storyblok.com/f/47927/x/609e85ec32/dublin-city-otter-report-2019.pdf
[22] Refer to the Infrastructure Planning Report prepared by BMCE (2025) and submitted as part of this application under separate cover.

The habitats present along the River Tolka corridor (outside the site boundary) comprise a mix of scrub and woodland habitats. These are of high ecological value and, of equal importance, serve as part of a continuous habitat corridor along the River Tolka, one of the key ecological features within the city. Immediately upstream of the open section of the river the bank comprises a vertical concrete wall. Immediately downstream the southern bank is similarly constrained.

Figure 8.1 Location of the proposed development – Architect's Site Plan (refer to accompanying documentation for full details).



8.4.2 Description of the proposed development

The development will consist of the construction of a residential development set out in blocks ranging in height up to 13 storeys, to accommodate 1131 no. apartments including retail and crèche units, residential tenant amenity spaces, community/cultural spaces, mobility hubs and public open space. Refer to the statutory notices for a full description.

The proposed development sits as part of a Site Masterplan for a wider landbank which includes an under-construction hotel development and potential future GAA facilities. To facilitate the proposed development the scheme will involve the demolition of a number of existing structures on the site.

The application site contains a number of Protected Structures including The Seminary Building, Holy Cross Chapel, South Link Building, The Assembly Hall and The Ambulatory while the wider lands also include The Red House and the Archbishop's House (both Protected Structures). The application proposes the renovation and reuse of the Seminary Building and the South Link Building to accommodate residential units and the use of the existing Holy Cross Chapel, Assembly Hall and Cloister Garden for use as community/cultural uses.

The residential buildings are arranged around a number of proposed public open spaces and routes throughout the site with extensive landscaping and tree planting proposed. Communal amenity spaces will be located adjacent to residential buildings and at roof level throughout the scheme. To facilitate the proposed development the scheme will involve the removal of some existing trees on the site.

The site is proposed to be accessed by vehicles, cyclists and pedestrians from a widened entrance on Clonliffe Road, at the junction with Jones's Road and through the opening up of an unused access point on Drumcondra Road Lower at the junction with Hollybank Road. An additional cyclist and pedestrian access is proposed through an existing access point on Holy Cross Avenue. The development will include both basement and podium parking under a number of blocks to accommodate car parking spaces, bicycle parking, storage, services and plant areas.

The proposed development includes all site landscaping works, green roofs, boundary treatments, lighting, servicing and utilities, signage, and associated and ancillary works, including site development works above and below ground.

8.4.3 Designated Conservation Areas

For an effect to occur, there must be a 'source' (such as a construction site); a 'receptor' (such as a designated site for nature conservation); and a 'pathway' between the two (such as a watercourse that links the construction site to the designated site). A construction site or completed development may also create a barrier to movement, for example, by preventing the migration of fauna along a river corridor, or by obstructing the migration of birds.

Identification of a potential effect means that there is a possibility of ecological or environmental damage occurring, with the level and significance of the impact depending upon the nature and exposure to the potential effect and the characteristics of the receptor. Although there may be a risk of an impact, it may not necessarily occur, and if it does occur, it may not be significant. In other words, the existence of a source, a pathway and a receptor does not necessarily mean that a significant effect is likely.

The potential for any significant effects on European sites arising as a result of the proposed development has been considered. Full details of that study are presented in the stand-alone Appropriate Assessment Screening Report.

No designated conservation areas occur within or in the immediate vicinity of the area of the proposed development. There are a number of designated sites within the Zone of Influence of the proposed development; however, the AA Screening report concludes that, on the basis of objective information, it can be excluded that the construction and operational phases of the proposed development, individually or in-combination with other plans or projects, will have significant effects on any European site.

8.4.3.1 Relevant European Sites

The nearest European sites are the Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) associated with Dublin Bay:

- Special Areas of Conservation (SACs)
  - South Dublin Bay SAC (site code 000210), c. 3.9km to the south east;
  - North Dublin Bay SAC (site code 000206), c. 4.5km to the east;

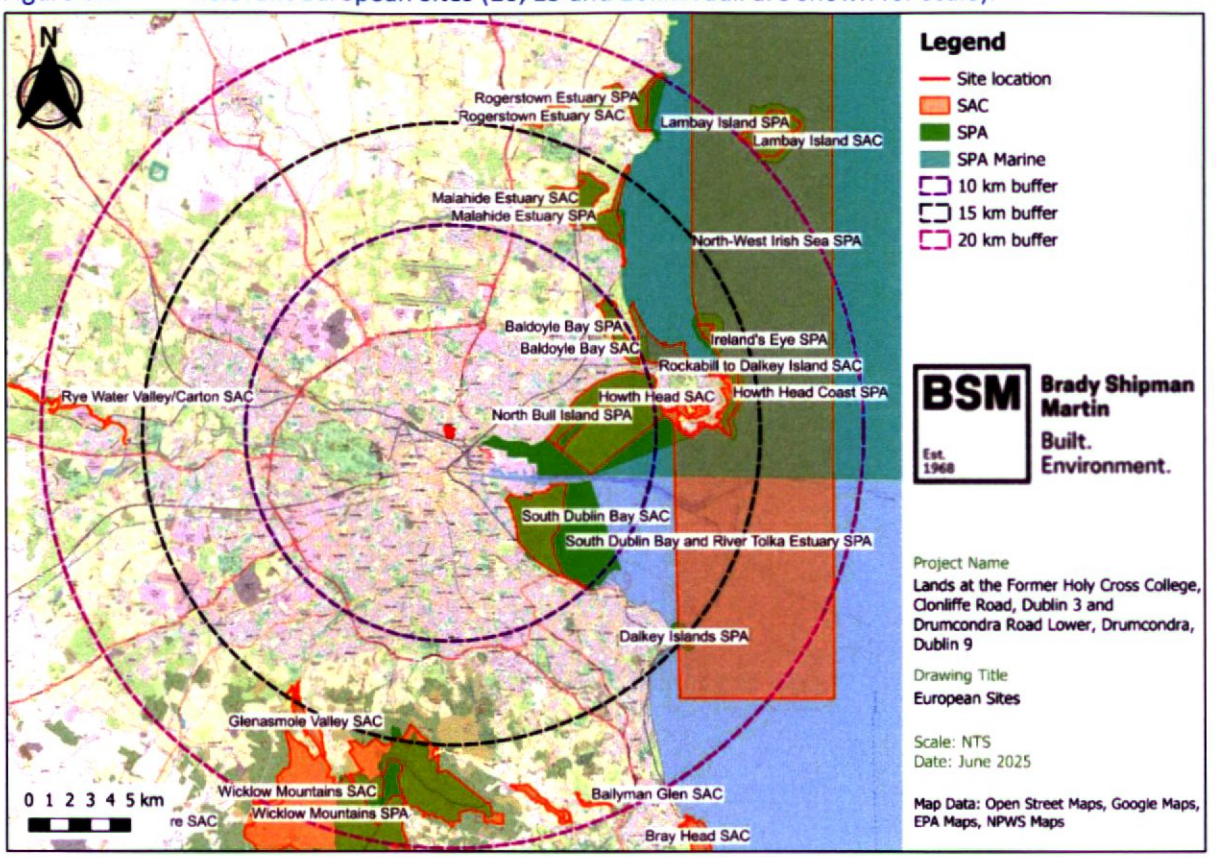
- Baldoyle Bay SAC (site code 000199), c. 8.6km to the north east;
- Howth Head SAC (site code 000202), c. 10.2km to the east;
- Rockabill to Dalkey Island SAC (site code 003000), c. 10.6km to the east;
- Malahide Estuary SAC (site code 000205), c. 11.3km to the north east;
- Ireland's Eye SAC (site code 002193), c. 12.8km to the north east;
- Wicklow Mountains SAC (site code 002122), c. 13.9km to the south;
- Rogerstown Estuary SAC (site code 000208), c. 15.2km to the north east;
- Rye Water Valley/Carton SAC (site code 001398), c. 15.6km to the west;
- Knocksink Wood SAC (site code 000725), c. 16.9km to the south;
- Ballyman Glen SAC (site code 000713), c. 18.1km to the south east;
- Glenasmole Valley SAC (site code 001209), c. 18.8km to the south west;
- Lambay Island SAC (site code 000204), c. 19.7km to the north east.

- Special Protection Areas (SPAs)

  - South Dublin Bay and River Tolka Estuary SPA (site code 004024), c. 1.5km to the east;
  - North Bull Island SPA (site code 004006), c. 4.5km to the east;
  - North-West Irish Sea SPA (site code 004232), c. 7.0km to the east;
  - Baldoyle Bay SPA (site code 004016), c. 9.0km to the north east;
  - Malahide Estuary SPA (site code 004025), c. 10.9km to the north east;
  - Howth Head Coast SPA (site code 004113), c. 12.9km to the east;
  - Ireland's Eye SPA (site code 004117), c. 13.0km to the north east;
  - Dalkey Islands SPA (site code 004172), c. 14.0km to the south east;
  - Wicklow Mountains SPA (site code 004040), c. 14.2km to the south;
  - Rogerstown Estuary SPA (site code 004015), c. 15.4km to the north east;
  - Lambay Island SPA (site code 004069), c. 19.6km to the north east.

The European sites are shown in **Figure 8.2**, below.

Figure 8.2 Relevant European Sites (10, 15 and 20km radii are shown for scale).



8.4.3.2 Other Designated Conservation Areas

The nearest pNHAs to the proposed development site are as follows (see **Figure 8.3**):

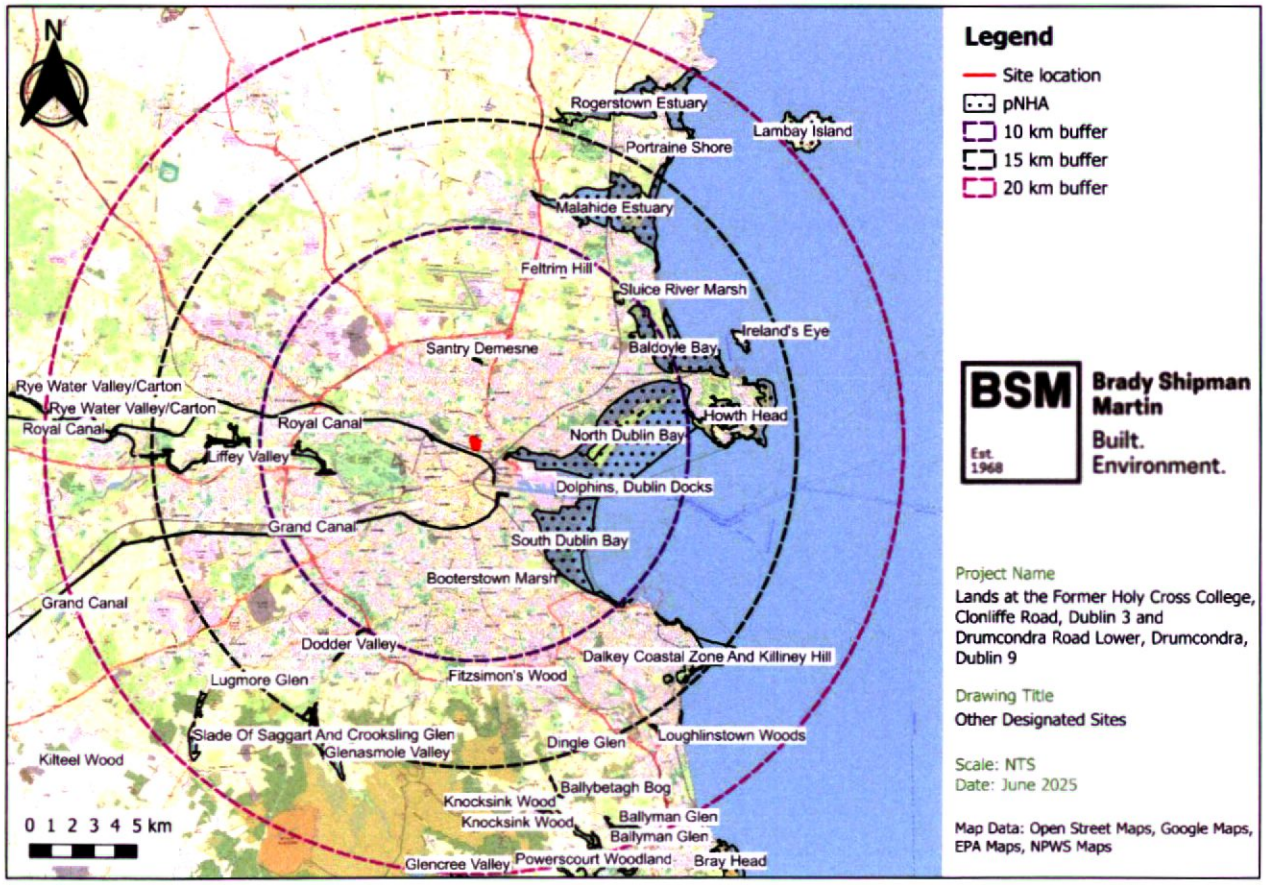
- Potential Natural Heritage Areas (pNHAs):
  - Royal Canal pNHA (site code: 002103), c. 0.3km to the south;
  - Grand Canal pNHA (site code: 002104), c. 2.2km to the south east;
  - North Dublin Bay pNHA (site code: 000206), c. 1.4km to the east;
  - South Dublin Bay pNHA (site code: 000210), c. 3.9km to the southeast;
  - Liffey Valley pNHA (site code: 000128), c. 6.5km to the west;
  - Santry Demesne pNHA (site code: 000178), c. 3.5km to the north;
  - Howth Head pNHA (site code: 000202), c. 10.0km to the east;
  - Dingle Glen pNHA (site code: 001207), c. 14.2km to the south east;
  - Glenasmole Valley pNHA (site code: 001209), c. 13.9km to the southwest;
  - Lambay Island pNHA (site code: 000204), c. 19.7km to the northeast;
  - Baldoyle Bay pNHA (site code: 000199), c. 9.0km to the northeast;
  - Sluice River Marsh pNHA (site code: 001763), c. 9.1km to the northeast;
  - Malahide Estuary pNHA (site code: 000205), c. 10.9km to the northeast;
  - Ireland's Eye pNHA (site code: 000203), c. 12.9km to the northeast;
  - Feltrim Hill pNHA (site code: 001208), c. 8.4km to the northeast;
  - Portraine Shore pNHA (site code: 001215), c. 15.3km to the northeast;
  - Rogerstown Estuary pNHA (site code: 000208), c. 15.2km to the northeast;
  - Dolphins, Dublin Docks pNHA (site code: 000201), c. 4.3km to the south east;
  - Rye Water Valley/Carton pNHA (site code: 001398), c. 15.6km to the west;

- Booterstown Marsh pNHA (site code: 001205), c. 6.6km to the south east;
- Dalkey Coastal Zone And Killiney Hill pNHA (site code: 001206), c. 11.2km to the south east;
- Fitzsimon's Wood pNHA (site code: 001753), c. 10.4km to the south;
- Dodder Valley pNHA (site code: 000991), c. 9.7km to the south west.

As noted above, the nearest site designated for nature conservation, not otherwise designated as a European site, is the Royal Canal proposed Natural Heritage Area (pNHA) (site code 002103). At its closest point, the pNHA is c. 0.3km from the proposed development site to the south. There is no surface water pathway between the proposed development site and the Royal Canal and, as noted in the Hydrological and Hydrogeological Qualitative Risk Assessment report (HHQRA) prepared by AWN Consulting and submitted under separate cover, the canal is fully lined and, as such, there is no potential for hydrogeological connectivity. There are, similarly, no pathways between the Proposed development site and any other pNHA, such as The Grand Canal pNHA (site code 002104), located c. 2.2km to the south (and south of the River Liffey) and Santry Demesne pNHA (site code 000178), c. 3.5km to the north.

The proximate pNHAs are shown in **Figure 8.3**, below.

Figure 8.3 Relevant pNHA Sites (10, 15 and 20km radii are shown for scale).



8.4.4 Rare and Protected Plant Species

The NPWS and NBDC databases were consulted with regard to rare species[23] and species protected under the *Flora Protection Order* (2022). According to the NBDC database, there are no known records of rare or protected plant species within the proposed development site or within the 2km grid square (O13T) that covers the site, and none were recorded during any of the site visits undertaken.

One plant of note, purple toothwort (*Lathraea clandestina*), was recorded along the Tolka riverbank during the surveys undertaken in 2020 and 2021. This plant is not native to Ireland and is likely to be a garden escape. It was not recorded in 2025.

8.4.5 Invasive Alien Plant Species

Historically, four species listed on the Third Schedule of the *Birds and Habitats Regulations 2011 as amended* (Japanese knotweed (*Reynoutria japonica*), giant hogweed (*Heracleum mantegazzianum*), Himalayan balsam (*Impatiens glandulifera*) and three-cornered leek (*Allium triquetrum*)) have been recorded at various points within the wider Holy Cross College lands (i.e. the wider Masterplan lands). A long-term management plan is currently being implemented by Invas Biosecurity in order to eradicate the plants from the wider site.

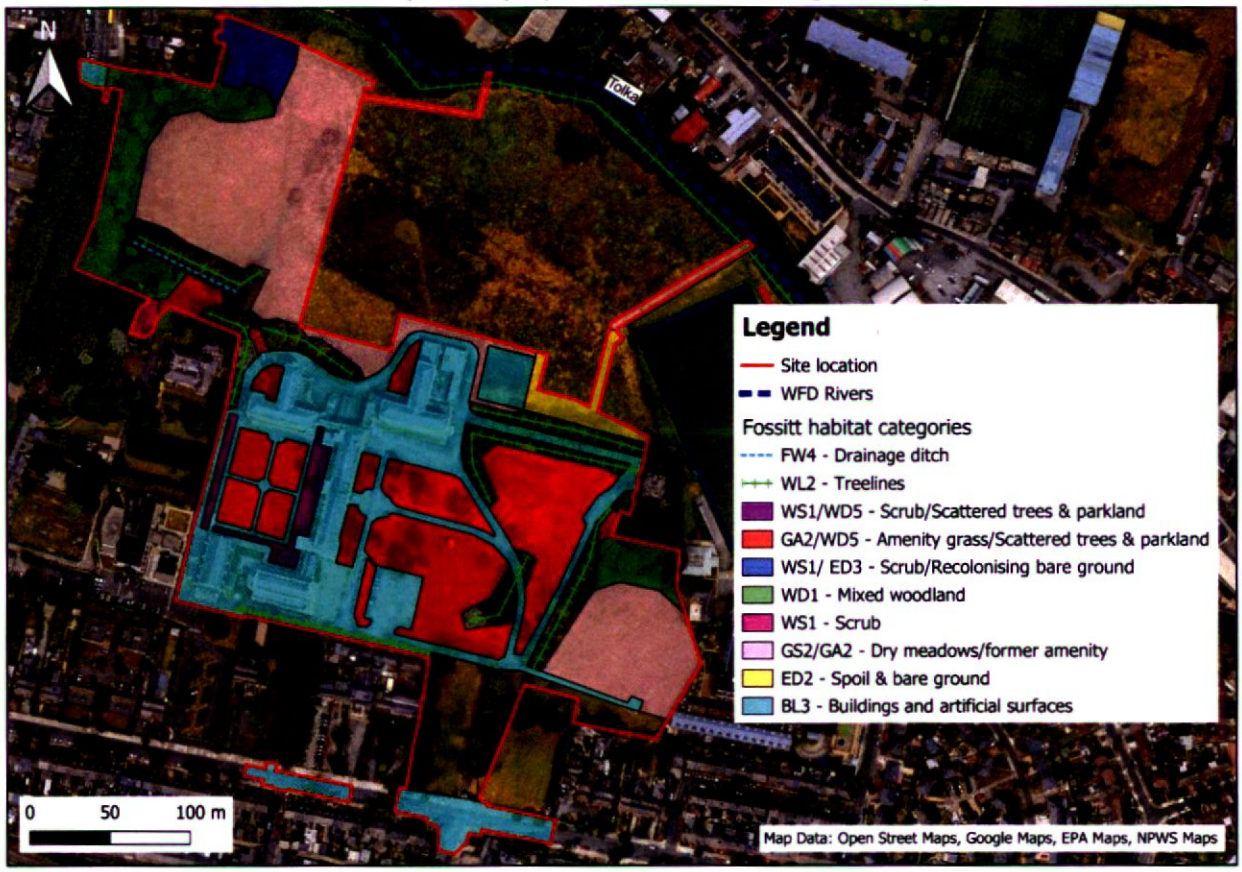
The management plan will continue until all these invasive species are entirely eradicated from the site.

8.4.6 Habitats

The habitats present on the proposed development site are shown in **Plate 8.1**, below.

[23] Curtis & McGough (1988)

Plate 8.1: Fossitt habitat map of the proposed Holy Cross College development site.[24,25]



8.4.6.1 The River Tolka

The corridor of the River Tolka (Fossitt habitat code **FW2**) is a key ecological feature in this area of Dublin. However, with the exception of two proposed surface water outfalls, the river is entirely outside the proposed development site. The River Tolka is relatively shallow at this location, with a mixed substrate, with large rocks/boulders and gravel beds present (**Plate 8.2**). There is a mix of shallow pools and faster flowing riffles also present. There is limited in-stream vegetation; however, the riverbanks, although subject to significant human intervention over the centuries, are relatively natural in condition (certainly compared to parts of the river both up- and down-stream of the subject site).

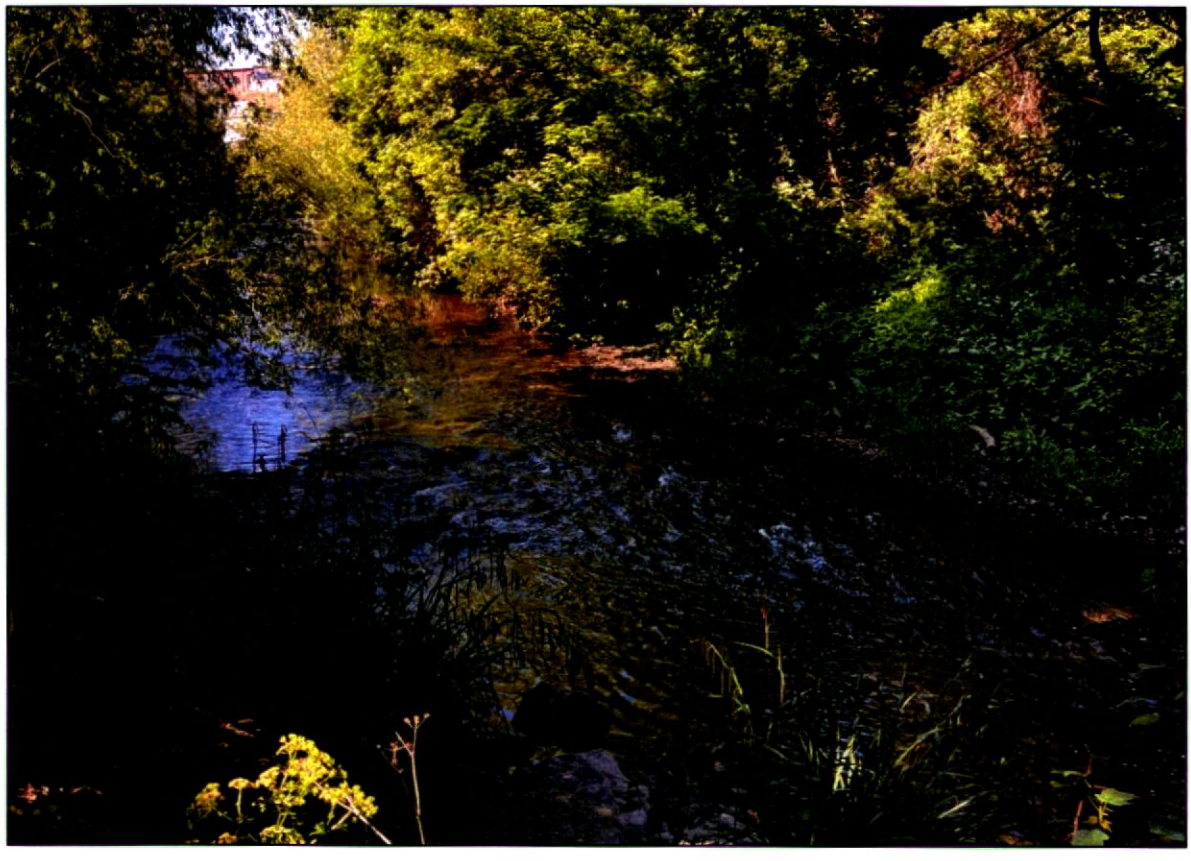
The southern riverbank, abutting the Holy Cross College Masterplan lands, is sloped down to the water's edge and is varied both in structure and vegetated profile. The river is approximately 2-3 m below the level of the top of the bank at this location. Species present along the riverbank, including where the two surface water outfalls are proposed, are dominated by scrub (**WS1**), both native and non-native, including buddleia (*Buddleja davidii*), elder (*Sambucus nigra*), willow (*Salix fragilis*) and bramble (*Rubus fruticosus* agg.), with occasional shrubs and young trees. More open parts of the riverbank are dominated by Alexanders (*Smyrnium olusatrum*), with sedges and grasses occasionally present. As referenced in **Section 8.4.5**, there are small patches of Himalayan balsam, three-cornered leek and giant hogweed along the river corridor (outside the subject site). There are some drier, shaded areas, which

[24] Small patches of habitats of negligible ecological value, such as flower beds and borders as well as ornamental and non-native shrubs are omitted from the habitat map. Patches of invasive weeds such as Japanese knotweed, mainly outside the Proposed development boundary, are also not shown.
[25] Site boundary red line is indicative only, for full details refer to the accompanying documentation.

have a woodland-like flora where the ground is not bare – mainly covered in ivy (*Hedera helix*), but with patches of primrose (*Primula vulgaris*), petty spurge (*Euphorbia peplus*), lords and ladies (*Arum maculatum*), field mustard (*Brassica rapa*) and cuckoo flower (*Cardamine pratensis*) present also. A small patch of purple toothwort (see Section 8.4.5) was also recorded on the riverbank in 2021 – but not subsequently.

- The River Tolka, including the riparian corridor, is of County Importance.

Plate 8.2: River Tolka at Holy Cross College, looking upstream (May 2025). The river is outside the site boundary and is included to show the wider context.



8.4.6.2 Habitats within the subject site

The proposed development site comprises a range of habitats typical of a city centre parkland setting.

The southern half of the site (**Plates 8.3** and **8.4**) is dominated by species-poor amenity grassland (**GA2**) and scattered trees and parkland (**WD5**), with occasional flower beds and borders (**BC4**) and patches of ornamental and non-native shrubs (**WS3**), mainly *buddleia*. Grassland species present are relatively few, mainly perennial rye-grass (*Lolium perenne*) and common bent grass (*Agrostis capillaris*), with occasional daisy (*Bellis perennis*), white clover, creeping buttercup (*Ranunculus repens*) and ribwort plantain (*Plantago lanceolata*).

The parkland trees and the tree lines (**WL2**) throughout the site (**Plate 8.5**) mainly comprise mature lime (*Tilia europaea*), horse chestnut (*Aesculus hippocastanum*), sycamore (*Acer pseudplatanus*), with ash (*Fraxinus excelsior*), elder, Lombardy poplar (*Polulus nigra "Italica"*), Lawson cypress (*Chamaecyparis lasoniasa*), cordyline (New Zealand cabbage – *Cordyline australis*), beech (*Fagus sylvatica*), Blue Atlas cedar (*Cedrus atlantica*, holm oak (*Quercus ilex*), silver birch (*Betula pendula*),

Norway maple (*Acer platanoide*), field maple (*Acer campestre*), false acacia (*Robinia pseudoacacia*), ornamental cherry (*Prunus* spp.) and others all present throughout the Masterplan site at the Holy Cross College lands.

- These habitats are of Local Importance (Lower Value).

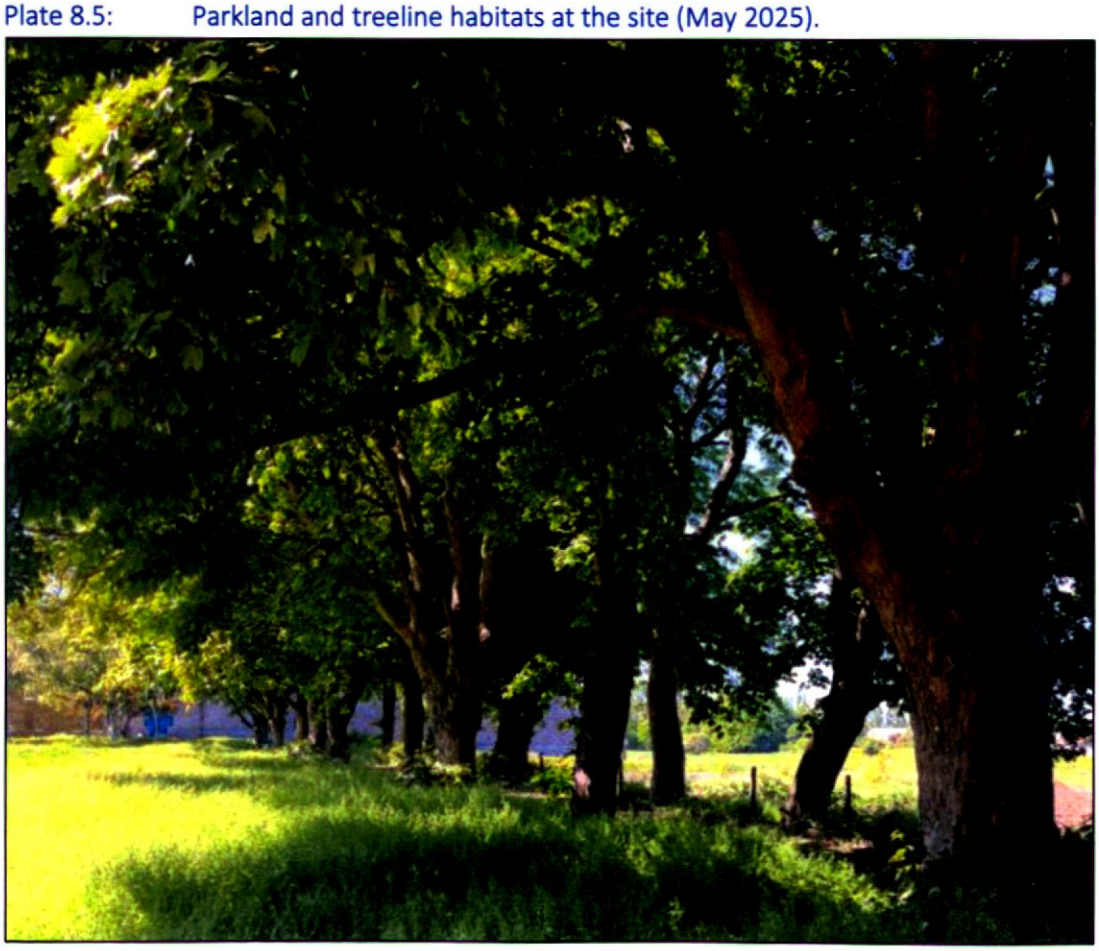
Plate 8.3: Parkland habitats at the site (May 2025).



Plate 8.4: Parkland habitats at the site (May 2025).



Plate 8.5: Parkland and treeline habitats at the site (May 2025).



The western part of the site, near Drumcondra Road Lower, comprises a band of mature mixed woodland (**WD1**). This is effectively made up of a line of mature lime trees on the inside, with a mixed line of yew (*Taxus baccata*), turkey oak (*Quercus cerris*), Norway maple, lime, holly (*Ilex aquifolium*), and Austrian pine (*Pinus nigra*) adjacent (**Plate 8.6**). This woodland is relatively open and, although much of the understorey is scrubby or covered in ivy, there is a varied ground flora including lesser celandine (*Ficaria verna*), herb-Robert (*Geranium robertianum*), red campion (*Silene dioica*), wood avens (*Geum urbanum*), nettle (*Urtica dioica*), common hogweed (*Heracleum sphondylium*) and occasional ferns. Non-native plants include frequent patches of three-cornered leek and Japanese laurel (*Aucuba japonica*). Japanese aucuba is not an invasive species.

- This habitat is of Local Importance (Higher Value).

Plate 8.6: Mixed woodland habitat on site (May 2025).



A small block of mixed broadleaved woodland (**WD1**) is located in the eastern corner of the site (**Plate 8.7**). This area comprises mainly mature sycamore with occasional lime. The understorey in this area is quite disturbed and is dominated by bare ground and nettle patches, but with cow parsley (*Anthriscus sylvestris*) and lesser celandine (*Ficaria verna*) frequent in more open parts, as well as elder (*Sambucus nigra*) seedlings.

- This habitat is of Local Importance (Lower Value).

Plate 8.7: Mixed woodland in the eastern corner of the site (May 2025).



An area of disturbed ground, now recolonising with scrub species (**WS1/ED3**), mainly bramble (and Japanese knotweed, as discussed in Section 8.3.4) is located in the north western corner of the site (**Plate 8.8**). Other species in this area include patches of forget-me-not (*Myosotis arvensis*), round-leaved cranesbill (*Geranium rotundifolium*), daisy (*Bellis perennis*), cleavers (*Galium aparine*) and common fumitory (*Fumaria muralis*).

- This habitat is of Local Importance (Lower Value).

Plate 8.8: Disturbed ground in the north east corner of the site (May 2025).



Much of the northern part of the wider site (the majority of which is **outside** the proposed development site, see Figure 8.1) is dominated by former amenity grassland which is largely unmanaged and has begun to develop into species-poor rough grassland (**GS2/GA1**) dominated by grasses including meadowgrass (*Poa annua*), perennial ryegrass, creeping bent (*Agrostis stolonifera*), crested dogstail (*Cynosurus cristatus*), Yorkshire fog (*Holcus lanatus*) and Timothy (*Phleum pratense*). In many places, particularly nearer to the river, the grasses have been overtaken by other species, dominated in parts by creeping buttercup (*Ranunculus repens*), with white dead nettle (*Lamium album*), common vetch (*Vicia sativa*) and frequent ribwort plantain (*Plantago lanceolata*), yarrow (*Achillea millefolium*), docks (*Rumex* spp.) and dandelion (*Taraxacum officinalis*) (**Plates 8.9** and **8.10**).

- This habitat is of Local Importance (Lower Value).

Plate 8.9: Grassland in the northern part of the Holy Cross College lands (May 2025).



Plate 8.10: Grassland in the northern part of the Holy Cross College lands (May 2025).



There exists a small amount of spoil and bare ground (**ED2**) on the eastern side of the site, of recent origin (**Plate 8.11**).

- This habitat is of Local Importance (Lower Value).

Plate 8.11: Spoil and bare ground in the eastern part of the Holy Cross College lands (May 2025).



The remainder of the site – mainly the southern part – is covered in buildings and artificial surfaces (**BL3** – roads, paths and car parking), with planted areas/flower beds and borders (**BC4**), especially within the walled-cloister gardens (**Plates 8.12** and **8.13**).

- This habitat is of Local Importance (Lower Value).

Plate 8.12: Buildings and artificial surfaces (May 2025).



Plate 8.13: Buildings/artificial surfaces and flower beds inside the walled cloister gardens (May 2025).



8.4.7 Fauna

8.4.7.1 Bats

All Irish bat species are fully protected under the Wildlife Act (1976) and subsequent amendments, and under the EU Habitats Directive, via the European Communities (Birds and Natural Habitats) Regulations, 2011, as amended.

The bat surveys (see **Appendix 8.1**) undertaken in June 2025 (emergence and return surveys) confirmed the presence of a total of three bat species commuting and foraging (common pipistrelle, soprano pipistrelle and Leisler's bat). As noted in Appendix 8.1 *"Pipistrelle activity was noted around the Red House, around the College buildings perimeter, along the treeline leading to the Red House, around the Cloisters and past the trees in the lawns in front of the College. Soprano pipistrelles were noted both in front of the College and along the trees leading to Red House and was much more restricted than common pipistrelles. Leisler's bat activity was highest towards the grassy area close to the Tolka and overall was very limited within the site. At one point, three Leisler's bats were visible at the same time over the long grass."*

The bat surveys confirmed that there are no bat roosts within the proposed development site – no bats were found to be roosting in any of the trees or the buildings that will be affected by the proposed development. Again, as noted in **Appendix 8.1** *"There is a roost within the attic of the neighbouring Red House. These bats were also present in autumn 2023 and they are probably a breeding population of common pipistrelles. The bats were seen to swarm around the eaves of the Red House from 04.01 hours onwards. There was repeat soprano pipistrelle activity around the Red House, and this may also be a soprano pipistrelle roost."* The Red House is outside the proposed development site and not affected by it.

A common pipistrelle was noted to circle to the rear of the college at 04.41 hours (on the night of 4/5 June 2025) but there was no roost feature at the point of circling and the bat was not seen to enter the building. As noted in the bat survey report (which takes account of historic bat survey data from 2021 and 2023 gathered by the authors), areas around the buildings have intense lighting (a negative indicator for bat species). However, away from the buildings the lands are substantially unlit.

- Overall, given the habitats present, the site is of local importance (higher value) for commuting and foraging bats. It has no more than lower ecological value for roosting bats (no bat roosts are present) however the buildings and trees do offer some roosting potential.

8.4.7.2 Wintering birds

Several European sites in the wider Dublin area, including the South Dublin Bay and River Tolka Estuary SPA and the North Bull Island SPA support a range of wintering bird species. Coastal habitats, such as the sandflats, mudflats and saltmarshes of Dublin Bay are of primary importance to these species, however many of the birds also feed on parks and playing fields throughout Dublin City. Light-bellied Brent goose, for example, a species for which Dublin Bay is a critical part of its range, frequently feeds on managed grass at numerous locations in the city.

The wider lands at Holy Cross College have the apparent potential to be suitable for use by wintering birds such as Brent geese. However, the southern part of the site, despite the availability of amenity grassland, is in fact of low suitability for Brent geese. This is because the species requires fairly large, open areas of grassland, and the areas of amenity grassland in this part of the site are broken up by the trees and shrubs. The northern half of the overall lands (which is outside the proposed development site) is more open, but is similarly of low suitability for this species, as it is not regularly mown, and has not been managed by mowing for many years.

Despite the low apparent likelihood of the overall Holy Cross College lands to be utilised by overwintering birds, four separate seasons of overwintering bird surveys were commissioned (between 2019 and 2025) in order to inform this ecological impact assessment. As stated in Section 8.3.2 the surveys were conducted by Scott Cawley on behalf of the applicant. The surveys involved a very high level of survey effort and detailed survey reports are included at **Appendix 8.2**.

8.4.7.2.1 Winter bird surveys: 2019/2020 season

The results of the **2019/2020** surveys recorded seven SCI species of European sites either flying over or foraging in the Holy Cross College site (black-headed gull, herring gull, light-bellied Brent goose, cormorant, curlew, grey heron and kingfisher[26]). According to the survey report:

> *"Herring Gull were the most frequent visitors to the proposed development site, with observations of the species on all 25 survey dates. Black-headed Gull were observed foraging in the lands on 13 of the 25 survey dates, and flying over the site on 10 of the survey dates. Light-bellied Brent Geese (hereafter referred to as Brent Geese) did not land to forage within the proposed development site on any date over the survey period, but were observed flying over the site on 11 dates between December 2019 and March 2020. Like Brent Geese, Curlew were not observed landing or foraging within the proposed development site on any occasion, but were observed*

[26] Grey heron is listed as an SCI species in Cork Harbour SPA, Inner Galway Bay SPA, Lough Swilly SPA and Wexford Harbour and Slobs SPA. This SPA is c. 99km south of the subject site. Kingfisher is listed in two SPA sites in Ireland (the River Nore SPA and the River Boyne and River Blackwater SPA, which is c. 37km to the northeast).

flying over the site on 10 dates between October 2019 and March 2020. Cormorant were observed foraging in the River Tolka on five dates between September and December 2019, and were observed flying over or within the proposed development site on 16 dates. Kingfisher were observed foraging in and along the River Tolka on the northern boundary of the site on 18 of the 25 survey dates. Grey Heron were observed flying over the site on nine dates."

8.4.7.2.2 Winter bird surveys: 2020/2021 season

The results of the **2020/2021** surveys recorded six SCI species of European sites either flying over or foraging in the Holy Cross College site (herring gull, light-bellied Brent goose, cormorant, curlew, grey heron and kingfisher). According to the survey report:

"Herring Gull were the most frequent visitors to the proposed development site, with observations of the species on all 25 survey dates. Light-bellied Brent Geese (hereafter referred to as Brent Geese) did not land to forage within the proposed development site on any date over the survey period, and were observed flying over the site on 16 dates between November 2020 and March 2021. Curlew were recorded foraging and flying over the proposed development site on four dates between October and December 2020. Cormorant were observed foraging in the River Tolka, flying over or within the proposed development site on 17 dates between October 2020 and March 2021. Kingfisher were observed foraging in and along the River Tolka on the northern boundary of the site on four of the 25 survey dates between October 2020 and March 2021. Grey Heron were observed foraging along the river Tolka or flying over or adjacent to the proposed development site 17 of the 25 survey dates."

8.4.7.2.3 Winter bird surveys: 2023/2024 season

The results of the **2023/2024** surveys recorded nine SCI species of European sites either flying over or foraging in the Holy Cross College site (herring gull, black-headed gull, common gull, light-bellied Brent goose, cormorant, curlew, grey heron and kingfisher, as well as mallard[27]). According to the survey report:

- *"Herring Gull* Larus argentatus *(amber-listed BoCCI): were the most frequent visitors to the proposed development site, with observations of the species on five survey dates (November and December 2023, and January, February and March 2024) and flying over the site on all survey dates (September 2023 to March 2024).*
- *Black-headed gull* Chroicocephalus ridibundus *(amber-listed BoCCI): was recorded flying over and in the vicinity of the proposed development site on all seven surveys but did not land within the proposed development site.*
- *Common gull* Larus canus *(amber-listed BoCCI): were noted flying over the site on one survey in March 2024 but were not observed on the proposed development.*
- *Light-bellied Brent Goose* Branta bernicla hrota *(amber-listed BoCCI): did not land to forage within the proposed development site on any date over the survey period, and were observed flying over the site on five surveys (November, December, January, February and March).*

[27] Mallard is listed as an SCI species in 9 SPAs in the south, west and midlands of Ireland, but not Dublin. Dundalk Bay SPA, the closest relevant site, is c. 69km to the north of the subject site.

- *Cormorant* Phalacrocorax carbo *(green-listed BoCCI): were observed flying over the River Tolka and within the proposed development site on one survey in March 2024.*
- *Curlew* Numenius arquata *(red-listed BoCCI): were recorded foraging and flying over the proposed development site on a single survey visit in February.*
- *Grey heron* Ardea cinerea *(green-listed BoCCI): Heron were observed flying over the River Tolka adjacent to the proposed development and over the site on four surveys in (September, October and November 2023, and March 2024).*
- *Kingfisher* Alcedo atthis *(amber-listed BoCCI): were observed foraging in and along the River Tolka on the northern boundary of the site during two surveys in October and November 2023."*

8.4.7.2.4 Winter bird surveys: 2024/2025 season

The results of the **2024/2025** surveys recorded eight SCI species of European sites either flying over or foraging in the Holy Cross College site (herring gull, black-headed gull, light-bellied Brent goose, cormorant, grey heron, kingfisher, mallard and coot[28]). According to the survey report:

- *"Herring Gull* Larus argentatus *(amber-listed BoCCI) were the most frequent visitors to the proposed development site, with observations of the species on all survey dates, as well as observations of this species flying over the site on all survey dates (October 2024 to March 2025).*
- *Black-headed gull* Chroicocephalus ridibundus *(amber-listed BoCCI) was recorded on the site once in November 2024 alongside observations of this species flying over and in the vicinity of the proposed development site on five surveys (November and December 2024, January, February and March 2025).*
- *Light-bellied Brent Goose* Branta bernicla hrota *(amber-listed BoCCI) did not land to forage within the proposed development site on any date over the survey period, and were observed flying over the site on three surveys (January, February and March 2025).*
- *Cormorant* Phalacrocorax carbo *(green-listed BoCCI) were observed flying over the River Tolka and within the proposed development site on three surveys in November 2024, January and February 2025.*
- *Grey heron* Ardea cinerea *(green-listed BoCCI): Herons were observed flying over the River Tolka and over the site on one survey in November 2024.*
- *Kingfisher* Alcedo atthis *(amber-listed BoCCI) were observed foraging in and along the River Tolka on the northern boundary of the site during one survey in October 2024.*
- *Mallard* Anas platyrhynchos *(amber-listed BoCCI) were also observed in and/or flying over the River Tolka on three survey dates, namely November 2024 and January and February 2025.*
- *Coot* Fulica altra *(amber-listed BoCCI) were observed flying over the site and on the River Tolka on two survey dates, namely November 2024 and February 2025."*

[28] Coot is listed as an SCI species in 10 SPAs throughout Ireland, but not in Dublin. The closest such site is Lough Ennel SPA, c. 77km to the west of the subject site.

8.4.7.2.5 Breeding bird surveys: 2025 season

The results of the **2025** breeding bird and kingfisher surveys recorded five SCI species of European sites either flying over or foraging in the Holy Cross College site (herring gull, cormorant, grey heron, kingfisher and mallard). According to the survey report:

> *"The results of 4 no. dedicated kingfisher surveys determined that there is no suitable breeding habitat for kingfisher on or adjacent to the site, the only kingfisher observations were in a commuting capacity. Therefore, it can be determined that breeding kingfisher is not present along the River Tolka in the vicinity of the proposed development.*
>
> *While no bird nests were confirmed on-site, it is highly likely that several green- listed species (listed in Table 3* [of the bird survey report-see **Appendix 8.2** of this EIAR]*) are using the hedgerows and treelines within the site as nesting habitat, with each green listed species observed recorded as 'possible breeder' or 'probable breeder' in at least once instance, according to the BTO Breeding Status Codes. All six amber listed species observed on-site (i.e. cormorant, goldcrest, herring gull, mallard, starling and willow warbler) were recorded in at least one instance as being possible and/or probable breeders except for the starling, which was only recorded in a non-breeding context. Typical breeding habitat for each of these amber-listed species exists on site – this includes trees within woodland and treelines for cormorant, goldcrest and starling (with starling also using cavities within buildings), dense hedgerow and shrubbery for willow warbler, rooftops for herring gull and along water features within ground cover for mallard. The little egret, an Annex I species, was recorded as a 'probable breeder' along the stretch of the Tolka which runs along the northern edge of the proposed development when a pair were observed foraging within the river. However, there was no evidence of nesting activity along the sections of River Tolka which run along the site boundary or immediately upstream and downstream of the site.*
>
> *It is also possible that the invasive ring-necked parakeet is breeding on or near the site, with all observations recorded as either 'possible breeder' and 'probable breeding'. The patch of woodland on the eastern edge of the site below the Belvedere College sports grounds may be in use as a breeding site by this species, where this species was recorded mostly prevalently. There is currently no Irish guidance for the control and/or management of this species."*

8.4.7.2.6 Bird surveys: results summaries

Brent geese were not observed foraging within the lands on any survey dates across four full seasons of survey. No evidence of usage by the species was collected during any survey transects in the proposed development site. The sole exception to this is the records of very small numbers of droppings (between 1 and 4 droppings) recorded in three of the surveys carried out in the 2024/2025 season. However, none of these droppings were recorded within the boundary of the proposed development (red line boundary) – they were all recorded on the unmanaged grassland to the north. In fact, the Scott Cawley report states that *"it is likely that isolated incidents of droppings recorded in the western half of the field were from birds flying-over, rather than landing on the site."* Further, the report states that *"should any brent geese land within the site, numbers would be far below the 1% threshold for international and national populations due to the suboptimal height of the sward in the rough grassland across the site"*. In the case of Black-headed Gull, Herring Gull, Brent Geese, Curlew, Cormorant, Grey Heron and Kingfisher, it has been demonstrated that the peak count of birds in the survey area in 2019/20, 2020/2021, 2023/2024 and 2024/2025 was less than 1% of the international population of

these species. The 1% criterion is applied to identify sites of international importance for birds (i.e. if a site regularly supports 1% or more of the international population, then it would be considered of international importance). The data collated and presented in Appendix 8.2 can also be reliably determined to be far below the 1% threshold of both the national and international total populations of these species with the site being of no significance to the species internationally or nationally. For example, as clearly set out in the overwintering bird surveys (see **Appendix 8.2**), in the case of herring gull, the peak count of 144 birds observed in the survey area (on both 6 December 2019 and 21 December 2020, with 11 birds recorded on 13 March 2024 and 50 birds recorded on 11 February 2025) equates to, at most, only 1.4% of the 1% international population[29] of the species (10,200 birds).

In the case of Cormorant, the peak count of one bird observed in 2019/20, 2020/21, 2023/2024 and 2024/2025 represents 0.16% of the 1% international population of the species (1,200 birds).

In the case of Curlew, the peak count of one bird observed in 2020/21 represents 0.02% of the 1% international population of the species (4,800 birds). Curlew was not observed on the site (other than flying over) during any of the other winter survey seasons.

In the case of Black-headed gull, the peak count of 16 birds observed in 2019/20 represents 0.0008% of the 1% international population of the species (20,000 birds). Black headed gull was not observed on the site (other than flying over) during any of the other winter survey seasons.

Brent Geese were not observed foraging within the lands on any survey dates across the four winter survey periods and no evidence of usage by Brent Geese was collected from completion of survey transects in the proposed development site – other than the very small numbers of droppings recorded, outside the proposed development site boundary, as discussed above it is believed that these droppings were from birds flying over the site and not foraging upon it.

These results clearly demonstrate that the proposed development site is of no significant value for any SCI species and there is no possibility of a significant effect arising on European sites as a result of potential impacts to populations of SCI bird species.

As noted in the 2019/2020 survey report prepared by Scott Cawley, *the proposed development site was heavily utilised by dog walkers over the 2019-2020 season, with dogs generally observed off-lead. This may have discouraged birds such as Brent geese and Curlew from landing in the site.* However, the proposed development site has been closed off to the public since March 2020, with restricted access to essential staff and visitors only. No dog walkers were permitted onto the site during this period, which included the 2020/2021, 2023/2024 and 2024/2025 winter bird survey seasons. This change to the accessibility of the site has not resulted in any significant changes to the use of the site by any bird species listed as Special Conservation Interest species in any European site.

Again, as noted in the survey reports, the results of the multiple seasons of wintering bird counts can be contextualised against the populations of these species in nearby European sites. The 2024/2025 survey report concludes as follows:

> *"The frequency and duration of winter bird surveys were reduced from the 2019/2020 and 2020/2021 surveys, which were considered proportionate in the professional judgement of Scott Cawley Ltd., based on the suitability of the site and results obtained in those years. Results of*

[29] All references to international populations of birds are after Nagy, S and Lagendoen, T (2021) AEWA Report on the Conservation Status of Migratory Waterbirds in the Agreement Area – 8th Edition.

winter bird surveys from the 2019/20 and the 2020/21 season are therefore comparable to data from the 2023/2024 surveys and the latest surveys in 2024/2025 which inform this report.

Brent geese were not observed foraging within the lands on any survey dates across the six-month survey period as in 2019/2020, 2020/2021, 2023/2024 and 2024/2025. Although potential evidence of usage by brent geese was collected in the form of isolated incidents of small numbers of droppings during the walkover transect surveys in the proposed development site in the 2024/2025 season. However, the site remains sub-optimal for usage by this species in appreciable numbers relative to the 1% international and national population thresholds.

In the case of herring gull, black-headed gull, cormorant, grey heron, kingfisher, mallard and coot it has been determined that the peak count of birds in the survey area in 2024/2025 is less than 1% of the international population of these species both on site and regarding flocks for species which traverse the proposed development site."

- Overall, given the habitats present, the site is of no importance for wintering birds.

8.4.7.3 Breeding birds and other birds

Birds, as well as their nests and eggs, are fully protected under the Wildlife Act (1976) and subsequent amendments.

According to the breeding bird survey report prepared by Scott Cawley (see **Appendix 8.2**), a total of 31 bird species were recorded on the subject site in 2025. Of these, 24 (blackbird, blackcap, blue tit, bullfinch, buzzard, chaffinch, coal tit, kingfisher, dunnock, feral pigeon, goldfinch, great tit, grey heron, hooded crow, jackdaw, little egret, long-tailed tit, magpie, mistle thrush, moorhen, robin, song thrush, sparrowhawk, woodpigeon and wren) are green-listed (on the green list of Birds of Conservation Concern in Ireland (BoCCI) (2020 – 2026)[30], indicating that they are not currently of conservation concern. Six amber-listed species were recorded (cormorant, goldcrest, herring gull, mallard, starling and willow warbler) and no red-listed species were recorded. See Figures 5 and 6 of the *Breeding Birds and Kingfisher Survey Technical Note* contained in **Appendix 8.2**.

Little egret, a green-listed species observed foraging in the River Tolka which borders the northern boundary of the site, is also an Annex I species under the EU Birds Directive. Five SCI species (Including Kingfisher) were observed: cormorant, grey heron, herring gull, kingfisher and mallard. One non-native species, the ring-necked parakeet, was observed on site. This species is considered as an invasive species outside of their native range. These birds are likely part of the known Drumcondra population which has been present in the area for several years.

The results of 4 no. dedicated kingfisher surveys determined that there is no suitable breeding habitat for kingfisher on or adjacent to the site, the only kingfisher observations were in a commuting capacity. Therefore, it can be determined that breeding kingfisher is not present along the River Tolka in the vicinity of the proposed development.

While no bird nests were confirmed on-site, it is highly likely that several green- listed species (listed above) are using the vegetation within the site as nesting habitat, with each green listed species observed recorded as 'possible breeder' or 'probable breeder' in at least one instance, according to the BTO Breeding Status Codes. All six amber listed species observed on-site (i.e. cormorant, goldcrest,

[30] Gilbert *et al.* (2021)

herring gull, mallard, starling and willow warbler) were recorded in at least one instance as being possible and/or probable breeders except for the starling, which was only recorded in a non-breeding context. Typical breeding habitat for each of these amber-listed species exists on site – this includes trees within woodland and treelines for cormorant, goldcrest and starling (with starling also using cavities within buildings), dense hedgerow and shrubbery for willow warbler, rooftops for herring gull and along water features within ground cover for mallard. The little egret, an Annex I species, was recorded as a 'probable breeder' along the stretch of the Tolka which runs along the northern edge of the proposed development when a pair were observed foraging within the river. However, there was no evidence of nesting activity along the sections of River Tolka which run along the site boundary or immediately upstream and downstream of the site.

It is also possible that the invasive ring-necked parakeet is breeding on or near the site, with all observations recorded as either 'possible breeder' and 'probable breeding'. The patch of woodland on the eastern edge of the site below the Belvedere College sports grounds may be in use as a breeding site by this species, where this species was recorded mostly prevalently. There is currently no Irish guidance for the control and/or management of this species.

- Overall, given the habitats present, the site is of local importance (higher value) for breeding birds.

8.4.7.4 Large mammals

Badgers and hares are fully protected under the *Wildlife Act* (1976) and subsequent amendments. No evidence of badgers or hares has been recorded on the proposed development site.

Otters are protected under the *Wildlife Act* (1976) and subsequent amendments, and under the *EU Habitats Directive*, via the *European Communities (Birds and Natural Habitats) Regulations*, 2011, as amended. Historically, the Dublin City Otter Survey (2019) recorded significant otter activity all along the Tolka, including otter prints on the riverbank within the Holy Cross College lands. In fact, otter spraint (droppings used as a territory marker) was found on a large rock on the riverbank by the author on two occasions in 2020, confirming the regular presence of the species in this area. The author has also occasionally seen evidence of otter on the Tolka between the National Botanic Gardens and Eastpoint between 2021 and 2025. However, despite an extensive search, no evidence of a breeding place (holt) or resting place (couch) for otters was recorded on the Tolka at Holy Cross College, including in the vicinity of the proposed surface water outfall locations.

Foxes and grey squirrel, which are not protected under wildlife legislation, were seen at the site by the author on several occasions.

- Overall, given the habitats present, the site is of no more than local importance (lower value) for large mammals.

8.4.7.5 Other fauna

Overall, the Holy Cross College lands are dry, with very few areas suitable for use by breeding amphibians (newts and frogs). No amphibians have been observed during the surveys undertaken to date at the subject site. Nevertheless, even minor wet areas and temporary ponds may be of value for amphibians, in particular during the spring breeding season.

Similarly, no evidence of common lizard has been recorded. However, it is possible that lizards may occur within the site, although the area of suitable habitat (such as exposed rock or heathland) is negligible.

Amphibians and reptiles are fully protected under the Wildlife Act (1976) and subsequent amendments.

The site was assessed for the presence of butterflies and for the suitability of the habitats for butterfly abundance and diversity. A number of species of butterfly such as red admiral, peacock, painted lady, ringlet and meadow brown, have all been recorded on the site by the authors. No evidence of Ireland's only protected insect, the marsh fritillary butterfly, or its food plant (devil's bit scabious (*Succisa pratensis*)) was recorded on the subject site.

- Overall, given the habitats present, the site is of no more than local importance (lower value) for other fauna.

8.4.8 Overall evaluation of the proposed development site

The proposed development site is not under any wildlife or conservation designation. Furthermore, no rare, threatened or legally protected plant species, as listed in the *Irish Red Data Book 1 – Vascular Plants* (Curtis & McGough, 1988), the *Flora Protection Order, 2022* or the *EU Habitats Directive*, are known to occur within the site and none have been recorded.

No rare habitats or habitats of particularly high ecological value (i.e. International or National) are present at the site.

No protected plants have been recorded during any of the site visits undertaken.

All of the bird species recorded are very common, and no red-listed species were noted. As noted in the stand-alone AA Screening Report (see also Section 8.4.7.2.6 above) the multi-season bird survey results clearly demonstrate that the proposed development site is of no significant value for any SCI species (i.e. Special Conservation Interest species listed in any European site) and there is no possibility of a significant effect arising on European sites as a result of potential impacts to populations of SCI bird species.

No evidence of badgers, hares, otters, amphibians or reptiles has been recorded within the subject site. No bat roosts have been recorded within the proposed development site.

The proposed development site has been evaluated in accordance with the ecological resource valuations presented in the National Roads Authority/Transport Infrastructure Ireland *Guidelines for Assessment of Ecological Impacts of National Road Schemes* (NRA/TII, 2009 (Rev. 2)), as follows.

Species:

- Overall, given the habitats present, the site is of local importance (higher value) for commuting and foraging bats. It has no more than lower ecological value for roosting bats (no bat roosts are present) however the buildings and trees do offer some roosting potential.
- Overall, given the habitats present, the site is of no importance for wintering birds.
- Overall, given the habitats present, the site is of local importance (higher value) for breeding birds.
- Overall, given the habitats present, the site is of no more than local importance (lower value) for large mammals.
- Overall, given the habitats present, the site is of no more than local importance (lower value) for other fauna.

Habitats:

- The River Tolka, including the riparian corridor, is of County importance (and is a Key Ecological Receptor).
- The Mature mixed woodland (WD1) on the western side of the site is of local importance (higher value) (and is a Key Ecological Receptor).
- The majority of the habitats on the site, including the following, are of local importance (lower value) (and are not Key Ecological Receptors):
  - Species poor amenity grassland (**GA2**).
  - Scattered trees and parkland (**WD5**).
  - Flower beds and borders (**BC4**).
  - Ornamental and non-native shrubs (**WS3**).
  - The tree lines (**WL2**) on the southern part of the site.
  - The small block of broadleaved woodland (**WD1**) on the eastern side.
  - The area of disturbed ground (**WS1/ED3**) in the northwestern corner.
  - The grassland (**GS2/GA1**) outside the proposed development site (northern part of the wider site).
  - The spoil and bare ground (**ED2**) of recent origin (eastern part of the site).
  - The remainder of the site, being covered in buildings and artificial surfaces (**BL3**), – roads, paths and car parking), with planted areas/flower beds and borders, especially within the walled-cloister gardens (**BC4**).

8.5 Predicted Impacts of the Proposed Development

8.5.1 Construction Phase

8.5.1.1 Designated Conservation Areas

The potential for any impacts on European designated sites (sites designated for nature conservation under the EU Habitats and Birds Directives) has been assessed separately, and a stand-alone report (Appropriate Assessment Screening Report), compiled in consultation with the wider design team including the project engineers, has been prepared for submission as part of the overall planning application and is submitted under separate cover.

Based on the studies undertaken and the features of the proposed development, the AA Screening process concluded that none of the habitats and species listed as qualifying interests or special conservation interests in any European site designation will be affected by the proposed development and full AA, including the preparation of a Natura Impact Statement (NIS), is not required. The following paragraphs are extracted from the AA Screening report conclusions:

> *"In view of best scientific knowledge this report concludes that the proposed development at the Holy Cross College site, individually or in combination with another plan or project, will not have a significant effect on any European sites. This conclusion was reached without considering or taking into account mitigation measures or measures intended to avoid or reduce any impact on European sites.*

It is considered that this report provides sufficient relevant information to allow the Competent Authority (Dublin City Council) to carry out an AA Screening under Section 177(U) of the Planning Acts and reach a determination, under Article 6 of the Habitats Directive, that the proposed development will not have any likely significant effects on European sites in light of their conservation objectives."

Similarly, there is no direct or indirect pathway between the proposed development site and any pNHA not already designated as a European site, and therefore no impacts on any pNHA will occur. Specifically, there is no possibility of any impacts on the Royal Canal pNHA.

8.5.1.2 Habitat Loss and Disturbance

The proposed development will result in the removal of some existing habitats of Local Importance (Lower Value) as well as alterations to parts of the site that are of Local Importance (Higher Value).

In the absence of mitigation, the loss of trees, scrub and associated habitats is considered to be a **permanent, moderate negative impact at a local level**. However, appropriate landscape planting (refer to the Landscape Design Statement), including the planting of semi-mature trees, as well as long-term biodiversity-focused landscape management will be undertaken within the development.

A total of 93 trees will be removed in order to facilitate the development, however as set out in the Landscape Design Statement there will ultimately be an increase in total tree cover at the site with approximately 815 new trees being planted.

Two new surface water connections will be made from the proposed development to the River Tolka. This will require the creation of two new outfall channels. The locations of the outfalls have been selected by the design team (including the engineer, ecologist and landscape architect) in order to minimise any potential for impacts on the River Tolka. The outfalls will be constructed in consultation and agreement with IFI and set back from the riverbank. The vast majority of works will be on the bankside, right up and including the headwall detail, which is set back from the bank edge. All of the outfall works will be constructed in advance (with the riverbank unaffected), with the last piece of work to be done to 'break through' the riverbank for the last few metres to open new channels to the river itself. On completion of the works, the newly created outfall areas will be landscaped and planted to match the existing riverbanks.

The temporary disturbance to bankside vegetation is a **temporary, minor negative impact at the local level**. However, the standard construction methodology and habitat reinstatement will mean that no permanent significant impacts arise from the installation of the surface water outfall and headwall connection. There will be no impacts on water quality in the River Tolka, or downstream as a result of these works.

The woodland strip along the western site boundary has a reasonably diverse structure and ground flora. Nonetheless, some management is proposed in order to increase the biodiversity of this area and to make it suitable for use as an amenity feature for the proposed development. This will involve the removal of some vegetation, and the introduction of new woodland planting suited to the site, as well as the creation of new low-impact paths and associated features (refer to the Landscape Design Statement, prepared by NMP Landscape Architecture and submitted as part of this application under separate cover, for full details). These features are sensitively designed and exploit existing features present in the woodland area.

The proposed woodland management will ultimately result in a **moderate, positive impact at the local level**.

The continued management of invasive alien plant species at the site (refer to the Invasive Species Management plan at **Appendix 8.3**) will also result in a **moderate, positive impact at the local level**.

8.5.1.3 Disturbance to or Loss of Habitat for Fauna

The felling of mature trees and alterations to existing buildings creates a risk of roost loss. While no bat roosts have been recorded on the proposed development site, there are several trees with roost potential and the felling of trees creates a risk of roost loss. Specifically, trees 169, 194 and 193 have very high bat roost potential and must be checked prior to felling Reduced vegetation will also lead to reduced insect abundance. This will reduce foraging opportunities for bats.

In the absence of mitigation, this will be a **permanent, slight negative impact at the local level**.

There will be a reduction in the vegetation cover and removal of the scrub and some of the mature trees that offer nest sites for the bird species noted within the site. Furthermore, in the absence of clear protocols for the protection of birds and their nests, there is potential for direct impacts on nesting birds and/or mortality of birds arising from the proposed development, should vegetation clearance take place during the bird nesting season, without accompanying bird-nesting surveys.

In the absence of mitigation, this will be a **permanent, slight negative impact at the local level**.

In the absence of mitigation (including the lighting design, the comprehensive landscape planting and the long-term habitat management proposed), this would be a **long-term, moderate negative impact at the local level** on biodiversity. However, the landscaping proposed (refer to the Landscape Design Statement, prepared by NMP Landscape Architecture and submitted as part of this application under separate cover) will ultimately lead to the introduction of new habitat (feeding and nesting) for birds.

No significant impacts on otters, badgers or any other large mammals within the site are expected as a result of the proposed development, either within the site or along the River Tolka corridor. Further, there will be no impacts on amphibians, reptiles, lepidoptera (butterflies and moths) or any other species groups as a result of the proposed development.

The implementation of biosecurity measures will ensure that no invasive alien plant species will be introduced, either deliberately or inadvertently, to the site. A long-term plan for the eradication of all such species on the Holy Cross College lands is already being implemented.

No significant impacts on wintering birds are expected as a result of the proposed development. As confirmed in the AA Screening Report (submitted as part of this application under separate cover) and **Appendix 8.2**, no Brent geese utilise the site and other SCI species use the site only on a very occasional basis. Similarly, there will be no impacts on bird species along the River Tolka corridor, such as kingfisher, grey wagtail, cormorant and heron.

8.5.1.4 Dust and other emissions

There is a potential risk to flora and fauna arising from dust deposition, which in extreme cases can inhibit photosynthesis in plants and can increase turbidity in watercourses. As set out in the chapter on Air Quality (see Section 11.3.3.1) construction dust tends to be deposited within 250 m of a construction site, with the majority of the deposition occurring within the first 50 m.

- Therefore, in the absence of adequate management and (best practice) mitigation measures, the construction phase of the development could have a **direct, short-term, slight-negative impact** on ambient air quality as a result of dust generation. Mitigation measures are outlined in Section 11.6

8.5.2 Operational Phase

According to the winter bird surveys contained in **Appendix 8.2**, the numbers of over wintering birds using the Holy Cross College lands is negligible. The proposed development will include the construction of new buildings, including one 13-storey block. However, the proposed development site is some 1.5km from the nearest SPA and the risk of collision is imperceptible. Birds tend to fly higher than the tallest obstruction in their flightpath and to fly at a greater height between foraging sites. No Brent geese were observed anywhere on the site during three years of comprehensive bird survey, and the Development site is not an important site for this or any other overwintering species.

Having regard to Specific Planning Policy Requirement SPPR3 of the Urban Development and Building Height Guidelines for Planning Authorities (December 2018), no issues arise in relation to any ecological receptors, for example via the disruption of flight lines for birds, or disruption to commuting or foraging bats.

8.5.2.1 Impacts of Lighting from the Proposed Development

Increased lighting and increased human activity have the potential to impact on bat feeding and commuting behaviour. There are no bat roosts within the site and therefore illumination will only affect commuting and feeding bats.

- Poorly designed lighting has the potential to be a **long-term to permanent slight negative impact at the local level**.

8.5.2.2 Discharges to Surface Water from the Proposed Development

As detailed in the Infrastructure Planning Report from BMCE (2025), the existing drainage systems on the site are mainly combined systems (carrying foul and surface water). There are connections from the site to the existing sewerage network on Clonliffe Road and also to a 675mm diameter combined sewer, which traverses the north east quadrant of the masterplan lands. There is an existing 225mm combined sewer on Holy Cross Avenue which discharges in a southerly direction and connects to the 375mm diameter combined sewer on Clonliffe Road. This 375mm sewer on Clonliffe Road discharges in an easterly direction and connects into a 450mm diameter combined sewer downstream.

There is also a 675mm diameter combined sewer in the north east quadrant of the masterplan lands, crossing the lower lying grassed area in a south easterly direction. The existing sewerage network in the vicinity of the site eventually discharges to the Poplar Row pumping station (to the east) and, from there, sewage is pumped to the municipal wastewater treatment at Ringsend.

There is a combination of surface water drains located on the site itself. There is an existing surface water system which collects run-off from the internal access roads, via road gullies, before discharging in a southerly direction into the 375mm diameter combined sewer on Clonliffe Road.

There is an existing combined system serving the cluster of Seminary Buildings, majority of which discharges in a southerly direction, into the 225mm combined sewer on Holy Cross Avenue, and from there into the 375mm combined sewer on Clonliffe Road. A small portion of the combined drainage

system discharges in a northerly direction and into the 675mm diameter combined public sewer. Refer to BMCE drawing CLN-BMD-00-ZZ-DR-C-1001 Sheets S1-S4 for a copy of the existing drainage site plan layouts.

As per the BMCE Infrastructure Planning Report, surface water run-off from the proposed development site will drain by gravity and will be attenuated prior to discharge into the River Tolka, with the exception of Building C2 adjacent to Clonliffe Road, which will discharge at a restricted attenuated flow into the Irish Water combined sewer on Clonliffe Road. SuDS measures (required by Dublin City Council – see for example Appendix 12 of the Dublin City Development Plan 2022 – 2028) will be incorporated into the proposed development and will include green blue roofs, permeable paving, filter drains, rain garden and shallow infiltration systems. Surface water run-off will go through a minimum of two-stage treatment prior to discharge by gravity into the receiving systems.

Operational impacts related to surface water (or ground water) management, in the context of biodiversity, as a result of the proposed development, will not be significant. In particular, there will be no long-term impacts arising as a result of the operation of the new surface water outfalls to the River Tolka.

A Site-Specific Flood Risk Assessment (SSFRA) have been prepared by BMCE and submitted under separate cover as part of this application, in accordance with the OPW publication *The Planning System and Flood Risk Assessment Guidelines for Planning Authorities*. The SSFRA confirmed that the proposed development site is within Flood Zone C and, as such, there is negligible flood risk associated with the proposed development, and negligible flood risk to surrounding areas arising from the proposed development.

Operational impacts related to flooding, in the context of biodiversity, as a result of the proposed development, will not be significant.

8.5.2.3 Discharges to Foul Sewer from the Proposed Development

The foul system will connect to the Irish Water network at three locations including two connection points into the existing 675mm combined sewer and a third connection on Clonliffe Road.

It is calculated that the proposed development will have a total hydraulic loading of 719m^3 per day of foul effluent generated during the operational phase of the development. This equates to an average flow of 6.15 litres/second (over a 24-hour period) and a peak flow of 18.45 litres/second.

A Pre-connection Enquiry application was submitted to Irish Water to confirm capacity in the receiving network and a confirmation of feasibility was obtained. See **Appendix 6** of the BMCE Infrastructure Planning Report, submitted under separate cover as part of this application, for a copy of the Irish Water Confirmation of Feasibility letter.

Foul wastewater discharge from the proposed development will be treated at the Irish Water Wastewater Treatment Plant (WwTP) at Ringsend prior to discharge to Dublin Bay. The Ringsend WwTP operates under licence from the EPA (Licence no. D0034-01) and received planning permission (ABP Reg. Ref.: 301798) in 2019 for upgrade works, which are expected to be completed by 2025.

The peak foul effluent discharge, calculated for the proposed development as 18.45 l/s (which would equate to 0.166% of the licensed discharge at Ringsend WWTP [peak hydraulic capacity]), would not have a measurable impact on the overall water quality within Dublin Bay and therefore would not have

an impact on the current Water Body Status (as defined within the Water Framework Directive (refer to the AWN HHQRA for more detail)). The Ringsend WWTP has capacity for the above proposed peak foul effluent. This assessment is supported by hydrodynamic and chemical modelling within Dublin Bay which has shown that there is significant dilution for contaminants of concern (DIN and MRP) available quite close to the outfall for the treatment plant (Ringsend WWTP 2012 EIS, Ringsend WWTP 2018 EIAR; refer to Section 12.4.22, ABP-301798-18 Inspector's report). The most recent water quality assessment of Dublin Bay WFD Waterbody undertaken by the EPA (Water Quality in 2023: An Indicators Report, 2024) also shows that Dublin Bay on the whole, currently has an 'Unpolluted' water quality status (refer to www.catchments.ie).

As such, this flow and treatment at Ringsend WWTP would not have a measurable impact on the overall current water quality and Water Body Status within the Dublin Bay Coastal Waterbody and therefore would not have an impact on the current Water Body Status (as defined within the Water Framework Directive).

As outlined in Section 3.1 (iv) of the HHQRA prepared by AWN and submitted under separate cover, upgrade works commenced in 2018 and are expected to be fully completed by 2025. The upgrade works will result in treatment of sewage to a higher quality than current, thereby ensuring effluent discharge to Dublin Bay will comply with the Urban Wastewater Treatment Directive by the end of the works.

Operational impacts related to foul water management, in the context of biodiversity, as a result of the proposed development, will not be significant.

8.6 Mitigation Measures

8.6.1 Construction Phase

8.6.1.1 Incorporated Design Mitigation

The proposed development incorporates a comprehensive landscape design, with biodiversity-focussed planting (refer to **Chapter 14** (Landscape & Visual) and the Landscape Design Statement, prepared by NMP Landscape Architecture and submitted as part of this application under separate cover). The planting and long-term management proposed in the Landscape Design Statement will enhance the biodiversity resource on the proposed development site by creating new, pollinator-friendly habitats.

8.6.1.2 Designated Conservation Areas

No designated conservation areas will be impacted in any way by the proposed development and no mitigation measures are required in this regard. Refer to the AA Screening Report that accompanies the planning application for full details in relation to European designated sites.

8.6.1.3 Habitats

There will be no significant habitat loss as a result of the proposed development. There will be no significant impacts on Key Ecological Receptors, including the River Tolka or the retained woodland on the western site boundary which will be enhanced as part of the proposed development. Regardless, as set out in the Landscape Design Statement, prepared by NMP Landscape Architecture and submitted as part of this application under separate cover, a significant amount of new planting has been

incorporated into the landscape design, and the planting has been designed with a view to maximising the new biodiversity resource at the proposed development site. The proposed planting/landscaping strategy includes a mix of appropriate species, incorporating species that will attract feeding invertebrates, including moths, butterflies and bees. It takes account of the All-Ireland Pollinator Plan (2020 - 2025)[31].

The proposed planting schedule as set out in the Landscape Design Statement contains no invasive species and none will be introduced, either deliberately or inadvertently, to the proposed development site. The Invasive Species Management Plan (see Section 8.4.5) currently being implemented at the Holy Cross College Lands will continue until all these invasive species are entirely eradicated from the site. Biosecurity measures will be included in the final CMP by the appointed contractor.

8.6.1.4 Fauna

8.6.1.4.1 Nesting birds

Where feasible and practicable, the clearance of scrub and other vegetation that may be suitable for use by nesting birds will be undertaken outside the bird nesting season (avoiding the period 1 March to 31 August). Should the construction programme require vegetation clearance between March and August, bird nesting surveys will be undertaken by suitably qualified ecologists. If no active nests are recorded, vegetation clearance will take place within 24 hours. In the event that active nests are observed, an appropriately sized buffer zone (up to 5 m radius around the nest) will be maintained around the nest until such time as all the eggs have hatched and the birds have fledged – a period that may be three weeks from the date of the survey. Once it is confirmed that the birds have fledged and no further nests have been built or occupied, vegetation clearance may take place immediately.

8.6.1.4.2 Otters and other large mammals

There will be no impacts on otters or other large mammals. Regardless, a pre-construction check for otters will be undertaken prior to the installation of the two surface water outfalls to the River Tolka, to ensure this remains the case.

8.6.1.4.3 Bats

No bat roosts have been recorded at the proposed development site, and it will not be necessary to apply for a derogation licence under Regulation 54 or 55 of the *European Communities (Birds and Natural Habitats) Regulations 2011, as amended*.

Nevertheless, as bats are highly mobile creatures, all mature trees shall be checked for bats by a bat specialist to identify trees with the highest potential prior to felling or major surgery. From this, trees with the highest roost potential as determined by the bat specialist shall be subjected to a higher level of examination that shall include thorough checking of all suitable crevices, cavities, ivy cover or loose bark. This will require access via a hoist to reach all suitable cavities and crevices. Should bats be noted during this evaluation, a derogation shall be required from NPWS.

Similarly, for all buildings proposed for demolition or where there is a need to undertake repairs / building work at roof level for the remaining buildings, a bat specialist shall examine each area for the

[31] NBDC (2021)

presence of bats prior to commencement. Sufficient time must be allowed to seek a derogation if bats are present.

8.6.1.4.4 Installation of bat and bird boxes

Notwithstanding the limited roosting potential of the site, it is proposed to install bat (and bird) boxes both within the proposed development itself and within the retained woodland blocks. The reason for the installation of additional bat boxes is not to provide replacement roosts; rather, it is to augment the overall ecological value of the site. This will contribute to maximising the ecological value of the proposed development.

To that end a number of bat and bird boxes will be erected, with advice from the Project Ecologist, in appropriate areas. The boxes proposed are as follows (this list is subject to revision based on the availability of suitable boxes in the future):

- Bat boxes proposed by the bat specialist (see also Appendix 8.1)
  - 6 no. Schwegler 2F with double front panel or similar;
  - 2 no. Eco bat boxes (wooden);
- Additional boxes proposed in this chapter:
  - 4 no. Schwegler 1MF combined bat and swift boxes or similar (to be located within the facades of four of the taller buildings proposed);
  - 6 no. assorted wooden or woodcrete bird boxes, suitable for use by robins, blue tits and tree creepers.
  - 10 no. insect hotels, to be distributed through the landscaped areas, as advised by the project ecologist during the construction phase.
  - The landscaping for the proposed development will include a dedicated series of 2m x 2m bare soil nesting habitat areas for mining solitary bees with locations to be confirmed by the project ecologist during the construction phase.

The installation of boxes that can accommodate swifts will increase the available nesting potential of the proposed development site for this species, which has not been recorded at the subject site, and which has undergone significant decline in recent years[32], and has now been placed on the red list of BoCCI[33].

No badger setts will be in any way affected by the proposed development, and no mitigation measures will be required for the protection of badgers. Nevertheless, a watching brief will be maintained by the project ecologist throughout the construction phase, in the event that badgers should establish a territory at the site.

Any ponds/wet areas found (although there are none on the site at present) will be inspected by a suitably experienced ecologist prior to works being undertaken. Should any frog spawn or tadpoles be discovered, a licence to remove frog spawn may be required from NPWS.

[32] Swift Conservation Ireland
[33] Gilbert *et al.* (2021)

8.6.1.5 Water Quality, Dust and other Emissions

The installation of two surface water outfalls has the potential to result in highly localised (in the vicinity of the outfall – not downstream), short-term (only the duration of the outfall construction period) impacts on surface water quality in the River Tolka.

The surface water mitigation measures proposed in Chapter 10 (Hydrology) and in the Outline Construction Surface Water Management Plan (CSWMP), prepared by BMCE, and Construction Management Plan (CMP), prepared by DCON Safety Consultants (all submitted as part of this application under separate cover), will ensure that no sediment contamination, contaminated run-off or untreated wastewater will enter any on-site surface water drains and, in particular, the River Tolka as a result of the construction of the proposed development. Refer also to the Appropriate Assessment Screening report.

The measures set out in **Chapter 11** (Air Quality) of this EIAR will be implemented to ensure that no air-related impacts arise on biodiversity. No further mitigation measures, in the context of biodiversity, are required.

8.6.2 Operational Phase

The lighting for the proposed development has been designed in accordance with the following guidelines:

- Bats and Lighting – Guidance Notes for Planners, Engineers, Architects and Developers (Bat Conservation Ireland, 2010)[34];
- Bats and Artificial Lighting at Night, Institute of Lighting Professionals, 2023[35];
- Guidance Notes for the Reduction of Obtrusive Light GN01-21 (Institute of Lighting Professionals, 2021)[36];
- Dark Sky Ireland's Environmentally Friendly Lighting Guide[37],
- Guidelines for consideration of bats in lighting projects (Eurobats Publication Series No 8, 2018)[38].

The proposed lighting will have the following characteristics:

- The minimum level of lighting will be provided within the developed areas, within the lux level criteria required by Dublin City Council.
- No flood lighting will be provided within the proposed development and all light fittings will be LED and are designed to shine downwards and will avoid sky glow and light spill.
- Lighting will be directed onto the working areas only – and away from retained woodland areas, which will be retained as dark areas, within the requirements of Dublin City Council.

There will be no impacts on foul water treatment capacity at the Ringsend WwTP as a result of the proposed development. No mitigation measures are required.

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[34] https://www.batconservationireland.org/wp-content/uploads/2013/09/BCIrelandGuidelines_Lighting.pdf
[35] https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/
[36] https://theilp.org.uk/publication/guidance-note-1-for-the-reduction-of-obtrusive-light-2021/
[37] https://www.darksky.ie/lighting-documents/#guidelines
[38] https://www.eurobats.org/sites/default/files/documents/publications/publication_series/WEB_DIN_A4_EUROBATS_08_ENGL_NVK_28022019.pdf

There will be no impacts related to surface water, including the River Tolka, as a result of the proposed development. The proposed development is designed in accordance with the principles of SuDS as embodied in the recommendations of the Greater Dublin Strategic Drainage Study (GDSDS), which addresses the issue of sustainability by requiring designs to comply with a set of drainage criteria which aim to minimize the impact of urbanization, by replicating the run-off characteristics of the greenfield site. The criteria provide a consistent approach to addressing the increase in both rate and volume of run-off, as well as ensuring the environment is protected from any pollution from roads and buildings. No corresponding mitigation measures are required.

No mitigation is proposed for the operational phase of the proposed development, once the measures required during the construction phase are implemented.

8.7 Residual Impacts

Overall, although the proposed development may have temporary negative impacts on biodiversity at the site level, these impacts will be fully mitigated over time to be rendered negligible.

There will be a loss of feeding habitat within the subject site for bats and birds and a loss of nesting habitat for birds as a result of the proposed works. However, the very comprehensive landscape design proposed will ensure that vegetation will establish over time and these losses will be reduced considerably. There will be very limited (slight, negative) long-term impact upon bats within the site, given the relatively low level of bat activity noted. As noted in the bat survey report (see **Appendix 8.1**) "*There is potential for some feeding loss for bats through loss of vegetation and increased lighting with the implementation of all mitigation*".

There will be no long-term impact on the River Tolka and its associated habitats, either as a result of the proposed development itself or the installation of two new surface water outfalls to the watercourse.

8.8 Monitoring

8.8.1 Construction Phase

A suitably experienced Project Ecologist (Ecological Clerk of Works) will be appointed for the duration of the construction phase and regular monitoring of all related works will take place to ensure the correct and full implementation of all mitigation measures. The Project Ecologist will ensure that all construction works take place in accordance with the development Construction Management Plan, Construction Environmental Management plan, the Construction Surface Water Management Plan and the mitigation measures set out in this EIAR.

As noted in Section 8.6.1.4, should vegetation clearance be required during the bird nesting season, this work will take place only after the Project Ecologist has undertaken a survey to ensure that no active bird nests or recently fledged birds are present. Similarly, no evidence of roosting bats was recorded on the site during any of the comprehensive bat surveys undertaken (there is one confirmed roost, in the Red House, outside of the proposed development site). Regardless, a pre-construction survey will be required to ensure that any necessary tree felling or works to buildings continue to have no impact on roosting bats.

8.8.2 Operational Phase

No long-term ecological monitoring is required, other than post-construction monitoring of the bat and bird boxes installed. The bat and bird boxes installed on the site will be checked annually for a period of two years post-completion of the works, to ensure that they continue to be accessible to these species.

On completion of construction, the lighting installed will be reviewed by the Project Ecologist and a bat specialist, to ensure that it is operating according to the approved specifications.

8.9 Reinstatement

The majority of the site to be removed and replaced with the various elements of the proposed development is of no more than Local Importance (Lower Value). The most significant part of the site, the mature woodland along the western boundary, is to be retained and enhanced as part of the proposed development. As set out in the Landscape Design Statement, prepared by NMP Landscape Architecture and submitted under separate cover, new habitats will be provided, including new trees and shrubs as well as formal planting, with biodiversity-focused SuDS measures and wildflower meadows.

The long-term management of the site will incorporate best practice measures to maintain the high level of biodiversity at the site.

On completion of the works the newly created surface water outfall areas will be landscaped and planted to match the existing riverbanks.

Given the comprehensive mitigation and landscape design proposed, no other ecological reinstatement is required.

8.10 Interactions

At the proposed development site, the main interactions of importance to biodiversity relate to Land, Soils, Geology & Hydrogeology (Chapter 9), Hydrology (Chapter 10), and Landscape & Visual (Chapter 14). The mitigation measures for the proposed development have been designed to minimise the potential impact that the demolition, construction and operational phases may have on the receiving environment, including, in particular, the River Tolka.

As noted in Chapter 11 (Air Quality), dust generation can occur during extended dry weather periods due to construction traffic along haul routes and construction activities such as excavations and infilling works. Dust emissions can coat vegetation leading to a reduction in the photosynthesising ability as well as other effects. There are no designated ecological sites within 250 m of the proposed development site area. Significant dust impacts are not predicted beyond this distance. Dust mitigation measures will be implemented on site as set out in Section 11.6.

The landscape design for the proposed development takes into account the requirements to maximise the benefits to biodiversity, both locally and within the wider landscape. The landscape scheme (refer to Chapter 14 and the Landscape Design Statement, prepared by NMP Landscape Architecture and submitted as part of this application under separate cover) proposes significant ecologically sensitive planting to provide for potentially diverse habitats.

As noted in Chapter 22 (Interactions) the potential significant impacts of biodiversity have been considered within the relevant discipline, and mitigation measures outlined, where required. With mitigation measures in place, no significant residual negative impacts are predicted.

8.11 Cumulative Impacts

A number of developments have been granted planning permission in the local area, by Dublin City Council or by An Bord Pleanála (refer to Chapter 22), including the following:

- **DCC 2935/20; ABP-308193-20**: Lands off Clonliffe Road (Part of Wider Masterplan Site) – Hotel Development- Under Construction.
- **DCC 4062/24; ABP-321745-25:** Residential Development at Drumcondra Road – Permitted.
- **LRD6006/23-S3; ABP-317136-23:** Permission for development LRD site along Richmond Road (as amended by LRD6067/24-S3)
- **DCC 4067/24:** Planning Permission for Residential development on Orchard Road- Permitted
- **LRD6009/23-S3; ABP-317438-23**: LRD at St. Vincent's Hospital at Richmond Road- Permitted
- **DCC 3483/22; ABP-314092:** Permission for residential development on Richmond Ave- Permitted.

Neither these nor any other developments will give rise to any significant impacts on biodiversity and there are no predicted cumulative impacts in relation to biodiversity, for example in terms of habitat loss or disturbance to protected species, as a result of the proposed development in combination with existing / proposed plans or projects.

8.12 'Do-Nothing' Impact

As noted in Section 8.4, the proposed development site is of local ecological importance, comprising as it does a mix of urban parkland habitats in close proximity to the River Tolka (which is of County value). Should the site remain undeveloped, and the current uses continue, no significant changes to the biodiversity value of the site can be expected.

A management plan to eradicate the invasive alien plant species is currently being implemented at the Holy Cross College Lands. Whether or not the site is developed this will continue until all these invasive species are entirely eradicated from the site.

The site is zoned Z12 under the Dublin City Development Plan (2022 – 2028) (with the objective *"To ensure existing environmental amenities are protected in the predominantly residential future use of these lands"*) and it is likely that in the absence of this subject proposal, a development of a similar nature would be progressed on the site that accords with national policy for appropriate development on such a site. Should the site be re-developed at a later stage, it is reasonable to expect that any potential impacts would be similar to those predicted to arise as a result of the proposed development.

8.13 Difficulties Encountered in Compiling the Chapter

This Biodiversity chapter is based on ecological surveys undertaken over several years by Brady Shipman Martin and other specialist ecologists.

No difficulties were encountered in compiling this chapter of the EIAR. All surveys were undertaken to an appropriate level given the nature of the site and the proposed development. The timeframe for the project facilitated the undertaking of surveys during all seasons.

8.14 Conclusion

Overall, although the proposed development is likely to have negative effects on biodiversity at the site level that are moderate, these impacts will be fully mitigated over time to be rendered not significant or imperceptible.

There will be a loss of feeding habitat internally within the site for bats and birds and a loss of nesting habitat for birds as a result of the proposed development. However, following mitigation this loss is not significant. Any long-term impact upon bats or on biodiversity receptors in general within the site will not be significant. There will be no loss of bat roosting sites as a result of the proposed development.

The landscape design proposed, which includes the provision of significant replacement and new planting, as well as ecologically sensitive management of the retained woodland resource, will ensure that vegetation will establish over time and the losses will be reduced considerably.

There will be no long-term impact on watercourses as a result of the proposed development.

In summary there will be no long-term residual impact on biodiversity or on ecological receptors, either within or in the vicinity of the proposed development site or associated with any site designated for nature conservation as a result of the proposed development.

8.15 Selected References

- Bat Conservation Ireland (2010). *Bats and Lighting – Guidance Notes for Planners, Engineers, Architects and Developers.*
- Chartered Institute of Ecology and Environmental Management (CIEEM) (2024) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. V1.3.
- Council Directive 79/409/EEC on the Conservation of Wild Birds. (The EU Birds Directive).
- Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora. (The EU Habitats Directive).
- Council Directive 2000/60/EC of the European Parliament and of the Council establishing a Framework for the Community Action in the Field of Water Policy (The Water Framework Directive).
- Dark Sky Ireland's Environmentally Friendly Lighting Guide.
- DCC (2022). Dublin City Development Plan 2022-2028.
- DCC (2020). Dublin City Biodiversity Action Plan 2021-2025.
- Department of Housing, Local Government and Heritage (2023) *Ireland's Fourth National Biodiversity Plan.*
- DG Environment (2003). *Interpretation Manual of European Union Habitats. European Commission*.
- Doogue D., Nash D., Parnell J., Reynolds S., & Wyse Jackson P. (1998). *Flora of County Dublin*. The Dublin Naturalists' Field Club.
- Environmental Protection Agency (EPA) (2022) *Guidelines on the information to be contained in Environmental Impact Assessment reports.*
- Fossitt J. (2000). *A Guide to Habitats in Ireland*. Heritage Council.
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- Institute of Lighting Professionals (2023). *Bats and Artificial Lighting at Night.*

- NPWS (2019a). **The Status of EU Protected Habitats and Species in Ireland – Volume 1.* *NPWS, Department of Culture, Heritage and the Gaeltacht.
- NPWS (2019b). **The Status of EU Protected Habitats and Species in Ireland – Volume 2* (Habitat Assessments). *NPWS, Department of Culture, Heritage and the Gaeltacht.
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- Smith G. F., O'Donoghue P., O'Hora K. and Delaney E. (2010). *Best Practice Guidance for Habitat Survey and Mapping.* Heritage Council.
- Stace, C. (2019). *New Flora of the British Isles*, 4th Edition. Cambridge University Press.
- Webb D.A., Parnell J. & Doogue D. (1996). *An Irish Flora*. Dundalgan Press.

9 Land, Soils, Geology & Hydrogeology

9.1 Introduction

This Chapter assesses and evaluates the potential impacts of the proposed development on the land, soils, geological and hydrogeological aspects of the site and surrounding area. In assessing likely *potential* and predicted effects, account is taken of both the importance of the attributes and the predicted scale and duration of the likely effects. The impact on hydrology is addressed in Chapter 10 (Hydrology).

This Chapter has been written and prepared by Luke Maguire Environmental Consultant and Geoscientist (BSc) at AWN Consulting and Teri Hayes (BSc MSc PGeol EurGeol) Senior Hydrogeologist and Director at AWN Consulting.

Luke Maguire; is an Environmental Consultant at AWN with over 4 years of experience in Environmental Consulting and water resources. Luke holds a B.Sc. in Geoscience (Geology, Hydrology, Geochemistry, Geophysics, Climate and Environmental studies) from Trinity College University of Dublin and has worked on a range of developments including pharmaceutical plants, medical device facilities, ICT facilities and energy projects. Luke has experience in contaminated soil sampling and analysis, basement impact assessments, bulk excavations and largescale dewatering processes. Additionally, Luke has gained experience in Environmental Impact Assessment Reporting (EIAR), Hydrological Risk Assessment, Flood Risk Assessments (Stage 1 & 2) and WFD Assessment Reporting and has worked in multiple Environmental monitoring disciplines such as Chemical Wastewater (Intel), Ground Gas, Surface Water, and Groundwater Monitoring at numerous sites across Dublin.

Teri is a hydrogeologist with over 25 years of experience in water resource management and impact assessment. She has a Degree in Geology and a Masters in Hydrogeology and is a former President of the Irish Group of the Association of Hydrogeologists (IAH) and has provided advisory services on water related environmental and planning issues to both public and private sector bodies. She is qualified as a competent person as recognised by the EPA in relation to contaminated land assessment (IGI Register of competent persons www.igi.ie). Her specialist area of expertise is water resource management eco-hydrogeology, hydrological assessment and environmental impact assessment.

9.2 Methodology

9.2.1 Criteria for Rating Effects

The Chapter has been prepared in accordance with European Commission's guidelines, *Guidance on the preparation of the Environmental Impact Assessment Report* (2017), the EPA *Guidelines on the information to be contained in EIAR* (2022) and the EU Commissions *Notice on changes and extensions to projects (2021).*

The appraisal methodology for the EIAR is completed in accordance with *'Guidelines on the Information to be contained in Environmental Impact Statements'* (EPA, 2022) and Institute of Geologists of Ireland (IGI) *'Geology in Environmental Impact Statements, a Guide'*, (IGI, 2002) and *'Guidelines for the Preparation of Soils, Geology and Hydrogeology Chapters of Environmental Impact Statements'* (IGI 2013). In addition, *'Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and*

Hydrogeology for National Road Schemes' by the Transport Infrastructure Ireland (TII, 2009) is referenced where the methodology for assessment of impact is appropriate.

The rating of potential environmental impacts on the land, soils and geological environment is based on the quality, significance, duration, and type of impact characteristic identified. Consideration is given to both the importance of an attribute and the magnitude of the potential environmental impacts of the proposed activities on that cited attribute. The EIAR guideline tables (EPA, 2022), the IGI and TII criteria for rating the magnitude and significance of impacts at EIA stage on the geological related attributes are also relevant in determining impact assessment.

The duration of each effect is considered to be either momentary, brief, temporary, short-term, medium term, long-term, or permanent. Momentary effects are considered to be those that last from seconds to minutes. Brief effects are those that last less than a day. Temporary effects are considered to be those which are construction related and last less than one year. Short term effects are seen as effects lasting one to seven years; medium-term effects lasting seven to fifteen years; long-term effects lasting fifteen to sixty years; and permanent effects lasting over sixty years.

The principal attributes (and impacts) assessed include the following:

- Geological heritage sites in the vicinity of the perimeter of the subject site;
- Landfills & industrial sites & graveyards in the vicinity of the site and the potential risk of encountering contaminated ground;
- The quality, drainage characteristics and range of agricultural uses of soil around the site;
- Quarries or mines in the vicinity, the potential implications (if any) for existing activities and extractable reserves;
- The extent of topsoil and subsoil cover and the potential use of this material on site as well or requirement to remove it off-site as waste for disposal or recovery;
- High-yielding water supply springs/wells in the vicinity of the site to within a 2 km radius and the potential for increased risk presented by the proposed development;
- Classification (regionally important, locally important etc.) and extent of aquifers underlying the site perimeter area and increased risks presented to them by the proposed development associated with aspects of the development for example removal of subsoil cover, removal of aquifer (in whole or part), drawdown in water levels, alteration in established flow regimes, change in groundwater quality;
- Natural hydrogeological/karst features in the area and potential for increased risk presented by the activities at the site; and
- Groundwater-fed ecosystems and the increased risk presented by operations both spatially and temporally.

9.2.2 Sources of Information

Desk-based geological information on the substrata (both Quaternary deposits and bedrock geology) underlying the extent of the site was obtained through accessing databases and other archives where available. Data was sourced from the following:

- Geological Survey of Ireland (GSI) - on-line mapping, Geo-hazard Database, Geological Heritage Sites & Sites of Special Scientific Interest, Bedrock Memoirs and 1: 100,000 mapping;
- Teagasc soil and subsoil database;
- Ordnance Survey Ireland - aerial photographs and historical mapping;

- Environmental Protection Agency (EPA) – website mapping and database information;
- National Parks and Wildlife Services (NPWS) – Protected Site Register;
- Dublin City Council Development Plan 2022-2028; and

Site-specific data was derived from the following sources:

- Infrastructure Planning Report- Holy Cross College LRD.; Barrett Mahony Civil & Structural Consulting Engineers (2025).
- Construction Environmental Management Plan- Holy Cross College LRD; DCON Safety Consultants (2025).
- Site Specific Flood Risk Assessment (SSFRA)- Holy Cross College LRD.; Barrett Mahony Civil & Structural Consulting Engineers (2025).
- The proposed development Design site plans and drawings.
- Consultation with the client & project engineers.
- Ground Investigation- Project Calvary, Virtus Project Management. Ground Investigations Ireland Ltd (GII, 2020). Refer to **Appendix 9.1.**

9.2.3 Relevant legislation & Guidance

- Environmental Protection Agency (EPA) Advice notes on current practice in the preparation of Environmental Impact Statement (EPA, 2003) and Guidelines on the Information to be contained in Environmental Impact Statements (EPA, 2022).
- TII/National Roads Authority Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes (TII/formerly NRA, 2009).
- Institute of Geologists Ireland (IGI) - Geology in Environmental Impact Statements, a guide (IGI, 2002) and Guidelines for the Preparation of Soils, Geology and Hydrogeology Chapters of Environmental Impact Statements (IGI, 2013).
- Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors' (CIRIA 532, 2001).
- Water Framework Directive (WFD) - Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy. This relates to the improvement of water quality across Ireland including rivers and groundwater bodies.
- River Basin Management Plan 2018-2021 (including regional plans by Local Authority Waters Programme (Waters and Communities 2020)).
- River Basin Management Plan 2022-2027.
- Waste Management Acts 1996 as amended;
- European Communities Environmental Objectives (Groundwater) Regulations 2010, S.I. No. 9/2010, as amended;
- European Union Environmental Objectives (Groundwater) (Amendment) Regulations 2016, S.I. No. 366/2016;
- Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration (Groundwater Directive);
- European Union Environmental Objectives (Surface Waters) (Amendment) Regulations 2019;
- Environment Agency (EA), Land contamination: risk assessment (EA 2020);
- BS 10175:2011 + A2:2017 Investigation of potentially contaminated sites. Code of practice (British Standards Institute 2017);
- CIRIA C552 Contaminated Land Risk Assessment: A Guide to Good Practice (CIRIA 2001);

- Environmental Protection Agency, Guidance on the Management of Contaminated Land and Groundwater at EPA Licensed Sites (EPA 2013);
- Local Authority planning guidance as applicable,
- Consolidated EIA Directive 2011/92/EU and 2014/52/EU.

9.3 Baseline Environment

The receiving environment is discussed in terms of; land geology, soils, hydrogeology, and site history including potential for contamination.

9.3.1 Topography and Setting

The site of the proposed development is located at Holy Cross College, Clonliffe Road, Dublin 3, and Drumcondra Road Lower, Drumcondra, Dublin 9. The Site is bounded to the west by the Drumcondra Road Lower, the south by the Clonliffe Road, to the east by residential buildings, and the north by the River Tolka. The proposed development sits as part of a wider site Masterplan for the entire Holy Cross College lands which includes a permitted hotel development (DCC Reg. Ref.: 2935/20, ABP Reg. Ref.: PL29N.308193) and potential future GAA facilities.

The site has an undulating topography, with ground levels of 6.62 metres above ordnance datum (mAOD) recorded at BH17 to the north-west of the site, 12.46 mAOD to the south-west of the site (around the currently located buildings), and 7.74 mAOD at the south-east of the Site. Natural topography would be presumed to be south to north towards the River Tolka (GII Ltd, 2020). The setting is largely suburban, with residential buildings primarily surrounding the Site, and some commercial / light industrial buildings located to the north-east.

The Site contains a number of Protected Structures including The Seminary Building, Holy Cross Chapel, South Link Building, The Assembly Hall and The Ambulatory while the wider lands also include The Red House and the Archbishop's House (both Protected Structures). The application proposes the renovation and reuse of the Seminary Building and the South Link Building to accommodate residential units and the use of the existing Holy Cross Chapel, Assembly Hall and Cloister Garden for use as community/cultural uses.

Figure 9.1 Site location map (boundary indicated in red)



9.3.2 Areas of Geological Interest, Historic & Current Land-Use

Review of the GSI online database confirmed that no geological heritage site has been identified in the vicinity of the proposed development site. The nearest recorded Geological Heritage Site is Glasnevin Cemetery (Site DC004), which is located c. 1.4 km to the west of the site at the point of closest proximity. Due to the distance and its regional up-gradient location from the proposed development, there is a negligible risk to this heritage site.

A review of historical mapping 1829 to current; (source: Geohive mapping) shows the land has, since the early 19th century, been occupied primarily by greenfield characterised by an agricultural function coupled with building structures located to the south of the Site associated with the Roman Catholic Archdiocese of Dublin. Historical maps do not show any evidence of any industrial or related activity on the Site that would result in soil or groundwater contamination. Refer to **figure 9.2-9.4** for historical mapping and aerial imagery.

According to the EPA (2025), there are no licensed Integrated Pollution Prevention and Control (IPPC) or Industrial Emissions Directive (IED) facilities in the vicinity of the Site. The closest is Everlac Paints Ltd (Licence No. P0220-01), which is 1.1 km east (down-gradient) of the proposed development Site. There are no records of any landfills or licenced waste facilities in the vicinity of the Site.

Figure 9.2 6-inch Cassini Historical Map dated 1829-1841 (OSI, 2025)

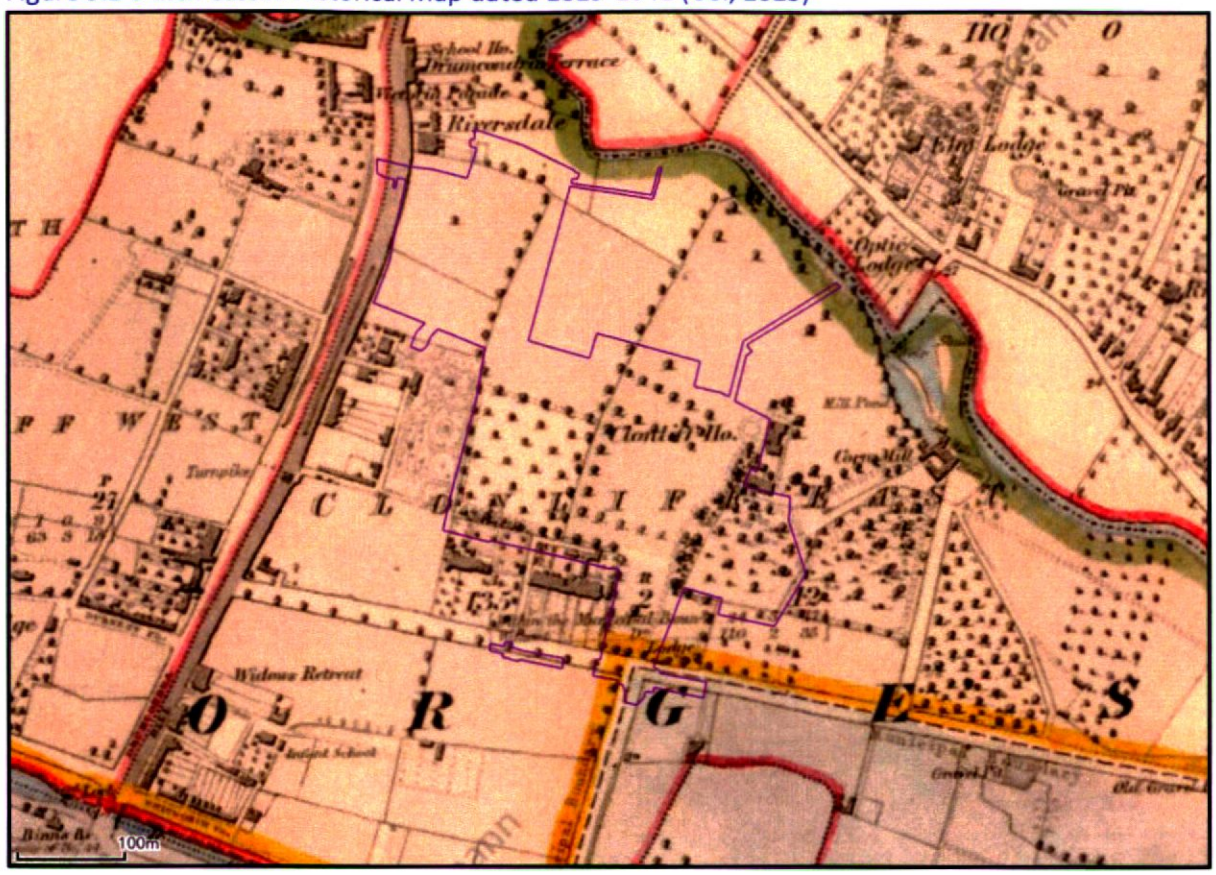


Figure 9.3 25-inch Historical Map dated 1897-1913 (OSI, 2025)

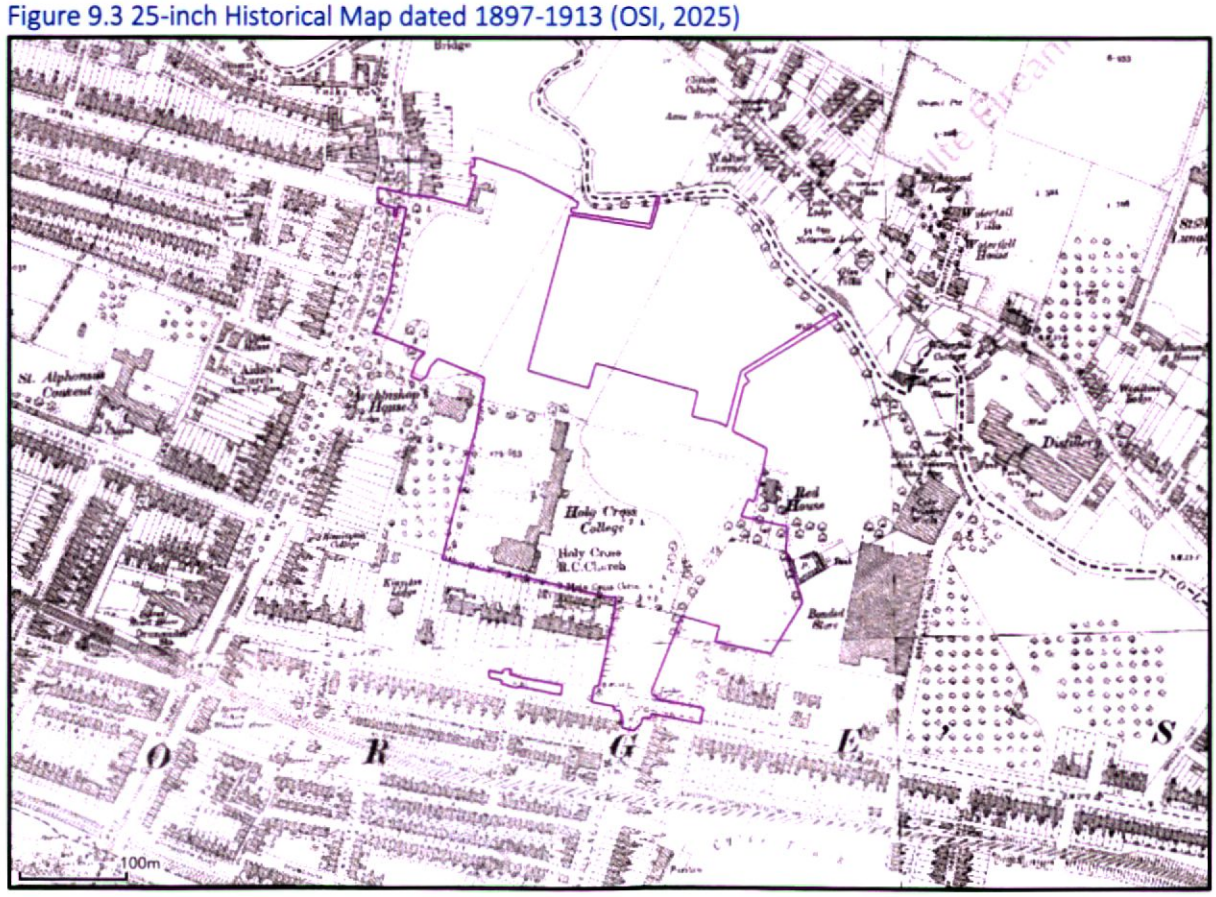


Figure 9.4 Land Use 1996 to 2000 Historical Aerial Imagery Map (OSI, 2025)



9.3.3 Soil and Quaternary Subsoil

The GSI (2025) Teagasc soil mapping indicates that the soils are comprised primarily of Made Ground/ Engineering fill material (signifying its suburban location) with deep, well drained mineral soil derived from limestones (BminDW) to the north of the Site. Alluvium (AlluvMIN) is also recorded to the north, which corresponds to the location of the River Tolka. The EPA have categorised this area of Dublin City in its CORINE landcover data series as Artificial Ground - Artificial non-agricultural vegetated areas (Green urban areas). The soil mapping for the Site is presented below in **Figure 9.6.**

The regional overburden deposits are reflective of the Quaternary geological period that extends from around 1.5 million years ago to the present day. This can be further sub-divided into the Pleistocene Epoch, which covers the Ice Age period, and which extended up to 10,000 years ago and the Holocene Epoch, which extends from that time to the present day.

The GSI/Teagasc (2025) mapping currently denotes the primary subsoil type underlying the site as Limestone till Carboniferous (TLs) which is made up of glacial clays which are less permeable than alluvium subsoils. (refer to **Figure 9.5** below).

The northern edge / boundary of the site is underlain by Alluvium subsoil which is associated with the Kennetstown Stream which bounds the site to the north (refer to **Figure 9.6 & 9.7**)

Figure 9.5 below presents the soil type predominantly covering the site and the surrounding area.

Figure 9.5 Soils Map for the Proposed Development site

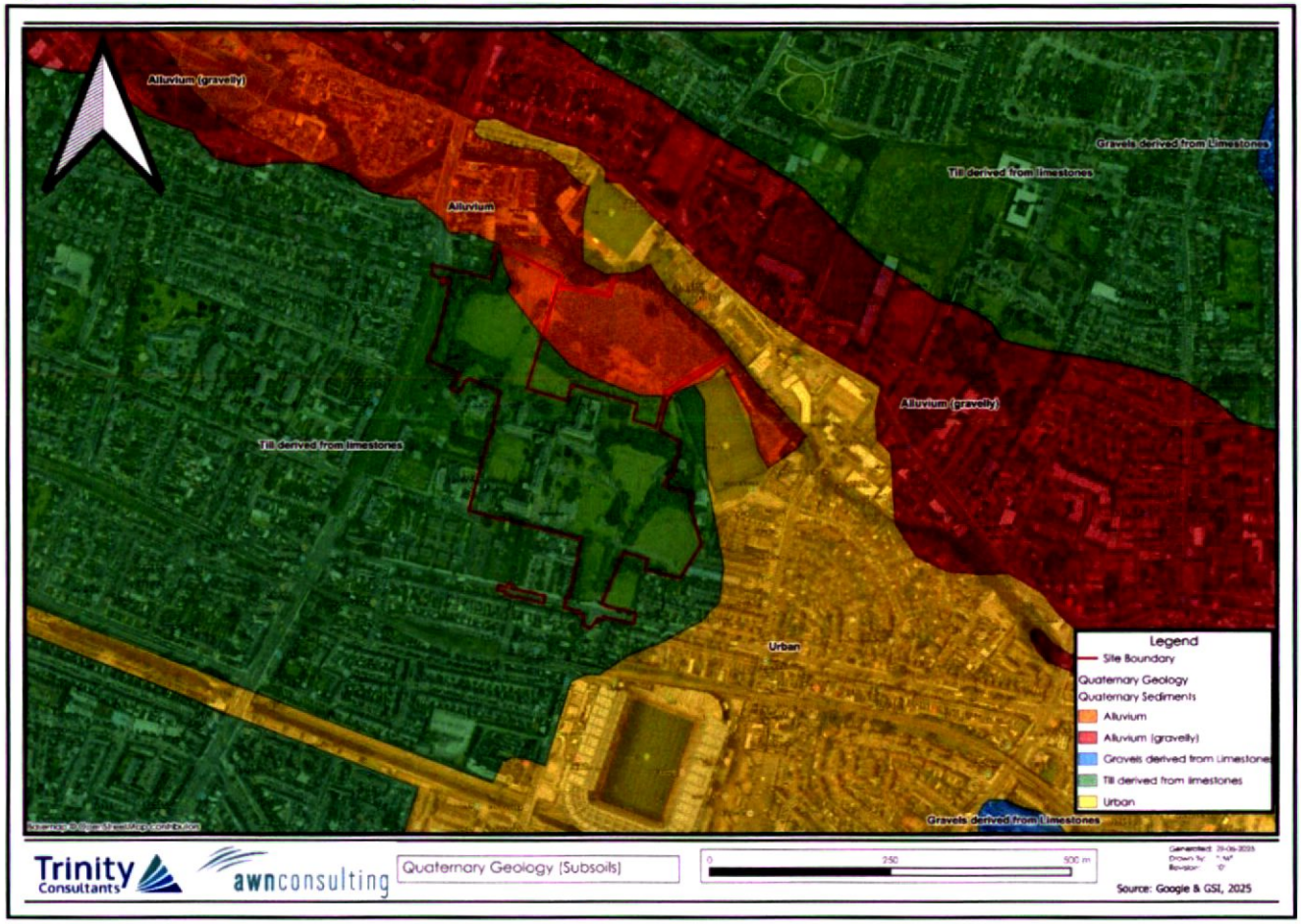


(boundary indicated in red) (Source::www.gsi.ie)

The GSI (2025) does not indicate any bedrock outcrops within the proposed site boundary or in the wider vicinity.

Figure 9.6 below illustrates the subsoil types found within and surrounding the site.

Figure 9.6 Subsoils Map for the Proposed Development site



(Source: www.gsi.ie)

9.3.3.1 2020 Site Investigations

Ground Investigations Ireland (GII) carried out an environmental site investigation at the Site of the proposed development in February, March and June 2020, coupled with an additional site visit which was conducted in October 2020. The scope of works included trial pitting, borehole drilling, subsoil sampling, interpretation of chemical data and reporting. The redline boundary presented in **Figure 9.7** below represents the environmental site investigation / survey boundary, as this investigation was conducted prior to the finalisation of the subject site boundary.

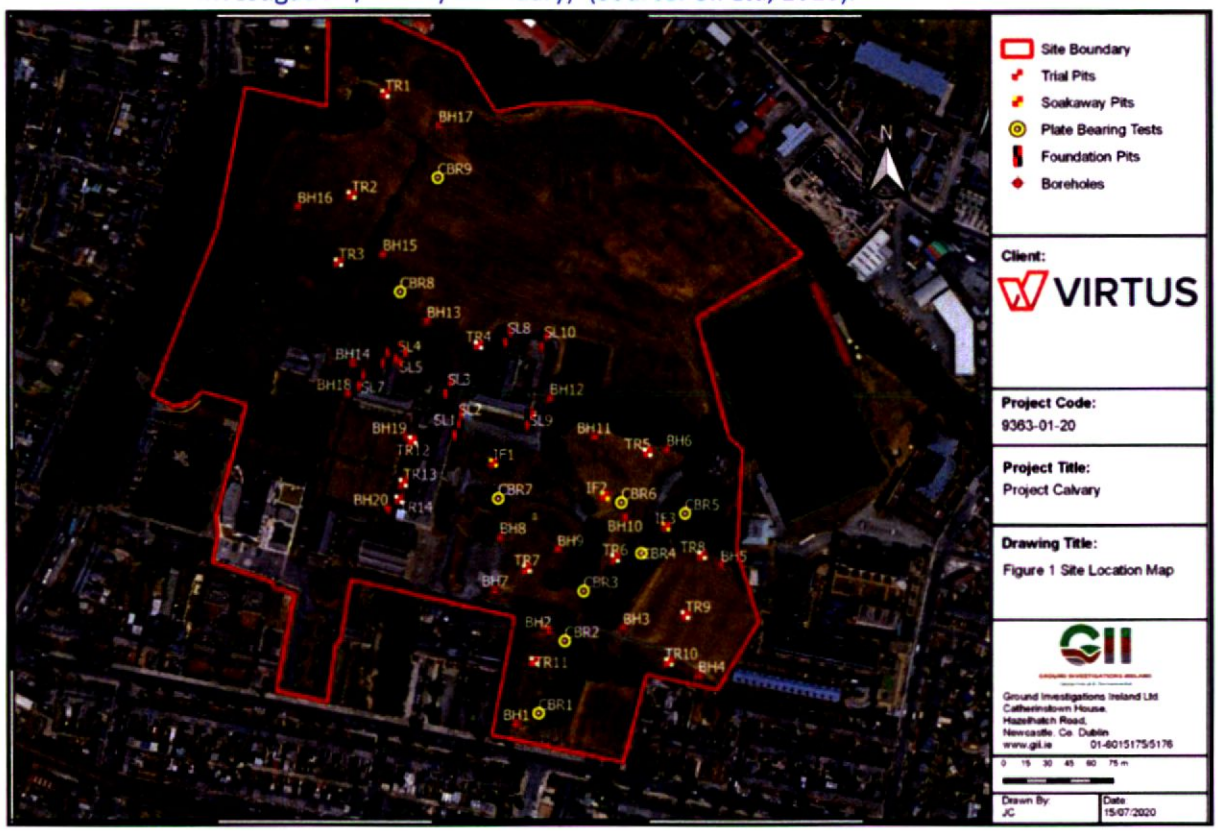
The sequence of subsoils deposits recorded during the site investigations are shown in **Table 9.1**. Site investigation locations are displayed / illustrated in **Figure 9.7**. Bedrock depth encountered during the site investigation confirms the GSI vulnerability categorisation as 'Low'.

Table 9.1 Strata Noted from Site Investigations (Ground Investigations Ireland, 2020)

Name	Depths / Notes
Topsoil	Topsoil was encountered in the majority of the exploratory holes and was present to a maximum depth of 0.90 metres below ground level (mbgl). Tarmacadam or Concrete surfacing was present typically to a depth of 0.20 m BGL in all the foundation pits and at the location of BH07 and BH14.
Made Ground	Made Ground deposits were encountered from ground level or beneath the Topsoil/Surfacing and were present to a variable depth of between 0.15 m and 2.00

Name	Depths / Notes
	(mbgl). These deposits were described generally as brown slightly sandy slightly gravelly CLAY with some cobbles and boulders and contained occasional fragments of concrete, brick, glass, ceramic, timber, animal bone and plastic. Made ground was encountered throughout the site.
Cohesive Deposits	Cohesive deposits were encountered beneath the Made Ground and were described typically as brown slightly sandy gravelly CLAY with occasional cobbles and boulders overlying a stiff dark grey slightly sandy gravelly CLAY with occasional cobbles occasional and boulders. The secondary sand and gravel constituents varied across the site and with depth, with granular lenses occasionally present in the glacial till matrix. The strength of the cohesive deposits typically increased with depth and was firm to stiff or stiff below 2.00 mbgl in the majority of the exploratory holes. These deposits had some, occasional cobbles and boulder content and noted on the exploratory hole logs.
Granular Deposits	The granular deposits were encountered beneath the cohesive deposits at TR1 & TR2. These deposits were typically described as Brown/grey clayey sandy subangular to subrounded fine to coarse GRAVEL with some subangular to subrounded cobbles and occasional boulders. At the location of BH05 and BH06, the drillers described SAND and GRAVEL deposits within and below the cohesive deposits at a depth of circa 7.0 mbgl. The secondary sand/gravel and silt/clay constituents varied across the site and with depth while occasional cobbles and boulder content were also present and noted on the exploratory hole logs.
Bedrock	The rotary core boreholes recovered interbedded weak to medium strong MUDSTONE interbedded with LIMESTONE in the rotary core boreholes. This is typical of the Lucan Formation, which is noted on the geological mapping of the proposed site. The depth to rock varies from 13.90 mbgl in BH01, to a maximum of 19.60 mbgl in BH05. No rock was found to a depth of 15 mbgl in BH06 and BH14.

Figure 9.7 Site investigation undertaken at the site (redline boundary represents the environmental site investigation / survey boundary) (Source: GII Ltd, 2020).



9.3.4 Soil Quality and Analysis

9.3.4.1 Soil Guidelines

For this analysis, the soil results were compared to the Generic Assessment Criteria (GAC) (The LQM/CIEH S4ULs for Human Health Risk Assessment, 2015) concentrations. The GAC is derived to be protective of human health and ecology for a residential end use, as detailed in above soil guidelines section. There are no legislated threshold values for soils in Ireland. As such, soil samples were compared to a GAC derived to be protective of human health, water bodies (including groundwater) and ecology for a residential end use.

GAC in the UK has been derived using the Contaminated Land Exposure Assessment (CLEA) model to be protective of human health for multiple different land uses. LQM (Land Quality Management) and the CIEH (Chartered Institute of Environmental Health) developed a document in July 2009 detailing their own research and derivation of their own 'LQM GACs'. LQM GACs were derived for a total of 82 substances including many organic substances for the standard land uses of residential, commercial/industrial and allotments. This was updated in 2015 following further research and the derived results are now called LQM/CIEH Suitable 4 Use Level (S4UL). The LQM/CIEH S4ULs are intended for use in assessing the potential risks posed to human health by contaminants in soil and as transparently derived and cautious "trigger values" above which further assessment of the risks or remedial action may be needed. For each contaminant S4ULs have been derived for six land use scenarios based on assessing exposure pathways in each planning scenario. In this instance the commercial scenario has been considered. Soil type and soil organic matter (SOM) has an influence on the behaviour of contaminants. S4Uls have been derived for three SOM contents (1%, 2.5% and 6%) to

cover the likely range in soils. A prudent approach has been taken by considering the lower 1% SOM content. At this lowest 1% SOM content lower S4AL "trigger values" are presented, as there is less potential for remediation of contaminants through microorganisms and humic substances associated with SOM.

The UK values do not have any legal standing within the Republic of Ireland and no statutory guidance for assessing the significance of soil contamination currently exists. However, the values do provide a means of placing the data within context when considering magnitude of risk and have been used in that capacity for this assessment.

9.3.4.2 Soil Quality

During the 2020 Site investigations by GII, samples were recovered from the on-site trial pit and borehole locations and sent for analysis. A selection of samples collected were analysed for a suite of parameters (the 'RILTA suite') that allow for the assessment of the soils in terms of total pollutant content, for classification of materials as hazardous or non-hazardous.

The parameter list for the RILTA suite includes analysis of the solid samples for arsenic, barium, cadmium, chromium, copper, cyanide, lead, nickel, mercury, zinc, speciated aliphatic and aromatic petroleum hydrocarbons, pH, sulphate, sulphide, moisture content, soil organic matter and asbestos. The total pollutant content analysis also provides analytical data which can be used to assess the quality of the subsoils underlying the Site and allow an assessment of their suitability for a range of proposed uses against generic assessment criteria.

The RILTA suite also includes those parameters specified in the EU Council Decision Establishing Criteria for the Acceptance of Waste at Landfills (Council Decision 2003/33/EC), referred to as 'Waste Acceptance Criteria' (WAC), which for the solid samples are pH; total organic carbon (TOC); speciated aliphatic and aromatic petroleum hydrocarbons; benzene, toluene, ethylbenzene and xylene (BTEX); phenol; polychlorinated biphenyls (PCB) and polycyclic aromatic hydrocarbons (PAH).

In line with the requirement of Council Decision 2003/33/EC, leachate was generated from the solid samples, which was in turn analysed for antimony, arsenic, barium, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, chloride, fluoride, soluble sulphate, sulphide, phenols, dissolved organic carbon (DOC) and total dissolved solids (TDS). The suite was selected due to the unknown origin of the material underlying the Site and no evidence of specific contaminants of concern highlighted in the Site history. The laboratory testing was completed by Element Materials Technology (EMT) in the UK, a UKAS accredited laboratory. The Site investigation locations are shown in **Figure 9.7**.

The laboratory analysis did not identify any asbestos containing materials (ACMs) in all but one (1) location. SL3 (foundation pit) recoded ACMs at a depth of 0.07 - 0.3 metres below ground level (mbgl). Due to this being a foundation pit, the source of the asbestos is possibly the building material and not indicative of the made ground found throughout the Site. See Chapter 20 (Material Assets – Waste) for more information on asbestos management.

The majority of the samples collected at the Site (area outlined in red in **Figure 9.7**) can be categorised as inert (as per Council Decision annex 2003/33/EC). Several of the leachate samples (TR6: 0 - 1.1 mbgl; TR8: 0 – 0.7 mbgl; TR9: 0 - 0.5 mbgl; TR10: 0 - 0.6 mbgl; SL8: 0.15 - 1.6 mbgl; TR12: 0 - 0.6 mbgl; TR13: 0 - 0.5 mbgl; TR14: 0 - 0.6 mbgl) exceeded the inert criteria limits for TOC with 1 No. sample (TR9) exceeding the hazardous threshold. However, these elevated levels will not be indicative of

contamination of the subsoils, as the majority of all the other parameters tested were below the WAC criteria, and all the samples listed are relatively shallow. The likely explanation is that the sample contained components of topsoil and vegetation, which resulted in the elevated levels of TOC.

It is recommended that, before removal of any soil from the Site, classification of the samples is carried out using an EPA approved proprietary web-based software waste classification tool called HazWasteOnline™. The software follows the latest Environment Agency (UK) guidance and EU Regulations and is approved by the Irish Environmental Protection Agency (EPA). HazWasteOnline™ allows users to code and classify waste as defined in the European List of Waste, based on EC Regulation 1272/2008 on the Classification, labelling and packaging of substances and mixtures (CLP) and latest Environment Agency (UK) guidance (WM3 v.1.1). It should be noted that the HazWasteOnline™ tool only gives a categorisation of material as Hazardous or Non-Hazardous. This will most likely be requested from any licenced facility receiving the excavated material (see corresponding EIAR Chapter on Material Assets – Waste for more information). Overall, Site soil analysis states that the soil underlying the site is of relatively good quality. Elevated TOC levels recorded in a select number of trial pit locations during the 2020 site investigations appear to be associated with the shallow depths they were recovered from and will need to be reassessed prior to removal from Site to a licenced waste facility.

The only two samples exceeding the inert WAC criteria that were not TOC-related were antimony in sample IF2 0 - 1.5 mbgl (0.06 mg/kg with a threshold of 0.05 mg/kg) and selenium 1.60 - 2.10 mbgl (0.15 mg/kg with a threshold of 0.1 mg/kg). These slightly elevated levels will not be indicative of contamination of the subsoils, as antimony and selenium are natural earth metals. The Soil Geochemical Atlas of Ireland (Teagasc, 2007) shows that the mean background concentration of antimony for soils in the area surrounding the proposed development Site is > 1.1 mg/kg, while selenium is 0.751 - 1.00 mg/kg.

The site has been closed between 2020-and 2025, therefore the condition of soils onsite has likely remained unchanged as risk of soil or ground contamination during this period or (since 2020 when the site investigation was conducted) is considered very low. Therefore, the subject site investigation from 2020 is considered to remain representative of the current existing soil and ground conditions onsite.

In line with the historic use and function of the site there was no evidence of waste deposited on-Site during site investigation works.

9.3.5 Regional Geology

Inspection of the available GSI mapping (GSI, 2025) shows bedrock geology underlying the site belongs to the Lucan Formation (Rock Unit code: LU), which is described as Carboniferous (Late Chadian to Asbian) dark limestones and shale ('calp'). This geological formation comprises dark grey to black, fine-grained, occasionally cherty, micritic limestones that weather paler, usually to pale grey. It is also characterised by its compact nature and discrete fracturing.

In terms of the structural geology of the area, the GSI database shows no structural faults traversing the northwest portion / section of the site (Refer to **Figure 9.8** below).

There is no evidence of karstification at the vicinity of the Site according to the GSI Karst and National Water Tracing database.

Figure 9.8 Bedrock Geology Map



(Source: www.gsi.ie)

9.3.6 Hydrogeology

9.3.6.1 Description of Water Body

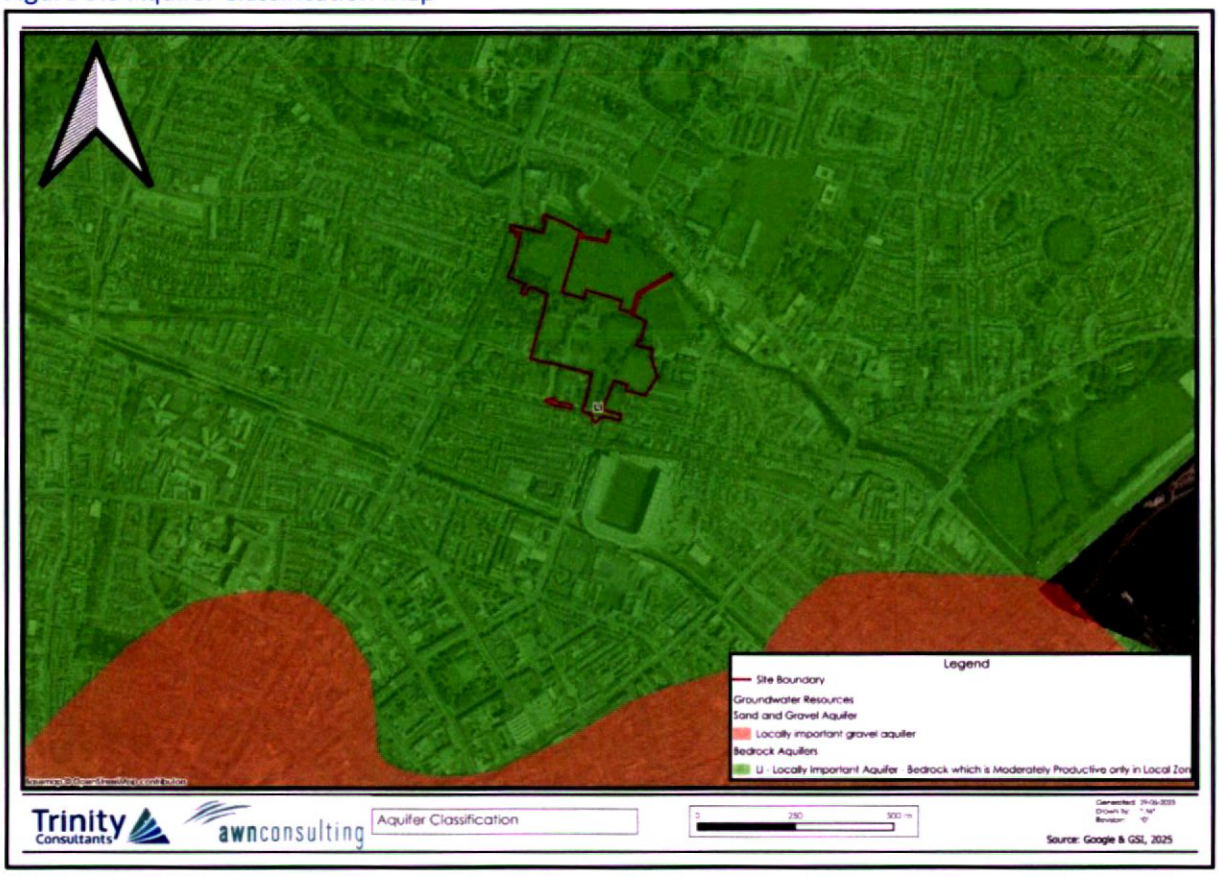
The GSI has devised a system for classifying the bedrock aquifers in Ireland. The aquifer classification for bedrock depends on a number of parameters including, the area extent of the aquifer (km^2), well yield (m^3/d), specific capacity ($m^3/d/m$) and groundwater throughput (mm^3/d). There are three main classifications: regionally important, locally important, and poor aquifers. Where an aquifer has been classified as regionally important, it is further subdivided according to the main groundwater flow regime within it. This sub-division includes regionally important fissured aquifers (Rf) and regionally important karstified aquifers (Rk). Locally important aquifers are sub-divided into those that are generally moderately productive (Lm) and those that are generally moderately productive only in local zones (Ll). Similarly, poor aquifers are classed as either generally unproductive except for local zones (Pl) or generally unproductive (Pu).

The bedrock aquifer underlying the southern portion of the site according to the GSI (www.gsi.ie/mapping) National Bedrock Aquifer Map is classified as (*Ll*) *Locally Important - Bedrock which is Generally moderately productive only in local zones*. The site is not underlain by any gravel aquifers.

In addition, groundwater source protection zones, which are zones defined by the GSI within which development is limited in order to protect groundwater from potential pollution, are not identified by

the GSI under / beneath the site or in the immediate adjacent lands / vicinity. As previously mentioned, there are no karst features in the area (GSI, 2025).

Figure 9.9 Aquifer Classification Map



(Source : www.gsi.ie)

Aquifer vulnerability is a term used to represent the intrinsic geological and hydrogeological characteristics that determine the ease with which groundwater may be contaminated generally by human activities. Due to the nature of the flow of groundwater through bedrock in Ireland, which is almost completely through fissures/ fractures, the main feature that protects groundwater from contamination, and therefore the most important feature in the protection of groundwater, is the subsoil (which can consist solely of/ or of mixtures of peat, sand, gravel, glacial till, clays, or silts).

Groundwater vulnerability is a term used to represent the natural ground characteristics that determine the ease with which groundwater may be contaminated by human activities. The GSI currently classifies the aquifer vulnerability within the subject site as *Low (L)* based on GSI (2025) data which is indicative of 10m+ overburden thickness of low permeability subsoil (CLAY in this instance). The GSI (2025) does not indicate any bedrock outcrops within the proposed site boundary or in the immediate vicinity. This was consistent with and confirmed by the 2020 Site investigations undertaken by GII during which bedrock was encountered between 13.90 mbgl in BH01, to a maximum of 19.60 mbgl in BH05.

Table 9.2 Vulnerability Mapping Guidelines (GSI, 2025).

Vulnerability Rating	Hydrogeological Condition				
	Subsoil Permeability (type) and Thickness			Unsaturated Zone	Karst Features
	High Permeability (sand/gravel)	Moderate Permeability (e.g. sandy subsoil)	Low Permeability (e.g. clayey subsoil, clay, peat)	(Sand/ gravel aquifers only)	(<30 m radius)
Extreme (E)	0 - 3 m	0 - 3 m	0 - 3 m	0 - 3 m	-
High (H)	> 3 m	3 - 10 m	3 - 5 m	> 3 m	n/a
Moderate (M)	n/a	> 10 m	5 - 10 m	n/a	n/a
Low (L)	n/a	n/a	> 10 m	n/a	n/a

Notes: (1) n/a: Not applicable
(2) Precise permeability values cannot be given at present
(2) Release point of contaminants is assumed to be 1-2 below ground surface

Figure 9.10 Aquifer Vulnerability Map



9.3.7 Groundwater Wells and Flow Direction

The GSI Well Card Index is a record of wells drilled in Ireland, water supply and site investigation boreholes. It is noted that this record is not comprehensive as licensing of wells is not currently a requirement in the Republic of Ireland. It is noted that this record is not comprehensive as licensing of wells is not currently a requirement in ROI. This current index does not show any wells drilled and springs at the site. There are no wells in the immediate vicinity of the site while several wells occupy the wider region. The well in closest proximity to the site is a borehole production well (2923SEW028) located approximately circa 1.4m northwest of the site. Multiple boreholes with a good yield and used

for industrial use are located in the Balbriggan region to the east of the site. The balance of the boreholes to the west and southwest are characterised by a historic potable use. There is no risk to these water supplies from the site.

There are no recorded groundwater resource protection zones in the immediate area of the proposed site, i.e., zones surrounding a groundwater abstraction area. The Public Supply Source Protection Area / drinking water protection area in closest proximity to the proposed development site is the Dunboyne Public Water Supply (PWS) is located approximately 15.9 km west of the Site in Co. Meath at Dunboyne.

No wells in the immediate vicinity of the site are categorised as domestic use. The area is serviced by Local Authority / public mains therefore it is unlikely that any wells are used for potable supply.

The flow direction in the overburden generally follows no fixed pattern or trend. Flows of this nature are typical of low permeability clay strata with discontinuous gravel lenses, where often the water level measures represent pore water seepages into the overburden monitoring well (opposed to bedrock wells) or perched groundwater conditions (not bedrock aquifer water). The depth to rock varies from 13.90 mbgl in BH01 to a maximum of 19.60 mbgl in BH05. Bedrock monitoring wells were installed at location BH01 and BH17. Overburden borehole monitoring wells (not screened in the bedrock) were installed in BH14 and BH6. Standing water level measurements were taken from these locations following their installation and are presented in **Table 9.3.**

Table 9.3 Standing Water Levels - 18th May 2020 (Ground Investigations Ireland, 2020)

Borehole	Groundwater Level (mbgl)
BH01	1.38
BH06	4.02
BH14	1.58
BH17	4.44

The results from **Table 9.3** appear to show the bedrock groundwater gradient as south-southwest to north-northeast towards the River Tolka. Perched (overburden) groundwater was noted in some but not all of the trial pit and borehole locations, showing the perched groundwater table is discontinuous.

The flow paths and key characteristics within the Dublin GWB are described as follows (GSI, 2025):

- 'The general groundwater flow direction in this aquifer is towards the coast and also towards the River Liffey and Dublin City. This aquifer is not expected to maintain regional groundwater flow paths. Groundwater circulation from recharge to discharge points will more commonly take place over a distance of less than a kilometre. The majority of groundwater flow will be a rapid flow in to upper weathered zone but flow in conduits is commonly recorded at depths of 30 to 50 m b.g.l. The aquifer is not considered to have any primary porosity and flow will be through fractures, some of which will have been enlarged by karstification and dolomitisation. The fissured nature and the moderate permeability of the bedrock close to the surface imply that water will move at high velocities.'
- The aquifers within the GWB are generally unconfined, but may become locally confined where the subsoil is thicker and/or lower permeability. Most flow in this aquifer will occur near the surface. In general, the effective thickness of this aquifer is likely to be about 10 m, comprising a weathered zone of a few metres and a connected fractured zone below this. However, deepwater strikes are commonly found in more isolated faults/ fractures at depths of 30 – 50 m.b.g.l. Flow path lengths

are not considered to be on a regional scale, and are typically less than 1km in length. Groundwater discharges to the numerous streams and rivers crossing the aquifer, and to the springs and seeps towards the coast.

The inferred regional groundwater flow would most likely be to the southeast towards the Dublin Bay.

Figure 9.11 below presents the GSI well search for the area surrounding the site.

Figure 9.11 GSI Well Search



(Source: GSI, 2025)

9.3.8 Groundwater Quality

The European Communities Directive 2000/60/EC, as amended established a framework for community action in the field of water policy (commonly known as the Water Framework Directive [WFD]). The WFD required *'Good Water Status'* for all European water by 2027, to be achieved through a system of river basin management planning and extensive monitoring. 'Good status' means both *'Good Ecological Status'* and *'Good Chemical Status'*.

According to the EPA mapping database (2025), the site is located within the Dublin GWB (EU Code: IE_EA_G_008). Presently, the Dublin GWB is classified by the EPA as having 'Good' WFD water quality status (2016-2021 period) and is under 'Review' (WFD 3rd Cycle). This condition is attributed to a 'Good' Quantitative Groundwater Status and 'Good' Chemical Groundwater Status (Catchments.ie, 2025).

9.3.8.1 Hydrogeological Features

According to the GSI Karst database there is no evidence of karstification (bedrock prone to dissolution leading to underground drainage systems such as caves and large crevices) in this area. This would not be expected in this type of Limestone. Given the lack of karstification in this region, there is no known underground traced flow paths.

9.3.9 Areas of Conservation

According to the NPWS (2025) on-line database there are no groundwater dependent special protected areas (SPA) or special areas of conservation (SAC) on or within the boundary of the proposed development site. The lands in which the development is located have no formal designations. There are no groundwater dependent wetlands within the downstream zone of influence (circa 1km flow path) of the proposed development (refer to section 9.3.7 above).

The relevant natura 2000 conservation sites are:

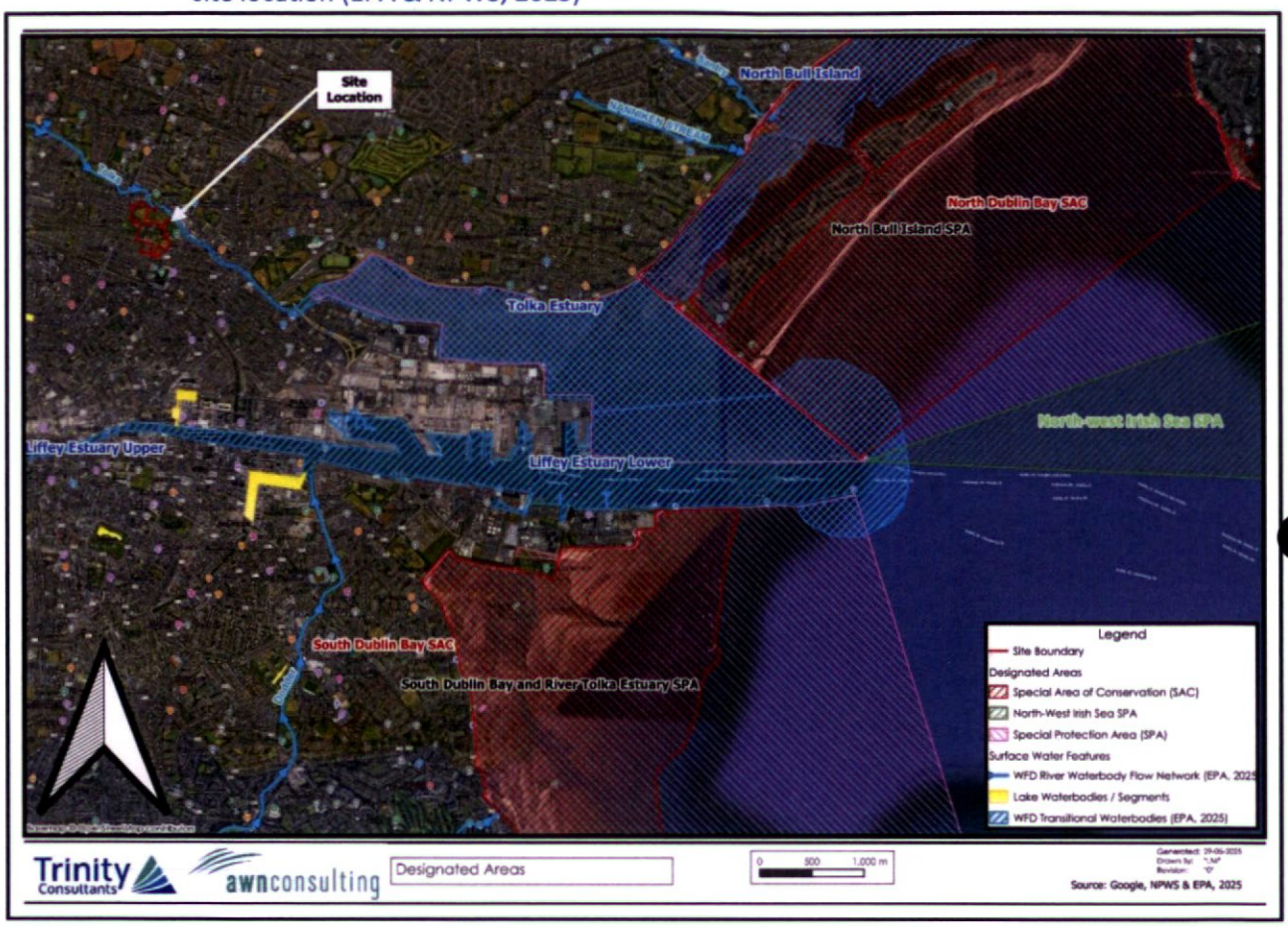
- South Dublin Bay Special Area of Conservation (SAC) (Site Code 000210) – c. 3.9 km south-east of the Site
- North Dublin SAC (Site Code 000206) – c. 4.5 km east of the site.
- South Dublin Bay and River Tolka Estuary Special Protection Area (SPA) (Site Code 004024) – c. 1.5 km east of the site.
- North Bull Island SPA (Site Code 004006) – c. 4.5km east of the Site.
- North-West Irish Sea SPA (Site Code: 004232) c. 6.4 km to the southeast of the site at the point of closest proximity.
- The nearest proposed Natural Heritage Area (NHA) (Royal Canal pNHA) is c. 0.3km to the south of the Site.

Figure 9.12 below presents the location of these protected areas in the context of the Site and it is noted that, based on the significant distance to these receptors, coupled with the large dilution factor along the hydrogeological pathway, there is no likelihood of an accidental release of hydrocarbons or silt from the proposed development resulting in any change in water quality contributing to these habitats. The closest Natura 2000 Site is North Dublin Bay Special Area of Conservation (SAC), which is 5 km east of the proposed development site. The nearest Special Protection Area (SPA), the South Dublin Bay and River Tolka Estuary SPA, is located 1.5 km east from the Site. There are no designated Natural Heritage Areas (NHA) within a 15 km radius. However, the nearest proposed NHA (pNHA), the Royal Canal is located approximately 420 m to the south the Site. The canal is fully lined and, as such, there is no potential for hydrogeological connectivity or a source pathway receptor linkage (S-P-R). Refer to Chapter 8 (Biodiversity) for more information on Natura 2000 Sites in the vicinity.

The proposed development would have a very low potential for a hydrogeological connection with the designated sites listed above via the aquifer underlying the site due to lengthy underground flow path distances in an aquifer characterised by discrete local fracturing with little connectivity rather than large, connected fractures which are more indicative of Regional Aquifers. As such, flow paths are generally local. Such a hydrogeological linkage / connection does involve a significant dilution factor in the aquifer and Dublin Bay.

Figure 9.12, below, presents the location of these protected areas in the context of the proposed development site.

Figure 9.12 Designated Natura 2000 Conservation / Protection Sites in the context of the development site location (EPA & NPWS, 2025)



9.3.10 Radon

According to the EPA (now incorporating the Radiological Protection Institute of Ireland) the site location is in a Radon Zone Area where between 1 - 5% of the homes in the corresponding 10 km grid are estimated to be above reference level. This is relatively low, as grid squares in which the predicted percentage of homes is 10 % or greater are regarded as 'High Radon Areas'.

9.3.11 Economic Geology

The EPA Extractive Industry Register and the GSI mineral database were consulted to determine whether there were / are any mineral sites close to the Site. The Huntstown Quarry is 6.2 km to the north-west of the Site of the proposed development.

9.3.12 Geohazards

Much of the Earth's surface is covered by unconsolidated sediments which can be especially prone to instability. Water often plays a key role in lubricating slope failure. Instability is often significantly increased by man's activities in building houses, roads, drainage, and agricultural changes. Landslides, mud flows, bog bursts (in Ireland) and debris flows are a result. In general, Ireland suffers few landslides. Landslides are more common in unconsolidated material than in bedrock, and where the sea constantly erodes the material at the base of a cliff and leads to recession of the cliffs. Landslides have also occurred in Ireland in recent years in upland peat areas due to disturbance of peat associated with

construction activities. There have been no recorded landslide events at the site. Due to the local topography and the underlying strata, there is a negligible risk of a landslide event occurring at the site.

In Ireland, seismic activity is recorded by the Irish National Seismic Network operated by the Geophysics Section of the School of Cosmic Physics at the Dublin Institute for Advanced Studies (DIAS) which has been recording seismic events in Ireland since 1978. The station configuration has varied over the years. However, currently there are five permanent broadband seismic recording stations in Ireland operated by DIAS. The seismic data from the stations comes into DIAS in real-time and is studied for local and regional events. Records since 1980 show that the nearest seismic activity to the proposed location was in the Irish Sea (1.0 – 2.0 Ml magnitude) and ~20 km to the south in the Wicklow Mountains. There is a very low risk of seismic activity to the proposed development site.

There are no active volcanoes in Ireland so there is no risk from volcanic activity.

9.3.13 TII Methodology

Based on the TII methodology, the criteria for rating site importance of **geological** features, the importance of the features at this proposed development site is rated as *Low Importance*. This is based on the assessment that the attribute has a low-quality significance or value on a local scale (refer to **Appendix 10.1 of the EIAR**).

Based on the TII methodology, the criteria for rating site importance of **hydrogeological** features, the importance of the features at this proposed development site is rated as *Medium Importance*. This is based on the assessment that the attribute has a medium-quality significance or value on a local scale, coupled with the site's location overlying a Locally Important (Ll) bedrock aquifer that is moderately productive in local zones with low groundwater vulnerability (refer to **Appendix 10.1 of the EIAR**).

9.3.14 Conceptual Site Model

Local cross-sections for the Site are presented below as **Figure 9.13** (A-A: south-west to north-east). This cross-section and the description below present the Conceptual Site Model (CSM), which was developed in order to identify any likely source-pathway-receptor linkages relating to the proposed development Site.

Historically the Site of the proposed development was mostly greenfield. There was no evidence of any historical waste disposal or source of contamination encountered during the GII Ground Investigation (GII, 2020).

The Site has an undulating topography ranging from c. 6.5 mAOD to c 12.4 mAOD. The highest point of elevation at the Site is located at the existing Holy Cross College buildings. The regional gradient falls from west to east towards the Irish sea / Dublin Bay coastline.

From on-Site investigations undertaken in 2020, the depth to rock varies from 13.90 mbgl in BH01 to a maximum of 19.60 mbgl in BH05. The bedrock consists of dark limestones and shale ('calp') which is referred to as Lucan Formation (Rock Unit code: LU) as per GSI mapping. The limestone is classified by the GSI as a Locally Important Bedrock Aquifer (Ll), "moderately productive only in local zones".

The bedrock aquifer is well protected by low permeability clay and characterised by the GSI as a low vulnerability area. The inferred groundwater flow from the site within the bedrock unit is north-eastward towards the River Tolka based on topography. However, the regional inferred groundwater flow would most likely be to the southeast towards the Dublin Bay. There is no continuous perched

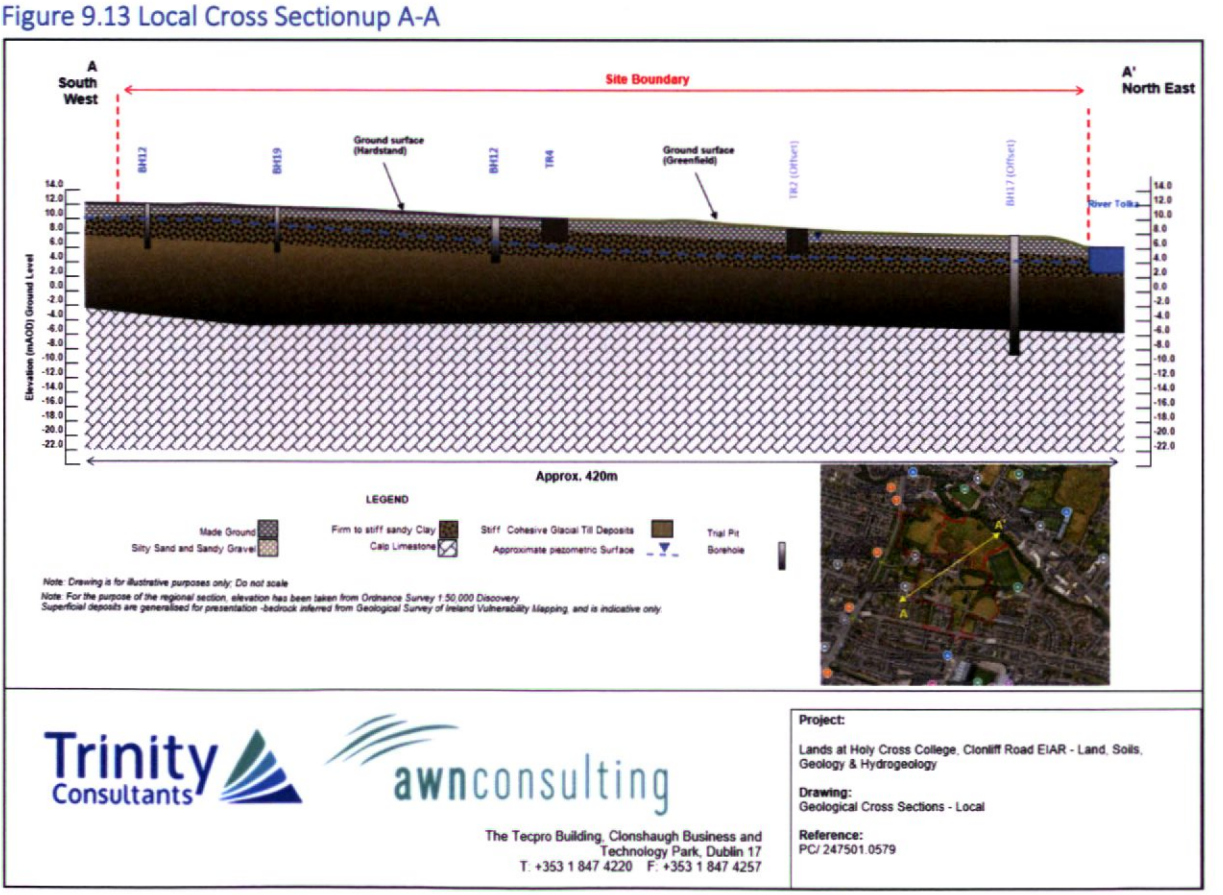
groundwater table on-Site. The groundwater body in the region of the site (Dublin GWB) is classified under the WFD Risk Score system as currently 'Under Review'. Previously (2016 – 2021) the Dublin GWB was given 'Good Status'.

The Site drainage comprises a mixture of man-made stormwater drainage to the south of the Site, internal drainage ditches, and overland drainage which discharge to the River Tolka, located north of the Site. This in turn discharges into the South Dublin Bay and River Tolka Estuary SPA, c. 1.5 km from the Site. The proposed development is outside of any delineated drinking water protection areas.

Site soil analysis states that the soil underlying the site is of relatively good quality. Elevated TOC levels recorded in a select number of trial pit locations during the 2020 site investigations appear to be associated with the shallow depths they were recovered from and will need to be reassessed prior to removal from Site to a licenced waste facility.

There are no groundwater-dependent terrestrial ecosystems which have the potential to be impacted by the proposed development. The limestone aquifer is characterised by discrete discontinuous fracturing with little connectivity and, as such, there is no groundwater source-pathway linkage to the North Dublin Bay SAC or South Dublin Bay and River Tolka Estuary SPA. There is a hydraulic connection to both Designated Sites via stormwater drainage to the River Tolka. These are examined further in Chapter 10 (Hydrology) and Chapter 8 (Biodiversity).

Figure 9.13 Local Cross Sectionup A-A



9.4 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

The development will consist of the construction of a residential development set out in blocks ranging in height from 3 to 13 storeys, to accommodate 1131 no. apartments including retail and crèche units, residential tenant amenity spaces, community/cultural spaces, mobility hubs and public open space.

The proposed development sits as part of a Site Masterplan for a wider landbank which includes an under-construction hotel development and potential future GAA facilities (which would be subject to separate future planning applications). To facilitate the proposed development the scheme will involve the demolition of a number of existing structures on the site.

The application site contains a number of Protected Structures including The Seminary Building, Holy Cross Chapel, South Link Building, The Assembly Hall and The Ambulatory while the wider lands also include The Red House and the Archbishop's House (both Protected Structures). The application proposes the renovation and reuse of the Seminary Building and the South Link Building to accommodate residential units and the use of the existing Holy Cross Chapel, Assembly Hall and Cloister Garden for use as community/cultural uses.

The residential buildings are arranged around a number of proposed public open spaces and routes throughout the site with extensive landscaping and tree planting proposed. Communal amenity spaces will be located adjacent to residential buildings and at roof level throughout the scheme. To facilitate the proposed development the scheme will involve the removal of some existing trees on the site.

The site is proposed to be accessed by vehicles, cyclists and pedestrians from a widened entrance on Clonliffe Road, at the junction with Jones's Road and through the opening up of an unused access point on Drumcondra Road Lower at the junction with Hollybank Rd. An additional cyclist and pedestrian access is proposed through an existing access point on Holy Cross Avenue. The development will include a single level basement under Blocks B3 and D2, and podium parking to Blocks A1 & D2 to accommodate car parking spaces, bicycle parking, storage, services and plant areas.

The proposed development includes all site landscaping works, green roofs, boundary treatments, lighting, servicing and utilities, signage, and associated and ancillary works, including site development works above and below ground.

In relation to Soil, Geology and hydrogeology the relevant characteristics are as follows:

- Increase in hardstanding.
- Provision of underground attenuation tanks, detention storage (basins) and associated infrastructure as part of the surface water systems along with installation of bypass hydrocarbon / petrol interceptors.
- All ancillary site development, landscaping and construction works to facilitate foul, water and service network connections.

9.4.1 Construction Phase

The key civil engineering works which relate to the land, soil geology, and hydrogeological environment during construction of the proposed development are summarised below:

- During the construction phase, excavated soil and stones (c. 30,000 m^3) will be generated from the excavations required to facilitate site levelling to the necessary base level and construction of new foundations. It is anticipated that c. 10,000 m^3 of this excavated soil and stone will be reused on

site. It is anticipated that c. 20,000 m^3 of excavated material will subsequently need to be removed off site and disposed of at a fully authorised soil recovery facility.

- The aquifer vulnerability is low which suggests that bedrock will not be encountered given depth to foundation level and subsequently no rock breaking or excavation of bedrock is anticipated.
- Storage of aggregate materials such as sands and gravels will be stored in clearly marked receptacles in a secure compound area within the contractors' compound on site. Temporary storage of spoil will be managed to prevent accidental release of dust and uncontrolled surface water run-off which may contain sediment and solid matter. Any excavated material temporarily stockpiled onsite for re-use during reinstatement will be managed to prevent accidental release of dust and uncontrolled surface water run-off which may contain sediment etc;
- Temporary storage of fuel required on site for construction traffic will be located within temporary bunded areas, doubled skinned tanks or bunded containers (all bunds will conform to standard bunding specifications - BS8007-1987) to prevent spillage.
- There will be a requirement for deliveries of imported engineering fill (sands and gravels), and other construction materials include, steel structure, concrete, cladding, ducting and piping. Construction materials will be brought to site by road. Soil requiring removal offsite will be removed from site regularly to ensure there is minimal need for stockpiling. Some of the topsoil will be re-used on site for backfill (levels in some areas need to be raised) and landscaping with some export required. Any surplus topsoil material will be transported off site and disposed of at a fully authorised soil recovery facility / site.
- Construction activities will necessitate storage of cement and concrete materials, temporary oils, and fuels on site. Small localised accidental releases of contaminating substances including hydrocarbons have the potential to occur from construction traffic and vehicles operating on site.
- No significant dewatering is anticipated during the construction phase which would result in the localised lowering of the water table.
- No Abstraction of groundwater is included in this development.

9.4.2 Operational Phase

The proposed application development will result in the increase in hardstanding area. During the operational phase there is no requirement for bulk fuels or chemical storage, no requirement for discharge to ground and no requirement for abstraction of groundwater. No long-term dewatering is anticipated for this development.

In accordance with the requirements of Dublin City Council, the proposed drainage system designed for this development includes / incorporates a number (multitude) of Sustainable Urban Drainage Systems (SuDS) measures which serve a dual purpose in managing stormwater and will be incorporated to reduce run-off volumes and improve run-off water quality. The proposed SuDs mechanisms will comprise the following:

- Intensive Green Blue Roof
- Extensive Green Blue Roof
- Gravel Filter Drains
- Bioretention areas
- Rain Garden & Tree Pits
- Permeable paving – for all car parking spaces
- Silt Trap

- Filter Strip
- Detention Basin
- Downstream Defender (sediment remover/remediation)
- Oil Separator
- Petrol Interceptor – Prior to out falling into main system
- Hydrobrake flow control – prior to out falling into the main system.
- Attenuation tanks

9.5 Predicted Impacts of the Proposed Development

This section details the potential impacts to land, soil and groundwater associated with the proposed development. As outlined below the activities required for the construction phase of the proposed development represent the greatest risk of potential impact on the geological and hydrogeological environment. These activities primarily pertain to the site preparation, excavation and infilling activities required to facilitate construction of the proposed development.

9.5.1 Do-Nothing Impact

If the proposed development were not to go ahead (i.e., in the Do-Nothing scenario) there would be no excavation or construction or operational impact at this site. There would, therefore, be a neutral effect on the environment.

The site is zoned for development and it is likely that, in the absence of this subject proposal, a development of a similar nature would be progressed on the site that accords with national and regional policies and, therefore, the likely effects would be similar to this proposal, as described in the following sections.

9.5.2 Construction Phase

9.5.2.1 Potential Impacts on Land, Soil, Geology, and Hydrogeology

Soil requiring removal offsite will be removed from site regularly to ensure there is minimal need for stockpiling. All of the topsoil will be re-used on site for backfill (levels in some areas need to be raised) and landscaping with some export required. All soils, subsoils and stone removed from the site will be transported off site and disposed of at a fully authorised soil recovery site.

There is potential for groundwater to become contaminated with pollutants associated with construction activity. Contaminated groundwater which arises from construction sites can pose a significant short-term risk to the underlying Dublin GWB quality for the duration of the construction if contaminated water is allowed percolate to the aquifer. During construction of the development, there is a risk of accidental pollution incidences from the following sources:

- There is potential for shallow soils to become contaminated with pollutants. There is minimal risk of aquifer contamination due to the nature and thickness of soil cover present at the site providing a natural level of protection to accidental discharges or spillages during the construction phase.
- Suspended solids (muddy water with increased turbidity) – arising from excavation and ground disturbance.
- Cement/concrete (increase turbidity and pH) – arising from construction materials.

- Hydrocarbons (ecotoxic) – accidental spillages from construction plant or onsite storage. Soils contaminated by petroleum hydrocarbons can affect soil health. They can harm soil microorganisms, reducing their number and activity.
- Wastewater (nutrient and microbial rich) – arising from accidental discharge from on-site toilets and washrooms.
- Excavation of soil and near-surface rock head will be required for levelling of the site to render it suitable for building the building platform. Local removal and reinstatement (including infilling) of the 'protective' topsoil and subsoil cover across the development area at the site will not change the overall vulnerability category for the site which is classified as *'Low'*. Capping significant areas of the site by hardstand/ building following construction and installation of drainage will minimize the potential for contamination of the aquifers beneath the site.
- During the construction phase, excavated soil and stones (c. 30,000 m^3) will be generated from the excavations required to facilitate site levelling to the necessary base level and construction of new foundations. It is anticipated that c. 10,000 m^3 of this excavated soil and stone will be reused on site. It is anticipated that c. 20,000 m^3 of excavated material will subsequently need to be removed off site and disposed of at a fully authorised soil recovery facility.
- Excavated and stripped soil can be disturbed and eroded by site vehicles during the construction. Rainfall and wind can also impact on non-vegetated/uncovered areas within the excavation or where soil is stockpiled. This can lead to run-off with high suspended solid content which can impact on water bodies. The potential risk from this indirect impact to water bodies and/or habitats from contaminated water would depend on the magnitude and duration of any water quality impact.
- Due to the historical greenfield use at the site, the risk of contaminated soils being present onsite is considered low.
- Soil Sample results confirmed that all Block sites are not contaminated. However, in the event of any evidence of soil contamination being found during either the excavation or the construction works, appropriate remediation measures will be employed. Any contaminated soil will be delineated, removed and stored on impervious quarantine areas pending testing to confirm appropriate removal and disposal to permitted licensed waste facilities. Records of disposal will be retained on site for inspection by Dublin City Council (DCC).
- Accidental discharges can also occur from welfare facilities during construction activities. Wastewater can contain high levels of bacteria, chemicals, and organic matter, which could contaminate nearby water sources if discharged incorrectly. The establishment and use of welfare facilities and connection to the existing foul sewer within the site, ensures that there are no potential significant impacts; therefore, no additional mitigation is required.
- Temporary construction surface drainage and sediment control measures, including the use of SuDS, will be provided before earthworks commence. The drainage design follows the natural topography of the site and utilises the existing storm water infrastructure within the surrounding infrastructure where possible including the River Tolka.
- A Construction Drainage Control System will be put in place so that all silt laden water will be diverted to temporary settlement storage tanks prior to discharge. This discharge, and the associated pollution control measures, will be subject to the approval of the Local Authority. At the northern and eastern boundary (in the northwest sector of the site which is nearest to the River Tolka), temporary silt fencing will be installed along the site boundary. The fencing will be inspected

daily by the site management staff, and after and adverse conditions, for any signs of contamination or excessive silt deposits.

- All discharges to surface waters will be suitably treated prior to discharge. There will be no direct discharge of surface water from any element of the works without proper attenuation and treatment. Any ground water arising from dewatering operations shall pass through an arrangement of sediment settling tanks, prior to discharge.
- The geotechnical site investigations findings indicate that bedrock excavation will not be required during the excavation works to achieve formation level. For this reason, dewatering is likely to be very limited. Groundwater drawdown is therefore not considered to be a risk to adjacent buildings side slopes or retaining walls.

In the absence of mitigation measures the potential impacts during the construction phase on land, soils and geology, hydrogeology (groundwater) are **negative, not significant** and **short term**.

9.5.2.2 Potential Impacts on Human Health and Populations

The site is not located near any public groundwater supplies or group schemes. As previously mentioned, there are no groundwater source protection zones, Groundwater Drinking Water Protection Areas (Public Supply Source Protection Areas OR Group Scheme Preliminary Source Protection Areas) in the immediate vicinity of the site. Given the separation distance between the proposed development site and the nearest groundwater source protection zones there are no potential impacts on groundwater source protection zones (proposed site is outside of the zone of contribution of this supply) There is no source pathway linkage to the underlying aquifer or any Public Drinking Water Supply scheme or Source Protection Zone (SPZ). The nature and thickness of soil cover present at the site provides a natural level of protection. No bulk oil storage is required during site operation. The site is not located within any source protection zones (SPZs), public groundwater supplies or group schemes with the nearest located approximately 15.9 km west of the Site (Dunboyne PWS) and the proposed site is outside of the zone of contribution of this supply.

A reduction in groundwater quality via unmitigated pollutants entering the soil and migrating to the underlying Dublin GWB would have potential to lead to negative impacts on human health and populations if a pathway existed. Hydrocarbons and petroleum products for example have the greatest risk for human health when they are in drinking water. Furthermore, humans can also be exposed to petroleum hydrocarbons or other contaminants by inhaling the fumes / dust from contaminated soil. Depending on the type of contaminant and the level of exposure, soil contamination can have serious health implications.

None of the wells listed in the wider region of the site are categorised as domestic use. The area is serviced by Local Authority mains therefore it is unlikely that any wells are used for potable supply.

No likely impact on the groundwater quality is foreseen due to low potential loading, natural attenuation within overburden and lack of geological faulting / fracturing reducing potential for off site migration.

The waste soil classification (WAC) classified the majority of samples as non-hazardous or inert.

Given this greenfield land has historically been utilized for agricultural purposes, and the lack of documented / recorded illegal / historic landfills in the vicinity, the potential risk of extensive contamination is considered low.

Any contaminated / hazardous soils encountered onsite will be removed from site and sent to a licenced treatment / disposal facility that accepts the corresponding soil classification / category, while clean soils maybe be reused onsite for backfill of landscaping. Therefore, on this basis in the absence of mitigation measures the potential impacts during the construction phase on human health and populations due to changes to the potential for contamination of soil and groundwater are **neutral imperceptible** and **short term**.

9.5.2.3 Potential Impacts on Water Framework Directive Status

There is a potential of accidental discharges during the construction phase (as previously set out in Section 9.4.2), however no likely impact on the underlying aquifer due to the thick soil cover present on the site.

Even in the absence of mitigation measures, the potential impact on Water Framework Directive status of the Dublin GWB or its potential to meet the requirements and/or objectives in the second RBMP 2018-2021 (River Basin Management Plan) and third RBMP 2022-2027 during the construction phase is considered to be neutral, imperceptible-and short term (temporary).

9.5.3 Operational Phase

The following risks have been considered in relation to the operational phase of the proposed development:

- There is a potential for leaks and spillages from vehicles along roads and in parking areas. Any accidental emissions of oil, petrol or diesel could cause soil / groundwater contamination if the emissions are unmitigated.
- A proportion of the Site will be partially covered in new hardstanding. This will provide protection to the underlying aquifer but also reduce local recharge in this area of the aquifer. As the area of the aquifer is large, this reduction in local recharge will have a **not significant** change in the natural hydrogeological regime.
- Groundwater abstraction does not form part of the proposed development. There will be no impact on local or regional groundwater resources (abstraction) as a result of the proposed development.

These potential impacts are not anticipated to occur following the implementation of mitigation measures outlined in Section 9.6.

There will be no direct discharges to the ground or abstractions from the bedrock aquifer during the operation of the development. The potential impacts of the development post development in relation to land soils and environment have been assessed under the following headings:

- Localised and Minor Accidental Emissions to ground from a car leak/delivery truck;
- Increase in hardstanding area will result in a localised alteration / reduction in recharge to the aquifer due to a decrease in local recharge (percolation to ground). As the area of aquifer is large this reduction in local recharge will have no significant change in the natural hydrogeological regime.

With or without mitigation, the impact of the proposed development on land soils and groundwater post construction is considered to be **neutral, imperceptible**, and **long-term.**

9.6 Mitigation Measures

This section outlines the measures that will be employed in order to minimise the impact on land, soils, and groundwater of the proposed development.

9.6.1 Construction Phase

A Construction Environmental Management Plan (CEMP) and Construction Management Plan (CMP) have been included with the application documentation and contained in this EIAR. This outlines the best practice construction techniques and methodologies which will be implemented during construction of the proposed development including measures to protect waterbodies. The CEMP sets out the proposed procedures and operations to be utilised on the proposed construction site to protect water quality. The mitigation and control measures outlined in the CEMP and this EIAR will be employed on site during the construction phase.

The CEMP and mitigation measures set out in this EIAR will be implemented and adhered to by the construction Contractor and will be overseen and updated as required if site conditions change by the Project Manager, Environmental Manager and Ecological Clerk of Works where relevant. All personnel working on the site will be trained in the implementation of the procedures.

All mitigation measures outlined in this chapter, and within the CEMP will be implemented during the construction phase, as well as any additional measures required pursuant to planning conditions which may be imposed.

The CEMP and this EIAR contains best practice measures and protocols to be implemented during the construction phase of the proposed development to avoid / minimise environmental impacts.

Construction works and the proposed mitigation measures are informed by best practice guidance on the prevention of pollution during development projects including but not limited to:

- Construction Industry Research and Information Association (CIRIA), Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors (C532);
- Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters (2016);
- Construction Industry Research and Information Association (CIRIA) Environmental Good Practice on Site (4th edition), (C741); and
- Enterprise Ireland Best Practice Guide, Oil Storage Guidelines (BPGCS005).

According to the subject CEMP prepared by DCON Safety Consultants (2025), all existing surface water drainage elements (including adjacent River Tolka) shall be maintained free from waste materials generated during the construction of the proposed development, including the initial site clearance and excavation. Routine visual inspections by the contractor shall reduce any risk of excess construction materials causing obstructions to surface water drainage and any potential flooding occurring. A maintenance schedule and operational schedule must be established by the contractor for silt and pollution control measures during the construction period. This should be undertaken in consultation with the relevant statutory authorities.

Run-off from the working site or any areas of exposed soil shall be channelled and intercepted at regular intervals for discharge to silt traps or lagoons. A temporary positive drainage system shall be installed prior to the commencement of the construction works, to collect surface water runoff from the site during construction. A temporary surface water management will throttle runoff and allow silt and

suspended solids to be settled out and removed before being discharged in a controlled manner to the agreed outfall.

- The CEMP provides actions and measures which will be undertaken for the purpose of environmental management and pollution prevention during the construction phase. As there is potential for run-off to indirectly discharge to the local drainage network or a watercourse (River Tolka) in the vicinity of the site and in order to manage the potential impact associated with sediment and sediment runoff the following mitigation measures will be implemented during the construction phase:
- SuDS will be constructed in line with manufacturer's guidelines / best practice methods.
- During construction, any surfaces which are intended to enable infiltration must be protected from compaction. This includes protecting from heavy traffic or storage materials.
- Any surface water run-off collecting in excavations will likely contain a high sediment load. This will not be allowed to discharge directly to the local drainage network or the River Tolka.
- During construction water contaminated with silt will not be allowed to enter a watercourse or drain. All parts of the drainage system will be protected from construction runoff to prevent silt clogging the system and causing pollution downstream. Silt reduction measures to prevent this include, early construction of sediment management basins, channelling runoff away from watercourses and surface water drains and erosion prevention measures. Following construction, subsoil that has been compacted during construction should be broken up prior to the re-application of topsoil to reinstate the natural infiltration performance of the ground.
- Process water used during construction will be disposed of appropriately. Rainwater will also accumulate on the site during construction. This water will be discharged directly via suitable pollution control and attenuation measures either directly to ground within the site or to foul sewer systems via portions of the DCC sewer network.
- Where available proposed permanent connections to the public sewer systems required for the operational phase will be used temporarily for the construction phase, to optimise efficiencies and avoid the creation of new outfalls for temporary construction only.
- De-watering operations and surface water run-off discharge on the site, during construction and prior to completion will be controlled and discharged only to the existing sewerage system at an agreed rate of flow in consultation with Irish Water, DCC Environment Division and Pollution Control Section. Local dewatering and collection of groundwater or rainfall during construction may require disposal. Disposal of groundwater during construction will be to the surface water sewer system following suitable pollution control and attenuation measures protecting the River Tolka. The precise measures to be used will be agreed in advance with the Project Ecologist.
- On-site treatment measures will be installed to treat surface water run-off from the site prior to discharge to the receiving surface water sewer. This treatment will be achieved by the construction of filter strips incorporating Straw Bales to reduce sediment loading, settlement tanks, the installation of proprietary surface water treatment systems including Class 1 full retention petrol interceptors and spill protection control measures. Settlement tanks will be sized to deal with surface run-off and any groundwater encountered. All measures will be approved prior to commencement with the Pollution Section of DCC.
- Pipe systems and orifices will be checked for blockages or partial blockages.
- Soils will be stabilised and protected from erosion whilst planting becomes established. All exposed soil surfaces will be within the main excavation site which limits the potential for any offsite impacts.

- The temporary storage of soil will be carefully managed. Stockpiles will be tightly compacted to reduce runoff and graded to aid in runoff collection.
- Pollution control measures will be implemented to control run-off from the site and prevent run-off which is potentially contaminated with sediments or hazardous chemicals entering the drainage network.
- A response procedure will be put in place to deal with any accidental pollution events and spillage kits will be available on site.
- Any hard surface site roads will be swept to remove mud and aggregate materials from their surface while any unsurfaced roads shall be restricted to essential site traffic only.
- A power washing facility or wheel cleaning facility will be installed near to the site compound for use by vehicles exiting the site when appropriate.
- Aggregate materials such as sands and gravels will be stored in clearly marked receptacles within a secure compound area to prevent contamination.
- Movement of material will be minimised to reduce the degradation of soil structure and generation of dust.
- Excavations will remain open for as little time as possible before the placement of fill. This will help to minimise the potential for water ingress into excavations.
- Weather conditions will be considered when planning construction activities to minimise the risk of run-off from the site.
- All excavated materials will be visually assessed by suitably qualified persons for signs of possible contamination such as staining or strong odours. Should any unusual staining or odour be noticed, samples of this soil will be analysed for the presence of potential contaminants to ensure that historical pollution of the soil has not occurred. Should it be determined that any of the soil excavated is contaminated, this will be segregated and appropriately disposed of by a suitably permitted/licensed waste disposal contractor.

9.6.1.1 Soil Management

The strategy for controlling and mitigating potential adverse environmental issues related to soil and contamination during construction will include the following, as appropriate:

- Identification and assessment of the potential for residual ground contamination to be present prior to the start of any excavation works.
- Minimisation of potential risks to site workers as required by the Safety, Health and Welfare (Construction Regulations) 2013, as amended.
- Testing and sampling of excavated soils in order to assess the suitability of materials for re-use on site.
- Dust suppression from any contaminated soils by the regular use of water spray during any dry conditions, sheeting of haulage vehicle loads.
- Stockpiling of contaminated materials will be avoided where possible.
- Stockpiles will be treated to prevent windblown dust.
- The handling and storage of any potentially hazardous liquids on site, e.g. fuels and chemicals, will be controlled and best practice guidelines applied. Storage tanks/container facilities will have appropriate bunding within the designated area.
- If hazardous liquids escape, remedial action will be taken as soon as possible.

- Where unforeseen contamination is identified during the course of the work, specific investigations will be carried out in the areas in question and appropriate health and safety procedures will be implemented during the removal of the material. A strategy will be prepared to identify, analyse, segregate and control existing contaminated materials on site. In addition to the measures above, all excavated materials will be visually assessed by suitably qualified persons for signs of possible contamination such as staining or strong odours. Should any unusual staining or odour be noticed, samples of this soil will be analysed for the presence of potential contaminants to ensure that historical pollution of the soil has not occurred. Should it be determined that any of the soil excavated is contaminated, this will be segregated and appropriately disposed of by a suitably permitted/licensed waste disposal contractor.

9.6.1.2 Run Off Suspended Solids

- A buffer zone of at least 50m separating working machinery from watercourses;
- During construction, any surfaces which are intended to enable infiltration must be protected from compaction. This includes protecting from heavy traffic or storage materials.
- Silt deposited during construction will be removed.
- Soils will be stabilised and protected from erosion whilst planting becomes established.
- Hydrocarbons or any hazardous chemicals will be stored in specific bunded areas. Refuelling of plant and machinery will also be carried out in bunded areas to minimise risk of any potential pollutants being discharged from the site.
- Pollution control measures will be implemented to control run-off from the site and prevent run-off which is potentially contaminated with sediments or hazardous chemicals entering the drainage network.
- Foul drainage from site offices and compound, where not directed to the existing wastewater network, will be contained and disposed of off-site in an appropriate manner and in accordance with the relevant statutory regulations to prevent the pollution of watercourses.
- A response procedure will be put in place to deal with any accidental pollution events and spillage kits will be available on site. Construction staff will be familiar with the emergency procedures and use of the equipment.
- During earthworks and excavation works care will be taken to ensure that exposed soil surfaces are stable to minimise erosion. All exposed soil surfaces will be within the main excavation site which limits the potential for any offsite impacts;
- Silt reduction measures on site and settlement measures (e.g. silt traps and settlement tanks/ponds or equivalent);
- Any hard surface site roads will be swept to remove mud and aggregate materials from their surface while any unsurfaced roads shall be restricted to essential site traffic only;
- A power washing facility or wheel cleaning facility will be installed near to the site compound for use by vehicles exiting the site when appropriate;
- Aggregate will be established at the site entrance points from the construction site boundary extending for at least 10 m;
- The temporary storage of soil will be carefully managed. Stockpiles will be tightly compacted to reduce runoff and graded to aid in runoff collection;
- Construction materials, including aggregates etc. will be stored a minimum of 50-meter buffer distance from any surface water bodies and surface water drainage points;

- Aggregate materials such as sands and gravels will be stored in clearly marked receptacles within a secure compound area to prevent contamination;
- Movement of material will be minimised to reduce the degradation of soil structure and generation of dust;
- Excavations will remain open for as little time as possible before the placement of fill. This will help to minimise the potential for water ingress into excavations;
- Weather conditions will be considered when planning construction activities to minimise the risk of run-off from the site.

9.6.1.3 Sources of Fill and Aggregates

- All fill and aggregate for the proposed development will be sourced from reputable suppliers per the project Contract and Procurement Procedures. All suppliers will be vetted for:
  - Aggregate compliance certificates/declarations of conformity for the classes of material specified for the proposed development;
  - Environmental Management status; and
  - Regulatory and Legal Compliance status of the Company.

9.6.1.4 Cement /concrete works

Where feasible all ready-mixed concrete will be brought to site by truck. A suitable risk assessment for wet concreting will be completed prior to works being carried out which will include measures to prevent discharge of alkaline wastewaters or contaminated storm water to the underlying subsoil.

No wash-down or wash-out of ready-mix concrete vehicles during the construction works will be carried out at the site within 10 meters of an existing surface water drainage point. Washouts will only be allowed to take place in designated areas with an impervious surface where all wash water is contained and removed from site by road tanker or discharged to foul sewer submit to agreement with Irish Water / DCC.

Pouring of cement-based materials for works will only be carried out in dry conditions. Pumped concrete will be monitored to ensure there is no accidental discharge. Mixer washings and excess concrete will not be discharged directly into the drainage network. Concrete washout areas will be created to avoid any accidental discharge from the proposed development site.

The construction contractor will be required to implement emergency response procedures, and these will be in line with industry guidance. All personnel working on the Site will be suitably trained in the implementation of the procedures.

9.6.1.5 Hydrocarbons and other construction chemicals

The following mitigation measures will be implemented during the construction phase to prevent any accidental leakage of fuels and other construction chemicals to ground and prevent any spillages impacting the surface water and groundwater quality:

- Designation of bunded refuelling areas on the Site;
- Provision of spill kit facilities across the Site;
- Where mobile fuel bowsers are used, the following measures will be taken:

- Any flexible pipe, pump, tap or valve will be fitted with a lock and will be secured when not in use;
- All bowsers to carry a spill kit and operatives must have spill response training;
- Portable generators or similar fuel containing equipment will be placed on suitable drip trays.

In the case of drummed fuel or other potentially polluting substances which may be used during the construction phase, the following measures will be adopted:

- Secure storage of all containers that contain potential polluting substances in a dedicated internally bunded chemical storage cabinet unit or inside a concrete bunded area;
- Oil and fuel storage tanks shall be stored in designated areas, and these areas shall be located within temporary bunded areas, doubled skinned tanks or bunded containers to a volume of 110% of the capacity of the largest tank/container. Drainage from the bunded area(s) shall be diverted for collection and safe disposal.
- Clear labelling of containers so that appropriate remedial measures can be taken in the event of a spillage;
- All drums to be quality approved and manufactured to a recognised standard;
- If drums are to be moved around the Site, they will be secured and on spill pallets; and
- Drums will be loaded and unloaded by competent and trained personnel using appropriate equipment.

Refuelling of construction vehicles and the addition of hydraulic oils or lubricants to vehicles will take place in a designated area or within the construction compound (or, where possible, off the site). In the event of a machine requiring refuelling outside of this area, fuel will be transported in a mobile double skinned tank. An adequate supply of spill kits and hydrocarbon adsorbent packs will be stored in this area. All relevant personnel will be fully trained in the use of this equipment. Guidelines such as "*Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors*" (CIRIA 532, 2001) will be complied with.

The construction contractor will be required to implement emergency response procedures, and these will be in line with industry guidance. All personnel working on the Site will be suitably trained in the implementation of the procedures.

9.6.2 Operational Phase

During the operational phase of the proposed development, there is limited potential for Site activities to impact on the geological and hydrogeological environment of the area. There will be no impact on local or regional groundwater resources (abstraction) as a result of the proposed development.

The proposed development design includes hardstand cover across the site and the proposed surface water drainage system for this development has been designed as a sustainable urban drainage system (SuDS). The surface water design has been designed in accordance with the Greater Dublin Regional Code of Practice for Drainage Works and Sewers for adoption. The drainage network will consist of attenuation to the green-field runoff using a flow control device (hydrobrake) from the site. Any localised car leaks will therefore discharge to the stormwater drainage and be treated in Petrol interceptors (oil separators) prior to outfalling into the main system. Therefore, the risk of accidental discharge has been adequately addressed through design. The purpose of these SuDS features is to treat runoff and remove pollutants to improve quality, restrict outflow and control quantity and increase overall amenity value.

9.7 Residual Impacts

9.7.1 Construction Phase

9.7.1.1 Land, soils, Geology, Hydrogeology

The implementation of the mitigation measures outlined in Section 9.6 of this chapter will ensure that targeted rates of impact to land, soils and ground water are achieved at the site of the Proposed Development during construction and operational phases. When mitigation measures are implemented throughout construction the predicted impact on the environment will be **short-term, imperceptible,** and **neutral**. With the measures outlined in the EIAR and CEMP, the predicted impact will be **long-term, imperceptible,** and **neutral.**

9.7.1.2 Human Health and Population

The implementation of the mitigation measures outlined in Section 9.6 of this chapter will ensure that the potential impacts on human health and populations during the construction phase are adequately mitigated. The residual effect on during the construction phase is considered to be **neutral, imperceptible,** and **short-term**.

9.7.1.3 Water Framework Directive

Even in the absence of the mitigation measures detailed in Section 9.6, there will be no predicted degradation of the current Dublin (GWB) groundwater body (chemically, ecological and quantity) or any impact on its potential to meet the requirements and/or objectives in the second RBMP 2018-2021 (River Basin Management Plan) and third RBMP 2022-2027.

There are appropriately designed mitigation measures which will be implemented during the construction phase to protect the hydrogeological environment. There is a potential of accidental discharges during the construction phase, however these are temporary short-lived events that will not impact on the water status of groundwater bodies and as such will not impact on trends in water quality and over all status assessment.

The residual effect on Water Framework Directive Status (Dublin GWB) Surface and Groundwater bodies during the construction phase is considered to be **neutral, imperceptible** and **short-term**.

9.7.2 Operational Phase

9.7.2.1 Land, soils, Geology, Hydrogeology

The implementation of the mitigation measures detailed in Section 9.6, will ensure that the potential impacts on land, soils, geology, hydrogeology once the proposed development is constructed and operational are adequately mitigated. The residual effect on land, soils, geology and hydrogeology (groundwater) quality during the operational phase is considered to be **neutral, imperceptible,** and **long-term**.

Following the TII criteria (refer to **Appendix 10.1 of the EIAR**) for rating the magnitude and significance of impacts on the geological and hydrogeological related attributes, the magnitude of impact is considered **negligible**.

9.7.2.2 Human Health and Population

The implementation of the mitigation measures detailed in Section 9.6, will ensure that the potential impacts on human health and populations once the proposed development is constructed and operational are adequately mitigated. The residual effect on human health and populations during the operational phase is considered to be **neutral, imperceptible,** and **long-term**.

9.7.2.3 Water Framework Directive Status

There is no potential for adverse or minor temporary or localised effects on the Dublin groundwater body (GWB) as a result of the Proposed Development. Therefore, it has been assessed that it is unlikely that the Proposed Development will cause any significant deterioration or change on its water body status or prevent attainment, or potential to achieve the WFD objectives or to meet the requirements and/or objectives in the third RBMP 2022-2027.

Even in the absence of the mitigation measures detailed in Section 9.6, there will be no predicted degradation of the current water body (chemically, ecological and quantity) or any impact on its potential to meet the requirements and/or objectives in the third RBMP 2022-2027.

There are appropriately designed mitigation and design measures which will be implemented during the construction and operation phase to protect the hydrogeological environment. There is a potential of accidental discharges during the operational phases from designated car parking areas however these are temporary short-lived events that will not impact on the water status of the underlying aquifer long-term and, as such, will not impact on trends in water quality and over all status assessment.

9.8 Monitoring Or Reinstatement

The management of land, soils and ground water during the construction phase will be monitored by the Contractor to ensure compliance with above-listed mitigation measures, and relevant waste management legislation and local authority requirements.

9.8.1 Construction Phase

During construction phase the following monitoring measures will be implemented:

- Soil sampling to confirm disposal options for excavated soils in order to avoid contaminated run-off; and
- Regular inspection of construction / mitigation measures (e.g., concrete pouring, refuelling, etc).
- Pouring of cement-based materials for works will only be carried out in dry conditions.
- Groundwater level monitoring adjacent to basement excavations and near sensitive receptors to ensure stability of any temporary slopes, retaining walls and that the zone of influence for dewatering is outside of any protection areas.

9.8.2 Operational Phase

There will be no requirement for groundwater monitoring as there is no likely discharge to ground, long term dewatering or abstraction of groundwater.

9.9 Interactions

This section discusses interactions between this Chapter and other specialist environmental topics considered in this EIAR. The main interactions of importance to land, soils, geology, and hydrogeology

relate to Biodiversity (Chapter 8), Hydrology / Water (Chapter 10), and Air Quality (Chapter 11) as follows:

9.9.1 Biodiversity

The proposed development may have temporary negative impacts on biodiversity at site level during construction due to excavation and removal of soil with resultant impact on local biodiversity. It will not result in any significant impact on nearby natura 2000 conservation sites. Standard best practice mitigation measures coupled with the large distance involved in the pathway and significant dilution factor downstream in the Tolka Estuary and Dublin Bay.

9.9.2 Hydrology

During construction of the proposed development, there will be soil excavation that could impact surface water quality if not adequately mitigated.

9.9.3 Air Quality

During construction of the proposed development, there will be a proportion of dust created during excavation (enabling works) and construction activities that could impact air quality if not adequately mitigated.

9.9.4 Cultural Heritage, Archaeology, & Architectural Heritage

Excavation could result in the discovery / finding or unearthing of shallow subsurface archaeology. Prior to any subsurface excavations, the site will be assessed by an archaeologist and appropriate mitigation measures agreed accordingly.

9.9.5 Waste

Waste: Excavation could result in encountering contaminated soil. This will undergo environmental testing and be disposed of at a suitable licenced waste facility as required.

9.9.6 Traffic and Transportation

Local Traffic and transportation will be implemented by the additional vehicle movements generated by the volume of excavated soil that will have to be transported off site, resulting in an increase of heavy good vehicles (HGVs) during construction. The increase in vehicle movements as a result of excavated soil removal during the construction phase will be temporary in duration. Traffic-related impacts during the construction and operational phases are addressed in the Traffic & Transportation chapter of this EIAR.

9.10 Indirect and/or Secondary Impacts

The proposed development requires excavation works which, if not managed appropriately, could give rise to the generation of dust.

In accordance with EPA Guidelines (2022), secondary or indirect impacts refer to environmental effects that occur away from the project site or through complex impact pathways. Having regard to the nature, scale and location of the proposed residential development, and the specific works involved during construction and operation, there is no potential for significant indirect or secondary impacts on land, soils, geology or hydrogeology. The development does not rely on functionally interdependent activities occurring off-site that would give rise to such effects.

9.11 Cumulative Impacts

All cumulative developments that are already built and in operation contribute to our characterisation of the baseline environment. As such, any further environmental impacts that the proposed development may have in addition to these already constructed and operational cumulative developments has been assessed in the preceding sections of this chapter.

9.11.1 Construction Phase

There are existing residential and commercial developments close by, along with the multiple permissions in the area. This chapter has been prepared with reference to the list of other developments in the locality as stated in Chapter 23.

In relation to the potential cumulative impact on land, soils, geology and hydrogeology during the construction phase, the construction works which would have potential cumulative impacts are as follows:

- soil and groundwater contamination due to accidental hydrocarbon/cement leakage to ground.

A Construction Environmental Management Plan (CEMP) (2025) is included with the application documentation. This, together with the mitigation measures set out in Section 9.6, outlines the best practice construction techniques and methodologies which will be implemented during construction of the proposed development to minimise potential for contamination.

The CEMP will be implemented and adhered to by the construction Contractor and will be overseen and updated as required if site conditions change by the Project Manager, Environmental Manager and Ecological Clerk of Works where relevant. All personnel working on the Site will be trained in the implementation of the procedures.

The works contractors for other planned or permitted developments will also be obliged to ensure that measures are in place to protect soil and water quality in compliance with legislative standards for receiving water quality (European Communities Environmental Objectives (Groundwater) Regulations (S.I. 9 of 2010 as amended by S.I. 366 of 2016 and by S.I. 287 of 2022).

The implementation of mitigation and monitoring measures detailed in Section 9.6; and 9.8 as well as the compliance of the above permitted development with their respective planning conditions, will ensure there will be minimal cumulative potential for change to the land, soils, geology, hydrogeological environment during the construction phase of the proposed development. The residual cumulative impact of the proposed development in combination with other planned or permitted developments can therefore be considered to be **neutral, imperceptible,** and **short-term**.

9.11.2 Operational Phase

In relation to the potential cumulative impact on land, soil, geology and hydrogeology during the operational phases, the operational activities which would have potential cumulative impacts are as follows:

- Increased hard standing areas will reduce local recharge to ground and increase surface water run-off potential if not limited to the green field run-off rate from the Site. Cumulatively this development and others in the area will result in localised reduced recharge to ground and increase in surface run-off;

- Increased risk of minor accidental discharge of hydrocarbons from car parking areas and along roads is possible unless diverted to surface water system with petrol interceptor;
- There will be a small loss of greenfield area locally as part of the proposed development.

The proposed development and the other permitted development listed (in Chapter 23) in close proximity will result in an increase in hard standing which will result in localised reduced recharge to ground. The aquifer underlying the site is "Locally Important Aquifer (Ll) – Bedrock which is moderately productive 2only in local zones". The implementation of SuDs measures on site will mitigate against and reduce the recharge rate to ground.

All nearby developments will also be obliged to ensure that measures are in place to protect soil and water quality in compliance with legislative standards for receiving water quality (European Communities Environmental Objectives (Groundwater) Regulations (S.I. 9 of 2010, S.I. 366 of 2016 and S.I. 287 of 2022).

The implementation of mitigation measures detailed in Section 9.6 as well as the compliance of the above permitted development with their respective planning conditions, will ensure there will be minimal cumulative potential for change to the land, soils, geology, hydrogeological environment during the operational phase of the proposed development. The residual cumulative impact of the proposed development in combination with other planned or permitted developments can therefore be considered to be **neutral, imperceptible,** and **long-term**.

9.12 Difficulties Encountered

There were no significant difficulties encountered in compiling the specified information for this EIA Chapter.

9.13 Summary

There will be **no long-term residual impact** on land, soil, geology and hydrogeological receptors, either within or in the vicinity of the proposed development as a result of the proposed development.

9.14 References

- Environmental Protection Agency Act 1992 as amended.
- European Commission, Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report (2017).
- Environmental Protection Agency (EPA) 'Guidelines on the information to be contained in Environmental Impact Assessment Reports' (2022).
- Department of Communications, Climate Action, and Environment (DCCAE), Waste Action Plan for the Circular Economy - Ireland's National Waste Policy 2020-2025 (Sept 2020).
- Dublin City Council (DCC), Dublin City Council Development Plan 2022-2028.
- BS 5906:2005 Waste Management in Buildings – Code of Practice.
- Planning and Development Act 2000 (No. 30 of 2000) as amended.
- CIRIA (2005). Environmental Good Practice on Site (C650).
- CIRIA (2007). CIRIA 697: The SUDS Manual.
- Enterprise Ireland (n.d.). Best Practice Guide BPGCS005: Oil Storage Guidelines.
- EPA (2025). EPA Maps.

- GSI (2025). GSI Map Viewer.
- Institute of Geologists of Ireland (2013). Guidelines for the Preparation of Soils, Geology and Hydrogeology Chapters of Environmental Impact Statements.
- NPWS (2025). Designations Viewer.
- NRA (2009). Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes.
- Institute of Geologists of Ireland (2013). Guidelines for the Preparation of Soils, Geology and Hydrogeology Chapters of Environmental Impact Statements.
- Teagasc (2025). Teagasc Map Viewer.
- National Roads Authority (NRA) (2009). Guidelines on Procedures for the Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes.

10 Hydrology

10.1 Introduction

This chapter assesses and evaluates the likely significant effects of the development on the hydrological aspects of the site and surrounding area. In assessing likely potential and predicted effects, account is taken of both the importance of the attributes and the predicted scale and duration of the likely effects.

This Chapter has been written and prepared by Luke Maguire Environmental Consultant and Geoscientist (BSc) at AWN Consulting and Marcelo Allende (BSc BEng) Principal Hydrological Consultant at AWN Consulting.

Luke Maguire; is an Environmental Consultant at AWN with over 4 years of experience in Environmental Consulting and water resources. Luke holds a B.Sc. in Geoscience (Geology, Hydrology, Hydrogeology, Climate Studies, Oceanology, Geochemistry, Geophysics) from Trinity College University of Dublin and has worked on a range of developments including pharmaceutical plants, medical device facilities, ICT facilities and energy projects. Luke has experience in contaminated soil assessment, basement impact assessments, bulk excavations and largescale dewatering processes. Additionally, Luke has gained experience in Environmental Impact Assessment (EIA), Flood Risk Assessment (Stage 1 & 2) and Hydrological and Hydrogeological Qualitative Risk Assessment (HRA), and WFD Assessment Reporting and Environmental Monitoring (Groundwater, Surface Water & Ground Gas).

Marcelo Allende (BSc, BEng) is a Principal Environmental Consultant (Hydrologist) with AWN Consulting with over 20 years of experience in water resources technical studies, conceptual and numerical hydrological/hydrogeological modelling and environmental consultancy. Marcelo holds a degree in Water Resource Civil Engineering (BEng, Hons) from the University of Chile and a Bachelor of Science in Engineering (BSc, Hons). He has worked on a wide of range of projects including multi-aspect environmental investigations, geo-environmental impact assessments, surface and groundwater resource management, hydrological and hydrogeological conceptual and numerical modelling, strategic and site specific flood risk assessments (Stage 1, 2 and 3), Due Diligence reporting, baseline studies, soils, surface water and groundwater monitoring and field sampling programmes on a variety of brownfield and greenfield sites throughout Ireland as well as overseas in Chile, Argentina, Peru and Panama. He also has detailed knowledge of environmental guidance, legislation, regulations & standards and expertise in GIS (expert level) and MATTE studies at COMAH establishments. He is currently a member of the International Association of Hydrogeologists (IAH, Irish Group) and a member of Engineers Ireland (MIEI).

10.2 Method

10.2.1 Criteria for rating of effects

This chapter evaluates the effects, if any, which the development has had or will have on Hydrology as defined in the Environmental Protection Agency (EPA) 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports' (EPA, 2022). In addition, the document entitled 'Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes' by the Transport Infrastructure Ireland (TII, 2009, previously NRA) is referenced where the methodology for assessment of impact is appropriate.

The rating of potential environmental effects on the hydrological environment is based on the standard EIAR impact predictions table included in Chapter 1 which takes account of the quality, significance, duration and type of effect characteristic identified (in accordance with impact assessment criteria provided in the EPA Guidelines (2022) publication).

The proposed development is compliant with the DCC Development Plan 2022-2028 which was the subject of separate assessments under the SEA Directive (SEA), the Habitats and Birds Directives (AA), the Water Framework Directive and the Floods Directive (see SFRA), and this Plan and the results of those assessments have been considered in the preparation of this EIAR.

The duration of each effect is considered to be either momentary, brief, temporary, short-term, medium term, long-term, or permanent. Momentary effects are considered to be those that last from seconds to minutes. Brief effects are those that last less than a day. Temporary effects are considered to be those which are construction related and last less than one year. Short term effects are seen as effects lasting one to seven years; medium-term effects lasting seven to fifteen years; long-term effects lasting fifteen to sixty years; and permanent effects lasting over sixty years.

The TII criteria for rating the magnitude and significance of impacts and the importance of hydrological attributes at the site during the EIA stage are also relevant in assessing the impact and are presented in Appendix 10.1.

The principal attributes (and effects) to be assessed include the following:

- River and stream water quality in the vicinity of the site (where available);
- Surface watercourses near the site and potential impact on surface water quality arising from proposed development related works including any discharge of surface water run-off;
- Localised flooding (potential increase or reduction) and floodplains including benefitting lands and drainage districts (if any); and
- Surface water features within the area of the site.

Relevant legislation/Guidelines

- The EU Water Framework Directive, 2000/60/EC;
- The Groundwater Directive, 2006/118/EC;
- The EU Floods Directive, 2007/60/EC;
- Water Services Acts (2007 – 2022);
- Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors' (CIRIA 532, 2001); and
- European Communities (Water Policy) Regulations, 2003, as amended (S.I. No. 166 of 2022);
- European Communities (Drinking Water) Regulations 2023 (S.I. 99 of 2023);
- European Communities Environmental Objectives (Surface Waters); Regulations, 2009 and numerous amendments have occurred since the initial regulations.
- European Communities (Good Agricultural Practice for Protection of Waters) Regulations, 2022 (S.I. No. 113 of 2022); and
- European Communities (Technical Specifications for the Chemical Analysis and Monitoring of Water Status) Regulations, 2011 (S.I. No. 489 of 2011);
- European Communities (Quality of Salmonid Waters) Regulations 1988 (S.I. No. 293 of 1988)
- Local Government (Water Pollution) Acts 1977-2007;

- Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites (Eastern Regional Fisheries Board, 2016);
- Central Fisheries Board Channels and Challenges – The enhancement of Salmonid Rivers (2006);
- The Planning System and Flood Risk Management, Guidelines for Planning Authorities (Department of the Environment, Heritage and Local Government (DoEHLG) and the Office of Public Works (OPW));
- CIRIA C532 Control of Water Pollution from Construction Sites Guidance for Consultants and Contractors;
- CIRIA C648 Control of Water Pollution from Constructional Sites;
- Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes (NRA/TII, 2006);
- OPW 2009 The planning System and flood Risk management- Guidelines for Planning Authorities.

10.2.2 Sources of Information

Desk-based hydrological information in the vicinity of the site was obtained through accessing databases and other archives where available. Data was sourced from the following:

- Environmental Protection Agency (EPA) – website mapping and database information. Envision water quality monitoring data for watercourses in the area;
- River Basin Management Plan for Ireland 2022-2027.
- Dublin City Council Development Plan 2022-2028.
- Uisce Éireann- Ringsend WWTP (D0034-01) AER 2023.
- Water Action Plan 2024 - A River Basin Management Plan for Ireland, (Department of Housing Local Government & Heritage, Sept 2024).
- Office of Public Works (OPW) flood mapping data (www.floodmaps.ie)
- National Parks and Wildlife Services (NPWS) – Protected Site Register.

Site specific data was derived from the following sources:

- Infrastructure Planning Report- Holy Cross College LRD.; Barrett Mahony Civil & Structural Consulting Engineers (2025).
- Construction Environmental Management Plan- Holy Cross College LRD; DCON Safety Consultants (2025).
- Site Specific Flood Risk Assessment (SSFRA) - Holy Cross College LRD.; Barrett Mahony Civil & Structural Consulting Engineers (2025).
- The proposed development Design site plans and drawings; and
- Consultation with the client & project engineers.

10.3 Baseline Environment

10.3.1 Site Setting & Topography

The site of the proposed Project is located at Holy Cross College, Clonliffe Road, Dublin 3, and Drumcondra Road Lower, Drumcondra, Dublin 9. The Site is bounded to the west by the Drumcondra Road Lower, the south by the Clonliffe Road, to the east by residential buildings, and the north by the River Tolka. The proposed Project sits as part of a wider site Masterplan for the entire Holy Cross College

lands which includes a permitted hotel development (DCC Reg. Ref.: 2935/20, ABP Reg. Ref.: PL29N.308193) and potential future GAA facilities.

The site has an undulating topography, with ground levels of 6.62 metres above ordnance datum (mAOD) recorded at BH17 to the north-west of the site, 12.46 mAOD to the south-west of the site (around the currently located buildings), and 7.74 mAOD at the south-east of the Site. Natural topography would be presumed to be south to north towards the River Tolka (GII, 2020 (Appendix 9.1)). The setting is largely suburban, with residential buildings primarily surrounding the Site, and some commercial / light industrial buildings located to the north-east.

Figure 10.1 Site Location Map



10.3.2 Hydrology

The proposed development site is located within the former ERBD (now the Irish River Basin District), as defined under the European Communities Directive 2000/60/EC, establishing a framework for community action in the field of water policy – this is commonly known as the Water Framework Directive (WFD). The proposed development site is located in the Irish River Basin District (ERBD).

According to the EPA maps, the proposed development site lies within the River Liffey and Dublin Bay catchment (Catchment ID 09) and Tolka Sub-catchment (Tolka_SC_020).

The River Liffey catchment encompasses an area of approximately 1,369 km^2. The River Liffey extends from the mountains of Kippure and Tonduff in County Wicklow to the sea at Dublin Bay. The main channel covers a distance of c. 120 km west to east.

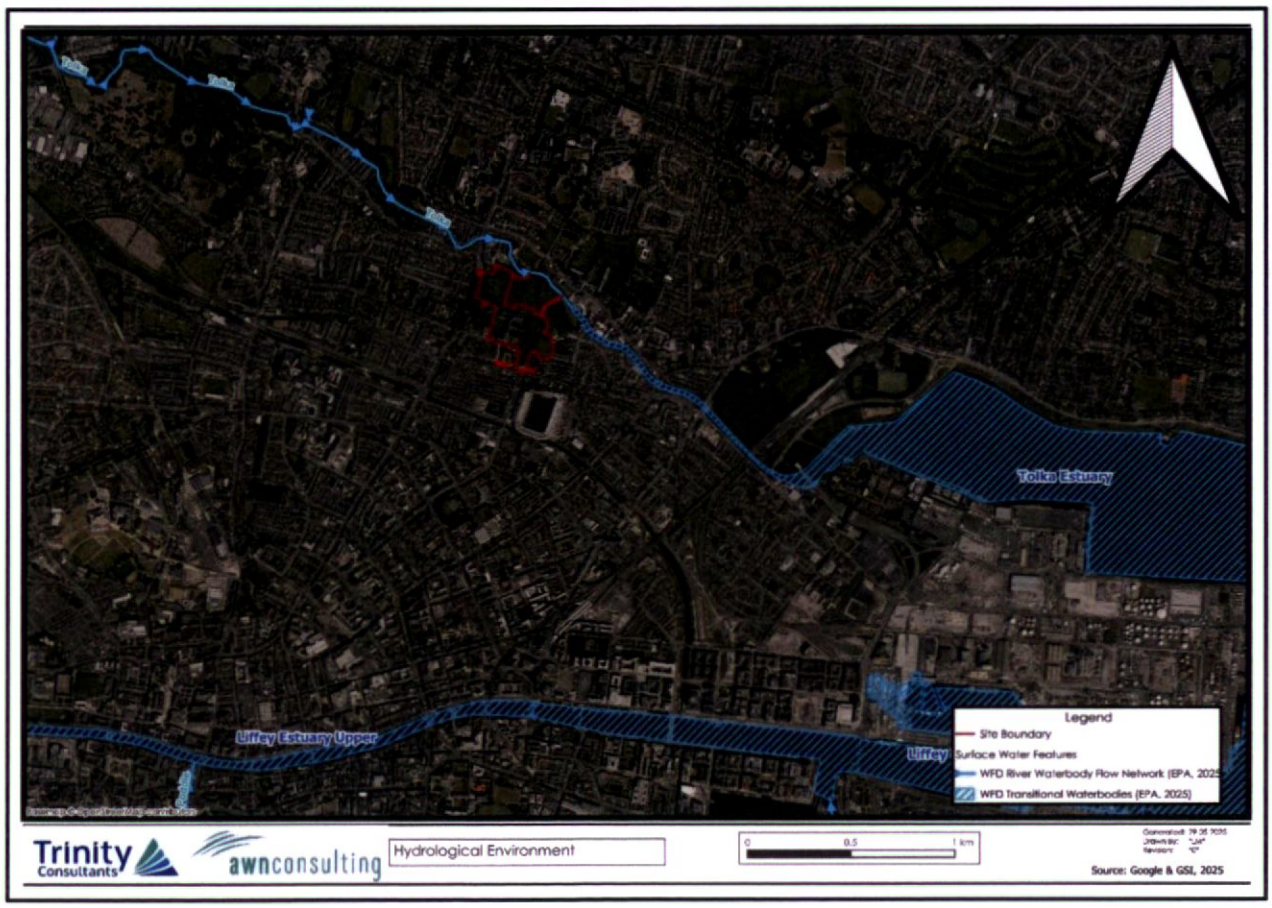
The River Tolka rises east of Dunshaughlin, County Meath, and bypasses Dunboyne, from where it receives the Castle Stream tributary. From Clonee, where it is joined by the Clonee Stream at the eastern end of the village, it flows into County Dublin. The river continues through Damastown and Mulhuddart, Blanchardstown, and Ashtown (southwest of Finglas), and the southern edges of Finglas itself, and then the north Dublin suburban districts of Glasnevin and Drumcondra, where it comes closest to the Royal Canal near Binn's Bridge. At the southern side of Tolka Park, it forms the border between Ballybough and Fairview, before entering Dublin Bay between East Wall and Clontarf.

The main hydrological feature of the area is the River Tolka. The River Tolka runs along / across parts / portions of the northern boundary of the site in an easterly direction, which in turn flows in a general alternating southeastern-easterly direction before its outfall to the Tolka Estuary and Dublin Bay circa 1.6 km southeast of the subject development site (refer to **Figure 10.2** below).

The site has a direct hydrological linkage / connection to the Tolka Estuary transitional waterbody and the downstream Dublin Bay coastal waterbody via the Tolka partially bounding the site to the North.

Historical mapping dated from 1829 to the early 1900s were examined for any indications of other hydrological features or watercourses in the immediate vicinity of the site. The historical maps do not depict any surface water features, springs (rise) located within or traversing the site or in close proximity to the agricultural plots which occupied the region.

Figure 10.2 Site Location and Local Hydrological Environment / Surrounding River & Transitional Waterbodies



Surface Water Quality

The European Communities Directive 2000/60/EC (the 'Water Framework Directive' (WFD)) established a framework for community action in the field of water policy. The Water Framework Directive (WFD) requires 'Good Water Status' for all European waters to be achieved through a system of river basin management planning and extensive monitoring by 2015 or, at the least, by 2027. 'Good status' means both 'Good Ecological Status' and 'Good Chemical Status'. In the second cycle River Basin Management Plan (2018), the impacts of a range of pressures were assessed including diffuse and point pollution, water abstraction and morphological pressures (e.g. water regulation structures). The purpose of this exercise was to identify waterbodies at risk of failing to meet the objectives of the WFD and include a programme of measures to address and alleviate these pressures. The third cycle Management Plan (2022-2027) and the Water Action Plan 2024 is currently in place in line with the Water Framework Directive.

The EPA identified water bodies either 'At Risk' of not achieving their objectives or 'Under Review'. The 3rd cycle River Basin management plan (RBMP) has been reviewed in the context of ensuring mitigation measures comply with current and expected future measures required to be implemented for protection of water body status within the context of the Proposed Project.

The proposed development is located within the Irish River Basin District, as defined under the European Communities Directive 2000/60/EC, establishing a framework for community action in the field of water policy. The River Tolka belongs to the Tolka_060 WFD surface water body (European Code: IE_EA_09T011150) whose most recent WFD River (surface) water status (2016-2021) is 'Poor' with a current WFD risk score (3rd risk cycle) of 'At risk of not achieving good status'. This rating and the main pressures identified on the Tolka_060 waterbody are attributed to poor ecological and biological status or potential. Additionally, the Tolka_060 received 'pass' (as opposed to 'Good') status on supporting chemistry conditions such as oxygenation conditions (dissolved oxygen saturation %) and acidification conditions (pH). Refer to Catchments.ie (2025).

According to the Tolka_SC_020 (Code: 09_4) Subcatchment Assessment report (WFD 2nd Cycle, 2019) the main pressures associated with the Tolka_050 (upstream/upgradient) and Tolka_060 (adjacent & downstream/downgradient) include urban run-off (involving diffuse sources run-off) and urban waste water (involving combined sewer overflows).

The transitional waterbody of the Tolka Estuary (European Code: IE_EA_090_0200) is currently listed as 'At Risk' (3rd Cycle). The latest Tolka Estuary WFD status is 'Poor' (2016-2021). This rating and the main pressures identified on the Tolka Estuary transitional waterbody are attributed to poor ecological and biological status or potential, in particular 'Moderate' Phytoplankton and Invertebrate Status or Potential. Additionally, the Tolka Estuary received 'Moderate' (as opposed to 'Good') status on supporting chemistry conditions such as oxygenation conditions (dissolved oxygen saturation %) and 'Moderate' nutrient conditions, particularly phosphorous conditions (Catchments.ie, 2025).

During the development of this 3rd cycle RBMP Plan, a prioritisation exercise was undertaken by the local authorities, the EPA and other stakeholders to identify those water bodies that require immediate action within this plan cycle to 2021. During the catchment characterisation, the EPA identified those water bodies either 'At Risk' of not achieving their objectives or 'Under Review'. The outcome of this prioritisation process was the selection of 190 Areas for Action across the 5 Local Authority regions. Within these 190 areas, a total of 726 water bodies were selected for initial actions during this RBMP

cycle. There are 832 water bodies identified as being 'At Risk' of not achieving their environmental objectives under this Plan that have not been included in the Areas for Action. For most of these water bodies, targeted actions will be undertaken in the third cycle RBMP from 2022-2027. The 3rd cycle RBMP has been reviewed in the context of ensuring mitigation measures comply with current and expected future measures required to be implemented for protection of water body status within the context of the Proposed Project.

Surface water quality is monitored periodically by the EPA at various regional locations along with principal and other smaller watercourses. The EPA assess the water quality of rivers and streams across Ireland using a biological assessment method, which is regarded as a representative indicator of the status of such waters and reflects the overall trend in conditions of the watercourse. The biological indicators range from Q5 - Q1. Level Q5 denotes a watercourse with good water quality and high community diversity, whereas Level Q1 denotes very low community diversity and bad water quality.

In relation to the subject site, the nearest active EPA monitoring stations located in the vicinity of the site is 'Violet Hill Drive Finglas' (Station Code: RS09T011100), located in the River Tolka (Tolka_050) c. 2.6km Upgradient / Upstream of the proposed development site. The most recent status recorded by the EPA (2022) is classified as Q3 / Poor, indicating a moderately polluted status. The EPA mapping database does not indicate any EPA water quality monitoring stations located downgradient / downstream of the subject development site.

10.3.3 Recreational Waterbodies & Drinking Water Supplies

The local environment also includes areas of natural resources that relate to population and human health that may be impacted by the proposed development, this includes economic resources, recreational and bathing waters, and drinking water resources.

A review of Environmental Sensitivity Mapping online maps that includes the Register of Protected Areas (RPA) under the Water Framework Directive (WFD) has shown that there are no Recreational Waters, Bathing Waterbodies, or Surface Water Drinking RPA, located downstream in the River Tolka or the Tolka Estuary.

The site is not located within the zone of influence of any PWS (Public Water Supply Scheme), GWS (Groundwater Scheme), or Source Protection Zones (SPZ). There are no PWS, GWS or SPZ located in vicinity of the subject development, with the drinking water protection area (Public Water Supply Source Protection Area) in closest proximity is Dunboyne PWS (Source Protection Area Unique ID: IE_GSI_SPA_202) which is located circa 15.9 km to the west of the subject development site.

10.3.4 Utilities and Drainage Infrastructure

Existing Stormwater (surface water) Drainage Infrastructure

The existing drainage systems on the site are mainly combined systems (carrying foul and surface water). There are connections from the site to the existing sewerage network on Clonliffe Road and also to the 675mm diameter combined sewer, which traverses the north-east quadrant of the masterplan lands.

There is an existing 225mm combined sewer on Holy Cross Avenue which discharges in a southerly direction and connects to the 375mm diameter combined sewer on Clonliffe Road. This 375mm sewer

on Clonliffe Road discharges in an easterly direction and connects into a 450mm diameter combined sewer downstream.

There also a 675mm diameter combined sewer in the north east quadrant of the masterplan lands, crossing the lower lying grassed area in a south easterly direction. The existing sewerage network in the vicinity of the site eventually discharges to the Poplar Row pumping station (to the east) and from there sewage is pumped to the municipal wastewater treatment at Ringsend.

On site, there is a combination of combined drains and surface water drains. There is an existing surface water system which collects run-off from the internal access roads, via road gullies, before discharging in a southerly direction into the 375mm diameter combined sewer on Clonliffe Road.

A review of the as built survey indicates there is an existing combined system serving the cluster of Seminary Buildings, the majority of which discharges in a southerly direction, into the 225mm combined sewer on Holy Cross Avenue, and from there into the 375mm combined sewer on Clonliffe Road. A small portion of the combined drainage system discharges in a northerly direction and into the 675mm diameter combined public.

Refer to Barrett Mahony Consulting Engineers (BMCE) drawing CLN-BMD-00-ZZ-DR-C-1001 Sheets S1-S4 for a copy of the existing drainage site plan layouts.

Existing Foul (Wastewater) Drainage Infrastructure

Presently, there is an existing 375mm Foul Network Sewer on Clonliffe Road. In addition, there is an existing 675mm Foul Network Sewer which crosses the site at the northern corner heading in a south westerly direction.

10.3.5 Flood Risk Assessment

A Flood Risk Assessment (SSFRA) has been prepared by Barrett Mahony Civil & Structural Consulting Engineers, to support the planning application.

The River Tolka runs the full length of the northern boundary of the subject site. The River Tolka has a history of flooding following heavy rainfall.

Historical Flooding

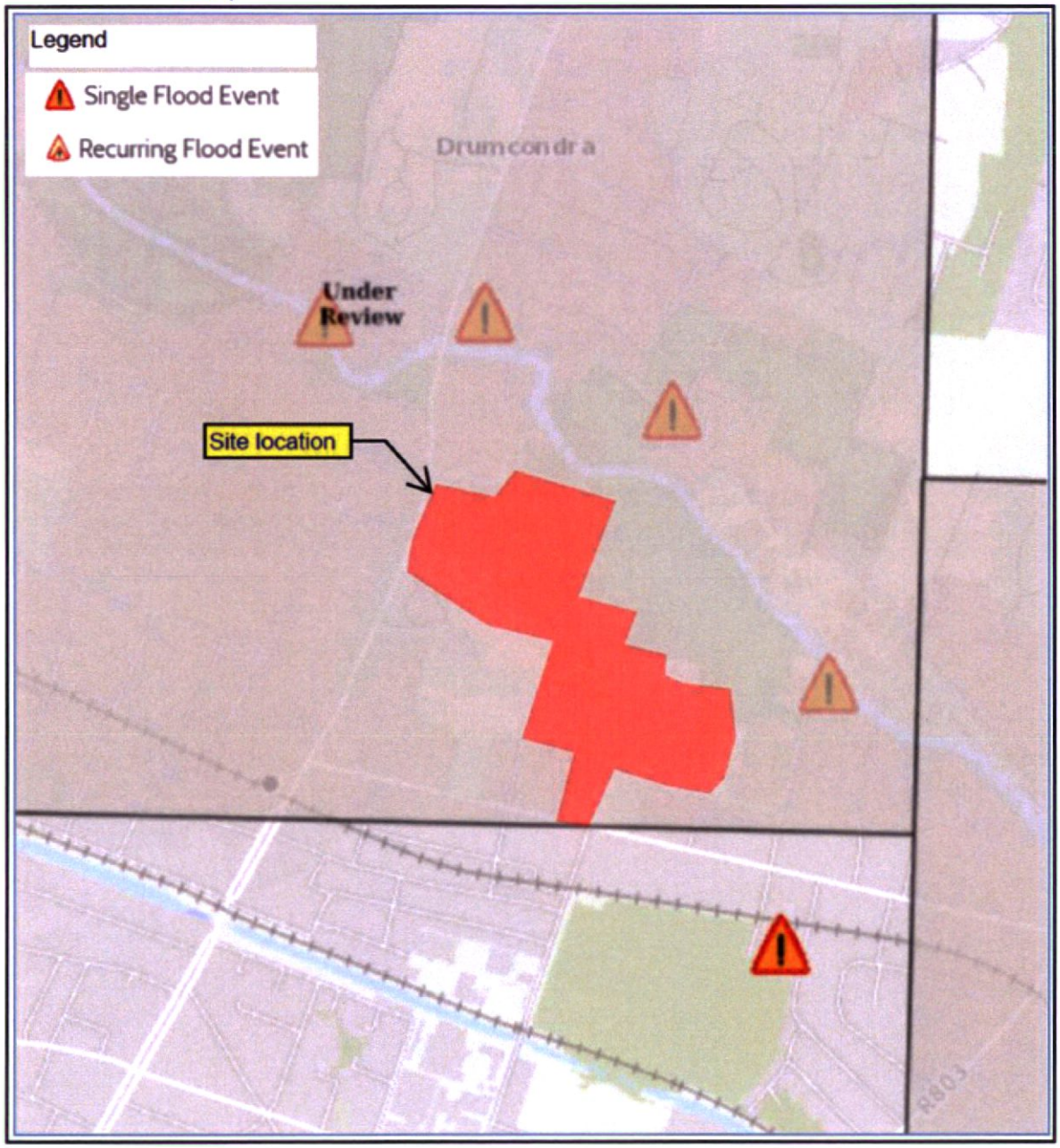
A review of the Office of Public Works flood maps database (at www.floodinfo.ie) does not highlight or indicate any recorded historical instances of flooding (single or reoccurring) on / within or directly adjacent to the development site, from any source. See **Figure 10.3** below and the OPW Past Flood Event Local Area Summary Report. Based on available and recorded information as outlined below, the subject site is considered not to have been subject to flooding in recent history.

However, this review indicates a number of past flooding events reported in the vicinity (within 2.5km) of the subject site.

- The first report dates back to November 1901 and the source of flooding was the River Tolka. The site which was flooded is located approximately 500m north west of the proposed development.
- The second flooding event was in November 1965 and the source of flooding was the River Tolka. The site which was flooded is located approximately 300m east of the proposed development.

- The third flooding incident in the vicinity was in August 1986 and the source of flooding was the River Tolka during hurricane Charley. A number of sites in the vicinity were flooded including a site north west and another north east of the proposed development.
- There is a report of a flooding event on Jones Road in July 2013 with very little information on the source of flooding. The single event is shown south east of the proposed development.

Figure 10.3 Site Location (approx.) and Recorded Past Flood Events (Source: OPW – www.floodinfo.ie, 2025)



Fluvial Flooding

Fluvial flooding occurs when rivers and streams break their banks and water flows out onto the adjacent low-lying areas. The River Tolka runs the full length of the northern boundary of the subject site. The river flows in a south easterly direction before entering the sea at Clontarf. A review of the OPW fluvial flood extents maps of the River Tolka was carried out and unfortunately the area is currently under

review. Older information including the River Tolka Flood Study in September 2010 carried out by RPS for DCC and OPW was reviewed and it shows that the proposed site development lies outside the 1 in 1000 year fluvial combined with the 1 in 2 year tidal. The study concluded '*Further to the review of the flood mapping in September 2010 by DCC and OPW, it was concluded that the 0.1% AEP fluvial coupled with the 50% AEP tidal event was the most appropriate to apply to Tolka River for the Dublin City area.*' Refer to **Figure 10.4** which shows the proposed development located outside the 0.1% AEP flood extent. Figure taken from the River Tolka Flood Study.

The existing riverbank's levels adjacent to the subject site varies from 5.70 – 4.30m. The lowest proposed building's finished floor level (Block D2) is at 7.50m or 1.8 – 3.2m above the riverbank's levels. In addition, the proposed development does not remove any flood storage volume from the lower level flood plain, as can be seen in **Figure 10.4 & Figure 10.5** taken from DCC Development plan 2022-2028. Additionally, Appendix 11 of the DCC development plan states as quoted 'Retaining wall north side protects this stretch from hundred-year flow. Parkland on south side allowed to flood and will do so at fifty-year flood level'. This parkland area referred to in the plan, lies outside the subject site location and is earmarked for future Sports Grounds.

Another surface water bodies in the vicinity is the Royal Canal located approximately 460m south of the subject site. The Royal Canal flows in a south easterly direction and into the River Liffey. The Royal Canal is a manmade waterway channel, a lined feature and the water level in the canal is regulated via series of locks. Therefore, the risk of flooding may arise when locks malfunction or are damaged from vandalism. However, in such event, the canal will drain towards the River Liffey and away from the subject site. Therefore, the risk of flooding from the Royal Canal is considered low.

The risk of fluvial flooding is currently being assessed by the OPW. The River Tolka Catchment Flood Risk Assessment and Management (CFRAM) is under review following an objection, submission and/or further information received. However, predictive flood maps involving detailed hydraulic modelling of river waterbodies was undertaken as part of the National CFRAM study, which places a section of the site within Flood Zone C. as mention in the flood risk assessment carried out by Barrett Mahony Civil & Structural Consulting Engineers The site therefore lies outside of the 0.1% AEP event, which indicates low flood risk (Floodinfo.ie, 2025), whereby the probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 for both river and coastal flooding coupled with the 50% AEP tidal flood extent). Flood Zone C covers all areas which are not in zones A or B.

Figure 10.4 River Tolka Flood Extents for 0.1% AEP, indicative site outline indicated by redline boundary – (Source: Dublin City Council Development Plan 2022-2028)

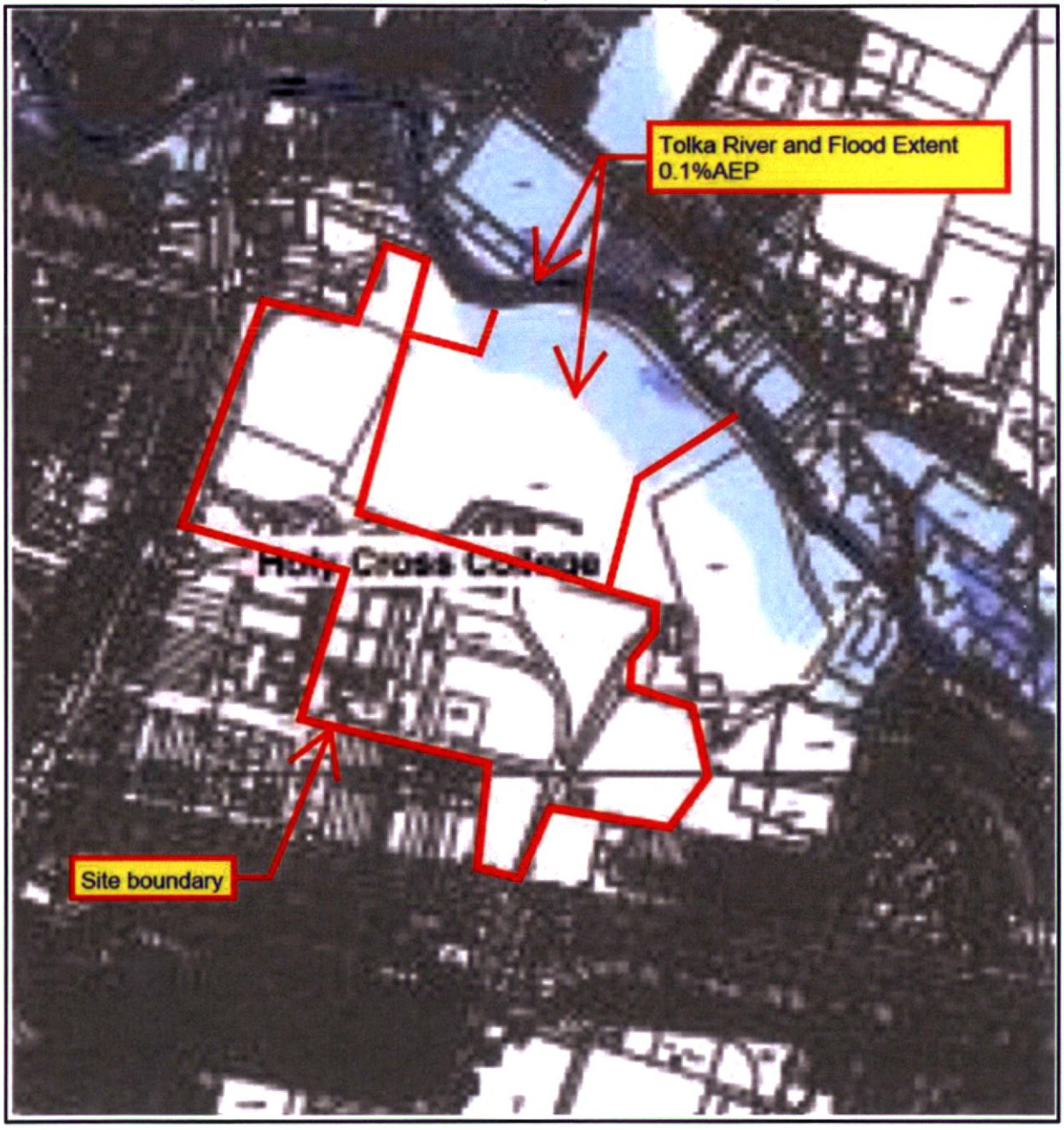
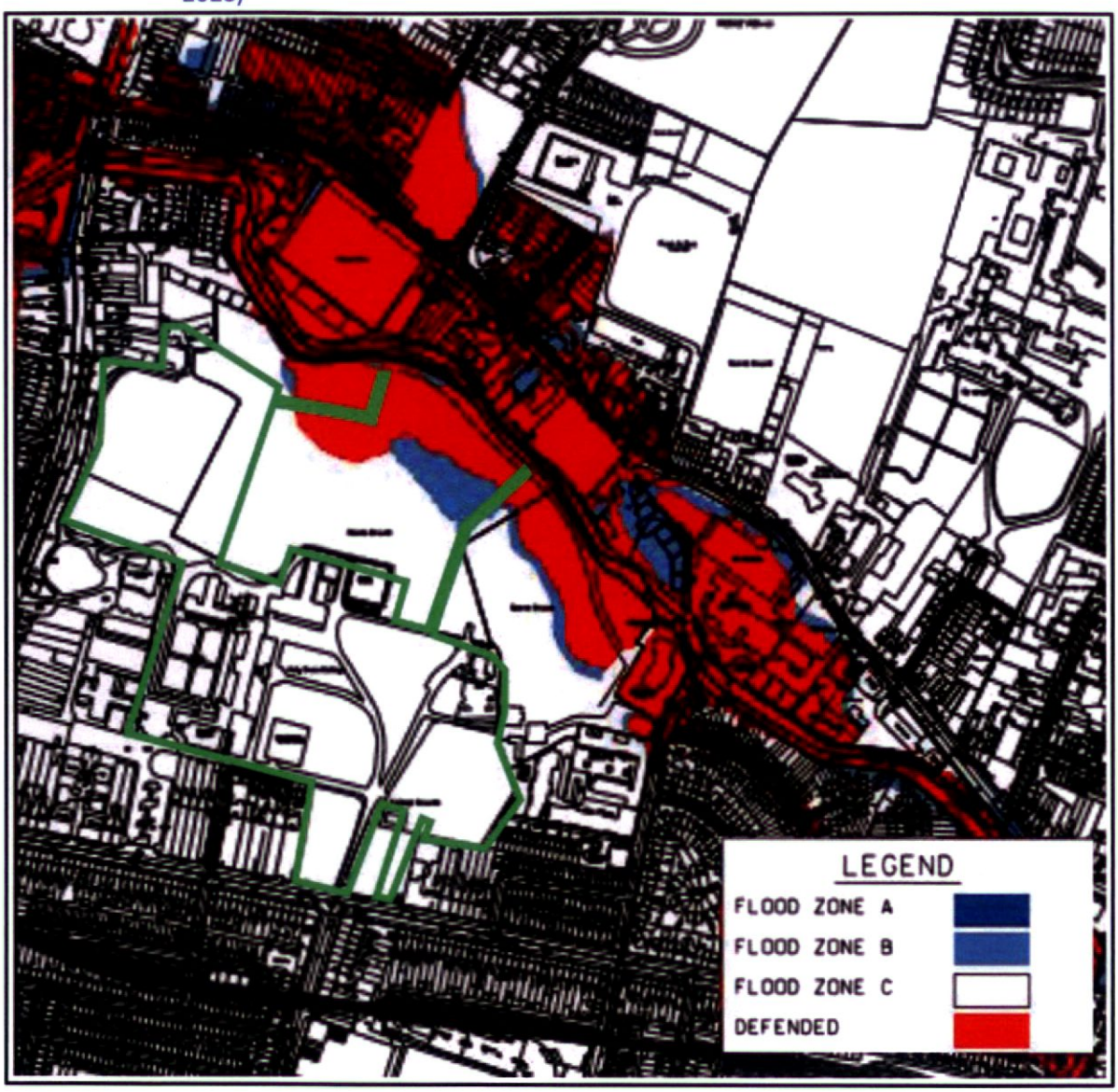


Figure 10.5 Flood Zone Mapping – Indicative site outline indicated by green boundary and Defended (in red) indicates the area protected from flooding as a result of flood defence works implemented previously along the River Tolka (Source DCC Development Plan 2022-2028)



Tidal / Coastal Flooding

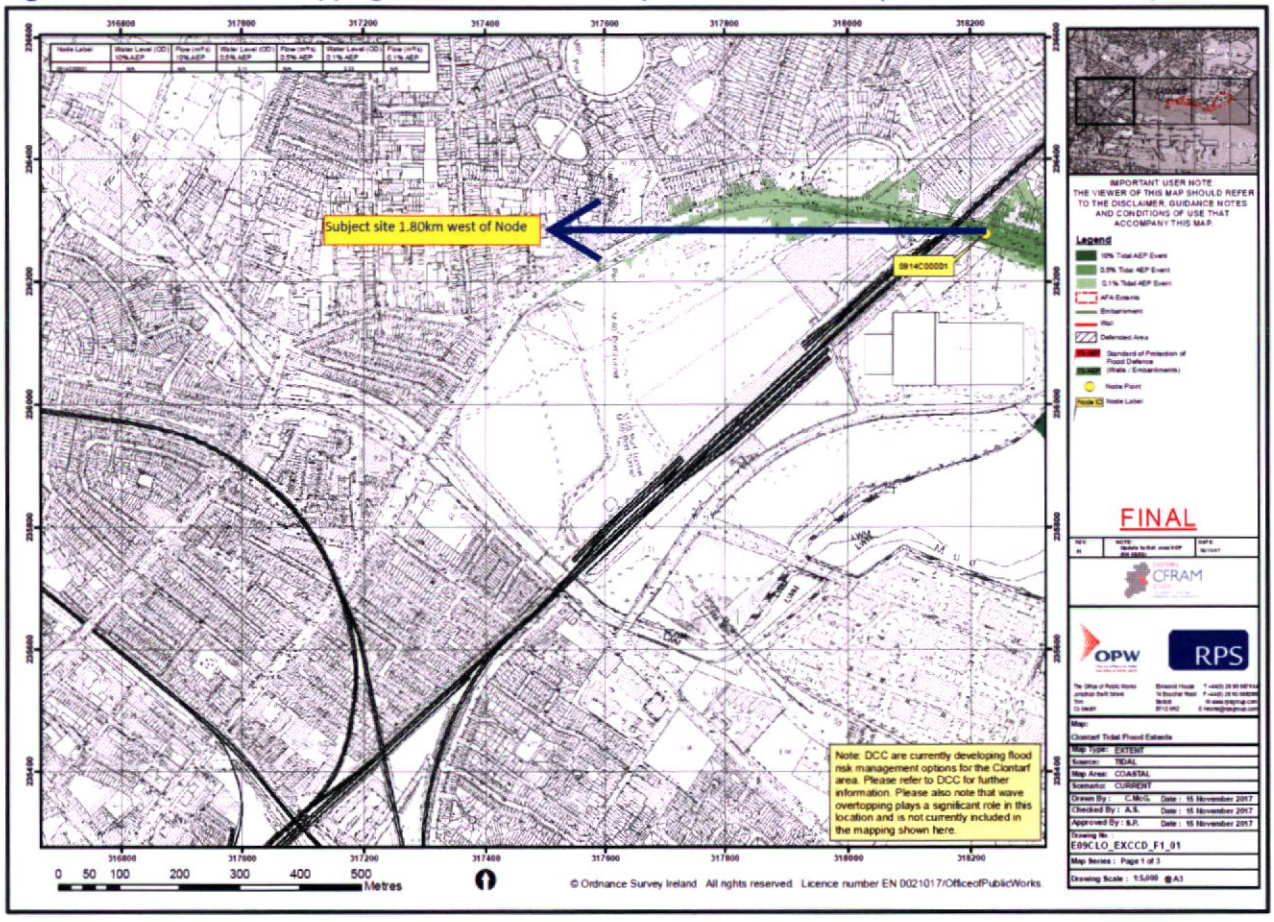
Coastal flooding occurs when sea levels along the coast or in estuaries exceed neighbouring land levels or overcome coastal defences where these exist. A review of the OPW Tidal Flood Extents Mapping was carried out and indicates no coastal flooding at the subject site for the following flood event probabilities:

- 10% Tidal AEP (Annual Exceedance Probabilities) or 1 in 10 year return period.
- 0.5% Tidal AEP or 1 in 200 year return period.
- 0.1% Tidal AEP or 1 in 1000 year return period.

Considering the distance from the coast and the elevation of the site above sea level, a review of the Office of Public Works flooding records confirms that the development site's location is such that it is not tidally influenced or affected by coastal water bodies and, as a result, coastal flooding is negligible.

Therefore, the risk of tidal flooding is considered low as the subject site lies outside the 0.1% AEP, and hence within Flood Zone C.

Figure 10.6 Flood Zone Mapping – Tidal Flood Extents (Source: DCC Development Plan 2022-2028)



Pluvial

Pluvial flooding is flooding which has originated from overland flow resulting from high intensity rain fall. Pluvial flooding occurs when the amount of rainfall exceeds the capacity of urban surface water drainage systems or the ground to absorb it. A review of the available literature including the DCC Flood Resilient City (FRC) project was carried out, and indicates some pluvial flooding south east of the subject site boundary. Note, these maps are 'predictive' flood maps showing areas predicted to be inundated 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, which is presented on 'historic' flood maps.

The DCC FRC project considers the subject site to be low risk of pluvial flooding as it is not located in low lying areas. The FRC project identifies the main source of flooding to be surface water run-off conveyed by road networks into low lying areas such as Fairview Strand and Marino Crescent to the east and southeast of the site, respectively.

Runoff from the proposed development, internal access roads and car parks will be attenuated prior to discharge into the River Tolka. Discharge rates will be restricted to Dublin City Council (DCC) Drainage Division's requirements. The proposed SuDS measures will reduce the risk of flooding downstream of the subject site. The proposed surface system will be designed for the 1 in 100 year plus 20% for climate change, in line with DCC Drainage Division guidelines. During storm events it is expected that sections

of the River Tolka will flow at full capacity and therefore restricting discharge from the development. The proposed outfall will be fitted with a non-return valve at the headwall to prevent backflow into the site. The proposed surface water system on site is designed to cater for 5-hour surcharged outfall for resilience for storms up to and including the 1 in 100 year return period plus 20% for climate change. Therefore, the risk of flooding due to the River Tolka reaching flow capacity is considered low due to the proposed resilience measures in place.

During extreme rainfall events, and in the event the drainage system is blocked due to lack of maintenance, there is potential for localised ponding to occur. However, no habitable floors of buildings will be at risk of flooding by any surface water ponding. Internal finished floor levels are set at a minimum of 150mm above highest external surface levels in the vicinity.

Therefore, the risk of pluvial flooding is considered low, due to existing and proposed measures in place. The existing drainage on site will be improved as a result of the proposed works including the removal of the surface drainage system from the combined network on Clonliffe Road to substantially reduce both the peak and volume of runoff into the network. The proposed storm attenuation facilities will restrict flows to Qbar flow rate (greenfield equivalent or similar) into the River Tolka which will further reduce the risk of pluvial flooding on site and downstream.

The FRC project and pluvial model prediction was examined further, and it highlights a number of anomalies including:

- The area south east of the site boundary shown as flooded is modelled as hardstanding although it is currently greenfield.
- The drainage system is simulated as gravity network to discharge into the River Tolka and Dublin Bay; this is incorrect as we know that the network is pumped at the Poplar Row pumping station to the Ringsend Treatment Works.

Groundwater

Groundwater flooding occurs when the level of water stored in the ground rises as a result of prolonged rainfall, to meet the ground surface and flows out over. A review of site investigations undertaken recently as part of this project was carried out to identify ground water levels in a number of trial pits. Trial pits at the subject site location confirm ground water levels at an average of 1.30m below ground levels.

The scheme comprises basements. Waterproof construction methods and measures will be employed to seal and prevent ingress of ground water into the basement. A review of the groundwater vulnerability data from the Geological Survey Ireland (GSI) website was also carried out and the model indicates low risk of groundwater contamination. The map identifies how susceptible areas are to groundwater contamination. Therefore, the risk of flooding due to ground water ingress to the proposed development is considered low. The proposed basement will be waterproofed.

Flood Risk Summary/Conclusion and Mitigation

Based on the flood risk identification in Stage 1, the proposed development falls in Flood Zone C i.e. where the probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 for both river and coastal flooding i.e. all areas which are not within zone A or B). Hence, the proposed development is deemed 'Appropriate' in accordance with the guidelines of the OPW's publication.

The risk of flooding due to ground water ingress to the proposed development is considered low. Waterproofing construction methods and measures will be employed to seal and prevent ingress of ground water into the basements. The risk of pluvial flooding is considered low, due to the site location and proposed measures for the development.

Part of the buried surface water network passes through a flood zone. The 2 no. surface outfall pipes pass through an area defined as Flood Zone B in the DCC Development Plan 2022-2028 Flood Risk Assessment where the probability of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding and between 0.1% or 1 in 1000 and 0.5% or 1 in 200 for coastal flooding).

There are 2 areas in which flooding occurs:

- Along the buried Surface Water pipe leading from catchment 1 (northwest portion of site) to the surface water outfall number 1. (see drawing CLN-BMD-50-ZZ-DR-C-1150 (Barrett Mahony Civil & Structural Consulting Engineers (2025)), included with this planning application.
- for details of the surface water outfall)
- Along the buried Surface Water pipe leading from catchment 2 (central portion of site) to the surface water outfall number 2. (see drawing CLN-BMD-50-ZZ-DR-C-1151 for details of the surface water outfall).

Several steps have been taken to mitigate the flood risk for the proposed development, and to leave the existing flood storage unaffected. The following points summarise the approach:

- No buildings, ancillary buildings, roads, footpaths are located in the flood zones. Only the 2 no. surface water outfall pipes are located in the flood zone, and are required here in order to reach the River Tolka.
- All finished floor levels are at grade and therefore are well above the flood level.
- Inert levels of attenuation tanks have been kept above the adjacent flood level to prevent surcharging and the performance of the proposed surface water network.
- None of the proposed buildings, roads (which includes access and egress for emergency vehicles) or footpaths are located within the flood zone. Neither are any of the amenity and landscaped areas of this proposed Development. The only items located in the flood zone are 2 no. buried surface water pipes. While excavation is required to install these pipes, ground levels will be returned to existing levels post installation and therefore will have no impact on the flood zone or increase a flood risk elsewhere. As no above ground structures are proposed in the flood zone, there is no effect on an existing residual risk. The existing flood plain will remain unaffected.
- During extreme rainfall events and where the proposed drainage system is blocked, there is a chance that localised ponding will occur. However, as internal finished floor levels are set at a minimum of 150mm above highest external surface levels in the vicinity, any runoff or ponding will be retained on access road and car park surfaces. This measure during the unlikely event is considered appropriate for the nature of the development.

10.3.6 Areas of Conservation

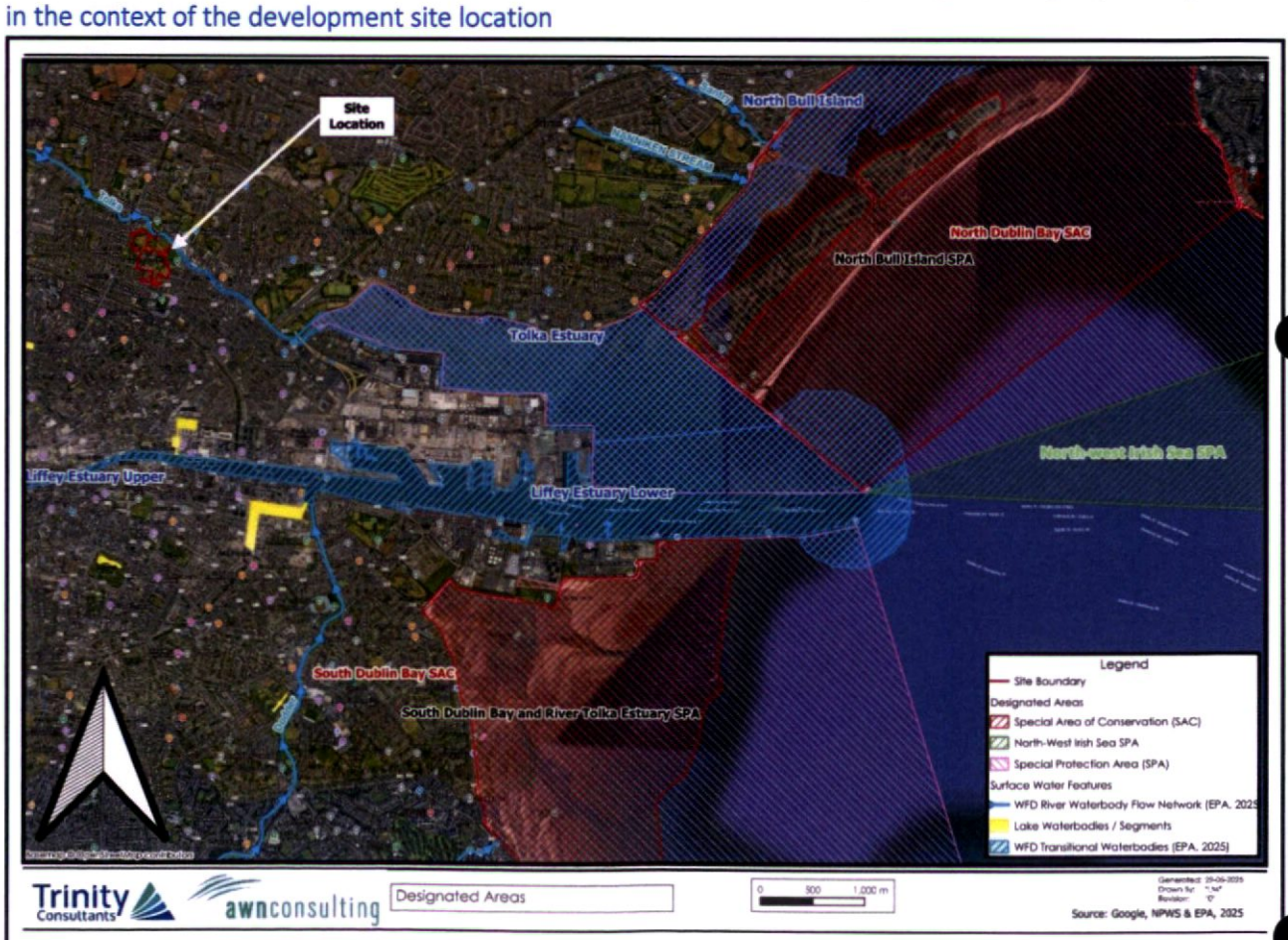
According to the NPWS (2025) on-line database there are no water dependent special protected areas (SPA) or special areas of conservation (SAC) on or within the boundary of the proposed development site. The lands on which the development is located have no formal designations.

There is a direct hydrological pathway to nationally designated sites in the Tolka Estuary and Dublin Bay via the local drainage network and River Tolka which flow in an easterly direction before its discharge / outfall to the Dublin Bay and ultimately the Irish Sea. The relevant Natura 2000 conservation sites are:

- South Dublin Bay Special Area of Conservation (SAC) (Site Code 000210) – c. 3.9 km south-east of the Site
- North Dublin SAC (Site Code 000206) – c. 4.5 km east of the site.
- South Dublin Bay and River Tolka Estuary Special Protection Area (SPA) (Site Code 004024) – c. 1.5 km east of the site.
- North Bull Island SPA (Site Code 004006) – c. 4.5km east of the Site.
- North-West Irish Sea SPA (Site Code: 004232) c. 6.4 km to the southeast of the site at the point of closest proximity.
- The nearest proposed Natural Heritage Area (NHA) (Royal Canal pNHA) is c. 0.3km to the south of the Site.

Figure 10.7 below presents the location of these protected areas in the context of the Site and it is noted that, based on the significant distance to these receptors, coupled with the large dilution factor along the hydrological pathway, there is no likelihood of an accidental release of hydrocarbons or silt from the proposed development resulting in any change in surface water quality contributing to these habitats. The Royal Canal is a fully lined feature therefore no hydrological linkage / connection exists between this canal and subject development site.

Figure 10.7 Designated Natura 2000 Conservation / Protection Sites and hydrological linkage / pathway in the context of the development site location



10.3.7 Rating of Importance of Hydrological Attributes

There is an objective (WFD) to maintain Good status or not impact on programme of measures to achieve Good status of this surface water receptor (River Tolka) during construction and operation.

The nearest river (Tolka) and open water are bounding the Site to the north. Currently, the northern section of the Site is hydrologically / hydraulically connected to the River Tolka via overland flows. However, based on the significant distance to the nearest European / Natura 2000 Site (South Dublin Bay and River Tolka Estuary SPA), which is c. 1.5 km to the east, and large dilution factor downstream in the Tolka Estuary and Dublin Bay, there would be no likely impact to the SPA / SAC sites located in and associated with Dublin Bay. Based on the TII methodology (2009) for the criteria for rating the importance of hydrological features (refer to Appendix 10.1), the features at this site are rated as **medium importance** based on the assessment that the attribute has a medium-quality significance or value on a local scale. This is due to a poor Quality Class C biotic index (Q value of 3 / poor) and its lack of use as a potable water source.

10.4 Characteristics of the Proposed Development

The development description consists of the construction of a residential development set out in blocks ranging in height from 3 to 13 storeys, to accommodate 1131 no. apartments including retail and crèche units, residential tenant amenity spaces, community/cultural spaces, mobility hubs and public open space. In relation to hydrology the relevant characteristics are as follows:

- Increase in hardstanding
- Provision of underground attenuation tanks and associated infrastructure as part of the surface water systems along with installation of bypass hydrocarbon / petrol interceptors.
- All ancillary site development, landscaping and construction works to facilitate foul, water and service network connections.

10.4.1 Construction Phase

The key civil engineering works which relate to the hydrological environment during construction of the proposed development are summarised below:

- During the construction phase, excavated soil and stones (c. 30,000 m^3) will be generated from the excavations required to facilitate site levelling to the necessary base level and construction of new foundations. It is anticipated that c. 10,000 m^3 of this excavated soil and stone will be reused on site. It is anticipated that c. 20,000 m^3 of excavated material will subsequently need to be removed off site and disposed of at a fully authorised soil recovery facility.
- Storage of aggregate materials such as sands and gravels will be stored in clearly marked receptacles in a secure compound area within the contractors' compound on site. Temporary storage of spoil will be managed to prevent accidental release of dust and uncontrolled surface water run-off which may contain sediment and solid matter. Any excavated material temporarily stockpiled onsite for re-use during reinstatement will be managed to prevent accidental release of dust and uncontrolled surface water run-off which may contain sediment etc; There will be a requirement for deliveries of imported engineering fill (sands and gravels), and other construction materials including, steel structure, concrete, cladding, ducting and piping. Construction materials

will be brought to site by road. Soil requiring removal offsite will be removed from site regularly to ensure there is minimal need for stockpiling. Some of the topsoil will be re-used on site for backfill (levels in some areas need to be raised) and landscaping with some export required. Any surplus topsoil material will be transported off site and disposed of at a fully authorised soil recovery facility / site.

- Temporary storage of fuel is required for on site for construction traffic. Liquid materials i.e., fuel storage will be located within temporary bunded areas, doubled skinned tanks or bunded containers (all bunds will conform to standard bunding specifications - BS8007-1987) to prevent spillage.
- Construction activities will necessitate storage of cement and concrete materials, temporary oils, and fuels on site. Small localised accidental releases of contaminating substances including hydrocarbons have the potential to occur from construction traffic and vehicles operating on site.

10.4.2 Operational Phase

There will be an increase in hardstanding and a resultant increase in run-off rate for storm water (which will be fully attenuated) due to the proposed development. The proposed development characteristics which relate to the water and hydrological environment during operation of the proposed development are summarised below:

10.4.2.1 Proposed Surface Water Drainage

Proposed Surface Water (Stormwater) Drainage Layout Design / Strategy / Connection Points

The development will be served by 3 no. separated surface water drainage sub catchment areas. Each sub catchment will be served by a gravity drainage network, with run-off attenuated in each catchment prior to discharging to the River Tolka or the public network in Clonliffe road. The proposed catchment division is as follows:

- Blocks A and surrounds - will drain by gravity towards the River Tolka.
- Blocks B, C, D, E – with the exception of block C2 will drain towards the River Tolka.
- Block C2 –will drain to the existing network in Clonliffe Road.

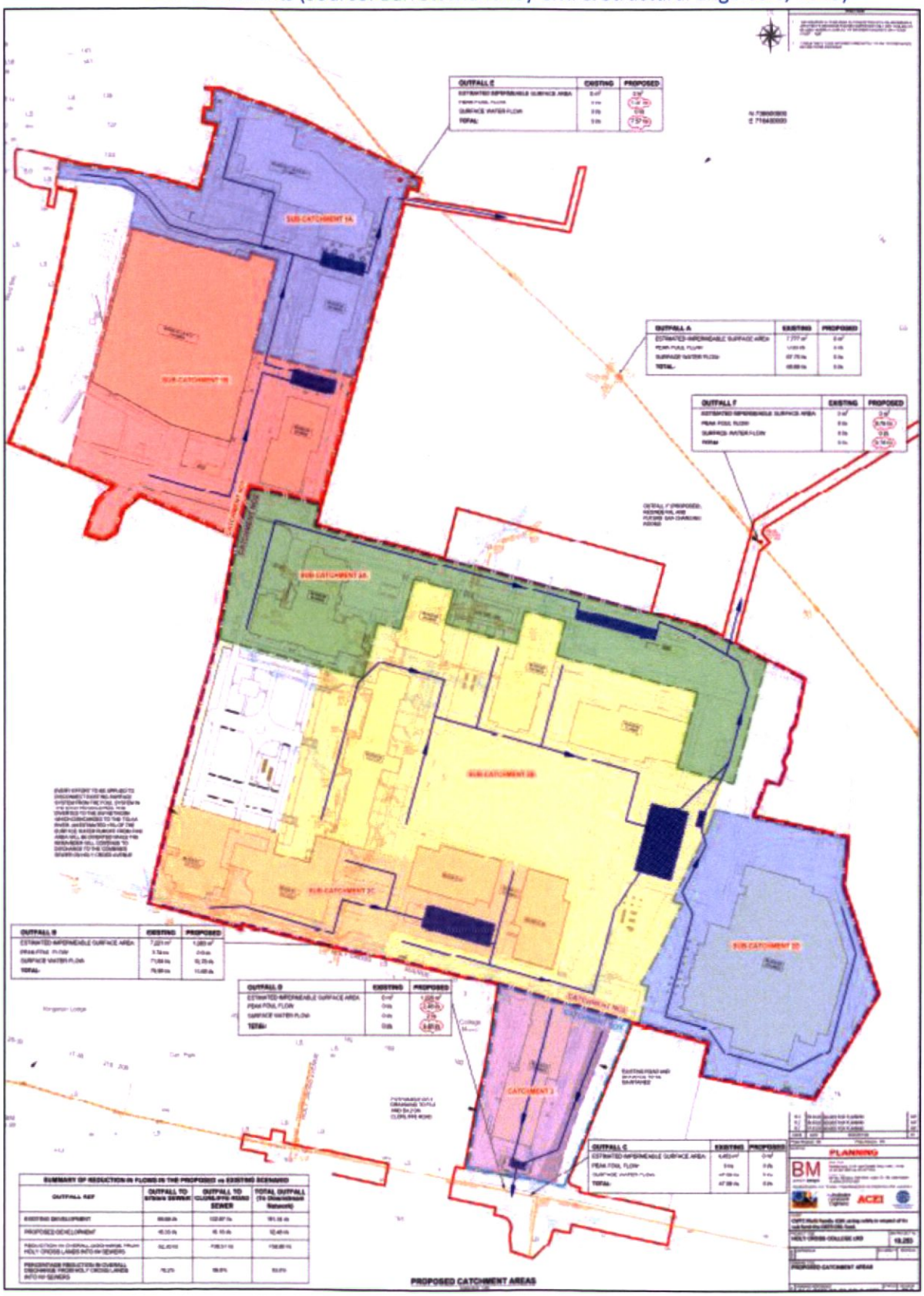
In accordance with the Greater Dublin Strategic Drainage Study (GDSDS), the proposed development shall restrict the stormwater run-off to greenfield run-off rates or Qbar rate. The new development will comprise a separated drainage system, wherein the vast majority of surface water will not discharge into Uisce Éireann combined sewers, but rather will be attenuated on site for up to a 1in 100-year storm event plus an additional 20% allowance for climate change, and discharged into the Tolka at the equivalent Qbar rate.

The surface water system will be attenuated prior to discharge into the River Tolka with the exception of Building C2 adjacent to Clonliffe Road which will discharge at a restricted flow, attenuated and into the Irish Water combined sewer on Clonliffe Road.

The drainage systems will be designed in accordance with Part H of the Building Regulations, EN 752 Drain and Sewer Systems outside Buildings, The Greater Dublin Regional Code of Practice for Drainage Works, Irish Water's Code of Practice for Wastewater and to DCC Drainage Division and Irish Water requirements.

Surface water run-off from the proposed development will drain by gravity and will be attenuated prior to discharge into the River Tolka with the exception of Building C2 adjacent to Clonliffe Road which will discharge at a restricted attenuated flow into the Irish Water combined sewer on Clonliffe Road. SuDS will be incorporated into the development and will include green blue roofs, permeable paving, filter drains, rain garden and shallow infiltration systems. Surface water run-off will go through a minimum of two-stage treatment prior to discharge by gravity into the receiving systems.

Figure 10.8 Proposed Surface Water (Stormwater) Drainage Design / Strategy and Catchments / Sub-catchments (Source: Barrett Mahoney Civil & Structural Engineers, 2025)



Surface water has been redesigned with an outfall rate equal to Qbar for any surface out falling into the River Tolka. Surface water outfall to Clonliffe Road is still restricted to 2 l/s/ha.

In line with the DCC Development Plan 2022-2028, blue roofs have been introduced to all new roof areas over 100m^2 in size, and the capacity of buried attenuation systems has been recused as much as possible. The design seeks to place greater emphasis on integrating increased opportunities for interception of surface water at source, through natural retention measures, such as tree pits, infiltration trenches and bio retention areas.

The proposed surface water drainage system will be designed in accordance with DCC Drainage Division and Irish Water requirements. Refer to BMCE drawings CLN-BMD-00-ZZ-DR-C-1008 – Sheets S1-S4 submitted with the planning permission for layout of the proposed surface water drainage.

The drainage strategy / arrangement will follow the following design standards:

- The Greater Dublin Strategic Drainage Study (GDSDS), Volume 2
- The Greater Dublin Regional Code of Practice for Drainage Works
- British Standard BS EN 752:2008 (Drains and Sewer Systems Outside Buildings)
- Part H of the Building Regulations (Building Drainage)

The proposed Surface Water Management Plan is in line with the key requirements of the Dublin City Council Drainage Division Planning & Development Control Section. The proposed surface water drainage system takes cognisance of the Dublin City Development Plan 2022 – 2028 with respect to SuDS Section 9.5.4. The proposed SuDS measures provide a minimum of two stage treatment train approach including interception and primary and secondary treatment of surface water run-off. This treatment approach is in line with The CIRIA SuDS Manual C753 and is outlined below.

In accordance with the requirements of Dublin City Council, the proposed surface water drainage system designed for this development includes / incorporates a number (multitude) of Sustainable Urban Drainage Systems (SuDS) measures which serve a dual purpose in managing stormwater and will be incorporated to reduce run-off volumes and improve run-off water quality. The proposed SuDs mechanisms will comprise the following:

- Intensive Green Blue Roof
- Extensive Green Blue Roof
- Gravel Filter Drains
- Bioretention areas
- Rain Garden & Tree Pits
- Permeable paving – for all car parking spaces
- Silt Trap
- Filter Strip
- Detention Basin
- Downstream Defender (sediment remover/remediation)
- Oil Separator
- Petrol Interceptor – Prior to out falling into main system
- Hydrobrake flow control – prior to out falling into the main system.
- Attenuation tanks

In the context of the subject site, peak run -off discharge from the proposed development will be restricted to a peak rate of 18.4 l/s into the River Tolka in line with GDSDS requirement of the equivalent Qbar rate. Attenuation facilities will be provided throughout the site for storm events up to and including the 1 in 100 year plus 20% for climate change.

For further details, refer to the Infrastructure Planning Report, prepared by Barrett Mahony Consulting Engineers (2025), included as part of this Application.

The DCC FRA project considers the subject site to be low risk of pluvial flooding as it is not located in low lying areas. The proposed SuDS measures will reduce the risk of flooding downstream of the subject site. The proposed surface system will be designed for the 1 in 100 year plus 20% for climate change, in line with DCC Drainage Division guidelines. No habitable floors of buildings will be at risk of flooding by any surface water ponding. Internal finished floor levels are set at a minimum of 150mm above highest external surface levels in the vicinity.

The existing drainage on site will be improved as a result of the proposed works including the removal of the surface drainage system from the combined network on Clonliffe Road to substantially reduce both the peak and volume of runoff into the network. The proposed storm attenuation facilities will restrict flows to Qbar into the River Tolka which will further reduce the risk of pluvial flooding on site and downstream.

Waterproof construction methods and measures will be employed to seal and prevent ingress of ground water into the basement. No buildings, ancillary buildings, roads, footpaths are located in the flood zone. Only the 2 no. surface water outfall pipes are located in the flood zone, and are required here in order to reach the River Tolka. All finished floor levels are at grade and therefore are elevated well above the flood level. Internal finished floor levels are set at a minimum of 150mm above highest external surface levels in the vicinity, any runoff or ponding will be retained on access road and car park surfaces. This measure during the unlikely event is considered appropriate for the nature of the development.

10.4.2.2 Proposed Foul (Wastewater) Water Infrastructure

Strict separation of surface water and wastewater will be implemented within the development. The proposed development will be fully serviced with separate foul and stormwater sewers which will have adequate capacity for the facility and discharge limits as required by Irish Water licensing requirements.

There is an existing 375mm Foul Network Sewer on Clonliffe Road. There is an existing 675mm Foul Network Sewer which crosses the site at the northern corner heading in a south-western direction. The proposed foul drainage system will be designed to take discharges from the new residential units. Drainage from any non-residential uses such a retail unit or creche (with likely kitchen) will discharge through a grease separator designed in accordance with IS EN 1825 Part 1 and Part 2 and / or to Uisce Éireann requirements. The foul system will connect to the Irish Water network at three locations including two connection points into the existing 675mm combined sewer below the future Sports Grounds and a third connection to the 375mm Foul Network Sewer on Clonliffe Road. Refer to BMCE drawings CLN-BMD-00-ZZ-DR-C-1008 – Sheets S1-S4 for layout of the proposed foul drainage.

This foul sewer will eventually discharge to the Ringsend Waste Water Treatment Plant (WWTP) located circa 4.4km southeast of the site, where it is treated and ultimately discharges to Dublin Bay. The WWTP operates under the EPA licence D0034-02.

It is calculated that the proposed development will have a total hydraulic loading of 719m^3 per day of foul effluent generated during the operational phase of the development. This equates to an average flow of 6.15 litres/second (over a 24-hour period) and a peak flow of 18.45 litres/second.

A Pre-connection Enquiry application was submitted to Irish Water to confirm capacity in the receiving network and a confirmation of feasibility was obtained.

The foul discharge from the site will join the public sewer and will be treated at the Ringsend Water Wastewater Treatment Plant (WWTP, D0034-02) prior to subsequent discharge to Dublin Bay. This WWTP is required to operate under an EPA licence and meet environmental legislative requirements as set out in its licence. There will also be indirect hydrological connection to Dublin Bay through the foul water discharge via Ringsend Wastewater Treatment Plant (WWTP).

There is no 'direct' pathway for foul sewage to any receiving water body (as identified above). There is however an 'indirect pathway' through the public sewer which ultimately discharges to the Irish Water WWTP at Ringsend prior to discharge to Dublin Bay post treatment. However, as the WWTP is required to operate in compliance with licence requirements, there is no potential for water quality exceeding SI threshold concentrations to be exceeded at the Dublin Bay.

It should be noted that the foul peak effluent discharge, calculated for the proposed development as 18.45 l/s would equate to 0.166% of the licensed discharge at Ringsend WWTP [peak hydraulic capacity]. This flow would not have a measurable impact on the overall water quality within Dublin Bay and therefore would not have an impact on the current Water Body Status (as defined within the Water Framework Directive).

It is noted that a planning permission for a new upgrade to this facility was granted in 2019 and is currently in the process of construction/ implementation.

This plant at Ringsend is currently in the process of being upgraded to a population equivalent (PE) of 2.4 million to meet the increased demand of the wider Dublin area. The most recent Annual Environmental Report (AER 2023) shows it is currently operating for a PE peak loading of 2.36 million. The WWTP was originally designed for 1.64 million but was increased up to 2.1million in 2023. However, the current maximum hydraulic load (804,220 m^3/day) is less than the peak hydraulic capacity as constructed (959,040 m3/day) i.e., prior to any upgrade works.

Uisce Éireann completed construction of the infrastructure to treat the wastewater for a population equivalent of 2.1million at the end of 2023, which is the current organic capacity. When all the proposed works are complete by the end of 2025, the Ringsend Wastewater Treatment Plant will be able to treat wastewater for up to 2.4 million PE.

As outlined above, upgrade works commenced in 2018 and are expected to be fully completed by 2025. The upgrade works will result in treatment of sewage to a higher quality than current, thereby ensuring effluent discharge to Dublin Bay will comply with the Urban Wastewater Treatment Directive by the end of the works.

Note: The following additional information is provided with regard to the Uisce Éireann WWTP at Ringsend, Dublin and in the context of the subject site calculated discharges (Ringsend Wastewater Treatment Plant Upgrade Project Environmental Impact Assessment Report, 2018):

The [WWTP upgrade] project is being progressed in stages to ensure that the plant continues to treat wastewater to the current treatment levels throughout the delivery of the upgrade. The project comprises three key elements and underpinning these is a substantial programme of ancillary works:

- Provision of additional secondary treatment capacity with nutrient reduction (400,000 population equivalent).
- Upgrade of the 24 existing secondary treatment tanks to provide additional capacity and nutrient reduction, which is essential to protect the nutrient-sensitive Dublin Bay area; and
- Provision of a new phosphorous recovery process.

In February 2018, the work commenced on the first element, the construction of a new 400,000 population equivalent extension at the Ringsend Wastewater Treatment Plant. After commissioning stages, the Capacity Upgrade facility began accepting flows for treatment in November 2021. This facility will enable current treatment levels to be maintained during the remainder of the upgrade of the existing secondary treatment tanks.

The 2019 planning permission facilitated upgrading works to meet nitrogen and phosphorus standards set out in the licence, which are temporarily exceeded currently. Uisce Éireann completed construction of the infrastructure to treat the wastewater for a population equivalent of 2.1 million at the end of 2023.

The application for the upgrade of the WWTP in 2012 and the revised upgrade in 2018 was supported by a detailed EIAR. As outlined in the EIAR, modelling of water quality in Dublin Bay has shown that the upgrades (which are now currently underway) will result in improved water quality within Dublin Bay. The 2018 EIAR predicts that the improvement in effluent quality achieved by the upgrade will compensate for the increase in flow through the plant. The ABP inspector's report summarises the positive findings of the modelling for the post WWTP upgrade scenario on Dublin Bay water quality in sections 12.3.5 and 12.3.12 of his report and the overall positive impact for human health and the environment in his conclusions in section 12.9.1.

In addition, the EIAR report acknowledges that under the do-nothing scenario "the areas in the Tolka Estuary and North Bull Island channel will continue to be affected by the cumulative nutrient loads from the River Liffey and River Tolka and the effluent from the Ringsend WWTP", which could result in a deterioration of the biological status of Dublin Bay (Irish Water, 2018). Nevertheless, these negative impacts of nutrient over-enrichment are considered "unlikely" (Uisce Éireann, 2018). This is because historical data suggests that pollution in Dublin Bay has had little or no effect on the composition and richness of the benthic macroinvertebrate fauna. Therefore, the do-nothing scenario predicts that nutrient and suspended solid loads from the WWTP will "continue at the same levels and the impact of these loadings should maintain the same level of effects on marine biodiversity". Therefore, it can be concluded that significant effects on the current status of the European sites within Dublin Bay from the current operation of Ringsend WWTP are unlikely. This conclusion is not dependent upon any future works to be undertaken at Ringsend.

With regard to bathing waters in Dublin Bay, as mentioned above, the Proposed Development will have no impact on the water quality in any overflow situation apart from a minor contribution (0.166% of the peak hydraulic capacity at Ringsend WWTP) from foul sewage.

It should be noted that the Ringsend WWTP upgrade has experienced capacity issues during rainfall events and therefore overflows can occur following periods of heavy rainfall. These overflows occur as

a result of the impact on treatment capacity during heavy rainfall events due to surges primarily caused by the historical combined drainage system in Dublin. As the Proposed Development will not contribute any additional stormwater drainage to the WWTP over the natural greenfield rate, the development will therefore have no measurable impact on the water quality in any overflow situation. Nevertheless, it should be noted that, according to the Ringsend WwTP AER (2023), the annual mean hydraulic loading is less than the peak Treatment Plant Capacity. Additionally, the annual maximum hydraulic loading is less than the peak Treatment

As there is adequate assimilation and dilution between the site and the Natura 2000 sites (Dublin Bay, which is c. 1.5 km from the site), it is concluded that no perceptible impact on water quality would occur at the Natura 2000 sites as a result of the construction or operation of this Proposed Development. It can also be concluded that the cumulative or in-combination effects of effluent arising from the Proposed Development with that of other permitted proposed developments, or with development planned pursuant to statutory plans in the greater Dublin, Meath and Kildare areas, which will be discharged into Ringsend WWTP will not be significant having regard to the size of the calculated discharge from the Proposed Development and having regard to the following:

- Recent water quality assessment for Dublin Bay shows that they currently continue to meet the criteria for 'Unpolluted' water quality status (EPA, data until 2024).
- The Ringsend WWTP upgrade which is currently being constructed will result in improved water quality by Q4 2025 to ensure compliance with Water Framework Directive requirements.
- All new developments are required to comply with SuDS which ensures management of run-off rate within the catchment of Ringsend WWTP.
- The natural characteristics of Dublin Bay result in enriched water rapidly mixing and degrading such that the plume has no appreciable effect on water quality at Natura 2000 sites.

As such this flow and treatment at Ringsend WWTP would not have a measurable impact on the overall current water quality and Water Body Status within the Dublin Bay or Northwestern Irish Sea Coastal Waterbody and therefore would not have an impact on the current Water Body Status (as defined within the Water Framework Directive).

For further details, refer to the Infrastructure Planning Report, prepared by Barrett Mahony Consulting Engineers (2025), included as part of this Application.

10.5 Predicted Impacts of the Proposed Development

An analysis of the potential impacts of the proposed Project on the hydrological environment during the construction and operational phases is outlined below.

10.5.1 Do-Nothing Impact

The Do-Nothing scenario refers to the environment as it would be in the future should the proposed Project not be carried out. Should the project not go ahead, the construction and operational phase impacts on hydrology (as detailed below) would not arise. If the proposed development were not to go ahead (i.e., in the Do-Nothing scenario) there would be no excavation or construction or operational impact at this site. There would, therefore, be a neutral effect on the environment. The site is zoned for development, and it is likely that, in the absence of this subject proposal, a development of a similar nature would be progressed on the site that accords with national and regional policies and, therefore, the likely effects would be similar to this proposal, as described in the following sections.

10.5.2 Construction Phase

10.5.2.1 Potential Impacts on Surface Water Quality

Land clearing, earthworks and excavations for foundations and services will necessitate the removal of vegetation cover and the excavation of soil and subsoils. As a result, there is potential for run-off water to become contaminated with pollutants/silt released during construction activity. If not mitigated, contaminated water can pose a temporary risk to the local drains. Based on the source pathway linkage to the River Tolka, which bounds the site to the north and the lengthy pathway distance and significant dilution factor downstream in the Catchment (Tolka Estuary) and Dublin Bay, there is no likely potential for impact on water quality.

During construction of the development, the potential of contamination is associated with the following sources:

- Suspended solids (muddy water with increased turbidity (measure of the degree to which the water loses its transparency due to the presence of suspended particulates)) – arising from excavation and ground disturbance;
- Cement/concrete (increase turbidity and pH) – arising from construction materials;
- Hydrocarbons and other construction chemicals (ecotoxic) – accidental spillages from construction plant or onsite storage;
- Wastewater (nutrient and microbial rich) – arising from accidental discharge from on-site toilets and washrooms. Construction phase sewerage will be taken by tanker off site for disposal at a licensed waste management facility.

Based on the lengthy pathway distance to Natura 2000 sites and significant dilution factor downstream in the Tolka Estuary and Dublin Bay coastal waterbody there is no likelihood of a significant impact on the surface water quality in the River Tolka, Tolka Estuary or Natura 2000 sites associated with Dublin. In the absence of mitigation measures the potential impacts during the construction phase on surface water quality are **negative**, **not significant** and **short-term.**

10.5.2.2 Potential Impacts on Surface Water Flow and Quantity

The gradual introduction of impermeable surfaces and the compaction of soils across the construction site as a result of the land clearing and earthworks will reduce the infiltration capacity and increase the rate and volume of direct surface run-off. The potential impact of this is a possible increase in surface water run-off which could potentially impact local drainage if not adequately attenuated. This increase in the rate and volume of direct surface run-off can result in increased sediment loading, scouring impacts on local drainage and watercourse.

Based on the distance to Natura 2000 sites and dilution downstream in the catchment and Dublin Bay, there is no likelihood of an impact on the surface water flow in the River Tolka waterbody, the Tolka Estuary transitional waterbody or Natura 2000 sites located at and associated with Dublin Bay coastal waterbody.

In the absence of mitigation measures the potential impacts during the construction phase on surface water flow are **negative**, **not significant** and **short-term.**

10.5.2.3 Potential Impacts on Human Health and Population

A reduction in water quality via unmitigated pollutants entering the adjacent drainage ditch, stream or surface waterbody has the potential to lead to negative impacts on human health and populations. However, it is noted that there are no recorded Recreational Waters, Bathing Waterbodies, or Surface Water Drinking RPA, located downstream in the River Tolka or Tolka Estuary.

There are no potential impacts during the construction phase on human health and populations due to changes to the hydrological environment.

10.5.2.4 Potential Impacts on Water Framework Directive Status

There is a potential of localised accidental discharges during the construction phase (as set out in Section 10.5.2.1). However, these are temporary short-lived events that will not impact on the surface water status of the River Tolka or Transitional Tolka Estuary waterbody and as such will not impact on trends in water quality and overall WFD status assessment.

There is no potential impact on Water Framework Directive status or Programme of Measures to achieve Good status.

10.5.3 Operational Phase

10.5.3.1 Surface Water Drainage and foul (wastewater) drainage

Potential Impacts on Surface Water Quality

The proposed development incorporates a sustainable drainage system that is to be integrated with the development's landscaping features and comprises a combination of multiple measures in relation to flow control, interception storage, attenuation storage and catchment conveyance features. In addition, petrol / hydrocarbon interceptors / oil separators are included within the network to treat any localised spill prior to discharge off site. Refer to Proposed Drainage Layout drawings included with this Application for details of the proposed surface water (stormwater) network.

A sustainable urban drainage system (SuDS) approach to stormwater management will be used throughout the site where possible. The overall strategy aims to provide an effective system to mitigate the adverse effects of urban stormwater runoff on the environment by reducing runoff rates, volumes and frequency, thereby reducing pollutant concentrations in stormwater.

There is no requirement for bulk oil / fuel storage or loading onsite. Surface water runoff from roads, car parking areas can potentially contain slightly elevated levels of contaminants such as hydrocarbons which will be collected within on-site drainage and treated in petrol (hydrocarbon) interceptors with no resultant impact on the local drainage network and the downstream River Tolka or Tolka Estuary.

Even without treatment at the Ringsend WWTP, the peak foul effluent discharge, calculated for the proposed development as 18.45 l/s (which would equate to 0.166% of the licensed discharge at Ringsend WWTP [peak hydraulic capacity]), would not have a measurable impact on the overall water quality within Dublin Bay and therefore would not have an impact on the current Water Body Status (as defined within the Water Framework Directive). The Ringsend WWTP has capacity for the above proposed peak foul effluent. This assessment is supported by hydrodynamic and chemical modelling within Dublin Bay which has shown that there is significant dilution for contaminants of concern (DIN and MRP) available quite close to the outfall for the treatment plant (Ringsend WWTP 2012 EIS,

Ringsend WWTP 2018 EIAR; refer to Section 12.4.22, ABP-301798-18 Inspector's report). The most recent water quality assessment of Dublin Bay WFD Waterbody undertaken by the EPA (Water Quality in 2023: An Indicators Report, 2024) also shows that Dublin Bay on the whole, currently has a 'Good' water quality status (refer to www.catchments.ie).

As such this flow and treatment at Ringsend WWTP would not have a measurable impact on the overall current water quality and Water Body Status within the Dublin Bay Coastal Waterbody and therefore would not have an impact on the current Water Body Status (as defined within the Water Framework Directive).

In the absence of mitigation measures the potential impacts during the operational phase on surface water quality are **negative**, **not significant** and **long-term**.

Potential Impacts on Surface Water Quantity and flow

The surface water drainage from the proposed development site has been designed with extensive and intensive green blue roofs, bioretention areas (rain gardens / tree pits), attenuation tanks, detention basins and flow control devices (hydrobrake) to ensure that there is no increase in flow rates and volumes, from the development site, being discharged to the receiving infrastructure and waterbodies; thus, causing no adverse impact on adjoining and other downstream properties.

The proposed project is located within Flood Zone C, which indicates low flood risk. The design of the development and drainage infrastructure will ensure that, in accordance with Greater Dublin Strategic Drainage Study (GDSDS), the proposed development shall restrict the stormwater run-off to greenfield run-off rates or 2.0 l/s/ha. Surface water runoff exceeding the allowable outflow rate for the catchment will be stored in underground attenuation tanks for rainfall events up to a 1 in 100-year return period, with an allowance for climate change of 20%.

The resultant increase in run-off from the proposed increase in hardstanding area has been mitigated by attenuation on site.

As previously discussed in Section 10.4.2.2 above, a review of the Ringsend Annual Environmental report (AER, 2023) confirmed that there is adequate capacity for foul water. As the stormwater and foul water will be separated on site, the Proposed Development will not contribute any additional stormwater drainage to the WWTP.

With design measures in place, the impact on surface water flow and quality are **neutral, imperceptible, long-term**.

10.5.3.2 Potential Impacts on Human Health and Populations

A reduction in water quality via unmitigated pollutants entering the River Tolka or the Tolka Estuary (as set out in Section 10.5.2.1) has the potential to lead to negative impacts on human health and populations. Hydrocarbons and petroleum products for example have the greatest risk for human health when they are in drinking water. However, it is noted that there are no recorded Recreational Waters, Bathing Waterbodies, or Surface Water Drinking RPA, located downstream in the River Tolka or Tolka Estuary. However, as yet unknown recreational, bathing or surface water abstractions may exist.

The potential for unmitigated off-site flooding as a result of the increased hardstanding areas will not have potential to impact on human health, populations, and material assets.

In the absence of mitigation measures the potential impacts during the operational phase on human health and populations due to changes to the hydrological environment are **negative, not significant** and **long term.**

10.6 Mitigation Measures

The design has taken account of the potential impacts of the development on the hydrological environment local to the area where construction is taking place and containment of contaminant sources during operation. Measures have been incorporated in the design to mitigate the potential effects on the surrounding water bodies.

10.6.1 Construction Phase

A Construction Environmental Management Plan (CEMP) and Construction Management Plan (CMP) has been included with the application documentation and contained in this EIAR. This outlines the best practice construction techniques and methodologies which will be implemented during construction of the proposed development including measures to protect waters bodies. The CEMP sets out the proposed procedures and operations to be utilised on the proposed construction site to protect water quality. The mitigation and control measures outlined in the CEMP and this EIAR will be employed on site during the construction phase.

The CEMP and mitigation measures set out in this EIAR will be implemented and adhered to by the construction Contractor and will be overseen and updated as required if site conditions change by the Project Manager, Environmental Manager and Ecological Clerk of Works where relevant. All personnel working on the site will be trained in the implementation of the procedures.

All mitigation measures outlined in this chapter, and within the CEMP will be implemented during the construction phase, as well as any additional measures required pursuant to planning conditions which may be imposed.

The CEMP and this EIAR contains best practice measures and protocols to be implemented during the construction phase of the proposed development to avoid / minimise environmental impacts.

Construction works and the proposed mitigation measures are informed by best practice guidance on the prevention of pollution during development projects including but not limited to:

- Construction Industry Research and Information Association (CIRIA), Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors (C532);
- Inland Fisheries Ireland (IFI), Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters (2016);
- Construction Industry Research and Information Association (CIRIA) Environmental Good Practice on Site (4th edition), (C741); and
- Enterprise Ireland Best Practice Guide, Oil Storage Guidelines (BPGCS005).

According to the subject CEMP prepared by DCON Safety Consultants (2025), all existing surface water drainage elements (including adjacent River Tolka) shall be maintained free from waste materials generated during the construction of the proposed development, including the initial site clearance and

excavation. Routine visual inspections by the contractor shall reduce any risk of excess construction materials causing obstructions to surface water drainage and any potential flooding occurring. A maintenance schedule and operational schedule must be established by the contractor for silt and pollution control measures during the construction period. This should be undertaken in consultation with the relevant statutory authorities.

Run-off from the working site or any areas of exposed soil shall be channelled and intercepted at regular intervals for discharge to silt traps or lagoons. A temporary positive drainage system shall be installed prior to the commencement of the construction works, to collect surface water runoff from the site during construction. A temporary surface water management will throttle runoff and allow silt and suspended solids to be settled out and removed before being discharged in a controlled manner to the agreed outfall.

- The CEMP provides actions and measures which will be undertaken for the purpose of environmental management and pollution prevention during the construction phase. As there is potential for run-off to indirectly discharge to the local drainage network or a watercourse (River Tolka) in the vicinity of the site and in order to manage the potential impact associated with sediment and sediment runoff the following mitigation measures will be implemented during the construction phase: SuDS will be constructed in line with manufacturer's guidelines / best practice methods.
- During construction, any surfaces which are intended to enable infiltration must be protected from compaction. This includes protection from heavy traffic or storage materials.
- Any surface water run-off collecting in excavations will likely contain a high sediment load. This will not be allowed to discharge directly to the local drainage network or the River Tolka.
- Water contaminated with silt will not be allowed to enter a watercourse or drain as it can cause pollution. All parts of the drainage system will be protected from construction runoff to prevent silt clogging the system and causing pollution downstream. Silt reduction measures to prevent this include, early construction of sediment management basins, channelling runoff away from watercourses and surface water drains and erosion prevention measures. Following construction, subsoil that has been compacted during construction should be broken up prior to the re-application of topsoil to reinstate the natural infiltration performance of the ground.
- Process water used during construction will be disposed of appropriately. Rainwater will also accumulate on the site during construction. This water will be discharged via suitable pollution control and attenuation measures either directly to ground within the site or to foul sewer systems via portions of the DCC sewer network.
- Where available proposed permanent connections to the public sewer systems required for the operational phase will be used temporarily for the construction phase, to optimise efficiencies and avoid the creation of new outfalls for temporary construction only.
- De-watering operations and surface water run-off discharge on the site, during construction and prior to completion will be controlled and discharged only to the existing sewerage system at an agreed rate of flow in consultation with Irish Water, DCC Environment Division and Pollution Control Section.
- On-site treatment measures will be installed to treat surface water run-off from the site prior to discharge to the receiving surface water sewer. This treatment will be achieved by the construction of filter strips incorporating Straw Bales to reduce sediment loading, settlement tanks, the

installation of proprietary surface water treatment systems including Class 1 full retention petrol interceptors and spill protection control measures. Settlement tanks will be sized to deal with surface run-off and any groundwater encountered. All measures will be approved prior to commencement with the Pollution Section of DCC.

- Pipe systems and orifices will be checked for blockages or partial blockages.
- Soils will be stabilised and protected from erosion whilst planting becomes established. All exposed soil surfaces will be within the main excavation site which limits the potential for any offsite impacts.
- The temporary storage of soil will be carefully managed. Stockpiles will be tightly compacted to reduce runoff and graded to aid in runoff collection.
- Pollution control measures will be implemented to control run-off from the site and prevent run-off which is potentially contaminated with sediments or hazardous chemicals entering the drainage network.
- A response procedure will be put in place to deal with any accidental pollution events and spillage kits will be available on site.
- Any hard surface site roads will be swept to remove mud and aggregate materials from their surface while any unsurfaced roads shall be restricted to essential site traffic only.
- A power washing facility or wheel cleaning facility will be installed near to the site compound for use by vehicles exiting the site when appropriate,
- Aggregate materials such as sands and gravels will be stored in clearly marked receptacles within a secure compound area to prevent contamination.
- Movement of material will be minimised to reduce the degradation of soil structure and generation of dust.
- Excavations will remain open for as little time as possible before the placement of fill. This will help to minimise the potential for water ingress into excavations.
- Weather conditions will be considered when planning construction activities to minimise the risk of run-off from the site.
- All excavated materials will be visually assessed by suitably qualified persons for signs of possible contamination such as staining or strong odours. Should any unusual staining or odour be noticed, samples of this soil will be analysed for the presence of potential contaminants to ensure that historical pollution of the soil has not occurred. Should it be determined that any of the soil excavated is contaminated, this will be segregated and appropriately disposed of by a suitably permitted/licensed waste disposal contractor.
- Surface water discharge from the site will be managed and controlled for the duration of the construction works until the permanently attenuated surface water drainage system of the proposed site is complete.

10.6.1.1 Cement/concrete works

Where feasible all ready-mixed concrete will be brought to site by truck. A suitable risk assessment for wet concreting will be completed prior to works being carried out which will include measures to prevent discharge of alkaline wastewaters or contaminated storm water to the underlying subsoil.

Pouring of cement-based materials for works will only be carried out in dry conditions. Pumped concrete will be monitored to ensure there is no accidental discharge. Mixer washings and excess concrete will not be discharged directly into the drainage network. Concrete washout areas will be created to avoid any accidental discharge from the proposed development site.

No wash-down or wash-out of ready-mix concrete vehicles during the construction works will be carried out at the site within minimum of 10 meters of an existing surface water drainage point. Washouts will only be allowed to take place in designated areas with an impervious surface where all wash water is contained and removed from site by road tanker or discharged to foul sewer subject to agreement with Dublin City Council and / or Uisce Éireann.

The construction contractor will be required to implement emergency response procedures, and these will be in line with industry guidance. All personnel working on the Site will be suitably trained in the implementation of the procedures.

10.6.1.2 Hydrocarbons and other construction chemicals

The following mitigation measures will be implemented during the construction phase in order to prevent any spillages to ground of fuels and other construction chemicals and prevent any resulting impacts to surface water and groundwater systems:

- Designation of bunded refuelling areas on the Site;
- Provision of spill kit facilities across the Site;
- Where mobile fuel bowsers are used, the following measures will be taken:
  - Any flexible pipe, tap or valve will be fitted with a lock and will be secured when not in use;
  - The pump or valve will be fitted with a lock and will be secured when not in use;
  - All bowsers to carry a spill kit and operatives must have spill response training;
  - Portable generators or similar fuel containing equipment will be placed on suitable drip trays.
- In the case of drummed fuel or other potentially polluting substances which may be used during the construction phase, the following measures will be adopted:
  - Secure storage of all containers that contain potential polluting substances in a dedicated internally bunded chemical storage cabinet unit or inside a concrete bunded area;
  - Oil and fuel storage tanks shall be stored in designated areas, and these areas shall be located within temporary bunded areas, doubled skinned tanks or bunded containers to a volume of 110% of the capacity of the largest tank/container. Drainage from the bunded area(s) shall be diverted for collection and safe disposal;
  - Clear labelling of containers so that appropriate remedial measures can be taken in the event of a spillage;
  - All drums to be quality approved and manufactured to a recognised standard;
  - If drums are to be moved around the Site, they will be secured and on spill pallets; and Drums will be loaded and unloaded by competent and trained personnel using appropriate equipment.
- Refuelling of construction vehicles and the addition of hydraulic oils or lubricants to vehicles will take place in a designated area or within the construction compound (or, where possible, off the site). In the event of a machine requiring refuelling outside of this area, fuel will be transported in a mobile double skinned tank. An adequate supply of spill kits and hydrocarbon adsorbent packs will be stored in this area. All relevant personnel will be fully trained in the use of this equipment.
- The construction contractor will be required to implement emergency response procedures, and these will be in line with industry guidance. All personnel working on the Site will be suitably trained in the implementation of the procedures.

10.6.1.3 Rainwater Run-off

Rainfall at the construction site will be managed and controlled for the duration of the construction works until the permanently intercepted and attenuated surface water drainage system of the proposed site is complete. In the meantime, rainwater will continue to discharge to ground as currently occurs. Temporary construction surface drainage and sediment control measures, including the use of SuDS, will be provided before earthworks commence. The drainage design follows the natural topography of the site and utilises the existing storm water infrastructure within the surrounding infrastructure where possible including the River Tolka.

10.6.1.4 Wastewater Management

Foul drainage from site offices and compound, where not directed to the existing wastewater network, will be contained and disposed of off-site in an appropriate manner or to a licenced facility and in accordance with the relevant statutory regulations to prevent the pollution of watercourses.

10.6.1.5 Surface Water Flow and Quantity

During construction a site drainage and protection system will be built to reduce the flow of run-off from the site, prevent soil erosion, and protect water quality in the adjacent River Tolka or the downstream Tolka Estuary. Temporary excavated channels, bunds, or ridges or a combination of the three, may be constructed to divert sediment-laden water to an appropriate sediment retention structure. These may be installed to provide permanent diversion of clean stormwater away from erosion exposed soil areas, or to provide a barrier between exposed areas and unexposed areas of the construction site. Runoff diversion channels/bunds need regular maintenance to keep functioning throughout their life.

10.6.1.6 Human Health and Population

It has been established (Section 10.3) that there are no recorded Recreational Waters, Bathing Waterbodies, or Surface Water Drinking RPA, located downstream in the River Tolka or the Tolka Estuary. On a precautionary basis, the mitigation measures set out above in this Section (10.6.1) will be implemented during the construction works for the protection of human health and populations.

10.6.1.7 Potential Impacts on Water Framework Directive

It has been established (Section 10.5.2) that while, there is a potential of accidental discharges during the construction phase this will not impact on trends in water quality and overall WFD status assessment. On a precautionary basis, the mitigation measures previously set out in Section 10.6.1 above, will be implemented during the construction works for the protection of surface water status and achievement of the programme of measures.

10.6.2 Operational Phase

10.6.2.1.1 Surface Water Quality

The design has taken account of the potential impacts of the development on surface water quality; measures have been incorporated in the design to mitigate these potential impacts.

The proposed development stormwater drainage network design includes sustainable drainage systems (SuDS). These measures by design ensure the stormwater leaving the site is to be attenuated

and treated within the new development site boundary to ensure suitable quality, before discharging to the existing local drainage network which subsequently outfalls to the nearby River Tolka. SuDS are drainage systems that are environmentally beneficial, causing minimal or no long-term detrimental damage. The SuDs design is set out in the Infrastructure Planning Report (Barrett Mahony Consulting Engineers, 2025) and uses extensive / intensive green blue roofs, underground attenuation tanks, detention basins, flow control devices (Hydrobrake), bioretention areas, rain gardens, tree pits, permeable paving (porous surfacing), an oil separator, and petrol / hydrocarbon interceptors (or equivalent).

The purpose of the SuDs design is to:

- Treat runoff and remove pollutants to improve quality;
- Restrict outflow and control quantity;
- Increase amenity value.

The layout of the proposed surface water drainage network is shown on Barrett Mahony Consulting Engineers (2025) Drawing Set included with this Application. It is proposed to strictly separate the surface water and wastewater drainage networks, which will serve the proposed development, and provide independent connections to the surface water (stormwater) and wastewater (foul) sewer networks respectively.

10.6.2.1.2 Surface Water Flow and Quantity

The design has taken account of the potential impacts of the development on surface water flow; measures have been incorporated in the design to mitigate these potential impacts.

As set out in the Infrastructure Planning Report (BMCE, 2025), flow restriction is achieved by means of a hydro-brake installed at the outfall of the surface water catchment within the development, with the excess storm water stored on site for the duration of the storm periods of up to 1 in 100 years. All the storm water from the proposed development shall be collected in separate storm pipes and shall be discharged into an underground attenuation system. The attenuation tanks shall be designed for 1-in 100 year storm event plus 20% climate change factor without any overland flooding. The attenuation tank shall be provided with flow control device to restrict the storm water run-off to greenfield rate.

The proposed development includes a new surface water network which will mitigate any flood risk to the site in line with SuDS measures. The DCC FRA project considers the subject site to be low risk of pluvial flooding as it is not located in low lying areas. The proposed SuDS measures will reduce the risk of flooding downstream of the subject site. The proposed surface system will be designed for the 1 in 100 year storm event plus 20% for climate change, in line with DCC Drainage Division guidelines. No habitable floors of buildings will be at risk of flooding by any surface water ponding. Internal finished floor levels are set at a minimum of 150mm above highest external surface levels in the vicinity. Therefore, the risk of pluvial flooding is considered low, due to existing and proposed measures in place.

The existing drainage on site will be improved as a result of the proposed works including the removal of the surface drainage system from the combined network on Clonliffe Road to substantially reduce both the peak and volume of runoff into the network. The proposed storm attenuation facilities will restrict flows to Qbar into the River Tolka which will further reduce the risk of pluvial flooding on site and downstream.

Waterproof construction methods and measures will be employed to seal and prevent ingress of ground water into the basement. No buildings, ancillary buildings, roads, or footpaths are located in the flood. Only the 2 no. surface water outfall pipes are located in the flood zone, and are required here in order to reach the River Tolka. All finished floor levels are at grade and therefore are elevated well above the flood level. Internal finished floor levels are set at a minimum of 150mm above highest external surface levels in the vicinity, any runoff or ponding will be retained on access road and car park surfaces. This measure during the unlikely event is considered appropriate for the nature of the development.

10.7 Residual Impacts

10.7.1 Construction Phase

10.7.1.1 Surface Water Quality

The implementation of the mitigation measures detailed in Section 10.6, will ensure that the potential impacts on surface water quality during the construction phase are adequately mitigated. The residual effect on surface water quality during the construction phase is considered to be **neutral, imperceptible** and **short-term**.

10.7.1.2 Surface Water Flow and Quantity

The implementation of the mitigation measures detailed in Section 10.6, will ensure that the potential impacts on surface water flow and quantity during the construction phase are adequately mitigated. The residual effect on surface water flow and quantity during the construction phase is considered to be **neutral, imperceptible** and **short-term**.

10.7.1.3 Human Health and Populations

The implementation of the mitigation measures detailed in Section 10.6, will ensure that the potential impacts on human health and populations (and material assets) during the construction phase are adequately mitigated. The residual effect on human health and populations during the construction phase is considered to be **neutral, imperceptible** and **short-term**.

10.7.1.4 Water Framework Directive Status

Even in the absence of the mitigation measures detailed in Section 10.6, there will be no predicted degradation of the current water body (chemically, ecological and quantity) or any impact on its potential to meet the requirements and/or objectives in the second RBMP 2018-2021 (River Basin Management Plan) and third RBMP 2022-2027.

There are appropriately designed mitigation measures which will be implemented during the construction phase to protect the hydrological environment. There is a potential of accidental discharges during the construction phase, however these are temporary short-lived events that will not impact on the water status of waterbodies long-term and, as such, will not impact on trends in water quality and over all status assessment.

The residual effect on the WFD status during the construction phase is considered to be **neutral, imperceptible** and **short-term**.

10.7.2 Operational Phase

10.7.2.1 Surface Water

The implementation of the mitigation measures detailed in Section 10.6, will ensure that the potential impacts on surface water quality once the proposed development is constructed and operational are adequately mitigated. The residual effect on surface water quality during the operational phase is considered to be **neutral, imperceptible** and **long-term**.

There will be no impact to the quality of downstream designated sites due to the lack of direct hydrological / hydraulic connectivity, the significant distance of the (indirect) pathway between the subject development and designated areas, and the standard best practice mitigation measures cited. In addition, SuDS for the project and installation of petrol / hydrocarbon interceptors / separators will serve to protect the adjacent River Tolka Waterbody and downstream Tolka Estuary from hydrocarbon / petrol leaks or accidental spillages and improve flood management and water quality.

10.7.2.2 Human Health and Populations

The implementation of the mitigation measures detailed in Section 10.6, will ensure that the potential impacts on human health and populations (and material assets) once the proposed development is constructed and operational are adequately mitigated. The residual effect on human health and populations during the operational phase is considered to be **neutral, imperceptible** and **long-term**.

10.7.2.3 Water Framework Assessment

Even in the absence of the mitigation measures detailed in Section 10.6, there will be no predicted degradation of the current water body (chemically, ecological and quantity) or any impact on its potential to meet the requirements and/or objectives in the second RBMP 2018-2021 (River Basin Management Plan) and third RBMP 2022-2027.

There are appropriately designed mitigation measures which will be implemented during the operational phase to protect the hydrological environment. There is a potential of accidental discharges during the operational phase, however these are temporary short-lived events that will be intercepted by the surface water drainage strategy / design and as a result will not impact on the water status of waterbodies long-term and as such will not impact on trends in water quality and over all status assessment.

There are no untreated discharges of surface water (stormwater) or wastewater during the operational phase to any open waterbody / watercourse. The discharge to surface water sewer will be adequately treated via SuDS measures, underground attenuation (detention) hydro-brake and Petrol interceptor / separator to ensure there is no long-term negative impact to the WFD water quality status of the receiving watercourse. The SuDS and proposed measures have been designed in detail with the ultimate aim of protecting the hydrological (& hydrogeological) environment. The SuDS and project design measures will be maintained correctly as per specifications to ensure long-term / on-going integrity of same.

The residual effect on Water Framework Directive Status during the operation phase (post mitigation) is considered to be **neutral, imperceptible** and **long-term.**

10.8 Monitoring or Reinstatement

The management of hydrology during the construction phase will be monitored by the Contractor to ensure compliance with above-listed mitigation measures, and relevant water legislation and local authority requirements.

10.8.1 Construction Phase

During construction phase the following monitoring measures will be considered:

- Silt remediation / interception treatment system;
- Contractors will carry out regular inspections to confirm compliance with the CEMP;
- Daily inspections by contractors will address potential environmental impacts including dust, litter, waste management and general housekeeping;
- Regular inspection of surface water run-off and sediments controls (e.g., silt remediation treatment e.g. silt traps/fence or equivalent). Inspection and maintenance of the silt fences during the construction phase is crucial to ensuring that they work as intended. They will remain in place throughout the entire construction phase;
- In accordance with Transport Infrastructure Ireland (TII)'s 'Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan', surface water monitoring during the construction phase to ensure maintenance of water quality protection will be undertaken for parameters including; temperature, dissolved oxygen, pH, nitrates, suspended solids, BODs (Biochemical Oxygen Demand), phenolic compounds petroleum hydrocarbons, non-ionized ammonia, total ammonium, total residual chlorine and electrical conductivity;
- Soil sampling to confirm disposal options for excavated soils in order to avoid contaminated water run-off; and
- Regular inspection or auditing of construction / mitigation measures (e.g., concrete pouring, refuelling, etc).

10.8.2 Operational Phase

No future surface water monitoring is proposed for the proposed development due to the low hazard potential at the site. Oil / hydrocarbon / petrol separators or interceptors will be maintained and cleaned out in accordance with the manufacturer's instructions. Maintenance of the surface water drainage system and foul sewers as per normal urban developments is recommended to minimise any accidental discharges to surface water.

10.9 Interactions

Due to the inter-relationship between land, soils, geology, hydrogeology and hydrology, the assessed impacts and mitigation measures discussed will be considered applicable to both chapters.

This section discusses interactions between this Chapter and other specialist environmental topics considered in this EIAR. The main interactions of importance to hydrology relate to Biodiversity (Chapter 8), Land, soil, geology, hydrogeology (Chapter 9), and Climate (Chapter 12) as follows.

10.9.1 Biodiversity

There is no potential for significant impacts on water quality within European Designated sites. Standard good practice mitigation measures coupled with the large distance involved in the pathway

and significant dilution factor downstream in the Tolka Estuary and Dublin Bay will result in no significant impacts.

10.9.2 Climate and Flood Risk

The proposed development will not have a negative impact on flood risk as a result of climate change. The proposed development is located within Flood Zone C. The proposed drainage plan incorporates adequate attenuation taking consideration of a climate safety factor. In addition, it is proposed to provide underground attenuation within the development. The attenuation system for the proposed development shall be designed to cater for a 1-in-100-year storm event plus 20% climate change factor. It is proposed to limit stormwater discharge from the site to the greenfield discharge rate which will further reduce the risk of pluvial flooding on site and downstream. By reducing the run-off from the site into the existing drainage system the potential risk of flooding from pluvial action is deemed to be within acceptable limits. No habitable floors of buildings will be at risk of flooding by any surface water ponding. Internal finished floor levels are set at a minimum of 150mm above highest external surface levels in the vicinity. Therefore, the risk of pluvial flooding is considered low, due to existing and proposed measures in place.

10.9.3 Land, Soil, Geology, and Hydrogeology

There will be a reduced recharge to the underlying aquifer (decrease in drainage percolation / infiltration to ground) due to hardstand cover and installation of a drainage system. However, no negative impact is expected due to surface water runoff management and infiltration through permeable paving.

10.10 Indirect and/or Secondary Impacts

The proposed development requires discharge of surface water (stormwater) and foul effluent to the local drainage networks which, if not managed appropriately, could give rise to negative impacts on the receiving waterbodies.

In accordance with EPA Guidelines (2022), secondary or indirect impacts refer to environmental effects that occur away from the project site or through complex impact pathways. Having regard to the design, drainage strategy (foul and surface water), nature, scale and location of the proposed residential development, and the specific works involved during construction and operation, there is no potential for significant indirect or secondary impacts on hydrology. The development does not rely on functionally interdependent activities occurring off-site that would give rise to such effects.

10.11 Cumulative Impacts

The cumulative impact of the proposed development with any/all relevant other planned or permitted developments as stated in Chapter 23 are discussed below.

Existing developments that are already built and in operation contribute to the characterisation of the baseline environment. As such any further environmental impacts that the proposed development may have in addition to these already constructed and operational developments has been assessed in the preceding sections of this chapter.

Neither the development proposed, nor any other developments will give rise to any significant impacts on surface water receptors and there are no predicted cumulative impacts in relation to surface water

receptors in terms of water quality and flow, as a result of the proposed development in combination with existing / proposed plans or projects.

10.11.1 Construction Phase

In relation to the potential cumulative impact on hydrology during the construction phases, the construction works which would have potential cumulative impacts are as follows:

- Surface water run-off during the construction phase may contain increased silt levels or become polluted from construction activities. Run-off containing large amounts of silt can cause damage to surface water systems and receiving watercourses;
- Stockpiled material will be stored on hardstand away from surface water drains, and gullies will be protected during works to ensure there is no untreated discharge of silt-laden water into the surrounding surface water drainage system;
- Contamination of local water sources from accidental spillage and leakage from construction traffic and construction materials is possible unless project-specific measures are put in place for each development and complied with.

The works contractors for other planned or permitted developments will be obliged to ensure that measures are in place to protect soil and water quality in compliance with legislative standards for receiving water quality (European Communities Environmental Objectives (Surface Water) Regulations (S.I. 272 of 2009, as amended).

The implementation of mitigation and monitoring measures detailed here as well as the compliance of the above permitted development with their respective planning conditions, will ensure there will be minimal cumulative potential for change to the hydrological environment during the construction phase of the proposed development. The residual cumulative impact of the proposed development in combination with other planned or permitted developments can therefore be considered to be **neutral, imperceptible,** and **short-term**.

10.11.2 Operational Phase

In relation to the potential cumulative impact on hydrology during the operational phase the operational activities which would have potential cumulative impacts are as follows:

Increased hard standing areas will reduce local recharge to ground and increase surface water run-off potential if not limited / restricted to the green field run-off rate from the Site. Cumulatively this development and others in the area will result in localised reduced recharge to ground and increase in surface run-off. Increase in wastewater loading and water supply requirement is an impact of all development. Each development will require approval from Uisce Éireann (formerly IW, Irish Water) confirming available capacity in the water and wastewater infrastructure. The surface water and foul drainage infrastructure and water supply requirements for the proposed development have been designed to accommodate the proposed development and a confirmation of feasibility from Uisce Éireann has been received.

Development will result in an increase in hard standing which will result in localised reduced recharge to ground. Each permitted development is required by the Local Authority and Uisce Éireann to comply with the Local Authority and Uisce Éireann requirements by providing suitable attenuation on-site and ensure that there is no increase in off-site flooding as a result of the development in question.

All developments are required to operate in compliance with relevant legislation - Water Framework Directive and Surface water Regulations. All developments are required to ensure they do not have an impact on the receiving water environment in accordance with the relevant legislation (Water Framework Directive and associated legislation, (European Communities Environmental Objectives (Surface Water) Regulations (S.I. 272 of 2009, as amended) such that they would be required to manage run-off quality.

The implementation of design and mitigation measures detailed in Section 10.6 as well as the compliance of the above permitted development with their respective planning conditions, will ensure there will be minimal cumulative potential for change in surface water during the operational phase of the proposed development. The residual cumulative impact of the proposed development in combination with other planned or permitted developments can therefore be considered to be **neutral, imperceptible** and **long-term**.

10.12 Difficulties Encountered

There were no difficulties encountered during the preparation of this report.

10.13 Summary

There will be **no long-term residual impact** on hydrological receptors, either within or in the vicinity of the proposed development as a result of the proposed development.

10.14 References

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- Department of Housing, Planning & Local Government (2018). River Basin Management Plan for Ireland 2018 – 2021.
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- Eastern Regional Fisheries Board (2006). Fisheries Protection Guidelines: Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites.
- Enterprise Ireland (n.d.). Best Practice Guide BPGCS005: Oil Storage Guidelines.
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- EPA (2025). EPA Maps.
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11 Air Quality

11.1 Introduction

This chapter assesses the likely air quality impacts associated with the proposed Large-scale Residential Development (LRD), located on lands at the Holy Cross College, Clonliffe Road, Dublin 3 and Drumcondra Road Lower, Drumcondra, Dublin 9. This report assesses the baseline air quality conditions at the site and evaluates the potential effects of the proposed development's construction and operation. Where required, appropriate mitigation measures to limit any identified likely significant adverse impacts to air quality are recommended.

A full description of the development is available in Chapter 5. This chapter should be read in conjunction with Chapter 19 Traffic & Transportation submitted with the planning application.

11.2 Expertise and Qualifications

This chapter was completed by Tanmay Gojamgunde. Tanmay is an Environmental Consultant in the Air Quality & Climate section of AWN Consulting, a Trinity Consultants Company. He holds a MSc in Air Pollution Management and Control from the University of Birmingham and has also completed BTech in Environmental Engineering. As part of the MSc, he worked on 'The Impact of bus-fleet electrification on air quality in Birmingham' utilising advanced dispersion modelling tools and emission inventory toolkit. Prior to joining AWN, Tanmay contributed to several key environmental projects in India, including Delhi's first air quality monitoring program (R ASMAN), air quality and traffic planning assessments with IIT Kanpur, and an Environmental Impact Assessment Report (EIAR) for an industrial district in Kanpur. He also specialises in conducting air dispersion modelling assessments of emissions, emission inventories, R programming and extends to broader aspects of environmental engineering.

This chapter was reviewed by Ciara Nolan. Ciara is a Principal Environmental Consultant in the Air Quality & Climate section of AWN Consulting. She holds a BSc in Energy Systems Engineering from University College Dublin and has also completed an MSc in Applied Environmental Science at UCD. She is a Member of the Institute of Air Quality Management (MIAQM) and the Institution of Environmental Sciences (MIEnvSc). She has over 8 years of experience in undertaking air quality and climate assessments. She has prepared air quality and climate impact assessments as part of EIARs for residential developments including Woodbrook, Shankill (Planning Application Ref. ABP30584419), Ballygossan Park, Skerries (Planning Application Ref. LRD0010/S3), SHD Ratoath (Planning Application Ref. SH305196), SHD Rathmullen, Drogheda (Planning Application Ref. SH305552), commercial and industrial developments by Dublin Airport Authority, Abbvie, Mountpark, Pfizer, Takeda, as well as renewable energy developments such as Crockahenny Windfarm, Upperchurch Windfarm, Knocknamona Windfarm and Keerglen Windfarm. She also specialises in conducting air dispersion modelling assessments of emissions from data centres, energy centres and the chemical industry as part of EPA Industrial Emissions Licences for Echelon DC, AWS, Takeda, MSD and Regeneron. She has undertaken air quality and climate impact assessments for transportation schemes, primarily regional and national road schemes, from constraints, through to route selection and EIAR stage.

11.2.1 Aspects Relevant to this Assessment

During the construction phase construction dust emissions have the potential to impact air quality. Dust emissions will primarily occur as a result of site preparation works, earthworks and the movement of trucks on site and exiting the site. There is also the potential for engine emissions from site vehicles and machinery to impact air quality. Construction phase impacts will be short-term in duration.

Engine emissions from vehicles accessing the site have the potential to impact air quality during the operational phase of the development through the release of nitrogen dioxide (NO_2) and particulate matter (as PM_{10} and $PM_{2.5}$). Operational phase impacts will be long-term in duration.

11.3 Method

11.3.1 Relevant Legislation, Guidance & Policy

The principal guidance and best practice documents used to inform the assessment of potential impacts on air quality are summarised below.

- Guidance on the Assessment of Dust from Demolition and Construction v2.2 (Institute of Air Quality Management [IAQM] (hereafter referred to as the IAQM Guidelines) (IAQM, 2024);
- A Guide to the Assessment of Air Quality Impacts on Designated Nature Conservation Sites (Version 1.1) (IAQM, 2020);
- PE-ENV-01106: Air Quality Assessment of Specified Infrastructure Projects (Transport Infrastructure Ireland [TII], 2022);
- Dublin City Council Development Plan 2022-2028 (DCC, 2022); and
- Dublin Region Air Quality Plan 2021 (Dublin City Council, et al., 2021).

In addition to specific air quality guidance documents, the following guidelines were considered and consulted in the preparation of this chapter:

- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (hereafter referred to as the Environmental Protection Agency (EPA) Guidelines) (EPA, 2022);
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of Housing, Planning & Local Government, 2018); and
- Environmental Impact Assessment (EIA) Directive Guidance on the Preparation of the Environmental Impact Assessment Report (European Commission, 2017).

The Dublin City Council Development Plan 2022-2028 (DCC, 2022) was reviewed as part of this assessment. As part of a green infrastructure approach, the City Council will seek more urban greening, and healthy placemaking. The overall approach is to:

- Reduce the impacts of climate change;
- Improve air and water quality;
- Provide effective flood management;
- Encourage walking, cycling and physical activity generally; and
- Protect and improve biodiversity and ecological resilience.

The Dublin City Development Plan 2022–2028 also sets out specific Development Standards relevant to air quality protection. Objective QHSNO19 requires that all childcare facilities provide private outdoor play space or demonstrate safe and easy access to a suitable play area, with such space appropriately located to avoid exposure to air pollution. In addition, Section 15.18.10 requires that all

developments ensure air quality is not adversely impacted during both construction and operational phases. Construction management plans must include details of air quality controls, while operational proposals must incorporate appropriate ventilation and air extraction systems.

The Dublin Region Air Quality Plan 2021 (Dublin City Council, et al., 2021) outlines a number of measures to address nitrogen dioxide (NO_2) levels, with a strong policy focus on sustainable mobility, land use planning, and local authority engagement. A key recommendation is the integration of the "15-Minute Neighbourhood" concept into City and County Development Plans, promoting mixed-use, walkable communities that reduce reliance on private vehicles and improve air quality. The plan also highlights the importance of residential and workplace parking controls, active travel infrastructure, and a coordinated Electric Vehicle (EV) Charging Strategy. Local authorities are encouraged to incorporate air quality protection into planning decisions and to continue implementation of the Active Travel Programme. These measures align with broader objectives under the Climate Action Plan and National Clean Air Strategy, supporting the decarbonisation of transport and reduction of traffic-related emissions in the Dublin region.

11.3.2 Criteria for Rating of Impacts

11.3.2.1 Ambient Air Quality Standards

To reduce the risk to health from poor air quality, national and European statutory bodies have set limit values in ambient air for a range of air pollutants. These limit values or 'Air Quality Standards' are health or environmental-based levels for which additional factors may be considered. For example, natural background levels, environmental conditions and socio-economic factors may all play a part in the limit value which is set.

Air quality significance criteria are assessed on the basis of compliance with the appropriate standards or limit values. The applicable standards in Ireland are set out in Directive (EU) 2024/2881 *of the European Parliament and of the Council of 23 October 2024 on ambient air quality and cleaner air for Europe (recast)*. This Directive sets out new air quality standards for pollutants to be reached by 2030 which are more closely aligned with the World Health Organisation (WHO) air quality guidelines.

For emissions prior to 2030 the air quality standards set out in EU Directive 2008/50/EC *of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe* are applicable.

The Air Quality Standards Regulations 2022 (S.I. 739 of 2022) transposed EU Directive 2008/50/EC. With the adoption of Directive (EU) 2024/2881, Ireland must transpose this Directive into national law (i.e. update the Air Quality Standards Regulations) before December 2026.

The ambient air quality standards applicable for nitrogen dioxide (NO_2) and particulate matter (as PM_{10} and $PM_{2.5}$) are outlined in **Table 11.1.** These pollutants are of relevance to the proposed development. The limit values set out in Directive (EU) 2024/2881 will need to be achieved by 2030, with the limit values set out in the Air Quality Standards Regulations 2022 (and future updated regulations) applicable until 2030.

Table 11.1 Ambient Air Quality Limit Values

Pollutant	Directive 2008/50/EC		Directive (EU) 2024/2881	
	Limit Type	Limit Value (applicable until 2030)	Limit Type	Limit Value (to be attained by 2030)
Nitrogen Dioxide (NO_2)	Hourly limit for protection of human health - not to be exceeded more than 18 times/year	200 µg/m^3	Hourly limit for protection of human health - not to be exceeded more than 3 times/year	200 µg/m^3
	N/A	N/A	24-hour limit for protection of human health - not to be exceeded more than 18 times/year	50 µg/m^3
	Annual limit for protection of human health	40 µg/m^3	Annual limit for protection of human health	20 µg/m^3
Particulate Matter (as PM_{10})	24-hour limit for protection of human health - not to be exceeded more than 35 times/year	50 µg/m^3	24-hour limit for protection of human health - not to be exceeded more than 18 times/year	45 µg/m^3
	Annual limit for protection of human health	40 µg/m^3	Annual limit for protection of human health	20 µg/m^3
Particulate Matter (as $PM_{2.5}$)	N/A	N/A	24-hour limit for protection of human health - not to be exceeded more than 18 times/year	25 µg/m^3
	Annual limit for protection of human health	25 µg/m^3	Annual limit for protection of human health	10 µg/m^3

11.3.2.2 WHO Air Quality Guidelines & Clean Air Strategy

The Government of Ireland published the Clean Air Strategy for Ireland in April 2023 (Government of Ireland, 2023), with a progress report published in July 2024. The Clean Air Strategy for Ireland provides a high-level strategic policy framework needed to reduce air pollution. The strategy commits Ireland to achieving the 2021 WHO Air Quality Guidelines Interim Target 3 (IT3) by 2026 (**Table 11.2**), the IT4 targets by 2030 and the final targets by 2040 (**Table 11.2**). The strategy notes that a significant number of EPA monitoring stations observed air pollution levels in 2021 above the WHO targets; 80% of these stations would fail to meet the final $PM_{2.5}$ target of 5 µg/m^3. The strategy also acknowledges that *"meeting the WHO targets will be challenging and will require legislative and societal change, especially with regard to both $PM_{2.5}$ and NO_2"*.

Annex II of Directive (EU) 2024/2881 gives assessment thresholds which align with the clean air strategy final 2040 WHO targets. Directive (EU) 2024/2881 states that *"Member States shall endeavour to achieve and preserve the best ambient air quality and a high level of protection of human health and the environment, with the aim of achieving a zero-pollution objective as referred to in Article 1(1), in line with WHO recommendations, and below the assessment thresholds laid down in Annex II."*

These assessment thresholds relate to monitoring of ambient air quality by Member States, where *"exceedances of the assessment thresholds specified in Annex II shall be determined on the basis of concentrations during the previous 5 years where sufficient data are available. An assessment threshold shall be deemed to have been exceeded if it has been exceeded during at least 3 separate years out of those previous 5 years."*

In February 2020, the Council signed up to the UN/ World Health Organisation (WHO) Breathe Life commitments on air quality and to achieving WHO air quality guidelines (daily limit value) by 2030. The WHO guideline values are generally stricter than the comparable agreed EU standards.

Table 11.2 WHO Air Quality Guidelines 2021

Pollutant	Limit Type	IT3 (2026)	IT4 (2030)	Final Target (2040)
NO_2	24-hour limit for protection of human health	-	-	25 µg/m³
	Annual limit for protection of human health	20 µg/m³	-	10 µg/m³
PM (as PM_{10})	24-hour limit for protection of human health	75 µg/m³	50 µg/m³	45 µg/m³
	Annual limit for protection of human health	30 µg/m³	20 µg/m³	15 µg/m³
PM (as $PM_{2.5}$)	24-hour limit for protection of human health	37.5 µg/m³	25 µg/m³	15 µg/m³
	Annual limit for protection of human health	15 µg/m³	10 µg/m³	5 µg/m³

The applicable air quality limit values for the purposes of this assessment are those set out in **Table 11.1.** The limit values stipulated under Directive 2008/50/EC and the Air Quality Standards Regulations 2022 are applicable for the construction phase and Opening Year 2029 for the proposed development. The limit values stipulated by Directive (EU) 2024/2881 are applicable for the Design Year 2044 for the proposed development.

11.3.2.3 Dust Deposition Guidelines

The concern from a health perspective is focused on particles of dust that are less than 10 microns (PM_{10}) and less than 2.5 microns ($PM_{2.5}$). The EU ambient air quality standards outlined in **Table 11.1** have set ambient air quality limit values for PM_{10} and $PM_{2.5}$.

With regards to larger dust particles that can give rise to nuisance dust, there are no statutory guidelines regarding the maximum dust deposition levels that may be generated during the construction phase of a development in Ireland. Furthermore, no specific criteria have been stipulated for nuisance dust in respect of this development.

With regard to dust deposition, the German TA-Luft standard for dust deposition (non-hazardous dust) (German VDI, 2002) sets a maximum permissible emission level for dust deposition of 350 mg/m^2/day averaged over a one-year period at any receptors outside the site boundary. The TA-Luft standard has been applied for the purpose of this assessment based on recommendations from the EPA in Ireland in the document titled Environmental Management Guidelines - Environmental Management in the Extractive Industry (Non-Scheduled Minerals) (EPA, 2006). The document recommends that the TA-Luft limit of 350 mg/m^2/day be applied to the site boundary of quarries. This limit value can be implemented with regard to dust impacts from construction of the proposed development.

11.3.2.4 Air Quality & Traffic Significance Criteria

The Transport Infrastructure Ireland (TII) guidance document Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106 (TII, 2022) details a methodology for determining air quality impact significance criteria for road schemes which can be applied to any project that causes a change in traffic. The degree of impact is determined based on the percentage change in pollutant concentrations relative to the Do-Nothing scenario. The TII significance criteria are outlined in Table 4.9 of Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106 (TII, 2022) and reproduced in **Table 11.3** below. These criteria have been adopted for the proposed development to predict the impact of NO_2, PM_{10} and $PM_{2.5}$ emissions as a result of the proposed development.

Table 11.3 Air Quality & Traffic Significance Criteria

Long-term average concentration at receptor in assessment year	% Change in concentration relative to Air Quality Limit Value (AQLV)			
	1%	2-5%	6-10%	>10%
75% or less of AQLV	Neutral	Neutral	Slight	Moderate
76 – 94% of AQLV	Neutral	Slight	Moderate	Moderate
95 – 102% of AQLV	Slight	Moderate	Moderate	Substantial
103 – 109% of AQLV	Moderate	Moderate	Substantial	Substantial
110% or more of AQLV	Moderate	Substantial	Substantial	Substantial

Source: Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106 (TII, 2022))

As per **Table 11.3** a neutral effect is one where a change in concentration at a receptor is:

- 5% or less where the Opening Year, without the proposed development, annual mean concentration is 75% or less of the standard; or
- 1% or less where the Opening Year, without the proposed development, annual mean concentration is 94% or less of the standard.

Where an effect does not meet the criteria for neutral, as described above, the effect can either be positive or negative. The TII guidance (TII, 2022) states that "the evaluation of significance of effects for the operational phase should be undertaken for the Opening Year only as the Design Year is likely to show lower total pollutant concentrations and changes in concentration" (TII, 2022).

Non-significant effects (i.e. of local importance only) are 'neutral' or 'slight' changes in concentrations while significant effects can be changes in pollutant concentrations that are either 'moderate' or

'substantial'. However, the TII guidance (TII, 2022) states that these must be considered in the context of the project and 'moderate' or 'substantial' increases are not necessarily always significant effects.

The impact descriptors in **Table 11.3** are used to describe the impact at each modelled receptor location, and the significance of the impacts is then determined, aligning with the terminology in the EPA guidelines (EPA, 2022). Whilst it may be determined that there are 'slight', 'moderate' or 'substantial' impacts at one or more receptors, an overall judgement should be made of whether the proposed development is 'significant' or 'not significant' in terms of air quality. Factors to consider when determining the overall significance of a proposed development are provided in Table 4.10 of the TII guidance (TII, 2022).

11.3.3 Construction Dust Assessment

11.3.3.1 Construction Dust Assessment

The Institute of Air Quality Management in the UK (IAQM) guidance document 'Guidance on the Assessment of Dust from Demolition and Construction' (IAQM, 2024) outlines an assessment method for predicting the impact of dust emissions from construction activities based on the scale and nature of the works and the sensitivity of the area to dust impacts. The IAQM methodology has been applied to the construction phase of this development to predict the likely risk of dust impacts in the absence of mitigation measures and to determine the level of site-specific mitigation required. The use of UK guidance is recommended by Transport Infrastructure Ireland in their guidance document Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106 (TII, 2022).

The major dust generating activities are divided into four types within the IAQM guidance (IAQM, 2024) to reflect their different potential impacts. These are:

- Demolition;
- Earthworks;
- Construction; and
- Trackout (transport of dust and dirt from the construction site onto the public road network).

The magnitude of each of the four categories is divided into Large, Medium or Small scale depending on the nature of the activities involved. The criteria for determining the category for the works involved are outlined in **Table 11.4** these are based on the IAQM guidance (IAQM, 2024). The magnitude of each activity is combined with the overall sensitivity of the area to determine the risk of dust impacts from site activities. This allows the level of site-specific mitigation to be determined.

Table 11.4 IAQM Criteria to Determine Dust Emissions Magnitude

Dust Emission Magnitude		
Small	**Medium**	**Large**
Demolition		
▪ Total building volume <12,000 m^3 ▪ Construction material with low potential for dust release (e.g. metal cladding or timber) ▪ Demolition activities <6 m above ground ▪ Demolition during wetter months	▪ Total building volume 12,000 - 75,000 m^3 ▪ Potentially dusty construction material ▪ Demolition activities 6 – 12 m above ground level	▪ Total building volume >75,000 m^3 ▪ Potentially dusty construction material (e.g. concrete) ▪ On-site crushing and screening ▪ Demolition activities >12 m above ground level
Earthworks		
▪ Total site area <18,000 m^2 ▪ Soil type with large grain size (e.g. sand) ▪ <5 heavy earth moving vehicles active at any one time ▪ Formation of bunds <3 m in height ▪ Earthworks during wetter months	▪ Total site area 18,000 m^2 - 110,000 m^2 ▪ Moderately dusty soil type (e.g. silt) ▪ 5 – 10 heavy earth moving vehicles active at any one time ▪ Formation of bunds 3–6 m in height	▪ Total site area >110,000 m^2 ▪ Potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size) ▪ >10 heavy earth moving vehicles active at any one time ▪ Formation of bunds >6 m in height
Construction		
▪ Total building volume <12,000 m^3 ▪ Construction material with low potential for dust release (e.g. metal cladding or timber)	▪ Total building volume 12,000 - 75,000 m^3 ▪ Potentially dusty construction material (e.g. concrete) ▪ On-site concrete batching	▪ Total building volume >75,000 m^3 ▪ On-site concrete batching ▪ Sandblasting
Trackout (Truck Movements)		
▪ <20 HDV (>3.5 t) outward movements in any one day ▪ Surface material with low potential for dust release ▪ Unpaved road length <50 m	▪ 20 – 50 HDV (>3.5 t) outward movements in any one day ▪ Moderately dusty surface material (e.g. high clay content) ▪ Unpaved road length 50 – 100 m	▪ >50 HDV (>3.5 t) outward movements in any one day ▪ Potentially dusty surface material (e.g. high clay content) ▪ Unpaved road length >100 m

Once the dust emission magnitude has been determined the next step, according to the IAQM guidance (IAQM, 2024), is to establish the level of risk by combining the magnitude with the overall sensitivity of the area to dust soiling, human health and ecological effects. The level of risk associated with each activity is determined using the criteria in **Table 11.5**.

Table 11.5 IAQM Criteria to Determine Risk of Dust Impacts

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
Demolition			
High	High risk	Medium risk	Medium risk
Medium	High risk	Medium risk	Low risk
Low	Medium risk	Low risk	Negligible
Earthworks			
High	High risk	Medium risk	Low risk
Medium	Medium risk	Medium risk	Low risk
Low	Low risk	Low risk	Negligible
Construction			
High	High risk	Medium risk	Low risk
Medium	Medium risk	Medium risk	Low risk
Low	Low risk	Low risk	Negligible
Trackout			
High	High risk	Medium risk	Low risk
Medium	Medium risk	Medium risk	Low risk
Low	Low risk	Low risk	Negligible

11.3.3.2 Construction Phase Traffic Assessment

Construction phase traffic also has the potential to impact air quality. The TII guidance Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106 (TII, 2022), states that road links meeting one or more of the following criteria can be defined as being 'affected' by a proposed development and should be included in the local air quality assessment. While the guidance is specific to infrastructure projects, the approach can be applied to any development that causes a change in traffic.

- Annual average daily traffic (AADT) changes by 1,000 or more.
- Heavy duty vehicle (HDV) AADT changes by 200 or more;
- Daily average speed change by 10 kph or more;
- Peak hour speed change by 20 kph or more;
- A change in road alignment by 5m or greater.

SYSTRA Consulting Engineers have prepared a Traffic and Transport Impact Assessment for the proposed development enclosed separately and have prepared Chapter 19 Traffic & Transportation of this EIAR. As per Chapter 19, it has been determined by SYSTRA Consulting Engineers that the construction stage traffic will not increase by 1,000 AADT, or 200 HDV AADT, or that the development will not result in speed changes or changes in road alignment. Therefore, the traffic does not meet the above scoping criteria. A detailed air quality assessment of construction stage traffic emissions has been

scoped out from any further assessment as there is no potential for significant impacts to air quality with respect with human or ecological receptors.

11.3.4 Operational Phase

11.3.4.1 Operational Phase Traffic Assessment

Operational phase traffic has the potential to impact local air quality as a result of increased vehicle movements associated with the proposed development. The TII scoping criteria detailed in Section 11.3.2.4 were used to determine if any road links are affected by the proposed development and require inclusion in a detailed air dispersion modelling assessment. SYSTRA Consulting Engineers has prepared a Traffic and Transport Impact Assessment for the proposed development enclosed separately and have prepared Chapter 19 (Traffic & Transportation). The proposed development will result in a greater than 1000 AADT increase on a small number of road links in the vicinity of the proposed development site. As a result, an assessment of traffic related emissions was conducted. Additionally, traffic associated with other cumulative developments in the vicinity of the proposed development was included in the figures supplied to ensure a full cumulative assessment was conducted. See Traffic and Transport Assessment and Chapter 19 (Traffic & Transportation) for further details.

The impact of traffic emissions on air quality is assessed for both human and ecological receptors within 200 m of impacted roads as per the TII PE-ENV-01106 guidance (TII, 2022). The following sections describe the methodology for each assessment.

The impact to air quality as a result of changes in traffic is assessed at sensitive human receptors in the vicinity of affected roads. These are discussed in further detail within Section 11.6.2 and shown graphically in **Figure 11.3**.

The TII guidance (2022) states that modelling should be conducted for NO_2, PM_{10} and $PM_{2.5}$ for the Base, Opening and Design Years for both the Do Nothing, i.e. assuming the proposed development is not in place, and Do Something (with the proposed development in place) scenarios. Modelling of operational NO_2, PM_{10} and $PM_{2.5}$ concentrations has been conducted for the Do Nothing and Do Something scenarios using the TII Road Emissions Model (REM) online calculator tool (TII, 2025).

The following inputs are required for the REM tool: receptor locations, light duty vehicle (LDV) annual average daily traffic movements (AADT), heavy duty vehicles (HDV) AADT (HDV AADT), annual average traffic speeds, road link lengths, road type, project county location and pollutant background concentrations. The Default fleet mix option was selected along with the Intermediate Case fleet data for cars, ICE Sales Ban for LGVs and EU target projections for HGVs, as per TII Guidance (TII 2022, TII 2025). The Intermediate Case assumes a linear interpolation between the 'Business as Usual' case – where current trends in vehicle ownership continue and the Climate Action Plan (CAP) case – where adoption of low emission light duty vehicles occurs. The ICE Sales Ban 2035 option for LGVs presents a sales ban on new combustion engine vehicles to be implemented by 2035. The EU Targets projections for HGVs represents interim targets for emissions from sales of new HGVs. The TII REM uses county-based Irish fleet composition for different road types, for different European emission standards from pre-Euro to Euro 6/VI with scaling factors to reflect improvements in fuel quality, retrofitting, and technology conversions. The TII REM also includes emission factors for PM_{10} emissions associated with brake and tyre wear (TII 2025).

Using this input data the model predicts the road traffic contribution to ambient ground level concentrations at the identified sensitive receptors using generic meteorological data. The predicted road contributions are then added to the existing background concentrations to give the predicted ambient concentrations. The ambient concentrations are then compared with the relevant ambient air quality standards to assess the compliance of the proposed development with these ambient air quality standards.

The TII guidance (2022) also states that impacts to sensitive ecology due to traffic emissions should be considered. Consideration should be given to designated sites within 2km of the proposed development. However, a detailed assessment is only required at a local level, where there is a designated site within 200m of impacted road links. The TII guidance (TII, 2022) notes that only sites that are sensitive to nitrogen and acid deposition need to be included in the assessment. It is not necessary to include sites, for example that have been designated as a geological feature or water course. There are no designated ecological sites within 200m of the site or impacted road links and therefore no assessment was required as there is no potential for significant impacts to the designated sites due to changes in air quality.

11.3.4.2 Traffic Data used in Modelling Assessment

Traffic flow information is detailed in **Table 11.6** as obtained from SYSTRA for the purposes of this assessment. Data for the Base Year 2025 and the Do Nothing and Do Something scenarios for the Opening Year 2029 and Design Year 2044 were provided. The traffic data included traffic associated with the development site and other cumulative sites as relevant (see Chapter 19 Traffic & Transportation for further details).

The modelling assessment has been undertaken for road links that were within 200 m of receptors. Background concentrations have been included as per Section 11.4.2 of this chapter based on available EPA background monitoring data (EPA, 2024).

Table 11.6 Traffic Data used in Operational Phase Air Quality Assessment

Road Name	Speed (kph)	Base Year	Opening Year		Design Year	
			Do Nothing	Do Something	Do Nothing	Do Something
		LDV AADT (HDV AADT)	LDV AADT (HDV AADT)	LDV AADT (HDV AADT)	LDV AADT (HDV AADT)	LDV AADT (HDV AADT)
Link 1: R132 Drumcrondra Rd Lower between Hollybank Rd and R131 Clonliffe Rd	50	24275(1600)	26027(1718)	26459(1746)	28050(1851)	29066(1918)
Link 2: R131 Clonliffe Rd between R132 Drumcondra Rd Lower and Jones' Road	50	11463(187)	12240(196)	12706(203)	13178(211)	14354(230)

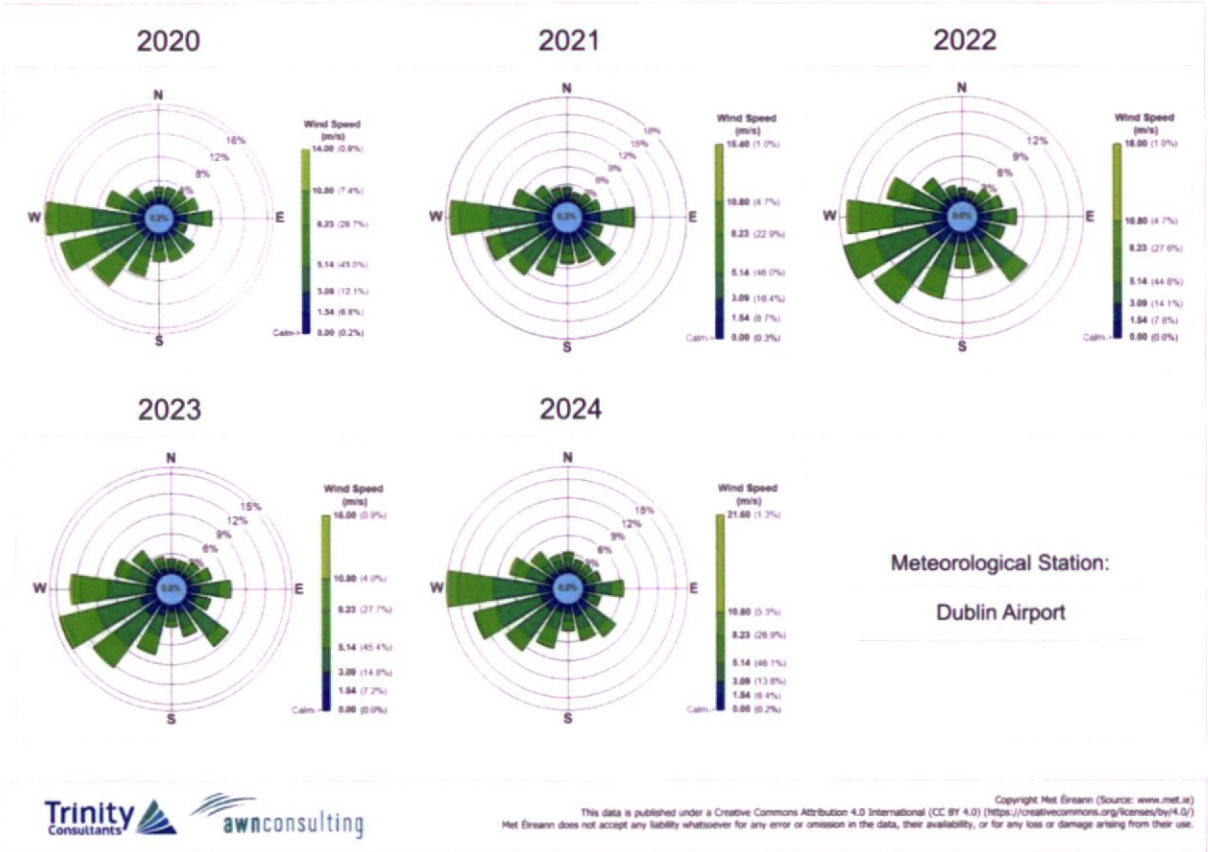
11.4 Baseline Environment

11.4.1 Meteorological Data

A key factor in assessing temporal and spatial variations in air quality is the prevailing meteorological conditions. Depending on wind speed and direction, individual receptors may experience very significant variations in pollutant levels under the same source strength (i.e. traffic levels) (WHO, 2006). Wind is of key importance in dispersing air pollutants and for ground level sources, such as traffic emissions, pollutant concentrations are generally inversely related to wind speed. Thus, concentrations of pollutants derived from traffic sources will generally be greatest under very calm conditions and low wind speeds when the movement of air is restricted. In relation to PM_{10}, the situation is more complex due to the range of sources of this pollutant. Smaller particles (less than $PM_{2.5}$) from traffic sources will be dispersed more rapidly at higher wind speeds. However, fugitive emissions of coarse particles ($PM_{2.5}$ - PM_{10}) will actually increase at higher wind speeds. Thus, measured levels of PM_{10} will be a non-linear function of wind speed.

The nearest representative weather station collating detailed weather records is Dublin Airport meteorological station, which is located approximately 6.4 km north of the site. Dublin Airport met data has been examined to identify the prevailing wind direction and average wind speeds over a five-year period (see **Figure 11.1**). For data collated during five representative years (2020 – 2024), the predominant wind direction is westerly to south-westerly with a mean wind speed of 5.3 m/s over the 30-year period of 1991 – 2020 (Met Éireann, 2025).

Figure 11.1 Wind Roses for Dublin Airport Meteorological Station



11.4.2 Baseline Air Quality

Air quality monitoring programs have been undertaken in recent years by the EPA. The most recent annual report on air quality in Ireland is *'Air Quality In Ireland 2023'* (EPA, 2024). The EPA website details the range and scope of monitoring undertaken throughout Ireland and provides both monitoring data and the results of previous air quality assessments.

As part of the implementation of the Air Quality Standards Regulations 2022 (S.I. No. 739 of 2022), as amended, four air quality zones have been defined in Ireland for air quality management and assessment purposes (EPA, 2024). Dublin is defined as Zone A and Cork as Zone B. Zone C is composed of 23 towns with a population of greater than 15,000. The remainder of the country, which represents rural Ireland but also includes all towns with a population of less than 15,000, is defined as Zone D.

In terms of air monitoring and assessment, the proposed development site is within Zone A (EPA, 2024). The long-term monitoring data has been used to determine background concentrations for the key pollutants in the region of the proposed development. The background concentration accounts for all non-traffic derived emissions (e.g. natural sources, industry, home heating etc.). Representative EPA monitoring stations have been used to determine an estimate of the background air quality in the region of the proposed development.

11.4.2.1 NO_2

Long-term NO_2 monitoring was carried out at the representative Zone A suburban background locations of Ballyfermot, Dun Laoghaire, Swords and Tallaght for the period 2019 – 2023 (**Table 11.7**) (EPA, 2024).

Long-term average concentrations are significantly below the annual average limit of 40 µg/m^3. Average results range from 10 – 20 µg/m^3. The overall annual average concentration for this 5-year period is 14 µg/m^3. Additionally, there were no exceedances of the hourly limit value of 200 µg/m^3. Based on the above information a conservative estimate of the current background NO_2 concentration for the region of the proposed development is 14 µg/m^3.

Table 11.7 Trends In Zone A Air Quality - Nitrogen Dioxide (NO_2)

Station	Averaging Period	Year				
		2019	2020	2021	2022	2023
Ballyfermot	Annual Mean NO_2 (µg/m^3)	20	12	13	13	13
	1-hr Mean > 200 µg/m^3 (days)	0	0	0	0	0
Dun Laoghaire	Annual Mean NO_2 (µg/m^3)	15	13	16	16	13
	1-hr Mean > 200 µg/m^3 (days)	0	0	0	0	0
Swords	Annual Mean NO_2 (µg/m^3)	15	11	11	12	10
	1-hr Mean > 200 µg/m^3 (days)	0	0	0	0	0
Tallaght	Annual Mean NO_2 (µg/m^3)	-	14	13	14	14
	1-hr Mean > 200 µg/m^3 (days)	-	0	0	0	0

11.4.2.2 PM_{10}

Continuous PM_{10} monitoring was carried out at seven representative Zone A locations from 2019 – 2023; Ballyfermot, Dun Laoghaire, Finglas, Marino, Phoenix Park, St. Anne's Park and Tallaght. Annual average PM_{10} concentrations across the sites ranged from 9 – 14 µg/ m^3 over the 2019 – 2023 period (**Table 11.8**). The overall annual average concentration for this 5-year period is 12 µg/ m^3. There were at most 4 exceedances of the daily limit of 50 µg/m^3 in 2019 (at Marino). However, 35 exceedances are permitted per year (EPA, 2024). Based on the EPA data, a conservative estimate of the current background PM_{10} concentration in the region of the proposed development is 12 µg/m^3.

Table 11.8 Trends In Zone A Air Quality - PM_{10}

Station	Averaging Period	Year				
		2019	2020	2021	2022	2023
Ballyfermot	Annual Mean PM_{10} (µg/m^3)	14	12	12	13	11
	24-hr Mean > 50 µg/m^3 (days)	7	2	0	1	0
Dun Laoghaire	Annual Mean PM_{10} (µg/m^3)	12	12	11	12	12
	24-hr Mean > 50 µg/m^3 (days)	2	0	0	1	0
Finglas	Annual Mean PM_{10} (µg/m^3)	13	12	12	12	12
	24-hr Mean > 50 µg/m^3 (days)	2	0	0	1	0
Marino	Annual Mean PM_{10} (µg/m^3)	14	13	12	14	12
	24-hr Mean > 50 µg/m^3 (days)	4	0	0	3	0
Phoenix Park	Annual Mean PM_{10} (µg/m^3)	11	10	10	11	9
	24-hr Mean > 50 µg/m^3 (days)	2	0	0	0	0
St. Anne's Park	Annual Mean PM_{10} (µg/m^3)	12	11	11	13	11
	24-hr Mean > 50 µg/m^3 (days)	1	0	0	1	0
Tallaght	Annual Mean PM_{10} (µg/m^3)	12	10	10	11	11
	24-hr Mean > 50 µg/m^3 (days)	3	1	0	1	1

11.4.2.3 $PM_{2.5}$

Average $PM_{2.5}$ levels in Ballyfermot, Dun Laoghaire, Finglas, Marino, Phoenix Park and St. Anne's Park over the period 2019 - 2023 ranged from 6 - 10 $\mu g/m^3$ (EPA, 2024). The overall annual average concentration for this 5-year period is 8 $\mu g/m^3$ (**Table 11.9**). Based on this information, an estimate of the background $PM_{2.5}$ concentration in the region of the proposed development is 8 $\mu g/m^3$.

Table 11.9 Trends In Zone A Air Quality - $PM_{2.5}$

Station	Averaging Period	Year				
		2019	2020	2021	2022	2023
Ballyfermot	Annual Mean $PM_{2.5}$ ($\mu g/ m^3$)	10	8	8	8	7
Dun Laoghaire	Annual Mean $PM_{2.5}$ ($\mu g/ m^3$)	10	8	8	8	7
Finglas	Annual Mean $PM_{2.5}$ ($\mu g/ m^3$)	9	7	8	7	7
Marino	Annual Mean $PM_{2.5}$ ($\mu g/ m^3$)	9	8	8	9	7
Phoenix Park	Annual Mean $PM_{2.5}$ ($\mu g/ m^3$)	8	7	6	6	6
St. Anne's Park	Annual Mean $PM_{2.5}$ ($\mu g/ m^3$)	8	7	7	8	7

11.4.2.4 Summary

Based on the above information the air quality in the suburban Dublin area is generally good, with concentrations of the key pollutants generally well below the relevant limit values set out in Directive 2008/50/EC. The current pollutant concentrations at these monitoring sites are also in compliance with the 2030 limit values set out in Directive (EU) 2024/2881 and the clean air strategy, however, concentrations are approaching the limit values. Further measures will be needed at a national scale to reduce air pollution in future years. The EPA have indicated that road transport emissions are contributing to increased levels of NO_2 with the potential for breaches in the annual NO_2 limit value in future years at locations within urban centres and roadside locations. In addition, burning of solid fuels for home heating is contributing to increased levels of particulate matter (PM_{10} and $PM_{2.5}$). The EPA predict that exceedances in the particulate matter limit values are likely in future years if burning of solid fuels for residential heating continues (EPA, 2024).

11.4.3 Sensitivity of the Receiving Environment

11.4.3.1 Construction Phase

In line with the UK Institute of Air Quality Management (IAQM) guidance document 'Guidance on the Assessment of Dust from Demolition and Construction' (IAQM, 2024) prior to assessing the impact of dust from a proposed development, the sensitivity of the area must first be assessed as outlined below. Both receptor sensitivity and proximity to proposed works areas are taken into consideration. For the purposes of this assessment, high sensitivity receptors are regarded as residential properties where people are likely to spend the majority of their time. Commercial properties and places of work are regarded as medium sensitivity while low sensitivity receptors are places where people are present for short periods or do not expect a high level of amenity. **Table 11.10** outlines the criteria for determining the sensitivity of the area to dust soiling and dust-related human health effects as per the IAQM guidance (IAQM, 2024).

Table 11.10 Criteria for Determining the Sensitivity of the Area

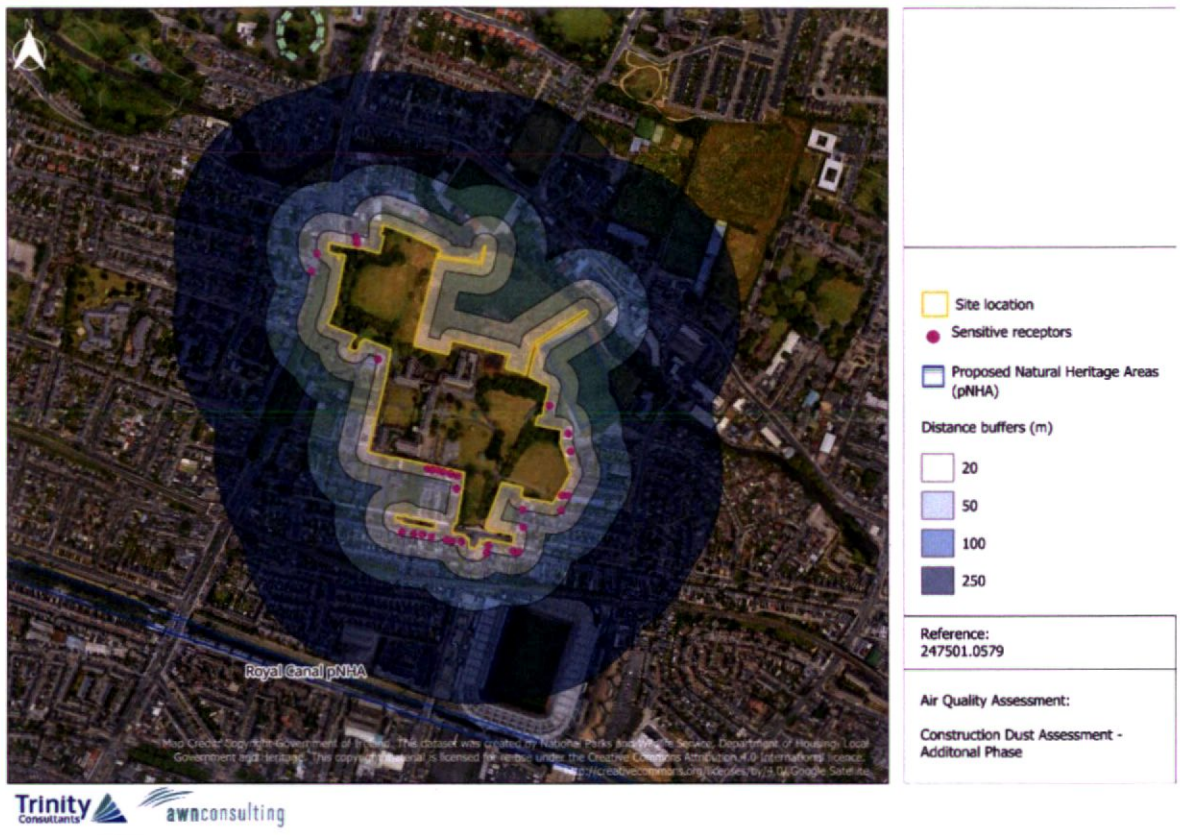
Sensitivity of the Area to Dust Soiling Effects on People and Property					
Receptor Sensitivity	Number of Receptors	Distance from Source (m)			
		<20	<50	<100	<250
High	>100	High	High	Medium	Low
	10 - 100	**High**	Medium	Low	Low
	1 - 10	Medium	Low	Low	Low
Medium	>1	Medium	Low	Low	Low
Low	>1	Low	Low	Low	Low
Sensitivity of the Area to Human Health Impacts					
Receptor Sensitivity	Annual Mean PM_{10} Concentration	Number of Receptors	Distance from Source (m)		
			<20	<50	<100	<250
High	< 24 µg/ m^3	>100	Medium	Low	Low	Low
		10 - 100	**Low**	Low	Low	Low
		1 - 10	Low	Low	Low	Low
Medium	< 24 µg/ m^3	>10	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
Low	< 24 µg/ m^3	>1	Low	Low	Low	Low

In terms of receptor sensitivity to dust soiling, there are a number of highly sensitive residential properties within 250 m of the proposed development boundary (**Figure 11.2**). There are 10-100 within 20m, 10-100 within 50m, 10-100 within 100m, and more than 100 properties within 250m, of the site boundary. Based on these receptor numbers and using the IAQM criteria in **Table 11.10**, the sensitivity of the area to dust soiling impacts from the proposed development is high.

In addition to sensitivity to dust soiling, the IAQM guidelines also outline the assessment criteria for determining the sensitivity of the area to human health impacts. The criteria take into consideration the current annual mean PM_{10} concentration, receptor sensitivity based on type (residential receptors are classified as high sensitivity) and the number of receptors affected within various distance bands from the construction works. A conservative estimate of the current annual mean PM_{10} concentration in the vicinity of the proposed development is 12 µg/ m^3. There are 10-100 high sensitivity receptors within 20 m of the proposed development boundary (**Figure 11.2**). Based on the IAQM criteria outlined in **Table 11.10** the worst-case sensitivity of the area to dust-related human health effects is low.

The IAQM guidelines also outline the assessment criteria for determining the sensitivity of the area to dust-related ecological impacts. Dust emissions can coat vegetation leading to a reduction in the photosynthesising ability of the plant, as well as other effects. The guidance states that dust impacts to vegetation can occur up to 50 m from the site, and 50 m from site access roads, up to 250 m for the site entrance. The sensitivity of the area is determined based on the distance to the source, the designation of the site, (European, National or local designation) and the potential dust sensitivity of the ecologically important species present. There are no sensitive ecological receptors that meet these criteria within the study area and there is no potential for impacts to sensitive ecology from construction dust emissions and no further assessment is required (**Figure 11.2**).

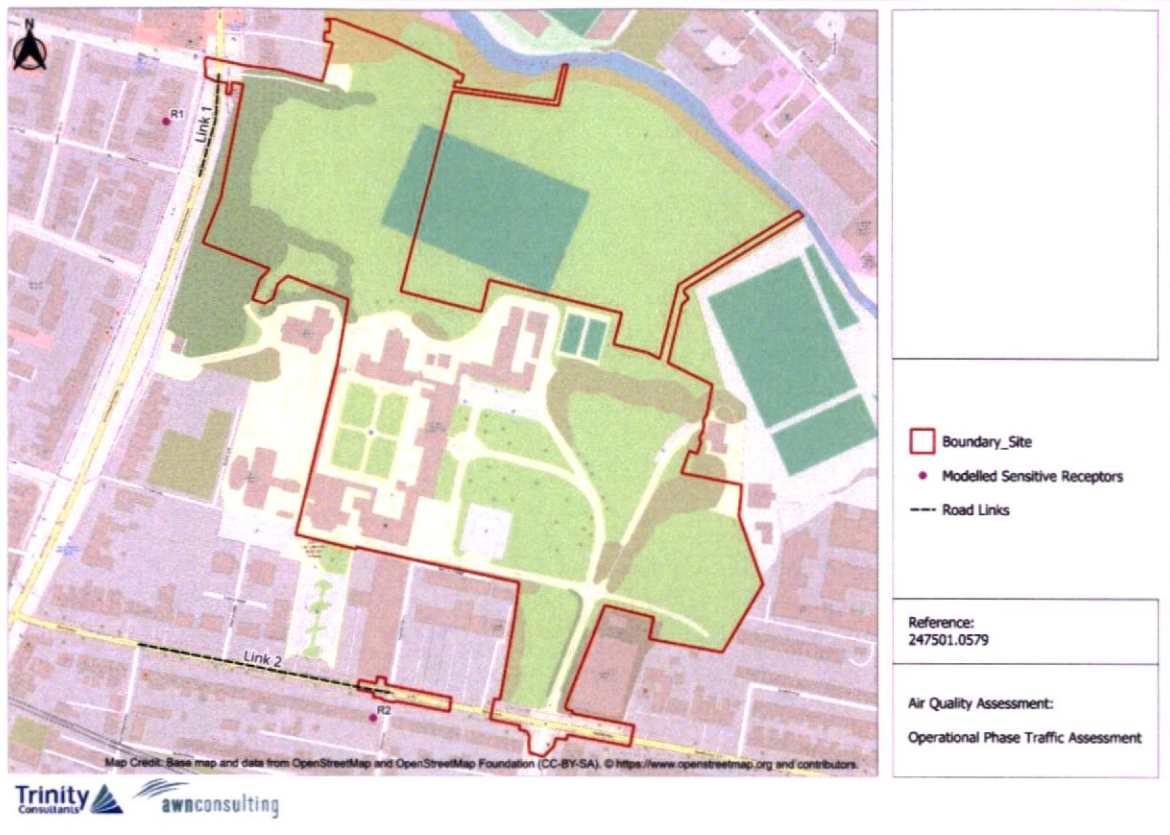
Figure 11.2 Sensitive Receptors within 250m of Site



11.4.3.2 Operational Phase

The impact to air quality due to changes in traffic is assessed at sensitive receptors in the vicinity of affected roads. The TII guidance (2022) states that a proportionate number of representative receptors, which are located in areas which will experience the highest concentrations or greatest improvements because of the proposed development, are to be included in the modelling. The TII criteria state that receptors within 200 m of impacted road links should be assessed; roads which are greater than 200 m from receptors will not impact pollutant concentrations at that receptor (TII, 2022). The TII guidance (2022) defines sensitive receptor locations for the purposes of modelling annual mean pollutant concentrations as: residential housing, schools, hospitals, care homes and short term-accommodation such as hotels, i.e. locations where members of the public are likely to be regularly present for 24 hours. A total of 2 no. high sensitivity residential receptors (R1 and R2) were included in the modelling assessment associated with the impacted road links (Link 1 and Link 2) (see **Figure 11.3**).

Figure 11.3 Location of Sensitive Receptors used in Operational Phase Air Quality Assessment



11.5 Predicted Impacts of the Proposed Development

11.5.1 Do-Nothing Impact

In the Do-Nothing scenario, ambient air quality at the site will remain as per the baseline and will change in accordance with trends within the wider area (including influences from potential new developments in the surrounding area, changes in road traffic, etc).

The Do-Nothing scenario associated with the operational phase of the development is assessed within Section 11.3.4 and it was found to be ***direct, long-term, negative and slight*** which is overall not significant.

11.5.2 Construction Phase

11.5.2.1 Construction Dust Assessment

The greatest potential impact on air quality during the construction phase of the proposed development is from construction dust emissions and the potential for nuisance dust. While construction dust tends to be deposited within 250 m of a construction site, the majority of the deposition occurs within the first 50 m (IAQM, 2024). The extent of any dust generation depends on the nature of the dust (soils, peat, sands, gravels, silts etc.) and the nature of the construction activity. In addition, the potential for dust dispersion and deposition depends on local meteorological factors such as rainfall, wind speed and wind direction. A review of Dublin Airport meteorological indicates that the prevailing wind direction is westerly to south-westerly and wind speeds are generally moderate in nature (Section 11.4.1). In addition, dust generation is considered negligible on days where rainfall is greater than 0.2 mm. A review of historical 30-year average data for Dublin Airport indicates that on

average 200 days per year have rainfall over 0.2 mm (Met Éireann, 2025a). Therefore, it can be determined that over 54% of the time dust generation will be negligible.

To determine the level of dust mitigation required during the proposed works, the potential dust emission magnitude for each dust generating activity needs to be taken into account, in conjunction with the previously established sensitivity of the area (Section 11.4.3). The major dust generating activities are divided into four types within the IAQM (IAQM, 2024) guidance to reflect their different potential impacts. These are: demolition, earthworks, construction and trackout (movement of heavy vehicles).

Determining the Potential Dust Emission Magnitude

The magnitude of the works under each category can be classified as either small, medium or large depending on the scale of the works involved. The magnitude of each activity has been determined below for the proposed development using the criteria in **Table 11.4.**

- **Demolition**: The dust emission magnitude for the demolition activities can be categorised as small due to the volume of buildings involved, with the potential for less than <12,000 m^3 of buildings to be demolished.
- **Earthworks**: The dust emission magnitude for the proposed earthwork activities can be classified as medium as the total site area is between 18,000 m^2-110,000 m^2.
- **Construction**: The dust emission magnitude for the proposed construction activities can be classified as large as a worst-case as the total volume of buildings to be constructed will be greater than 75,000 m^3.
- **Trackout**: The dust emission magnitude for the proposed trackout can be classified as large, as there will be greater than 50 outward HGV movements per day during the worst-case peak periods of the construction phase of the proposed development.

Determining the Risk of Dust Impacts

Once the dust emission magnitude has been determined the next step, according to the IAQM guidance (IAQM, 2024), is to establish the level of risk by combining the magnitude with the overall sensitivity of the area to dust soiling and dust-related human health effects. The level of risk associated with each activity is determined using the criteria in **Table 11.5**. The overall risk of dust impacts from the construction works is shown in **Table 11.11** for each category.

- **Demolition**: As the overall sensitivity of the area to dust soiling is high, when combined with a small dust emission magnitude, this produces an overall medium risk of dust soiling impacts (as per the criteria in **Table 11.5**). As the overall sensitivity of the area to dust-related human health effects is low, this results in a low risk of dust-related human health effects (as per the criteria in **Table 11.5**Table 11.5).
- **Earthworks**: As the overall sensitivity of the area to dust soiling is high, when combined with a medium dust emission magnitude, this produces an overall medium risk of dust soiling impacts (as per the criteria in **Table 11.5**). As the overall sensitivity of the area to dust-related human health effects is low, this results in a low risk of dust-related human health effects (as per the criteria in **Table 11.5**).
- **Construction**: Combining the large dust emissions magnitude for the construction activities with the high sensitivity to dust soiling results in a high risk of dust soiling impacts using the criteria in **Table**

11.5. As the overall sensitivity of the area to dust-related human health effects is low, this results in a low risk of dust-related human health effects as a result of the proposed construction activities.

- **Trackout**: Combining the large dust emission magnitude for the trackout activities with the high sensitivity to dust soiling results in a high risk of dust soiling impacts using the criteria in **Table 11.5**. As the overall sensitivity of the area to risk of dust-related human health effects is low, this results in a low risk of dust-related human health effects as a result of the proposed trackout activities.

There is a high risk of dust soiling impacts and at most low risk of dust-related human health impacts associated with the proposed works. As a result, best practice dust mitigation measures associated with high-risk works will be implemented to ensure there are no significant impacts at nearby sensitive receptors. In the absence of mitigation, dust impacts are predicted to be **direct, short-term, negative** and **slight**.

Table 11.11 Risk of Dust Impacts used to Define Site-Specific Mitigation

Category	Receptor Sensitivity	Dust Emission Magnitude	Risk of Dust-Related Impacts
Demolition			
Dust Soiling	High	Small	Medium Risk
Human Health	Low		Negligible Risk
Earthworks			
Dust Soiling	High	Medium	Medium Risk
Human Health	Low		Low Risk
Construction			
Dust Soiling	High	Large	High Risk
Human Health	Low		Low Risk
Trackout			
Dust Soiling	High	Large	High Risk
Human Health	Low		Low Risk

11.5.2.2 Construction Phase Traffic Assessment

There is also the potential for traffic emissions to impact air quality with respect to human health in the short-term over the construction phase, particularly, due to the increase in HGVs accessing the site. The construction stage traffic has been reviewed, and a detailed air quality assessment has been scoped out as none of the road links impacted by the proposed development satisfy the TII assessment criteria in Section 11.3.2.4.

Therefore, it can be determined that the construction stage traffic will have a **neutral, short-term and not significant** impact on air quality.

11.5.3 Operational Phase

11.5.3.1 Operational Phase Traffic Assessment

The potential impact of the proposed development has been assessed by modelling emissions from the traffic generated due to the development. The traffic data has included specific cumulative developments within the area to provide for a worst-case assessment and to assess potential

cumulative impacts (see Transport Assessment and Chapter 19 Traffic & Transportation, both prepared by SYSTRA for further details).

The traffic data includes the Do Nothing (DN) scenario and Do Something (DS) scenario. The impact of NO_2, PM_{10} and $PM_{2.5}$ emissions for the Opening and Design Years was predicted at the nearest sensitive receptors to the impacted road links. This assessment allows the significance of the development, with respect to both relative and absolute impacts, to be determined.

The TII guidance PE-ENV-01106 (TII, 2022) details a methodology for determining air quality impact significance criteria for TII road schemes and infrastructure projects. However, this significance criteria can be applied to any development that causes a change in traffic. The degree of impact is determined based on both the absolute and relative impact of the proposed development. Results are compared against the 'Do Nothing' scenario, which assumes that the proposed development is not in place in future years, to determine the degree of impact.

Traffic related air emissions have the potential to impact air quality which can affect human health. The following details the results of the air dispersion modelling assessment of traffic emissions to determine the impact to human health. The predicted pollutant concentrations have been compared against the ambient air quality limit values set out in Section 11.3.2.1. The limit values set out in Directive (EU) 2008/50/EC are applicable to the Opening Year 2029 and limit values set out in Directive (EU) 2024/2881 are applicable to the Design Year 2044 as the assessment year is post-2030.

NO_2

The results of the NO_2 modelling are shown in **Table 11.12**. In the Opening Year 2029, predicted annual mean concentrations of NO_2 are in compliance with the annual mean limit value of 40 µg/ m^3 set out under Directive (EU) 2008/50/EC, reaching at most 38 % of the limit. In addition, the TII guidance (2022) states that the hourly limit value for NO_2 of 200 µg/ m^3 is unlikely to be exceeded at roadside locations unless the annual mean is above 60 µg/m^3. As predicted NO_2 concentrations are significantly below 60 µg/m^3 **Table 11.12**, it can be concluded that the short-term NO_2 limit value will be complied with at all receptor locations. Some increases in NO_2 concentrations are predicted at the worst-case receptors assessed in the Opening Year when compared with the Do-Nothing scenario (see **Table 11.12**). Concentrations are predicted to increase by at most 0.04 µg/ m^3 at receptor R2. When comparing the change in concentration with the air quality limit value, it results in a maximum change of 0.10% at receptor R2. The other receptor in the area will experience similar or lesser impacts and all increases are considered 'neutral' as per the TII criteria in **Table 11.3.**

In the Design Year 2044, predicted annual mean NO_2 concentrations are in compliance of the limit value of 20 µg/m^3 set out under Directive (EU) 2024/2881, at the worst-case receptors assessed, reaching at most 71% of the limit. The proposed development will result in a 'neutral' increase in NO_2 concentrations according to the TII significance criteria in **Table 11.3**, with concentrations increasing by at most 0.02 µg/m^3 as a result of the proposed development (at receptor R1, see **Table 11.12**Table 11.12), which is an increase of 0.10% when compared with the applicable annual mean limit value for NO_2. Therefore, the impact of the proposed development on NO_2 concentrations is neutral.

Table 11.12 Predicted Annual Mean NO_2 Concentrations (µg/ m^3)

Receptor	Impact Opening Year						
	DN	% of AQLV	DS	% of AQLV	DS-DN	% Change of AQLV	Description
R1	14.99	37%	15.00	38%	0.01	0.02%	Neutral
R2	14.88	37%	14.92	37%	0.04	0.10%	Neutral
Receptor	Impact Design Year						
	DN	% of AQLV	DS	% of AQLV	DS-DN	% Change of AQLV	Description
R1	14.14	71%	14.16	71%	0.02	0.10%	Neutral
R2	14.12	71%	14.13	71%	0.01	0.05%	Neutral

PM_{10}

The results of the PM_{10} modelling can be seen in **Table 11.13** for the Opening Year 2029 and Design Year 2044.

In the Opening Year 2029, annual mean PM_{10} concentrations are in compliance with the annual mean limit value of 40 µg/ m^3 set out under Directive (EU) 2008/50/EC reaching at most 37% of the limit. In the Design Year 2044 annual mean PM_{10} concentrations are also in compliance with the annual mean limit value of 20 µg/ m^3 set out under Directive (EU) 2024/2881 reaching at most 73% of the limit. In addition, the proposed development will not result in any days of exceedance of the daily PM_{10} limit value (**Table 11.2**Table 11.2) in both the opening and design years.

The changes in PM_{10} concentrations as a result of the proposed development can be assessed relative to the 'Do Nothing' (DN) levels. In the Opening Year 2029 annual PM_{10} concentrations will increase by at most 0.08 µg/ m^3 at receptor R2, this is a 0.2% increase when compared with the annual mean limit value of 20 µg/ m^3. This is considered a 'neutral' impact as per the TII criteria in **Table 11.3**. The other receptor in the area will experience similar or lesser impacts and all increases at other modelled receptors are considered 'neutral' as per the TII criteria in **Table 11.3.**

In the Design Year 2044 the proposed development will result in a maximum increase of 0.20 µg/ m^3 at receptor R2, which is a 1% increase when compared with the annual mean limit of 20 µg/ m^3. The changes in concentrations in the Design Year are considered 'neutral' based on the TII criteria in **Table 11.3.**

Table 11.13 Predicted Annual Mean PM_{10} Concentrations (µg/ m^3)

Receptor	Impact Opening Year						
	DN	% of AQLV	DS	% of AQLV	DS-DN	% Change of AQLV	Description
R1	14.62	37%	14.63	37%	0.01	0.03%	Neutral
R2	14.21	36%	14.29	36%	0.08	0.20%	Neutral
Receptor	Impact Design Year						
	DN	% of AQLV	DS	% of AQLV	DS-DN	% Change of AQLV	Description
R1	14.55	73%	14.59	73%	0.04	0.20%	Neutral
R2	14.24	71%	14.44	72%	0.20	1.00%	Neutral

$PM_{2.5}$

In relation to changes in $PM_{2.5}$ concentrations as a result of the proposed development, the results of the assessment can be seen in **Table 11.14** for the modelled Opening Year 2029 and Design Year 2044.

In the Opening Year 2029, predicted annual mean concentrations of $PM_{2.5}$ are in compliance with the annual mean limit value of 25 µg/ m^3 set out under Directive (EU) 2008/50/EC reaching at most 38% of the limit. There is predicted to be an increase in $PM_{2.5}$ concentrations at the worst-case receptors assessed in the Opening Year when compared with the Do-Nothing scenario (see **Table 11.14**). Concentrations are predicted to increase by at most 0.05 µg/ m^3 at receptor R2. When comparing the change in concentration with the air quality limit value, it results in a maximum change of 0.2% at receptor R2. This is considered a 'neutral' impact as per the TII criteria in Table 11.3. The other receptor in the area will experience similar or lesser impacts and all increases at other modelled receptors are considered 'neutral' as per the TII criteria in **Table 11.3**Table 11.3.

In the Design Year 2044, predicted annual mean $PM_{2.5}$ concentrations are in compliance with the limit value of 10 µg/ m^3 set out under Directive (EU) 2024/2881 at all receptors assessed. Concentrations reach at most 94% of the annual mean limit value. The proposed development will result in a 'neutral' increase in $PM_{2.5}$ concentrations according to the TII significance criteria **Table 11.3**, with concentrations increasing by at most 0.11 µg/m^3 as a result of the proposed development (at receptor R2, see **Table 11.14**), which is an increase of 1.1% when compared with the annual mean limit value of 10 µg/m^3 for $PM_{2.5}$.

Table 11.14 Predicted Annual Mean $PM_{2.5}$ Concentrations (µg/m^3)

Receptor	Impact Opening Year						
	DN	% of AQLV	DS	% of AQLV	DS-DN	% Change of AQLV	Description
R1	9.39	38%	9.40	38%	0.01	0.04%	Neutral
R2	9.17	37%	9.22	37%	0.05	0.20%	Neutral
Receptor	Impact Design Year						
	DN	% of AQLV	DS	% of AQLV	DS-DN	% Change of AQLV	Description
R1	9.36	94%	9.38	94%	0.02	0.20%	Neutral
R2	9.20	92%	9.31	93%	0.11	1.10%	Neutral

Significance of Predicted Changes in NO_2, PM_{10} and $PM_{2.5}$ Concentrations

As outlined in Section 11.3.2.4, the TII guidance (2022) states that the significance of effects should be assessed based on the opening year only. Non-significant effects are 'neutral' or 'slight' changes in concentrations while significant effects can be changes in pollutant concentrations that are either 'moderate' or 'substantial'. However, the TII guidance (2022) states that these must be considered in the context of the project and 'moderate' or 'substantial' increases are not necessarily always significant effects.

In relation to NO_2, PM_{10} and $PM_{2.5}$ the predicted changes in concentrations are 'neutral' at the worst-case receptors assessed. Therefore, according to the TII criteria as outlined in Section 11.3.2.4, the impact is **not significant**.

For the purposes of this assessment, it has been assumed that the current estimated background pollutant concentrations are applicable for both the opening and design years, with no decreases in

future background concentrations allowed for. There will be some decreases in background concentrations in future years. However at present there is no guidance-based methodology available for estimating future year background concentrations and therefore, as a conservative approach, the current estimated background concentrations have been applied to future years.

Due to the large uncertainty in future improvements in fleet composition and emissions, such as projected changes to vehicle registration and electric vehicle uptake, the future year emission rates utilised by the TII REM tool do not account for the full implementation of these measures. Predicted design year concentrations are therefore currently overly conservative as future emissions improvements are not fully taken into account, as well as no improvement in background concentrations being assumed.

As a result, the opening year predicted concentrations are the most appropriate for determining the significance of effects as per Section 11.3.2.4.

It can be concluded that the impact of traffic emissions on air quality and human health during the operational phase is **long-term, direct, localised, negative and not significant** in EIA terms.

The measures set out in the Clean Air Strategy for Ireland (Government of Ireland 2023) aim to work towards solutions to ensure that air pollution concentrations are reduced in order to comply with the future changes in limit values. Ireland will need to continue to implement and develop measures to ensure continuing improvements in air quality in future years in order to meet the objectives of the Clean Air Strategy for Ireland (Government of Ireland, 2023) and to ensure the ambient air quality limit values set out in Directive (EU) 2024/2881 are achieved. The estimated background concentrations used in the assessment are the largest contribution to predicted pollutant concentrations, rather than pollutant contributions associated with the proposed development. Strategies to improve air quality at a national level in future years will contribute to reducing background concentrations and therefore it is envisioned that air quality will improve in the future.

11.6 Mitigation Measures

11.6.1 Construction Phase

The proposed development has been assessed as having a high risk of dust soiling impacts and a low risk of dust related human health impacts during the construction phase as a result of demolition, earthworks, construction and trackout activities (see Section 11.5.2). Therefore, the following dust mitigation measures shall be implemented during the construction phase of the proposed development. These measures are appropriate for sites with a high risk of dust impacts and aim to ensure that no significant nuisance occurs at nearby sensitive receptors. The mitigation measures draw on best practice guidance from Ireland (DCC (2018), DLRCC (2022)), the UK (IAQM (2024), BRE (2003), The Scottish Office (1996), UK ODPM (2002)) and the USA (USEPA, 1997). These measures will be incorporated into the Construction Environmental Management Plan (CEMP) prepared for the site. The measures are divided into different categories for different activities.

Communications

- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site. Community engagement includes explaining the nature and duration of the work to local residents and businesses.

- The name and contact details of a person to contact regarding air quality and dust issues shall be displayed on the site boundary, this notice board should also include head/regional office contact details.

Site Management

- During working hours, dust control methods will be monitored as appropriate, depending on the prevailing meteorological conditions. While dry and windy conditions are favourable to dust suspension, they may also enhance dispersion. Therefore, appropriate mitigation measures must be implemented if undertaking dust generating activities during such weather conditions.
- A complaints register will be kept on site detailing all telephone calls and letters of complaint received in connection with dust nuisance or air quality concerns, together with details of any remedial actions carried out.

Preparing and Maintaining the Site

- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.
- Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.
- Avoid site runoff of water or mud.
- Keep site fencing, barriers and scaffolding clean using wet methods.
- Remove materials that have potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below.
- Cover, seed or fence stockpiles to prevent wind whipping.
- Fully enclose sites or specific operations where there is a high potential for dust production and the site is active for an extensive period.

Operating Vehicles / Machinery and Sustainable Travel

- Ensure all vehicles switch off engines when stationary - no idling vehicles.
- Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable.
- Impose and signpost a maximum-speed-limit of 15 kph on haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate).
- Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.
- Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing)

Operations

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.
- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
- Use enclosed chutes and conveyors and covered skips.

- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
- Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.

Waste Management

- Avoid bonfires and burning of waste materials.

Measures Specific to Demolition

- Prior to demolition blocks should be soft striped inside buildings (retaining walls and windows in the rest of the building where possible, to provide a screen against dust).
- During the demolition process, water suppression should be used, preferably with hand-held spray. Only the use of cutting, grinding or sawing equipment fitted or used in conjunction with a suitable dust suppression technique such as water sprays/local extraction should be used.
- Drop heights from conveyors, loading shovels, hoppers and other loading equipment should be minimised, if necessary fine water sprays should be employed.
- Avoid explosive blasting, using appropriate manual or mechanical alternatives.

Measures Specific to Earthworks

- Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.
- Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable.
- Only remove the cover in small areas during work and not all at once.
- During dry and windy periods, and when there is a likelihood of dust nuisance, a bowser will operate to ensure moisture content is high enough to increase the stability of the soil and thus suppress dust.

Measures Specific to Construction

- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.
- Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.
- For smaller supplies of fine power materials, ensure bags are sealed after use and stored appropriately to prevent dust.
- Avoid scabbling (roughening of concrete surfaces) if possible.
- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.

Measures Specific to Trackout

- A speed restriction of 15 kph will be applied as an effective control measure for dust for on-site vehicles.

- Avoid dry sweeping of large areas.
- Ensure vehicles entering and leaving sites are covered to prevent the escape of materials during transport.
- Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.
- Record all inspections of haul routes and any subsequent action in a site logbook.
- Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned.
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).
- Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permit.
- Access gates to be located at least 10 m from receptors where possible.

Monitoring

- Undertake daily on-site and off-site inspections, where receptors (including roads) are nearby, to monitor dust, record inspection results in the site inspection log. This should include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100 m of site boundary, with cleaning to be provided if necessary.
- Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.

11.6.2 Operational Phase

No site-specific mitigation measures are proposed for the operational phase as impacts are predicted to be not significant (see Section 11.5.3).

11.7 Residual Impacts

11.7.1 Construction Phase

11.7.1.1 Air Quality

To minimise dust emissions during construction, a series of mitigation measures have been prepared as outlined in Section 11.6. Provided the dust minimisation measures are adhered to, the predicted residual air quality impacts during the construction phase are **short-term, direct, negative, localised and not significant**.

11.7.1.2 Human Health

Best practice mitigation measures are proposed for the construction phase of the proposed development, which will focus on the proactive control of dust and other air pollutants, to minimise generation of emissions at source. The mitigation measures that will be put in place during construction will ensure that the impact complies with all EU ambient air quality legislative limit values (set out in Directive 2008/50/EC), which are based on the protection of human health (**Table 11.1**). Therefore, the predicted residual, dust-related, human health impact of the construction phase of the proposed development is **short-term, direct, negative, localised and not significant**.

11.7.2 Operational Phase

11.7.2.1 Air Quality

Air dispersion modelling of operational traffic emissions associated with the proposed development was carried out using the TII REM tool. The modelling assessment determined that the change in emissions of NO_2, PM_{10} and $PM_{2.5}$ at nearby sensitive receptors as a result of the proposed development will be 'neutral' in line with the TII assessment criteria (**Table 11.3**Table 11.3). Therefore, the operational phase impact to air quality is **long-term, direct, localised, negative and not significant**.

11.7.2.2 Human Health

Dispersion modelling of traffic emissions at sensitive receptors in proximity to impacted road links during the operational phase indicate pollutant emissions will be in compliance with the TII assessment criteria which is based on the impacts in the opening year. Section 11.5.3 determined that the impact to air quality as a result of increased traffic volumes during the operational phase of the proposed development will be **localised, direct, long-term, negative and not significant** for the opening year. However, Ireland will need to develop measures to ensure continuing improvements in air quality in future years in order to meet the objectives of the Clean Air Strategy for Ireland (Government of Ireland, 2023) and to ensure the ambient air quality limit values set out in Directive (EU) 2024/2881 are achieved.

11.8 Monitoring

11.8.1 Construction Phase

The following monitoring measures are proposed to ensure the dust mitigation measures are working satisfactorily:

- Undertake daily on-site and off-site inspections, where receptors (including roads) are nearby, to monitor dust, record inspection results in the site inspection log. This should include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100 m of site boundary, with cleaning to be provided if necessary.
- Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.
- Monitoring of construction dust deposition along the site boundary to nearby sensitive receptors during the construction phase of the proposed development is recommended to ensure mitigation measures are working satisfactorily. This can be carried out using the Bergerhoff method in accordance with the requirements of the German Standard VDI 2119. The Bergerhoff Gauge consists of a collecting vessel and a stand with a protecting gauge. The collecting vessel is secured to the stand with the opening of the collecting vessel located approximately 2m above ground level. The TA Luft limit value is 350 mg/m^2/day during the monitoring period of 30 days (+/- 2 days). Monitoring shall ensure that the dust mitigation measures are working satisfactorily as construction works progress.

11.8.2 Operational Phase

There is no monitoring recommended for the operational phase of the proposed development as impacts to air quality are predicted to be not significant.

11.9 Reinstatement

This is not relevant to air quality.

11.10 Interactions

11.10.1 Air Quality and Population & Human Health

11.10.1.1 Construction Phase

Air quality does not have a significant number of interactions with other topics. The most significant interactions are between Population and Human Health and Air Quality. An adverse air quality impact during the construction phase can cause health and dust nuisance issues. There is a low risk of dust-related human health impacts during the construction phase of the proposed development. Best practice mitigation measures will be implemented during the construction phase to ensure that the impact of the proposed development complies with all ambient air quality legislative limits. Therefore, the predicted impact is **direct, short-term, negative, localised and not significant** with respect to Population and Human Health during the construction phase.

11.10.1.2 Operational Phase

Vehicles accessing the site will emit pollutants which may impact Air Quality and Human Health. However, the increased number of vehicles associated with the proposed development will not cause a significant change in air pollutant emissions in the locality. It has been assessed that emissions will be in compliance with the ambient air quality standards which are set for the protection of human health. Impacts will be **long-term, localised, direct, negative and not significant**.

11.10.2 Air Quality and Climate

Air Quality and Climate have interactions as the emissions from the burning of fossil fuels (in relation to construction vehicles and equipment) during the construction and operational phases generate both air quality and climate impacts. There is no impact on climate due to air quality. However, the sources of impacts on air quality and climate are strongly linked.

11.10.3 Air Quality and Land & Soils

11.10.3.1 Construction Phase

Construction phase activities such as land clearing, excavations, stockpiling of materials etc. have the potential for interactions between Air Quality and Land & Soils in the form of dust emissions. With the appropriate mitigation measures to prevent fugitive dust emissions, it is predicted that there will be no significant interactions between air quality and land and soils during the construction phase.

11.10.3.2 Operational Phase

There are no potentially significant interactions identified between Air Quality, and Land & Soils during the operational phase.

11.10.4 Air Quality and Biodiversity

11.10.4.1 Construction Phase

Dust generation can occur during extended dry weather periods due to construction traffic along haul routes and construction activities such as excavations and infilling works. Dust emissions can coat vegetation leading to a reduction in the photosynthesising ability as well as other effects. There are no designated ecological sites within 250 m of the proposed development site area. Significant dust impacts are not predicted beyond this distance. Dust mitigation measures will be implemented on site as set out in Section 11.6. With the implementation of these mitigation measures dust emissions will be minimised and impacts will be **direct, short-term, negative, localised and not significant** with respect to biodiversity.

11.10.4.2 Operational Phase

There are no potentially significant interactions identified between Air Quality, and Biodiversity during the operational phase.

11.10.5 Air Quality and Material Assets – Traffic & Transport

11.10.5.1 Construction Phase

Interactions between Air Quality and Traffic can be significant. With increased traffic movements and reduced engine efficiency, i.e. due to congestion, the emissions of vehicles increase. The impacts of the proposed development on air quality are assessed by reviewing the change in annual average daily traffic on roads close to the site. In this assessment, the impact of the interactions between Traffic and Air Quality are linked but there is no potential for significant impacts from traffic on air quality. The effects are considered to be **direct, short-term, neutral, localised and not significant** during the construction phase.

11.10.5.2 Operational Phase

The impact of the interactions between Traffic and Air Quality are considered to be ***long*-term, direct, neutral and not significant** during the operational phase.

11.11 Indirect and/or Secondary Impacts

This assessment has considered all impacts with the potential for significant effects on air quality. As per Section 11.5, these impacts are predicted to have a direct effect on air quality. There are no indirect and/or secondary impacts with the potential for a significant effect on air quality.

11.12 Cumulative Impacts

11.12.1 Construction Phase

According to the IAQM guidance (2024) should the construction phase of the proposed development coincide with the construction phase of any other developments within 500m then there is the potential for cumulative construction dust related impacts to nearby sensitive receptors.

A review of recent planning permissions for the area was conducted, in conjunction with the cumulative projects list included in Chapter 23, and it was found that there were a number of relevant sites for

which cumulative impacts may occur should their construction phase and that of the proposed development overlap, these are listed below:

These include the following developments (planning reference):

- 3673/19: St. Patrick's Boys National School extension.
- 2396/21: Works at "St Joseph's" Grace Park Road, Drumcondra, Dublin 9 D09 WK0H
- 6009/23-S3 : LRD at St. Vincent's Hospital at Richman Road (St. Vincent's Hospital Fairview).
- 4067/24: Planning Permission for Residential development on Orchard Road (Fold Housing Association Ireland CLG).
- D4062/24 : Residential Development at Drumcondra Road (Ginxo Trading Ltd.).
- 6055/25 : Proposed amendment seeking permission for LRD application on Esmond Ave (Banner A Cuig Limited).
- ABP 317121: BusConnects - Swords to City Centre Core Bus Corridor Scheme (NTA).
- ABP 314232: Dart and West Railway Order- Dublin City to Maynooth and M3 Parkway (Córas Iompair Éireann).

There is the potential for cumulative construction dust impacts should the construction phases overlap with that of the proposed development. However, provided the mitigation measures outlined in Section 11.6, are implemented throughout the construction phase of the proposed development significant cumulative dust impacts are not predicted. Impacts are predicted to be **direct, short-term, negative, localised and not significant**.

11.12.2 Operational Phase

Air dispersion modelling of operational traffic emissions associated with the proposed development and cumulative developments in the wider area was carried out using the TII REM tool. The modelling assessment determined that the change in emissions of NO_2, PM_{10} and $PM_{2.5}$ at nearby sensitive receptors (see Section 11.5.3.1) as a result of the proposed development in combination with cumulative developments will be imperceptible. Therefore, the operational phase impact to air quality is **long-term, direct, negative, and not significant**.

11.13 Difficulties Encountered

Due to the large uncertainty in future improvements in fleet composition and emissions, such as projected changes to vehicle registration and electric vehicle uptake, the future year emission rates utilised by the TII REM tool do not account for the full implementation of these measures. There were no further difficulties encountered when compiling this assessment.

11.14 Conclusion

This chapter has assessed the predicted impacts of the construction and operational phases of the proposed development on air quality. The cumulative impacts of the proposed development and surrounding developments have also been considered.

Provided all mitigation measures as set out in this chapter, the overall predicted effect of the proposed development is **not significant**.

11.15 References

BRE (2003) Controlling Particles, Vapours & Noise Pollution from Construction Sites

Department of the Environment Heritage and Local Government (DEHLG) (2004) Quarries and Ancillary Activities, Guidelines for Planning Authorities

Dublin City Council (2018) Air Quality Monitoring and Noise Control Unit's Good Practice Guide for Construction and Demolition

Dublin City Council (2022) Dublin City Council Development Plan 2022-2028

Dublin City Council, Fingal County Council, South Dublin County, Council and Dun Laoghaire-Rathdown County Council (2021) Dublin Region Air Quality Plan 2021

Environmental Protection Agency (2006) Environmental Management Guidelines - Environmental Management in the Extractive Industry (Non-Scheduled Minerals)

Environmental Protection Agency (2022) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports

Environmental Protection Agency (2024) Air Quality in Ireland 2023 (& previous annual reports)

German VDI (2002) Technical Guidelines on Air Quality Control – TA Luft

Government of Ireland (2023) Clean Air Strategy for Ireland

Institute of Air Quality Management (IAQM) (2020) A Guide To The Assessment Of Air Quality Impacts On Designated Nature Conservation Sites (Version 1.1)

Institute of Air Quality Management (IAQM) (2024) Guidance on the Assessment of Dust from Demolition and Construction (Version 2.2)

Met Éireann (2025) Met Éireann website: https://www.met.ie/

The Scottish Office (1996) Planning Advice Note PAN50 Annex B: Controlling The Environmental Effects Of Surface Mineral Workings Annex B: The Control of Dust at Surface Mineral Workings

Transport Infrastructure Ireland (2022) Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106

Transport Infrastructure Ireland (2025) TII Road Emissions Model (REM): Model Development Report – GE-ENV-01107

UK Office of Deputy Prime Minister (2002) Controlling the Environmental Effects of Recycled and Secondary Aggregates Production Good Practice Guidance

USEPA (1997) Fugitive Dust Technical Information Document for the Best Available Control Measures

World Health Organisation (2021) Air Quality Guidelines (and previous Air Quality Guideline Reports 1999 & 2000 & 2006)

12 Climate

12.1 Introduction

This chapter assesses the likely climate impacts associated with the proposed residential development located on lands at Holy Cross College, Clonliffe Road, Dublin 3 & Drumcondra Road Lower, Drumcondra, Dublin 9. A full description of the development is available in Chapter 5.

The climate assessment is divided into two distinct sections – a greenhouse gas assessment (GHGA) and a climate change risk assessment (CCRA).

- Greenhouse Gas Emissions Assessment (GHGA) – Quantifies the GHG emissions from a project over its lifetime. The assessment compares these emissions to relevant carbon budgets, targets and policy to contextualise magnitude.
- Climate Change Risk Assessment (CCRA) – Identifies the impact of a changing climate on a project and receiving environment. The assessment considers a projects vulnerability to climate change and identifies appropriate adaptation and mitigation measures to increase project resilience.

12.1.1 Expertise & Qualifications

This chapter was completed by Ciara Nolan. Ciara is a Principal Environmental Consultant in the Air Quality & Climate section of AWN Consulting. She holds a BSc in Energy Systems Engineering from University College Dublin and has also completed an MSc in Applied Environmental Science at UCD. She is a Member of the Institute of Air Quality Management (MIAQM) and the Institution of Environmental Sciences (MIEnvSc). She has over 8 years of experience in undertaking air quality and climate assessments. She has prepared air quality and climate impact assessments as part of EIARs for residential developments including Woodbrook, Shankill (Planning Application Ref. ABP30584419), Ballygossan Park, Skerries (Planning Application Ref. LRD0010/S3), SHD Ratoath (Planning Application Ref. SH305196), SHD Rathmullen, Drogheda (Planning Application Ref. SH305552), commercial and industrial developments by Dublin Airport Authority, Abbvie, Mountpark, Pfizer, Takeda, as well as renewable energy developments such as Crockahenny Windfarm, Upperchurch Windfarm, Knocknamona Windfarm and Keerglen Windfarm. She also specialises in conducting air dispersion modelling assessments of emissions from data centres, energy centres and the chemical industry as part of EPA Industrial Emissions Licences for Echelon DC, AWS, Takeda, MSD and Regeneron. She has undertaken air quality and climate impact assessments for transportation schemes, primarily regional and national road schemes, from constraints, through to route selection and EIAR stage.

12.1.2 Aspects Relevant to this Assessment

During the construction phase, engine emissions from site vehicles and machinery have the potential to impact climate through the release of CO_2 and to a lesser extent, other greenhouse gases (GHGs). Embodied carbon of demolition waste materials as well as materials used in the construction of the development along with site activities will impact climate. Impacts to climate are assessed against Ireland's obligations under the EU 2030 GHG targets and sectoral emissions ceilings.

Engine emissions from vehicles accessing the site have the potential to impact climate during the operational phase of the development through the release of CO_2. Operational phase impacts will be long-term in duration. In addition, the vulnerability of the proposed development in relation to future

climate change must be considered during the operational phase. The proposed development has been designed to minimise the impact on climate where possible in line with the most recent development guidelines (Part L of the Building Regulations 2022) and in reference to measures within the Climate Action Plan 2025 (DECC, 2025).

In accordance with the Dublin City Development Plan, both climate change mitigation and adaptation measures have been integrated into the design and assessed within this chapter of the EIAR. Adaptation measures, such as sustainable drainage systems, flood resilience design, and increased planting to provide shading and reduce heat stress, have been incorporated to reduce the vulnerability of the development to future climate impacts. This ensures alignment with national policy and avoids any potential material contravention of the Dublin City Development Plan (DCC, 2022).

12.2 Methodology

12.2.1 Relevant Guidance, Legislation & Policy

12.2.1.1 Guidance

The principal guidance and best practice documents used to inform the assessment of potential impacts on climate are summarised below. In addition to specific climate guidance documents, the following guidelines were considered and consulted in the preparation of this chapter:

- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (hereafter referred to as the Environmental Protection Agency (EPA) Guidelines) (EPA, 2022); and
- Environmental Impact Assessment of Projects – Guidance on the preparation of the Environmental Impact Assessment Report (European Commission, 2017).

The assessment has referred to national guidelines where available, in addition to international standards and guidelines relating to the assessment of climate impacts. These are summarised below:

- Transport Infrastructure Ireland (TII) PE-ENV-01104: Climate Guidance for National Roads, Light Rail and Rural Cycleways (Offline & Greenways) – Overarching Technical Document (TII, 2022a);
- Transport Infrastructure Ireland (TII) PE-ENV-01105: Climate Assessment Standard for Proposed National Roads (TII, 2022b);
- Transport Infrastructure Ireland (TII) GE-ENV-01106: TII Carbon Assessment Tool for Road and Light Rail Projects and User Guidance Document (TII, 2024);
- Institute of Environmental Management & Assessment (IEMA) Environmental Impact Assessment Guide to: Assessing GHG Emissions and Evaluating their Significance (hereafter referred to as the IEMA 2022 GHG Guidance) (IEMA, 2022);
- IEMA Environmental Impact Assessment Guide to: Climate Change Resilience and Adaptation (hereafter referred to as the IEMA 2020 EIA Guide) (IEMA, 2020a);
- IEMA GHG Management Hierarchy (hereafter referred to as the IEMA 2020 GHG Management Hierarchy) (IEMA, 2020b);
- IEMA Principles Series: Climate Change Mitigation & EIA (IEMA, 2010);
- Carbon Management in Infrastructure and Built Environment - PAS 2080 (BSI, 2023); and
- Technical Guidance on the Climate Proofing of Infrastructure in the Period 2021-2027 (European Commission, 2021a).

12.2.1.2 Legislation

In 2015, the Climate Action and Low Carbon Development Act 2015 (No. 46 of 2015) (as amended) (Government of Ireland, 2015) was enacted (the 2015 Act). The purpose of the 2015 Act was to enable Ireland *"to pursue, and achieve, the transition to a low carbon, climate resilient and environmentally sustainable economy by the end of the year 2050"* (3.(1) of No. 46 of 2015). This is referred to in the 2015 Act as the 'National Transition Objective'. The 2015 Act made provision for a national mitigation plan, and a national adaptation framework. In addition, the 2015 Act provided for the establishment of the Climate Change Advisory Council with the function to advise and make recommendations on the preparation of the national mitigation and adaptation plans and compliance with existing climate obligations.

The first Climate Action Plan (CAP) was published by the Irish Government in June 2019 (Government of Ireland, 2019). The Climate Action Plan 2019 outlined the current status across key sectors including Electricity, Transport, Built Environment, Industry and Agriculture and outlined the various broadscale measures required for each sector to achieve ambitious decarbonisation targets. The 2019 CAP also detailed the required governance arrangements for implementation including carbon-proofing of policies, establishment of carbon budgets, a strengthened Climate Change Advisory Council and greater accountability to the Oireachtas. The fifth and most recent climate action plan, CAP25, was published in April 2025 (Government of Ireland, 2025).

Following on from Ireland declaring a climate and biodiversity emergency in May 2019, and the European Parliament approving a resolution declaring a climate and environment emergency in Europe in November 2019, the Government approved the publication of the General Scheme in December 2019, followed by the publication of the Climate Action and Low Carbon Development (Amendment) Act 2021 (hereafter referred to as the 2021 Climate Act) in March 2021. The Climate Act was signed into Law on the 23rd of July 2021, giving statutory effect to the core objectives stated within the CAP.

In relation to carbon budgets, the 2015 Act (as amended) states *"a carbon budget, consistent with furthering the achievement of the national climate objective, shall be proposed by the Climate Change Advisory Council, finalised by the Minister and approved by the Government for the period of 5 years commencing on the 1 January 2021 and ending on 31 December 2025 and for each subsequent period of 5 years (in this Act referred to as a 'Budget Period')"*.

A carbon budget is defined as the total amount of greenhouse gas emissions that are permitted during the budget period. The carbon budget is to be produced for 3 sequential budget periods (**Table 12.1**). The carbon budget can be revised where new obligations are imposed under the law of the European Union or international agreements or where there are significant developments in scientific knowledge in relation to climate change. In relation to the sectoral emissions ceiling, the Minister for the Environment, Climate and Communications (the Minister for the Environment) shall prepare and submit to government the maximum amount of GHG emissions that are permitted in different sectors of the economy during a budget period and different ceilings may apply to different sectors. The sectorial emission ceilings for 2030 were published in the Climate Action Plan 2025 (CAP25) (DECC, 2025) (**Table 12.2**).

Table 12.1 5-Year Carbon Budgets

Budget Period	Carbon Budget	Reduction Required
2021-2025	295 Mt CO_2e	Reduction in emissions of 4.8% per annum for the first budget period.
2026-2030	200 Mt CO_2e	Reduction in emissions of 8.3% per annum for the second budget period.
2031-2035	151 Mt CO_2e	Reduction in emissions of 3.5% per annum for the third provisional budget.

Table 12.2 Sectoral Emission Ceilings 2030

Sector	Baseline ($MtCO_2e$)	Carbon Budgets ($MtCO_2e$)		2030 Emissions ($MtCO_2e$)	Indicative Emissions % Reduction in Final Year of 2025 – 2030 Period (Compared to 2018)
	2018	2021-2025	2026-2030		
Electricity	10	40	20	3	75
Transport	12	54	37	6	50
Built Environment – Residential	7	29	23	4	40
Built Environment – Commercial	2	7	5	1	45
Industry	7	30	24	4	35
Agriculture	23	106	96	17.25	25
Other (F-gases, waste, petroleum refining)	2	9	8	1	50
Land Use, Land-use Change and Forestry (LULUCF)	5	Reflecting the continued volatility for LULUCF baseline emissions to 2030 and beyond, CAP24 puts in place ambitious activity targets for the sector reflecting an EU-type approach.			
Total	68				
Unallocated Savings	-	-	26	-5.25	-
Legally Binding Carbon Budgets and 2030 Emission Reduction Targets	-	295	200	-	51

12.2.1.3 Policy

12.2.1.3.1 Greenhouse Gas Assessment Policy

In 2024, the Government published its *Long-Term Strategy on Greenhouse Gas Emissions Reductions* (DECC, 2024). This strategy provides a long-term plan on how Ireland will transition towards net carbon zero by 2050, achieving the interim targets set out in the CAP.

In December 2023, CAP24 was published, establishing key actions to deliver a 51% reduction in GHG emissions by 2030 (compared to 2018 levels) and achieve climate neutrality by 2050 (DECC, 2023a). The updated and current CAP25, published in April 2025, builds on the progress of the previous four iterations of the CAP, with CAP23 first publishing carbon budgets and sectoral emission ceilings. It also reaffirms Ireland's climate ambition, with a focus on delivery, implementation and measurable outcomes, particularly ahead of the second carbon budget period (2026–2030). 2025 is the last year in the first 5-year carbon budget period. During the initial 5-year budget period the average annual reduction required was 4.8%, this increases to 8.3% in the second budget period (2026-2030). CAP25 retains the high-impact sectors where the biggest savings can be achieved, while emphasising public

sector leadership and green procurement. These sectors include renewable energy, energy efficiency of buildings, transport, sustainable farming, sustainable business and land-use change.

CAP25 also includes targeted actions to decarbonise industrial heat and support the transition to carbon-neutral manufacturing processes. Public sector leadership is strengthened through a new Buying Greener: Green Public Procurement Strategy and Action Plan (2024–2027), the development of mandatory Climate Action Roadmaps, and enhanced emissions monitoring and reporting across government operations. To support innovation and ensure future economic resilience, IDA Ireland continues to attract and support businesses investing in climate technologies and low-carbon solutions.

CAP25 highlights a significant 17% reduction in electricity emissions in early 2024, with wind power supplying nearly 40% of Ireland's total electricity demand and over 100,000 rooftop microgenerators connected to the grid. Investments are ongoing in grid reinforcement, offshore wind development, and interconnectors with France and the UK to enhance renewable generation capacity. EirGrid, Enterprise Ireland and IDA Ireland have recently signed a MoU to collectively support offshore wind development in Ireland.

CAP25 also reinforces targets first outlined in CAP24 to reduce the embodied carbon of construction materials, with a 10% reduction by 2025 and 30% reduction by 2030 for materials produced and used in Ireland. Cement and high embodied carbon construction materials can be reduced through product substitution, reduced clinker content in cement and uptake of low-carbon construction methods, including those outlined in the Construction Industry Federation 2021 report Modern Methods of Construction (Construction Industry Federation, 2021). There also remains scope for the construction industry to use more timber in construction. In 2022, 24% of new construction in Ireland was built using timber frames to satisfy the demand for housing. Public bodies are now required under the Public Sector Mandate to use best practice project design to reduce embodied carbon; procure concretes with clinker replacements (lower carbon); and require that large construction projects produce a whole life cycle GHG emissions assessment.

Furthermore, CAP25 advances sector-specific measures in green procurement, electrification of transport and heat, and just transition (with the introduction of a Just Transition Commission) to support vulnerable communities. Transport emissions increased by 0.3%. Electric vehicles and the use of biofuels are stated as the best means of transport emission reductions in the medium term.

12.2.1.3.2 Climate Change Adaptation Policy

The Dublin City Council Climate Change Action Plan 2024 - 2029 (Dublin City Council and Codema, 2024) outlines several goals and plans to prepare for and adapt to climate change. There are five key action areas within the plan: energy and buildings, transport, flood resilience, nature-based solutions and resource management. Some of the measures promoted within the Action Plan under the 5 key areas involve building retrofits, energy master-planning, development of segregated cycle routes, the promotion of bike share schemes, development of flood resilient designs, promotion of the use of green infrastructure and water conservation initiatives. The implementation of these measures will enable the Dublin City Council area to adapt to climate change and will assist in bringing Ireland closer to achieving its climate related targets in future years.

The Dublin City Council Climate Neutral Dublin 2030 Plan (Dublin City Council 2024) explains the 2030 vision that the Council have for the city. This is set around four foundations: a Creative City, a Resource-

Full City, a Resilient City and a Social City. These foundations aim to deliver the overall target of a 51% reduction in greenhouse gas emissions in line with our National Climate Objective by 2030 (2018 baseline), while striving for neutrality before 2050 as per Dublin City's participation in the EU Mission for 100 Climate Neutral and Smart Cities (Net Zero Cities). Actions within the plan include the Networks for Knowledge Exchange with universities to develop creative solutions to battle climate change and Innovation Districts, where innovation projects are fast-tracked, and technology is used to help address climate change. The plan states that whole society behaviour needs to change towards more sustainable lifestyles and as part of that it has a focus on children's active travel.

Dublin City Development Plan 2022 – 2028 (DCC, 2022) reinforces the city's climate resilience objectives through a strong emphasis on integrating climate adaptation and mitigation across all new development. Climate Action Policy 5 (CA5) of the Plan specifically requires that "all new development including in Strategic Development and Regeneration Areas integrate appropriate climate mitigation and adaptation measures." These include flood risk management, green infrastructure, sustainable mobility, and the incorporation of nature-based solutions to address urban heat and biodiversity loss. The Plan acknowledges the increasing risks posed by climate change and highlights the need for climate-proofed urban design to protect future generations and ensure sustainable, resilient communities.

12.2.1.3.3 Climate Change Vulnerability Policy

The second National Adaptation Framework (NAF) (DECC, 2024) was published in June 2024 in line the five-year requirement of the 2015 Climate and Low Carbon Development Act. The plan provides a whole of government and society approach to climate adaptation in Ireland to reduce Ireland's vulnerability to climate change risks including extreme weather events, flooding, drought, loss of biodiversity, sea level rise and increased temperatures. Like the *"Just Transition"* when considering carbon emissions, the NAF aims for *"Just Resilience"* stating that *"a climate resilient Ireland will have a reduced reliance on fossil fuel; it will have widely accessible electrified public transport and will have transitioned towards sustainable agricultural practices such as agroforestry and organic farming".*

In relation to the built environment the NAF states in Chapter 3 "*deepening of adaptation considerations in the planning and building standards processes is considered the most appropriate way of increasing the resilience of the built environment*". Within the NAF it mentions that there is a risk of damage to buildings and structures from severe weather events such as high winds and intense rainfall. New development should accommodate predicted future climate change impacts without requiring major redesign or redevelopment in the future which may be costly and inefficient. This will require facilitating innovative building design, new materials and standards (to accommodate hotter summers while withstanding changes in precipitation patterns and more intense storms for example) according to the NAF (DECC, 2024).

The National Climate Change Risk Assessment (NCCRA) was published in May 2024 (EPA, 2024a). The NCCRA was required to be developed under Action 457 from the 2021 CAP (Government of Ireland 2021). Action 457 seeks to *"further develop Ireland's national climate change risk assessment capacity to identify the priority physical risks of climate change to Ireland"*. The NCCRA uses definitions of the risk determinants from the Intergovernmental Panel on Climate Change (IPCC) Risk Framework (IPCC 2023):

- **Hazard** - the potential occurrence of a natural or human-induced physical event or trend or physical impact that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems, and environmental resources
- **Exposure** - the presence of people, livelihoods, species or ecosystems, environmental functions, services, and resources, infrastructure, or economic, social, or cultural assets in places and settings that could be adversely affected
- **Vulnerability** - the propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts including sensitivity
- **Risk** - the potential for adverse consequences for human or ecological systems.

When considering risk, the NCCRA assesses exposure and vulnerability for two future climate change scenarios or Representative Concentration Pathways (RCPs):

- RCP4.5 was selected as it represents a scenario aligned with the global temperature trajectory
- RCP8.5 was selected as it represents a high-emissions scenario and achieves the highest level of modelled temperature increases by the end of the century. Consequently, this scenario will result in the highest level of physical risk for Ireland, and the greatest requirement for adaptation.

These scenarios align with a conservative approach to assess risks to Ireland and assumes global emission reduction targets are not met. This aligns with the principle of precaution as stated in the NAF (DECC 2024). In addition to the future climate scenarios, the NCCRA assesses the risk from the future climate during the following timeframes:

- Present (~2030)
- Medium term (~2050)
- Long term (~2100).

12.2.2 Greenhouse Gas Assessment

As per the EU guidance document *Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment* (European Commission, 2013) the climate baseline is first established with reference to EPA data on annual GHG emissions (see Section 12.3.1).

12.2.2.1 Construction Phase

The GHG assessment accounts for various components relating to the project during different life stages to determine the total impact of the development on climate. The reference study period (i.e. the assumed building life expectancy) for the purposes of the assessment is 60 years. Embodied carbon emissions are attributed to four main categories, taken from BS EN 15978. The categories are:

- **Product Stages (Category A1 to A3)** The carbon emissions generated at this stage arise from extracting the raw materials from the ground, their transport to a point of manufacture and then the primary energy used (and the associated carbon impacts that arise) from transforming the raw materials into construction products.
- **Construction (Category A4 to A5)** These carbon impacts arise from transporting the construction products to site, and their subsequent processing and assembly into the building.
- **Use Stage (Category B1 to B7)** This covers a wide range of sources from the GHG emissions associated with the operation of the building (B1), maintenance (B2), repair (B3), refurbishment (B4) and replacement (B5) of materials, and operational energy use (B6) and water use (B7).

- **End of Life Stages (Category C1 to C4)** The eventual deconstruction and disposal of the existing building at the end of its life takes account of the on-site activities of the demolition contractors. No 'credit' is taken for any future carbon benefit associated with the reuse or recycling of a material into new products.

PE-ENV-01104 (TII, 2022a) recommends the calculation of the construction stage embodied carbon using an appropriate carbon tool (TII, 2022a). Embodied carbon refers to the sum of the carbon needed to produce a good or service. It incorporates the energy needed in the mining or processing of raw materials, the manufacturing of products and the delivery of these products to site. The purpose of the embodied carbon assessment is to engage the design team in the consideration of embodied carbon at an early stage in the development and mitigate embodied carbon. This engagement aims to ensure carbon savings are made and to assist in aligning the project to Ireland's CAP goal of Net Carbon Zero by 2050.

For the building elements of the proposed development, the OneClick LCA tool was utilised. OneClick LCA is certified to EN 15978, EN 15978, ISO 21931 – 1 & ISO 21929, and data requirements of ISO 14040 & EN 15804, and is LEED, BREEAM and PAS 2080 aligned. It allows users to assess the carbon impact of buildings at various stages of design. The tool includes a detailed product and material list based on Irish materials as well as materials from the UK and Europe. Data was obtained from the project design team in terms of estimated material types and quantities. Where an exact material type or quantity was not known, as it will not be chosen until detailed design, an estimate value or alternative material was used within the tool to complete the GHG assessment. The tool allows for optioneering and optimization of the carbon impact, it highlights the key areas within the building with the highest carbon impact and provides options for lower carbon intensive materials.

Reasonable conservative estimates have been used in this assessment where necessary to provide an estimate of the GHGs associated with the proposed development. The quantities of materials and associated GHGs is considered a worst-case scenario and will be reduced during the detailed design stage.

12.2.2.2 Operational Phase

12.2.2.2.1 Traffic Emissions

Emissions from road traffic associated with the proposed development have the potential to emit carbon dioxide (CO_2) which will impact climate.

The TII guidance *Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106* (TII, 2022b), states that road links meeting one or more of the following criteria can be defined as being 'affected' by a proposed development and should be included in the local air quality assessment, and also the climate assessment.

- Annual average daily traffic (AADT) changes by 1,000 or more;
- Heavy duty vehicle (HDV) AADT changes by 200 or more;
- Daily average speed change by 10 kph or more;
- Peak hour speed change by 20 kph or more;
- A change in road alignment by 5 m or greater.

While the guidance is specific to infrastructure projects the approach can be applied to any development that causes a change in traffic.

There are a small number of road links that will experience a change of over 1,000 in the AADT during the operational phase due to the proposed development. As a result, a detailed assessment of traffic related carbon dioxide (CO_2) emissions was conducted.

PE-ENV-01104 (TII, 2022a) states that road traffic related emissions information should be calculated using the TII Road Emissions Model (REM) online calculator tool (TII, 2024). The TII guidance (TII, 2022b) states that modelling should be conducted for the Base, Opening and Design Years for both the Do Nothing and Do Something scenarios. The output is provided in terms of CO_2e.

The following inputs are required for the REM tool: receptor locations, light duty vehicle (LDV) annual average daily traffic movements (AADT), annual average daily heavy-duty vehicles (HDV AADT), annual average traffic speeds, road link lengths, road type, project county location and pollutant background concentrations. The *Default* fleet mix option was selected along with the *Intermediate Case* fleet data base selection for cars, the *ICE Sales Ban 2035* fleet data base for LGVs and the *EU Target* for the HGV fleet data base, as per TII Guidance (TII, 2024b; 2025). The Intermediate Case assumes a linear interpolation between the Business-as-Usual case – where current trends in vehicle ownership continue and the Climate Action Plan (CAP) case – where adoption of low emission light duty vehicles occurs. The ICE Sales Ban 2035 represents a sales ban on new combustion engine vehicles to be implemented by 2035, and the EU Target for HGV represents interim targets for emissions from sales of new HGVs.

Traffic flow information was obtained from SYSTRA, the traffic engineers, for the purposes of this assessment. Data was provided for the Base Year 2025, Opening Year 2029 and Design Year 2044 (see Traffic and Transport Assessment for further details). Both the Do Nothing and Do Something scenarios are quantified to determine the degree of change in emissions due to the proposed development. A total of 2 no. scenarios were assessed, these include:

- The Do Nothing scenario – this scenario assumes the proposed development is not in place in future years but includes traffic associated with cumulative developments in the wider area.
- The Proposed scenario – this is the "Do Something" scenario and includes traffic from the Do Nothing scenario and traffic associated with the proposed development as well as traffic associated with cumulative developments in the wider area.

Further detail on the modelling scenarios can be found in the Traffic and Transport Assessment prepared by SYSTRA and submitted with this planning application. The traffic data is detailed in **Table 12.3**. Only road links that met the TII scoping criteria were included in the modelling assessment. Inputs include light duty vehicle (LDV) annual average daily traffic movements (AADT), annual average daily heavy-duty vehicles (HDV AADT), annual average traffic speeds, road link lengths, road type and project county location.

Table 12.3 Traffic Data used in Operational Phase Climate Assessment

Road Name	Speed (kph)	Base Year	Opening Year		Design Year	
			Do Nothing	Do Something	Do Nothing	Do Something
		LDV AADT (HDV AADT)	LDV AADT (HDV AADT)	LDV AADT (HDV AADT)	LDV AADT (HDV AADT)	LDV AADT (HDV AADT)
Link 1: R132 Drumcondra Rd Lower between Hollybank Rd and R131 Clonliffe Rd	50	24275(1600)	26027(1718)	26462(1746)	28050(1851)	29066(1918)
Link 2: R131 Clonliffe Rd between R132 Drumcondra Rd Lower and Jones' Road	50	11463(187)	12240(196)	12716(203)	13178(211)	14354(230)

12.2.2.2.2 Operational Phase Energy Use

The EU guidance (European Commission, 2013) also states indirect GHG emissions because of a development must be considered, which includes emissions associated with energy usage. Information on the proposed energy strategy for the development was obtained from the Climate Action Energy Statement Report prepared by OCSC (2025) and used to inform this assessment. Several measures in relation to sustainable energy usage have been incorporated into the overall design of the development which will have the benefit of reducing the impact to climate where possible during operation.

12.2.2.3 Significance Criteria for GHGA

The Transport Infrastructure Ireland (TII) guidance document entitled PE-ENV-01104 Climate Guidance for National Roads, Light Rail and Rural Cycleways (Offline & Greenways) – Overarching Technical Document (TII, 2022a) outlines a recommended approach for determining the significance of both the construction and operational phases of a development.

The significance of GHG effects set out in PE-ENV-01104 (TII, 2022a) is based on IEMA guidance (IEMA, 2022) which is consistent with the terminology contained within Figure 3.4 of the EPA's 'Guidelines on the information to be contained in Environmental Impact Assessment Reports' (EPA, 2022).

The 2022 IEMA Guidance (IEMA, 2022) sets out the following principles for significance:

- When evaluating significance, 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. Therefore, the significance of a project's emissions should be based on its net impact over its lifetime, which may be positive, negative or negligible;
- Where GHG emissions cannot be avoided, the goal of the EIA process should be to reduce the project's residual emissions at all stages; and
- Where GHG emissions remain significant, but cannot be further reduced, approaches to compensate the project's remaining emissions should be considered.

The criteria for determining the significance of effects are a two-stage process that involves defining the magnitude of the impacts and the sensitivity of the receptors (i.e. Ireland's National GHG targets). In relation to climate, there is no project specific assessment criteria, but the project will be assessed

against the recommended TII significance determination. This takes account of any embedded or committed mitigation measures that form part of the design which should be considered.

TII (TII 2022a) states that professional judgement must be considered when contextualising and assessing the significance of a project's GHG impact. TII reference the IEMA guidance (IEMA, 2022) which states that the crux of assessing significance is "*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*".

Significance is determined using the criteria outlined in **Table 12.4** (derived from Table 6.7 of PE-ENV-01104 (TII 2022a)) along with consideration of the following two factors:

- The extent to which the trajectory of GHG emissions from the project aligns with Ireland's GHG trajectory to net zero by 2050; and
- The level of mitigation taking place.

Table 12.4 Significance Criteria for GHGA

Effects	Significance Level	Description
Significant adverse	Major adverse	The project's GHG impacts are not mitigated. The project has not complied with do-minimum standards set through regulation, nor provided reductions required by local or national policies; and No meaningful absolute contribution to Ireland's trajectory towards net zero.
	Moderate adverse	The project's GHG impacts are partially mitigated. The project has partially complied with do-minimum standards set through regulation, and have not fully complied with local or national policies; and Falls short of full contribution to Ireland's trajectory towards net zero.
Not significant	Minor adverse	The project's GHG impacts are mitigated through 'good practice' measures. The project has complied with existing and emerging policy requirements; and Fully in line to achieve Ireland's trajectory towards net zero.
	Negligible	The project's GHG impacts are mitigated beyond design standards. The project has gone well beyond existing and emerging policy requirements; and Well 'ahead of the curve' for Ireland's trajectory towards net zero.
Beneficial	Beneficial	The project's net GHG impacts are below zero and it causes a reduction in atmosphere GHG concentration. The project has gone well beyond existing and emerging policy requirements; and Well 'ahead of the curve' for Ireland's trajectory towards net zero, provides a positive climate impact.

Ireland's carbon budgets can also be used to contextualise the magnitude of GHG emissions from the proposed development (TII, 2022a). The approach is based on comparing the net proposed development GHG emissions to the relevant carbon budgets (DECC, 2023a). With the publication of the Climate Action Act in 2021 and the Climate Action Plan 2025, sectoral carbon budgets have been published for comparison with the net GHG emissions from the proposed development over its lifespan.

The aim of the carbon budgets is to ensure we are on a trajectory to meet the National Climate Objective of Net Zero by 2050.

12.2.3 Climate Change Risk Assessment (CCRA)

The assessment involves determining the vulnerability of the proposed development to climate change. This involves an analysis of the sensitivity and exposure of the development to climate hazards which together provide a measure of vulnerability.

PE-ENV-01104 (TII, 2022a) states that the CCRA is guided by the principles set out in the overarching best practice guidance documents:

- Technical Guidance on the Climate Proofing of Infrastructure in the Period 2021-2027 (European Commission, 2021a); and
- The Institute of Environmental Management and Assessment, Environmental Impact Assessment Guide to: Climate Change Resilience and Adaptation (2nd Edition) (IEMA, 2020).

The baseline environment information provided in Section 12.3.2, future climate change modelling and input from other experts working on the proposed development (i.e. hydrologists) should be used to assess the likelihood of a climate risk.

First an initial screening CCRA based on the operational phase is carried out, according to the TII guidance PE-ENV-01104. This is carried out by determining the sensitivity of proposed development assets (i.e. receptors) and their exposure to climate change hazards.

The proposed development asset categories must be assigned a level of sensitivity to climate hazards. PE-ENV-01104 (TII, 2022a) provides the list of asset categories and climate hazards to be considered. The asset categories will vary for development type and need to be determined on a development-by-development basis.

- **Asset Categories** Pavements; drainage; structures; utilities; landscaping; signs, light posts, buildings, and fences.
- **Climate Hazards** Flooding (coastal, pluvial, fluvial); extreme heat; extreme cold; wildfire; drought; extreme wind; lightning and hail; landslides; fog.

The sensitivity is based on a High, Medium or Low rating with a score of 1 to 3 assigned as per the criteria below.

- **High Sensitivity** The climate hazard will or is likely to have a major impact on the asset category. This is a sensitivity score of 3.
- **Medium Sensitivity** It is possible or likely the climate hazard will have a moderate impact on the asset category. This is a sensitivity score of 2.
- **Low Sensitivity** It is possible the climate hazard will have a low or negligible impact on the asset category. This is a sensitivity score of 1.

Once the sensitivities have been identified the exposure analysis is undertaken (European Commission, 2021a; TII, 2022a). The exposure analysis involves determining the level of exposure of each climate hazard at the project location irrespective of the project type. Current and future climate hazards are discussed in Section 12.4.3. For example, flooding could be a risk if the project location is next to a river in a floodplain. Exposure is assigned a level of High, Medium or Low as per the below criteria.

- **High Exposure** It is almost certain or likely this climate hazard will occur at the project location, i.e. might arise once to several times per year. This is an exposure score of 3.
- **Medium Exposure** It is possible this climate hazard will occur at the project location, i.e. might arise a number of times in a decade. This is an exposure score of 2.
- **Low Exposure** It is unlikely or rare this climate hazard will occur at the project location, i.e. might arise a number of times in a generation or in a lifetime. This is an exposure score of 1.

Once the sensitivity and exposure are categorised, a vulnerability analysis is conducted by multiplying the sensitivity and exposure to calculate the vulnerability.

12.2.3.1 Significance Criteria for CCRA

The CCRA involves an initial screening assessment to determine the vulnerability of the proposed development to various climate hazards. The vulnerability is determined by combining the sensitivity and the exposure of the proposed development to various climate hazards.

Vulnerability = Sensitivity x Exposure

The vulnerability assessment takes any proposed mitigation into account. **Table 12.5** details the vulnerability matrix; vulnerabilities are scored on a high, medium and low scale.

TII guidance (TII, 2022a) and the EU technical guidance (European Commission, 2021a) note that if all vulnerabilities are ranked as low in a justified manner, no detailed climate risk assessment may be needed. Therefore, the impact from climate change on the proposed development is considered not significant.

However, where residual medium or high vulnerabilities exist the assessment may need to be progressed to a detailed climate change risk assessment and further mitigation implemented to reduce risks.

Table 12.5 Vulnerability Matrix

		Exposure		
		High (3)	Medium (2)	Low (1)
Sensitivity	High (3)	9 - High	6 – High	3 - Medium
	Medium (2)	6 - High	4 - Medium	2 - Low
	Low (1)	3 - Medium	2 – Low	1 - Low

The screening CCRA, detailed in Section 12.4.2.2, did not identify any residual medium or high risks to the proposed development due to climate change. Therefore, a detailed CCRA for the construction and operational phase were scoped out.

While a CCRA for the construction phase was not required, best practice mitigation against climate hazards is still recommended in Section 12.5.1.

12.3 Baseline Environment

PE-ENV-01104 (TII, 2022a) states that a baseline climate scenario should identify, consistent with the study area for the project, GHG emissions without the project for both the current and future baseline.

Ireland declared a climate and biodiversity emergency in May 2019 and in November 2019 there was European Parliament approval of a resolution declaring a climate and environment emergency in

Europe. This, in addition to Ireland's current failure to meet its EU binding targets under Regulation 2018/842 (European Union, 2018) results in changes in GHG emissions either beneficial or adverse being of more significance than previously considered prior to these declarations.

12.3.1 Current GHG Baseline

Data published in April 2025 (EPA, 2025a), indicates that Ireland exceeded, without the use of flexibilities, its 2023 annual limit set under EU's Effort Sharing Decision (ESD) (406/2009/EC) by 2.22 Mt CO_2e. However, the 2023 emissions were the first time that Ireland's emission were below (-3.3%) 1990 levels. ETS (Emissions Trading Scheme) emissions decreased (-17.0%) and ESR (Effort Sharing Regulation) emissions decreased (-3.5%). Ireland's target is an emission reduction of 626 kt of CO_2e by 2030 on an average baseline of 2016 to 2018. The EPA estimate that 2023 total national GHG emissions, excluding LULUCF, have decreased by 6.8% on 2022 levels to 54.93 Mt CO_2e, with a 2.2 Mt CO_2e (-21.4%) reduction in electricity industries alone. This was driven by a 40.7% share of energy from renewables in 2023 and by increasing our imported electricity. Manufacturing combustion and industrial processes decreased by 5.2% to 6.3 Mt CO_2e in 2023 due to declines in fossil fuel usage. The sector with the highest emissions in 2023 was agriculture at 37.7% of the total, followed by transport at 21.5%. For 2023, total national emissions (including LULUCF) were 58.82 Mt CO_2e (EPA, 2025) (**Table 12.6**).

The current estimates of National greenhouse gas emissions (including LULUCF) in 2023 are 10.3% below 2018, well off the National Climate ambition of a 51% reduction by 2030. The data indicate that from 2021- 2023 Ireland has used 63% (186 Mt CO_2e) of the 295 Mt CO_2e Carbon Budget for the five-year period 2021-2025. This leaves 37% of the budget available for the next two years, requiring a substantial 5% annual emissions reduction for 2024 and 2025 to stay within budget.

Table 12.6 Trends in Total National GHG Emissions 2021 – 2023

Sector *Note 1*	2021	2022	2023	Total Budget (Mt CO_2e) (2021-2025)	% Budget 2021-2025 Used	Annual Change 2022 to 2023
Electricity	9.89	9.69	7.57	40	67.89%	-21.91%
Transport	11.09	11.76	11.80	54	64.16%	0.35%
Buildings (Residential)	6.87	5.75	5.35	29	61.97%	-7.01%
Buildings (Commercial and Public)	1.44	1.45	1.39	7	61.16%	-3.94%
Industry	7.09	6.62	6.31	30	66.75%	-4.71%
Agriculture	21.94	21.78	20.72	106	60.79%	-4.88%
Other *Note 2*	1.86	1.93	1.81	9	62.28%	-6.27%
LULUCF	4.63	3.98	3.89	–	-	-2.33%
Total including LULUCF	64.82	62.99	58.83	295	63.27%	-3.80%

Note 1 Reproduced from latest emissions data on the EPA website May 2025 (EPA, 2025).

Note 2 Other includes Petroleum refining, F-Gases and Waste (emissions from solid waste disposal on land, solid waste treatment (composting and anaerobic digestion), wastewater treatment, waste incineration and open burning of waste).

12.3.2 Future GHG Baseline

The future baseline with respect to the GHGA can be considered in relation to the future climate targets which the assessment results will be compared against. In line with TII (TII, 2022a) and IEMA Guidance

(IEMA, 2022) the future baseline is a trajectory towards net zero by 2050, "*whether it* [the project] *contributes to reducing GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050*".

The future baseline will be determined by Ireland meeting its targets set out in the CAP25, and future CAPs, alongside binding 2030 EU targets. The European Union (EU) enacted *'Regulation (EU) 2018/842 on binding annual GHG emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No. 525/2013'* (hereafter referred to as the Regulation) (European Union, 2018) to meet the commitments under the Paris Agreement. The Regulation aims to deliver, collectively by the EU in the most cost-effective manner possible, reductions in GHG emissions from the Emission Trading Scheme (ETS) and non-ETS sectors amounting to 43% and 30%, respectively, by 2030 compared to 2005. The Regulation was amended in April 2023 and Ireland must now limit its ETS and non-ETS greenhouse gas emissions by at least 42% by 2030. The ETS is an EU-wide scheme which regulates the GHG emissions of larger industrial emitters including electricity generation, cement manufacturing and heavy industry. The non-ETS sector includes all domestic GHG emitters which do not fall under the ETS scheme and includes GHG emissions from transport, residential and commercial buildings and agriculture.

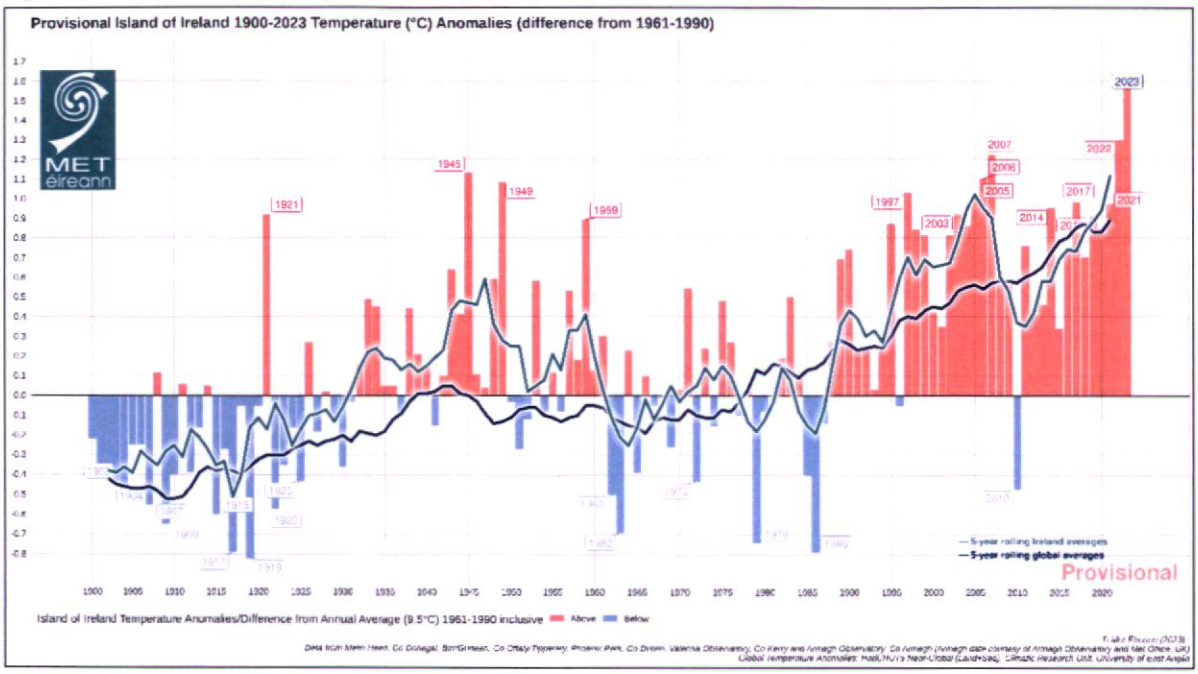
In May 2025, the EPA released the report *Ireland's Greenhouse Gas Emissions Projections 2024-2055* (EPA, 2025b), which includes total projected emissions and a breakdown of projected emissions per sector under the 'With Existing Measures' and 'With Additional Measures' scenarios. The EPA projections indicate that currently implemented measures (With Existing Measures) will achieve a reduction of 10% on 2005 levels by 2030, significantly short of the 42% reduction target. If measures in the higher ambition (With Additional Measures) scenario are implemented, EPA projections show that Ireland can achieve a reduction of 22% by 2030, still short of the 42% reduction target.

12.3.3 Current CCRA Baseline

The region of the proposed development has a temperate, oceanic climate, resulting in mild winters and cool summers. The Met Éireann weather station at Dublin Airport is the nearest, representative, weather and climate monitoring station to the proposed development with meteorological data recorded for the 30-year period from 1991 to 2020. The data for the 30-year period from 1991 to 2020 indicates that the wettest months at Dublin Airport Metrological Station were October, November and December, and the driest month on average was March (Met Éireann, 2025a). July was the warmest month with a mean temperature of 15.4 Celsius. January was the coldest month with a mean temperature of 5.2 Celsius.

Met Éireann's 2023 Climate Statement (Met Éireann, 2024a) states 2023's average shaded air temperature in Ireland is provisionally 11.20°C, which is 1.65°C above the 1961-1990 long-term average. Previous to this 2022 was the warmest year on record; however, 2023 was 0.38°C warmer (**Figure 12.1**).

Figure 12.1 1900-2023 Temperature (°C) Temperature Anomalies (differences from 1961-1990)



2023 also had above average rainfall. This included the warmest June on record and the wettest March and July on record. Record high sea surface temperatures (SST) were recorded since April 2023 which included a severe marine heatwave to the west of Ireland during the June 2023. This marine heatwave contributed to the record rainfall in July.

Met Éireann's 2024 *Climate Statement* (Met Éireann 2025b) states 2024's average shaded air temperature in Ireland is provisionally 10.72°C, which is 1.17°C above the 1961-1990 long-term average or 0.55°C above the most recent 1991-2020 long-term average. This is the 4th warmest year on record with 2023 breaking previous records. Seven of the top ten warmest years have occurred since 2005. Record high sea surface temperatures (SST) were recorded in 2022, and in 2024 continued at or near record high levels. 2024 was overall drier than average; however, there were many instances of heavy or intense rainfall which led to flooding events. This trend is predicted to continue with climate change with an increase in both dry periods and heavy rainfall events. Considering the extraordinary data, Met Éireann states that the latest Irish climate change projections indicate further warming in the future, including warmer winters. The record temperatures mean that the likelihood of extreme weather events occurring has increased. This will result in longer dry periods and heavy rainfall events. Storm surges and coastal flooding due to sea level rise. Compound events, where coastal surges and extreme rainfall events occur simultaneously will also increase. Met Éireann has high confidence in maximum rainfall rates increasing but not in how the frequency or intensity of storms will change with climate change.

12.3.4 Future CCRA Baseline

Impacts due to climate change will evolve with a changing future baseline, changes have the potential to include increases in global temperatures and increases in the number of rainfall days per year. Therefore, it is expected that the baseline climate will evolve over time and consideration is needed with respect to this within the design of the proposed development.

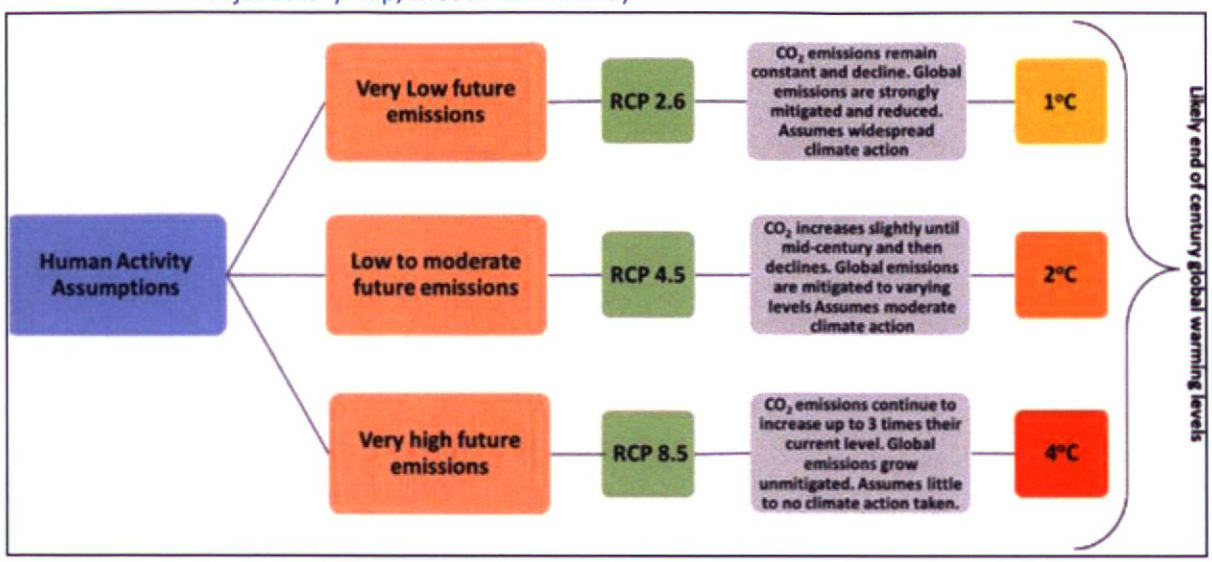
Ireland has seen increases in the annual rainfall in the north and west of the country, with small increases or decreases in the south and east including in the region where the proposed development will be located (EPA, 2021b). The EPA have compiled a list of potential adverse impacts due to climate change including the following which may be of relevance to the proposed development (EPA, 2021b):

- More intense storms and rainfall events;
- Increased likelihood and magnitude of river and coastal flooding;
- Water shortages in summer in the east;
- Adverse impacts on water quality; and
- Changes in distribution of plant and animal species.

TII's Guidance document PE-ENV-01104 (TII 2022a) states that for future climate change a moderate to high Representative Concentration Pathways (RCP) should be adopted. RPC4.5 is considered moderate, while RPC8.5 is considered high. Representative Concentration Pathways (RCPs) describe different 21st century pathways of GHG emissions depending on the level of climate mitigation action undertaken.

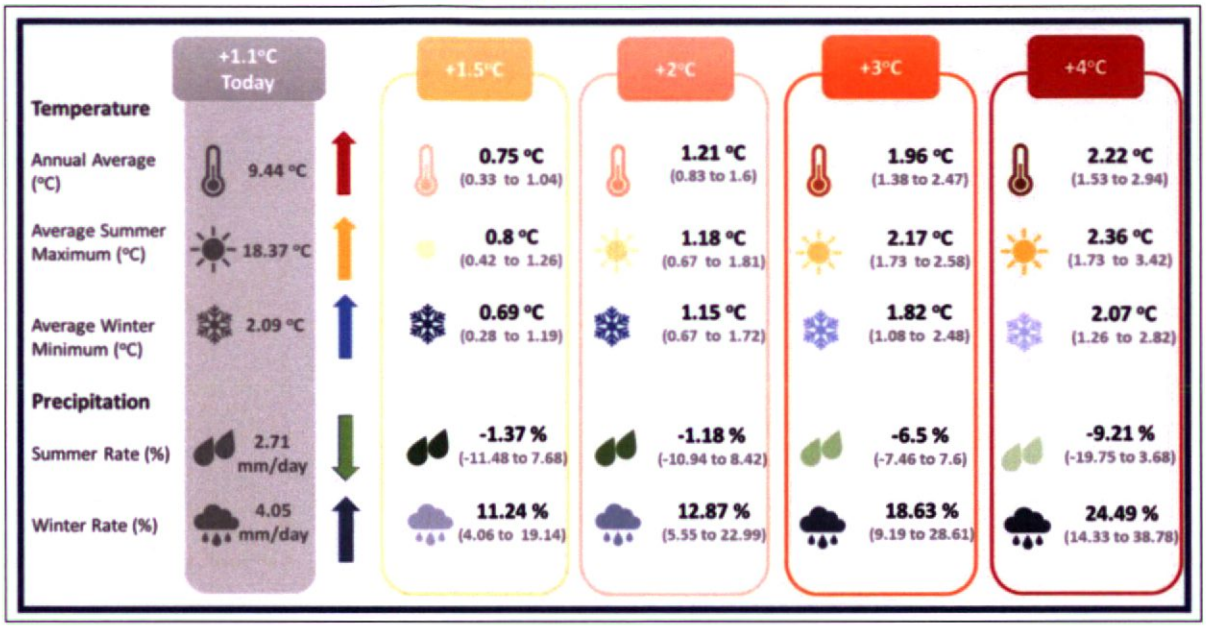
National Framework for Climate Services (NFCS) was founded in June 2022 to streamline the provision of climate services in Ireland and will be led by Met Éireann. The aim of the NFCS is to enable the co-production, delivery and use of accurate, actionable and accessible climate information and tools to support climate resilience planning and decision making. In addition to the NFCS, further work has been ongoing into climate projects in Ireland through research under the TRANSLATE project. TRANSLATE (Met Éireann, 2023b) has been led by climate researchers from University of Galway – Irish Centre for High End Computing (ICHEC), and University College Cork – SFI Research Centre for Energy, Climate and Marine (MaREI), supported by Met Éireann climatologists. TRANSLATE's outputs are produced using a selection of internationally reviewed and accepted models from both CORDEX and CMIP5. Representative Concentration Pathways (RCPs) provide a broad range of possible futures based on assumptions of human activity. The modelled scenarios include for "least" (RCP2.6), "more" (RCP4.5) or "most" (RCP8.5) climate change (**Figure 12.2**).

Figure 12.2 Representative Concentration Pathways associated emission levels (Source: TRANSLATE Project Storymap, Met Éireann 2023)



TRANSLATE (Met Éireann, 2023b) provides the first standardised and bias-corrected national climate projections for Ireland to aid climate risk decision making across multiple sectors (e.g. transport, energy, water), by providing information on how Ireland's climate could change as global temperatures increase to 1.5˚C ,2˚C, 2.5˚C, 3˚C or 4˚C. Projections broadly agree with previous projections for Ireland. Ireland's climate is dominated by the Atlantic Meridional Overturning Circulation (AMOC), a large system of ocean currents, including the Gulf Stream, characterised by a northward flow of warm water and a southward flow of cold water. Due to the AMOC, Ireland does not suffer from the extremes of temperature experienced by other countries at a similar latitude. Recent studies have projected that the AMOC could decline by 30 – 40 % by 2100, resulting in cooler North Atlantic Sea surface temperatures (SSTs) (Met Éireann, 2023b). Met Éireann projects that Ireland will nevertheless continue to warm, although the AMOC cooling influence may lead to reduced warming compared with continental Europe. AMOC weakening is also expected to lead to additional sea level rise around Ireland. With climate change Ireland's temperature and rainfall will undergo more and more significant changes, e.g. on average summer temperature could increase by more than 2°C, summer rainfall could decrease by 9% while winter rainfall could increase by 24% (**Figure 12.3**). Future projects also include a 10-fold increase in the frequency of summer nights (values > 15°C) by the end of the century, a decrease in the frequency of cold winter nights and an increase in the number of heatwaves. A heatwave in Ireland is defined as a period of 5 consecutive days where the daily maximum temperature is greater than 25°C.

Figure 12.3 Change of climate variables for Ireland for different Global warming thresholds (Source: TRANSLATE Project Storymap, Met Éireann, 2023b)



The TRANSLATE research report (Met Éireann, 2024d) finds that night-time temperatures will warm more than day-time temperatures, with temperatures increases across all seasons but the highest in the summer (with an increase of 0.5°C to 3.5°C). Autumn is projected to have the highest increase in average minimum temperatures (with an increase of 1.1°C to 4.4°C). The variance is dependent on the scenario that is being reviewed. While these temperatures are projected across all of Ireland, they increase most in the east of the country compared to the west. With respect to rainfall, increases of 4% to 38% are projected. However, this will not be spread across the year as during summer months there are projected decreases in rainfall beyond the 2°C warming scenario.

In January 2024 the EPA published *Ireland's Climate Change Assessment Synthesis Report* (EPA, 2024e) which contained four volumes:

- Volume 1: Climate Science: Ireland in a Changing World;
- Volume 2: Achieving Climate Neutrality by 2050;
- Volume 3: Being Prepared for Ireland's Future Climate; and
- Volume 4: Realising the Benefits of Transition and Transformation.

This report reinforces the existing and future risks arising from climate change. Volume 1 (EPA, 2024e) states that under Early action, the temperature increase averaged across the island of Ireland relative to the recent past (1976 to 2005) would reach 0.91°C (0.44 to 1.10°C) by mid-century before falling back to 0.80°C (0.34 to 1.07°C) at the end of the century. Whereas under Late action, by the end of the century it is projected that the temperature increases could be 2.77°C (2.02 to 3.49°C). Heat extremes will become more frequent and more severe and cold extremes will become less frequent and less severe with further warming.

Precipitation was 7% higher over the period 1991 to 2020 than over the 1961 to 1990 period. The average future predicted increase in precipitation is <10% in annual mean accumulated. By 2100 projected additional rises in sea level range from 0.32 to 0.6m under early action to 0.63 to 1.01m under late action scenarios, with greater storm surges potentially effecting critical infrastructure along

the coastline. Projections of changes in storminess are highly uncertain and translate into large uncertainties in future frequency and intensity of extreme waves.

Volume 3 (EPA, 2024e) discusses how water supplies will face growing pressures resulting in increased water demand and how options need to be developed, including potential new sources. The report states the key role of critical infrastructure for delivering public services, economic development and a sustainable environment. These are exposed to a range of climate extremes. Failures in critical infrastructure can cascade across other sectors and present a multi-sector risk due to climate change.

The report references the EPA's *Critical Infrastructure Vulnerability to Climate Change* report (EPA, 2021a) as the most substantial research project in Ireland to date on climate change and critical infrastructure which assesses the future performance of Ireland's critical infrastructure when climate is considered. The Critical Infrastructure Vulnerability to Climate Change report states with respect to water availability and quality, that flood risk and heatwaves have a medium vulnerability index and the underground supply network has a high vulnerability to snowstorms and cold spells. However, while the vulnerability is high, the exposure is likely to reduce due to future climate change resulting in less cold weather events. The risk assessment highlights the co-dependence of the water sector to the energy sector, and how vulnerability in the energy sector may have cascading impacts.

Volume 4 (EPA, 2024e) calls for system change, including a transformation of urban settings. Stating that meaningful urban transformation can create a better living environment while simultaneously reducing emissions.

The projections were echoed by the *Updated High-resolution Climate Projections for Ireland Research Report: 471* (EPA, 2024f) which was in broad agreement with previous research. The future autumn and winter months are projected to be up to 10% wetter, while summer is projected to be up to 8% drier. This information has been used in determining the exposure analysis (see Section 12.4.3.2).

12.4 Predicted Impacts of the Proposed Development

12.4.1 Do-Nothing Impact

In the Do-Nothing scenario, the site will remain as per the baseline and will change in accordance with trends within the wider are, including influences from potential new developments in the surrounding area, changes in road traffic, etc.

As the site is zoned for development, it is likely that in the absence of the proposed development a development of a similar nature would occur in the future. Therefore, the predicted greenhouse gas emissions associated with the construction and operation phases are likely to occur regardless of the specific proposed development. Climate change is being driven by broader, long-term global trends in greenhouse gas concentrations, which will continue irrespective of any localised development. This assessment focuses on the contribution of the proposed development to the overall emissions ad considers mitigation measures to minimise its climate impact.

12.4.2 Greenhouse Gas Assessment

12.4.2.1 Demolition Phase

There are some demolition works proposed as part of the proposed development. A total of c. 7,508 m^3 of buildings are predicted to be demolished. These works will result in upfront embodied carbon

emissions, primarily associated with deconstruction, processing of waste materials, and transportation to disposal or recovery facilities. Based on standard assumptions for demolition emissions (e.g. RICS A5.1 and A5.2 guidelines), the associated emissions have been included within the embodied carbon calculations presented in the project's Whole Life Carbon assessment (see ARUP's technical note Justification for Demolition for further detail).

In accordance with Policy CA6 of the Dublin City Development Plan 2022–2028 (DCC, 2022), which promotes the retrofitting and reuse of existing buildings rather than their demolition and reconstruction, a detailed comparative assessment was undertaken to evaluate both retention and new build scenarios. The analysis concluded that while demolition results in higher upfront embodied carbon, the New Build scenario provides greater long-term carbon efficiency, particularly on a per-occupant basis, due to increased density and higher energy performance (A3 BER rating versus B2 for retention). Over a 60-year study period, the total whole life carbon emissions of both options were found to be broadly comparable.

The reuse, recycling / recovery and disposal rates for the demolition phase have been estimated using the EPA National Waste Reports and further detail can be found in Ch. 20 Material Assets – Waste. The demolition phase will also involve the removal of asbestos within the existing buildings. A total of 1774.7 tonnes (46.7% of total) will be reused, 1491.9 tonnes (39.2% of total) recycled/recovered, and 534.6 tonnes (14.1% of total) disposed.

Although demolition results in short-term emissions, it is considered justified in this instance due to the overall efficiency gains of the proposed development and the alignment with national density and housing targets. Opportunities to reuse materials from the demolished structures, either on-site or off-site, will be explored as part of the construction waste management strategy, further reducing the climate impact of the demolition phase.

12.4.2.2 Construction Phase

The most significant proportion of GHG emissions tend to occur during the construction phase due to embodied carbon in construction materials and emissions from construction activities. In line with Dublin City Development Plan 2022–2028 (DCC, 2022), the assessment recognises the importance of evaluating the carbon implications of demolition and reconstruction, considering the embodied carbon of existing structures and the additional energy and material demands associated with new construction. Therefore, the assessment has been included in the construction phase assessment for the purposes of the EIAR. The assessment is broken down into the following stages as per Section 12.2.2.1.

- Product stage (A1 – A3);
- Transportation to site (A4);
- Site operations (construction activities) (A5); and
- Material replacement & refurbishment (B4 – B5).

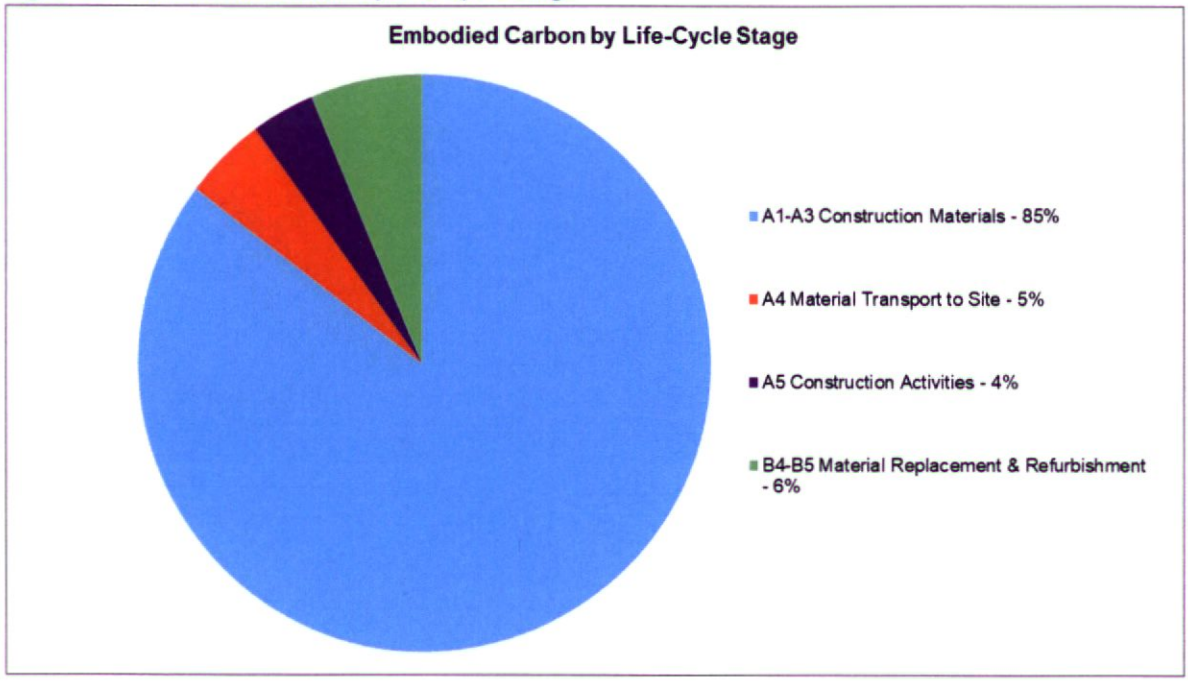
The construction phase GHG emissions comprise stages A1 – A5 which includes the construction materials, the transport of the materials to site and the construction activities or site operations. Ongoing material refurbishment and replacement throughout the lifetime of the development is included within category B4 – B5, these are default values based on the typical maintenance requirements for the chosen material types over the assumed 60-year lifetime. **Figure 12.4** shows the

GHG emissions for the proposed development per life-cycle stage based on the output from the OneClick LCA tool.

Construction materials make up the majority of GHG emissions for the proposed development making up approximately 85% of the total construction phase GHG emissions across the various buildings. Material transport, construction activities and material replacement make up the remainder of the construction GHG emissions. The A5 and B4-B5 categories include carbon savings associated with waste material recycling or re-use.

The carbon assessment has highlighted the areas where the highest embodied carbon emissions occur, specifically due to building materials.

Figure 12.4 Embodied Carbon by Life-Cycle Stage



It has been calculated that the total construction phase embodied carbon (including maintenance and replacement of materials over the development lifetime) will be 29,897 tonnes CO_2e (see Table 12.8). The GHG emissions from the development as a total cannot be compared against one specific sector 2030 carbon budget, the emissions are broken down into different assessment categories and these must be compared separately to the relevant sectoral emissions budget which are detailed in **Table 12.7 and Table 12.8**. The relevant sectoral emissions for the proposed development comparison include the Industry sector, Transport sector and Waste sector. The predicted emissions for the proposed development are annualised over the assumed 60-year lifespan and then compared to the relevant sector 2030 carbon budgets. Annualising the full carbon emissions over the lifetime of the development allows for appropriate comparison with annual GHG targets.

Table 12.7 GHG Assessment Results – Construction Phase

Stage	GHG Assessment Category	Predicted GHG Emissions (tCO_2e)	Predicted GHG Emissions as % of Project Total	Relevant Sector for Carbon Budget Comparison
A1-A3	Materials – concrete, steel, glass, tile, plasterboard	25,506	85%	Industry
A4	Material Transport	1,406	5%	Transport
A5	Construction site material waste	972	3%	Waste
	Construction site material waste transport	57	0.2%	Transport
	Construction site waste	54	0.2%	Waste
B4 - B5	Maintenance Material - concrete, steel, glass, tile, plasterboard	1,813	6%	Industry
	Maintenance Material Transport	7	0.02%	Transport
	Maintenance Material Waste	82	0.3%	Waste
Total		29,897 (tCO_2e)		

In **Table 12.8**, GHG emissions have been compared against the carbon budget for the industry, transport and waste sectors in 2030 (DECC, 2024), against Ireland's total GHG emissions in 2023 and against Ireland's EU 2030 target of a 30% reduction in non-ETS sector emissions based on 2005 levels (27.7 Mt CO_2e) (set out in Regulation EU 2018/842 of the European Parliament and of the Council).

The estimated total GHG emissions, when annualised over the 60-year proposed development lifespan, are equivalent to 0.0085% of Ireland's total GHG emissions in 2023 and 0.002% of Ireland's non-ETS 2030 emissions target. The estimated GHG emissions associated with transport-related activities are 0.0004% of the 2030 Transport budget, construction waste GHG emissions are 0.002% of the Waste budget and industry-related activities are 0.01% of the 2030 Industry budget.

Table 12.8 Estimated GHG Emissions Relative to Sectoral Budgets and GHG Baseline

Target/Sectoral Budget (tCO_2e)		Annualised Development GHG Emissions		% of Relevant Target/Budget
Ireland's 2023 Total GHG Emissions (existing baseline)	5,883,000	498	Total GHG Emissions	0.0085%
Non-ETS 2030 Target	27,722,000	498	Total GHG Emissions	0.002%
2030 Sectoral Budget (Industry Sector)	4,000,000	455	Total Industry Emissions	0.01%
2030 Sectoral Budget (Transport Sector)	6,000,000	24	Total Transport Emissions	0.0004%
2030 Sectoral Budget (Waste Sector)	1,000,000	18	Total Waste Emissions	0.002%

12.4.2.3 Operational Phase

12.4.2.3.1 Operational Energy Usage

The proposed development has been designed to reduce the impact to climate where possible. Several measures have been incorporated into the design to ensure the operational phase emissions are minimised. The primary elements with respect to reducing climate impacts and optimising energy usage

are summarised in Section 12.5.2 and are based on information provided by OCSC in the Climate Action and Energy Statement report.

12.4.2.3.2 Operational Traffic Emissions

There is the potential for increased traffic volumes to impact climate during the operational phase. To provide for a worst-case assessment and to assess potential cumulative impacts, the traffic data has included specific cumulative developments within the area (see Transportation Assessment prepared by SYSTRA, 2025 for further details).

The predicted concentrations of CO_2e for the future years of 2029 and 2044 are detailed in **Table 12.9**. These are significantly less than Ireland's national 2029 and 2030 targets set out under EU legislation (targets beyond 2030 are not available) and the 2030 sectoral emissions ceilings. It is predicted that in 2029 the proposed development will increase CO_2 emissions by 5 tonnes CO_2e. This equates to 0.00001% of the 2029 national emission ceiling or 0.0001% of the 2030 Transport sector emissions ceiling (see **Table 12.9**). Similarly low increases in CO_2 emissions are predicted to occur in 2044 with emissions increasing by 8 tonnes CO_2e. This equates to 0.0003% of the 2030 national emission ceiling or 0.0001% of the 2030 Transport sector emissions ceiling (**Table 12.9**).

In addition, bicycle parking and electric vehicle parking and charging infrastructure will be provided as part of the parking requirements at the proposed development which will promote the use of more sustainable methods of transport.

Table 12.9 Traffic Emissions GHG Impact Assessment

Year	Scenario	CO_2e (tonnes/annum)
2029	Do Nothing	180
	Do Something	186
2044	Do Nothing	130
	Do Something	138
Increment Change in 2029		5
National Emission Ceiling 2029 (Tonnes) Note 1		34,503,322
Impact in 2029 (as % of national emissions ceiling)		0.00001%
Transport Sector 2030 Emission Ceiling		6,000,000
Impact in 2029 (as % of transport sector emissions ceiling)		0.0001%
Increment Change in 2044		8
National Emission Ceiling 2030 (Tonnes) Note 1		27,722,000
Impact in 2044 (as % of national emissions ceiling)		0.00003%
Impact in 2044 (as % of transport sector emissions ceiling)		0.0001%

Note 1 Target under Commission Implementing Decision (EU) 2020/2126 of 16 December 2020 on setting out the annual emission allocations of the Member States for the period from 2021 to 2030 pursuant to Regulation (EU) 2018/842 of the European Parliament and of the Council.

12.4.2.4 GHGA Significance of Effects

The TII guidance states that the following two factors should be considered when determining significance:

- The extent to which the trajectory of GHG emissions from the project aligns with Ireland's GHG trajectory to net zero by 2050; and
- The level of mitigation taking place.

The level of mitigation described in Section 12.5 has been considered when determining the significance of the proposed development's GHG emissions. According to the TII significance criteria described in Section 12.2.2.3 and Table 12.4, the significance of the GHG emissions during the construction and operational phase is minor adverse. The proposed development has mitigated some GHG impacts where possible.

In accordance with the EPA guidelines (EPA, 2022), this equates to a **direct, long-term, negative** and **slight** effect, which is overall **not significant** effect of GHG emissions during the construction and operational phase.

12.4.3 Climate Change Risk Assessment

12.4.3.1 Construction Phase

A detailed CCRA of the construction phase has been scoped out as there are no residual medium or high-risk vulnerabilities to climate change hazards. However, consideration has been given to the proposed development's vulnerability to the following climate change hazards with best practice mitigation measures proposed in Section 12.5:

- Flood Risk due to increased precipitation, and intense periods of rainfall. This includes fluvial and pluvial flooding;
- Increased temperatures potentially causing drought, wildfires and prolonged periods of hot weather;
- Reduced temperatures resulting in ice or snow; and
- Major Storm Damage including wind damage.

12.4.3.2 Operational Phase

The sensitivity and exposure of the development to various climate hazards must first be determined to then determine the vulnerability of the proposed development to climate change. Flooding (coastal, pluvial, fluvial), extreme heat, extreme cold, wildfire, drought, extreme wind, lightning, hail, landslides and fog have been considered as climate hazards in the context of the proposed development.

The sensitivity of the proposed development to the climate hazards is assessed irrespective of the project location. **Table 12.10** details the sensitivity of the proposed development on a scale of high (3), medium (2) and low (1). Once the sensitivity has been established the exposure of the proposed development to each of the climate hazards is determined, this is the likelihood of the climate hazard occurring at the project location and is also scored on a scale of high (3), medium (2) and low (1). The product of the sensitivity and exposure is then used to determine the overall vulnerability of the proposed development to each of the climate hazards as per Table 12.5. The results of the vulnerability assessment are detailed in **Table 12.10**.

Table 12.10 Climate Change Vulnerability Assessment

Climate Hazard	Sensitivity	Exposure	Vulnerability
Flooding (Coastal, Pluvial, Fluvial)	1 (Low)	2 (Medium)	2 (Low)
Extreme Heat	1 (Low)	2 (Medium)	2 (Low)

Climate Hazard	Sensitivity	Exposure	Vulnerability
Extreme Cold	1 (Low)	2 (Medium)	2 (Low)
Wildfire	1 (Low)	1 (Low)	1 (Low)
Drought	1 (Low)	1 (Low)	1 (Low)
Extreme Wind	1 (Low)	1 (Low)	1 (Low)
Lightning & Hail	1 (Low)	1 (Low)	1 (Low)
Landslides	1 (Low)	1 (Low)	1 (Low)
Fog	1 (Low)	1 (Low)	1 (Low)

The sensitivity and exposure of the area was determined with reference to several online tools and with input from the various discipline specialists on the project team. It was concluded that the proposed development does not have any significant vulnerabilities to the identified climate hazards as described in the below sections. All vulnerabilities are classified as low.

12.4.3.2.1 Flooding

A Site Specific Flood Risk Assessment (SSFRA) was undertaken by Barrett Mahony Consulting Civil & Structural Engineers (2025) and is submitted as part of this planning application. This document was reviewed to inform the climate change vulnerability assessment and assess the potential for flooding at the proposed development site.

The SSFRA assessed the risk of flooding from tidal, fluvial, groundwater and pluvial sources. The proposed development is within Flood Zone C, which indicates flooding is not a risk for the site and the development's drainage design includes for a 20% climate change allowance. The 20% climate change allowance aligns with the RCP4.5 'Medium Risk' future scenario.

In relation to coastal or tidal flooding, the SSFRA concludes that the risk of tidal flooding is considered low as the subject site lies outside the 0.1% (1 in 1000 year) AEP (Annual Exceedance Probabilities). The proposed development site is considered of low risk to fluvial flooding. The River Tolka is in the vicinity of the proposed development site, however, the finished floor levels for the proposed development are 1.8 – 3.2 m above the riverbank's levels. In addition, the proposed development does not remove any flood storage volume from the lower-level flood plain.

The SSFRA has found that the risk of flooding due to ground water ingress to the proposed development is considered low. The proposed basement will be waterproofed.

Regarding pluvial flooding, the SSFRA has reviewed the Dublin City Council Flood Resilient city (FRC) project as well as other sources. The site is generally considered of low risk to pluvial flooding as the site is not located in low-lying areas. The primary risk is from surface water run-off. However, the development has been designed to mitigate against surface water flooding as per the below extract from the SSFRA:

"Runoff from the proposed development, internal access roads and car parks will be attenuated prior to discharge into the River Tolka. Discharge rates will be restricted to Dublin City Council (DCC) Drainage Division's requirements. The proposed SuDS measures will reduce the risk of flooding downstream of the subject site. The proposed surface system will be designed for the 1 in 100 year plus 20% for climate change, in line with DCC Drainage Division guidelines. During storm events it is expected that sections of the River Tolka will flow at full capacity and therefore restricting discharge from the development. The proposed outfall will be fitted with a non-return valve at the headwall to prevent backflow into the site. The proposed surface water system on site is designed to cater for 5-hour surcharged outfall for

resilience for storms up to and including the 1 in 100 year return period plus 20% for climate change. Therefore, the risk of flooding due to the River Tolka reaching flow capacity is considered low due to the proposed resilient measures in place. During extreme rainfall events and in the event of the drainage system is blocked due to lack of maintenance, there is potential for localised ponding to occur. However, no habitable floors of buildings will be at risk of flooding by any surface water ponding. Internal finished floor levels are set at a minimum of 150mm above highest external surface levels in the vicinity".

Based on the information provided in the SSFRA it can be concluded that overall, the proposed development has low vulnerability to flood risk.

12.4.3.2.2 Extreme Wind, Fog, Lightning & Hail

In relation to extreme winds, Chapter 18 Microclimate – Wind, has included an assessment of wind effects on the proposed development. The building shall be designed to the appropriate standards to account for the relevant wind loadings events for RCP4.5 and RCP8.5.

Due to the height of some of the buildings within the proposed development there is the potential for lightning protection to be required where buildings are deemed tall enough. Lightning protection has been included as part of the building design as is standard practice for tall buildings.

Hail and fog are not predicted to significantly affect the buildings due to their design.

Increased intensity of storms and wind speeds has been considered in relation to the landscaping proposals for the proposed development. As per advice from the landscape architects on the project and Chapter 18 Microclimate – Wind the terrace garden spaces at roof level are protected with glazed windscreens with a minimum height of 1.8m from the finished floor level for user comfort as required based on the results of the wind assessment. Whilst it is not expected for residents to be utilising these spaces in high wind scenarios, these screens will provide protection for wind tolerant plant species and other furnishings which otherwise may be exposed to wind damage. The requirement for the screening is based on the wind assessment included in Chapter 18 as is a standard design measure.

Additionally, the landscape design of the roof terraces has included plant species that are designed for wind tolerance and are selected from a palette of hardy alpine species accordingly. In general, plant species have been selected to form a resilient soft landscape design and as with trees are largely native in source. Trees will be planted with stakes or below ground guying to allow establishment in windy conditions. Existing trees have been surveyed and those marked as dangerous will be removed, some may require limb pruning to ensure no safety risks arise (see Ch. 14 Landscape & Visual for further detail).

It can be concluded that overall, the proposed development has low vulnerability to extreme wind, fog, lightning and hail.

12.4.3.2.3 Wildfires

In relation to wildfires, the *Think Hazard!* tool developed by the Global Facility for Disaster Reduction and Recovery (GFDRR, 2025), indicates that the wildfire hazard is classified as low for the Dublin area. This means that there is between a 4% and 10% chance of experiencing weather that could support a problematic wildfire that may cause disruptions and low but tangible risk of life and property loss in any given year. Future climate modelling indicates that there could be an increase in the weather conditions which are favourable to fire conditions. These include increases in temperature and prolonged dry

periods. However, due to the project location in a built-up, urban area the risk of wildfire is significantly lessened, and it can be concluded that the proposed development is of low vulnerability to wildfires.

12.4.3.2.4 Landslides

The Geological Society of Ireland (GSI) landslide susceptibility mapping database (GSI, 2025) was reviewed to inform the risk from landslides at the proposed development. There have not been any historical landslide events in the vicinity of the proposed development and most of the site area is of made ground which is considered of low susceptibility to future landslides. The remainder of the site area that is not completely made ground is classified as low vulnerability to landslides according to the GSI landslide susceptibility mapping database (GSI, 2025). Therefore, the vulnerability of the proposed development to landslides is classed as low.

12.4.3.2.5 Extreme Temperatures (Heat & Cold) & Drought

Extreme temperatures, both extreme heat and extreme cold, have the potential to impact the building materials and some related infrastructure. However, high quality, durable building materials are proposed for the development as per the Building Lifecycle Report prepared by Aramark as part of the planning application. There is a low risk of damage to the structure from extreme heat. The internal structure is behind the thermal line of the building and is insulated from large temperature variations with movement joints designed into the structure to allow for thermal expansion and contraction. Similarly, as drainage infrastructure are buried in the ground, the shorter-term changes in temperature are less pronounced because the soil acts as an insulating layer. In addition to the committed incorporated design measures, the architects will be using guidance documents to inform with design detail decisions during the latter phases of the proposed development post-planning consent including the EU Commission *Technical Guidance on Adapting Buildings to Climate Change* (European Commission (2021a), LETI emergency design guide (LETI, 2020), and the latest available IPCC report. In addition, should updated EuroCodes be published prior to completion of detailed design, which will include consideration for climate impacts, these design standards will be considered.

There is the potential for drought to impact the landscaping planting elements of the proposed development. However, as per advice from the landscape architects on the project, the plant palette has been selected from most native plant species; some non-natives are also included in the proposal which will tolerate drought like conditions or reduced water availability. The planting design follows local microclimate conditions including identifying areas appropriate for shade loving plants and those in fuller light. Roof gardens or podiums will be irrigated. Additionally, sedum roofs might be impacted by drought if they are not correctly maintained or watered in the establishment period. As such, a water source should be applied to help during establishment.

12.4.3.2.6 Summary

Overall, the proposed development has at most low vulnerabilities to the identified climate hazards. Therefore, no detailed risk assessment is required.

12.4.3.3 CCRA Significance of Effects

With design mitigation in place, there are no significant risks to the proposed development due to climate change. In accordance with the EPA Guidelines (EPA, 2022), the significance of effect of the

impacts to the proposed development due to climate change during the operational phase are **direct, long-term, negative** and **imperceptible**, which is overall **not significant** in EIA terms.

12.5 Mitigation Measures

12.5.1 Incorporated Design Mitigation

Several measures have been incorporated into the design of the development to mitigate against the impacts of future climate change. For example, adequate attenuation and drainage have been incorporated into the design of the development to avoid potential flooding impacts due to increased rainfall events in future years. These measures have been considered when assessing the vulnerability of the proposed development to climate change (Section 12.4.3.2). Landscaping planting elements have been chosen with consideration for climate change impacts in future years.

In relation to operational energy usage information included in the Climate Action Energy Statement prepared by OCSC, and included with this planning application, has been used to inform this assessment. The incorporated design measures in relation to operational energy are outlined below:

The proposed development will be NZEB (near zero energy building) compliant in line with the Part L requirements and the measures in the Dublin City Development Plan 2022 – 2028. A minimum BER (Building Energy Ratio) of A3 has been targeted.

The residential units will have an energy performance coefficient (EPC) that complies with NZEB (maximum permitted under NZEB requirements is <0.3). The units will also have a carbon performance coefficient (CPC) and renewable energy ratio (RER) that comply with NZEB requirements (maximum permitted CPC under NZEB requirements is <0.35 and RER is 0.20). Like the residential units, the non-domestic spaces will also comply with the NZEB requirements. The EPC will comply with the NZEB requirements (maximum permitted under NZEB requirements is <1.0). The units will also have a CPC and RER that comply with NZEB requirements (maximum permitted CPC under NZEB requirements is <1.15 and RER is 0.20).

The Climate Action Energy Statement outlines that the design of the development has incorporated the principles of the energy hierarchy which are:

1. Be Lean – this encourages a passive strategy whereby space heating, cooling and lighting energy demand is minimised through a fabric first approach.
2. Be Clean – this stage encourages that energy supplied to the development, such as heating or domestic hot water is delivered efficiently through communal or highly efficient systems.
3. Be Green – this stage ties in with the Renewable Energy Ratio requirement of Part L 2022, whereby any remaining requirements are addressed through on-site renewable energy or low zero carbon technologies.

Additionally, the development will incorporate the following measures:

- Use of natural daylight has been maximised through the design where possible. Where artificial lighting is needed this will use energy efficient lighting.
- The proposed ventilation strategy for the non-residential areas will be natural ventilation where possible and/or mechanical ventilation. The mechanical ventilation system will be a high efficiency, variable speed drive system that also incorporates heat recovery and CO_2 control.

- The feasibility and appropriateness of PV solar panels will be investigated at the detailed design stage to satisfy the renewable energy requirement for the proposed development.
- The feasibility of air source heat pumps and exhaust air heat pumps will be investigated at the detailed design stage.
- The proposed development will incorporate measures to reduce water usage through the appropriate selection of low consumption sanitary fittings, leak detection systems and water monitoring facilities.

The development incorporates 2,619 bicycle parking spaces and also includes E.V charging facilities to promote more sustainable transport methods. A minimum of 50% of all car parking spaces will be equipped with fully functional EV charging points and the remaining spaces will be designed to facilitate the relevant infrastructure to accommodate future EV charging. The development is also located in an area with good bus routes and is in proximity to the Drumcondra train station which will facilitate sustainable travel modes.

As per Chapter 19 Traffic & Transport, the majority of central-north Dublin is within a 15-minute cycle of the proposed development. The site's location, coupled with the NTA's ambitious Cycle Network Plan, will mean that cycling will be an attractive mode of travel for the residents of the development. The internal design of the proposed development, and plentiful supply of a range of cycle parking will fully support this. This aligns with the climate action goal of a 15-minute city which is promoted as part of the Dublin City Council Climate Action Plan 2024-2029.

These identified measures will aid in reducing the impact to climate during the operational phase of the proposed development in line with the goals of the Climate Action Plan.

12.5.2 Demolition Phase Mitigation

Embodied carbon of demolition waste materials will be the primary source of climate impacts during the demolition phase. The following measures will aid in reducing the embodied carbon impact of the demolition wastes:

- Creating a demolition and construction program which allows for sufficient time to determine reuse and recycling opportunities for demolition wastes.
- Appointing a suitably competent demolition contractor who will undertake a pre-demolition audit detailing resource recovery best practice and identify materials/building components that can be reused/recycled.
- Materials will be reused on site within the new build areas where possible.
- The reuse, recycling / recovery and disposal rates for the demolition phase have been estimated using the EPA National Waste Reports and further detail can be found in Ch. 20 Material Assets – Waste. The demolition phase will also involve the removal of asbestos within the existing buildings. A total of 1774.7 tonnes (46.7% of total) will be reused and a 1491.9 tonnes (39.2% of total) recycled/recovered.
- Although demolition results in short-term emissions, it is considered justified in this instance due to the overall efficiency gains of the proposed development and the alignment with national density and housing targets. Opportunities to reuse materials from the demolished structures, either on-site or off-site, will be explored as part of the construction waste management strategy, further reducing the climate impact of the demolition phase.

Additional detail in relation to the demolition proposal and justifications is available in Chapter 5 Description of the Proposed Development and the Demolition Justification and Adaptive Re-use Report.

12.5.3 Construction Phase Mitigation

Embodied carbon of materials and construction activities will be the primary source of climate impacts during the construction phase. The following measures to reduce the embodied carbon of the construction works are:

- Alignment with requirements under the Local and National Climate Action Plan;
- Where possible, adoption of the methods set out in the Construction Industry Federation 2021 report Modern Methods of Construction.
- Creating a construction program which allows for sufficient time to determine reuse and recycling opportunities for construction wastes;
- Materials will be reused on site where possible;
- Material choices and quantities will be reviewed during detailed design, to identify and implement lower embodied carbon options where feasible.
- Appointing a suitably competent contractor who will undertake waste audits detailing resource recovery best practice and identify materials can be reused/recycled;
- Prevention of on-site or delivery vehicles from leaving engines idling, even over short periods;
- Ensure all plant and machinery are well maintained and inspected regularly;
- Minimising waste of materials due to poor timing or over ordering on site will aid to minimise the embodied carbon footprint of the site; and
- Sourcing materials locally where possible to reduce transport related CO_2 emissions.

In terms of impact on the proposed development due to climate change, during construction the Contractor will be required to mitigate against the effects of extreme rainfall/flooding and other extreme weather events through site risk assessments and method statements. Contractors' Environmental Management System (EMS) should consider all measures deemed necessary to manage extreme weather events and should as a minimum, cover training of personnel and, prevention and monitoring arrangements. Construction method statements should also consider extreme weather events where risks have been identified. Emergency preparedness and contingency procedures in place for an extreme weather event on the construction site or within the supply chain. All materials used during construction will be accompanied by certified datasheets which will set out the limiting operating temperatures. Temperatures can affect the performance of some materials, and this will require consideration during construction i.e. concrete should not be poured during extreme temperatures. During construction, the Contractor will be required to mitigate against the effects of fog, lighting and hail through site risk assessments and method statements.

Throughout detailed design and construction phase, guidance documents to inform with design detail decisions shall be reviewed e.g. the EU Commission *Technical Guidance on Adapting Buildings to Climate Change* (European Commission (2021a), LETI emergency design guide (LETI, 2020), and the latest IPCC report.

12.5.4 Operational Phase Mitigation

The proposed development has been designed to reduce the impact on climate due to energy usage during operation. These measures are outlined in Section 12.5.1 above as incorporated design mitigation.

In relation to the landscaping planting elements and potential impacts from future climate change; sedum roofs might be impacted by drought if they are not correctly maintained or watered in the establishment period. As such, a water source shall be applied to help during establishment.

No other operational phase mitigation is required.

12.6 Residual Impacts

The impact to climate due to a proposed development must be assessed as a whole for all phases. The proposed development will result in some impacts to climate through the release of GHGs. TII reference the IEMA guidance which states that the crux of assessing significance is "*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 proposed development has proposed best practice mitigation measures and is committing to reducing climate impacts where feasible. The mitigation measures in relation to the proposed development are detailed in Section 12.5 and further details are included in the Climate Action Energy Statement and Building Lifecycle Report. As per the assessment criteria in Table 12.3 the residual impact of the proposed development in relation to GHG emissions is considered minor adverse. The proposed development is aligned with the following assessment criteria as per Table 12.3:

- The project's GHG impacts are mitigated through 'good practice' measures.
- The project has complied with existing and emerging policy requirements; and
- Fully in line to achieve Ireland's trajectory towards net zero.

The 'minor adverse' impact rating equates to a **direct, long-term, negative** and **slight**, impact which is overall **not significant** in EIA terms.

In relation to climate change vulnerability, it has been assessed that there are no significant risks to the proposed development due to climate change. The residual effect of climate change on the proposed development is considered **direct, long-term, negative** and **imperceptible**, which is overall **not significant** in EIA terms.

12.7 Monitoring

Monitoring and reporting of the embodied carbon in the construction phase will be conducted. The aim of monitoring will be to seek further ways to minimise climate impacts. Monitoring will include contractual obligations, in line with the most recent Climate Action Plan and sectoral targets, for the successful tenderer to ensure that the proposed development stays in line with updated aims. Commitments to monitor GHG emissions during the construction phase will also be secured through the final Construction Environmental Management Plan (CEMP). Monitoring will include embodied carbon of construction materials, water usage, power and fuel usage, and waste generation (including reuse and recycling rates). Where monitoring shows that the proposed development is not meeting its targets, further mitigation will be put in place.

Monitoring should also include reviewing potential for extreme weather events which may cause damage during construction. Contractors' Environmental Management System (EMS) will include measures to address risks during such events i.e. flooding.

12.8 Reinstatement

This is not applicable to the climate assessment.

12.9 Interactions

Climate has the potential to interact with several other environmental attributes.

12.9.1 Land, Soils, Geology and Hydrology

The impact of flood risk has been assessed, and the surface water drainage network has been designed to cater for increased rainfall in future years due to climate change. The effect of the interactions between climate and land, soils, geology and hydrology are **direct, short-term, negative and imperceptible** during the construction phase and **direct, long-term, negative and imperceptible** during the operational phase, which is overall **not significant** in EIA terms.

12.9.2 Air Quality

Air quality and climate have interactions due to the emissions from the burning of fossil fuels during the construction and operational phases generating both air quality and climate impacts. Air quality modelling outputs are utilised within the Climate Chapter. There is **no impact** on climate due to air quality. However, the sources of impacts on air quality and climate are strongly linked.

12.9.3 Traffic and Transportation

During the construction and operational phase, there is the potential for interactions between climate and traffic. Vehicles accessing the site will result in emissions of CO_2, a greenhouse gas. The effects of the proposed development on climate are assessed by reviewing the change in annual average daily traffic on roads close to the site. In this assessment, the effects of the interactions between traffic and climate are **direct, short-term, negative and not significant** during the construction phase and **direct, long-term, negative and not significant** during the operational phase, which is overall **not significant** in EIA terms.

12.9.4 Microclimate - Wind

There is the potential for the proposed development to be impacted by the local wind microclimate. More detail can be found in Ch. 18 Microclimate – Wind. This chapter identified no significant effects on the proposed development due to the wind microclimate. Therefore, in this assessment the effects of the interactions between microclimate - wind and climate are considered **direct, short-term, negative** and **imperceptible** during the construction phase and **direct, long-term, negative** and **imperceptible** during the operational phase, which is overall **not significant** in EIA terms.

12.9.5 Waste

Waste management measures (detailed in Ch. 20 Material Assets – Waste) will be put in place to minimise the amount of waste entering landfill, which has higher associated embodied carbon emissions than other waste management such as recycling. The effect of the interactions between waste and climate are considered **direct, short-term, negative and not significant** during the

construction phase and **direct, long-term, negative and not significant** during the operational phase, which is overall **not significant** in EIA terms.

12.10 Indirect and/or Secondary Impacts

12.10.1 Greenhouse Gas Emissions

The GHG assessment considers both the indirect and direct emissions with respect to materials required to construct and operate the proposed development. Indirect, or scope 2 and 3 emissions, such as transportation of goods, waste, electricity and fuel have been included in the assessment where data is available (Table 12.8).

Mitigation measures to reduce secondary emissions such as operational phase traffic movements associated with the proposed development is mitigated through good practice measures to encourage use of active travel and public transport to the site. With mitigation measures put in place to minimise secondary emissions the effect is considered **long-term, direct, negative and slight** in EIA terms.

12.10.2 Climate Change Risk

Indirect or secondary impacts due to climate risk have the potential to occur where a proposed development increases the risk of a climate hazard outside of its own boundary. This may be increasing flood risk at nearby locations, supply chain disruptions (i.e. loss of power or water) or changes to the landscaping which increase wildfire risk outside the project boundary.

Where resilience to indirect impacts for such risks can be built into the proposed project, they have been assessed in Section 12.4.3.2. This includes the impact of the project on flood risk outside of the redline boundary to ensure that the proposed project does not increase flood risk at other locations.

Indirect risks such as potential failures of the power or water network are outside the scope of the project. Critical infrastructure such as roads, water and power is undergoing risk assessment by their oversight bodies to add resilience to the networks in line. These will be published as Sectorial Climate Risk Assessments in 2025 and completed in line with the Sectoral Planning Guidelines for Climate Change Adaptation (Government of Ireland, 2024). These risk assessments aim to pinpoint where the most significant risks are present to prioritise these for adaptation to future climate risk.

12.11 Cumulative Impacts

With respect to the requirement for a cumulative assessment the IEMA (IEMA, 2022) and TII (TII, 2022a) guidance on which the assessment is based states that "*the identified receptor for the GHG Assessment is the global climate and impacts on the receptor from a project are not geographically constrained, the normal approach for cumulative assessment in EIA is not considered applicable. By presenting the GHG impact of a project in the context of its alignment to Ireland's trajectory of net zero and any sectoral carbon budgets, this assessment will demonstrate the potential for the project to affect Ireland's ability to meet its national carbon reduction target. This assessment approach is considered inherently cumulative*".

The traffic data used for the operational phase assessment included cumulative traffic from existing and permitted developments in the surrounding area. Therefore, this impact assessment is cumulative.

As per the above, the cumulative impact of the proposed development in relation to GHG emissions is considered **direct, long-term, negative** and **slight**, which is overall **not significant** in EIA terms.

12.12 Difficulties Encountered

There were no difficulties encountered in completing this chapter.

12.13 Conclusion

This chapter has reviewed and analysed the potential and the predicted impacts of the proposed development with regards to climate. These impacts have been considered for both the construction and operational phases of the proposed development. The cumulative impact of the proposed development and surrounding developments have also been considered.

Provided all mitigation measures as set out in this chapter are adhered to, the overall predicted effect of the proposed development is not significant in relation to GHG emissions and climate change risk.

12.14 Reference

Civil Engineering Standard Method of Measurement (CESMM) (2013) Carbon and Price Book database.

Construction Industry Federation (2021) Modern Methods of Construction

Department of Environment, Climate and Communications (DECC) (2025) Climate Action Plan (CAP) 2025

Department of Environment, Climate and Communications (DECC) (2023) Long-term Strategy on Greenhouse Gas Emissions Reductions (draft)

Department of Environment, Climate and Communications (DECC) (2024) National Adaptation Framework (NAF)

Dublin City Council (2022) Dublin City Council Development Plan 2022-2028

Dublin City Council & Codema (DCC) (2024) Dublin City Council Climate Change Action Plan 2024 -2029

Dublin City Council (2024) Dublin City Council Climate Neutral Dublin 2030 Plan

Environmental Protection Agency (2020a) State of the Irish Environment Report (Chapter 2: Climate Change)

Environmental Protection Agency (2020b) Research 339: High-resolution Climate Projections for Ireland – A Multi-model Ensemble Approach'

Environmental Protection Agency (EPA) (2021a) Critical Infrastructure Vulnerability to Climate Change Report No. 369

Environmental Protection Agency (2022) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports

Environmental Protection Agency (2024a) National Climate Change Risk Assessment (NCCRA)

Environmental Protection Agency (2024e) Ireland's Climate Change Assessment Synthesis Report

Environmental Protection Agency (2024f) Updated High-resolution Climate Projections for Ireland Research Report: 471

Environmental Protection Agency (2025a) Ireland's Final Greenhouse Gas Emissions 1990-2023

Environmental Protection Agency (2025b) Ireland's Greenhouse Gas Emissions Projections 2024-2050

European Commission (2013) Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment

European Commission (2014) 2030 Climate and Energy Policy Framework

European Commission (2017) Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report

European Commission (2021a) Technical guidance on the Climate Proofing of Infrastructure in the Period 2021-2027

European Commission (2021b) 2030 EU Climate Target Plan

European Commission (2021b) Forging a climate-resilient Europe - the new EU Strategy on Adaptation to Climate Change.

European Union (2018) Regulation 2018/842 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No. 525/2013

Global Facility for Disaster Reduction and Recovery (GFDRR) (2025) Think Hazard!

Government of Ireland (2015) Climate Action and Low Carbon Development Act

Government of Ireland (2019) Climate Action Plan 2019

Government of Ireland (2020) Climate Action Plan 2021

Government of Ireland (2021) Climate Action and Low Carbon Development (Amendment) Act 2021 (the 2021 Climate Act) (No. 32 of 2021)

Government of Ireland (2022) Climate Action Plan 2022

Government of Ireland (2023) Long-term Strategy on Greenhouse Gas Emissions Reductions

Institute of Environmental Management & Assessment (IEMA) (2020a) Environmental Impact Assessment Guide to: Climate Change Resilience and Adaptation

Institute of Environmental Management & Assessment (IEMA) (2020b) GHG Management Hierarchy

Institute of Environmental Management & Assessment (IEMA) (2022) Environmental Impact Assessment Guide to: Assessing GHG Emissions and Evaluating their Significance

LETI (2020) Climate Emergency Design Guide

Met Éireann (2023b) TRANSLATE: One Climate Resource for Ireland. [Online] Available at: https://www.met.ie/science/translate

Met Éireann (2025a) Ireland's 30-year Climate Averages. Available from: https://www.met.ie/climate/30-year-averages

Met Éireann (2025b) Met Éireann's 2024 Climate Statement Available at: https://www.met.ie/annual-climate-statement-for-2024

The Geological Society of Ireland (GSI) (2025) Landslide Susceptibility Mapping Database

Transport Infrastructure Ireland (2022a) PE-ENV-01104: Climate Guidance for National Roads, Light Rail and Rural Cycleways (Offline & Greenways) – Overarching Technical Document

Transport Infrastructure Ireland (2022b) PE-ENV-01106: Air Quality Assessment of Specified Infrastructure Projects

Transport Infrastructure Ireland (2024) GE-ENV-01106: TII Carbon Assessment Tool for Road and Light Rail Projects and User Guidance Document

13 Noise & Vibration

13.1 Introduction

This EIAR Chapter has been prepared by AWN Consulting Ltd. (AWN) to assess the potential noise and vibration effects of the proposed project in the context of current relevant standards and guidance as detailed in relevant sections below.

This chapter includes a description of the receiving ambient noise climate in the vicinity of the subject site and an assessment of the potential noise and vibration impact associated with the proposed project, during both the short-term construction phase and the permanent operational phase, on its surrounding environment. The assessment of direct, indirect and cumulative noise and vibration effects on the surrounding environment have been considered in this chapter.

Mitigation measures are included, where relevant, to ensure the proposed project is constructed and operated in an environmentally sustainable manner in order to ensure minimal impact on the receiving environment.

This assessment has been prepared by Robert Holohan (Acoustic Consultant) who has a BA(Hons) in Geography and Business Marketing from Maynooth University as well as an environmental science background from his MSc in Coastal and Marine Environments from the University of Galway. He has completed noise monitoring campaigns across numerous sites and has experience in modelling and building acoustics. He holds a certificate from the Institute of Acoustics in environmental noise monitoring and building acoustics testing. Recent experience of residential developments where noise is an important element of the environmental assessment include:

- Blacklgen Residential Development, Sandyford, Co Dublin;
- Papermills Student Accommodation and Residential Development, Clonskeagh, Dublin 6;
- Circular Road Large Residential Development, Ennis, Co Clare.

This chapter has been reviewed by Jennifer Harmon, who holds a BSc in Environmental Science and a Diploma in Acoustics and is a full member of the Institute of Acoustics (IOpsitiveA). Jennifer has over 20 years of experience working in acoustic consultancy and environmental impact assessments having completed numerous EIARs for a wide range of project types across Ireland including residential developments through to large scale infrastructure projects.

The assessment of effects has been undertaken with reference to the most appropriate guidance documents relating to environmental noise and vibration, which are set out within the relevant sections of this report. In addition to specific guidance documents for the assessment of noise and vibration effects, which are discussed further in the relevant sections, the following guidelines and enactments were considered and consulted for the purposes of this report:

- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of Housing, Planning & Local Government, 2018);
- Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report (European Commission, 2017);
- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports –(EPA, 2022);
- Environmental Noise Regulations 2006 (S.I. No. 140 of 2006);

- Environmental Noise Regulations 2018 (S.I. No. 549 of 2018);
- Dublin Agglomeration Noise Action Plan 2024–2028 (2025);
- BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Noise;
- BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 2 – Vibration;
- BS 7385-2:1993 Evaluation and measurement for vibration in buildings. Guide to damage levels from groundborne vibration;
- British Standard BS 4142: 2014+A1:2019: Methods for Rating and Assessing Industrial and Commercial Sound;
- UK Design Manual for Roads and Bridges (DMRB), LA111 Rev02 (Highways England et al, 2020)
- ISO 1996: 2017: Acoustics – Description, measurement and assessment of environmental noise;
- Environmental Noise Guidelines for the European Region (World Health Organisation, 2018);
- Guidelines for Community Noise (World Health Organisation, 1999); and
- EC Directive on Outdoor Noise Emissions 2000/14/EC.

The study has been undertaken using the following methodology:

- An environmental noise survey has been undertaken in the vicinity of the subject Site in order to characterise the existing baseline noise environment;
- A review of the most applicable standards and guidelines has been conducted in order to set a range of acceptable noise and vibration criteria for the construction and operational phases of the proposed project;
- Predictive calculations have been performed for the construction phase of the proposed project at the nearest sensitive locations to the project site;
- Predictive calculations have been performed to assess the potential effects associated with the operation of the proposed project at the most sensitive locations surrounding the Site; and
- A schedule of mitigation measures has been proposed to reduce, where necessary, the identified potential outward effects relating to noise and vibration from the proposed project.
- An inward noise impact assessment from the existing noise sources on the proposed development has been conducted.

13.1.1 Construction Phase Assessment Criteria

13.1.1.1 Construction Phase Noise Impacts

There is no published statutory Irish guidance relating to the maximum permissible noise level that may be generated during the construction phase of a project. Local Authorities typically control construction activities by imposing limits on the hours of operation and consider noise thresholds at their discretion.

In order to set appropriate construction noise thresholds for the Project Site, reference has been made to BS 5228 2009+A1 2014 *Code of practice for noise and vibration control on construction and open sites*. Part 1 of this document provides guidance on selecting appropriate noise criteria relating to construction works.

BS 5228-1:2009+A1:2014 sets out guidance on permissible noise levels relative to the existing noise environment. Under this Code of Practice, the assessment of construction noise impact is based on the designation of noise sensitive locations into specific categories (A, B, or C) according to existing ambient

noise levels in the absence of construction noise. This approach applies Fixed Noise Thresholds, which establish threshold noise levels for each category. If construction noise exceeds these thresholds, it indicates a potential significant noise impact depending on the context. This assessment does not rely on the magnitude of noise change but rather on whether noise levels exceed the fixed thresholds set for each category.

Table 13.1 sets out the values which, when exceeded, signify a potential significant effect at the façades of residential receptors.

Table 13.1 Example Threshold of Significant Effect at Dwellings

Assessment Category and Threshold Value Period (L_{Aeq})	Threshold Value (dB*)		
	Category A[A]	Category B[B]	Category C[C]
Daytime (week days) (07:00 – 19:00) and Saturdays (07:00 – 13:00)	65	70	75
Evenings and weekends [D]	55	60	65
Night-time (23:00 to 07:00)	45	50	55

* Decibels

A. Threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are less than these values.

B. Threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are the same as category A values.

C. Threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are higher than category A values.

D. 19:00 – 23:00 weekdays, 13:00 – 23:00 Saturdays and 07:00 – 23:00 Sundays.

For the appropriate assessment period, the ambient noise level is determined and rounded to the nearest 5 dB. If the construction noise exceeds the appropriate category value, then a significant effect is deemed to occur. It should be noted that this assessment method is only valid for residential properties and if applied to commercial premises without consideration of other factors may result in excessively onerous thresholds being set.

13.1.1.2 Interpretation of the Construction Noise Threshold (CNT)

In order to assist with interpretation of significance relating to a calculated construction noise level (CNL), **Table 13.2** includes guidance as to the likely magnitude of impact associated with construction noise, relative to the CNT. This guidance is derived from DMRB: Noise and Vibration (UKHE 2020) and adapted to include the EPA EIAR 2022 Guidelines.

Table 13.2 Construction Noise Significance Ratings

Construction Noise Level Per Period	Guidelines for Noise Impact Assessment Significance (DMRB)	EPA EIAR Significance of Effects	Determination
Below or equal to baseline noise level	Negligible	Not Significant	

Construction Noise Level Per Period	Guidelines for Noise Impact Assessment Significance (DMRB)	EPA EIAR Significance of Effects	Determination
Above baseline noise level and below or equal to CNT	Minor	Slight to Moderate	Depending on CNT, duration & baseline noise level
Above CNT and below or equal to CNT +5 dB	Moderate	Moderate to Significant	
Above CNT +5 dB	Major	Significant, to Very Significant	

The adapted DMRB guidance outlined will be used to assess the predicted CNLs at Noise Sensitive Locations (NSLs) and comment on the likely effects during the construction stage.

In accordance with the DMRB Noise and Vibration Guidance, construction noise and construction traffic noise effects shall constitute a significant effect where it is determined that a major or moderate magnitude of effect will occur for a duration exceeding.

- Ten or more days or nights in any 15 consecutive days or nights, or
- A total number of days exceeding 40 in any six consecutive months.

13.1.1.3 Construction Traffic

Vehicular movement to and from the construction site for the proposed development will make use of the existing road network. In order to assess the potential impact of additional traffic on the human perception of noise, the following two guidelines are referenced: DMRB Noise and Vibration (UKHE 2020) and the EPA Guidelines (EPA, 2022). For construction traffic, due to the short-term period over which this impact occurs, the magnitude of impacts is assessed against the 'short term' period in accordance with the DMRB Noise and Vibration document. **Table 13.3** sets out the classification of changes in noise level to impact on human perception based on the guidance contained in these documents.

Table 13.3 Significance in Change of Noise Level – Construction Phase Traffic (Adapted from DMRB)

Change in Sound Level (dB)	Subjective Reaction	DMRB Magnitude of Impact (Short-term)	EPA Significance of Effect
<1.0	Inaudible	Negligible	Imperceptible
1.0 – 2.9	Barely Perceptible	Minor	Not significant
3.0 – 4.9	Perceptible	Moderate	Slight to Moderate
≥5	Up to a doubling of loudness	Major	Significant

The DMRB guidance outlined will be used to assess the predicted increases in traffic levels on public roads associated with the proposed project and comment on the likely effects during the construction phase.

Construction Vibration

Vibration standards address two aspects: those dealing with cosmetic or structural damage to buildings and those with human comfort. For the purpose of this scheme, the range of relevant criteria used for surface construction works for both building protection and human comfort are expressed in terms of Peak Particle Velocity (PPV) in mm/s.

Building Response

There is no published statutory Irish guidance relating to the maximum permissible vibration level. The following standards are the most widely accepted in this context and are referenced here in relation to cosmetic or structural damage to buildings:

- British Standard BS 5228-2 (BSI 2014); and
- British Standard BS 7385-2 (BSI 1993)

BS7385-2 (BSI 1993) and BS5228-2 (BSI 2014) advise that, for soundly constructed residential properties and similar light-framed structures that are generally in good repair, a threshold for minor or cosmetic (i.e. non-structural) damage should be taken as a peak component particle velocity (in frequency range of predominant pulse) of 15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz and 50 mm/s at 40 Hz and above for transient vibration. Where the dynamic loading caused by continuous vibration is such as to give rise to dynamic magnification due to resonance, especially at the lower frequencies where lower guide values apply, then the guide values in Table B.2 of BS5228-2 (BSI 2014) might need to be reduced by up to 50%. On a precautionary approach, continuous vibration thresholds are set as 50% of those for transient vibration across all frequency ranges. For buildings or structures that are structurally unsound, lower vibration magnitudes will apply, typically 50% of those for structurally sound buildings. Protected or historic buildings are not automatically assumed to be more vulnerable to vibration unless they have existing structural defects. The recommended transient vibration thresholds from BS5228-2 (BSI 2014) for the avoidance of cosmetic damage to light framed and residential buildings are summarised in **Table 13.4.**

Table 13.4 Recommended Vibration Criteria during Construction Phase

Allowable vibration (in terms of PPV) at the closest part of sensitive property to the source of vibration, at a frequency of:		
Less than 15 Hz	15 to 40 Hz	40 Hz and above
15 mm/s	20 mm/s	50 mm/s

Expected vibration levels from the construction works will be discussed further in Section 13.4.1.2.

Human Perception

Human response to vibration stimuli occurs at orders of magnitude below those associated with any form of building damage, hence vibration levels lower than those indicated in **Table 13.4** can lead to concern. **Table 13.5** presents the significance table relating to potential effects to building occupants during construction based on guidance from BS5228-2 (BSI 2014), the DMRB Noise and Vibration (UKHE 2020) document and the associated EPA significant ratings.

Table 13.5 Guidance on Effects of Human Response to PPV Magnitudes

PPV range	BS 5228-2 (Note A, B, C)	DMRB Impact Magnitude	EPA Significance Ratings
≥10 mm/s PPV	Vibration is likely to be intolerable for any more than a very brief exposure to this level in most building environments.	Major	Very Significant
≥1 to 10 mm/s PPV	It is likely that vibration of this level in residential environments will cause complaint, but can be tolerated if prior warning and explanation has been given to residents	Moderate	Significant to Very Significant
≥0.3 to <1 mm/s PPV	Vibration might be just perceptible in residential environments.	Minor	Slight to Moderate
<0.3 mm/s PPV	Vibration might just be perceptible in the most sensitive situations for most vibration frequencies associated with construction	Negligible	Not significant

Note A) The magnitudes of the values presented apply to a measurement position that is representative of the point of entry into the recipient.

Note B) A transfer function (which relates an external level to an internal level) needs to be applied if only external measurements are available.

Note C) Single or infrequent occurrences of these levels do not necessarily correspond to the stated effect in every case. The values are provided to give an initial indication of potential effects, and where these values are routinely measured or expected then an assessment in accordance with BS 6472 (BS1 2008), and/or other available guidance, might be appropriate to determine whether the time varying exposure is likely to give rise to any degree of adverse comment.

13.1.2 Operational Phase Assessment Criteria

13.1.2.1 Building Services Plant Noise

The most appropriate standard used to assess the impact of a new continuous source from building services plant noise (i.e., ventilation systems, pumps, generators, and other fixed plant) to a residential environment is BS 4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound. This standard describes a method for assessing the impact of a specific noise source at a specific location with respect to the increase in background noise level generated. The standard provides the following definitions that are pertinent to this application:

- ***Specific sound level*** ($L_{Aeq,Tr}$) is the equivalent continuous A-weighted sound pressure level produced by the specific sound source at the assessment location over a given reference time interval, T. This level has been determined with reference to manufacturers' information for specific plant items.
- ***Rating level*** ($L_{Ar,Tr}$) is the specific sound level plus adjustments for the character features of the sound (if any).
- ***Background noise level*** is the A-weighted sound pressure level that is exceeded by the residual sound at the assessment location for 90% of a given time interval, T. This level is expressed using the L_{A90} parameter. These levels were measured as part of the baseline survey.

The assessment procedure in BS4142 is outlined as follows:

1. Determine the specific noise level;
2. Determine the rating level as appropriate;
3. Determine the background noise level, and;

4. Subtract the background noise level from the specific noise level in order to calculate the assessment level.

The lower the rating level is relative to the measured background sound level, the less likely it is that the specific source will have a negative impact or a significant negative impact. A difference of +10 dB or more is likely to be an indication of a significant negative impact. A difference of around +5 dB is likely to be an indication of a negative impact, dependent on the context. Where the rated plant noise level is equivalent to the background noise level, noise effects are typically considered to be neutral.

Receptors Inside the Proposed Development

In order to determine an appropriate noise criterion for residential receptors within the proposed development that will be built in future, guidance is taken from BS 8233 (BS1 2014). Recommended internal noise levels for residential settings are set out in the standard as follows:

Table 13.6 BS 8233 Recommended Internal Noise Levels

Activity	Location	Day (07:00 to 23:00hrs) dB $L_{Aeq,16hr}$	Night (23:00 to 07:00hrs) dB $L_{Aeq,8hr}$
Resting	Living room	35 dB $L_{Aeq,16hr}$	-
Sleeping (daytime resting)	Bedroom	35 dB $L_{Aeq,16hr}$	30 dB $L_{Aeq,8hr}$

For the purposes of this assessment, it is appropriate to derive external thresholds based on the internal criteria noted in the above. This is done by factoring in the degree of noise reduction afforded by a partially open window; typical 15 dB attenuation is noted in this British Standard. Using this correction value across an open window, the following external noise levels would achieve the internal noise levels noted in Table 13.6 above.

- Daytime (07:00 to 23:00 hours) 50 dB $L_{Aeq,16hr}$
- Night-time (23:00 to 07:00 hours) 45 dB $L_{Aeq,8hr}$

13.1.2.2 Additional Vehicular Traffic on Surrounding Roads

Vehicular movement to and from the proposed development will make use of the existing road network and new junction arrangement. Given that traffic from the development will make use of existing roads already carrying traffic volumes, it is appropriate to consider the increase in traffic noise level that arises as a result of any additional vehicular movements associated with the development.

In order to assess the potential impact of additional traffic on the human perception of noise, the following two guidelines are referenced: DMRB Noise and Vibration (UKHE 2020) and the EPA EIAR Guidelines (EPA, 2022), which categorise the magnitude of effect relating to changes in road traffic. For the operational phase, traffic noise impacts are assessed against the 'long term' magnitude ratings from the DMRB. These are discussed in Table 13.7.

Table 13.7 Significance in Change of Noise Level – Operational Phase Traffic

Change in Sound Level (dB)	Subjective Reaction	DMRB Magnitude of Impact	EPA Significance of Effect
0	Inaudible	Negligible	Imperceptible
0.1 – 2.9	Barely perceptible		Not significant
3 – 4.9	Perceptible	Minor	Slight to moderate
5 – 9.9	Up to a doubling of loudness	Moderate	Significant
10+	Doubling of loudness and above	Major	Very significant

The criteria outlined in Table 13.7 will be used to assess the predicted increases in traffic levels on public roads associated with the proposed project and comment on the likely long-term effects during the operational phase.

13.1.2.3 Vibration

The proposed project is residential in nature, therefore there are no operational sources with the potential to generate any vibration impacts.

13.1.3 Inward Noise Impact

13.1.3.1 Dublin Agglomeration Noise Action Plan 2024 – 2028

The Dublin Agglomeration Noise Action Plan 2024 – 2028, addresses the requirements of the European Noise Directive 2002/49/EC, as transposed into Irish law by the Environmental Noise Regulations 2006 (S.I. No. 140/2006), for managing environmental noise at a local authority level. The Noise Action Plan (NAP) states the following regarding planning guidance: *"The appropriate use of the planning system can be used to help avoid, or minimise, the adverse impacts of noise without placing unreasonable restrictions on development".*

The action plan outlines guidance to minimise the impact in relation to noise on new developments. ProPG Planning and Noise: Professional Practice Guidance on Planning and Noise, and BS 8233: Guidance on Sound Insulation and Noise Reduction for Buildings, are recommended as guidance to be employed in areas where people are being brought to noise in the form of existing road and rail noise.

13.1.3.2 ProPG: Planning and Noise (2017)

The Professional Practice Guidance on Planning and Noise (ProPG) document outlines a systematic risk-based two-stage approach for evaluating noise exposure on prospective sites for residential development. The two primary stages of the approach can be summarised as follows:

Stage 1 – Comprises a high-level initial noise risk assessment of the proposed site considering either measured and or predicted noise levels; and

Stage 2 – Involves a full detailed appraisal of the proposed development covering four "key elements":

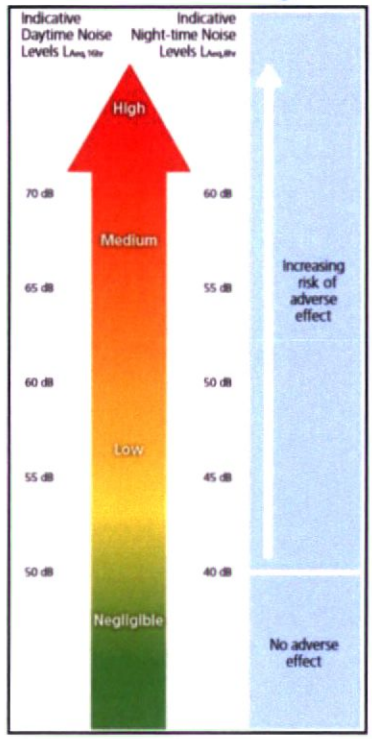
- Element 1 – Good Acoustic Design Process;
- Element 2 – Noise Level Guidelines;
- Element 3 – External Amenity Area Noise Assessment; and
- Element 4 – Other Relevant Issues.

The initial noise risk assessment is intended to provide an early indication of any acoustic issues that may be encountered. It calls for the categorisation of the site as a negligible, low, medium, or high risk, based on the pre-existing noise environment and assumes no mitigation measures are in place at this stage. **Figure 13.1** presents the basis of the initial noise risk assessment; it provides appropriate risk categories for a range of continuous noise levels either measured and/or predicted on site.

It should be noted that a site should not be considered a negligible risk if more than 10 L_{AFmax} events exceed 60 dB during the night period and the site should be considered a high risk if the L_{AFmax} events exceed 80 dB more than 20 times a night, as set out in Figure 1 of the ProPG: Planning & Noise Proffessional Practice Guidance Document.

Element 2 of stage 2 of the ProPG document sets out recommended internal noise targets derived from BS 8233 (2014). The recommended indoor ambient noise levels are set out in **Table 13.6** and are based on annual average data, that is to say they omit occasional events where higher intermittent noisy events may occur. In addition to these absolute internal noise levels, the ProPG document provides guidance on flexibility of these internal noise level targets. For instance, in cases where the development is considered necessary or desirable, and noise levels exceed the external noise guidelines, then a relaxation of the internal L_{Aeq} values by up to 5 dB can still provide reasonable internal conditions.

Figure 13.1 ProPG – Stage 1 Initial Risk Assessment Categories



The ProPG document provides the following advice with regard to external noise levels for amenity areas in the development:

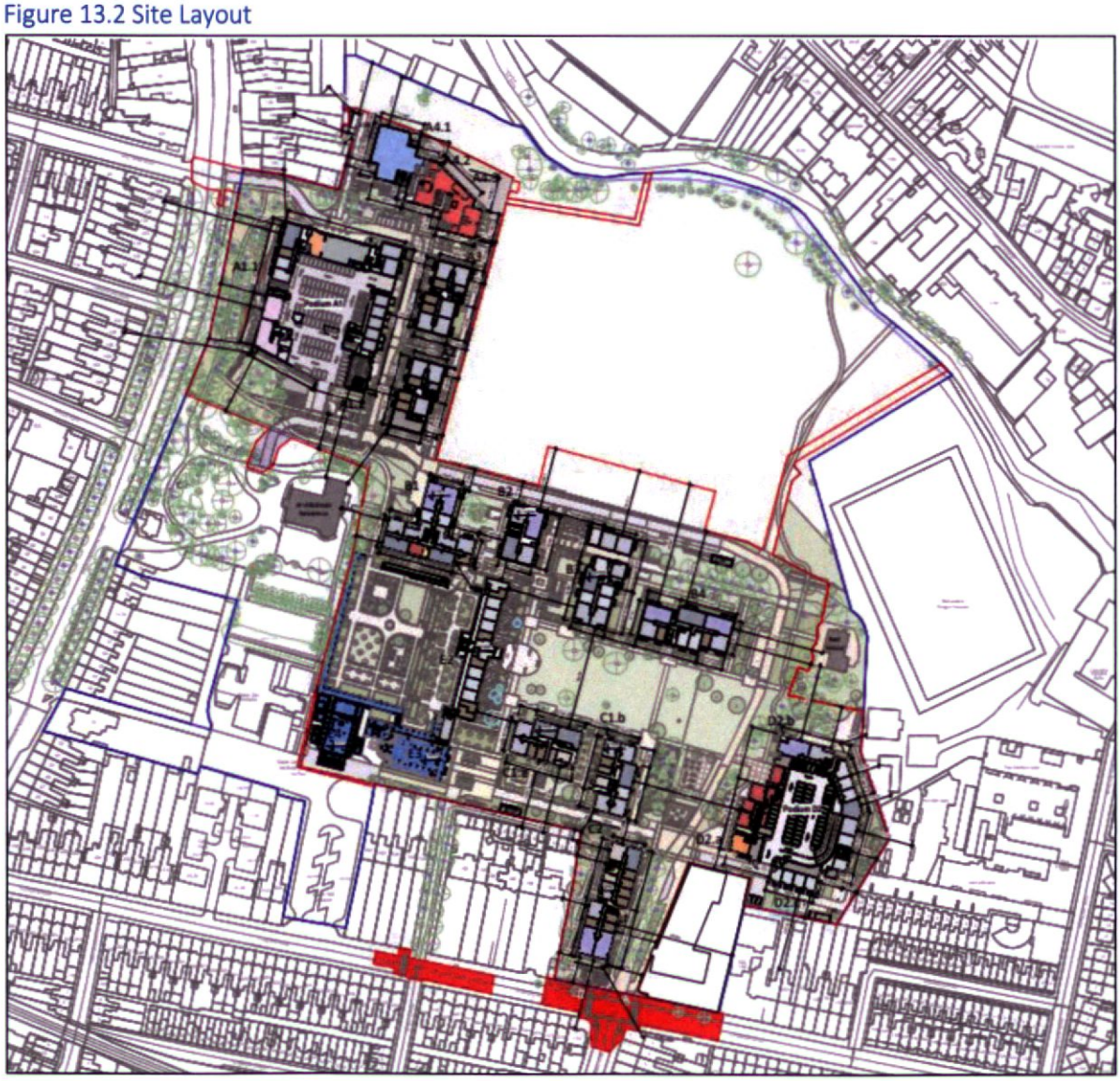
"The acoustic environment of external amenity areas that are an intrinsic part of the overall design should always be assessed, and noise levels should ideally not be above the range 50 – 55 dB $L_{Aeq,16hr}$."

13.2 Baseline Environment

The site of the proposed development is located within the Dublin 3 and Dublin 9 area, bound to the north by playing fields which are south of the River Tolka, to the west and south-west by residential areas at Corn Mill Apartments and Susanville Road, to south by Clonliffe Road and Holy Cross Avenue and to the west by Drumcondra Road Lower.

The surrounding environment in the vicinity of the project site is primarily residential, with sports fields to the north and north-west, and a mixture of offices and light industrial buildings to the north and north-east of the River Tolka. The site is located within the grounds of the former Holy Cross College seminary. The centre of the site is protected from traffic noise by its distance from the roads and acoustic screening afforded by the surrounding buildings.

Figure 13.2 Site Layout



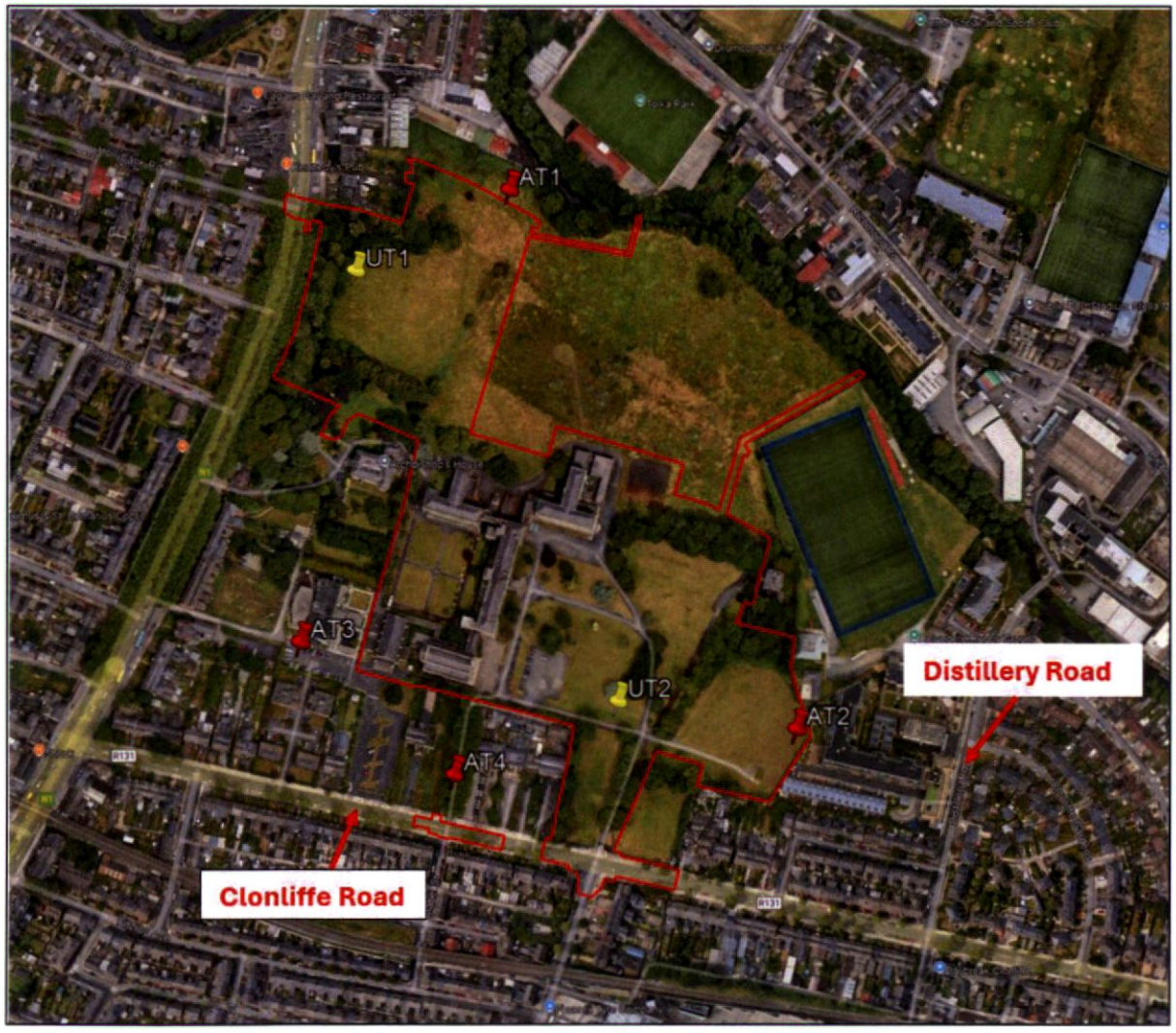
13.2.1 Baseline Noise Survey

13.2.1.1 Survey Locations

An environmental noise survey has been conducted at the site in order to quantify the existing noise environment. The survey was conducted in accordance with ISO 1996: 2017: Acoustics – Description, measurement and assessment of environmental noise.

The noise measurement locations were selected to represent the noise environment at noise sensitive location surrounding the proposed project. The locations were chosen to capture how noise levels in the area around the site vary, from the moderately high noise levels along Clonliffe Road to the relatively quiet locations on Distillery Road. The selected locations, shown in the **Figure 13.3**, below, are as follows:

Figure 13.3 Noise Measurement Locations



- AT1 – Measurement location representing the existing noise climate at the northern end of the proposed site adjacent of the N1 Road;
- AT2 – Measurement location representing the existing noise climate from inside of the site boundary at Distillery Road;
- AT3 – Measurement location at the south-west end of the site boundary representing the existing noise climate at the N1 Road and Clonliffe Road;

- AT4 – Measurement location south of the proposed site representing the existing noise climate at façades along Clonliffe Road;
- UT1 – Measurement location at the north-east end of the site boundary representing the existing noise climate at the N1 Road and;
- UT2 – Measurement location south of the proposed site representing the existing noise climate at façades along Clonliffe Road.

13.2.1.2 Survey Periods

The attended noise surveys AT1 to AT3 were carried out on Monday the 26th of May 2025 and AT4 was carried out on Wednesday the 28th of May 2025. Noise levels were measured over 15-minute periods on a cyclical basis at each measurement location. The weather during the surveys was dry with varying cloud cover. Wind speeds were moderate; however, they were not considered to have had a detrimental effect on the noise measurements.

The unattended measurements (UT1 and UT2) were carried out between the 22nd May and the 26th May 2025. The weather during the survey periods was generally stable, with dry conditions and low to moderate wind speeds.

13.2.1.3 Personnel and Instrumentation

AWN provided the noise monitoring equipment used to conduct the surveys, as listed in Table 13.8, below.

Table 13.8 Instrumentation Details

Equipment	Type	Serial Number	Calibration Due Date
Sound Level Meter	Rion NL-52	586940	20/02/2026
Sound Level Meter	Rion NL-53	251904	16/04/2027
Calibrator	Bruel & Kjaer	2615338	28/11/2026

13.2.1.4 Measurement Parameters

The noise survey results are presented in terms of the following parameters.

L_{Aeq} is the equivalent continuous sound level. It is a type of average and is used to describe a fluctuating noise in terms of a single noise level over the sample period.

L_{AFmax} is the instantaneous maximum sound level measured during the sample period using the 'F' time weighting.

L_{A10} is the sound level that is exceeded for 10% of the sample period. It is typically used as a descriptor for traffic noise.

L_{A90} is the sound level that is exceeded for 90% of the sample period. It is typically used as a descriptor for background noise.

The "A" suffix denotes the fact that the sound levels have been "A-weighted" in order to account for the non-linear nature of human hearing. All sound levels in this report are expressed in terms of decibels (dB) relative to $2x10^{-5}$ Pa.

13.2.1.5 Survey Results

13.2.1.5.1 Attended Survey Results

Noise level measurements of 15 minutes' duration for each sample round were taken at locations AT1 to AT4. The results are presented in **Tables 13.9 – 13.12**, below.

Table 13.9 Summary of Noise Measurement Results at Location AT1

Time	Subjective Impression of Noise Environment	Measured Noise Levels (dB re. 2x10-5 Pa)			
		L_{Aeq}	L_{Amax}	L_{A10}	L_{A90}
15:56	- Road traffic dominant - Foliage Rustle - Pedestrian activity - Construction works in distance - Sirens briefly	50	58	52	47
16:42	- Road traffic dominant - Foliage Rustle - Pedestrian activity - Construction works in distance - Sirens briefly - Air Traffic overhead	52	71	52	45
17:37	- Road traffic dominant - Foliage Rustle - Pedestrian activity - Construction works in distance	49	59	51	47

Noise levels at AT1 were in the range 49 to 52 dB $L_{Aeq,15min}$ and 45 to 47 dB $L_{A90,15min}$. The main contributors to noise build-up were road traffic in the surrounding area.

Table 13.10 Summary of Noise Measurement Results at Location AT2

Time	Subjective Impression of Noise Environment	Measured Noise Levels (dB re. 2x10-5 Pa)			
		L_{Aeq}	L_{Amax}	L_{A10}	L_{A90}
15:31	- Distant road traffic - Birdsong - Construction Noise - Crane Operating	55	74	57	47
16:19	- Distant road traffic - Birdsong - Construction Noise - Crane Operating	53	76	54	47
17:03	- Distant road traffic - Birdsong - Construction Noise - Crane Operating	50	63	52	46

Noise levels at AT2 were in the range 50 to 55 dB $L_{Aeq,15min}$ and 46 to 47 dB $L_{A90,15min}$. The main contributors to noise build-up were road traffic in the surrounding area and distant construction noise.

Table 13.11 Summary of Noise Measurement Results at Location AT3

Time	Subjective Impression of Noise Environment	Measured Noise Levels (dB re. 2x10-5 Pa)			
		L_{Aeq}	L_{Amax}	L_{A10}	L_{A90}
13:04	- Distant road traffic - Pedestrian activity - Foliage rustling - Birdsong	51	68	53	47

Time	Subjective Impression of Noise Environment	Measured Noise Levels (dB re. 2x10-5 Pa)			
		L_{Aeq}	L_{Amax}	L_{A10}	L_{A90}
	- Distant Construction - Air traffic overhead				
13:41	- Distant road traffic - Pedestrian activity - Foliage rustling - Birdsong - Distant Construction - Engine idling nearby	53	72	55	47
14:09	- Distant road traffic - Pedestrian activity - Foliage rustling - Birdsong - Distant Construction - Air traffic overhead	53	67	56	47

Noise levels at AT3 were in the range 51 to 53 dB $L_{Aeq,15min}$ and at 47 dB $L_{A90,15min}$. The main contributors to noise build-up were road traffic in the surrounding area, construction works and birdsong.

Table 13.12 Summary of Noise Measurement Results at Location AT4

Time	Subjective Impression of Noise Environment	Measured Noise Levels (dB re. 2x10-5 Pa)			
		L_{Aeq}	L_{Amax}	L_{A10}	L_{A90}
09:32	- Road traffic noise - Construction works - Sirens briefly - Foliage rustling - Pedestrian activity	58	68	61	50
09:48	- Road traffic noise - Construction works - Sirens briefly - Foliage rustling - Pedestrian activity - Trains at Drumcondra Station	61	83	62	50
10:04	- Road traffic noise - Construction works - Foliage rustling - Pedestrian activity - Air traffic overhead - Occasional gust of wind	60	77	63	51

Noise levels at AT4 were in the range 58 to 61 dB $L_{Aeq,15min}$ and 50 to 51 dB $L_{A90,15min}$. The main contributors to noise build-up were road traffic in the surrounding area and construction activity nearby.

13.2.1.5.2 Unattended Survey Results

The survey results for location UT1 are given in **Table 13.13**. The results are summarised for each day-time 16hr period (i.e. 07:00 to 23:00hrs) and each night-time 8hr period (i.e. 23:00 to 07:00hrs).

Table 13.13 Summary of Noise Measurement Results at Location UT1

Date	Period	Measured Noise Levels (dB re. $2x10^{-5}$ Pa)	
		$L_{Aeq,T}$	$L_{A90,T}$
22/05/25	Day	54	47

Date	Period	Measured Noise Levels (dB re. $2x10^{-5}$ Pa)	
		$L_{Aeq,T}$	$L_{A90,T}$
	Night	54	46
23/05/25	Day	55	47
	Night	54	47
24/05/25	Day	55	48
	Night	54	48
25/05/25	Day	55	48
	Night	54	46
26/05/25	Day	56	49
	Night	-	-

Noise levels were in the range 54 to 56 dB $L_{Aeq,16hr}$ and 47 to 49 dB $L_{A90,16hr}$ during the day period. During the night noise levels measured 54 dB $L_{Aeq,8hr}$ and 46 to 48 dB $L_{A90,8hr}$.

The survey results for location UT2 are given in Table 13.14.

Table 13.14 Summary of Noise Measurement Results at Location UT2

Date	Period	Measured Noise Levels (dB re. $2x10^{-5}$ Pa)	
		$L_{Aeq,T}$	$L_{A90,T}$
22/05/25	Day	50	43
	Night	45	39
23/05/25	Day	53	46
	Night	47	43
24/05/25	Day	50	45
	Night	48	45
25/05/25	Day	52	47
	Night	47	43
26/05/25	Day	56	50
	Night	-	-

Noise levels were in the range 50 to 56 dB $L_{Aeq,16hr}$ and 43 to 50 dB $L_{A90,16hr}$ during the day period. During the night noise levels were measured in the range of 45 to 48 dB $L_{Aeq,8hr}$ and 39 to 45 dB $L_{A90,8hr}$.

13.2.1.6 Comparison with Dublin City Noise Maps

For comparison, the EPA Round 4 Road noise maps for the area near the site are presented for the long-term 24hour average L_{den} parameter and the 8hr night-time (L_{night}) in **Figure 13.4 and Figure 13.5**. The noise maps clearly show that the areas with the highest noise levels are the surrounding streets, and that the inner part of the site is levels of below 55 dB L_{den} and below 50 dB L_{night}.

Figure 13.4 EPA Round 4 Noise Map for L_{den} (day-evening-night)

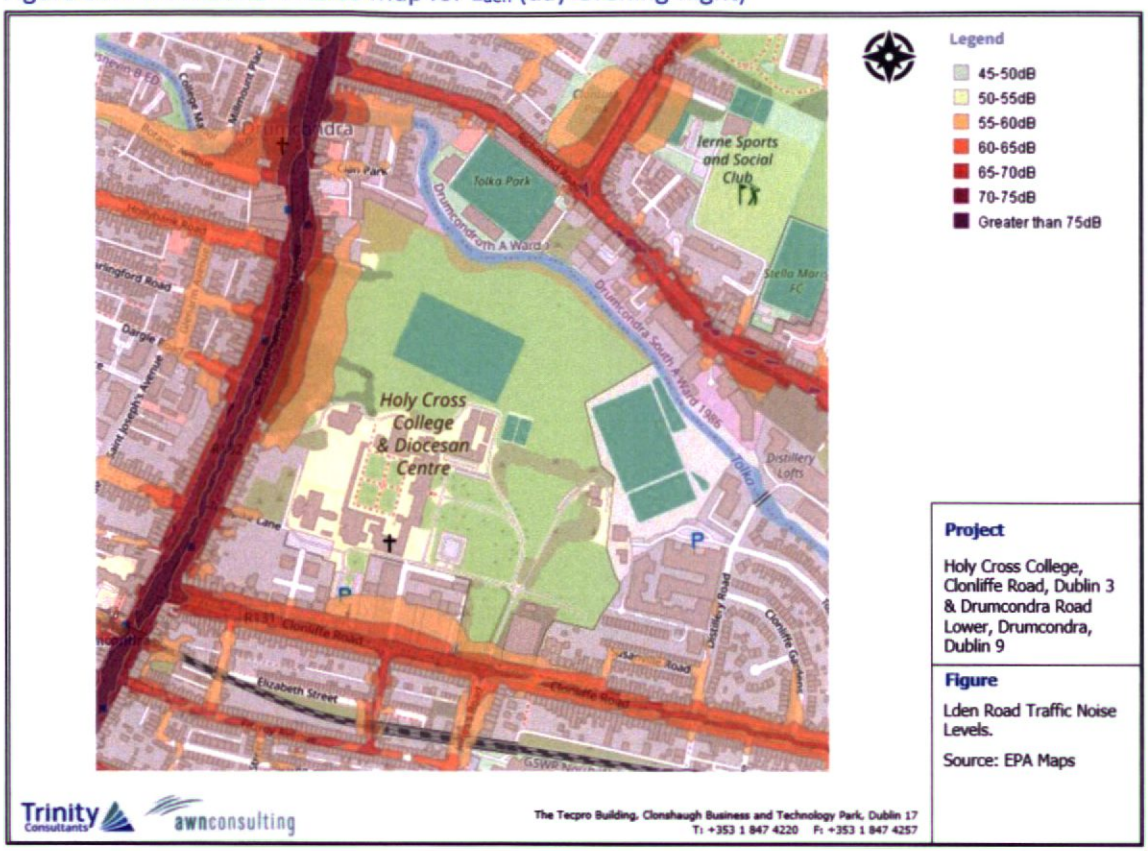
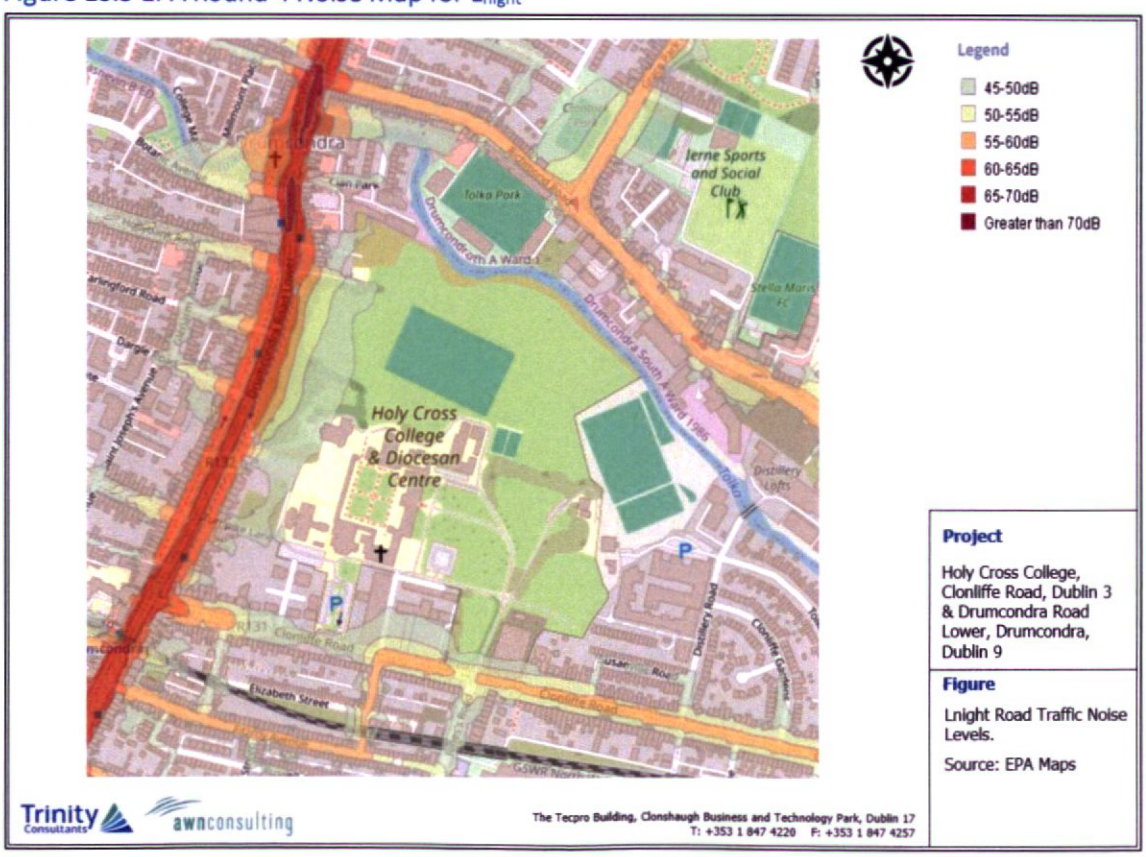


Figure 13.5 EPA Round 4 Noise Map for L_{night}



The day and night-time road traffic noise levels shown in the EPA maps align with the measured noise levels obtained from monitoring locations across the proposed site.

13.3 Predicted Impacts of the Proposed Development

In the absence of the proposed project being constructed (i.e. Do Nothing scenario), the noise environment at the nearest noise sensitive locations and within the development site will remain largely unchanged from the baseline environment set out in section 13.2.1, resulting in a neutral and local impact in the long-term.

The potential effects of the proposed development are considered for the short-term construction phase (approximately 60 months) and permanent operational phase (effects lasting 60+ years). These are set out in the following sections.

13.3.1 Construction Phase

13.3.1.1 Construction Noise

Noise levels generated by the site operations and experienced at local receptors will depend upon a number of variables, the most significant of which are:

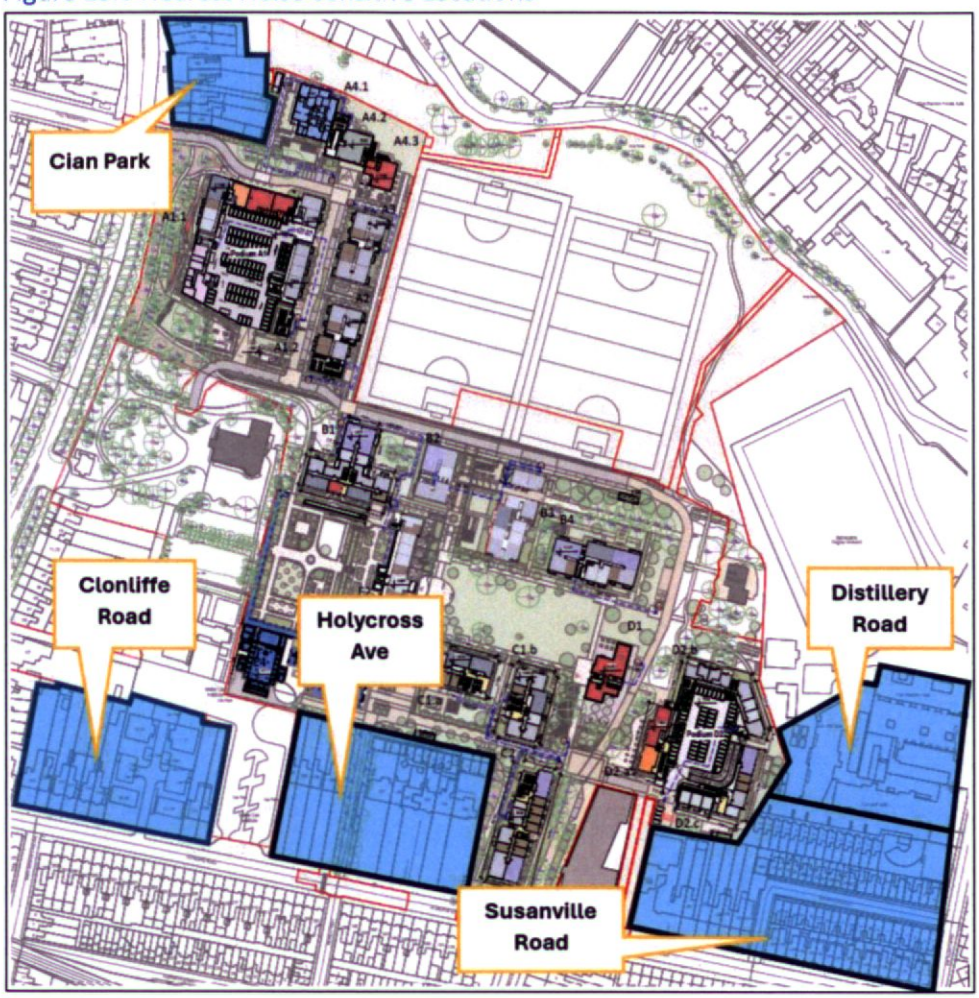
- The amount of noise generated by plant and equipment being used at the development site, generally expressed as a sound power level;
- The periods of operation of the plant at the development site, known as the 'on-time';
- The distance between the noise source and the receptor, known as the 'stand-off';
- Attenuation due to ground absorption or barrier screening effects; and
- Reflections of noise due to the presence of hard vertical faces, such as walls.

The Construction Management Plan (CEMP) (DCON Safety Consultants, 2025) sets out the general phasing for the construction of the proposed project. However, as with any project of this nature, works during the various construction phases will be transient in nature and will involve the use of several different plant items at any one time. As such, it is difficult at this stage of the assessment to state accurately what items of plant will be in use and what levels of noise will be experienced during construction works. The appropriate approach in this instance is to prepare indicative noise prediction calculations in relation to construction activities. The calculations have been undertaken in line with guidance set out in British Standard BS 5228 (2009 +A1 2014): *Code of practice for noise and vibration control on construction and open sites – Part 1: Noise*.

A variety of items of plant will be in use for the purposes of demolition, site clearance, excavations and construction. There will be vehicular movements to and from the site that will make use of existing roads. Due to the nature of these activities, there is potential for generation of high levels of noise.

For the purposes of the calculation, the closest noise sensitive locations to construction works are the residential buildings on Clonliffe Road, Susanville Road, Distillery Road, Holycross Avenue and at Cian Park, at distances ranging from 20m to 40m from the site boundary. Based on the noise levels measured during the noise survey, a CNT criterion of 65 dB L_{Aeq} is adopted for construction noise (i.e. Noise Category A from **Table 13.1**). These areas are illustrated in **Figure 13.6**, below.

Figure 13.6 Nearest Noise-sensitive Locations



13.3.1.1.1 Demolition, Rock Breaking and Piling works

For construction works associated with such activities as rotary piling and demolition works including pulverisers and concreting works etc. noise levels are typically in the range of 80 to 85 dB L_{Aeq} at 10m from the plant/machinery being operated. A total construction noise level of 90 dB L_{Aeq} at 10m has been used for the purposes of indicative calculations for these activities representing a variety of plant items and activities over this stage. This would include, for example three items of plant at 83 dB L_{Aeq} and two items of plant at 80 dB L_{Aeq} operating simultaneously within one work area resulting in a total noise level of 90 dB L_{Aeq}.

13.3.1.1.2 Basement Excavation, Structural Works, Basement Foundation and Concreting Works

For construction works associated with activities such as mechanical excavation, basement construction, building foundation piling, structural works including excavators, loaders, dozers, cranes, generators, and concreting works etc. noise levels are typically in the range of 70 to 82 dB L_{Aeq} at 10m.

For ongoing construction activity associated with the above activities, a total construction noise level of 85 dB L_{Aeq} at 10m has been used for the purposes of indicative calculations for these activities representing a variety of plant items and activities over this stage. This would include, for example two

items of plant at 80 dB L_{Aeq} and three items of plant at 75 dB L_{Aeq} operating simultaneously within one work area resulting in a total noise level of 85 dB L_{Aeq}.

13.3.1.1.3 Superstructure and Lower Noise Activities

For construction work areas with lower noise levels such as those associated with superstructure works including site compounds (for storage, offices and material handling, generators etc.), smaller items of mobile plant (excavators, cranes, dozers), landscaping and concreting works with lower noise emissions, a total construction noise level of 78 dB L_{Aeq} at 10m has been used for the purposes of indicative calculations. This would include, for example one item of plant at 75 dB L_{Aeq} and three items of plant at 70 dB L_{Aeq} operating simultaneously within a work area.

Table 13.15 sets out a range of construction noise levels relating to different construction activity. The calculations assume that plant items are operating for 66% of the time. A screening correction of 5 dB has been allowed for to account for site hoarding and existing boundary walls surrounding the site. The 66% plant-on-time is based on BS 5228 guidance for typical activity cycles on construction sites, reflecting the intermittent use of equipment over a working period. The 5 dB screening correction is applied in accordance with BS 5228 and industry practice, representing the attenuation typically achieved by partial screening by solid barriers like 2.4 m high hoarding and boundary walls present around the site perimeter.

Table 13.15 Typical Predicted Noise Levels Associated with Different Construction Activities and Phases

Phase of Works	Predicted Construction Noise Levels, per phase of works at closest NSLs				
	20m	30m	40m	60m	80m
Demolition and Piling	77	73	71	67	65
Structural works (basement excavation, foundation and concrete works)	72	68	66	62	60
General Construction (superstructure and fit out)	65	61	59	55	53

Reference to Table 13.15 indicates that during the most intrusive early stage activities relating to demolition and piling works, the CNT has the potential to be exceeded when works are occurring up to 80m from NSLs without mitigation. The calculated noise level in this table will not occur during all periods of these construction phases as there will be periods where the assumed plant items (i.e. demolition plant and piling rigs etc) will not be in operation or will be in use for intermittent periods of time. In this regard, the noise levels presented here are considered to be the upper threshold envisioned. At NSLs typically located within 40m from the sites red line boundary, the impact without mitigation is **negative, significant to very significant and temporary** during periods when this activity is taking place.

During structural works including those associated with basement excavation and foundation works the CNT has the potential to be exceeded when works are typically occurring within 40m of NSLs and the sites red line boundary without mitigation. The impact without mitigation is **negative, moderate to very significant and short-term** during this phase of work at NSLs within 20m of the activity.At NSLs within 20m to 40m from this phase of work the impact without mitigation is **negative, moderate to significant and short-term.**

Once the most intrusive ground works have been completed on site, noise levels associated with the general construction of the superstructure will be significantly reduced. During this phase the works can operate within the CNT at the closest NSLs. The impact without mitigation is **negative, slight to moderate and short-term.**

It should also be noted that construction works will not consistently take place along the site boundary; therefore, the noise levels presented here are considered to be the upper threshold envisioned.

13.3.1.2 Construction Vibration

The main potential source of vibration during the construction programme is associated with piling, and ground-breaking activities. In terms of piling, low vibration methods involving bored or augured piles will be used, where possible, in order to minimise vibration levels from this activity. Reference to BS 5228 (2009 +A1 2014) – *Part 2: Vibration*, shows measured vibration levels during rotary bored piling for different ground conditions and varying pile diameter. The data indicate that at distances of 10 m, measured PPV values are typically below 1 mm/s with individual events during driving casing or auger hitting rock at or below 3 mm/s.

Considering the low vibration levels at close distances to the piling rigs, vibration levels are not expected to pose any significant risk in terms of cosmetic or structural damage to buildings in proximity to the proposed works. In addition, the range of vibration levels is typically below a level which would cause any disturbance to occupants of adjacent buildings.

Where rock breaking is required or during certain demolition activities, there is also potential for vibration to be generated through the ground. While BS 5228-2 primarily provides criteria related to the potential for structural damage to buildings, it is important to note that human response to vibration occurs at significantly lower levels. Vibration levels in the range of 1 to 10 mm/s peak particle velocity (PPV) are likely to cause disturbance or complaints from residents, particularly if prior warning and communication are not provided. Such impacts may be considered moderate to significant or very significant in terms of human annoyance.

It is anticipated that vibration levels generated during construction will remain below the thresholds for building damage as set out in Table 13.4. However, the potential for human disturbance at lower vibration levels will be addressed through mitigation measures including communication with affected residents and appropriate control of vibration-generating activities.

Therefore, without mitigation, vibration impacts are assessed as **negative, slight to moderate and temporary** in terms of potential structural effects within 40 m of vibration activities and **negative, moderate to significant and temporary** for human response, with mitigation measures proposed to minimize disturbance.

13.3.1.3 Construction Traffic

Traffic data provided by the traffic consultants indicates that the additional construction traffic on local roads will have a minimal impact. The traffic assessment indicates that the worst affected road will see an increase of 16.8% HGV's and 0.5% increase in traffic overall. An increase in traffic volumes of around 25% would be needed to raise noise levels by just 1 dB. Based on this, and with reference to Table 13.3, the impact is considered **negative, imperceptible, and short-term**.

13.3.2 Operational Phase

13.3.2.1 Building Services Plant Noise

Once operational, there will be building services plant items required to serve the commercial and residential aspect of the proposed development. These will typically be limited to heating and cooling plant, pumps and extraction units, depending on the building design and user requirements. Certain areas are likely to require mechanical services during the daytime hours only, however, there may be requirement for night-time operational plant, depending on specific requirements.

In this instance, is it best practice to set appropriate noise thresholds that will inform the detailed design during the selection and layout of building services for the development.

Receptors within the Development Site

These plant items will be selected at a later stage, however, they will be designed and located so that there is no negative impact on sensitive receptors off-site or within the development itself. The cumulative operational noise level from building services plant at the nearest noise sensitive location within the development (e.g. apartments, etc.) will be designed / attenuated to meet the relevant BS 8233 noise criteria for day and night-time periods as set out in this assessment (i.e. the internal noise levels from Table 13.6. The associated likely noise impact is described as **negative, not significant, local and permanent**

Existing Receptors Outside of Development Site

Based on the baseline noise data collected for this assessment it is considered an appropriate external design criterion is the order of 45dB $L_{Aeq,15min}$ at the façade of any noise-sensitive location. This threshold is set in order to achieve acceptable internal noise levels within residential spaces based on prevailing noise levels in the area. Taking into account that sensitive receptors within the development are much closer than off-site sensitive receptors, once the relevant noise criteria are achieved within the development it is expected that there will be no negative impact off site and the operational noise level from building services will be well below this threshold value. The associated likely noise impact is described as **negative, not significant, local and long-term.**

13.3.2.2 Additional Vehicular Traffic on Surrounding Roads

During the operational phase of the proposed development, there will be a small increase in vehicular traffic on surrounding roads associated with the proposed development and other planned developments. Details of the traffic assessment are included in Chapter 19 of this EIAR.

For the purposes of assessing the associated potential noise impact, it is appropriate to consider the relative increase in noise level associated with traffic movements on existing roads surrounding the site with and without the proposed development. Using the AADT information provided by traffic

consultants, the impact from the increase in traffic from the proposed development has been assessed for the year of 2029 and the year of 2044 relative to the Do Nothing scenario along the sections of road detailed in Table 13.16.

In terms of the overall traffic data as described by peak hour vehicle flows, in order to increase traffic noise levels by 1 dB, traffic volumes would need to increase by the order of 25%, approximately. A review of the potential traffic flow increases attributable to the proposed development indicates that the proposal will not give rise to increases of this magnitude on the surrounding road network during the operational phase.

Table 13.16 Predicted Changes in Noise Levels Associated with Vehicular Traffic – Operational Phase

Road Link	Year 2029		Year 2044	
	Percentage Increase in traffic flow	Increase in noise level (dB)	Increase in traffic flow	Increase in noise level (dB)
R132 Drumcondra Rd Lower north of Hollybank Rd	1.4%	+0.1	2.9%	+0.1
Hollybank Rd	0.5%	0.0	1.4%	+0.1
R132 Drumcrondra Rd Lower between Hollybank Rd and R131 Clonliffe Rd	1.7%	+0.1	3.6%	+0.2
R132 Drumcondra Rd Lower south of R131 Clonliffe Rd	1.2%	+0.1	2.6%	+0.1
R131 Clonliffe Rd between R132 Drumcondra Rd Lower and Jones' Road	3.9%	+0.2	8.9%	+0.4
Jones' Rd	0.9%	0.0	2.4%	+0.1
R131 Clonliffe Rd east of site access	1.0%	0.0	2.5%	+0.1

The predicted increase in traffic flows associated with the proposed Project in 2029 and 2044 will result in an increase in noise levels of less than 1 dB along all roads receiving traffic from the proposed development. With reference to Table 13.7, the likely effect is therefore **neutral, imperceptible, local and permanent.**

13.3.3 Inward Noise Impact

13.3.3.1 Stage 1: Noise Risk Classification of the Site

Noise levels across the proposed site have been identified through both noise surveying and reference to published maps. With reference to both the survey results within section 13.2 and the reference to the available EPA Noise Maps, noise levels for proposed residential dwellings at the site have been established, the initial site noise risk assessment has concluded that the level of risk across the site falls into the low to medium noise risk categories.

ProPG: Planning and Noise states the following with respect to low and medium risks:

Low Risk — At low noise levels, the site is likely to be acceptable from a noise perspective provided that a good acoustic design process is followed and is demonstrated in an ADS which confirms how the adverse impacts of noise will be mitigated and minimised in the finished development.

Medium Risk — As noise levels increase, the site is likely to be less suitable from a noise perspective and any subsequent application may be refused unless a good acoustic design process is followed and is demonstrated in an ADS which confirms how the adverse impacts of noise will be mitigated and minimised, and which clearly demonstrate that a significant adverse noise impact will be avoided in the finished development.

Given the above it can be concluded that the development site may be categorised as a Low to Medium Risk and as such an Acoustic Design Strategy will be required to demonstrate that suitable care and attention has been applied in mitigating and minimising noise impact to such an extent that an adverse noise impact will be avoided in the final development.

It should be noted that ProPG: Planning and Noise states the following with regard to how the initial site noise risk is to be used,

> *"2.12 It is important that the assessment of noise risk at a proposed residential development site is not the basis for the eventual recommendation to the decision maker. The recommended approach is intended to give the developer, the noise practitioner, and the decision maker an early indication of the likely initial suitability of the site for new residential development from a noise perspective and the extent of the acoustic issues that would be faced. Thus, a site considered to be high risk will be recognised as presenting more acoustic challenges than a site considered as low risk. A site considered as negligible risk is likely to be acceptable from a noise perspective and need not normally be delayed on noise grounds. A potentially problematical site will be flagged at the earliest possible stage, with an increasing risk indicating the increasing importance of good acoustic design."*

Therefore, following the guidance contained in ProPG: Planning and Noise does not preclude residential development on sites that are identified as having medium risk noise levels. It merely identifies the fact that a more considered approach will be required to ensure the developments on the higher risk sites are suitably designed to mitigate the noise levels. The primary goal of the approach outlined in ProPG: Planning and Noise is to ensure that the best possible acoustic outcome is achieved for a particular site.

13.3.3.2 ProPG Stage 2: Acoustic Design Statement

Element 1 – Good Acoustic Design Process

In practice, good acoustic design should deliver the optimum acoustic design for a particular site without adversely affecting residential amenity or the quality of life or occupants or compromising other sustainable design objectives. It is important to note that ProPG specifically states that good acoustic design is not equivalent to overdesign or "gold plating" of all new development but that it seeks to deliver the optimum acoustic environment for a given site.

Section 2.23 of the ProPG outlines the following checklist for Good Acoustic Design (GAD):

- Check the feasibility of relocating, or reducing noise levels from relevant sources;
- Consider options for planning the site or building layout;
- Consider the orientation of proposed building(s);
- Select construction types and methods for meeting building performance requirements;
- Examine the effects of noise control measures on ventilation, fire regulation, health and safety, cost, CDM (construction, design and management) etc;
- Assess the viability of alternative solutions; and,
- Assess external amenity area noise.

In the context of the proposed development, each of the considerations listed above have been addressed in the following subsections.

Relocation or Reduction of Noise from Source

The noise is generated by traffic volumes on the N1 and Clonliffe road. It is beyond the scope of this development to introduce any traffic diversion or other mitigation at source.

Planning, Layout and Orientation

Consideration has been given to the location of both the buildings and external amenity areas. The orientation of the site is such that the buildings themselves screen the majority of common external amenity areas associated with the development.

Select Construction Types for meeting Building Regulations

Masonry constructions will be used in constructing the external walls of the development. This construction type offers high levels of sound insulation performance. However, as is typically the case the glazed elements and ventilation will be the weakest elements in the façade in terms of sound insulation performance.

Upgraded glazing and mechanical ventilation will be incorporated, where required. The proposal here will be to provide dwelling units with glazed elements that have good acoustic insulation properties so that when the windows are closed the noise levels internally are good.

A mechanical ventilation system ducted to the façade will be utilised as per Part F of the Building Regulations. This system provides a high level of sound insulation.

Impact of noise control measures on fire, health and safety etc

The good acoustic design measures that have been implemented on site, e.g. locating properties away from the road and placing outdoor space on the quiet side of buildings, are considered to be cost neutral and do not have any significant impact on other issues.

Assess Viability of Alternative Solutions

Alternative solutions typically involve reorientation or removal of sensitive facades and rooms from the noise source, or incorporating screening along external boundaries. It is not a viable solution to remove all sensitive facades from the streetscape in a dense urban environment. Note that there is already screening from the site to the roads on the ground floor.

Assess External Amenity Area Noise

ProPG provides the following advice with regards to external noise levels for amenity areas in the development:

"The acoustic environment of external amenity areas that are an intrinsic part of the overall design should always be assessed and noise levels should ideally not be above the range 50 – 55 dB $L_{Aeq,16hr}$."

Noise levels across external amenity areas (i.e. courtyards) associated with the development are presented in Element 3 of this section.

Summary

Considering the constraints of the site, in so far as possible and without limiting the extent of the development area, the principles of Good Acoustic Design have been applied to the development.

In terms of viable alternatives to acoustic treatment of façade elements, there are no further options for mitigation outside of proprietary acoustic glazing and mechanical ventilation.

Element 2 – Internal Noise Guidelines

Internal Noise Criteria

Element 2 of the ProPG document sets out recommended internal noise targets derived from BS 8233 and WHO's Community Noise Guidelines. The recommended indoor ambient noise levels are set out in Table 13.6 and are based on annual average data.

Discussion on Open Closed Windows

In the first instance, it is important to note the typical level of sound reduction offered by a partially open window falls in the region of 10 to 15 dB.

Considering the design goals outlined in Table 13.6, and a sound reduction across an open window of 15 dB, the free-field noise levels that would be required to ensure that internal noise levels do not exceed good (i.e. at or below the internal noise levels) or reasonable internal noise levels (i.e. 5 dB above the internal noise levels) have been summarised in Table 13.17.

Table 13.17 External Noise Levels Required to Achieve Suitable Internal Noise Levels with Windows open

Level Desired	Day 07:00 to 23:00hrs	Night 23:00 to 07:00hrs
Good (i.e. at or below the internal noise levels)	50 – 55 dB $L_{Aeq,16hrs}$	45 dB $L_{Aeq,8hrs}$
Reasonable (i.e. 5 dB above the internal noise levels)	55 – 60dB $L_{Aeq,16hrs}$	50 dB $L_{Aeq,8hrs}$

Façade Levels

Based on the information outlined in Figure 13.4 and Figure 13.5 and the measured noise levels set out in Section 13.2.1, noise levels associated with road traffic noise have been characterised across the site. The site has been zoned in order to outline appropriate mitigation measures for the site (see **Figure 13.7 and Figure 13.8**).

Façades that are not highlighted are predicted to meet either the 'good' or 'reasonable' internal noise criteria when windows are open, hence no mitigation will be required for those facades.

Highlighted façades in Figure 13.7 have an incident noise level of 55 dB $L_{Aeq,16hrs}$ and 54 dB $L_{Aeq,8hrs}$. Highlighted façades in Figure 13.8 have a predicted incident noise level of 60 dB $L_{Aeq,16hrs}$ and 50 dB $L_{Aeq,8hrs}$ The noise levels indicate that internal criteria will be exceeded at the façades when windows are open, hence an assessment of the façades has been undertaken to ensure that internal noise criteria will be met when windows are closed.

Figure 13.7 Block A1.1 Façade that is above desired level

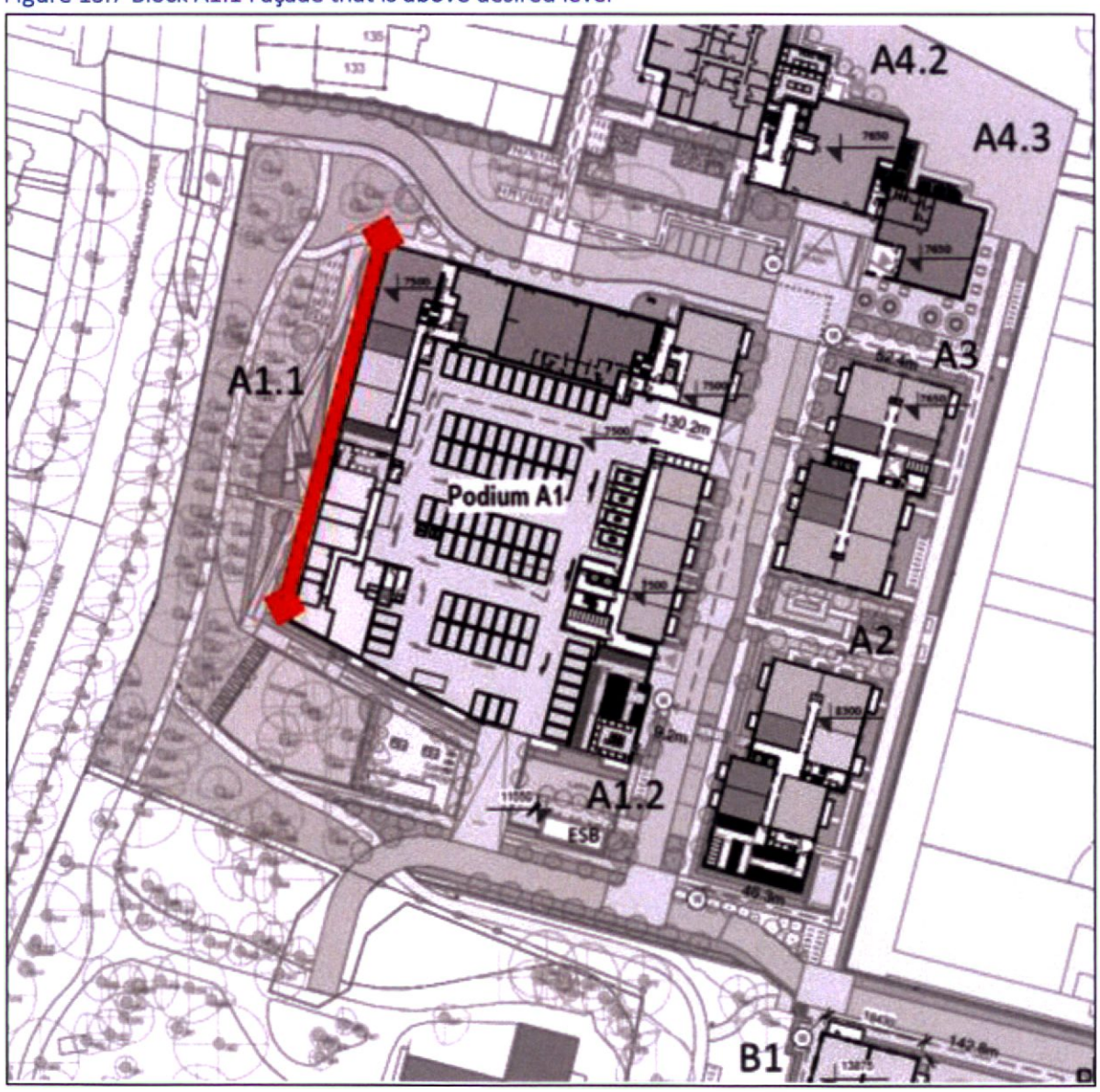
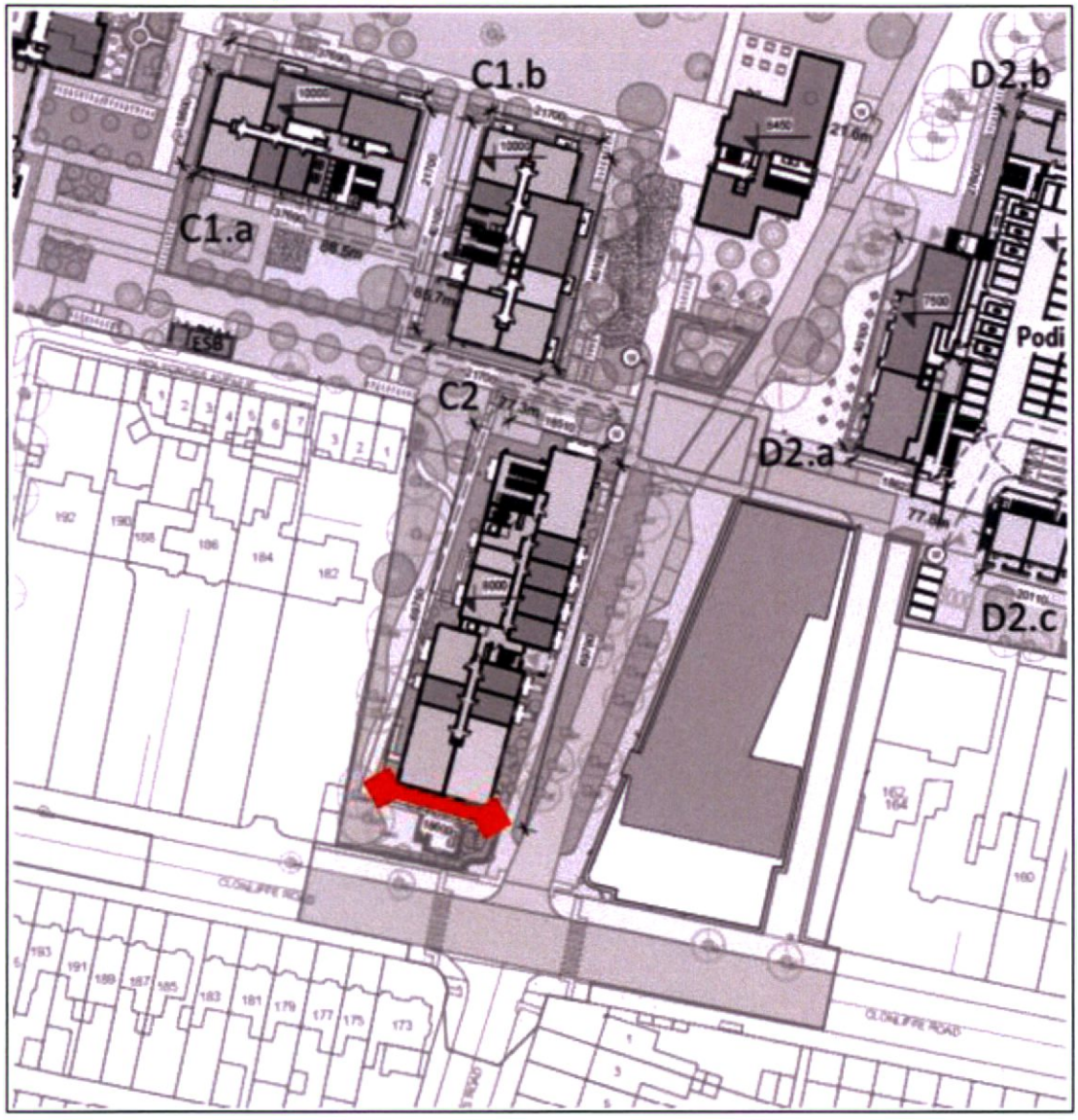


Figure 13.8 Block C2 Façade that is above desired level



Proposed Façade Treatment

The British Standard BS EN 12354-3: 2000: *Building acoustics – Estimation of acoustic performance of buildings from the performance of elements – Part 3: Airborne sound insulation against outdoor sound* provides a calculation methodology for determining the sound insulation performance of the external envelope of a building. The method is based on an elemental analysis of the building envelope and can take into account both the direct and flanking transmission paths.

The Standard allows the acoustic performance of the building to be assessed taking into account the following:

- Construction type of each element (i.e. windows, walls, etc.);
- Area of each element;
- Shape of the façade, and;
- Characteristics of the receiving room.

The principles outlined in BS EN 12354-3 are also referred to in BS8233 and Annex G[1] of BS 8233 provides a calculation method to determine the internal noise level within a building using the composite sound insulation performance calculated using the methods outlined in BS EN 12354-3. The methodology outlined in Annex G of BS 8233 has been adopted here to determine the required performance of the building facades.

Glazing

Given the level of noise predicted at this development the calculations have concluded that there are no specific glazing requirements beyond standard double glazing (typically 31 dB R_w) to meet good internal noise levels. The relevant internal noise criteria for the residential units along the facades identified in Figure 13.7 and 13.8 for Block A1.1 and C2 respectively can be achieved with a closed standard double glazing. All other blocks can achieve suitable internal noise levels with windows open.

Wall Construction

In general, all wall constructions (i.e. block work or concrete) offer a high degree of sound insulation, much greater than that offered by the glazing systems. Therefore, noise intrusion via the wall construction will be minimal. The calculated internal noise levels across the building façade have assumed a minimum sound reduction index of 54 dB R_w for this construction.

Ventilation

The ventilation strategy for the development is for mechanical ventilation. Mechanical ventilation systems typically offer a high performance in terms of preventing sound intrusion from external sources, consequently there is no assessment of the ventilation system required for this noise impact assessment.

Internal Noise Levels

The assessment has demonstrated that the recommended internal noise criteria can be achieved with windows closed assuming standard double glazing. No further mitigation required.

Element 3 – External Amenity Area Noise Assessment

In terms of the external amenity areas and courtyards proposed with the development, Table 13.13 and Table 13.14 illustrates that noise levels across the development will range between <50 and 55 dB $L_{Aeq,1hr}$. The range of noise levels across the external amenity areas (gardens and common areas) are within the acceptable range as advised by ProPG Planning and Noise.

Element 4 – Other Relevant Issues

No other relevant issues arise in the context of this development

13.4 Mitigation Measures

13.4.1 Construction Phase

With regard to demolition and construction activities, best practice control measures for noise and vibration from construction sites are found within *BS 5228 (2009 +A1 2014)* Code of Practice for Noise

[1] The methodology contained within Annex G of BS8233 is based on the assumption that the source is a line source (such as a road) and that the building facades are simple, i.e. do not have balconies. These assumptions are considered valid for the purposes of this assessment and have been adopted.

and Vibration Control on Construction and Open Sites Parts 1 and 2, which include guidance on several aspects of construction site practices, including, but not limited to:

- Selection of quiet plant;
- Control of noise sources;
- Screening (boundary and / or localised plant screening);
- Hours of work;
- Liaison with the public; and
- Monitoring.

Detailed comment is offered on these items in the following paragraphs. Noise control measures that will be implemented include the selection of quiet plant, enclosures and screens around noise sources, limiting the hours of work and noise monitoring.

13.4.1.1 Selection of Quiet Plant

In general, selection of quiet plant is recommended in relation to sites with static plant such as compressors and generators. In this case, the Contractor shall ensure that these units be supplied with manufacturers' proprietary acoustic enclosures, where possible. The potential for any item of plant to generate noise will be assessed prior to the item being brought onto the site. To facilitate this, each item of plant equipment will be required to comply with the EC Directive on Outdoor Noise Emissions 2000/14/EC. The least noisy item will be selected, wherever possible.

13.4.1.2 Noise Control at Source

If replacing a noisy item of plant is not a viable or practical option, the Contractor will ensure that consideration is given to noise control 'at source' and that corresponding measures are implemented, where possible. This refers to the modification of an item of plant or the application of improved sound reduction methods in consultation with the supplier. For example, resonance effects in panel work or cover plates can be reduced through stiffening or application of damping compounds, while rattling and grinding noises can often be controlled by fixing resilient materials in between the surfaces in contact.

BS 5228 states that *"as far as reasonably practicable sources of significant noise should be enclosed"*, and the Contractor shall be obliged to comply with this measure. In applying this guidance, constraints such as mobility, ventilation, access and safety must be taken into account. Items suitable for enclosure include pumps and generators.

BS 5228 makes a number of recommendations in relation to the use and siting of equipment, which are directly relevant to the proposed development. The Contractor will ensure that these recommendations are adopted on Site:

- Plant shall always be used in accordance with manufacturers' instructions.
- Care shall be taken to keep site equipment away from noise-sensitive areas. Where possible, loading and unloading will be carried out away from such areas.
- Machines whose use is intermittent in nature, such as cranes, shall be shut down between work periods or throttled down to a minimum.
- Plant known to emit noise strongly in one direction shall, where possible, be orientated so that the noise is directed away from noise-sensitive areas.

- Acoustic covers to engines shall be kept closed when the engines are in use and idling. The use of compressors that have effective acoustic enclosures and are designed to operate when their access panels are closed is recommended.
- Materials shall be lowered whenever practicable and shall not be dropped. Where appropriate, the surfaces on to which materials are being moved will be covered by resilient material.

Other forms of noise control at source relevant to the proposed works are set out below, and shall be adhered to by the Contractor insofar as possible and practicable:

- For mobile plant items such as cranes, dump trucks, excavators and loaders, the installation of an acoustic exhaust and / or maintaining enclosure panels closed during operation will be considered, and can reduce noise levels by up to 10 dB.
- Mobile plant will be switched off when not in use and not left idling.
- For percussive tools such as pneumatic concrete breakers, noise control measures include fitting muffler or sound reducing equipment to the breaker 'tool' and ensure any leaks in the air lines are sealed. Such measures will be considered in implemented, as appropriate. The Contractor will erect localised screens around breaker or drill bit when in operation in close proximity to noise sensitive boundaries.
- For concrete mixers, control measures will be employed during cleaning to ensure no impulsive hammering is undertaken at the mixer drum.
- For all materials handling, the Contractor will ensure that materials are not dropped from excessive heights. Drop chutes and dump trucks will be lined with resilient materials.
- Demountable enclosures will be used to screen operatives using hand tools / breakers and will be moved around site as necessary.
- All items of plant will be subject to regular maintenance. Such maintenance can prevent unnecessary increases in plant noise and can serve to prolong the effectiveness of noise control measures.

13.4.1.3 Screening

Typically, screening is an effective method of reducing the noise level at a receiver location and can be used successfully as an additional measure to all other forms of noise control. The effectiveness of a noise screen will depend on the height and length of the screen and its position relative to both the source and receiver. Screening is a useful form of noise control when works are taking place at basement and ground level to screen noise levels at ground floor adjacent buildings. The Contractor will ensure that appropriate and effective screening is erected, where needed.

In addition, careful planning of the site layout will also be considered. The use of localised mobile hoarding screens and / or acoustic quilts to items of plant with the potential to generate high levels of noise is an effective noise control measure. Localised screening will be used by the Contractor, where relevant, when percussive works are taking place in close proximity to the nearest sensitive perimeter buildings.

13.4.1.4 Liaison with the Public

A designated Community Liaison Officer (CLO) will be appointed to site by the Contractor for the duration of the construction works. All noise complaints will be logged and followed up in a prompt fashion by the CLO, including the implementation of all necessary mitigation measures. In addition,

prior to particularly noisy construction activity (e.g. demolition, breaking, piling, etc.), the CLO will inform residents at the nearest noise sensitive locations of the time and expected duration of the noisy works.

13.4.1.5 Hours of Work

Construction works will be limited to the times below:

- Monday to Friday 07:00 to 18:00 hrs
- Saturdays 08:00 to 14:00 hrs
- Sundays and Public Holidays No work on site

However, where required for specific circumstances (e.g. connections to public service systems or utilities), it may be necessary for certain construction operations to be undertaken outside these times. The timing of such works will be agreed in advance with Dublin City Council.

13.4.2 Operational Phase

13.4.2.1 Building Services Plant

Plant rooms of apartment buildings and outdoor plant areas will be designed to ensure that noise levels at the façades of the noise-sensitive locations both within the site and in the surrounding area do not exceed the criteria of 50dB $L_{Aeq,15\ min}$ day time and 45dB $L_{Aeq,15\ min}$ for night time, outside any noise-sensitive location, as discussed in Section 13.1.2.1.

During the detailed design of the proposed development, the selection and location of mechanical and electrical plant will be undertaken in order to ensure the noise emission criterion of 45dB $L_{Aeq,15\ min}$, outside any noise-sensitive location are not exceeded.

In addition to selecting plant with suitable noise levels, the contractor shall ensure that the following best practice measures will be adhered to, insofar as possible, for all plant items, in order to minimise potential noise disturbance for residents of on-site and adjacent buildings during the operational phase:

- Where ventilation is required for plant rooms, consideration will be given to acoustic louvers or attenuated acoustic vents, where required to reduce noise breakout.
- Ventilation plant serving plant rooms and car parks will be fitted with effective acoustic attenuators to reduce noise emissions to the external environment.
- Perimeter plant screens will be used, where required, for roof top plant areas, to screen noise sources.
- Attenuators or silencers will be installed on external air handling plant, as required.
- All mechanical plant items (e.g. fans, pumps, etc.) shall be regularly maintained to ensure that excessive noise generated by any worn or rattling components is minimised.
- Any new or replacement mechanical plant items, including plant located inside new or existing buildings, shall be designed so that all noise emissions from Site do not exceed the noise thresholds of 50dB $L_{Aeq,15\ min}$ for daytime and 45dB $L_{Aeq,15\ min}$ for nighttime, outside any noise-sensitive location outlined in this document.
- Installed plant will have no tonal or impulsive characteristics when in operation.

13.4.2.2 Additional Vehicular Traffic on Surrounding Roads

During the operational phase of the proposed development, noise mitigation measures with respect to the outward impact of traffic from the site are not deemed necessary.

13.5 Residual Impacts

This section describes the degree of environmental change that will occur after the proposed mitigation measures have taken effect.

13.5.1 Construction Phase

During the construction phase of the proposed project, there is the potential for temporary noise effects on nearby noise sensitive properties due to noise emissions from site activities. The application of binding noise thresholds and hours of operation, along with implementation of appropriate noise and vibration control measures (as set out in Section 13.4, above), will ensure that noise and vibration impact is kept to a minimum as far as practicable. For the duration of the demolition and construction period, residual construction noise and vibration effects will be **negative, slight to significant and temporary,** depending on the proximity of the works to the site boundary. For the remaining phases of construction work, structural development and general construction, the residual construction noise and vibration effects will be **negative, slight to moderate and short-term** depending on the proximity of the works to the site boundary.

13.5.2 Operational Phase

13.5.2.1 Building Services Plant

Noise levels associated with operational plant are expected to be well within the adopted day and night-time noise thresholds at the nearest noise sensitive properties once the design criteria in Section 13.2.2.1 are adopted. Assuming the operational noise levels do not exceed the adopted design goals, the resultant residual noise effects from this source will be **negative, not significant, and permanent**.

13.5.2.2 Additional Vehicular Traffic on Surrounding Roads

The change in noise levels associated with additional traffic is predicted to be imperceptible along the existing road network. In the context of the existing noise environment, the overall effects from noise contribution of increased traffic is considered to be of **neutral, imperceptible and long term effect** to nearby noise sensitive locations.

13.6 Monitoring

During the demolition and construction phase, noise and vibration monitoring shall be carried out by the contractor to ensure that the recommended threshold levels set out in Table 13.1 and Table 13.2 and / or any additional noise and vibration thresholds conditioned in the planning permission (if granted) are not exceeded.

Noise monitoring will be conducted in accordance with the International Standard ISO 1996: 2017: *Acoustics – Description, measurement and assessment of environmental noise* and located a distance of greater than 3.5 m away from any reflective surfaces, e.g. walls, in order to ensure a free-field measurement without any influence from reflected noise sources.

13.7 Interactions

There are interactions between the noise and vibration assessment, traffic assessment and the population and human health assessment. With increased traffic movements, the noise levels in the surrounding area increase. The impacts of the proposed development on the noise environment are assessed by reviewing the change in traffic flows on roads close to the site. In this assessment, the impact of the interactions between traffic and noise are considered to be **imperceptible** due to the low-level changes in traffic flows associated with the proposed development.

13.8 Indirect and /or Secondary Impacts

There are no indirect and or secondary impacts from noise and vibration in relation to this proposed development.

13.9 Cumulative Impacts

13.9.1 Construction Stage

In terms of construction noise, it's noted that construction works at nearby and adjacent sites (i.e. DCC 2935/20 ABP308193 at Clonliffe Road, Drumcondra, Dublin 3 and D4062/24 ABP-321745-25 at Turnpike Lane at the Rear of No. 59-69 Drumcondra Road Lower, Co. Dublin) may be ongoing simultaneous to this project. In this scenario slightly elevated construction noise emissions due to cumulative construction activities are likely to occur at receptor locations bounding the sites. Cumulative impacts will need to be considered and managed during the construction phase. It is recommended that liaison between both construction sites is on-going throughout the duration of the construction phase. Contractors should schedule work in a co-operative effort to limit the duration and magnitude of potential cumulative impacts on nearby sensitive receptors. For properties adjacent to the construction sites the cumulative construction noise impacts are expected to be **short-term, negative, slight to significant**, depending on the proximity of the works to the site boundary. There are no cumulative construction vibration impacts.

13.9.2 Operational Stage

There are no likely cumulative noise impacts associated with the proposed development and other developments in the areas. The noise thresholds set for off-site noise sensitive locations are designed to avoid any significant increase in the prevailing background noise environment. Operational noise thresholds included in this report refer to cumulative noise from all fixed installations on site. The design of plant and other fixed installations will be progressed during the design stage to ensure the noise thresholds at offsite noise sensitive locations are not exceeded.

In terms of increased traffic noise, the traffic noise assessment within this chapter takes into account the overall masterplan for cherrywood and, hence, is a cumulative prediction.

13.9.3 Do-Nothing Impact

In the absence of the proposed development being constructed, the noise environment at the nearest noise sensitive locations and within the development site will remain unchanged. The noise levels recorded during the baseline noise environment are considered representative of the Do-Nothing scenario.

13.10 Difficulties Encountered

No difficulty was encountered in the preparation of this chapter.

13.11 Conclusion

The assessment of construction noise and vibration and has been conducted in accordance best practice guidance contained in BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Noise and BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Vibration. Subject to good working practice as recommended in the EIAR Chapter, noise associated with the construction phase is not expected to exceed the recommended threshold values for noise-sensitive locations beyond 40m from the site boundary during the main building works phase and with mitigation no significant effects are expected. At distances less than 40m from the boundary, construction noise has the potential to exceed the recommended threshold values depending on the activity involved. A variety of standard proven best practice noise mitigation is proposed together with noise monitoring to reduce the noise impacts as far as reasonably practicable.

The operational phase of the proposed development has also been assessed, including an inward noise impact analysis. Provided that the design criteria and mitigation measures outlined in this report are implemented, no significant noise effects are predicted during the operational phase.

No significant vibration effects are associated with the operation of the site.

In summary, the noise and vibration impact of the proposed development is not significant in the context of current national guidance.

13.12 References

- *BS 8233: 2014: Guidance on sound insulation and noise reduction for buildings.*
- *British Standard BS 4142: 2014+A1:2019: Methods for Rating and Assessing Industrial and Commercial Sound*
- *British Standard BS 5228 (2009 +A1 2014): Code of Practice for Control of Noise and Vibration on Construction and Open Sites Part 1: Noise & Part 2: Vibration.*
- *British Standard BS 7385 (1993): Evaluation and measurement for vibration in buildings Part 2: Guide to damage levels from ground borne vibration.*
- *Calculation of Road Traffic Noise, Department of Transport Welsh Office, HMSO, 1988.*
- *ISO 1996: 2017: Acoustics – Description, measurement and assessment of environmental noise.*
- *EPA Advice Notes for Preparing Environmental Impact Statements, (May 2022).*
- *Professional Guidance on Planning & Noise (ProPG), (IoA, 2017).*

14 Landscape & Visual

14.1 Introduction

This chapter on Landscape and Visual Impacts has been prepared by Alex Craven, Landscape Architect and LVIA Specialist with Brady Shipman Martin. Alex has a BSc and an MLA in Landscape Architecture from the University of Sheffield, and he is a corporate member of the Irish Landscape Institute. Alex has worked on a broad range of landscape and visual assessments over the past 15 years. The chapter has been reviewed by Thomas Burns, Landscape Architect and Environmental Planner with Brady Shipman Martin. Thomas has a B.Agr.Sc. in Landscape and a Diploma in EIA Management, both from UCD, and an Advanced Diploma in Planning and Environmental Law from Kings Inn. Thomas is a member of the Landscape Institute and Environmental Management and Law Association. Thomas has been preparing landscape and visual impact assessments for over 30 years and has prepared assessments for a wide range and scale of urban and rural development projects.

This assessment addresses two separate but closely related aspects: the first is visual impacts focusing on the extent to which new developments can be seen, the potential loss of existing site features and the introduction of new site features; the second aspect is impacts on the character of the landscape, the changes the proposed development will bring to the landscape in general, the impacts of those changes upon views from the surrounding area, and examining responses which are felt towards the combined effects of the new development.

This latter topic is complex because it can encompass many other environmental topics such as ecology, archaeology and architectural history and because attempts to scientifically measure feelings and perceptions are not universally reliable.

Given the urban location of the Site the term 'landscape' and 'townscape' (i.e. acknowledging the urban setting of the lands) are used interchangeably.

14.2 Methodology

This chapter has been prepared having particular regard to the following guidelines:

- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports – (EPA, 2022);
- Guidelines for Landscape and Visual Impact Assessment, Third Edition, (Landscape Institute and the Institute of Environmental Management and Assessment, 2013) (generally referred to as 'GLVIA3').

Specific guidance for the assessment of landscape and visual impacts is set out in the GLVIA3, while the EPA provides guidance on overall approach and structure. The EPA Guidelines also references the GLVIA3 in terms of guidance for landscape and visual assessment.

The GLVIA3 outlines a methodology for determining the sensitivity of a landscape or view to the proposed development and the significance of effects arising from the development. Sensitivity of a landscape or view is judged by balancing its value with its susceptibility to the type of development proposed. The significance of effects on that landscape or view is then assessed by balancing its sensitivity with the magnitude of change arising from the proposed development (refer to Table 14.1). GLVIA3 also recognises (at para 2.23) that '*professional judgement is a very important part of LVIA.*

While there is scope for quantitative measurement of some relatively objective matters much of the assessment must rely on qualitative judgements.'

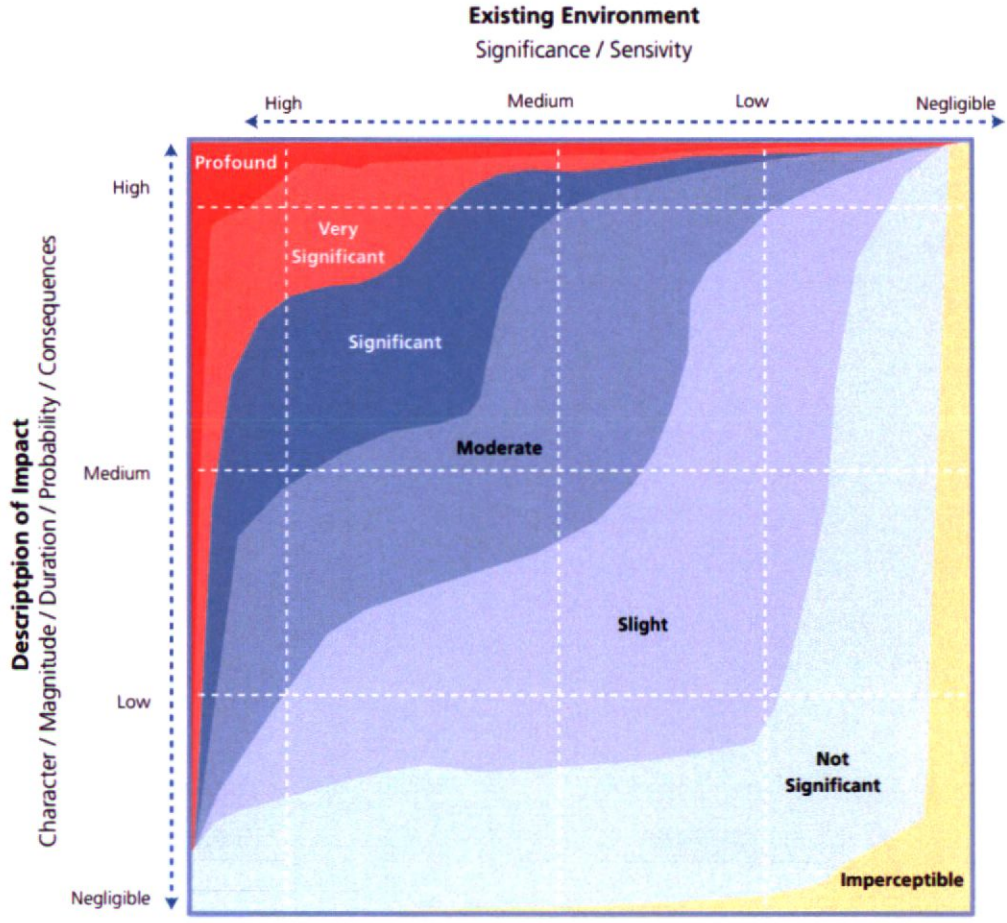
An initial desk study was undertaken to establish an understanding of the Site and surroundings, its planning context and to make an initial assessment of the likely visual context *i.e.* areas from which the Site / proposed development may be seen. Relevant maps, development plans and other published documents were used for this purpose and are referenced at the end of this chapter.

A visual field survey of the Site and surroundings was carried out, examining the nature of the local built environment, considering the contribution that landscape components make to local character, and exploring the potential for views of the Site / proposed development from the surrounding area. A selection of key / representative views has been identified, which support this landscape and visual appraisal and inform preparation of associated Photomontages of the proposed development (Refer to photomontages prepared by Model Works (2025) submitted under separate cover as part of the planning application).

The potential impact of development on the landscape is assessed with reference to the following landscape factors:

- **Context**: a description of the Site and its surroundings;;
- **Character**: identifies distinct landscape units within the Site and / or its surroundings and outlines the defining features of the landscape;
- **Sensitivity**: This is based on:
  - Value: whether a landscape / view is scarce or unique (and designated for this reason); recognised for its high amenity; whether it is 'ordinary' or even 'derelict';
  - Susceptibility: to what extent there is pressure for / vulnerability to the type of proposed development and the damage likely to arise as a result;
- **Significance**: susceptibility is combined with the anticipated magnitude of change to determine the likely effects (impacts) of the proposed development;
- **Magnitude of change**: the degree to which the proposed development alters the existing landscape / view.

Table 14.1 Significance of Landscape and Visual Effects (extract from EPA Guidelines, 2022)



Potential changes in character, visibility and land use patterns have been considered, including direct, indirect, secondary and cumulative impacts. This has given direction to proposed mitigation measures, which have been incorporated into the proposed development. The assessment of likely residual landscape and visual impacts takes account of proposed mitigation measures.

The assessment has also had regard to the assessments presented in other Chapters of the EIAR, and in particular, to the findings in Chapter 8 Biodiversity and Chapter 15 Cultural Heritage: Architectural Heritage.

14.3 Baseline Environment

14.3.1 Description of the Site and Surrounding Environment

The Site comprises c.8.71 hectares of buildings and lands (with a developable site area of 8.25 hectares) within the wider lands at Holy Cross College off Clonliffe Road Dublin 3, and off Drumcondra Road Lower, Dublin 9 (refer to **Figure 14.1**).

The lands / Site are bounded to the south by Clonliffe Road and properties off Clonliffe Road and Holy Cross Avenue. The main entrance to the lands / Site is off Clonliffe Road and aligns with Jones' Road which runs south from Clonliffe Road to Croke Park. The southern boundary and entrance are defined by a high brick wall with curving brick walled entrance way of late 20th century construction. The entrance leads to a mature tree-lined avenue (refer to **Figure 14.1** & **Plate 14.1**). In April 2021

permission was granted for a new hotel up to 7 storeys in height on Holy Cross College lands immediately east of the existing entrance and access avenue (DCC ref. no.:2935/20 & ABP ref. no.: 308179-20); This development is currently under construction and is scheduled for completion in 2026.

The Holy Cross College lands / Site are bounded to the west by Drumcondra Road Lower and properties off Drumcondra Road Lower, including the residence of the Archbishop of Dublin and Mater Dei College. A secondary (emergency) access to the lands is located immediately south of No. 133 Drumcondra Road Lower at the northwest corner of the Site. This secondary entrance is defined by metal gates and stone piers set into the high boundary stone wall (a Protected Structure) with Drumcondra Road Lower.

The college lands are bounded by the River Tolka corridor to the north, however, with the exception of connections for surface water, the boundary of the Site is setback from the river corridor with intervening lands zoned as riverside open space and as lands formerly used as playing pitches.

To the east the lands / Site are bounded by Belvedere Rugby Grounds and residential development at Corn Mill Apartments (refer to **Figure 14.1** & **Plate 14.1**).

Holy Cross College was founded in 1854 as the Catholic diocesan seminary for Dublin. After seminary duties ceased in 2000 the college eventually closed in 2018 with the sale of the lands. The college was established on the grounds of Red House, which was formerly known as Clonliffe House (refer to **Figure 14.1** & **Plate 14.1**).

Today the Site comprises a range of large 19th and 20th century former college buildings and chapel, some of which are Protected Structures. The Main Seminary Block is 19th century three-storey over raised-basement building with central flight of steps facing parkland to the east. Formal cloister gardens laid out in an open quadrangle are located to the west of the Seminary Block and these were enclosed by the late 1950's colonnaded 'Ambulatory' on the south and west side. The main buildings are group close to the centre of the lands and towards the western boundary. Green areas lie to south, east and north, while Mater Dei College and the Archbishop's Residence, which set within its own mature gardens, lie to the west (refer to **Figure 14.1** & **Plate 14.1**). A detailed description of the history and development of the college and its grounds is provided in Chapter 15 Cultural Heritage: Architectural Heritage of the EIAR.

The Site includes mature trees in an avenue along the access off Clonliffe Road and in the landscape areas east of the main college buildings. Belts of mature tree planting surround Red House and an avenue along an east-west pathway delineates the boundary between the core college area and the open northern lands. Tree belts also define the boundary with the Archbishop's Residence and with Drumcondra Road Lower. Established trees and hedgerows are located along both banks of the River Tolka to the north of the Site.

The Site is gently sloping with higher ground to the west, southwest falling towards the River Tolka to the north, northeast. There is a noticeable step down in the Site at the transition to the open lands north of the central core area.

The Site is located between the established residential communities of Drumcondra to the west and north and Clonliffe Road / Ballybough to the south and east. Both are established, mature suburbs of Dublin City with the surrounding area predominately developed. The Site is c.400m northeast of Drumcondra Commuter Railway Station and the immediate area includes a range of public facilities including community centres, healthcare, libraries, shops and sports / recreation facilities.

A range of Photomontages have been prepared to illustrate the physical and visual character of the proposed development from both within the Site and from surrounding roads and public locations (Refer to photomontages prepared by Model Works (2025) submitted under separate cover as part of the planning application). An 'as existing' and 'as proposed' version is presented for each view. The 'existing' version shows the existing baseline together with a representation of the final fully constructed appearance of the permitted hotel development, that is currently under construction on the wider college lands (DCC ref. no.:2935/20 & ABP ref. no.: 308179-20), and which is expected to be complete in 2025. For some views where vegetation screening is an important part of the scene, summer-time and winter-time versions are presented.

Figure 14.1 Site Context with Boundary outlined in Red (source: Google Maps)

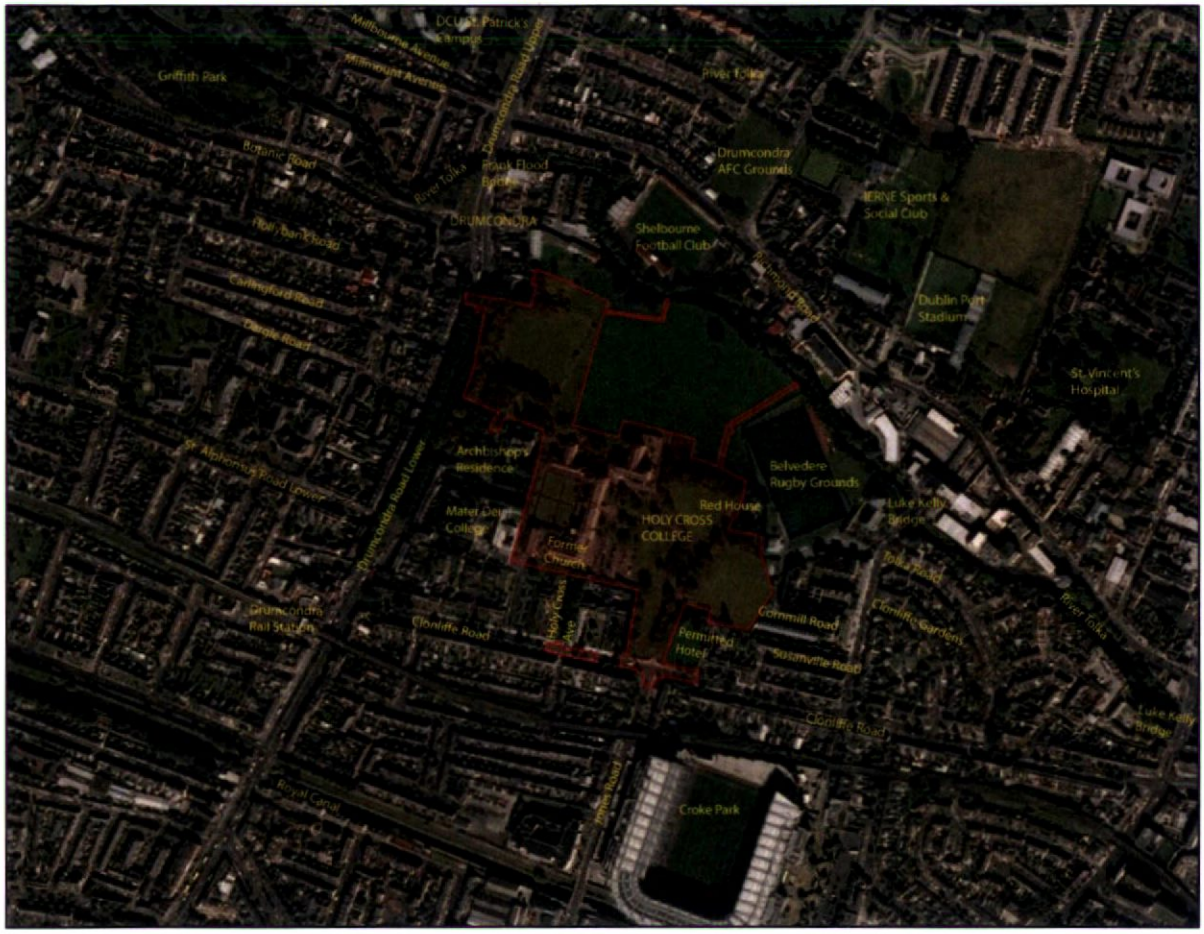


Plate 14.1 Aerial View south, southwest over college lands



14.3.2 Trees and Woodlands

An Arboricultural Report (The Tree File, 2025) has been prepared for the lands / Site. The history of the development of the Site is reflected in its tree population. Though many trees to the east of Holy Cross College are relatively young, much of the woodland belt to the west of the Site and adjoining Drumcondra Road appears to be a century or more in age structure. Only a small remnant of the original landscape associated with Red House (Clonliffe House) remains. This landscape is now restricted to isolated pockets and particularly to the east of the access drive to Red House and adjoining the eastern façade of the gable walls of the housing terrace on Clonliffe Road.

The tree population can be considered under three categories: 'woodland blocks' such as along Drumcondra Road Lower and at Red House; 'tree-lines' such as between Red House and the Main Seminary Building or the line of Cypress trees located to the north of main buildings; and 'standalone trees' such as those within the lawns as part of a dispersed parkland setting.

The tree survey notes that the Holy Cross lands supports 503 trees, 317 of which lie within the "red line" area. Ten trees are identified as being of high quality 'Category A' trees. Over 135 trees are of moderate quality 'Category B' and over 124 are of low-quality 'Category C'. The Site includes 27 potentially low quality and unsustainable trees. In this regard 23 low quality 'Category U' trees are recommended for removal due to their poor condition regardless of any development works.

There are no tree preservation orders (TPO) pertaining to the trees on the Site. Nevertheless, the diversity and maturity of existing trees, including the lime avenue and parkland specimens, make a significant contribution to the landscape and visual character of the lands.

14.3.3 Planning Context: Dublin City Development Plan 2022-2028

The former college lands and Site are located within the administrative area of Dublin City Council. In the Dublin City Development Plan 2022-2028 the vast majority of the lands / and virtually all of the Site lies within **Zone Z12**: *'To ensure that existing environmental amenities are protected in the predominately residential future use of these lands'*. The corridor along the River Tolka to the north of the Site is within **Zone Z9**: *'To preserve, provide and improve recreational amenity, open space and ecosystem services'*. However, a very limited portion of the Site lies within this zone, and mainly for purpose of providing surface water connections to the river (refer to **Figure 14.2**).

A number of Protected Structures are located on and adjoining the lands of Holy Cross College and within the Site including:

- **RPS Ref. No. 1901**: The Main College Building, Holy Cross Church, South Link Building, Ambulatory and the Assembly Hall (all within the Site);
- **RPS Ref. No 1902**: Red House – a detached Georgian house (within college lands immediately east of the Site). (Red House is also included on the Record of Monuments and Places, Ref. No. 018-019); and
- **RPS Ref. No 2361**: Archbishop's House – a detached Victorian residence / office, gate lodge at entrance, entrance gates, piers, railings and plinth walls (immediately west of the Site).

In addition, a number of houses along Clonliffe Road, along Susanville Road; along Drumcondra Road Lower; and at the Corn Mill and Distillery Buildings off Distillery Road are identified as Protected Structures and / or Residential Conservation Areas (**Zone Z2**). General residential areas (**Zone Z1**) are located in the wider environment (refer to **Figure 14.2**).

The prominent mature plane tree-lined verges of Drumcondra Road Lower are zoned as amenity / open space (**Zone Z9**). The River Tolka is identified as a Conservation Area (refer to **Figure 14.2**) and forms part of the city's green / blue network in **Fig. 10-1 (Existing Strategic Green and Blue Network in Dublin City)** of Development Plan. A range of sports grounds and sports facilities, including Tolka Park, lie along the River Tolka.

The Site does not fall within the visual context of any of the Key Views and Prospects identified in **Fig. 4-1: Key Views and Prospects** of the Development Plan. Trees on the lands are not identified for protection.

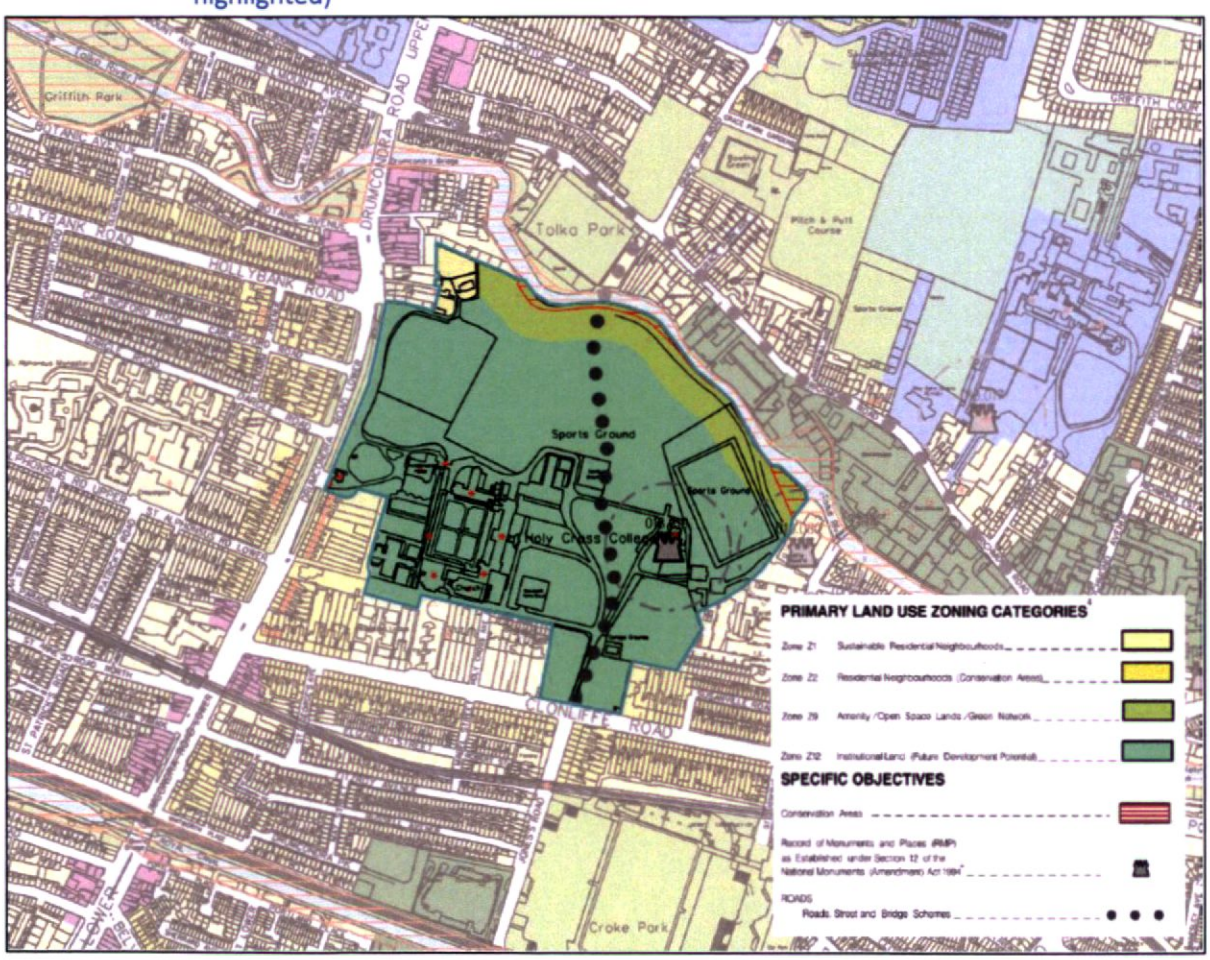
In relation to Zone Z12 lands, the Development Plan identifies specific considerations for the development, including the requirement for preparation of a Masterplan. The Development Plan identifies a number of specific requirements arising from the Z12 zoning objective, including the following:

- *Where lands zoned Z12 are to be developed, a minimum of 25% of the site will be required to be retained as accessible public open space to safeguard the essential open character and landscape features of the site. Where such lands are redeveloped, the predominant land-use will be residential;*
- *In considering any proposal for development on lands subject to zoning objective Z12, other than development directly related to the existing community and institutional uses, Dublin City Council will require the preparation and submission of a masterplan setting out a clear vision for the future development of the entire landholding;*
- *In particular, the masterplan will need to identify the strategy for the provision of the 25% public open space requirement associated with any residential development, to ensure a co-ordinated*

approach to the creation of new high-quality public open space linked to the green network and/or other lands, where possible; and

- *On Z12 lands, the minimum 25% public open space shall not be split up into sections/fragmented and shall comprise soft landscape suitable for relaxation and children's play, unless the incorporation of existing significant landscape features and the particular recreational or nature conservation requirements of the site and area dictate that the 25% minimum public open space shall be apportioned otherwise.*

Figure 14.2 Zoning (Extract of Map E Dublin City Development Plan 2022-2028, with college lands highlighted)



The Development Plan sets out requirements in relation to trees (existing and proposed) at Section 10.5.7: Trees and Hedgerows. The Plan encourages the retention of existing trees where possible and there is a presumption in favour of retaining and safeguarding trees that make a valuable contribution to the environment. The following criteria shall be taken into account where there are significant trees on Site:

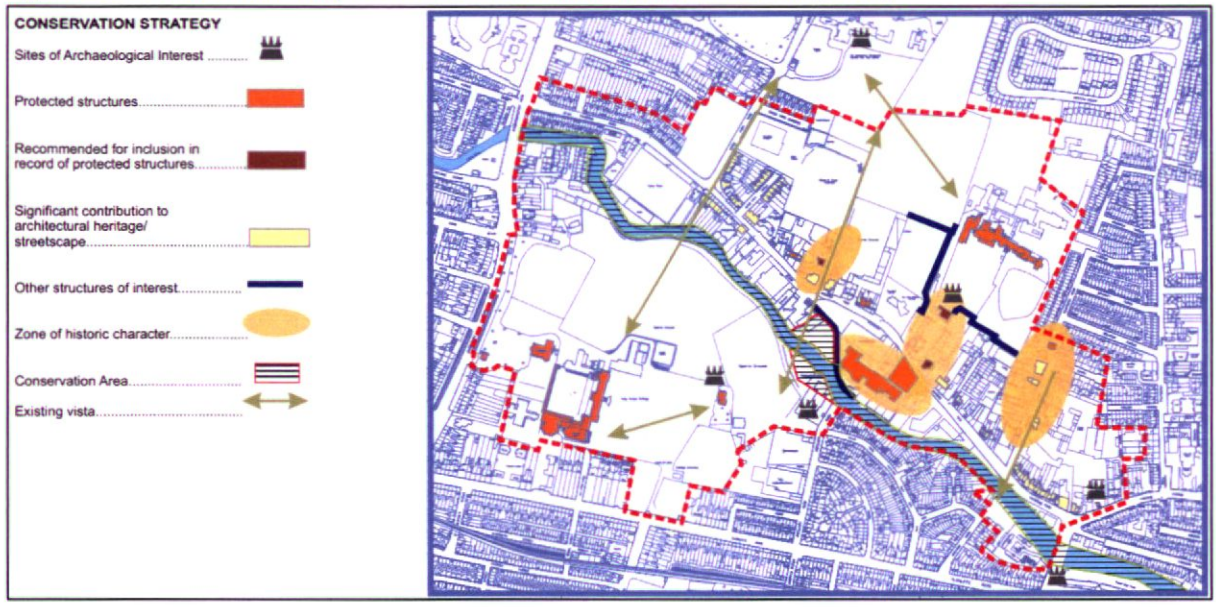
Habitat / ecological value of the trees and their condition.

- Uniqueness / rarity of species;
- Contribution to any historical setting / conservation area;
- Significance of the trees in framing or defining views; and
- Visual and amenity contribution to streetscape.

14.3.4 Planning Context: Richmond Road Action Area Plan 2007

The former college lands and Site were included within the 2007 Action Area Plan prepared for c.51 hectares spanning the River Tolka and Richmond Road. Aspects of conservation and heritage significance were identified on Map 4 (and Map 12) of the Plan. These included Protected Structures (2007), zones of historic character and vistas. The Plan identified vistas south along Grace Park Road towards Holy Cross College and between Red House and the College Church (refer to **Figure 14.3**).

Figure 14.3 Extract from Map 12 of Richmond Road Action Area Plan (2007)



14.3.5 Planning Context: Holy Cross College Lands Masterplan (2025)

In accordance with the Z12 zoning requirements a Masterplan has been prepared for the c.12 hectares of the Holy Cross College Lands (refer to **Figure 14.4**). The layout as set out in the Masterplan and in the associated Site Strategy Document, seeks to address the following key principles:

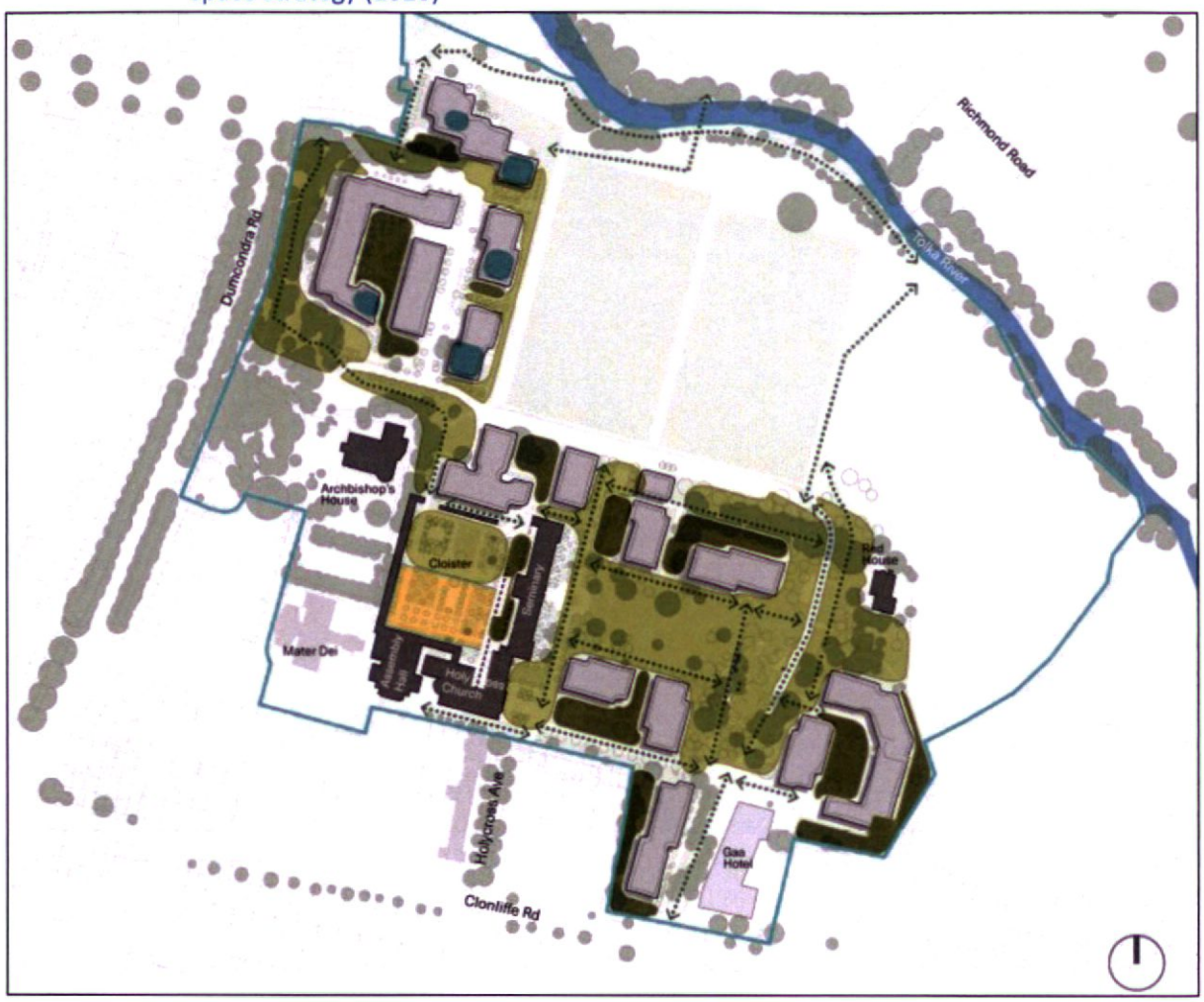
These principles include:

- Unlocking the Clonliffe demesne to the neighbourhood and beyond, with inviting public spaces and connections;
- Protect and enrich the built and natural heritage;
- Create public spaces that respect the chapel, seminary and Red house;
- Insert 'edges' to frame vistas to these Protected Structures;
- Allow for gathering spaces to also occur at nodal or convergence points.

The Masterplan identified significant views within the college lands, which informed the development of the layout:

- The view of the Holy Cross Church from the entrance avenue;
- The view of the Main Seminary Block and Red House from the entrance avenue; and
- The view of Red House from the Main Seminary Block.

Figure 14.4 Extract from Masterplan for Holy Cross College Lands showing public and communal open space strategy (2020)



14.3.6 Receiving Environment: Sensitivity and Significance

A number of landscape (townscape) and visual features are of particular sensitivity and significance. Of particular note are the following aspects:

- The established collective historic character of the complex of buildings in its landscape setting;
- The individual architectural quality of – and visual connections between – the key buildings on the Site including Protected Structures such as the Seminary Building, Holy Cross Church, Red House, as well as in the immediate surrounds of the Site, *e.g.* the Archbishop's Residence;
- The extent and maturity of tree blocks, tree-lines and individual trees in a parkland setting on the lands;
- The historic character of landscape features such as parklands, quadrangle, walkways, avenues and the boundary wall along Drumcondra Road Lower;
- The open nature of the northern lands and landscape corridor (conservation area) of the River Tolka;
- The presence of residential and other property around and beyond the boundaries of the Site; and
- Potential longer-range views across or to the Site from surrounding areas.

In overall terms the presence of a range of Protected Structures within a building complex and their physical and visual interrelationship in a high-quality parkland setting is of very high sensitivity and significance. Given the partly secluded nature of the Site, the relationship with its wider surrounds and city context is of moderate sensitivity and significance.

14.4 Potential Impact of the Proposed Project

14.4.1 Summary Description of the Proposed Development

The development will consist of the construction of a residential development set out in blocks ranging in height up to 13 storeys, to accommodate 1131 no. apartments including retail and crèche units, residential tenant amenity spaces, community/cultural spaces, mobility hubs and public open space.

The proposed development sits as part of a Site Masterplan for a wider landbank which includes an under-construction hotel development and potential future GAA facilities. To facilitate the proposed development the scheme will involve the demolition of a number of existing structures on the site.

The application site contains a number of Protected Structures including The Seminary Building, Holy Cross Chapel, South Link Building, The Assembly Hall and The Ambulatory while the wider lands also include The Red House and the Archbishop's House (both Protected Structures). The application proposes the renovation and reuse of the Seminary Building and the South Link Building to accommodate residential units and the use of the existing Holy Cross Chapel, Assembly Hall and Cloister Garden for use as community/cultural uses.

The residential buildings are arranged around a number of proposed public open spaces and routes throughout the site with extensive landscaping and tree planting proposed. Communal amenity spaces will be located adjacent to residential buildings and at roof level throughout the scheme. To facilitate the proposed development the scheme will involve the removal of some existing trees on the site.

The site is proposed to be accessed by vehicles, cyclists and pedestrians from a widened entrance on Clonliffe Road, at the junction with Jones's Road and through the opening up of an unused access point on Drumcondra Road Lower at the junction with Hollybank Road. An additional cyclist and pedestrian access is proposed through an existing access point on Holy Cross Avenue. The development will include both basement and podium parking under a number of blocks to accommodate car parking spaces, bicycle parking, storage, services and plant areas.

The proposed development includes all site landscaping works, green roofs, boundary treatments, lighting, servicing and utilities, signage, and associated and ancillary works, including site development works above and below ground.

A detailed description of the proposed development is provided in Chapter 5 Project Description of the EIAR.

Figure 14.5 Landscape Indicative Masterplan (NMP Landscape Architecture, 2025)



14.4.2 Characteristics of the Proposed Development

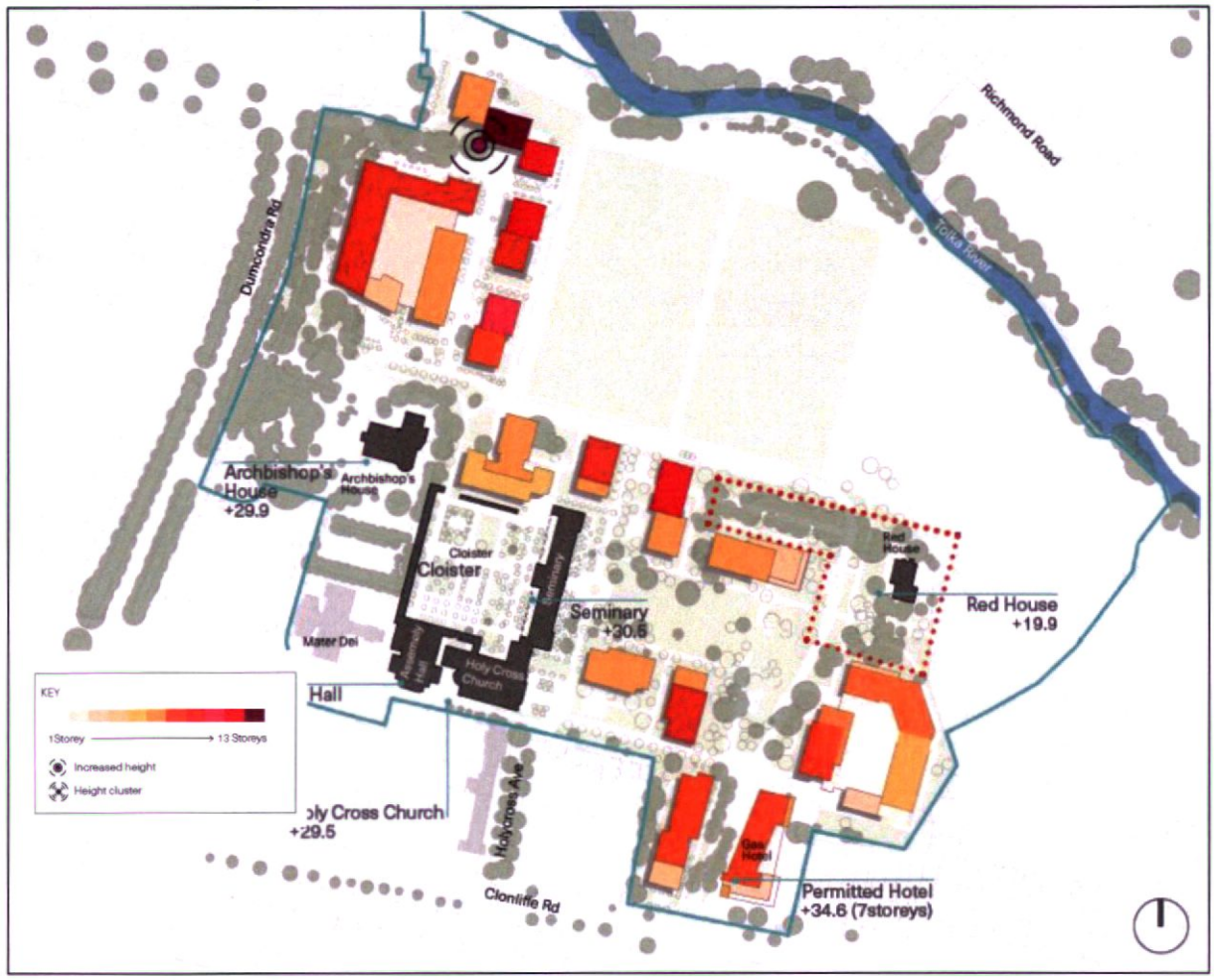
The proposed development will include the following characteristics of landscape and visual significance:

- The new development is laid out in a range of distinct character areas as per **Figure 14.4** (from of the Holy Cross Masterplan);
- Provision of new buildings ranging from three to thirteen-storeys (refer to **Figure 14.6**);
- In total 94 trees (31.8% of existing) will be removed. Twenty-three of these are low quality 'category U' trees that are recommended for removal regardless of development. Therefore, the development results in the loss of 71 trees (24%) that might otherwise have been suitable for

retention. This includes two higher quality 'category A' trees; 25no. moderate quality 'category B trees'; and 44no. lower quality 'category C' trees;

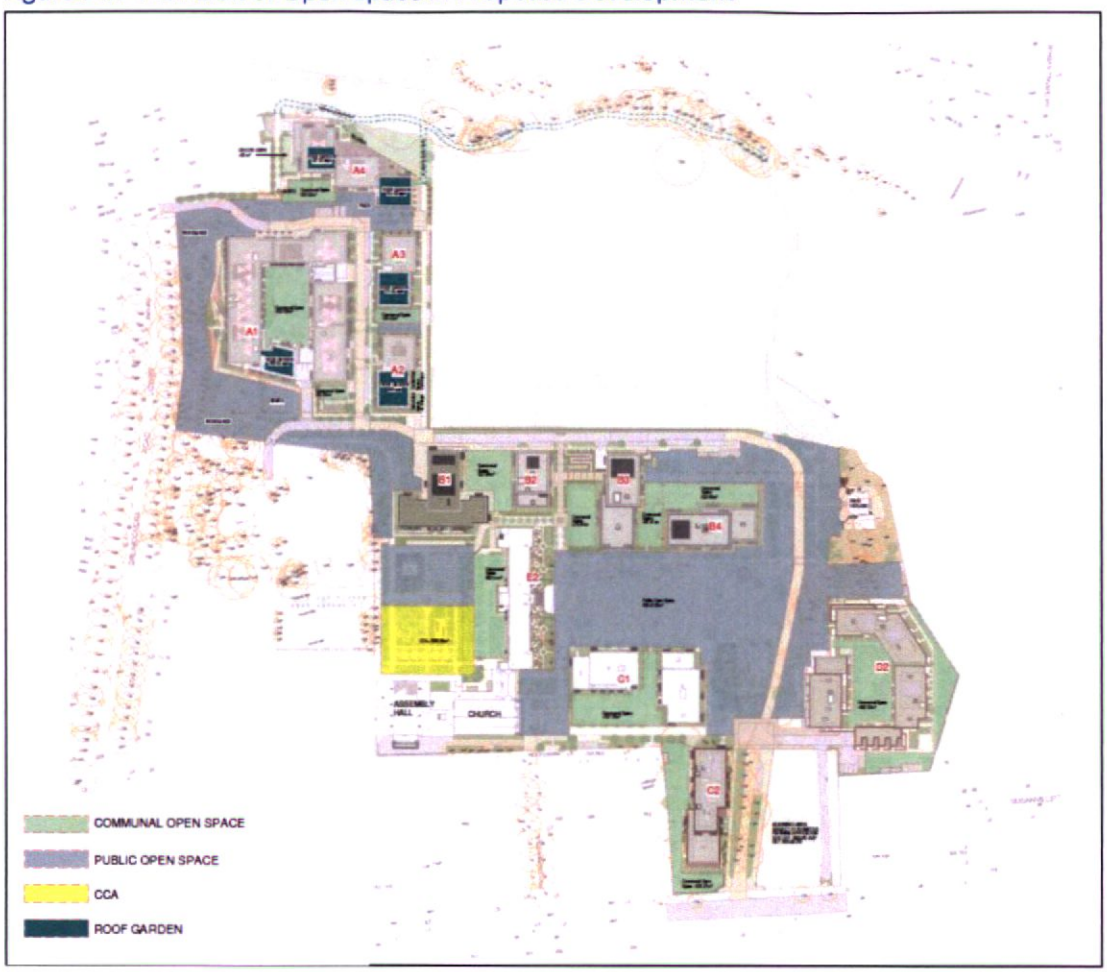
- The existing secondary entrance off Drumcondra Road Lower will be opened up as a new access providing a new junction opposite Hollybank Road. The existing entrance off Clonliffe Road will also be widened for enhanced physical and visual connectivity;
- A mature London Plane forming part of the distinctive tree avenue along Drumcondra Road Lower will be affected by the proposed new site access to Drumcondra Road. The location of the road, though slightly north of the tree stem, will result in the excavation of more than 50% of the trees root protection area (RPA) radius. The Arboricultural Report (The Tree File 2025) notes that "While the proposed works can be achieved without removing the tree, its safe and sustainable retention directly adjoining and overhanging a busy highway, cannot be guaranteed."

Figure 14.6 Approach to Proposed Building Height (source Holy Cross Lands Site Masterplan Document, 2025)



- Delivery of c.25% of connected public open space within the Site, conforming with the requirements stipulated in the Dublin City Development Plan for Zone Z12. This includes the woodlands on the western boundary with Drumcondra Road Lower, as well as historic parkland at the core of the Site, and the quadrangle garden west of the Seminary Building. Communal open space is provided in addition to the public open space (refer to **Figure 14.7**).

Figure 14.7 Provision of Open Space in Proposed Development



14.4.3 Potential Landscape (Townscape) Effects

14.4.3.1 Construction Phase

The proposed development is expected to be constructed in 3 Phases as follows:

- **Phase 1a**: Blocks B4, C1a, C1b and C2 in the central core area of the Site and renovation of the Church, and surrounding retained buildings within central-west portion of the Site;
- **Phase 1b**: Blocks D2a, D2b and D2c;
- **Phase 2**: Blocks A1.1, A1.2, A2, A3, A4.1, A4.2, and A4.3 off Drumcondra Road Lower in the northern and western area of the Site; and
- **Phase 3**: Blocks B1, B2, B3 to the north of the central-core area and the renovation works to existing Seminary.

The construction process would entail the following:

- Site establishment and perimeter hoarding;
- Set up of construction compound, tree protection measures, internal Site works arrangement;
- Demolition of existing structures, removal of trees and planting, and general site clearance;
- Loss of existing open landscape / visual parkland character;

- General construction activity, including construction traffic, movements and use of cranes;
- Site stripping, excavation and earthworks;
- Site services installations;
- Emergence of new buildings, with associated scaffolding, cranes and works at height;
- Works to on-site Protected Structures and in vicinity of off-site Protected Structures such as Red House;
- Completion of new buildings, roads, entrances, footpaths, cycleways;
- Provision of exterior public realm, landscape, streetscape and site boundary works, and
- Occupation of the development on a phased basis.

During construction the Site would be heavily disturbed by the above activities and the incremental emergence of the buildings, with direct and indirect visual effects on the surroundings. The magnitude of change to the landscape of the Site and the townscape in the immediate vicinity of the Site would be **high**, with the effects reducing with increased distance from Site. Overall, the sensitivity of the landscape and visual character of the Site is **high** and of the wider townscape is **medium** (refer to Section 14.3.6 of this chapter). Therefore, while **short-term**, the effects on the townscape would be **significant and negative** on the Site and **moderate to significant and negative** in the immediate vicinity of the Site.

14.4.3.2 Operation Phase

The completed development will give rise to impacts through the establishment of a new residential development comprising 15 blocks, ranging in height from 3 no. to 13-storeys, open spaces and associated developments.

Potential for likely significant landscape and visual operation stage effects arise from:

- the overall change in character from enclosed historic institutional parkland to a developed contemporary residential neighbourhood;
- the change in existing views from within Holy Cross lands and from surrounding areas – especially from the north, east and south of the Site – both during daytime and at night;
- the change in the setting of Red House and the Archbishops Residence, being Protected Structures; and
- the change in character of the Site as viewed from Clonliffe Road and from areas further south, east and north.

14.5 Mitigation Measures

14.5.1 Construction Phase

The proposed development is to be delivered in 3 Phases (with Phase one split into two sub-phases), which will assist in mitigating the intensity and scale of construction required to deliver the proposed development.

Construction works will adhere to standard best practice construction site management and to the requirements of the Construction and Environmental Management Plan. Other than where interventions are proposed, existing Site boundaries and associated tree and other plantings will be protected from construction works.

The immediate setting of Red House, including all areas surrounding areas outside of where works are proposed will be retained and appropriately protected during construction phase.

Key areas of proposed open space, including the woodland on the boundary with Drumcondra Road Lower, tree groups in the central core parkland, and the northern open space, including the corridor along the River Tolka will be protected during the construction phase and will not be used for storage of earthworks or construction materials.

14.5.1.1 Retention of Existing Trees

Given the importance of the existing trees, a qualified Arborist will be retained for the duration of the construction phase to ensure protection of trees to be retained.

Trees to be retained will be fenced off and protected in accordance with BS5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations and to the requirements the Arboricultural Report and the Clonliffe Tree Protection Plans prepared by The Tree File.

Works to and in the vicinity of the RPA of retained trees shall be carried out in accordance with an Arboricultural Methodology Statement to be approved by a retained Arborist.

14.5.1.2 Hoarding and Screening

In addition to the fencing and protection of retained trees, tree groups and existing boundaries, c.2.4m high hoarding for the purposes of screening will be required – particularly on the western, southern and eastern boundaries.

14.5.2 Operational Phase

The proposed development is the culmination of a detailed design development process, weighing development opportunity of a strategic land resource with retention of key landscape characteristics of the receiving environment and visual sensitivities of the Site and surrounding areas. Therefore, the arrangement, layout and design of the proposed development is critical to the avoidance and mitigation of adverse landscape and visual impacts.

In particular, landscape and visual mitigation (refer to **Figure 14.8**) has been considered in:

- Compliance with the Z12 land use zoning for the Site and wider college lands;
- The retained setting for Red House and the manner in which the wider proposed development respects the setting and identified view corridor to the Main Seminary Block from Red House;
- The manner in which the setting of the existing retained structures is incorporated into the wider development on the Site;
- Retention of key existing mature trees, tree groups and woodland blocks;
- The arrangement and layout of buildings, heights, and finishes;
- Provision of high-quality public open spaces and communal open space;
- Extensive new landscape works, including public realm and new tree and other planting proposals; and
- Maintenance and aftercare of the new landscape.

These considerations are important for the successful integration of the proposed development into its Site and immediate context. Detailed high-quality landscape proposals are set out in the Landscape Design Statement (NMP Landscape Architects, 2025) which accompanies the application.

Figure 14.8 Illustrative Landscape Masterplan for Proposed Development



14.6 Residual Impacts

14.6.1 Construction Phase

14.6.1.1 Impact on the Site

The lands at Holy Cross College have an enclosed character defined by a framework of boundary trees and woodland blocks, boundary walls, vegetated river corridor, and established residential and mixed-use development.

Nevertheless, the construction of the proposed development, which provides for a phased delivery of a scheme which greater height and density than is predominant in the local area, will result in significant change to the landscape fabric and to the visual characteristics of views within the Site, as well as to and from the lands and the existing buildings, including Red House. There will be a direct impact on the Z9 zoned amenity area along Drumcondra Road Lower with removal of a section of verge and one of the mature avenue trees. The removal of buildings and trees, site establishment and development, construction activity and emergence of buildings would all combine to result in **significant, negative short-term** effects on landscape and visual character of the Site.

14.6.1.2 Townscape Effects

In terms of wider townscape, and the ongoing trends towards delivery of greater numbers of residential units, including greater height, the receiving environment can accommodate the construction of the proposed development without significant negative effects on key townscape characteristics of surrounding areas.

The impact of the construction phase on the wider townscape would be **moderate, negative – neutral and short-term**.

14.6.1.3 Visual Amenity

The construction phase will give rise to significant visual effects, particularly within the wider college lands and from immediately adjoining areas to the south, east and north.

The initial disturbance and general activity associated with the construction stage will result in notable alteration to the existing landscape giving rise to significant landscape and visual change for the setting of existing structures, including Red House, other retained buildings and for those immediately bounding the Site. Given the enclosed nature of the Site, visual impact from the wider surrounding areas, including Drumcondra Road Lower will be of lesser significance.

During construction the Site and immediate environs would be disturbed by construction activities and haulage, and by the gradual emergence of the buildings on site and associated use of scaffolding and cranes at height. In the earlier stages, before buildings reach some height above ground, the effects would be largely limited to the immediate environs (i.e. the Site, neighbouring properties and adjoining boundaries with Clonliffe Road / Drumcondra Road Lower).

As the buildings rise to upper floors, and particularly for taller buildings, the visual effects would be more widespread. The magnitude of change in the visual environment would vary from negligible to high and this would also vary over time; therefore, the significance of the effects would likewise vary – although they would typically be negative during the construction phase. Such temporary / short-term negative visual effects are unavoidable but not unusual in the urban context where change is continuous.

The assessment of construction phase impacts on visual amenity is as follows:

- The visual impact on the college lands, including Red House and the Archbishop's Residence would be **significant, negative and short-term;**
- The visual impact from the construction phase on properties along the Site boundary off Clonliffe Road, Susanville Road, and at Corn Mill and Distillery Apartment (i.e. to south and east) would be **moderate - significant, negative and short-term** at most. This effect will be most pronounced for properties with views towards the Site from upper floors of mid-rise apartments, with the enclosed nature of the streetscapes for terraces providing a greater degree of screening;
- The visual impact from the construction phase on properties along the Site boundary off Drumcondra Road Lower and Clonliffe Road west of the existing entrance (i.e. to south and west) would be **moderate - significant, negative and short-term** at most;
- The visual impact from the construction phase on properties off Richmond Road (i.e. to north) would be **moderate - significant, negative and short-term** at most. Generally, most properties are well screened by vegetation along the River Tolka corridor, however, the higher properties will afford clearer views of the Site and receptors will be more significantly effected;

- The visual impact from the construction phase on Drumcondra Village and areas west of Drumcondra Road Lower (i.e. to west) would be **slight to moderate, negative and short-term** at most;
- The visual impact from the construction phase on wider surrounds (i.e. south of Clonliffe Road, east of Distillery Road and north of Richmond Road) would be **slight, negative and short-term** at most, decreasing with distance and with screening from intervening built form.

14.6.2 Operation Phase

14.6.2.1 Impact on the Site

The introduction of the proposed development, which includes a relatively high-density scheme would mark a major change for the existing layout and presentation of the college lands and its key features. The development would see the insertion of modern buildings together with the integration of former college buildings and establishment of a new residential community on former college lands. The overall effect will see the loss of aspects of the original character and open parkland. However, the provision of a new residential neighbourhood, with high-quality public open spaces will also open up and enliven the Site, while the retained landscape setting around Red House, as well as the implementation of a well-considered landscape masterplan, will appropriately preserve the sensitive characteristics of the historic structures within a new developed context. The provision of a network of interconnected open spaces will retain much of the Site's parkland character and will facilitate a greater degree of active travel permeability throughout the lands.

It is also noted that the change the proposed development brings to the existing landscape / townscape fabric is already evident in the commencement of construction of the permitted 7-storey hotel on college lands off Clonliffe Road.

Therefore, notwithstanding the potential for initial significant impacts from the rapid change in the landscape and the resulting visual effects, in overall terms the proposed development also has the potential for significant positive effects on the landscape and visual setting in the delivery of a new appropriately located, high-quality residential neighbourhood and open spaces delivered in line with current planning policy. Therefore, the overall effect upon delivery and establishment of the landscape Masterplan will be **significant, positive and long-term**.

14.6.2.2 Townscape Effects

In terms of wider townscape, the receiving environment can accommodate the proposed landscape / townscape change with limited negative effects on the key characteristics of surrounding areas. This is due in-part to the enclosed and institutional nature of the college lands and to the manner in which the design responds to the context and policy guidance, and also to the following characteristics:

- The Site is strategically located in proximity to the city centre and to the city village of Drumcondra, a point of transition between the urban area of Dublin and the northern suburbs;
- There is an emerging pattern of higher density clusters at appropriate locations across the city, often interspersed with areas of low-density suburban character;
- The former institutional and enclosed nature of the lands, taken together with the retention of key woodlands, trees and buildings indicate that the lands can positively accommodate buildings of the arrangement, nature and height proposed;

- The Holy Cross College lands are institutional in character and introverted, largely closed off from the surrounding townscape by closely spaced buildings and a framework of woodland and trees;.
- The proposed development would not be visually prominent from the wider road corridors of Clonliffe Road or Drumcondra Road Lower, although the change in passing the immediate road boundary with the Site would be prominent and significant;
- The layout makes use of the more heavily screened north-west corner of the Site for locating the highest-density phase of development;
- The primary sensitive area in the receiving environment is the more open lower density residential area to the southeast and east of the Site, which is undergoing change through the ongoing construction for an up to 7-storey hotel development on part of the college lands;

The overall assessment of the impact on townscape effects is that the development is consistent with emerging trends in development within the city and that key characteristics are not adversely altered, therefore, the impact is assessed as being **moderate, neutral and long-term**.

14.6.2.3 Visual Amenity

The description of impacts on visual amenity is described with reference to the series of Photomontages prepared for the proposed development. In total Photomontages have been prepared from 52 locations (refer to View Location Map, Photomontages Booklet), including from locations as follows:

- Within the wider Holy Cross College lands (Views 1 to 10 exc. 3 and 4);
- Views from east of the Site (Views 3, 4, 34a to 38 and 44);
- From areas north / northeast of proposed site access on Drumcondra Road Lower, going up Drumcondra Road Upper and along and north of Richmond Road (Views 10a to 18);
- From Drumcondra Road Lower / Upper and to the west (Views 19 to 28);
- From Clonliffe Road and its wider corridor (Views 29 to 34); and
- From areas south of Clonliffe Road and vicinity of Royal Canal (Views 39 to 45 exc. 44).

Holy Cross College Lands

Photomontages 1, 2 and 10 provide 'as existing' and 'as proposed' views south from the River Tolka corridor over the wider college lands to the core development area. While partly integrated with retained tree-lines, the proposed development would enclose and frame the retained open landscape. The introduction of the new residential development would be a dramatic change in the former college / institutional lands.

- The visual impact of the operation phase from the wider open lands within the college would be **significant, negative in the short-term, and significant, neutral / positive in the long-term**.

Photomontages 6, 7A, 7B and 9 provide 'as existing' and 'as proposed' views of the parkland front of the Main Seminary and of the Church as well as of the formal quadrangle to the west of the Main Seminary. The views illustrate the dramatic change that the proposed development would have in the views of the structures and their setting. These changes would be heightened by the new sense of enclosure created by the proposed buildings and the major transition from a former largely disused institutional layout to a high-quality active residential community.

- The visual impact of the operation phase on core college lands and buildings would be **very significant, negative in the short-term, and significant, neutral / positive in the long-term.**

Photomontage 5 provides an 'as existing' and 'as proposed' view of Red House. The view illustrates the retention of the immediate setting of the house. The change in the setting of Red House would be informed by the transition from the property being set back from the other college buildings, whereas the house would be more centrally incorporated in the proposed developed context.

- The visual impact of the operation phase on Red House would be **very significant, negative in the short-term, and significant, neutral / positive in the long-term.**

Photomontages 7 and 8 provide an 'as existing' and 'as proposed' view of the Archbishop's Residence. The property is set within a mature garden with surrounding mature trees, many of which are evergreen and which significantly restrict views. The change in the setting of the Archbishop's Residence would be substantially mitigated by the screening effect of mature trees, nevertheless, there will be some limited tree removal which will open up views to the proposals, and it is expected that more open views of the proposed development would be available from upper floors of the residence.

- The visual impact of the operation phase from the Archbishop's Residence would be **significant, negative in the short-term, and moderate, neutral in the long-term.**

Clonliffe Road Corridor

Photomontages 29 to 34 provide 'as existing' and 'as proposed' views of the proposed development west to east along Clonliffe Road and from Susanville Road (View 44).

The views indicate how the proposed development would be screened in longer distance views, with views screened by other built form and limited to views approaching the Site boundary with Clonliffe Road, where the development and changes to the roadside boundary would be openly viewed. It is acknowledged that the proposed development would also be more openly visible from the rear of properties close to the Site boundary on the north side of Clonliffe Road.

- The visual impact of the operation phase on the Clonliffe Road Corridor and associated properties would be **moderate - significant, negative in the short-term, and positive in the long-term.**

South of Clonliffe Road Corridor

Photomontage 31 provides 'as existing' and 'as proposed' views, in both summer and winter, of the proposed development from Jones' Road, which is aligned on the entrance to the college lands / proposed development. The views indicate that there would be the removal of the distinctive gateway and the notable addition a relatively tall new building, but that this would be similar in massing to the permitted hotel building on college lands to the east of the Site entrance. While the proposed development is clearly modern addition, the materiality and form of the building is broadly harmonious with the surrounding architecture and in combination with hotel creates a monumental gateway to the overall Masterplan area.

- The visual impact of the operation phase on Jones' Road would be **moderate, negative in the short-term and positive in the long-term**.

Photomontages 40 to 45 provide 'as existing' and 'as proposed' views of the proposed development from a range of areas south of Jones's Road, including Mountjoy Square and the Royal Canal. The views indicate the proposed development would either be fully screened or readily integrated within the

wider view of the cityscape, even in the limited situation where views of the taller blocks would be experienced.

- The visual impact of the operation phase on these viewpoints south of Jones's Road would be not significant - **slight, neutral in the short and long-term.**

Drumcondra Road Corridor

Photomontages 11 to 13, 27 and 28 provide 'as existing' and 'as proposed' views of the proposed development south to north along Drumcondra Road Lower, Drumcondra Village and Drumcondra Road Upper.

The views indicate that for the most part the proposed development would be either screened or of minimal visibility in views away from the entrance off Drumcondra Road Lower / Drumcondra Village. The opening up of the entrance off Drumcondra Road would change the character of existing views from the junction with Hollybank Road through to Drumcondra Village. The presence of the new development would have some visibility, even through dense vegetation (during winter) though for the most part the proposed development would be screened by woodland, trees and existing development. It is acknowledged that the proposed development would also be more openly visible from the rear of properties close to the Site boundary on the east side of Drumcondra Road Lower.

- The visual impact of the operation phase on the Drumcondra Road Corridor and associated properties would be **moderate, negative in the short-term, and positive in the long-term**.

Areas west of Drumcondra Road Lower

Photomontages 19 to 23 provide 'as existing' and 'as proposed' views of the proposed development from areas west of Drumcondra Road Lower, including Griffith Park (No.19). The views indicate the proposed development would either be fully screened or readily integrated within the wider view of the cityscape, even in the limited situation where views of the taller blocks would be experienced. Where it would be visible along axial views the development would be a new focal point and visual landmark and would not detract from the existing views.

- The visual impact of the operation phase on these views west of Drumcondra Road Lower would be **moderate, neutral in the short and long-term**.

Wider areas north and east of the Site

Photomontages 10a to 18 provide 'as existing' and 'as proposed' views of the proposed development from areas north of Richmond Road and east of the Site, including Grace Park Road (No. 17 and 17A), DCU All Hallows Campus (No. 16) and Marino Park (No. 37). The views indicate that for the most part proposed development would be screened or readily integrated within the wider cityscape, however, in some instances the taller buildings would be prominent on the skyline, particularly from Grace Park Road which is aligned south towards the Site.

- The visual impact of the operation phase on wider areas north and east of the Site would be **moderate, negative at most in the short-term becoming neutral in the medium and long-term**.

On balance the effects on visual amenity would include some negative effects in the short-term where the development would form a new prominent addition but these effects would transition to neutral or positive in the medium to long-term given the development can be quickly and appropriately

integrated within the local townscape without significant negative effects. This will allow for the establishment of the high-quality development and new residential community in its setting.

14.7 Monitoring

A project Arborist and Landscape Architect will be retained for the duration of the construction works. Monitoring of retained trees and landscape is an integral aspect of the proposed scheme, and includes monitoring of:

- Tree and hedgerow removal, retention and protection;
- Topsoil stripping and storage;
- Disturbance by site works, services etc.
- Excavation / alteration of ground levels;
- Landscape build-up; profiling and cultivation;
- Landscape finishing and implementation;
- Proposed planting and grass seeding;
- 12 months aftercare of landscape measures.

All works associated with soil stripping and movement, landscape build-up and finishing, and landscape implementation will be approved and monitored by a qualified Landscape Architect.

All works associated with removal, retention and protection of existing trees and tree surgery works will be approved and monitored by a qualified Arborist.

On completion of construction, all landscape areas will be managed under the direction of the Management Company for the overall development.

14.8 Reinstatement

A significant portion of the Site will be subject to development and on completion all landscape areas will require to be reinstated.

The Landscape Design Statement (NMP Landscape Architects) which accompanies the application includes for provision of a detailed and high-quality hard and soft landscape scheme, which will ensure appropriate reinstatement of the Site.

14.9 Interactions

The landscape and visual assessment has been prepared having regard to the interaction between environmental factors. In particular, interactions arise with:

- **Population**: the introduction of the development would deliver a high-quality mixed density residential neighbourhood well served by public and communal open space and this will have a **significant, positive, long-term effect** enlivening the landscape setting of the proposed development (by providing homes offering a high level of residential amenities);
- **Biodiversity**: while some trees and planting will be removed, a significant majority of trees are retained and incorporated and new tree and other planting is proposed and the Masterplan includes a range of open spaces of varying character, which, in addition to providing recreation amenities and contributing to the area's place-identity, would deliver a range of ecosystem services. The effect of the interaction would be **moderate, negative in the short-term** due to removal of

plantings **but would become neutral into the long-term** as the proposed Masterplan and landscape becomes established; and

- **Cultural Heritage - Built Heritage**: the wider setting of Red House, the Main Seminary Building and adjoining retained buildings and of the Archbishop's Residence would be dramatically altered – but purposively and positively incorporated and rejuvenated within the proposed development. The effect of the interaction would be **significant, negative in the short-term due to the disruption** of the setting of the landscape setting of the historic structures **becoming a positive into the long-term** as the proposed Masterplan and landscape becomes established.

14.10 Indirect/Secondary Effect

There are not expected to be any significant indirect / secondary effects on the landscape or visual amenities as a result of the proposed development.

14.11 Cumulative Impacts

The proposed development will lead to landscape (townscape) and visual effects when in combination with the other projects listed in Chapter 23 of this EIAR. The increased density and urban intensification will result in a noticeable change to the local visual environment. However, the townscape character is robust and has the capacity to accommodate this level of transformation, given that developments will respect the urban grain and will generally have limited impacts on streetscape fabric and public realm. When considered alongside other existing, approved, and emerging developments, the cumulative effects will contribute to a more urbanised character. However, this change aligns with the ongoing and anticipated evolution of an inner-city suburban context into a compact city neighbourhood. Importantly, the area's robust urban grain, varied building typologies, and established street hierarchy provide a resilient framework that can absorb higher density development without fundamentally compromising townscape integrity.

Despite the intensification, the key characteristics of the local townscape and streetscape, such as the pattern of movement, established architectural character, notable tree groups, and the relationship between built form and public realm, will be broadly protected. While certain viewpoints and local visual receptors will experience a degree of change, the cumulative visual impacts are not considered to be unduly adverse when balanced against the area's capacity for change and the strategic planning objectives guiding urban regeneration.

The cumulative landscape (townscape) and visual impact would be **moderate, neutral in the short and long-term.**

14.12 'Do-Nothing' Impact

Should the proposed development not proceed, the Site would remain as a large area comprising largely unused buildings and open green areas. Construction is underway for a hotel up to 7-storeys on a part of the wider college lands, and giving the zoning and Masterplan, it is envisaged that development of some broadly similar form would eventually occur on these lands.

In the context of the national policy of compact growth, no development on the lands may be considered an unsustainable use of the land resource, although as a component of the local green infrastructure network it does contribute to the wider ecosystem.

14.13 Difficulties Encountered in Compiling the Chapter

No difficulties were encountered in the preparation of the chapter.

14.14 References

DCC (2022). *Dublin City Development Plan 2022 – 2028*

EPA (2022). *Guidelines of the Information to be Contained in Environmental Impact Assessment Reports*

HJL (2025). *Holy Cross College LRD, Masterplan Document*

Landscape Institute and IEMA (2013). *Guidelines for Landscape and Visual Impact Assessment (3rd Edition)*

NMP (2025). *Holy Cross College LRD, Landscape Design Statement*

The Tree File (2025), *Holy Cross College LRD, Arboricultural Report*

15 Cultural Heritage - Architectural Heritage

15.1 Introduction

This chapter of the EIAR provides an assessment of the built heritage significance of the site, its setting and context, and the built heritage elements within the wider context, including Protected Structures. The chapter identifies any special architectural and historic character on the subject site, and any other features which are of note. An evaluation of the chronology of the site is also included.

This chapter does not relate to archaeological significance, which is covered in Chapter 16 Cultural Heritage - Archaeology.

This chapter should be read in conjunction with other chapters and reporting including in particular Chapter 16 on Archaeology and on Chapter 14 Landscape and Visual. The chapter provides a full assessment of the Architectural Significance of all the buildings on the subject site; their settings and their context (including adjacent Protected Structures). The Report identifies any associated special architectural and historic character in accordance with the Planning and Development Act 2000, as amended and the DoHLGH (Department of Housing, Local Government and Heritage) Guidelines on Architectural Heritage (2004, 2011).

It should be noted that several structures on the subject site are included on the current (2022-2028) Dublin City Council Development Plan Record of Protected Structures at RPS Ref 1901. These were originally inscribed in the RPS as follows –

"Clonliffe Road, Dublin 3 Dublin 3 Former Holy Cross College: The Main College Building (1863); Holy Cross Church; the South Link Building; the Ambulatory (now clarified to include the single storey arcade forming northern perimeter of college quadrangle); the Assembly Hall;"

Figure 15.1 Extract from Map E of Dublin City Council Development Plan 2022-28, showing the subject site with the 5 no. Protected Structures within it inscribed on the RPS marked with a red star



Within the wider complex but outside the subject site are two further Protected Structures which were considered in the assessment. Archbishop's House, on Drumcondra Road Lower, is inscribed under RPS Ref. No. 2361 as follows –

"Archbishop's House: detached Victorian residence/office; gate lodge at entrance; entrance gates, piers, railings and plinth walls; milestone in grounds of Archbishops House; and stone wall on Drumcondra Road Lower."

Part of the western boundary to the subject site onto Drumcondra Road Lower includes a section of calp stone walling (and gate piers) which comprises the northern section of the stone wall inscribed at Ref. 2361.

The Red House (originally Clonliffe House) is inscribed under RPS Ref. No. 1902. The Red House is also included on the Record of Monuments and Places, Ref. No. 018-019.

The NIAH Survey for the area, (carried out in 2017 but published only recently), concurs with the existing DCC RPS inscription for the subject site, indicating a Regional Significance for Holy Cross College Chapel (inscribed on the RPS as Holy Cross Church) as well as for the overall Holy Cross College (the overall Seminary Complex) without distinguishing any individual elements within the complex. The inscription to the RPS has been clarified in the recent and current (2022-2028) Dublin City Development Plan and reads as follows –

"1901 Clonliffe Road, Dublin 3 Dublin 3 Former Holy Cross College: The Main College Building (1863); Holy Cross Church; the South Link Building; the Ambulatory; the Assembly Hall; and the single storey arcade forming northern perimeter of college quadrangle"

It should be noted that this assessment has been completed in accordance with the Planning and Development Act 2000, as amended, the DoHLGH (Department of Housing, Local Government and Heritage) Guidelines on Architectural Heritage (2004, 2011) and the policies within the current (2022-2028) Dublin City Development Plan. The owners have commissioned a full detailed measured survey of all of the buildings in accordance with those guidelines and these surveys form the basis of the architects' drawings to ensure a comprehensive review of the existing buildings and accurate and reflective alterations and interventions drawings.

The subject site comprises a former institutional building complex which has fallen into disuse but nevertheless retains many of its architectural qualities and historical interests. The potential impact of the proposed development on this complex and any changes to the context and setting to it will be considered and reviewed within this Report.

A full evaluation of the Architectural and Historic chronology the subject site and of the building fabric has been included. It should be read in conjunction with IAC's archaeological assessment provided in the EIAR. This evaluation has been carried out with reference to a number of important resources. These include the following list -

- Trinity College Map Library
- The Diocesan Archive
- the National Library of Ireland
- Dublin City Council's Archives
- the Irish Architectural Archive

In addition to this research, a series of site investigations were carried out. Specific areas were opened up and photographed to confirm methods of construction and material used in order to further verify their age, intactness, condition and suitability for retention, conservation and restoration.

Extracts from these documentary sources and documents are referenced and appended throughout this Report. This research facilitated the identification of all original and non-original fabric which have been identified in this report. These appraisals of the architectural and historic fabric have provided guidance for the design strategies for intervening on site.

In the preparation of this Report, all of the aforementioned buildings within the subject site were fully evaluated and photographically recorded both externally and internally. These fully up to date Photographic Records are appended to the Report in the form of a comprehensive, keyed photo record. Particular attention has been paid to internal elements proposed for alteration and removal and to the poor quality non-original late 20th Century extensions. The suitability of these elements for adaptive reuse in terms of their structure, architecture and layouts is addressed in detail in the Demolition Justification & Adaptive Reuse Report by Henry J Lyons Architects and OMP Architects.

This Chapter schedules the works proposed to each of the buildings within the site on a building-by-building and interior-by-interior basis and assesses the potential impact of these proposals on the architectural heritage and any mitigations and justifications of those impacts. The Chapter on Landscape and Visual Impact (14) to the immediate and surrounding areas contains verified before and after CGIs which are assessed. There are assessments of some of these views in this chapter also. Finally, this Chapter sets out to provide a justification for these proposed works and where appropriate recommend mitigating measures could be undertaken.

The Architects Proposals have undergone an exhaustive design process and ongoing review which has included a substantial and extended pre-application consultation carried out on the proposals due particularly to sensitivities over potential impact on the architectural heritage outlined above. This included meetings in the Dublin City Council offices with Kiaran Sweeney Senior Planner, Nicci Nolan Senior Executive Planner and both Niamh Kiernan Architect and Head of Conservation and Mary McDonald Architect and Senior Deputy Conservation Officer. Subsequent to these meetings a full pre-application submission was made and a detailed LRD Opinion on the submission was issued by Dublin City Council. There have been subsequent joint meetings both on-line and on-site (14th May 2025) to review and refine the proposals in greater detail and agree salvage scopes and strategies. The current proposals have evolved significantly from those discussed and presented in model form at the early stages and those submitted pre-Opinion. The material changes to the proposals have absorbed the concerns raised within these discussions and reflect the planning authority's regard for the proposals' complete compliance with their policy and with relevant DoHLGH guidance.

Relevant Experience & Expertise

This chapter has been prepared by James Slattery MRIAI, Principal at David Slattery Conservation Architects Ltd. James Slattery completed his Bachelors of Architecture Degree in 2001 and a Diploma in Architectural Conservation in 2008. I am a member of the Royal Institute of the Architects of Ireland. He is a member of the Royal Institute of the Architects of Ireland.

He has provided expert testimony on numerous cases relating to built and architectural heritage, including oral hearings at An Bord Pleanala relating to the restoration and redevelopment of the

Nationally Significant Protected Structure at Clerys and adjoining protected sites on O'Connell Street and Marlborough Street, the restoration and redevelopment of the Protected Structure at No.2 Grand Parade as well as within numerous planning applications for conservation and redevelopment including the recently completed restoration and redevelopment of the western side of the south end of Camden Street for Wetherspoons, the conservation of the Gate of Justice at Dublin Castle for the Office of Public Works and the Bolands Quay Site.

15.2 Method

The cultural heritage value and significance of the proposed development site has been assessed in accordance with the Planning and Development Act 2000 (as amended), the Department of Arts Heritage and the Gaeltacht 'Architectural Heritage Protection: Guidelines for Planners', 2011, and the Dublin City Council Development Plan 2022-28.

A full evaluation of the chronology of the subject site and of the building fabric has been carried out in the preparation of this chapter. This evaluation has been carried out with reference to a number of important resources. These include the following -

- Trinity College Map Library
- the National Library of Ireland
- the Irish Architectural Archive
- Dictionary of Irish Architects
- Pearse Street Library – Dublin City Archive
- Britain from Above – Online Photographic Collection
- Irish Photo Archive – Online Photographic Collection
- Irish Times Archive

15.2.1 Visual Impact Assessment

The proposals for the subject site have been assessed with regard to potential impact on the architectural heritage of the subject site, and any visual impact on the architectural character of the surrounding structures and area. The visual impact of the proposed development on key view corridors and landmark buildings within the wider city, as outlined in the DCC Development Plan, has also been assessed. See Chapter 14.

Key viewpoints, prepared by Modelworks in the form of photomontages have been assessed in Chapter 14 Landscape & Visual. The locations of these viewpoints were selected in conjunction with Dublin City Council so as to illustrate the impact on the Protected Structures at close and long distances as well as on the wider context outside the site.

Relevant Legislation & Guidance

This chapter has been prepared having regard to the following;

- Planning and Development Act 2000 (as amended)
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of Housing, Planning & Local Government, 2018);
- Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report (European Commission, 2017);

- Advice Notes on Current Practice in the Preparation of Environmental Impact Statements, (EPA, 2003);
- Guidelines on the Information to be Contained in Environmental Impact Statements, (EPA, 2002)
- Urban Development and Building Heights: Guidelines for Planning Authorities, (Department of Housing, Planning and Local Government, 2018)

The impact of the proposals on the cultural heritage value of the subject site has also been considered with regard to national and international guidelines and conservation charters, including:

- Architectural Heritage Protection: Guidelines for Planning Authorities, (Department of Arts, Heritage and the Gaeltacht, 2004,2011);
- Granada Convention for the Protection of the Architectural Heritage of Europe, (Council of Europe, 1985).
- Venice Charter for the Conservation and Restoration of Monuments and Sites, (ICOMOS, 1964).
- Dublin Principles for the Conservation of Industrial Heritage Sites, Structures, Areas and Landscapes, (ICOMOS-TICCIH, 2011).
- Part IV: Architectural Heritage, Planning and Development Act, 2000.
- Chapter 11: Built Heritage and Archaeology, Dublin City Council Development Plan, 2022-2028
- Chapter 12: Culture, Dublin City Council Development Plan, 2022-2028
- Chapter 13: Strategic Development and Regeneration Areas (SDRAs), Dublin City Council Development Plan, 2022-2028
- Chapter 15: Development Standards, Dublin City Council Development Plan, 2022-2028
- Volume 4 Record of Protected Structures, Dublin City Council Development Plan, 2022-2028
- NIAH Handbook (Department of Culture, Heritage and the Gaeltacht, 2017).

The description of likely significant effects included in this chapter is in line with Table 3.3 of the Draft EPA Guidelines.

15.3 Baseline Environment

The overall site (including the Red House and Archbishop's House which lie outside the subject site) represents the evolution of an ecclesiastical site in a number of phases throughout the 19th and 20th centuries. Each of these phases have different qualities and effected different impacts on the overall site and have transformed it from Clonliffe House (subsequently the Red House) - a modest suburban house on a large, landscaped grounds. The site is currently completely vacant (save for the very light use of the Diocesan archive within the Assembly Hall) and it is clear that a new phase in its evolution is necessary to restore vitality to a site that retains significant architectural qualities.

15.3.1 Site Chronology

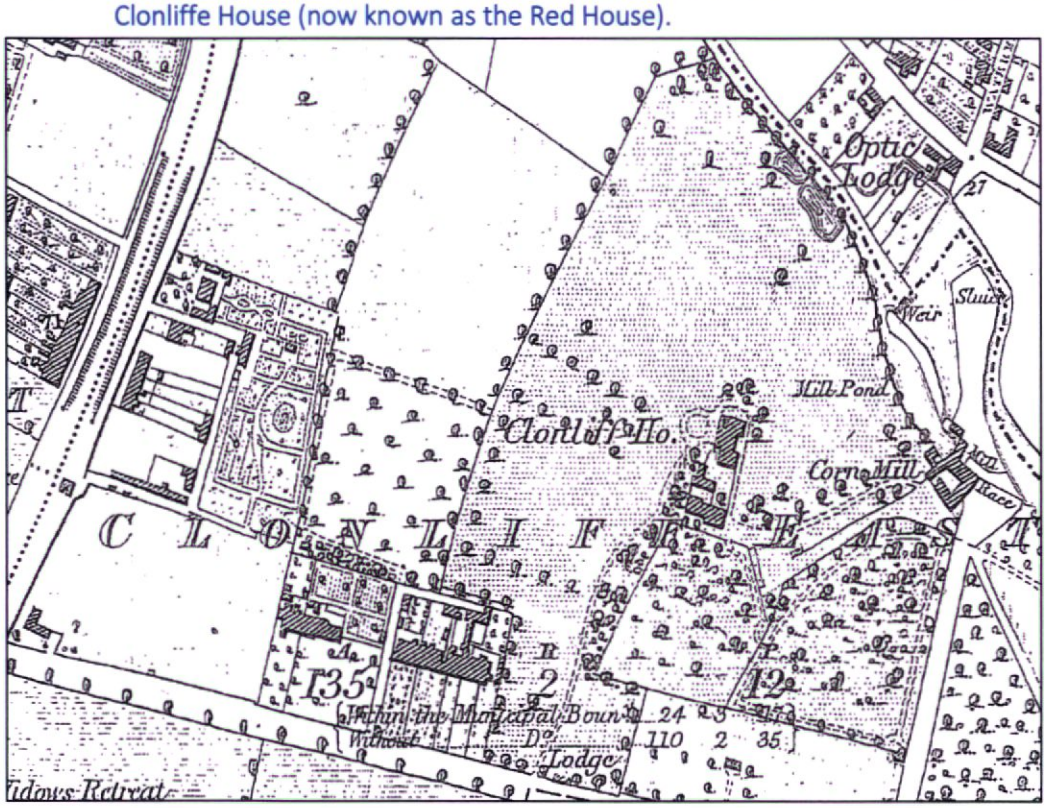
15.3.1.1 Phase 1 Acquisition of Clonliffe Site including Clonliffe House

The lands of Holy Cross College, Clonliffe Road, historically formed part of the Grange of Clonliffe, owned by the Cistercian order of St. Mary's Abbey. Following the Dissolution of the Monasteries in 1539, the lands were granted to the Desmonds, and later passed to the Moores of Drogheda. In 1729 the estate was purchased by the Gardiner family.

The lands were acquired by Archbishop Paul Cullen from 1858, with the intention to open a diocesan seminary. The seminary was housed within the Red House until the construction of the Main Block c. 1860. The development of the site continued throughout the late 19th and early-mid 20th centuries. The site remains in use by the Diocese of Dublin to the present, with the seminary duties suspended c. 2001.

The original curtilage of the Red House, formerly known as Clonliffe House, was defined by the boundaries of the original estate, owned by Frederick Edward Jones. The extent of the lands included in this definition of curtilage can be seen in figure 15.2 below, an extract from the 1837-43 Ordnance Survey map.

Figure 15.2 Hatching on OS 1837-43 gives an indication of the boundaries of the lands associated with Clonliffe House (now known as the Red House).



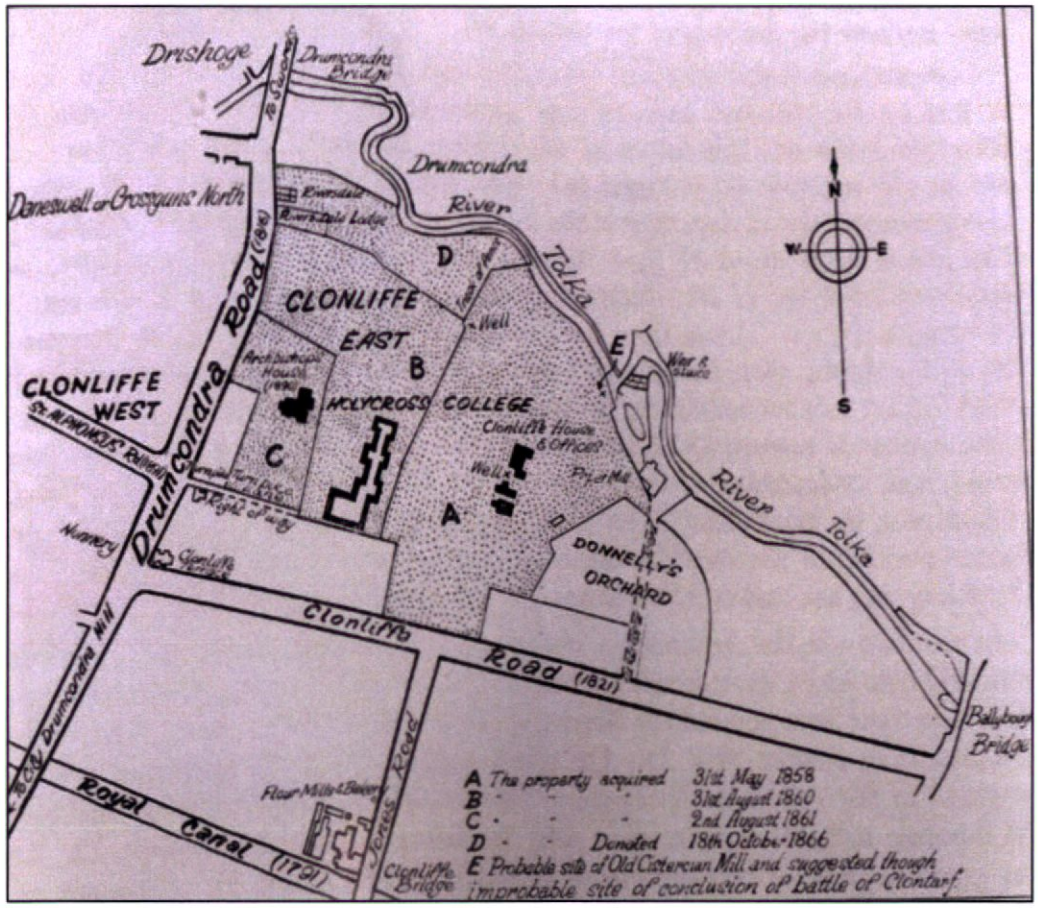
Clonliffe House and its lands were purchased by Dr. Cullen in 1858, and the Diocesan College was established in the existing house. The description of the sale notes that there were extensive offices on the grounds, as well as a large garden and pleasure grounds. The 1st edition OS Map (see the figure 15.2 above) shows the ancillary office buildings to the south of the house.

Throughout the 1860s, Dr. Cullen set about acquiring adjoining lands and properties, so as to enable the expansion of the College. The series of acquisitions is illustrated in the figure 15.3 below. It is clear from this diagram that the original curtilage of Clonliffe House formed a large part of the College Lands, with later acquisitions located to the west along Drumcondra Road.

The first addition to the College lands was the lease, in August 1860, of eleven statute acres from the estate of the Earl of Blessington. This was the section lying between the existing land holding ('A' on the below map) and the Drumcondra Road, labelled 'B' on the below map. In August 1861, Dr. Cullen purchased a further land holding along the Drumcondra Road from the Landed Estates Court. This

section, labelled 'C' on the below map, is the land on which the Archbishop's House now stands. Finally, in October 1866, a further five acres were donated to Dr. Cullen by a Miss Lucy Cahill. This section, labelled 'D' on the below map, was to the north of the existing holdings, along the Drumcondra Road, and took in Riversdale House and the present exit from the College Grounds in this area.

Figure 15.3 Map showing the series of acquisitions made in the 1850s and 1860s, resulting in the extensive grounds of Holy Cross College today. From R. Sherry, 'Holy Cross College, Clonliffe, 1859-1959'.



15.3.1.2 Phase 2 – The Main College Building (1863) by John Bourke & Holy Cross Church (College Chapel) by JJ McCarthy

The mid-19th century constructions are the most significant architecture on the site and comprise three of the five Protected Structures. They include the Main College Building (1863) by John Bourke (a Protected Structure) and Holy Cross Church and South Link to the seminary (both Protected Structures) by JJ McCarthy. With the construction of these large buildings located in the western section of the College lands, the focal point of the site shifted away from Clonliffe House (now the Red House).

A relationship between the house and the later College buildings was maintained, and in the 1875 Ordnance Survey map (below), a path linking the two buildings is shown. This path survives to the present, lined with trees. A 1947 aerial photograph of the College shows the line of this path, and the relationship between Clonliffe House and the Main Seminary. This line of trees effectively splits the site

into two sections, the northern section in open fields, and the southern section, which contains the buildings, formal gardens and entrance avenue.

Figure 15.4 Extract from the 1875-89 Ordnance Survey Map showing the extents of the college land at this time.

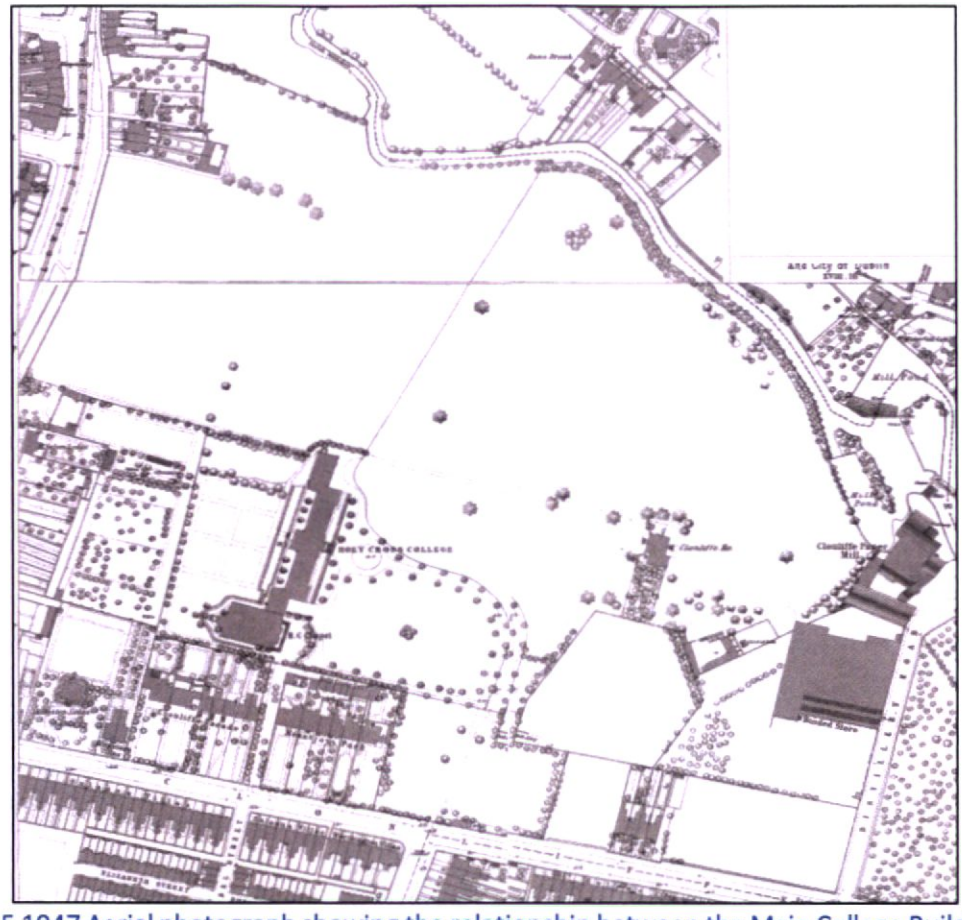
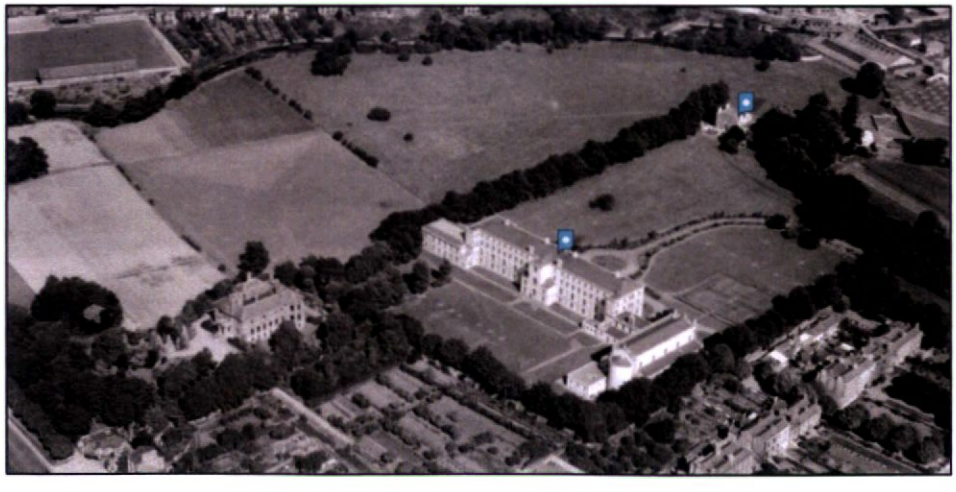


Figure 15.5 1947 Aerial photograph showing the relationship between the Main College Building (1863) and the earlier Clonliffe House. BFA XAW009782.



15.3.1.3 Phase 3 – Archbishop's House 1889

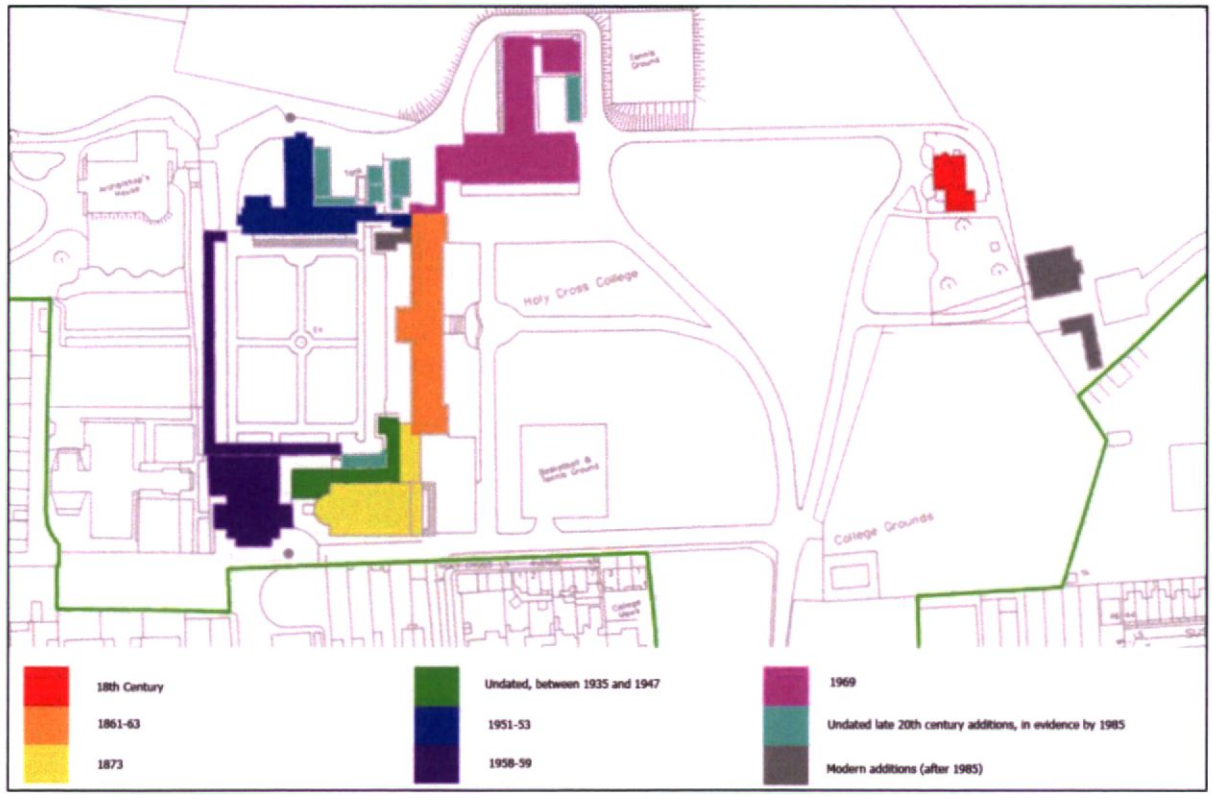
Although it lies outside of the subject site and is designed to be visually and physically separated from it, Archbishop's House, is nevertheless an important part of the overall ecclesiastical complex. It was constructed c. 1889 and sits in its own gardens, and there is a boundary wall between the College and the Archbishop's House. The House and its grounds are considered to be outside of the curtilage of Clonliffe House or the College Buildings, although prior to the construction of the Archbishop's House the lands would have been part of the curtilage of the College buildings.

15.3.1.4 Phase 4 – 1950s & 1960s Additions to the Site

The late-20th Century phase of development comprised significant amounts of demolition to the original seminary with Bourke's original interiors lost in their entirety (see figure 15.6) and the original library to the north demolished in its entirety also. In addition to these demolitions, a number of buildings were constructed in order to accommodate the growth in number of new seminarians attending the college. These include the Assembly Hall and Ambulatory (both Protected Structures) which form the cloistered setting to the rear (west) of the original seminary along with the New Wing and Library Extension (both deliberately omitted from the inscription).

The evolution of the buildings and ancillary structures on site is shown on the keyed diagram below. The information in this diagram is based on historic records, mapping and photographs.

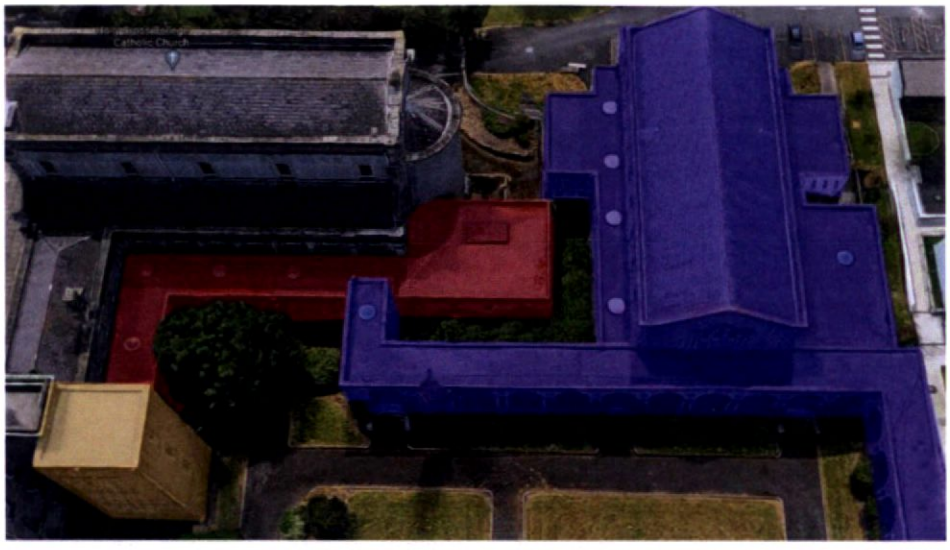
Figure 15.6 Diagram showing the fabric chronology of the site. Based on historic documentation, maps and historic photographs.



A number of extensions and additions to the rear setting of the South Link Building and the College Church have been constructed over the course of the 20th century, including the modern link corridor.

The chronology of development of structures in this area is illustrated in the diagram and coloured aerial photography above and below.

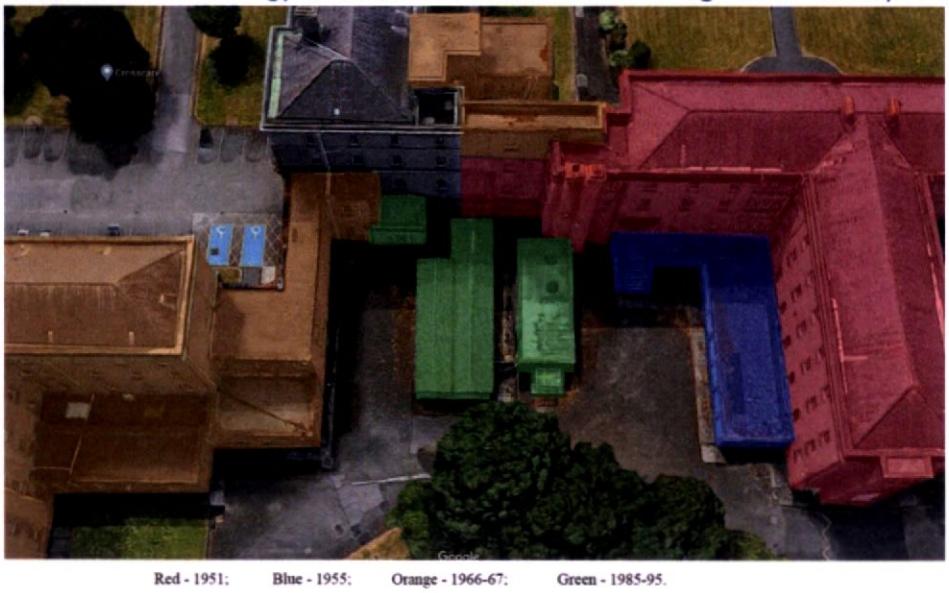
Figure 15.7 Detail fabric chronology of the area to the rear of the South Link Building and College Church.



Red - 1942-44; Blue - 1959; Orange - 1966-67.

Similarly, there have been a number of extensions and additions to the northern end of the Main Seminary Block, between the New Wing and the Library Block.

Figure 15.8 Detail fabric chronology of the area between the New Wing and the Library Wing.



Red - 1951; Blue - 1955; Orange - 1966-67; Green - 1985-95.

Figure 15.9 Photograph showing the complete internal reconstruction of the Main Seminary Block in 1966. Note the new concrete frame at the base and the RSJs which abut the walls and ultimately require cladding in brick slips.



Internally, almost all of the fittings and features throughout the buildings on site date from the 20th century phase of demolition and extension. The interiors of each building will be considered on an individual basis in the sections that follow.

15.4 Description of the Receiving Environment

The subject site is a large, former-ecclesiastical site to the North of Clonliffe Road. There is a range of buildings on site, dating from late-18th century up to mid-20th century. A brief account of the history of each of these buildings is provided below along with descriptions of exteriors and interiors. Please refer to the Architectural Heritage Impact Assessment which includes a comprehensive room-by-room photo record of all of the buildings on within the subject site.

15.4.1.1 The Main College Building 1863 (John Bourke's Original Seminary Building

This building is a Protected Structure, DCC RPS Ref. No. 1901.

Outline Historical Development of the Main College Building (1853)

This building was the first of the College buildings to be constructed. It was begun in 1860, to designs by the prominent Irish architect John Bourke, who had recently designed the Mater Misericordiae Hospital in Dublin.

An account in the Builder in 1861 notes that:

"The building will be two hundred and seventy feet in length, four storeys high, - the first, half sunk, will contain culinary offices, stores, refectory and prayer hall. A corridor twelve feet wide will traverse the entire length of the first and second storeys. Opposite the entrance hall are the principle stairs. On either side are the reception rooms with library and study hall. The top two storeys will contain a central corridor traversing the entire length, together with suites of apartments for a staff of professors, private rooms for advanced students, four large sitting rooms, and seventy-two bedrooms for junior students. Massive limestone cornices will surmount the entire building, the style of which will be Italian. It is said that it will not be perfect until there shall be erected in connection with it a great hall and Church, the latter to serve also as a place of worship for the inhabitants of Drumcondra and the surrounding district."

No record of any internal alterations was found until the College Fire of 1904. The fire broke out in January, 1904, in a reading room library on the ground floor of the main building. Sherry details the extent of damage in his 1959 book 'Holy Cross College, Clonliffe, 1859-1959':

"The fire occurred in what was then a reading room and auxiliary library, now the senior billiard room on the ground floor. The timber and books were ready and ample fuel, and the heat was so intense that the tiles in the corridor outside were warped. Extensive damage was done to the ceiling and floor and the renovation cost £200.

A small fire is also noted in January 1905, in the first division camerata, which is said to have spread to the ceiling of the junior study hall below.

Central heating and electric lighting were installed in 1909.

An inspection of the building in 1956 revealed extensive dry tor and woodworm, and the architect's advice at this time was for the building to be completely reconstructed internally, with all of the timber structure to be replaced with steel and concrete. It was estimated at this time that the works would cost about £200,000.

Newspaper articles in the late 1960s refer to the fundraising campaign undertaken by the church to fund this reconstruction, which was carried out c. 1966. In 1973, the Irish Times notes in an article on Bishop

Carroll that "in recent years, [he] supervised the reconstruction of the College, and also the construction of the new building for the Mater Dei Institute in Clonliffe".

Description - Exterior

The subject building is a multi-bay three-storey-over-raised-basement rendered 19th century building. The central and end bays of the front façade project forward from the building line. There is a central flight of steps to the main entrance, which has a projecting single-storey granite porch.

There is a central return to the rear elevation, and modern rear toilet block extensions to the northern and southern ends of the elevation. There is a pitched slate roof and rendered chimney stacks at roof level.

Description - Interior

The interiors of this building are considered to be of minimal architectural, historic or other significance, due to the extensive internal remodelling undertaken in the mid/late 20th century. Features such as the brick arches at the circulation corridors at Basement and Ground Floor Levels appear to date from this time.

Figure 15.10 View of the late 20th century brick 'arches' at Ground Floor Level of the Main Seminary Building (1863). The floors above and below are constructed in and supported by a steel and concrete frame. The brick visible here is a cladding which conceals the 1960s RSJs that intruded into Bourke's original corridor space. These represent a 1960s cladding and support no loads.



It appears that all windows in this building are modern replacement timber sash windows. The fabric represents a good quality replica however and the significance of these windows - lying in their contribution to the external appearance and historic architectural character of the Main Seminary Block – is retained.

Figure 15.11 Detail view of the decorative crest in upper floor of the seminary. Features such as the decorative insignia in the floor at upper levels appear to date from the late-20th century, and are considered to be of minimal artistic interest.



15.4.1.2 Holy Cross Church by JJ McCarthy (Referred to as College Chapel by the NIAH)

This building is a Protected Structure, DCC RPS Ref. No. 1901.

Outline Historical Development of Holy Cross Church/the College Chapel

The Chapel at Holy Cross College was designed c. 1872, by renowned 19th century Irish architect J. J. McCarthy, and was modelled on Santa Francesca Romana, in the Roman Forum. The interior of the College Church was initially modelled on the interior of Santa Agata dei Goti, in Rome. The models for this church were chosen by request of Cardinal Cullen.

Figure 15.12 Photo of the interior of S. Agata dei Goti, Rome. Photo from flickr.com.



The Church of S. Agata dei Goti was attached to an Irish college for the education of priests in Rome. The Church was partially rebuilt in 1633. The interior was redecorated in the Baroque style, and also has some 19th century additions. In 1847, the church became the final resting place for Daniel O'Connell's heart.

The construction of the new Chapel was begun in 1873. Sherry notes that:

"Wages per day ranged from 2/8 for an unskilled labourer to 6/- for a tradesman, and the total cost of the Church and library wing exceeded £23,000. The stone was granite from Ballyknockan, Co. Wicklow, and Calp limestone from the quarries at Finglas. The eight paintings in the clerestory, and the Stations of the Cross are the work of the Roman painter Francesco Gagliardi, who was commissioned to decorate the Council Chamber in St. Peter's Basilica for the Vatican Council of 1869-70. The bas-reliefs in the side altars were gifts of Pius IX to Cardinal Cullen. The Church of the Holy Cross and of the Sacred Heart was opened on the feat of the Exaltation of the Holy Cross, 14th September, 1876."

A description of the original interior of the church at Holy Cross College, from 'Holy Cross Clonliffe 1859-1959' reads:

"The nave was separated from the aisles by seven bays of semi-circular arches, which were supported on pillars of polished red Jura marble, with Ionic capitals and bases of white Sicilian marble, and sub-plinths of black Galway marble. The entablature was also Ionic. It was hoped later to replace the plain pilasters in the apse and aisles with coloured marbles but this was never carried out. (The semi-circular arches of the side walls of the aisles have lunette windows. The arms of Cardinal Cullen are reproduced in stone above the main entrance of the church on the inside. Higher up on the wall the arms of the Cardinal are carved on wood in high relief. Underneath the arms is a heart surrounded by thorns representing the sacred heart. This was the secondary titular selected for the church, in commemoration of the solemn dedication of Ireland to the sacred heart in 1873, when the building of the Church began.) The Stations of the Cross and the eight paintings around the clerestory were the work of the Roman painter Francesco Gagliardi. Over the arch of the apse there are pictures of St. Peter and St. Andrew with

their crosses. The high altar, which has since been replaced, was the work of Luigi Medici, a Roman craftsman. The two side altars were decorated with bas-reliefs, gits of Pius IX to Cardinal Cullen.

... the beautiful crucifix, containing a relic of the True Cross, which was given by Pius IX to the Cardinal, and which is now kept in an ornamental reliquary over the altar of the Holy Cross. This crucifix, of exquisite Spanish workmanship, and formerly a gift of Queen Isabella of Spain to the Pope, is one of the most treasured possessions of the college... The confessionals were carved to represent the front of the church in miniature. The organ in the gallery, built by John White of 72 York Street, well-known organ builders in those days, was the gift of Dr. Verdon.

In one corner of the vestibule stands a marble statue of Pius IX by Matteini, which Cardinal Cullen bought for the church... The statue of Cardinal Cullen by Thomas Farrell which occupies the other corner of the vestibule was commissioned in 1879 and completed in 1881..."

Cardinal Cullen died in 1878, and the small vault underneath the apse of the church became his final resting place. The vault was decorated in his honour, with the works paid for by Dr McCabe. The architect for these works is unknown.

A new sacristy was constructed adjacent to the sanctuary in 1942-44. This was a return to the original site for a sacristy as planned by the architect J. J. McCarthy in 1873. The new Sacristy was designed by architects Jones & Kelly. The new sacristy connected into the rear of the sanctuary by a door broken through the apse wall. The new sacristy with its adjoining work rooms and fittings cost just over £3,800.

Figure 15.13 A 1959 view of the interior of the tomb of Cardinal Cullen, and current view of the entrance to this tomb. A 1940 internal photograph from the Irish Press shows the layout of the church at this time.

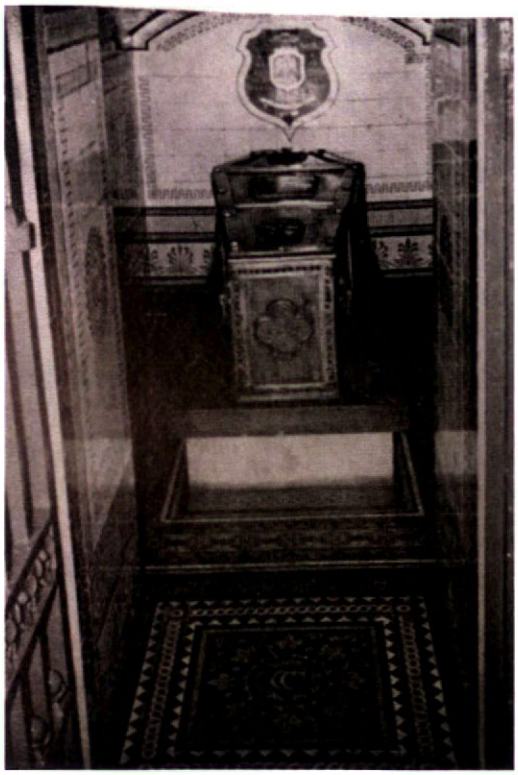
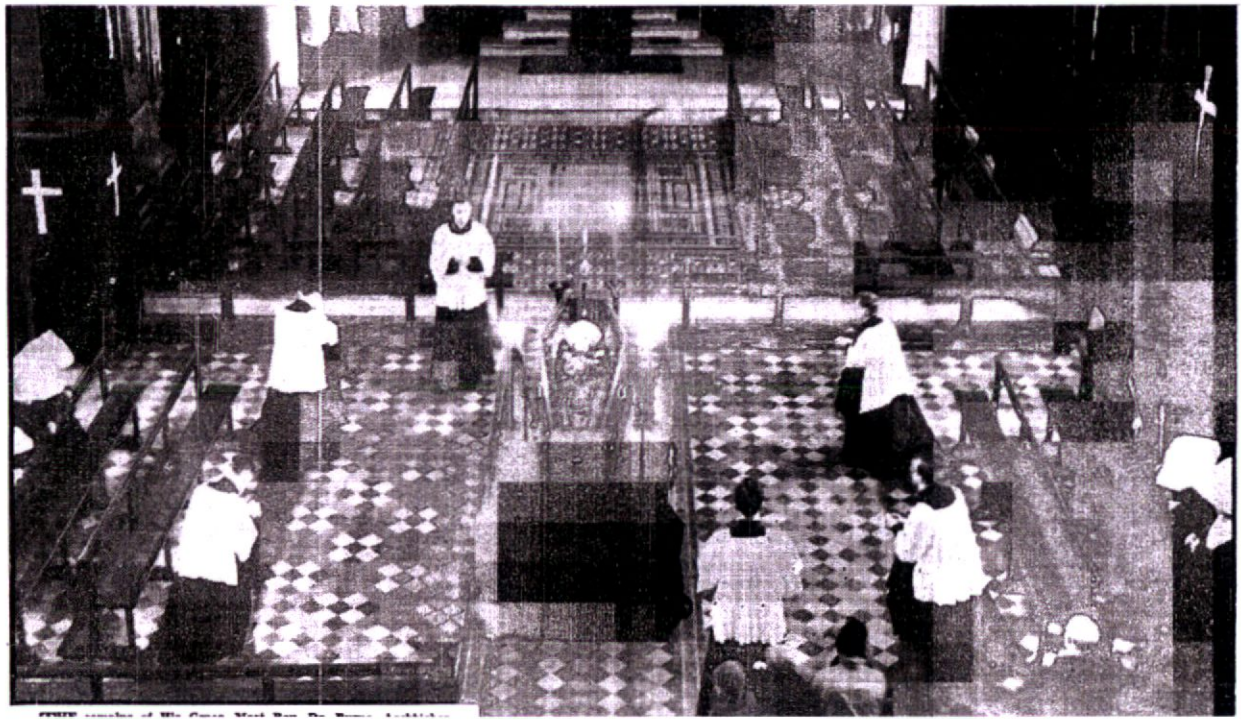




Figure 15.14 1940 Internal view of the Chapel, at the lying in state of Archbishop Byrne. Irish Press, February 12th, 1940.



Internal renovations carried out in 1943 are recorded in 'Holy Cross College, Clonliffe, 1859-1959':

"In 1943 the apse of the church was considerably renovated. The three huge paintings – so clear in the Jubilee photographs of 1909 – were removed. A new chancel floor of Irish white and Connemara green marble was laid. A new altar was built by Messrs CW Harrison; the steps, mensa and tabernacle were white statuary Italian marble and the front of the altar was cipollino quartered. A ciborium of four Connemara-green marble columns with Corinthian-type capitals was erected over the altar; the bases were in black moulded marble. (The ciborium was built around a steel frame costing £250, supplied and fixed by Messrs J and C McGloughlin, Dublin). These changes were completed by the summer of 1944 and cost approximately £2,500."

Figure 15.15 1959 view of the interior of the Chapel, showing the mid-20th century alterations, and Existing view of the nave of the chapel.



A comparison between the 1959 interior view, above, and the existing interior of the church, highlights some alterations. These include the loss of the paintings hanging at clerestory and the installation of new fittings, such as the new Chancel screen.

No historical record of any further alterations to the interiors of the Chapel has been found in the course of the preparation of this report.

Description - Interior

A brief description of the interior of the subject building, outlining the extent or surviving original material, and any features which are of significance, is provided below.

The Chapel is in the Italianate style, and was modelled on the Church of S. Francesca Romana externally, and the Church of S. Agata dei Goti internally, as detailed above.

The interior of the Chapel is comprised of a nave terminating in an apse, with side aisles terminating in side altars. There are seven bays of semi-circular arches resting on red Jura marble pillars separating the nave and the side aisles. The pillars have Ionic capitals and are surmounted by an Ionic entablature, which continues around the nave, sanctuary, and apse. The clerestory walls, rising above this entablature, contain five six-over-six timber sash windows on either side. There is an organ gallery on the western wall of the church, over the entrance vestibule. The floor of the nave is laid with encaustic tiles, with a raised marble floor to the chancel. The ceiling of the nave is wood panelled and painted in gold and red.

The outer walls of the side aisles are divided into bays by projecting pilasters, corresponding with the bays of the nave. There is a Diocletian window in each of these bays. The ceilings of the side aisles are groin vaulted. There are marble side altars in the apse terminating each side aisle, gifted by the Pope.

A number of the original fittings and features have been lost due to the interventions and alterations carried out over the years. The significance of the remaining fitting and fixtures will be assessed below.

Figure 15.16 Photograph of the Centenary Sermon, 1959, showing the interior of the Chapel.



Figure 15.16 above shows several pieces of Chapel furniture which are no longer extant in the Chapel today. These include the carved timber pews, the pulpit, and prie-dieu. The light fittings visible in the side aisle in this photograph have been replaced with modern pendant lights. The framed paintings representing the Stations of the Cross survive today, as does the marble flooring to the chancel area. An organ is also visible to the rear of the photograph. This organ is now located in the upper floor of the Southern Link Building, which connects the seminary to the Chapel.

Figure 15.17 View of the organ shown in Figure 15.16, now located in the Southern Link Building (a Protected Structure).



The secondary organ, now located in the Southern Link Building, has been moved from its previous location in the southern side aisle of the Chapel. The organ cannot be considered to contribute to the character of the Chapel today. It is nonetheless considered to be a significant piece, and will be salvaged for re-use.

Figure 15.18 Photographs showing the encaustic tile flooring.



The encaustic tile flooring of the building is an original feature, and contributes significantly to the character of the space. The tiles are considered to be a significant element of the building and will be retained in situ. The cast-iron radiators, visible in Figure 15.18, are non-original and their removal would have a positive impact on the character of the interior.

The marble side altars contain marble altarpieces, which are recorded as being gifts from Pope Pius IX to Cardinal Cullen at the time of construction of the Chapel. The artist responsible for these altars is not known. These are significant features of the Chapel, as they are among the few surviving original fittings. They are considered to be of artistic significance and will be retained in situ.

Figure 15.19 View of altar and marble ciborium.



The Connemara and Galway marble ciborium dates from the 1943 alterations to the apse. It appears that the Chapel did not originally have a ciborium, however this is a feature at the S. Agata dei Goti altar, and therfore the existing ciborium is in keeping with the historic architectural character of the Chapel. It is considered that the ciborium contributes to the architectural character of the interior, and will be retained in situ.

The original marble altar was replaced in 1943. It appears, from comparison with a 1959 photograph, that the existing marble altar may be a later replacement, or has been altered from its 1943 appearance. The altar is therefore a non-original feature of the Chapel. It is not considered to make a significant contribution to the character of the Chapel. The removal of the altar by the Chapel, for re-use elsewhere, is considered to be an appropriate intervention.

Figure 15.20 Coat of arms above the entrance door; Organ in gallery and Central painted glass window to the organ gallery.



The coat of arms above the entrance door are recorded as being of the Cullen family, for Archbishop Cullen. The Latin script 'Ponit Animam Pro Amicis' translates to "For those I love I sacrifice". There was previously a second Cullen coat of arms, carved in timber, at the organ gallery. This is no longer extant today. This coat of arms is considered to be of artistic interest, and to contribute to the architectural character of the interior of the Chapel. The coat of arms will be retained in situ.

The organ, located in the gallery at the western end of the Chapel, is in two parts. The organ is an original feature of the Chapel and was built by John White of 72 York Street. The organ was gifted to the College by Dr. Verdon. The organ, and its gallery, are significant architectural features of the Chapel. The organ is of architectural, artistic and historic significance and will be retained in situ.

The window between the two parts of the organ in the raised organ gallery is a painted glass window showing a central crucifix and decorative borders around the edges. This window is considered to be of artistic interest, and to contribute to the architectural character of the interior of the Chapel. The window will be retained in situ.

Figure 15.21 View of the panelled timber ceiling to the nave of the Chapel.



The decorative carved and painted timber panelled ceiling to the nave of the Chapel is an original feature. The artist or craftsman responsible for the work is not known. The ceiling is of architectural and artistic significance and contributes significantly to the character of the interior. There will be no alterations to the ceiling.

Figure 15.22 Internal timber entrance porch and timber confessional box.





It appears that the timber entrance porches to the side aisles are original features. They make minimal contribution to the architectural character of the building.

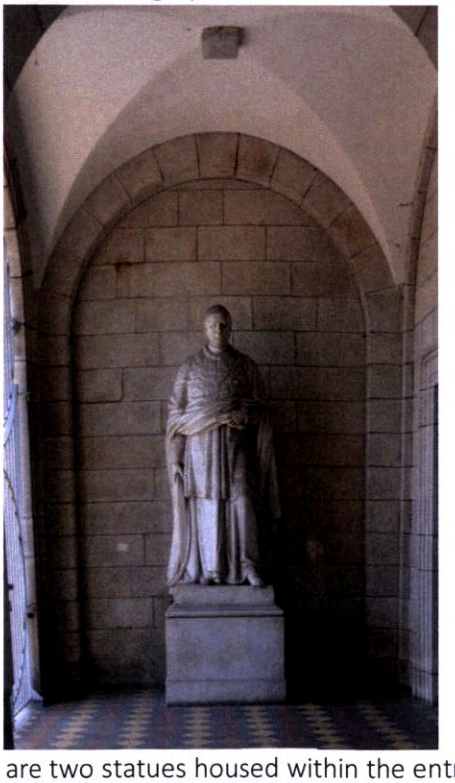
It appears that the confessional boxes are original features of the building, as it is recorded that they were carved to represent the front of the chapel in miniature. The confessionals are therefore tied to the specific context of this Chapel, and will be retained and re-used within the Chapel.

Figure 15.23 Photograph of the existing (replacement) timber pews in the Chapel.



The pews in the Chapel today appear to be crude later replacements, and do not match the pews visible in a 1959 photograph of the nave from above (Figure 15.23). The pews are not original and are not of any architectural, historic, artistic, or other significance in and of themselves. The pews do not contribute to the architectural character of the space.

Figure 15.24 Photographs of the two statues within the entrance vestibule of the Chapel.





There are two statues housed within the entrance vestibule on the western end of the Chapel. To the left, there is a statue of Cardinal Cullen, by Thomas Cullen. This statue was completed in 1881. To the right, there is a marble statue of Pope Pius IX, by Matteini, which is recorded as previously having been

located in the hall of the college. The statue was exhibited at the Dublin Exhibition in 1865, and purchased by Cardinal Cullen. The statues are of artistic significance and contribute to the architectural character of the vestibule. They will be retained in situ.

Figure 15.25 View of the Jura marble arcade between the nave and the side aisle, the Ionic entablature, clerestory, and pilaster arcade within the side aisles.



The red Jura marble pillars with black Galway marble bases, the Ionic entablature, and the pilasters and plasterwork to the side aisles and the western wall, are original features. These features contribute significantly to the architectural character of the interior of the Chapel and are of architectural significance. This includes the arch to the apse, and arches to apse at both side aisles. All of these features are integral to the architectural character and quality of the space, and will not be altered. Please see Tables later in Chapter which address potential impacts, mitigations and residual impacts.

Figure 15.26 View of the side aisle and Painting to the spandrel on the apse.





The two paintings over the arch of the apse are of St. Peter and St. Andrew. The artists of these works is not known. These paintings contribute to the architectural character of the interior of the Chapel and will be retained in situ.

Figure 15.27 View of a safe within the Sacristy and Carved timber architrave to the door linking the Chapel with the Seminary.





The safe within the mid-20th sacristy bears a plaque, inscribed 'Presented by the Students 1909'. 1909 was the year of the celebration of the college Jubilee. The safe is therefore of some historic significance.

The carved timber architrave and pediment to the doors on the northern wall of the side aisles are of architectural interest and contribute to the character of the Chapel. They will be retained in situ.

15.4.1.3 Original South Link Building by JJ McCarthy

This building is a Protected Structure, DCC RPS Ref. No. 1901.

Outline Historical Development of the South Link

This building appears to have been constructed alongside the Chapel, and was likely also designed by McCarthy. It connects the new Chapel into the Main Seminary block. Unlike Bourke's seminary, it was not shelled in the 1960s and, therefore, retains much of its internal original fabric.

Figure 15.28 Photograph c. 1909 showing the Main College Building (1863), Chapel, South Link building and Old Library Wing (now demolished)



Description – Exterior

This building is a two-storey five-bay rendered structure. There is a pitched slate roof and a central stone bell-tower at ridge level on the roof. There is a modern doorway at ground floor level. A modern link corridor to the College Chapel has been constructed against the rear of the South Link Building.

Description – Interior

Internal features of interest in this building include the original timber sash windows, decorative plasterwork at Room F.01, and the organ from the College Chapel.

15.4.1.4 The Assembly Hall

This building is a Protected Structure, DCC RPS Ref. No. 1901.

Outline Historical Development of the Assembly Hall

Figure 15.29 1951 Aerial Photograph of the subject site prior to the construction of the Assembly Hall. College History and Centenary Record, NLI 15B1104.

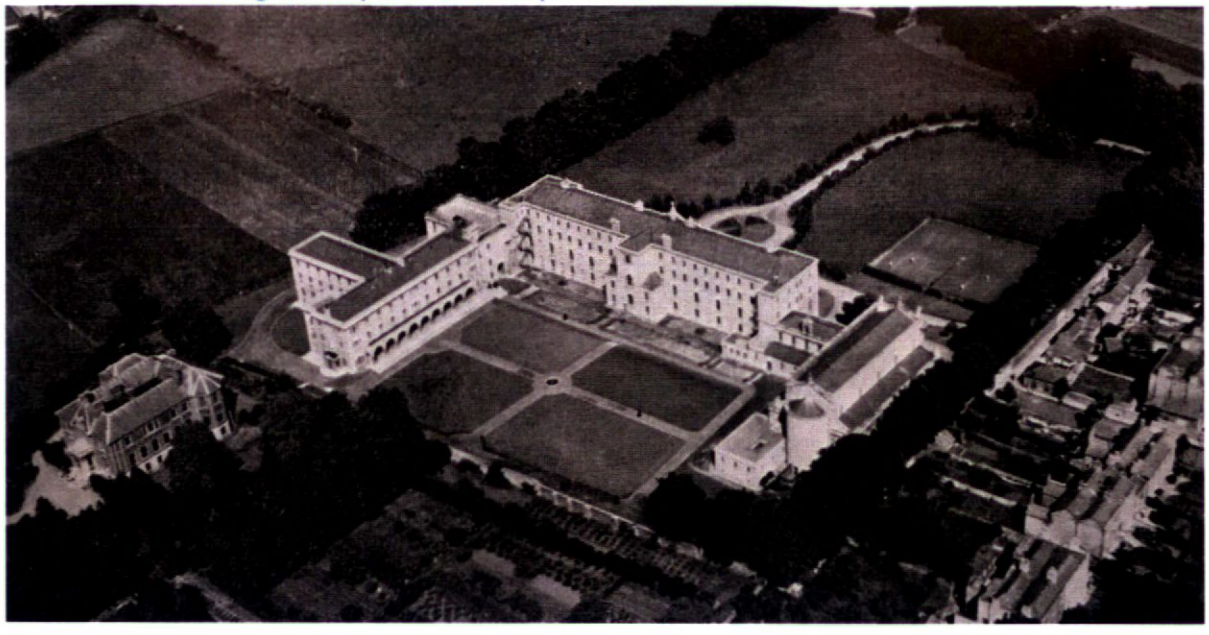
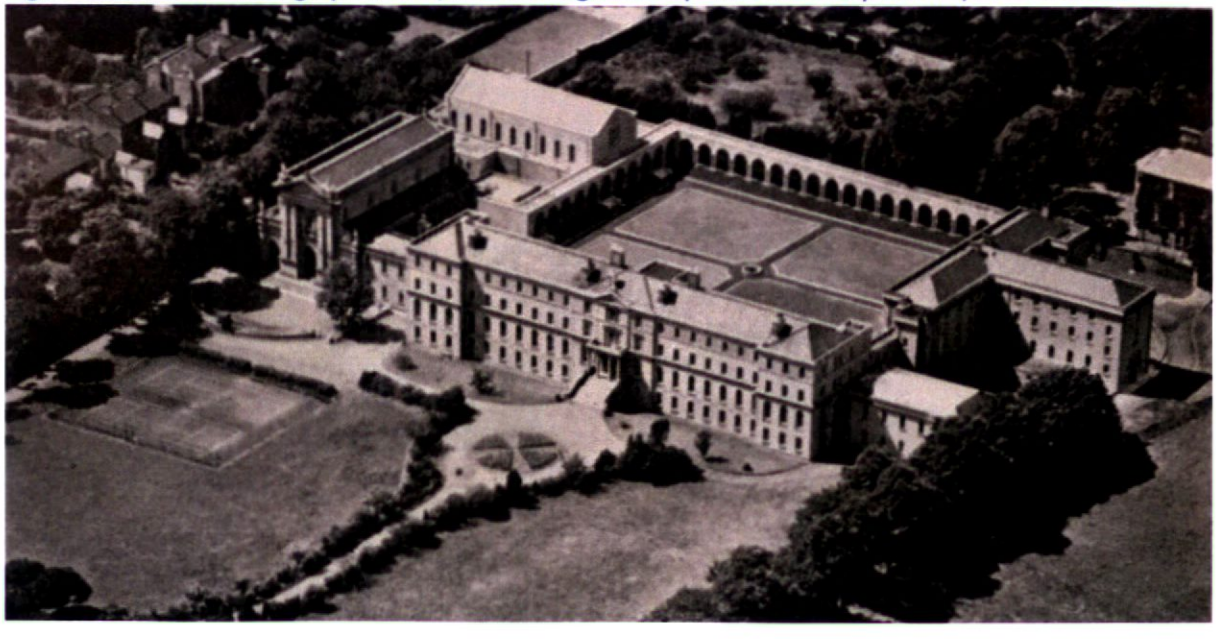


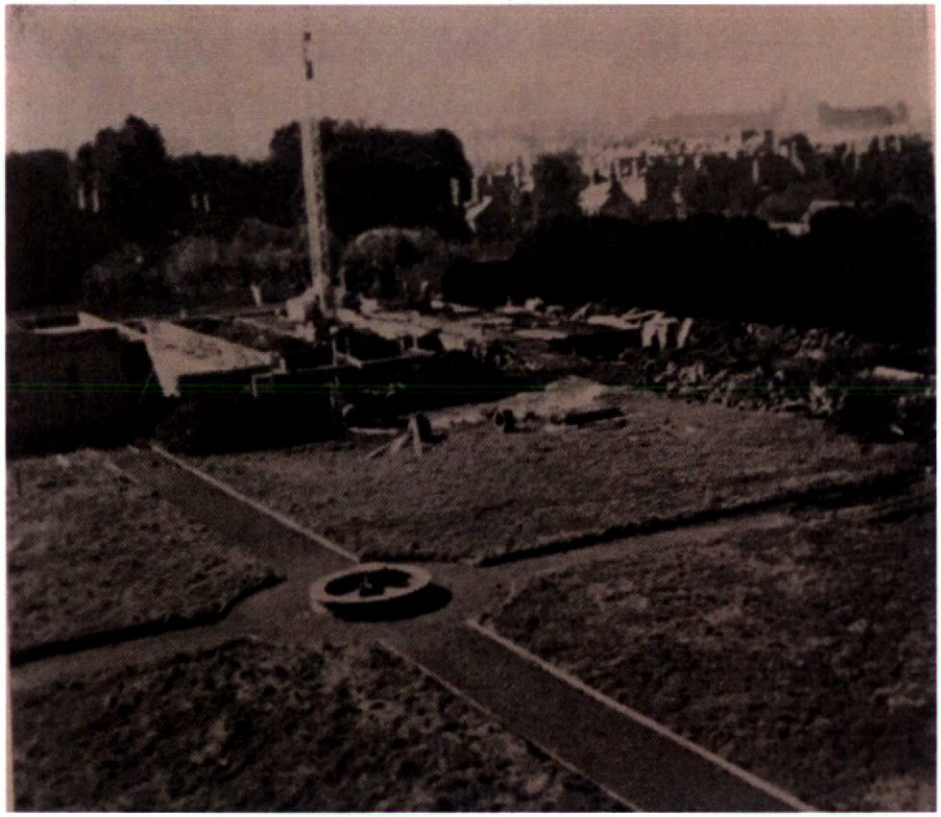
Figure 15.29 above shows an aerial view of the subject site prior to the construction of the Ambulatory and Assembly Hall. The photograph shows the rear elevation of the Main Seminary block, and the primary elevation of the 'New Wing'. The quadrangle to the rear of the Seminary block is shown in its current form, divided into four quadrants.

Figure 15.30 1959 Photograph of site, from College History and Centenary Record, NLI 15B1104.



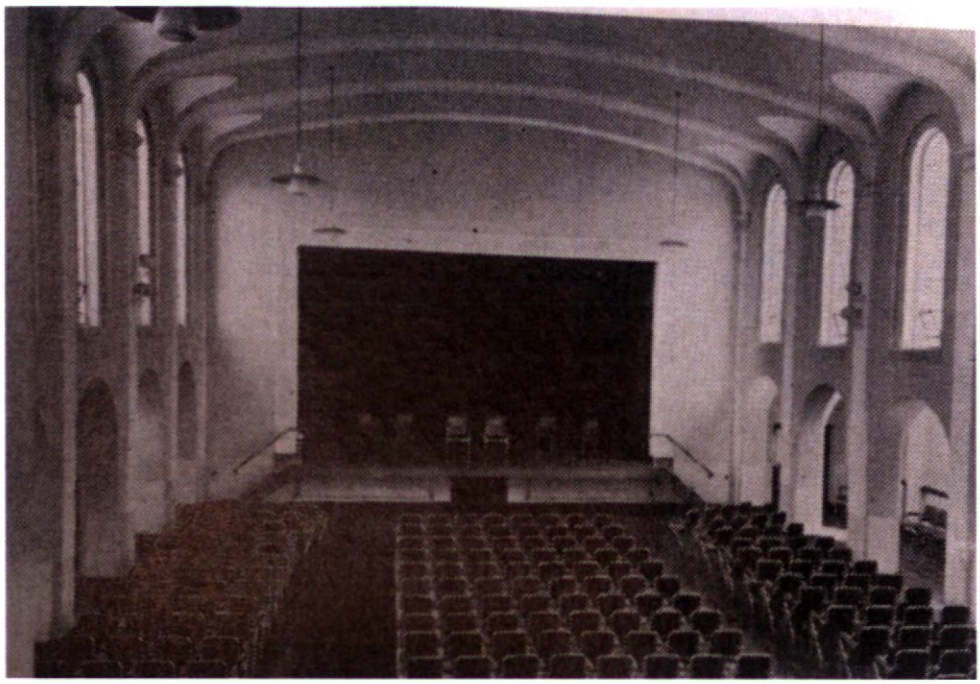
The Assembly Hall and Ambulatory to the southern and western sides of the quadrangle were constructed from 1958-59, to designs by Jones & Kelly Architects. Prior to this, the college assembly hall had been located in the 'New Wing'. This hall was converted to an oratory following the construction of the new Assembly Hall.

Figure 15.31 Photograph showing the construction of the new Assembly Hall to the south of the formal quadrangle to the rear of the seminary.



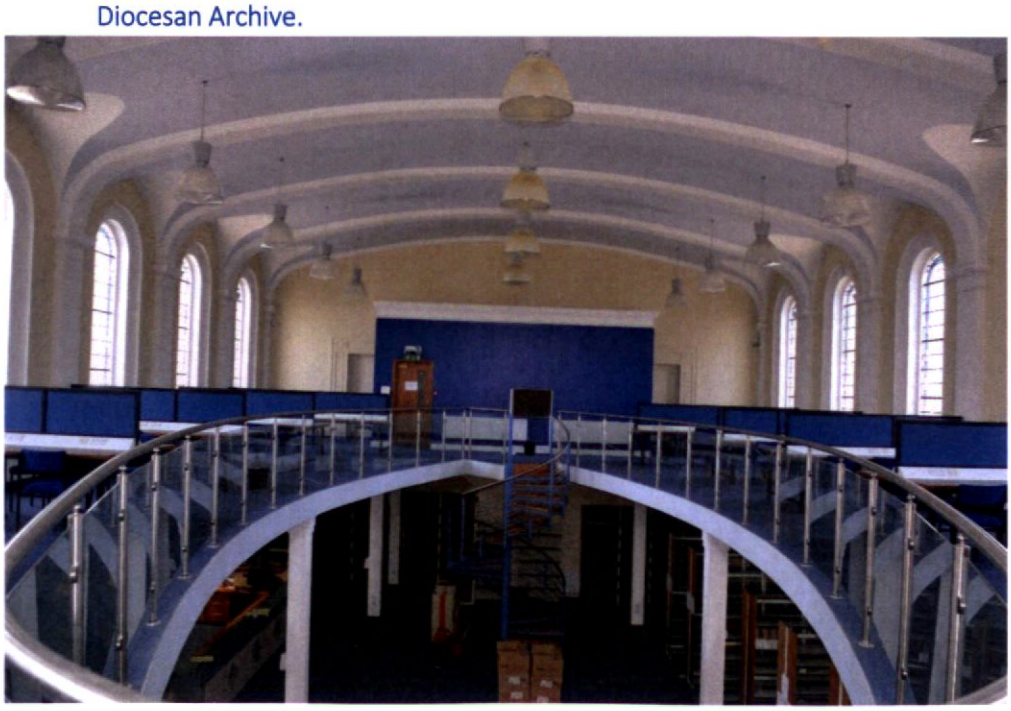
A new ambulatory was constructed at this time to provide shelter to students as they walked from building to building. The L-shaped ambulatory matched the design of the arcade on the southern elevation of the New Wing. This completed the formation of the College Quadrangle.

Figure 15.32 Historic internal photograph of the Assembly Hall. College History and Centenary Record, NLI 15B1104. This shows the quality of the interior prior to the addition of the mezzanine level.



A comparison between the historic internal photograph (undated, but appears to be c. 1959), and the existing interior show that extensive alterations have been carried out to the Assembly Hall. The original hall is shown to be a large double-height single-volume space, with side aisles delineated by arcades. There is a simple moulded proscenium to the stage on the northern wall.

Figure 15.33 Exiting internal view of the former Assembly Hall, currently used as a library for the Diocesan Archive.



A modern lightweight mezzanine floor has been inserted to the interior of the main space of the Assembly Hall. A new staircase has been constructed against the northern wall of the primary space, interrupting the original proscenium arch. The arch nevertheless survives behind this new stair hall (see below).

Figure 15.34 Internal photograph of the modern stairhall showing a surviving section of the original proscenium arch.



This proscenium arch is of architectural significance and the modern stairhall (and mezzanine) could be removed so that the arch become visible in the main space once again.

Description - Interior

A brief description of the interior of the subject building, outlining the extent or surviving original material, and any features which are of significance, is provided below.

The subject building is a two-storey multi-bay rendered structure with side aisles and a pitched roof. The primary entrance faces south towards Clonliffe Road, and there is a secondary smaller entrance facing north into the College Quadrangle.

The interior of the building is largely comprised of a large open-plan double-height space with a first floor mezzanine. There are ancillary rooms to the front and rear of this main space.

The main space is double-height, with a modern mezzanine level. There are side aisles at ground floor level, separated from the main space by an arcade of columns. There are roof-lights to the side aisles. There are tall round-headed multi-pane windows with coloured glass sections to the main space at mezzanine level. These windows are of architectural interest and contribute to the character of the space.

Figure 15.35 View of the mezzanine level showing the original multi-pane leaded glazing.



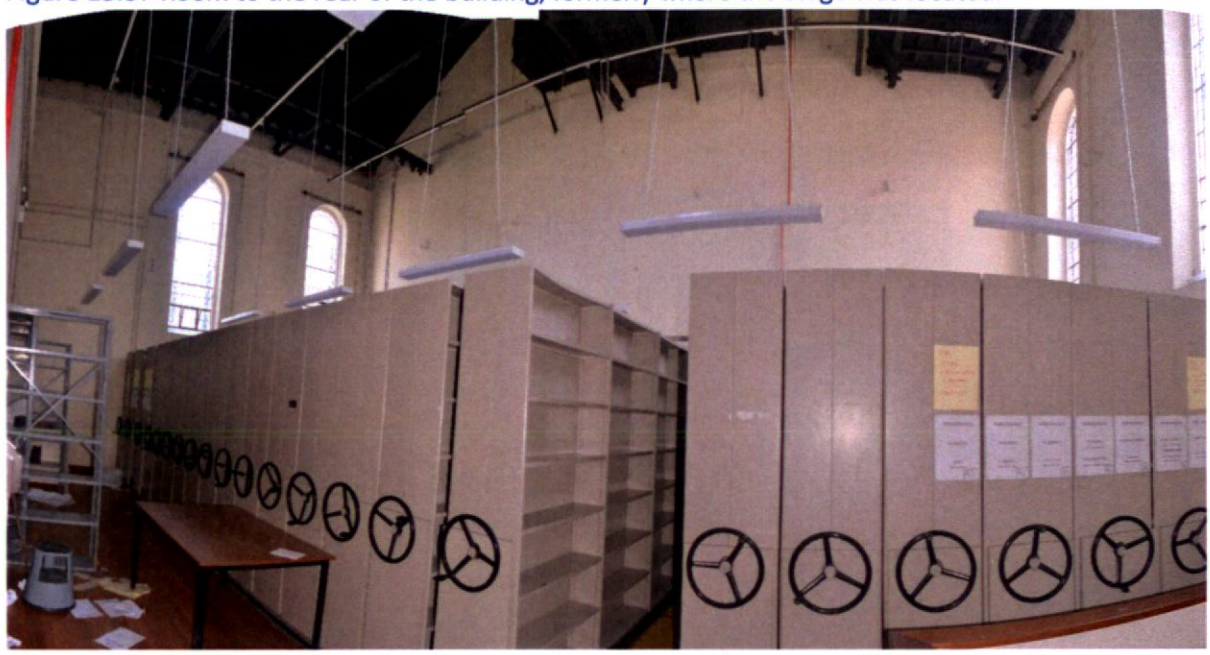
There is a staircase to the front (southern) section of the building, with a multi-pane sash window to match those in the main space. There are smaller round-headed windows to the front façade at first floor level, with central opening sections.

Figure 15.36 Front stair hall to the building.



The former back stage area to the rear is now in use as archival storage. This area is a double-height space with exposed timber roof structure. The windows to this space match those in the main space of the building.

Figure 15.37 Room to the rear of the building, formerly where the stage was located.



The interior of the Assembly Hall today is largely modern, and is not considered to be of any particular architectural or other significance. The date for these modern interventions is not known.

15.4.1.5 The 'New' Wing

This building is not included on the DCC Record of Protected Structures. The single-storey arcade facing directly onto the quadrangle has been clarified as forming part of the ambulatory Protected Structure and impacts are assessed in relation to the Ambulatory Protected Structure.

Outline Historical Development of the New Wing

This building is not included on the Record of Protected Structures. The current DCC Development Plan Map includes a red asterisk over this building, indicating Protected Structure status, however the building is not included in the description on the Record of Protected Structures and the red asterisk refers to the ambulatory which is a Protected Structure and returns south at the ground floor level of the building.

Figure 15.38 1947 Aerial Photograph of Subject Site, facing North-east. BFA XAW009782.

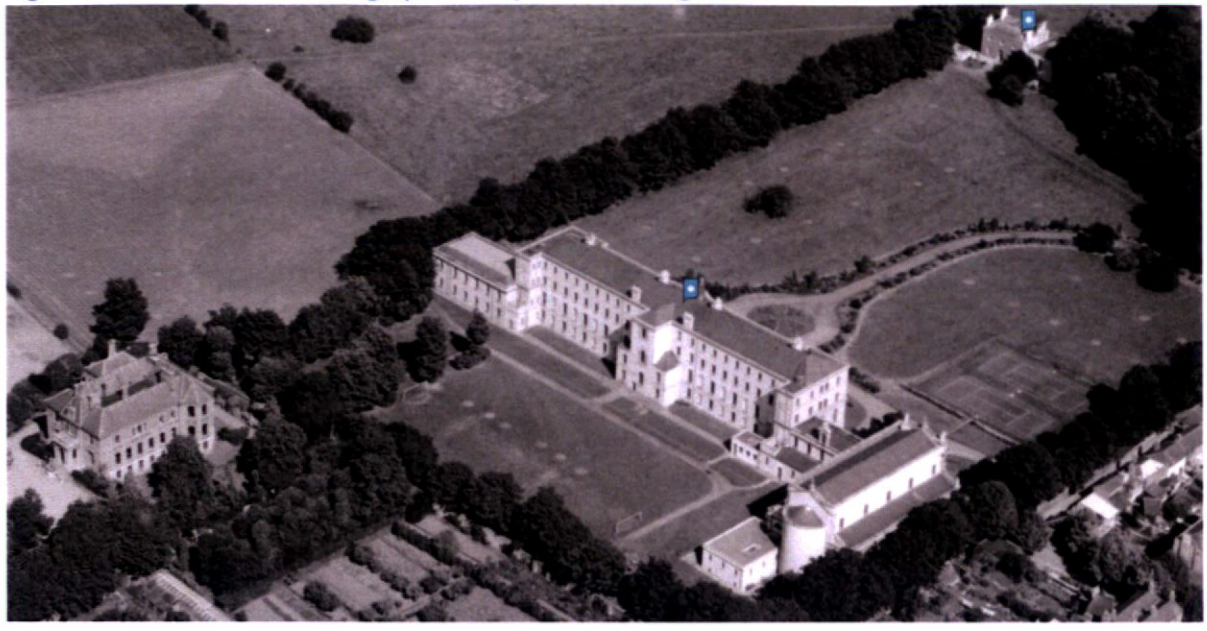


Figure 15.38 above shows an aerial view of the subject site prior to the construction of the New Wing. The main Seminary building, the Library wing (since replaced) and the Chapel are visible in the centre of the image, with the Red House in the top-right, and the Archbishop's House to the left.

Figure 15.39 1951 Aerial photograph of the subject site, from College History and Centenary Record, NLI 15B1104.

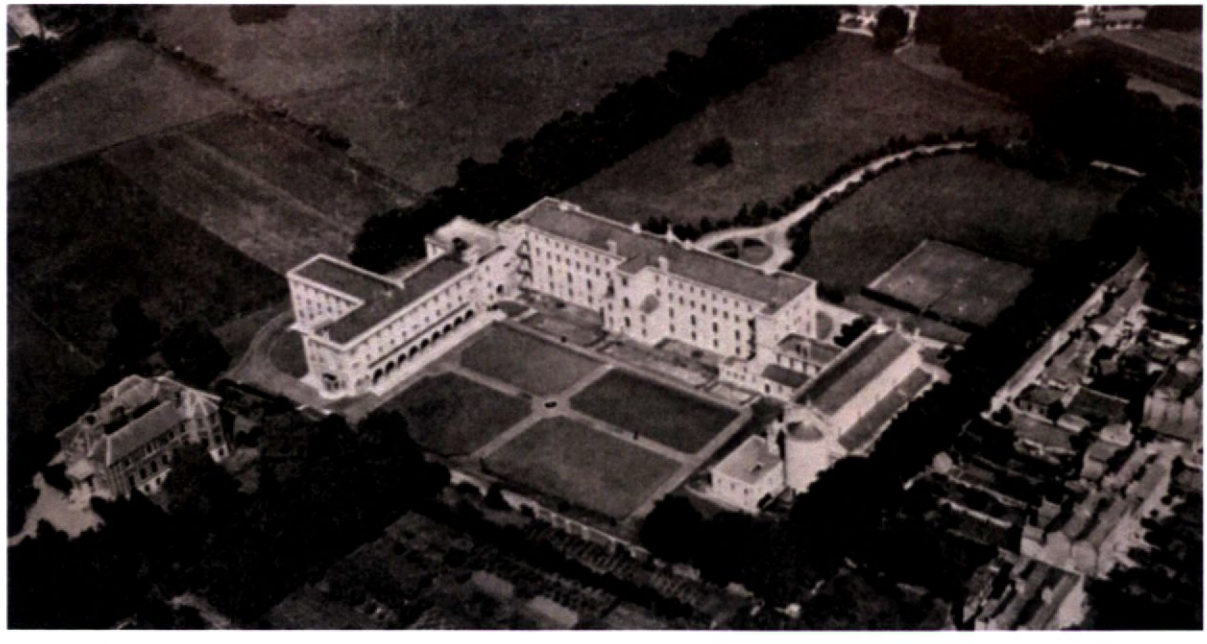
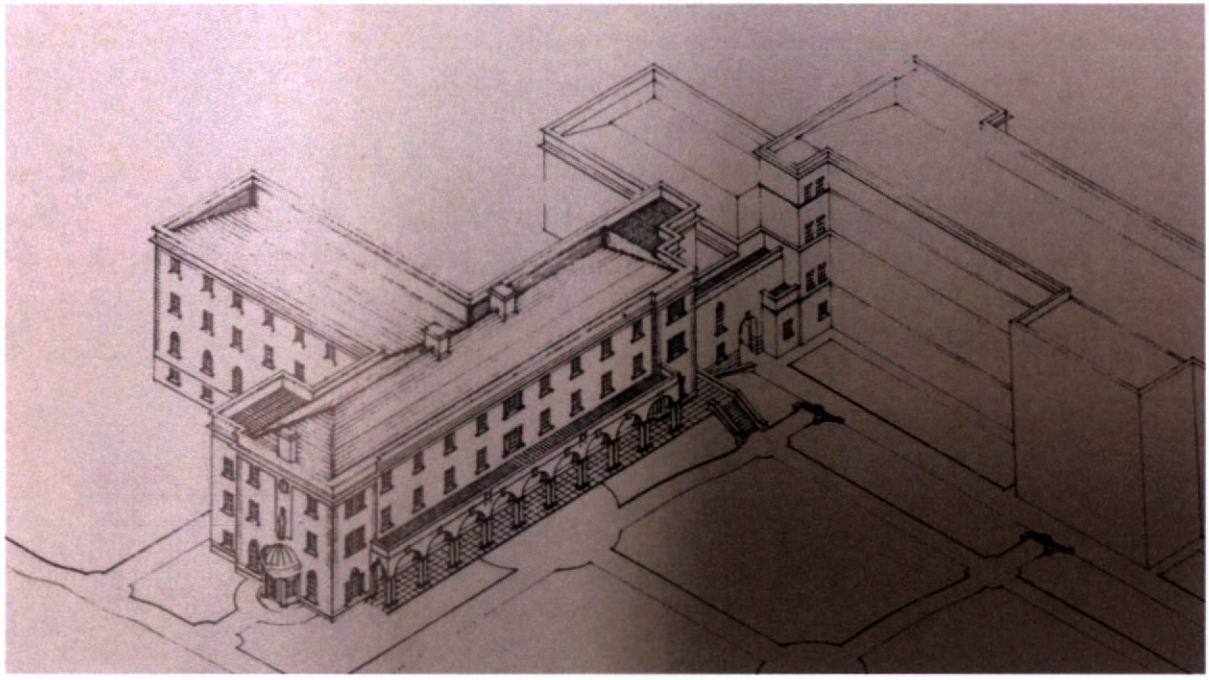


Figure 15.39 above shows a similar view to Figure 15.38, with the New Wing constructed by this time. It is a T-shaped wing, constructed at right-angles to the main Seminary building. Diocesan records show that the architect for the New Wing was Stanislaus Nevin, and that it was constructed at an estimated cost of £80,000 in 1950-51. The funds were raised through a broad appeal by the Archbishop and by Monsignor Boylan throughout all the parishes in the diocese.

The need for the New Wing was described by Boylan in his appeal:

"The foundation stone of the existing college of Clonliffe was laid in 1860. In that year – 90 years ago – there were 50 parishes and 250 secular priests in the diocese. It seemed likely then that a steady supply of 60 students would, for an indefinite period, amply suffice to provide priests for the diocese; and the college was built to house that number... There are now more than 640,000 Catholic in Dublin diocese – roughly twice as many as in 1860. There are 90 parishes, and nearly 450 secular priests... The college must be enlarged. There must be space for the residential accommodation of over 100 students, and for their devotional and academic exercises."

Figure 15.40 Architect's sketch of the New wing, dated 1950. Architect Stanislaus Nevin, from Holy Cross College, Clonliffe 1859-1959. NLI 1B2417.

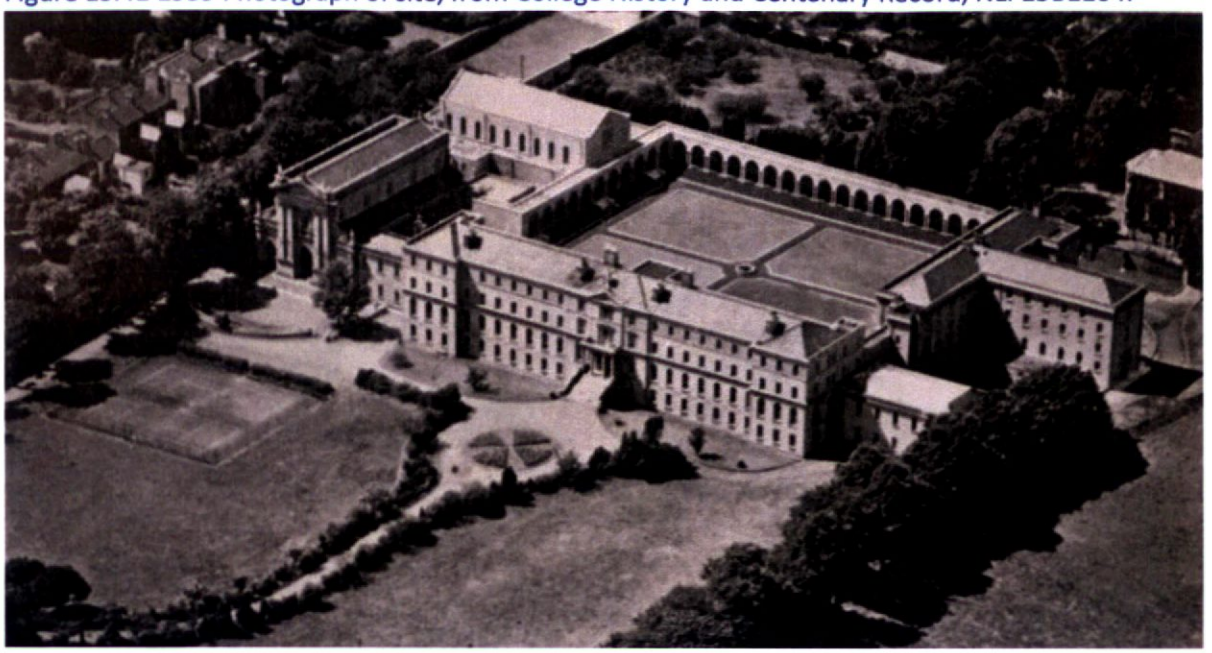


The new wing was to have residential accommodation for a further forty students and six professors, as well as an Aula Maxima (where the oratory was relocated to), diocesan archives and a central heating chamber for the college. The contract was given to Messrs Lawrence Murray & Sons, contractors.

A 1959 description of the building reads:

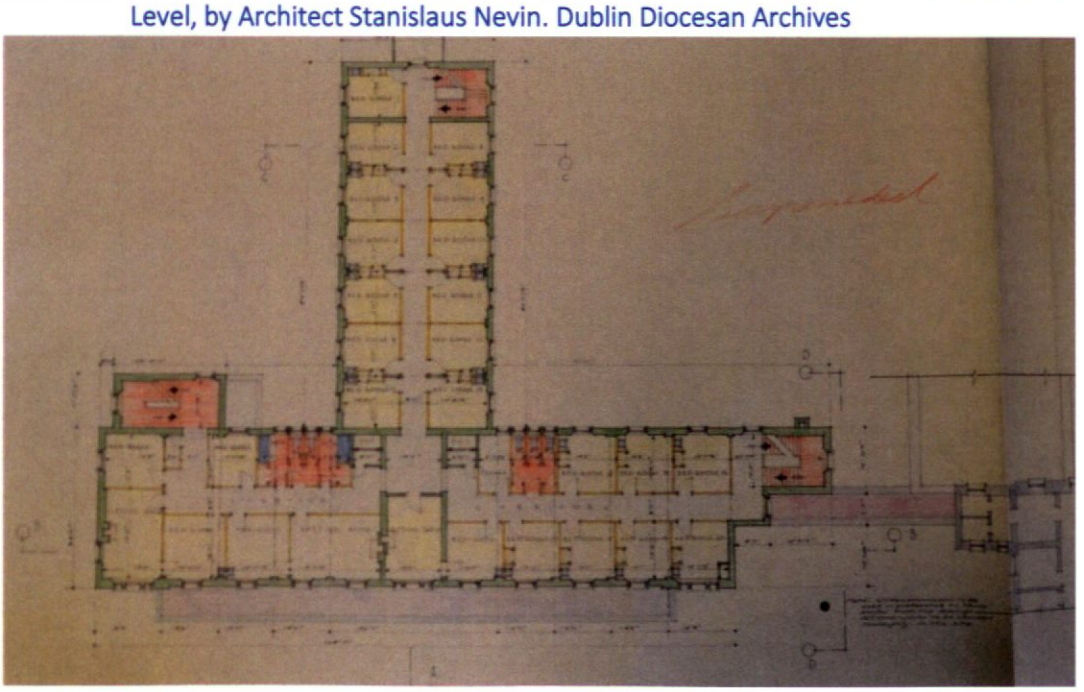
"The new wing, which is T shaped, is connected at two levels with the main building. The structure is basically fire-proof concrete, and the elevation is plastered in cement and granite sand to blend as far as possible with the colour scheme of the main college block. The façade incorporates an ambulatory designed with twin Doric columns with arched head in pure classical style."

Figure 15.41 1959 Photograph of site, from College History and Centenary Record, NLI 15B1104.



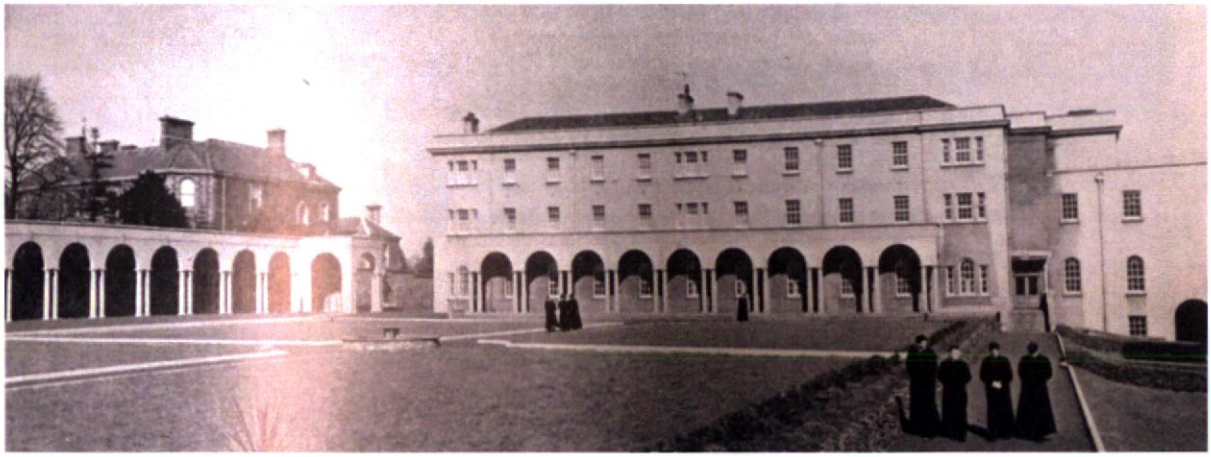
Sketch plans of the new wing, by Architect Stanislaus Nevin, reveal the internal dormitory layout of the building. This layout is largely still extant today, although the rooms now function as offices rather than living quarters. Some internal features of interest survive, including the cast-iron radiators at first and second floor levels. Further detail on the surviving internal features of interest will be provided below.

Figure 15.42 Undated sketch plan showing the internal arrangement of the 'New Wing' at Ground Floor Level, by Architect Stanislaus Nevin. Dublin Diocesan Archives



In 1958, a new Assembly Hall was constructed at the southern end of the garden behind the Seminary. A new ambulatory was constructed at this time to provide shelter to students as they walked from building to building. The L-shaped ambulatory matched the design of the arcade on the southern elevation of the New Wing. This completed the formation of the College Quadrangle.

Figure 15.43 Undated photograph showing the ambulatory and the New Wing. From Holy Cross College, Clonliffe 1859-1959. NLI 1B2417.



Following the construction of the new Assembly Hall in 1958-59, the former Assembly Hall within the New Wing became superfluous. In 1960 Stanislaus Nevin, architect, converted the assembly hall into a new oratory. A plaque erected at the entrance to the Oratory reads:

"Pray for all those who established this Oratory in the Centenary Year 1960 Architect Stanislaus Nevin Woodworker Thomas Doody"

A contemporary description of the oratory reads:

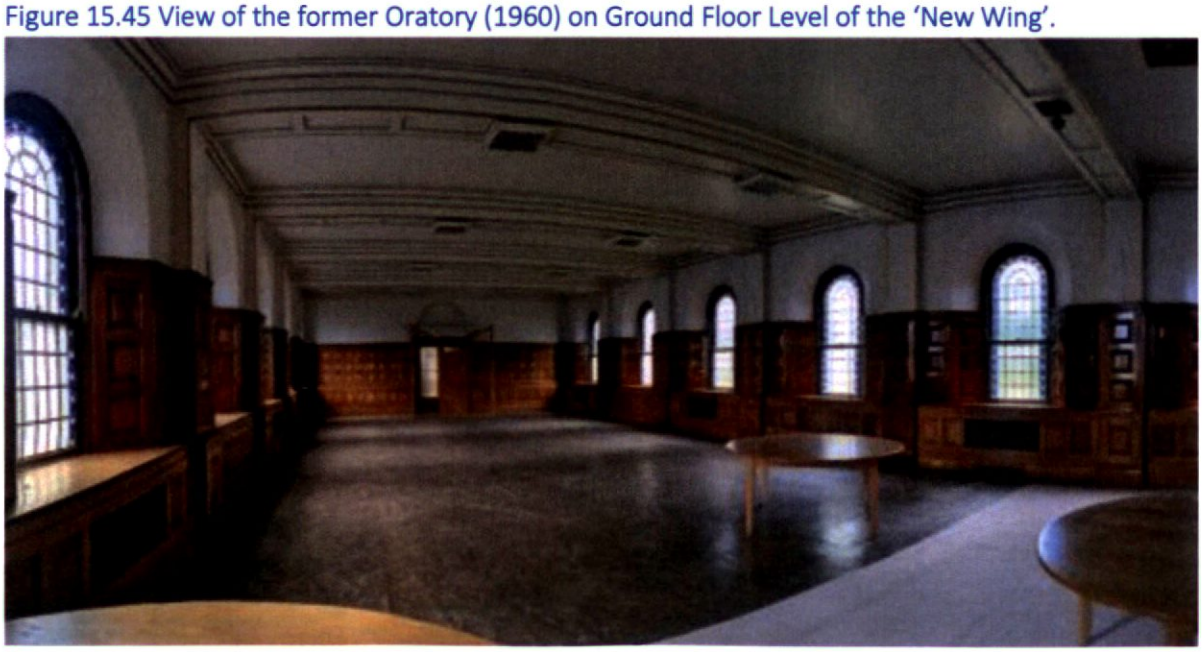
"The walls were faced in 'raised and fielded' panels of Japanese oak. Mr Nevin designed a new altar, to be hand carved in oak with a centre piece in black Australian walnut, and a tabernacle in oak with a sycamore dome. The sanctuary lamp is the Centenary year gift of the students. The predella and baldacchino are also Japanese oak. The Stations of the Cross are plain crosses in hornbeam tipped with gold leaf. The Archbishop presented a statue of Our Lady and the Divine Child for the new oratory. It had been carved in limewood by an artist in Oberammergau. The statue had been given to Dr. McQuaid 'as a token of respect and gratitude by the Fathers of the Irish Province of the Society of Jesus...'."

Figure 15.44 Undated photograph showing the new oratory, located in the location of the former Assembly Hall in the New Wing. From Holy Cross College, Clonliffe 1859-1959. NLI 1B2417.



This oratory remains extant in the subject building today and retains many of the original 1960s fittings, including the oak-panelling and the leaded glass to the sash windows. All of this fabric is to be salvaged and relocated in accordance with the appended conservation specifications.

Figure 15.45 View of the former Oratory (1960) on Ground Floor Level of the 'New Wing'.



Description - Exterior

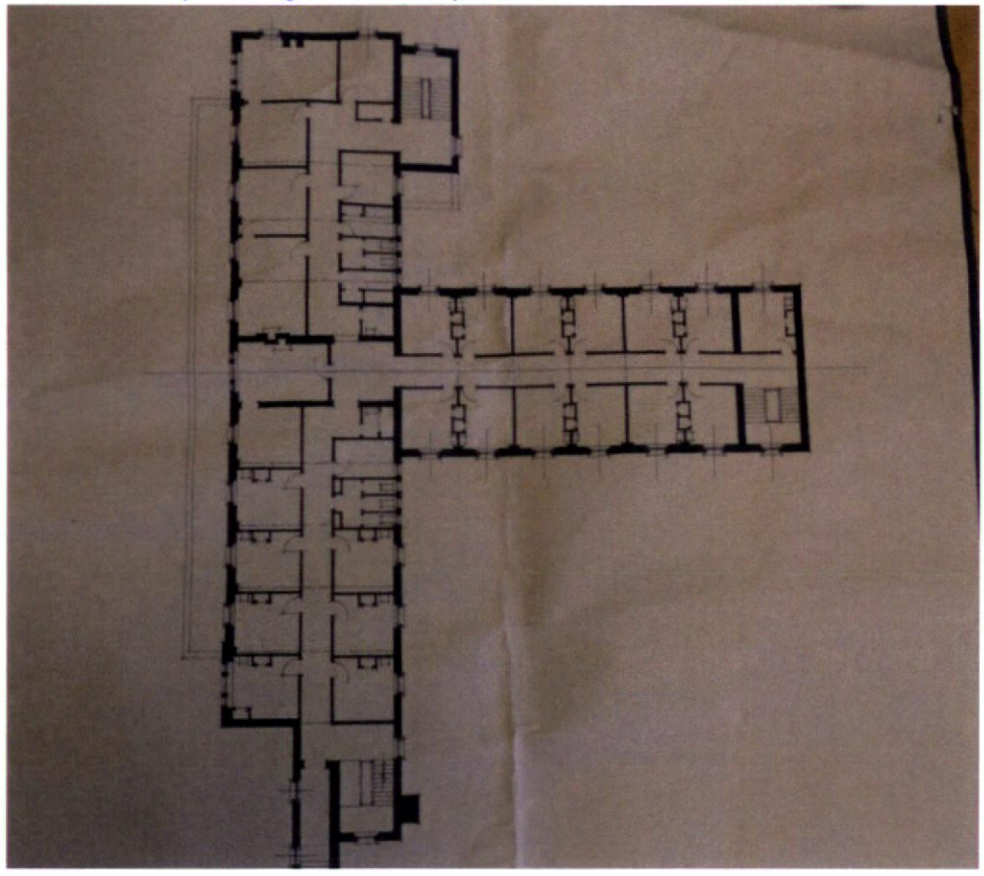
The subject building is a three-storey multi-bay T-shaped block, sand and cement rendered. There is an arcade on the southern elevation to the quadrangle. There are tri-partite windows in the central and end bays of the southern elevation. The building has a pitched and hipped slate roof.

There is a projecting entrance porch to the wing on the western elevation. A modern extension has been constructed to the northern elevation of the building, which now functions as a staircase and secondary entrance into the wing.

Description - Interior

The typical internal layout of accommodation within the New Wing is illustrated in Figure 15.46. The layout is a straightforward double-hung central corridor with staircases at the ends of each wing. This layout appears to remain largely extant at First and Second Floor Levels, with the original bedrooms now in use as offices.

Figure 15.46 1955 Survey Drawing, Jones & Kelly Architects. In Dublin Diocesan Archives.



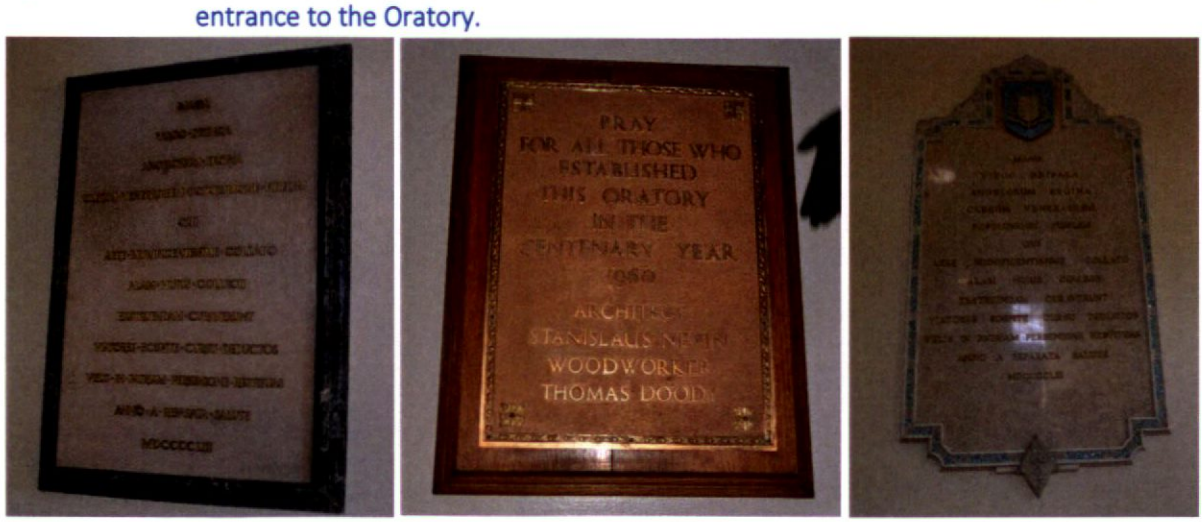
It appears that this area of the building was sparsely decorated and there are no surviving decorative features of architectural, artistic or other interest. A number of the rooms at first and second floor levels retain the original cast-iron radiators which are considered to be of some interest and will be salvaged along with the 20th Century sash window joinery.

Figure 15.47 Photo showing a surviving cast-iron radiator within the New Wing. There are several surviving examples of this type of radiator throughout first and second floor levels.



Other fixtures within this wing which are considered to be of some artistic interest include the plaques at the main stair hall and at the entrance to the Oratory. These are to be salvaged and relocated in the chapel in accordance with the conservation specifications.

Figure 15.48 Views of the stone plaques in the main stair hall and the timber and bronze plaque at the entrance to the Oratory.



Whilst the timber sash windows are not considered to be of any particular interest due to their relative modernity and lack of any particular artistic interest, there are a significant number of them surviving in relatively good condition and these are to be salvaged in accordance with the conservation specifications.

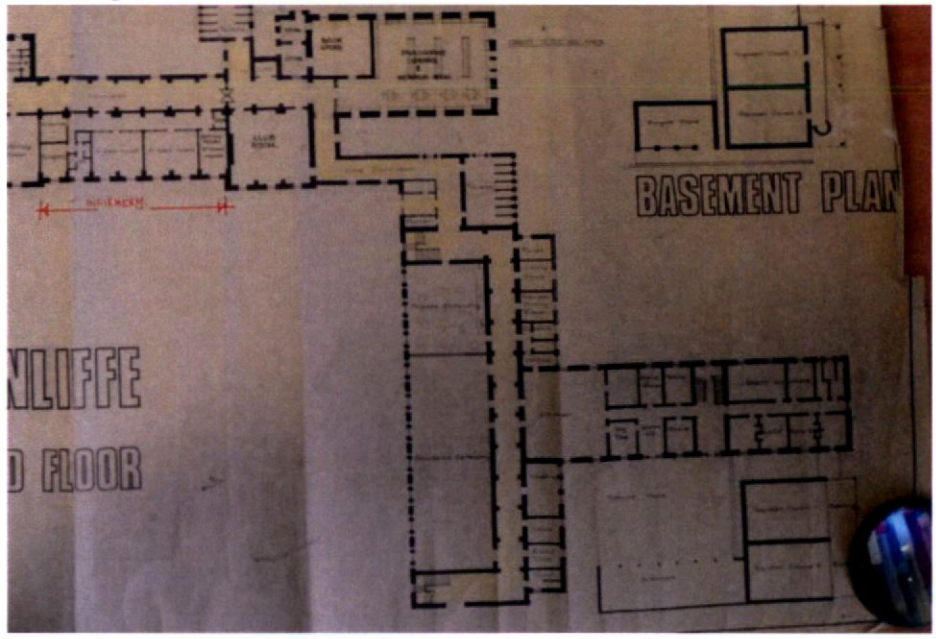
15.4.1.6 The Library Wing

This building is not included on the DCC Record of Protected Structures.

Outline Historical Development of Library Wing

The Library Wing is a later addition to the college complex, constructed c. 1966 to designs by Nevin and Nolan Architects. A 1969 drawing by Nevin & Nolan shows that the ground floor level contained Refectory and Kitchens, and associated stores rooms.

Figure 15.49 1969 Drawing by Nevin & Nolan Architects showing the ground floor layout of the 'Library Wing'.



No details or written record relating to the construction of this wing were found during the preparation of this chapter. The wing is referred to within the college as the 1966 Wing.

Description

The subject building is a four-storey multi-bay T-shaped block, sand and cement rendered, dating from the 1960s. The building has a pitched and hipped slate roof. There are Venetian windows at ground floor level, with round-headed windows at first floor level.

15.4.1.7 The Ambulatory

This building is a Protected Structure, DCC RPS Ref. No. 1901. It has been clarified to include the single-storey arcade element of the New Wing.

Figure 15.50 Photograph pre-dating the laying out of the formal gardens to the rear of the Main Seminary Block, showing the area in use as a football pitch.



The ambulatory was constructed alongside the construction of the Assembly Hall, in 1958-59, by Jones & Kelly Architects. The ambulatory was constructed to provide shelter to students as they walked from building to building. The L-shaped ambulatory matched the design of the arcade on the southern elevation of the New Wing. This completed the formation of the College Quadrangle.

Figure 15.51 Historic photograph showing the Ambulatory, Assembly Hall and formal gardens in the quadrangle.



The formal gardens within the quadrangle pre-date the construction of the ambulatory itself, and appear to have been laid out c. 1953, following the construction of the New Wing. The ambulatory will be retained in total along with the mosaics within. The felt to the flat roofs has failed and works will be carried out to restore these in accordance with the conservation specifications.

15.4.1.8 The Red House

This building is a Protected Structure and a Recorded Monument (see archaeological assessment by IAC including in Chapter 16 of the EIAR). It is a three-bay, two-storey over basement detached, mid-sized Georgian House in red brick with a double-piled pitched slate roof (and additions) which has lost its original setting to the institutional complex and developments behind it to the east. Whilst it forms an important part of the overall lands and requires particular consideration in respect of any proposed development, the building itself does not form part of the subject site. There are no physical impacts proposed to it, therefore, and no detailed assessment of the interiors was carried out.

Figure 15.52 View showing the transformed front setting to the Red House (formerly Clonliffe House) with tarmacked parking area and rendered utilitarian extensions visible to either side.



15.4.1.9 Archbishop's House

This building is a Protected Structure. It is a three-bay, two-storey brick dwelling with fine limestone detailing to designs of William Hague. Again, the building, whilst forming part of the overall complex, turns its back on the seminary and is contained in its own setting separated from the subject site by large stone walls. As it does not form part of the subject site and there are no physical impacts proposed to it, no detailed assessment of the interiors was carried out.

Figure 15.53 View of Archbishop's house and the elegant projecting front porch on the Drumcondra Road side of the complex.



15.5 Assessment of Cultural Significance of Receiving Environment

The primary significance of the buildings on the site is based on the ensemble, and on the contribution of the buildings to the overall characteristics of the site. Individually, the buildings have varying degrees of significance due to their effects on that character and due to some poor-quality interventions in the late 20th Century which included the loss of most of the interiors of Bourke's original seminary. Some of these additions, therefore, including the Library and New Wing are considered of lesser significance having a negative impact on the overall site and have, correctly, been omitted from inscription on the RPS by Dublin City Council.

Figure 15.54 Diagram showing the different phases of development on the site - based on historic documentation, maps and historic photographs. The scale of this diagram means it cannot describe fully the degree of internal alteration and the large number of minor extensions of which there many. These include the poor-quality toilet block extensions, the complete shelling and reconstruction of the interior of Bourke's seminary building and the conversion of the original assembly hall into an Oratory in the 1960s.



The complex comprises the following elements within and adjacent to the subject site for consideration –

- Main College Building (1863) - John Bourke's Original Seminary (a Protected Structure)
- Holy Cross Church – JJ McCarthy's Original College Chapel (a Protected Structure)
- South Link Building by JJ McCarthy (a Protected Structure)
- Assembly Hall (a Protected Structure)
- The New Wing (including the single storey arcade forming northern perimeter of college quadrangle)
- Library Wing
- Ambulatory (a Protected Structure)
- Setting
- The Red House (a Protected Structure and Recorded Monument)
- Archbishop's House (a Protected Structure)

15.5.1.1 Significance of Main College Building (1863) - John Bourke's Original Seminary (a Protected Structure)

This structure was inscribed on the DCC Record of Protected Structures in 2000 (Ref 1901). It represents the first piece of new architecture associated with the seminary use in the late 19th Century. It was

designed by the eminent architect John Bourke – also responsible for the original Mater Hospital building. Despite the loss of its original interiors it remains the focal point for the architecture of the site and contributes very particular architectural significance to the setting.

The front façade is of primary significance and remains largely unaltered from its original form. The façade is of architectural significance in and of itself, and also in its contribution to the character of the setting of the college lands.

The interior of the Block has been transformed in modern times, with localised reconstruction following a fire in the early 20th century and a later 20th century wholesale reconstruction of the interior. The interior as it exists today appears to be almost entirely a late 20th century reconstruction and is not considered to be of any particular interest.

Figure 15.55 Photograph showing the complete internal reconstruction of the Main Seminary Block in 1966. Note the new concrete frame at the base and the RSJs which abut the walls and ultimately require cladding in brick slips



Figure 15.56 View of the late 20th century brick 'arches' at Ground Floor Level of the Main Seminary Block. The floors above and below are constructed in and supported by a steel and concrete frame. The brick visible here is a cladding which conceals the 1960s RSJs that intruded into Bourke's original corridor space. These represent 1960s cladding and support no loads above.



Historic Significance

The building is of historic significance as part of a large Catholic institutional facility in 19th century Dublin. The growth and development of the site mirrors the rising Catholic population of the city and is of interest from a social history perspective. The development is tied to significant historic figures, including Archbishop McQuaid.

Technical Significance

None of the buildings on site can be considered to be of particular technical significance.

Vernacular Significance

None of the buildings on site are vernacular.

Group Significance

The ensemble of buildings on the site are considered to have added significance as a group.

Personal Association

The development of the subject site is associated with former Archbishops of Dublin, and with significant Irish architects including J. J. McCarthy. The construction and fundraising of the New Wing

and the Library Wing were associated with the Archbishop McQuaid, considered one of the most powerful and influential figures in Ireland at the time.

Unique/Rarity

The subject buildings are relatively typical 19th and 20th century institutional buildings. The Italianate style of the Chapel building is rare for J. J. McCarthy.

Detail/Design

The buildings on site are quite standard for its time in detail and execution.

Archaeological Significance

This report does not address archaeological issues.

Materials

The use of materials in these buildings is standard for their time, and could not be considered to be particularly significant.

Setting

The seminary forms a long elevation (with the chapel front and south link) and makes a very positive contribution to the setting, remaining the focal point of the overall complex despite additions in the 19th and 20th Centuries.

15.5.1.2 Significance of Holy Cross Church – JJ McCarthy's Original College Chapel (a Protected Structure)

This structure was inscribed on the DCC Record of Protected Structures in 2000 (Ref 1901).

Architectural Significance

The front façade is of primary architectural significance, facing onto the front setting of the College and aligned with the facades of the Main Seminary Block and South Link building. The front façade is of high architectural quality and has a distinctive and strong character.

The rear façade of the Chapel is of lesser architectural significance than the front façade. This significance has been further detracted from by the mid-20th century construction of the Assembly Hall in the immediate setting of the rear façade. The entrance to the vault for Cardinal Cullen's tomb is located at the rear façade of the Chapel, and is considered to be of architectural significance.

The side facades of the structure are of lesser architectural significance, with minimal decorative features and windows at high level only. The northern side elevation has been impacted by the construction of the 20th century Chapel Corridor and other later interventions in this area. The southern side elevation is considered to be of slightly greater significance than the northern elevation, due to its largely unaltered form and its greater visual prominence on the approaches to the College via Holy Cross Avenue and the existing Mater Dei entrance.

The interior of the Chapel is of architectural and artistic significance. Later additions, as detailed in Section 3.2 above, are generally of lesser significance compared with the original features.

Historic Significance

The buildings on site are of historic significance as a large Catholic institutional facility in 19th century Dublin. The growth and development of the site mirrors the rising Catholic population of the city and is of interest from a social history perspective. The development is tied to significant historic figures, including Archbishop McQuaid.

Technical Significance

None of the buildings on site can be considered to be of particular technical significance.

Vernacular Significance

None of the buildings on site are vernacular.

Group Significance

The ensemble of buildings on the site are considered to have added significance as a group.

Personal Association

The development of the subject site is associated with former Archbishops of Dublin, and with significant Irish architects including J. J. McCarthy. The construction and fundraising of the New Wing and the Library Wing were associated with the Archbishop McQuaid, considered one of the most powerful and influential figures in Ireland at the time.

Unique/Rarity

The subject buildings are relatively typical 19th and 20th century institutional buildings. The Italianate style of the Chapel building is rare for J. J. McCarthy.

Detail/Design

The buildings on site are quite standard for its time in detail and execution.

Archaeological Significance

This report does not address archaeological issues.

Materials

The use of materials in these buildings is standard for their time, and could not be considered to be particularly significant.

Setting

The church forms a long elevation (with the seminary and south link) and makes a very positive contribution to the setting, remaining the focal point of the overall complex despite additions in the 19th and 20th Centuries.

15.5.1.3 Significance of the South Link Building by JJ McCarthy (a Protected Structure)

This structure was inscribed on the DCC Record of Protected Structures in 2000 (Ref 1901).

Architectural Significance

The front façade of the block was designed alongside the College Chapel and intended to form both a physical and a visual link between the Main Seminary Block and the new Chapel (also designed by JJ McCarthy). The façade faces onto the front setting of the college and contributes to the character of the group of buildings.

The rear façade is largely invisible and blocked up by later interventions. As with the Seminary Block above, this structure predates the creation of the formal gardens in the rear quadrangle, and the rear façade is of lesser significance than the front façade.

The interior has been significantly altered at ground floor level. However, in contrast to the seminary interior, some original features of interest survive at first floor level, as outlined in section 3.3 above.

Historic Significance

The buildings on site are of historic significance as a large Catholic institutional facility in 19th century Dublin. The growth and development of the site mirrors the rising Catholic population of the city and is of interest from a social history perspective. The development is tied to significant historic figures, including Archbishop McQuaid.

Technical Significance

None of the buildings on site can be considered to be of particular technical significance.

Vernacular Significance

None of the buildings on site are vernacular.

Group Significance

The ensemble of buildings on the site are considered to have added significance as a group.

Personal Association

The development of the subject site is associated with former Archbishops of Dublin, and with significant Irish architects including J. J. McCarthy. The construction and fundraising of the New Wing and the Library Wing were associated with the Archbishop McQuaid, considered one of the most powerful and influential figures in Ireland at the time.

Unique/Rarity

The subject buildings are relatively typical 19th and 20th century institutional buildings. The Italianate style of the Chapel building is rare for J. J. McCarthy.

Detail/Design

The buildings on site are quite standard for its time in detail and execution.

Archaeological Significance

This report does not address archaeological issues.

Materials

The use of materials in these buildings is standard for their time, and could not be considered to be particularly significant.

Setting

The south-link building makes a positive contribution to the setting and forms part of the designed 19th Century ensemble and front elevation (with McCarthy's Chapel and Bourke's Seminary) to the complex facing onto the front setting.

15.5.1.4 Significance of the Assembly Hall (a Protected Structure)

This structure was inscribed on the DCC RPS in 2000 (Ref 1901).

Architectural Significance

The front façade faces south towards the entrance to the Mater Dei campus and has no relationship with the front setting of Holy Cross College. The significance of this façade is as a standalone piece rather than as part of a group with the other college buildings.

The rear façade is partially obscured by the adjoining Ambulatory and thus appears to be at a remove from the formal garden in the rear quadrangle. The central Venetian window at high level on the rear façade is in keeping with the architectural language and character of the return on the rear elevation of the Main Seminary Block.

The interior of the building has been transformed by the conversion of the space to a library function. The proscenium arch survives largely intact but has been obscured by the mezzanine intervention.

Figure 15.57 View of existing assembly hall interior which has been compromised by the addition of a mezzanine.



Historic Significance

The buildings on site are of historic significance as a large Catholic institutional facility in 19th century Dublin. The growth and development of the site mirrors the rising Catholic population of the city and is of interest from a social history perspective. The development is tied to significant historic figures, including Archbishop McQuaid.

Technical Significance

None of the buildings on site can be considered to be of particular technical significance.

Vernacular Significance

None of the buildings on site are vernacular.

Group Significance

The ensemble of buildings on the site are considered to have added significance as a group.

Personal Association

The development of the subject site is associated with former Archbishops of Dublin, and with significant Irish architects including J. J. McCarthy. The construction and fundraising of the New Wing and the Library Wing were associated with the Archbishop McQuaid, considered one of the most powerful and influential figures in Ireland at the time.

Unique/Rarity

The subject buildings are relatively typical 19th and 20th century institutional buildings. The Italianate style of the Chapel building is rare for J. J. McCarthy.

Detail/Design

The buildings on site are quite standard for its time in detail and execution.

Archaeological Significance

This report does not address archaeological issues.

Materials

The use of materials in these buildings is standard for their time, and could not be considered to be particularly significant.

Setting

The assembly hall forms the southern edge to the formal quadrangle to the rear of the seminary and adds to the quality of the setting therefore.

15.5.1.5 Significance of the New Wing (not Protected) including the Single-Storey Arcade which is Part of the Ambulatory Protected Structure

Architectural Significance

The building cannot be considered to be a generally agreed exemplar of good quality architectural design;

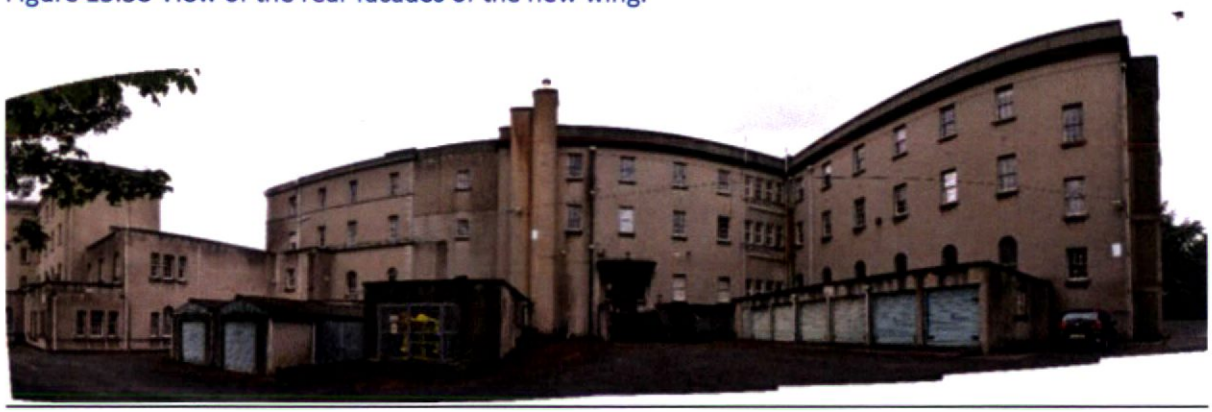
The building is the work of a relatively unknown and undistinguished architect;

The building does not provide an exemplar of a building type, plan-form, style or styles of any period but also the harmonious interrelationship of differing styles within one structure;

The arcade on the southern elevation of the building contributes to the character of the quadrangle to the rear of the Main Seminary Block, and is considered to form part of a group with the Ambulatory (a Protected Structure;

The Oratory at Ground Floor Level has some features which are considered to be of minor architectural interest.

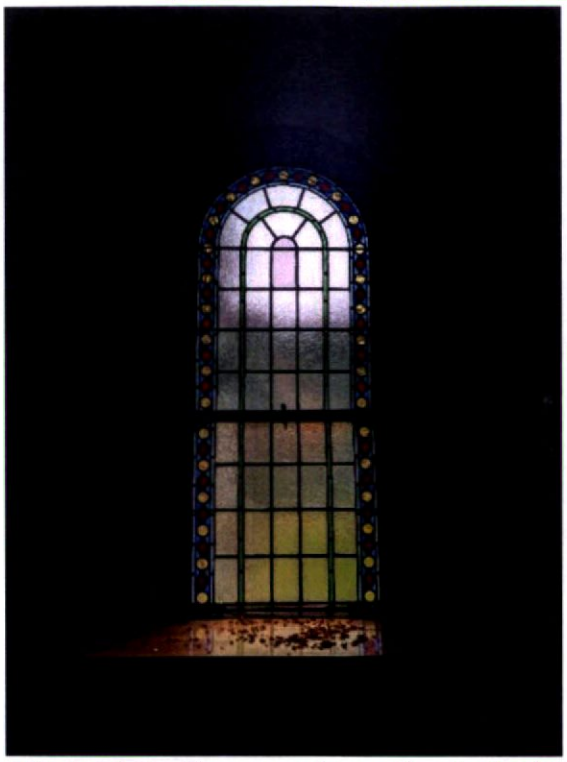
Figure 15.58 View of the rear facades of the new wing.



The subject building is a 1950s cellular seminary block within the college. It was designed by Architect Stanislaus Nevin and constructed in concrete blocks and steel in a pastiche expression. It cannot be considered to be of sufficient architectural quality and interest significance in and of itself to merit its inclusion on the RPS. This is confirmed by the recorded discussions which took place within the Dublin Corporation/City Council executive c. 2000. These resulted in the site's inscription in 2000 which defined the extent of protection, considering all of the buildings on the site including the New Wing and Library Wing. The conclusion of these discussions determined that both should be omitted from protection. As well as being in agreement with the 2000 inscription, this assessment is in agreement with the assessment by the NIAH of 2017 which broadly notes significance for the overall complex but does not address this building as a distinct element.

Internally, there are minimal fittings and features of interest. Some of the fittings in the 1960 Oratory on Ground Floor Level are considered to be of artistic and/or architectural interest, as detailed in Section 3. On the upper levels of the building, original features such as the cast-iron radiators and sash windows are considered to be of sufficient interest to warrant salvage (see conservation specifications). In general, with the exception of the Oratory, the interiors of the building cannot be considered to be of any particular interest (see appended photo record describing all of these).

Figure 15.59 Views of the leaded glazing to the windows (added to the sashes in 1960) and the oak panelling in the Oratory also dating from 1960. These are considered to be of sufficient artistic and architectural interest to merit salvage.





Architectural significance can be ascribed to the building on the basis of its arcade forming the northern edge of the cloistered, formal College quadrangle, and the contribution that it makes to the character of the quadrangle. The architectural language of the arcade on the southern elevation of the building was replicated in the later ambulatory, and together these features frame the quadrangle to the rear of the main Seminary block and contribute to the architectural character of the quadrangle. This element -"the single storey arcade forming northern perimeter of college quadrangle" - , whilst not inscribed in accordance with the Act, has nevertheless been 'clarified' within the most recent Development Plan as being protected due to it forming the northern part of the later Ambulatory Protected Structure. It is worth noting that the remainder of the building has not been included through such clarification and that the 1960s Oratory fit-out is omitted also.

Figure 15.60 View of the quadrangle from the north-west corner with the arcade to the New Wing visible on LHS.



Figure 15.61 Aerial view showing the much-later, mid-20th Century, poorly executed 'pastiche' additions to the site known as the Library and New Wing.



Whilst the single-storey, south-facing arcade to the New Wing adds to the quality of the quadrangle, the elevations to the rear (north) are of no architectural significance, fail to address this part of the overall setting and create a utilitarian character to this part of the site.

The New Wing (and Library) did not form part of masterplans or designs by Bourke or JJ McCarthy. They are of a far lesser architectural significance and have been expressly omitted from inscription and protection on the Dublin City Council RPS and on the recent clarification to it. The Library extension in particular has had a detrimental impact on the original seminary, effecting a front return which unbalances its composition when viewed from the east and resulting in the loss of much of the tree-lined avenue which ran east towards the Red House. The buildings succeed in reducing the permeability of the site by severing the north setting from the front. The elevations of both to the north are monolithic fail to address the setting to this side creating disconnected utilitarian space to the north. These are additions to the site which would have to be considered of a lesser architectural significance as has been properly expressed on the inscription to the RPS.

Figure 15.62 View looking east within cloistered quadrangle to east of seminary.



15.5.1.6 Significance of the Library Wing (not Protected)

Architectural Significance

a) *The building cannot be considered to be a generally agreed exemplar of good quality architectural design;*

b) *The building is not the work of a known or distinguished architect;*

c) *The building does not provide an exemplar of a building type, plan-form, style or styles of any period but also the harmonious interrelationship of differing styles within one structure;*

d) *The building does not make a positive contribution to its setting and is considered to detract from the front setting of the Main Seminary Block (a Protected Structure);*

e) *The building does not have an interior that is well designed, rich in decoration, complex or spatially pleasing.*

The subject building is a 1950s residential block within the college. It was designed by Architect Stanislaus Nevin and constructed in concrete blocks and steel in a pastiche expression. It cannot be considered to be of sufficient architectural quality and interest significance in and of itself to merit its inclusion on the RPS. This is confirmed by the discussions around the site's inscription in 2000 and the inscription itself. The broad assessment by the NIAH of 2017 does not address the qualities of special interest of individual buildings on site.

Internally, there are no features or fittings which could be considered to be of any particular architectural or other significance.

With regard to setting, the location of this wing does not fit with the quadrangle lay-out of the earlier college buildings and is considered to detract from the front setting of the Main Seminary Block, a Protected Structure.

The Library (and New Wing) did not form part of the designs by Bourke or JJ McCarthy, are of a far lesser architectural significance and have been expressly omitted from inscription and protection on the Dublin City Council RPS and on the recent clarification. The Library extension in particular has had a detrimental impact on the original seminary, effecting a front return which unbalances its composition when viewed from the east and resulting in the loss of much of the tree-lined avenue which ran east towards the Red House. The buildings succeed in reducing the permeability of the site by severing the north setting from the front. The elevations of both to the north are monolithic fail to address the setting to this side creating disconnected utilitarian space to the north. These are additions to the site which would have to be considered of a lesser architectural significance as has been properly expressed on the inscription to the RPS.

15.5.1.7 Significance of the Ambulatory (a Protected Structure)

Architectural Significance

This structure is listed on the DCC Record of Protected Structures (Ref 1901). The single-storey arcade (attached to the New Wing) facing directly onto the quadrangle on its northern edge has been clarified as forming part of the ambulatory Protected Structure.

The significance of the structure is based largely on its spatial quality and the contribution which it makes to the rear setting of the Main Seminary Block. The Ambulatory frames the rear quadrangle garden and creates a unifying element between the Assembly Hall, the Chapel Corridor and the Main Seminary Block.

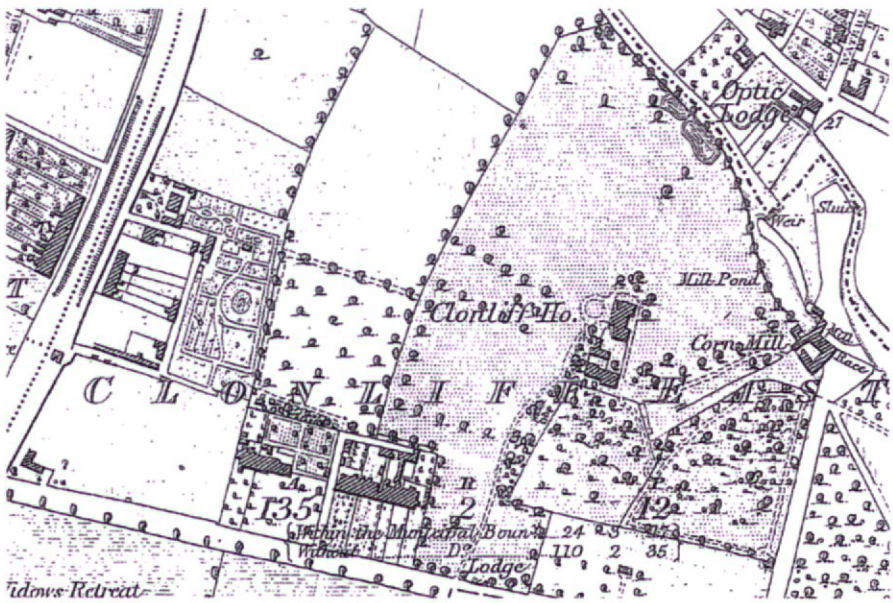
Architectural fixtures such as the mosaic tiling are of interest and create visual interest and are to be retained and presented within the new landscape proposals.

Figure 15.63 Detail view of mosaic panels to ambulatory.



15.5.1.8 Significance of the Setting of the Complex

Figure 15.64 The First Edition of the OS 1837-43 shows the original open suburban setting to both the front and rear of Clonliffe House (built c. 1750 and now known as the Red House) prior to the acquisition of the site by Archbishop Cullen. That original setting has been transformed by large scale development all around the building through the 19th Century and 20th Century.



15.5.1.9 Significance of the Entrance Avenue and Parkland to the Front of the Main Seminary Block

This setting is of primary significance within the College lands but has undergone transformation in the various phases of development on the site. The entrance avenue and parkland predate the construction of the College buildings and were originally linked to the Red House. The development of the College buildings in the mid-late 19th century recognised the primacy of the front setting in its arrangement of all structures in a linear fashion, facing towards the Red House. This arrangement maximised the visual impact of the College buildings on views from the entrance avenue.

The front setting has been altered in modern times by the maturation of trees, which obscure views in some areas, and by the construction of tarmacked surface car parks in this area. The construction of the new Library Block in the 1960s is somewhat anomalous and neither ties in with the original linear arrangement of seminary and chapel nor the Quadrangle arrangement to the rear. The Library also interrupts views from the Main Seminary Block towards the northern area of the site, and detracts from the significance of the front setting.

Figure 15.65 View of front setting currently extensively tarmacked and used for carparking to the front of the chapel and seminary



Figure 15.66 Photograph taken c. 1909 showing the original 19th Century phase of development to the Seminary. The Main Block and the Old Library Wing (now demolished to make way for the mid-20th Century blocks) which were part of the original design by John Bourke c. 1861 are visible to the north (RHS). The Chapel and South Link building which were built to designs of JJ McCarthy c. 1873. Also of note in this view is the open nature of the front setting. It comprises a lawn and a roadway without any trees or designed landscape in evidence.



15.5.1.10 Significance of the Formal Garden in the Quadrangle to the Rear of the Main Seminary Block

This part of the setting of the College buildings dates from the 1950s construction of the New Wing, which was followed by the Ambulatory and Assembly Hall. Prior to this, the area was in use as playing fields and had no formal architectural qualities.

The construction of the new 1950s structures framed this area of land, creating a formal quadrangle with new quadripartite lawns laid out in the centre. This resulted in the creation of a new formal setting within the College. The character of this quadrangle is largely defined by the rhythm of coupled-columns in the arcade of the New Wing, a detail which was later replicated in the construction of the Ambulatory. The significance of this setting is recognised by the inclusion of the Ambulatory and

Assembly Hall on the DCC Record of Protected Structures. The single-storey arcade facing directly onto the quadrangle has been clarified by DCC as forming part of the ambulatory Protected Structure in the most recent development plan. Whilst the landscaping itself has been compromised and is somewhat basic, these enclosing elements create a very interesting space within the complex.

Figure 15.67 View of formal quadrangle to rear/west of the original seminary.



15.5.1.11 Significance of the Parkland to the North of the College Buildings

This area of the College lands is illustrated as open parkland in historic maps and there are no buildings of architectural or other significance in this area. The boundary walls and gates to the western boundary are Protected Structures and contribute to the character of the Drumcondra Road.

As described in Section 2, above, the line of trees between the College Buildings and the Red House serve as a physical and visual boundary between this area and the Front Setting of the College. This area is disconnected from the College buildings due to the construction of the New Wing and Library and is of limited significance.

Figure 15.68 View of parkland to north of later extensions to the complex.



15.5.1.12 Significance of the Red House (a Protected Structure and Recorded Monument)

This building is a Protected Structure and a Recorded Monument due to its 17th Century origin (see archaeological reporting by IAC in the EIAR). It is a three-bay, two-storey over basement detached, mid-sized Georgian House in red brick with a double-piled pitched slate roof (and additions) which has lost its original setting to the institutional complex and developments behind to the east. The building does

not form part of the subject site and there are no physical impacts proposed to it therefore no detailed assessment of the interiors was carried out.

Figure 15.69 View of front setting to the Red House which comprises a tarmacked parking area with the main grassed front setting to the seminary visible beyond. The tree-lined avenue to the west is visible to RHS of this image.



Figure 15.70 View of tarmacked parking area to front setting of the Red House (outside the subject site)



The setting to the Red House to the rear has been lost. The original Clonliffe House setting visible on historic mapping retained a large space to the west much of which now forms the front setting of the seminary. The immediate setting of the Red House has been reduced therefore. It nevertheless retains strong visual connections beyond its curtilage with the front setting of the college. The setting has been the subject of much discussion throughout the design process and the consultations with Dublin City Council. Significant changes to the scheme have come about from these which will be outlined in the sections which follow on the LRD Opinion from DCC.

15.5.1.13 Significance of Archbishop's House (a Protected Structure)

This building is a Protected Structure. It is a three-bay, two-storey brick dwelling with fine limestone detailing to designs of William Hague. The building, whilst part of the overall complex, turns its back on the seminary and is contained in its own setting separated from the subject site by large stone walls.

As it does not form part of the subject site and there are no physical impacts proposed to it therefore no detailed assessment of the interiors was carried out. The setting to Archbishop's House focuses on the Drumcondra Road side and is completely enclosed by walls which separate it physically and visually from the setting to the college. A small part of the northern section of the boundary wall to Drumcondra Road Lower will be impacted by the proposals and is addressed in the impact assessments.

Figure 15.71 View of Archbishop's house and the elegant projecting front porch on the Drumcondra Road side of the complex.



15.6 Sensitivity of Receiving Environment

A number of buildings on the site are Protected Structures. These along with their settings and some features within these could be considered to have a high sensitivity with regard to built heritage. Some parts of the site including extensions and interiors to some of the surviving buildings, correctly, have been omitted from formal protection on the Record of Protected Structures and do not have a high sensitivity.

15.7 Predicted Impacts of the Proposed Development

15.7.1 Do-Nothing Impact

At present, the structures on Site are largely disused, particularly at upper levels. In the Do-Nothing scenario, following the full departure of the Diocese and related offices and no possibility of return, the structures would be entirely vacant. In this Do-Nothing scenario, whilst the buildings are generally in a good condition, the setting is overgrown and without a functional use the maintenance of the site and buildings will be a challenge and there is a real risk of deterioration. Section 7.3.1 of the Architectural Heritage Protection Guidelines for Planning Authorities by (DoHLGH, 2004, 2011) emphasises the importance of keeping a building in use, and of avoiding vacancy -

"It is generally recognised that the best method of conserving a historic building is to keep it in active use."

The proposed Project will enable the continued use and appreciation of these Protected Structures.

It should be noted that the subject site is zoned for a similar density of development within the Dublin City Council Development Plan. In the absence of this subject proposal, it is very likely that another development of a similar nature would be progressed. This is in accordance with national policy for compact growth on such sites.

The restoration of an intensity of use to these buildings and their settings is of critical importance. They have suffered from lack of occupancy for some time and the proposals will restore welcome activity and presence to the site and environs allowing for the built heritage to be enjoyed by a new community.

15.7.2 Potential Impacts of the Proposed Development

The following sections refer to potential significant impacts in the absence of mitigation and without consideration of the specific features and design of the proposed development which will reduce these potential effects.

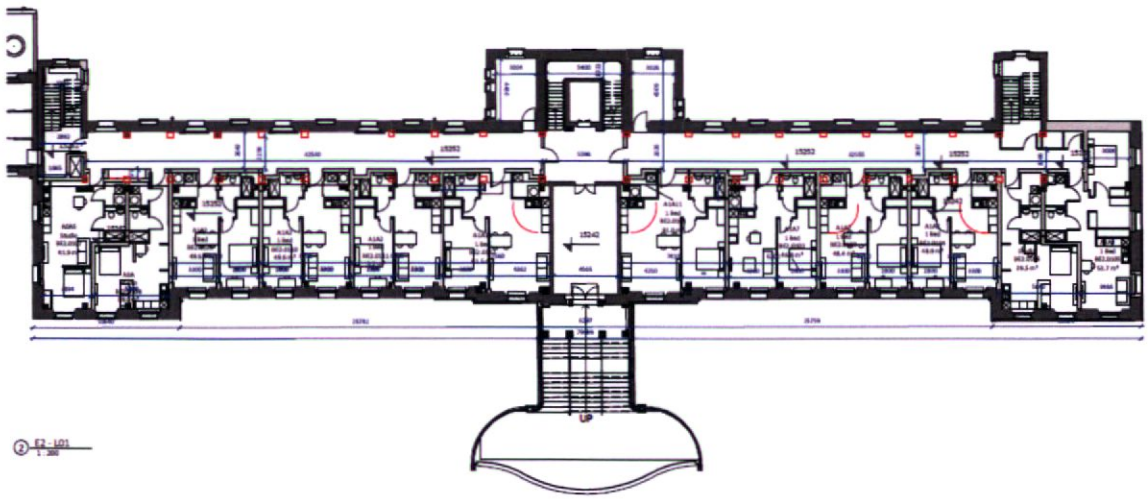
15.7.3 Potential Impacts on the Main College Building (1863) - John Bourke's Original Seminary (a Protected Structure)

The Original Seminary Building (a Protected Structure) will be retained as part of the proposed development. The modern interior of the building will be demolished and new internal structure constructed to accommodate the proposed new residential use of the structure. The proposed new internal layout will respect the original layout through the retention of a single-loaded access corridor. In addition, there will be demolition of obtrusive, modern toilet blocks to the rear to reveal the original façade. For further detail on the proposed works, please refer to the drawings prepared by OMP Architects.

The removal of inappropriate later interventions and the proposed conservation of the historic fabric will have a positive impact on the cultural and architectural heritage of the Site, and will enhance the contribution of the Protected Structures to the character of the site and to the architectural heritage of the wider area.

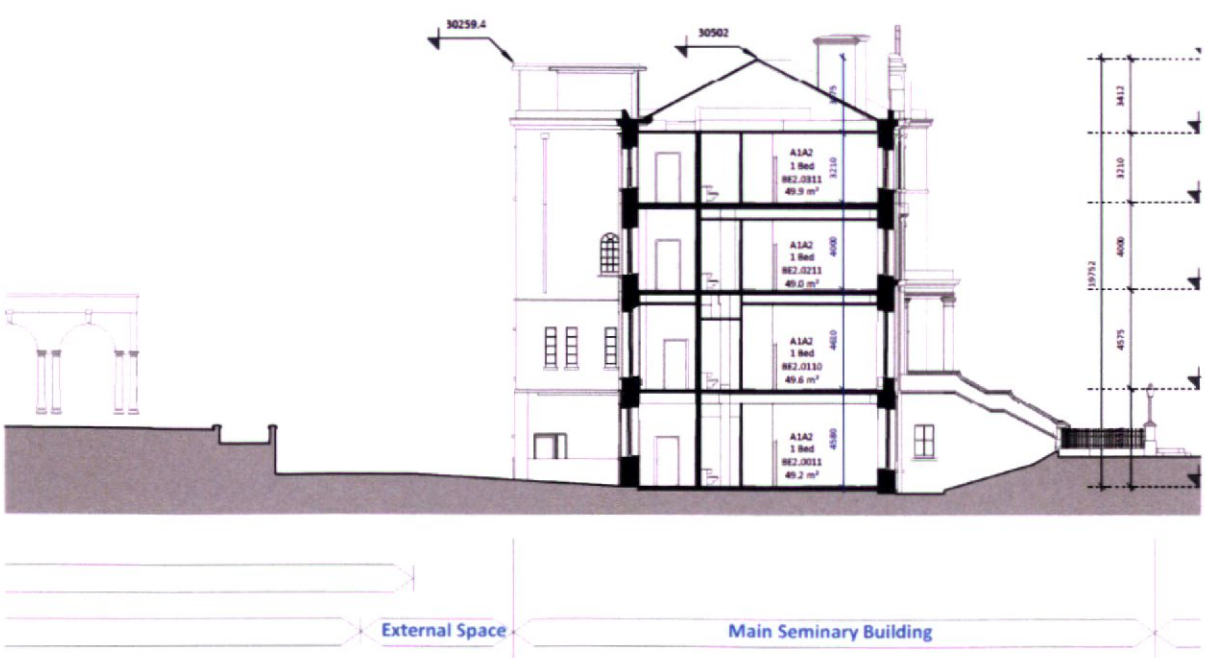
Given the extensive internal reconstruction that was carried out in the 1960s, it would be difficult to consider that the interiors of the Original Seminary Building retain considerable architectural significance. The cellular layout reflects the original institutional design but the plasterwork and joinery is all 1960s' replica. The brick arches in the corridor are a deceit relating to the 1960s concrete and steel frames. The proposal to reconfigure the interior of this building as apartments will not impact on the external expression of the front or rear face of the building and will result in reinstatement of the original rear façade character and a minimal loss of historic fabric within. It is considered that these are appropriate interventions which will restore use to the non-original cellular spaces with minimal additional subdivision required for the provision of en-suites, etc.

Figure 15.72 Extract from Proposed Ground Floor Plan, OMP Architects, showing the proposed interventions to the Original Seminary Building with the rear corridor preserved and the original stairs blocks revealed on the rear elevation.



As outlined in above, the rear elevation of the existing Main Seminary Block is has a lesser architectural significance – its original composition was less formal and it has been compromised by later additions. The proposed interventions will remove the obtrusive extensions to the rear, revealing Bourke's original rear elevation. The connections at the lower level into the cloistered quadrangle to the west will also be enhanced by the proposals. This will provide vibrant new residential activity to what is currently a fine formal garden which is unfortunately suffering from disuse, poor maintenance and a poor quality of landscaping.

Figure 15.73 Extract from Cross Section through the Main Seminary Block OMP Architects.



In contrast to the previous SHD application on the site, no extension is proposed for the rear of the Original Seminary building.

In the absence of mitigation, effects on the Main Seminary Block are predicted to occur as a result of the proposed Project, as detailed in Table 15.1, below.

Table 15.1 Predicted Effects Prior to Planned Mitigation on Bourke's Original Seminary Building (a Protected Structure)

Cause	Effect	Impact Characterisation	
Demolition and reconfiguration of interiors	Replacement of non-original low quality, vacant spaces with residential spaces of high architectural quality	*Quality*	Positive
		Significance	Slight
		Extent	Local
		Context	The interior of the building was reconstructed in modern times and is not considered to be of significance or quality
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case
Demolition and reconfiguration of interiors	No loss of historic fabric and features of interest	*Quality*	Neutral
		Significance	Slight
		Extent	Local
		Context	The interior of the building was reconstructed in modern times and is not considered to be of significance. There is no surviving historic fabric or features of interest.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case
Demolition of later inappropriate extensions to the rear	Restoration of historic architectural character opening up light to interiors and reinstating original elevation to quadrangle	*Quality*	Positive
		Significance	Significant
		Extent	Local
		Context	Rear extensions such as the toilet blocks are non-original and detract from the character of the rear elevation and spaces within. Their removal will enhance the original seminary building as well as the quadrangle setting to the west.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case
Construction of new residential buildings on the subject site	The impact of this effect will be assessed under Section 15.4.10, Setting	*Quality*	Neutral
		Significance	Significant
		Extent	Local
		Context	This will largely impact the front setting of the structure, and its relationship with College lands and the Red House

Cause	Effect	Impact Characterisation	
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

15.7.4 Potential Impacts on the Holy Cross Church – JJ McCarthy's Original College Chapel (a Protected Structure)

There are no proposed works to the exterior of this building save for necessary conservation/maintenance works to the stone, roofs and windows. The proposed re-use of this building for the public, for re-use and re-programming as a multi-purpose venue for a range of public-facing community and cultural uses, is respectful to the fact that it was formerly a place of worship, and of its building integrity. The opportunity to welcome a broad community to the Holy Cross Church responds to the changing needs of the City and is in keeping with its original use as a place for communal worship.

Please see Community, Social & Cultural Infrastructure Report for further details in this regard.

The impact of the new residential buildings and landscaping in providing new focus to the Protected Structures is dealt with later in this Chapter.

In the absence of mitigation, effects on the College Church are predicted to occur as a result of the proposed Project, as detailed in Table 15.2, below.

Table 15.2 Predicted Effects Prior to Planned Mitigation on Original College Church by JJ McCarthy (a Protected Structure)

Cause	Effect	Impact Characterisation	
Internal modifications to accommodate proposed new use of structure	The proposed works will not impact materially or structurally on the chapel or involve the removal of historic fabric. New services and furniture to allow the space to function as a community and cultural space will have a reversible effect that enhances its amenity.	*Quality*	Positive
		Significance	Significant
		Extent	Local
		Context	Historic fabric and features including the building envelope will be retained in situ and conserved
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case
Construction of new residential blocks on the subject site	The impact of this effect will be assessed under Section 15.4.10, Setting	*Quality*	Neutral
		Significance	Significant
		Extent	Local
		Context	This will largely impact the front setting of the structure, and its relationship with College lands and the Red House
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

15.7.5 Potential Impacts on South Link Building by JJ McCarthy (a Protected Structure)

The Original South Link Building (a Protected Structure) will be retained in full as part of the proposed development. Minor internal alterations are proposed in order to accommodate the proposed new residential use. For further detail on the proposed works, please refer to the drawings prepared by OMP Architects.

The internal reconfiguration of this structure to contain apartments will not impact on its external appearance or contribution to the setting of the College. Internal features of interest will be restored and retained for the enjoyment of new residents.

In the absence of mitigation, effects on the South Link Building are predicted to occur as a result of the proposed Project, as detailed in Table 15.3, below.

Table 15.3 Predicted Effects Prior to Planned Mitigation on Original South Link Building by JJ McCarthy (a Protected Structure)

Cause	Effect	Impact Characterisation	
Internal modifications	The proposed internal works will enhance the architectural quality and fabric of the interiors and reinstate use in the form of new apartments	*Quality*	Positive
		Significance	Significant
		Extent	Local
		Context	All historic fabric and features of interested will be retained and conserved
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case
Construction of new residential blocks on the subject site	The impact of this effect will be assessed under Section 15.4.10, Setting	*Quality*	Negative
		Significance	Significant
		Extent	Local
		Context	This will largely impact the front setting of the structure, and its relationship with the Red House
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

15.7.6 Potential Impacts on the Assembly Hall (a Protected Structure)

It is proposed to conserve the Assembly Hall and retain it for use as a community and cultural space for the redevelopment with minor necessary conservation/maintenance works carried out to the roof, external render and leaded glass windows in accordance with the conservation specifications. There are no proposals for major intervention to the interiors or invasive upgrades to the envelope as part of this application.

The proposed re-use of this building to accommodate the Diocesan Archive, which will include an enhancement and expansion of the current (limited access) to the Archive, also incorporating temporary exhibition space, research & interpretive centre, and facilitating enhanced public access.

Please see Community, Social & Cultural Infrastructure Report for further details in this regard.

The surviving proscenium arch has been identified and will be retained.

Some new opes will be created in the wall to the Ambulatory, utilising existing niches. It is considered that this is a positive intervention as there will be minimal loss of historic fabric, and will enhance the physical and visual connection between the Ambulatory and Assembly Hall.

Table 15.4 Predicted Effects Prior to Planned Mitigations on the Assembly Hall (a Protected Structure)

Cause	Effect	Impact Characterisation	
Proposed minor interior alterations	The architectural character and quality of the space will be enhanced	*Quality*	Positive
		Significance	Significant
		Extent	Local
		Context	The interior of the building was extensively altered in modern times and is not considered to be of significance. The mezzanine, although it obscures the proscenium arch, is nevertheless not proposed to be removed as part of this application. The relocation of the 1960s Oratory fit out to here is an appropriate salvage proposal which will enhance the large 'backstage' space behind the original hall.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

15.7.7 Potential Impacts on the New Wing (including the single storey arcade forming northern perimeter of college quadrangle)

The subject structure is not a Protected Structure and is considered to be of minimal architectural or other significance. It is proposed to demolish the existing structure, retaining only the arcade at ground floor level on the southern façade. A new structure (Block B1) of the same approximate height and footprint will be constructed in the place of the existing structure. For further detail on the proposed works, please refer to the drawings prepared by Henry J Lyons Architects and OMP Architects.

The proposed demolition of the New Wing is an acceptable intervention as it is a modern structure with little architectural significance. The careful retention of the northern section of the Ambulatory on its southern elevation will ensure that the character and form of the rear quadrangle is maintained. The New Wing is located to the rear of the site and is not visible from the front setting. Its demolition will therefore have no impact on the front setting of the college, the area of primary significance. It should be noted that DCC have not deemed this structure to be worthy of inclusion on the Record of Protected Structures.

This level of demolition will protect and retain the single-storey arcade to the southern elevation which has been clarified as forming part of the Ambulatory Protected Structure, and its contribution to the character of the quadrangle, the area of primary significance for this building. The demolition of the northern section is not considered to be detrimental to the character of the quadrangle or the wider college setting.

With the exception of the 1960s Oratory, the subject building is not considered to be of any particular significance internally. Features and fittings of significance, as detailed above, will be carefully salvaged.

In the absence of mitigation, effects on the New Wing are predicted to occur as a result of the proposed Project, as detailed in Table 15.5, below.

Table 15.5 Predicted Effects prior to Planned Mitigations on the New Wing (see also Effects on Ambulatory Protected Structures in Relation to Single-Storey Arcade)

Cause	Effect	Impact Characterisation	
Demolition of the structure	Loss of surviving historic architectural features and fabric of interest	*Quality*	Neutral
		Significance	Slight
		Extent	Local
		Context	There are minimal architectural features of interest in the subject building, with the exception of the Oratory at ground floor level. Features of interest will be salvaged in accordance with the drawings and specifications.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case
Demolition of the structure	The works will enhance the historic architectural character of the rear quadrangle	*Quality*	Positive
		Significance	Slight
		Extent	Local
		Context	The retention of the single-storey arcade on the southern façade and the construction of the proposed new Block B1 to its north will ensure that the architectural heritage character of the rear quadrangle is protected and enhanced. The proposed new structure will be a high quality architectural design and will improve the amenity of the site allowing for greater connectivity and integration with the quadrangle and the lands to the north.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

15.7.8 Potential Impacts on the Library Wing

The subject structure is not a Protected Structure and is not considered to be of any architectural or other significance. It is proposed to demolish the existing structure. Two new blocks will be constructed in this approximate area, Blocks B2 and B3. For further detail on the proposed works, please refer to the drawings prepared by Henry J Lyons Architects & OMP Architects.

The proposed demolition of the Library Wing is an acceptable intervention as it is a modern structure with little architectural significance. The demolition of this building will restore the complex of college buildings to their mid-20th Century layout. The 1969 Library Wing cannot be considered to be of any

particular significance, and its demolition will not detract from the character and significance of the overall site. The Library Wing is visually intrusive to the front setting of the Main Seminary Block and its removal will have a positive impact on the character of the front setting.

As detailed above, it is considered that the Library Wing unbalances the formal character of the front setting of the Main Seminary Block (a Protected Structure) and limits views within the setting.

The building is not considered to be of any particular architectural or other significance. As such, it is considered that the demolition of the building would be an acceptable intervention. It should be noted that DCC have deemed this structure to be excluded from inscription on the Record of Protected Structures.

In the absence of mitigation, effects on the Library Wing are predicted to occur as a result of the proposed Project, as detailed in Table 14.19, below.

Table 15.6 Predicted Effects Prior to Planned Mitigations on the Library Wing

Cause	Effect	Impact Characterisation	
Demolition of the structure	No loss of surviving historic architectural features and fabric of interest	*Quality*	Neutral
		Significance	Slight
		Extent	Local
		Context	There are no architectural features of any particular architectural or other interest in the subject building.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case
Demolition of the structure	The works will enhance the setting of the neighbouring Protected Structures and the setting of the College.	*Quality*	Positive
		Significance	Slight
		Extent	Local
		Context	The demolition of this inappropriate modern structure will have a positive impact on the setting of the College and will enable the construction of new residential buildings of high architectural quality which will enhance the amenity and setting of the site.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

15.7.9 Potential Impacts on the Ambulatory (a Protected Structure including the single-storey arcade to the New Wing)

The Ambulatory (a Protected Structure) will be retained as part of the proposed development. The late 20th Century mosaics from these areas will be recorded and retained in situ. New openable timber panels with fitted lighting to match the mosaic panels will be installed over each mosaic. For further detail on the proposed works, please refer to the drawings prepared by Henry J Lyons Architects and OMP Architects.

It is considered that this is an appropriate intervention as there will be minimal loss of historic fabric, and the character of the Ambulatory will be retained and its use - as part of the currently abandoned quadrangle - reactivated.

In the absence of mitigation, effects on the Ambulatory are predicted to occur as a result of the proposed Project, as detailed in Table 15.7, below.

Table 15.7 Predicted Effects Prior to Planned Mitigations on Ambulatory

Cause	Effect	Impact Characterisation	
Retention and restoration of existing mosaic panels	Enhancement of architectural and artistic character	*Quality*	Positive
		Significance	Significant
		Extent	Local
		Context	The Ambulatory is a relatively austere structure with few decorative details, with the exception of the mosaic panels. The panels will be retained in situ and restored. The bitumen-covered flat roof will be restored also.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

15.7.10 Potential Impacts on the Setting

Alongside the proposed works to the existing structures on site, there are several proposed new residential buildings to be constructed within the setting. Refer to the drawings by Henry J Lyons Architects and OMP Architects for more detail on the overall scheme for the site.

The proposed scheme also includes a new landscape design, as illustrated in the detailed drawings by Niall Montgomery Partnership. These drawings include further detail on the proposed works to the existing boundary walls and gates to the site (see separate Section below for further detail on the walls and gates).

The impact of the proposed works on the setting of the Protected Structures of the former Holy Cross College will be assessed below, along with the impact on the setting of the Red House, a Protected Structure (and National Monument) to the east, Archbishop's House, a Protected Structure to the west and the wider area.

In the absence of mitigation, effects on the setting are predicted to occur as a result of the proposed Project, as detailed in the Tables below.

15.7.10.1 Potential Impact of the Proposed New Landscape Design on the Setting

The proposed redevelopment will utilise the existing circulation routes through the site, with the original entrance avenue to the Red House forming the primary circulation route through the site. It will also re-establish routes and north-south permeability that was lost with some of the changes to the site in the late 20th Century. This will have a positive impact on the architectural heritage of the site as it will ensure that views and approaches to the Protected Structures will be maintained and enhanced. Significant spaces, including the front setting to the Original Seminary buildings and the quadrangle to the rear/west will be retained and enhanced within the proposed scheme.

Significant features within the setting, including the entrance avenue and the formal front setting to the Main Seminary Block, will be maintained and remade with the inappropriate tarmac surfaces removed. This will ensure that the significance of the setting of the Red House, the Original Seminary Building, the South Link Building and the College Chapel will not be compromised. Similarly, the formal garden in the quadrangle to the rear of the Original Seminary Building will be retained and enhanced, ensuring that the character and special significance of the Assembly Hall and the Ambulatory is protected.

The proposed landscape design for the Front Setting follows the historic layout of this area, utilising the historic entrance avenue with an entrance plaza at the base of the stone steps to the Original Seminary Building. This area will be planted with grass, and mature trees will be retained. This will ensure that the parkland character of the setting is retained.

Figure 15.74 Late 19th Century Photo of the front setting of the Main Block and Church. NLI L_ROY_01108.



The original setting of the College, as seen in historic photos, has been significantly altered by the widespread planting and growth of mature trees within the landscape. This has diminished views within the site, and in some cases severed the visual connections between disparate buildings on the site.

Figure 15.75 Existing view of the front setting of the Main Block and Church, illustrating the extent to which the setting has been altered.



The mature trees contribute significantly to the existing character of the setting and these were a significant influence on the location and size of new building footprints within the proposals. Most of these trees are to be retained therefore.

Numerous new trees will also be introduced as part of the landscape proposal. The retention of existing mature trees and the planting of new trees within the site will ensure that the sylvan character of the setting will be enhanced. It is considered that this is a positive intervention to the setting.

The proposed landscape design for the quadrangle (to the rear of the Original Seminary Building) is a modern interpretation of the quadripartite arrangement implemented in the 1950s.

It is considered that the proposal is a positive intervention and an appropriate contemporary interpretation of a cloistered garden type for the new residential use.

Table 15.8 Predicted Effects of New Landscape Proposals on Setting

Cause	Effect	Impact Characterisation	
Proposed new landscape design for the subject site	The proposed new landscaped design for the site is respectful of the historic character of the various distinct areas within the site and will retain this character.	*Quality*	Positive
		Significance	Significant
		Extent	Local
		Context	The parkland character of the front setting of the Original Seminary Building & College Chapel will be retained in the proposed new design. The formal design of the rear quadrangle will be enhanced. The new landscape proposals will tie the proposed new scheme to the historic character of the setting.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

15.7.10.2 Potential Impact of the Proposed New Residential Buildings on the Setting

Consideration must be given to the Proposals with Regard to DoHLGH Architectural Heritage Guidance issued under Section 52 and in accordance with Section 57 of the Planning Act

The Architectural Heritage Protection Guidelines (2011) provide guidance regarding assessment of proposed new development within the setting and curtilage of a Protected Structure. Relevant extracts from this guidance are included below, with some commentary on the subject buildings and their attendant grounds.

"AHPG Section 13.3: General Principles

Features within the curtilage and attendant grounds of a protected structure can make a significant contribution to the character of that structure. The designed landscape associated with a protected structure was often an intrinsic part of the original design concept and, as such, inseparable from the building. Where proposals are made for alterations to a designed landscape, ancillary buildings, structures or features within the curtilage or attendant grounds of a protected structure, a site inspection should be carried out the planning authority in order properly to understand the potential effects of the proposed development.

When assessing the contribution of structures or features within the curtilage or attendant grounds to the character of a protected structure, and when considering any proposals to alter such features, the following should be considered:

a) *What items of interest are there within the present curtilage of the structure?*

b) *Was this the original curtilage of the structure or are there likely to be other items of interest that are, or once were, associated with this structure and which now lie beyond its curtilage but within its attendant grounds?*

c) *Are there any other items of interest which, while not original, are later additions of merit?*

d) *Do any items within the curtilage or attendant grounds affect the character of the main structure and help to define its special interest?*

e) *Do any items within the curtilage or attendant grounds affect the character of other structures? For example, boundary walls, railings, gates and gardens can contribute to the character of other protected structure or to the character of an ACA;*

f) *How are the boundaries of the site enclosed or demarcated? Are there walls, railings, fences, ditches or ha-has, gates or gate piers?*

g) *Are there other buildings within the curtilage or attendant grounds? Were these other structures connected with the previous use or enjoyment of the protected structure? For example, with a country house there may be such structures as outbuildings, coach-houses, stables, icehouses, dovecotes, follies, gate-lodges and others;*

h) *Are there features of interest within the curtilage or attendant grounds connected with the use or enjoyment of the protected structure? For example, a mill may have associated features such as a mill-race, a mill-pond, a tail-race, sluice-gates, weirs, dams, and drying greens;*

i) *Are there designed landscape features within the curtilage or attendant grounds connected with the protected structure or its ancillary buildings? These may include ornamental planting, earth works, avenues, gardens, ponds, woodlands or other plantations;*

j) *Are there any items or structures within the curtilage which detract from the character of the protected structure? These might include, for example, later structure or planting which mar views of the structure or its relationship with other, more important, structures within the curtilage or attendant grounds. Does the opportunity exist to reverse any adverse impacts?"*

"a) What items of interest are there within the present curtilage of the structure?"

There are three areas in the setting of interest - the front setting/lawn to the east of the Original Seminary Building front which extends towards the Red House; the formal quadrangle garden to the rear of the Original Seminary Building and the parkland to the north of the site. Whilst these areas all retain trees and grassed areas, the designed features comprise tarmacked parking areas (previously tennis courts) and driveways. Only the formal garden to the rear of the Original Seminary Building retains features of interest all of which are proposed to be restored ad retained as part of the landscape proposals by NMP Architects.

"b) Was this the original curtilage of the structure or are there likely to be other items of interest that are, or once were, associated with this structure and which now lie beyond its curtilage but within its attendant grounds?"

The Red House and Archbishop's House may be considered to form part of the attendant grounds. The front setting to the Red House is a carpark and the setting to Archbishop's house has no visual connection with the subject site due to the boundaries constructed between them.

"c) Are there any other items of interest which, while not original, are later additions of merit?"

No.

"d) Do any items within the curtilage or attendant grounds affect the character of the main structure and help to define its special interest?"

The settings all have an impact on the Protected Structures and contribute to the character of each of them. The proposals seek to enhance that character.

"e) Do any items within the curtilage or attendant grounds affect the character of other structures? For example, boundary walls, railings, gates and gardens can contribute to the character of other protected structures or to the character of an ACA;"

The setting to the seminary has a visual connection with the Red House and very particular consideration has been given to the impact on the Red House setting.

"f) How are the boundaries of the site enclosed or demarcated? Are there walls, railings, fences, ditches or ha-has, gates or gate piers?"

Enclosed by a mix of brick and stone boundary walls and gates.

"g) Are there other buildings within the curtilage or attendant grounds? Were these other structures connected with the previous use or enjoyment of the protected structure? For example, with a country house there may be such structures as outbuildings, coach-houses, stables, icehouses, dovecotes, follies, gate-lodges and others;"

All of the buildings on the subject site and attendant grounds are described, recorded and assessed.

"h) Are there features of interest within the curtilage or attendant grounds connected with the use or enjoyment of the protected structure? For example, a mill may have associated features such as a mill-race, a mill-pond, a tail-race, sluice-gates, weirs, dams, and drying greens;"

No such features.

"i) Are there designed landscape features within the curtilage or attendant grounds connected with the protected structure or its ancillary buildings? These may include ornamental planting, earth works, avenues, gardens, ponds, woodlands or other plantations;"

Only the formal cloister garden to the rear of the seminary could be considered as a designed landscape. There was an avenue of trees created to the north of the site most of which was removed with the construction of the library wing.

"j) Are there any items or structures within the curtilage which detract from the character of the protected structure? These might include, for example, later structures or planting which mar views of the structure or its relationship with other, more important, structures within the curtilage or attendant grounds. Does the opportunity exist to reverse any adverse impacts?"

Yes. The grassed areas and tarmacked carparking that surround the buildings on site detract from the special interest of their architecture. In particular, the treatment to front of the College Chapel façade is entirely inappropriate to its architecture. The extensions to the north have reduced the permeability of the site and cut off views of the seminary. The proposals seek to activate all of these areas and to provide a more appropriate context to some important architecture.

The DoHLGH 2011 *Architectural Heritage Protection Guidelines* provide guidance in relation to the construction of new extensions, which can also be applied to the construction of new buildings within the curtilage of a Protected Structure:

"Section 6.8.2

If planning permission is to be granted for an extension, the new work should involve the smallest possible loss of historic fabric and ensure that important features are not obscured, damaged or destroyed. In general, principal elevations of a Protected Structure (not necessarily just the façade) should not be adversely affected by new extensions. The design of symmetrical buildings or elevations should not be compromised by additions that would disrupt the symmetry or be detrimental to the design of the protected structure."

In this case the proposal involves minimal loss of historic fabric of any architectural significance, as detailed above. The primary facades, designed landscape features and vistas within the setting will also be protected.

"Section 6.8.3:

Generally, attempts should not be made to disguise new additions or extensions and make them appear to belong to the historic fabric. The architectural style of additions does not necessarily need to imitate historical styles or replicate the detailing of the original building in order to be considered acceptable... Careful consideration of the palette of materials with which the works are to be executed can mediate between a modern design idiom and the historic fabric of the structure. Extensions should complement the original structure in terms of scale, materials and detailed design while reflecting the values of the present time."

The proposed new buildings within the setting do not mimic the historic buildings, but are complementary to them in terms of proportion, materiality, and scale. This is in line with prevailing best conservation practice, as noted in the 2017 S.P.A.B. publication *New Design for Old Buildings:*

"To prevent confusion, new work should express modern needs a modern language and add to, rather than detract from, the building's historic provenance... that is complementary to what exists."

The proposed new buildings within the setting of the Protected Structure will be high quality modern architectural designs, which will contrast and complement the existing building stock. The juxtaposition of old and new will ensure that the historic form of the cluster of buildings will remain legible. The RIBA-SPAB guidance on new buildings in historic settings notes that:

"Used in the historic environment, well-executed juxtaposition allows the old to remain clearly readable against the new, with visual separation created by distinct material and design differences. Despite these clearly set boundaries, there is inherent integration and sympathy: the two structures function together as a new and successful entity."

The material palette and façade treatment has been designed with careful consideration of the existing Protected Structures on site, and the architectural heritage of the surrounding context. The approach is outlined in the OMP Architects and Henry J Lyons Architects Design Reports.

Figure 15.76 View of the Long Room Hub within the Nationally Significant Setting of Trinity College Dublin. McCullough Mulvin Architects.



A successful example of new design in a historic setting can be seen in McCullough Mulvin's 2008 Long Room Hub at Trinity College, Dublin. This building is in immediate proximity to numerous protected structures, and at an architectural heritage site of international significance. The new building is a high quality architectural design, in decidedly contemporary style. The building does not attempt to mimic the materiality or classical detailing of the surrounding architectural heritage. This building was the recipient of an RIAI Award in 2011.

Further examples of successful interventions which contrast with the existing historic setting within which they are located are provided in this guidance, and include the Granary, Barking, and the Holbourne Museum, Bath.

"Pollard Thomas Edwards successfully used the technique of juxtaposition at the Granary, on Barking Creek, Barking. The scheme saw the creation of new, self-contained and openly assertive design alongside the sensitive conversation of the nineteenth century building. The added structure, although distinctly modern and different, has a shape, colour and texture that is in harmony with the old...

...Eric Parry's extension to Bath's Holbourne Museum turns juxtaposition into an art form. Glimpsed form a distance there is an unexpected ethereal quality to the extension added to the rear of the Grade 1

listed building. No attempt has been made to mimic the classical detailing or solidity of the Bath-stone original, which dates from the late eighteenth century..."

At the Granary, the proposed new building makes a significant visual impact on the front setting of the existing historic building. The new building is not subservient to the historic building, and does not mimic the historic detailing or materiality. The height, massing and proportions of the new addition ensure that it enhances the appreciation of the historic building.

The proposed development will consist of several apartment buildings constructed over the existing parkland. The height of these new buildings will be largely from 4-8 storeys, and in cases will respect the existing institutional parapet and ridge heights and match the heights of the existing mature trees on the site. The relatively low heights of the blocks and the retention of a significant amount of the existing mature trees on site will ensure that the parkland character of the site will be protected and retained.

The heights of the proposed new blocks has been adjusted with regard to proximity to Protected Structures in particular the Red House where the offsets are very significant and building heights and materiality defer to the Red House. See also the impact assessment within the AHIA and the assessment of proposals with regard to current relevant Development Plan Policy later in this Chapter 15.

Figure 15.77 Extract from architects' drawings indicating 40 plus metre offset to south of Red House and building heights stepping down on those closer

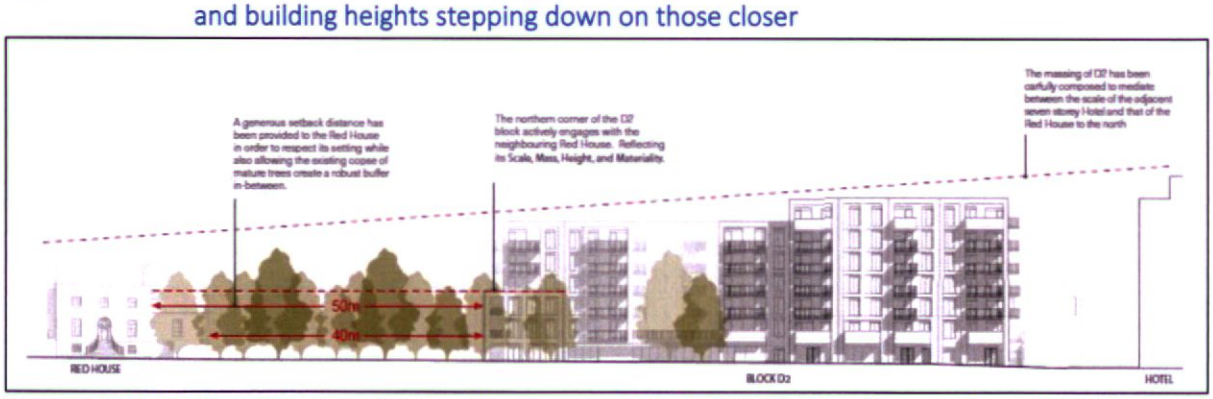


Figure 15.78 Verified CGI View showing the Impact of Block D at 40/50m distance from the Red House

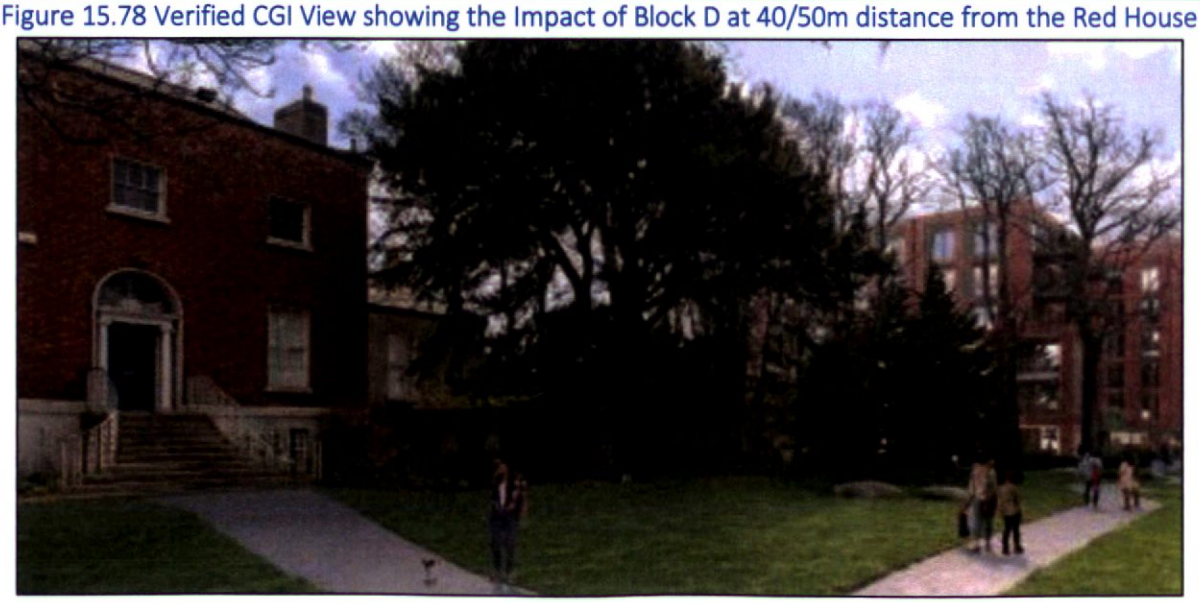


Figure 15.79 Elevated view showing distance, stepping scale and deferential materiality of the B4 Block to the West of the Red House



Table 15.9 Predicted Effects Prior to Planned Mitigations of Proposed New Residential Buildings on the Setting

Cause	Effect	Impact Characterisation	
Construction of proposed new residential buildings on the site	The new buildings will have a positive impact on the character of the site and will enhance the setting of the Protected Structures.	*Quality*	Positive
		Significance	Significant
		Extent	Local
		Context	The proposed new residential buildings have been designed with consideration of the historic context of the site, the numerous Protected Structures on site and their settings. The new buildings will be of high quality architectural design and will enhance the context and setting of the Protected Structures. The scale, heights, footprints, locations and material palette utilised will ensure a visual harmony between new and old on site, whilst clearly distinguishing contemporary intervention.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

15.7.11 Potential Impact of Proposed New Residential Buildings on Views and Vistas within the Site

A number of significant views on the subject site were identified (see standalone CGI document by Modelworks submitted as part of the planning documentation). The significance of these views has informed the layout, location, scale, heights and materiality of the buildings on the subject site.

Figure 15.80 Key view locations identified within the Site



View 5 – View Towards College Chapel from the Entrance Avenue

It should be noted that at present this view is only partially visible from certain points along the Entrance Avenue, due to the mature trees on site. The viewpoint chosen for the viewpoint is located to the west of the entrance avenue, in a location where the full façade of the College Chapel is clearly visible. The avenue branches in this area, providing a direct access route to the College Chapel.

Figure 15.81 Extract from Modelworks Submission showing Impact of Proposals on View 5



The view of the front façade of the College Chapel will be protected within the proposed scheme. The above figure clearly shows that views to the College Chapel will not be interrupted or obstructed from this viewpoint along the entrance avenue. The proposed new Block C1 will block views of the South Link building and the façade of the Main Seminary Block. This is considered to be an acceptable impact, as it will bring a focus to the view of the façade of the College Chapel whilst moving along the entrance avenue.

The proposed works will therefore clearly not interrupt or obstruct this significant view within the subject site. It is considered that the proposed new residential buildings will enhance the front setting of the College Chapel and Original Seminary Building and have a positive impact on views to the Protected Structure.

View 4 – View Toward Original Seminary Building from the Entrance Avenue

It should be noted that at present this view is only partially visible from certain points along the Entrance Avenue, due to the mature trees on site. The existing view is illustrated in the photo records appended to the AHIA and in the Landscape and Visual Chapter in the EIAR. This clearly shows that the existing view between the Main Seminary Block and the entrance avenue is focused on the central breakfront and entrance to the block. The façade of the Original Seminary Building, the South Link Building and the College Chapel are largely obscured by trees from this viewpoint.

The proposed new residential buildings within the front setting have been carefully sited so that this view of the front façade of the Main Seminary Block from the main entrance avenue will not be interrupted. Almost all of the existing trees will be retained in this area, preserving the parkland

character of the setting. The proposed heights, scale, footprints and material expression of the proposed new buildings responds directly to the existing architecture and this is clearly visible in the verified CGIs. The proposed new blocks frame the view of the Original Seminary Building and give a focus to views of the elevation - particularly on its central breakfront and entrance which will provide access to what will be the most significant new residential building on the site – the Original Seminary Building.

The proposed works will therefore clearly not interrupt or obstruct this significant view within the subject site. It is considered that the proposed new high quality buildings will enhance the front setting of the Main Seminary Block and have a positive impact on views to the Protected Structures.

Figure 15.82 Extract from Modelworks Submission showing Impact of Proposals on View 4



View 3 – Visual Connection Between Original Seminary Building and the Red House (on adjoining site)

Figure 15.83 Extract from Modelworks Submission showing Impact of Proposals on View 3 (this shows the impact after the very significant mitigation of omitting Block D1)



As the college was housed in the Red House prior to the construction of the Original Seminary Building with functions retained there subsequently, the visual connection between the Red House and the Original Seminary Building is of particular significance despite the sites now being separate legally. This important view will be preserved and given emphasis within the proposed redevelopment. The proposed new residential buildings have been arranged in such a way as to maintain the visual connection between the Red House and the Main Seminary Block. The front setting of the Red House will remain largely open, with landscaping works emphasising the connection between the structure and the College.

Table 15.10 Predicted Effects Prior to Planned Mitigations of Proposed New Residential Buildings on Views & Vistas within the Site

Cause	Effect	Impact Characterisation	
Proposed new residential buildings on site	The proposed new residential buildings will have a positive impact on the setting of the Protected Structures and will retain and give emphasis to significant views.	*Quality*	Positive
		Significance	Significant
		Extent	Local
		Context	Significant views and visual connections within the subject site have been retained and protected in the proposed development. The proposed new residential buildings will emphasise these significant views and will enhance the front setting of the Original Seminary Building.
		Probability	Likely

Cause	Effect	Impact Characterisation	
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

15.7.12 Potential Impact of the Proposed Development on the Setting of the Red House (A Protected Structure)

The history of the Red House has been dated to the early 18th Century, when Tristram Fortick obtained a lease of *"the great house of the Grange of Clonliffe with all out-offices, conveniences thereunder belonging"*. This house was in the location of the existing Red House. By 1790, the house was the residence of a Frederick Edward Jones, manager of the Theatre Royal. Jones renamed the house as Clonliffe House, and employed an Italian craftsman, Maranari, to paint frescos in two rooms. The neighbouring Jones Road is named for Frederick Edward Jones, who laid out this road and who constructed the bridge over the Royal Canal (now known as Clonliffe Bridge).

The original construction date of the house is not clear, as the interiors have been extensively renovated. The college historian Richard Sherry undertook research into the construction of the Red house for the 1959 centenary publication. He notes that:

> *"Mr. C. P. Curran was good enough to give us his private opinion about the building. 'The house', he said, 'looks like late eighteenth century. The flat doorway which lacks a projecting pediment, and the flanking arcaded walls are a good example of Dublin domestic architecture of the last quarter of the eighteenth century'. The Honourable Desmond Guinness, president of the Irish Georgian Society, pointed out that the house is very difficult to date exactly. 'It has been extensively renovated', he said, 'and all the interior cornices have been removed. These are usually most helpful for fixing the date of construction. The fireplaces, staircase, basement and windows seem to suggest a date about 1770, although the house has some later features as well. In the distance, as one approaches the house, it looks rather like early nineteenth century, but this impression disappears as one comes closer. In my opinion it was probably built by Lord Mountjoy. It is certainly too late for Fortrick and most probably was built before the time of Jones'."*

The Clonliffe House and its lands were purchased by Dr. Cullen in 1858, and the Diocesan College was established in the existing house. The description of the sale notes that there were extensive offices on the grounds, as well as a large garden and pleasure grounds. The 1st Edition OS Map shows the ancillary office buildings to the south of the house. With the construction of the main seminary block in the early 1860s, and further additions such as the College Church c. 1873, all located in the western section of the College lands, the focal point of the site shifted away from Clonliffe House.

A relationship between the house and the later College buildings was maintained, and in the 1875 Ordnance Survey map, a path linking the two buildings is shown. This path survives to the present, lined with trees. This connection between the Red House and the Original Seminary Building has been taken into account in the design of the proposed scheme for the former College lands, with views between these two buildings preserved and given new focus.

There will be no direct impacts on the Red House as part of the proposed Project, as the building is outside of the legal boundary of the Subject Site. The proposal to construct a series of residential

buildings in the front setting of the Original Seminary Building will have a visual impact on the setting of the Red House, and on views between the Red House and the Original Seminary Building.

Whilst the proposals cannot physically impact on the front setting to the Red House the main impact of the proposals on the Red House will be to provide a new, high-quality landscape adjacent to it. The proposed new buildings are located at very long distances from the Red House and the buildings will reduce in height and mass as they get closer to it so as not to overbear, overlook or overshadow the Red House or indeed its setting. Please refer also to the drawings by Henry J Lyons and OMP Architects and the Architectural Design Statement. It is important to note that a difference in scale between the Red House and the much larger institutional seminary buildings has existed on this site since the 19th Century. The overall site must be considered to have an institutional scale to it with the earlier Red House somewhat dwarfed by the scale of the existing seminary buildings. The proposed new development in terms of massing, footprint, location and heights takes account of these differences in scale.

Table 15.11 Predicted Effects Prior to Planned Mitigations of the New Residential Buildings on the Setting of the Red House

Cause	Effect	Impact Characterisation	
Proposed new structures on the subject site	The proposed new high quality residential buildings will have a positive impact on the setting of the Red House.	*Quality*	Positive
		Significance	Significant
		Extent	Local
		Context	The proposed new residential buildings are of high architectural quality and have been designed in response to the scale, height, materiality and proximity of the Red House so as to protect and retain significant views and vistas within the overall site. The proposed development will use red-brick and be in visual harmony with the Red House in terms of scale, height, proximity and material whilst distinguishing itself a contemporary intervention on site.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

15.7.13 Potential Impact on the Architectural Heritage Character of the Wider Area

The proposal for the Project Site has been assessed with regard to its potential impact on the cultural and architectural heritage of the Site, and any visual impacts on the architectural character of the surrounding structures and area. The visual impact of the proposed development on key view corridors and landmark buildings within the wider city, as outlined in the Dublin City Development Plan (2022 – 2028), has also been assessed.

Key viewpoints, selected in conjunction with Dublin City Council and the Design Team, have been assessed. The locations of these viewpoints were selected so as to illustrate the impact on the Protected Structures and Residential Conservation Areas within the wider context. Please refer to the Landscape

and Visual impact assessment (LVIA) Chapter 14 in this EIAR for a detailed commentary on the selection of viewpoints and the impact on these views.

There are a number of Protected Structures, Architectural Conservation Areas and Z2 Residential Conservation Areas in the wider context of the subject site. A selection of viewpoints illustrating the visual impact of the proposed scheme on the architectural heritage character of the wider area is assessed below.

Please refer to the full package of views, submitted in Chapter 14, for further detail. The viewpoints show the existing/baseline view, the proposed view following the construction of the subject scheme, and the proposed view showing the cumulative impact of the proposed scheme and the proposed development of the adjoining site as permitted under DCC Reg. Ref. 2935/20 (currently under appeal with An Bord Pleanála, Reg. Ref. PL29N.308193). The cumulative visual impact of the two schemes on the architectural heritage character of the wider area will be assessed in this section.

15.7.14 Potential Impact on Protected Structures in the Wider Context of the Subject Site

Protected Structures within the immediate context of the Site include the Archbishop's House (Reg. Ref. 2361), the Red House (Reg. Ref. 1902), the houses along Drumcondra Road (Reg. Refs. 2344 – 2368), the houses along Clonliffe Road (Reg. Refs. 1903 – 1906), the corner tower and walls of the former Goodall's Warehouse (Reg. Ref. 2291), the railway bridge at Jones's Road (Reg. Ref. 884), the former warehouse and associated buildings along Richmond Road (Reg. Ref. 7359). The impact on the setting of the Red House has been assessed earlier in this chapter.

Potential Impact of the Proposed Development on the Setting of the Archbishop's House

No impact. No works are proposed here as the building and its setting lie outside the subject site and are separated visually and physically from it by stone boundary walls. There will be a visual impact in views to the north from the front setting. These are screened by existing trees on the boundary and are not significant or negative.

Figure 15.84 Photomontage showing the Impact on Archbishop's House (a Protected Structure).



The Archbishop's House is a Protected Structure (Reg. Ref 2361) adjoining the subject site to the immediate west. Figure 15.85 by Modelworks shows the visual impact of the proposed scheme on the setting of and views towards the structure. It is clear from these views that the scheme will be barely perceptible from the setting of the Protected Structure, due to the extensive planting of mature trees to the east of the Archbishop's' House. The proposed development therefore cannot be considered to have any visual impact on this Protected Structure.

Figure 15.85 Baseline (A) and proposed (B) cumulative viewpoints showing the houses along Drumcondra Road (Protected Structures).







A number of the houses along Drumcondra Road are Protected Structures (Reg. Refs. 2344-2368), to the immediate west of the subject site. Figure 15.86 shows the visual impact of the proposed scheme on the setting of and views towards the Protected Structures. It is clear from these views that the

scheme will be barely perceptible from the streetscape of Drumcondra Road, due to the distance from the subject site and the existing trees between the site and the Protected Structure. The proposed development therefore cannot be considered to have any visual impact on these Protected Structures.

Figure 15.86 Baseline (A) and proposed (B) cumulative viewpoints showing St. Columba's Church, Iona Road (a Protected Structure).



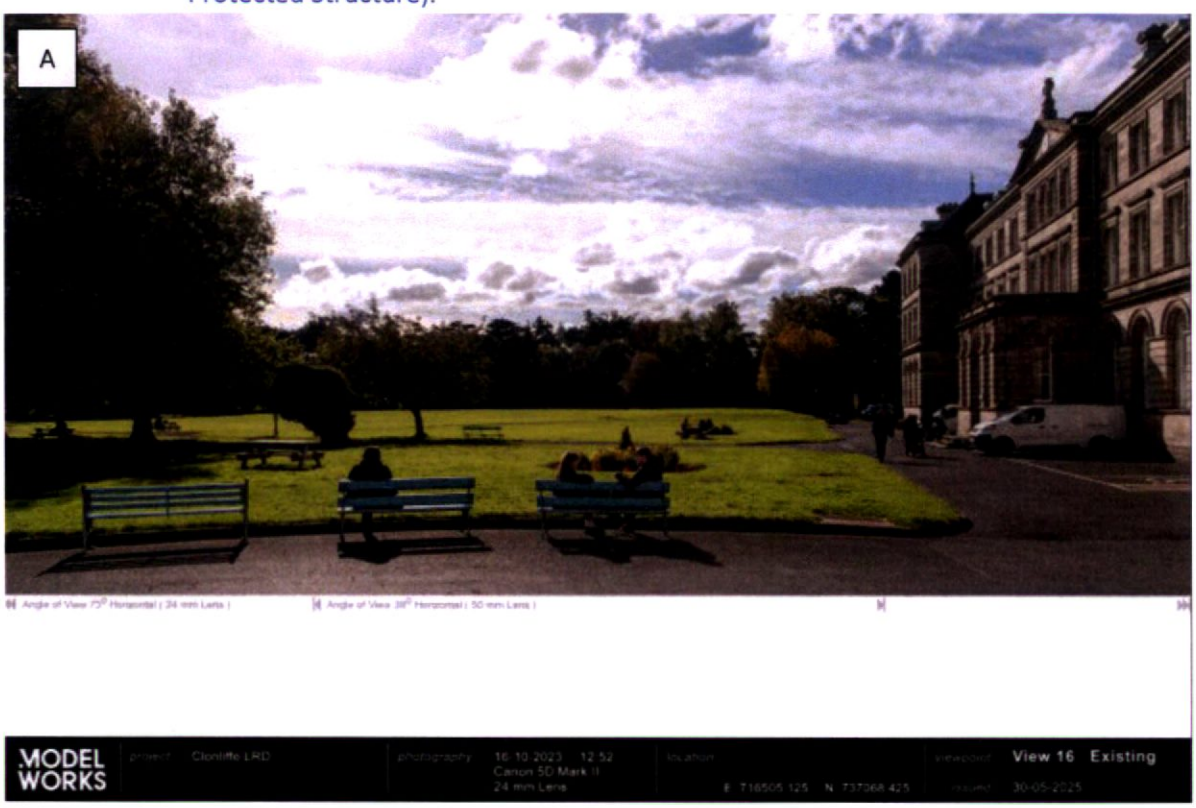






St. Columba's Church is a Protected Structure (Reg. Ref 4001) located to the west of the subject site. Figure 15.87 shows the cumulative visual impact of the proposed scheme on the setting of and views towards the structure.

Figure 15.87 Baseline (A) and proposed (B) cumulative viewpoints showing All Hallows College, DCU (a Protected Structure).





It is clear from these views that the scheme will be barely perceptible from the setting of the Protected Structure, due to the distance from the subject site and the existing trees between the site and the Protected Structure. The proposed development therefore cannot be considered to have any visual impact on this Protected Structure.

All Hallows College is a Protected Structure (Reg. Ref 3237) located to the north of the subject site. Figure 15.87 shows the cumulative visual impact of the proposed scheme on the setting of and views towards the structure. It is clear from these views that the scheme will be barely perceptible from the setting of the Protected Structure, due to the distance from the subject site and the existing trees between the site and the Protected Structure. The proposed development therefore cannot be considered to have any visual impact on this Protected Structure.

15.7.15 Potential Impact on Architectural Conservation Areas in the Wider Context of the Site

Architectural Conservation Areas exist within the wider context of the subject site. The Mountjoy Square ACA is located to the south of the subject site.

Figure 15.88 Baseline (A) and proposed (B) cumulative viewpoints showing the Mountjoy Square Architectural Conservation Area.





Mountjoy Square Architectural Conservation Area is located to the south of the subject site. Figure 15.88 shows the visual impact of the proposed scheme and the cumulative impact of the neighbouring scheme on the character of the Architectural Conservation Area. It is clear from these views that the scheme will be completely obscured from views within the ACA by the surrounding Georgian terraces. There are clearly no cumulative visual impacts from the proposed scheme on this Architectural Conservation Area.

15.7.16 Potential Impact of the Development on Z2 Residential Conservation Areas in the Wider Context of the Site

A number of the neighbouring houses along Clonliffe Road, Drumcondra Road and Susanville Road are zoned Z2 Residential Conservation Areas under the Dublin City Council Development Plan 2022-28 (see Development Plan zoning maps). The visual impact of the proposed scheme, and the cumulative impact of the proposed scheme and the adjoining hotel scheme (DCC Reg. Ref. 2935/20), on the architectural heritage character of these areas will be assessed in this section.

Figure 15.89 Baseline (A) and proposed (B) cumulative viewpoints showing the Z2 Residential Conservation Area on Clonliffe Road (towards Drumcondra Road Lower end).



Figure 15.89 shows the cumulative visual impact of the proposed scheme and the neighbouring scheme on the character of the Z2 Residential Conservation Area along Clonliffe Road. It is clear from these views that the scheme will be largely obscured from views within the ACA by the trees along the road

and due to the oblique angle. There cannot be considered to be any significant cumulative visual impacts on the character of this Z2 Residential Conservation Area.

Figure 15.90 Baseline (A) and proposed (B) cumulative viewpoints showing the Z2 Residential Conservation Area at the junction between Clonliffe Road and Jones's Road.





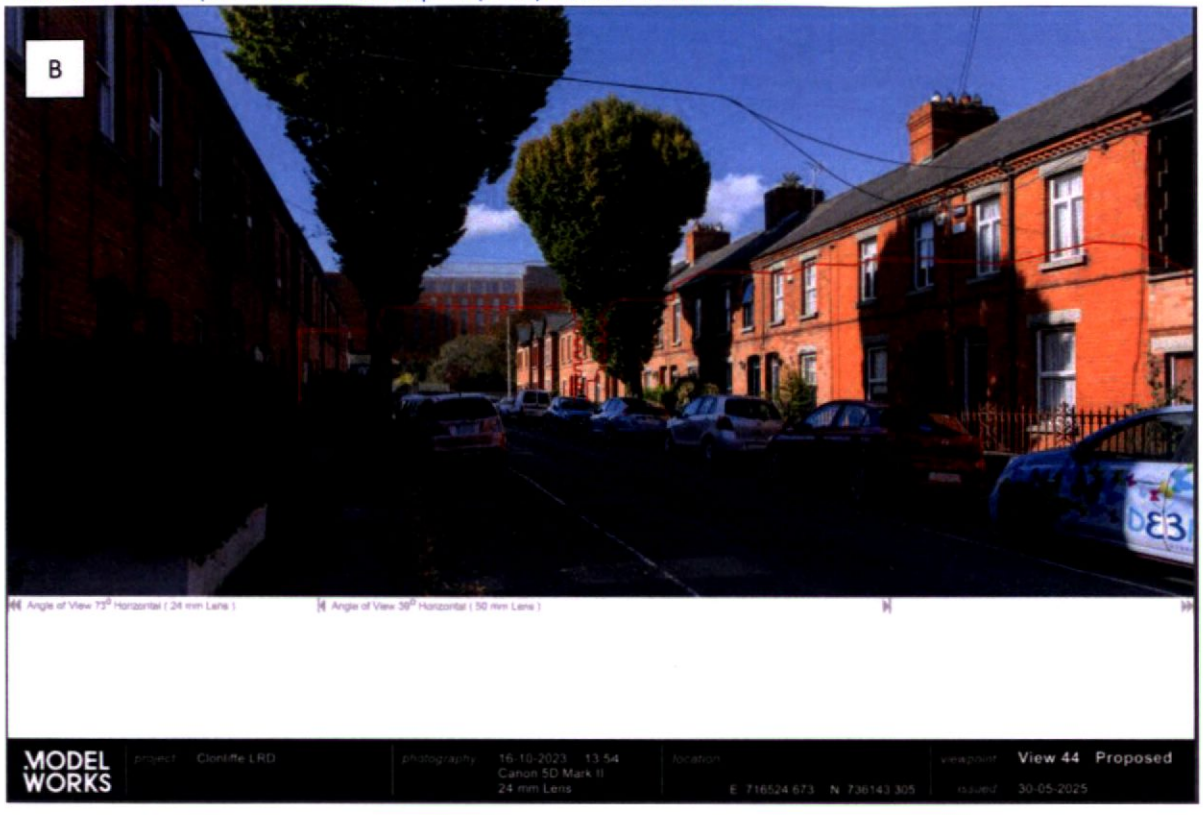
Figure 15.90 shows the proposed and the cumulative visual impact on the character of the Z2 Residential Conservation Area at the junction of Clonliffe Road and Jones's Road. There will clearly be a significant cumulative visual impact on the streetscape. However, the proposed material palette of red brick to be used in both schemes will ensure visual harmony between the new schemes and the existing Z2 Residential Conservation Areas. The widening of the entrance has already been permitted but is part of the cumulative impact (2935/20). The proposed materiality of the new schemes will minimise the cumulative visual impact and maintain the character of the Z2 Residential Conservation Area. It is considered that the proposed development will have a positive impact on the character of the Z2 Residential Conservation Area, enhancing the architectural quality of the area and providing visual interest and greater connectivity and openness into the former Holy Cross college site. The cumulative impact of the proposed scheme and the adjoining permitted scheme is considered to have an acceptable visual impact on the character of this Z2 Residential Conservation Area.

Figure 15.91 shows the baseline and the cumulative visual impact on the character of the Z2 Residential Conservation Area along Susanville Road. These views clearly show that the constructed hotel obscures views of the subject scheme. The cumulative visual impact on the character of the streetscape is restricted to the visual impact of this existing construction.

Figure 15.91 Baseline (A) and cumulative (b) viewpoints showing the Z2 Residential Conservation Area at Susanville Road.



MODEL WORKS | project: Clonliffe LRD | photography: 16-10-2023 13:54 Canon 5D Mark II 24 mm Lens | location: E 716524.673 N 736143.305 | viewpoint: View 44 Existing | issued: 30-05-2025



15.7.17 Summary of Predicted Impacts on Architectural Heritage of Wider Context

In the absence of mitigation, effects on the architectural heritage character of the wider area are predicted to occur as a result of the proposed development, as detailed in Table 15.12, below.

Table 15.12 Predicted Effects Prior to Planned Mitigations on Architectural Heritage Character of Wider Area

Cause	Effect	Impact Characterisation	
Proposed new residential buildings on subject site and the adjoining scheme permitted under 2935/20	There will be little or no cumulative visual impact on the setting of or views to the Protected Structures in the wider context of the subject site.	*Quality*	Neutral
		Significance	Slight
		Extent	Local
		Context	There are a number of Protected Structures in the immediate and wider context of the subject site. CGI Photomontages clearly show that the proposed scheme will be largely imperceptible from the setting of these Protected Structures.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Cumulative
Proposed new residential buildings on subject site and the adjoining scheme permitted under 2935/20	There will be no cumulative impact on the character of Mountjoy Square Architectural Conservation Area.	*Quality*	Neutral
		Significance	Slight
		Extent	Local
		Context	Mountjoy Square is the closest ACA to the subject site. CGI Photomontages clearly show that the proposed scheme will be completely obscured from views within the ACA.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Cumulative
Proposed new residential buildings on subject site and the adjoining scheme permitted under 2935/20	There will be minimal cumulative visual impact on the character of Z2 Residential Conservation Areas in the wider context of the subject site. Where visible, the proposed new development will have a positive impact on the character of the streetscape.	*Quality*	Positive
		Significance	Slight
		Extent	Local
		Context	There are a number of Z2 Residential Conservation Areas in the wider context of the subject site. The proposed development will largely have little or no visual impact on these. Where visible, the proposed new development will have a positive impact on the character of the streetscape.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Cumulative

15.7.18 Potential Impacts on Boundary Walls and Gates

Alteration works are proposed to the existing entrances to the subject site to facilitate the proposed new apartment developments. Please refer to the drawings and reports by Niall Montgomery Partnership for further detail.

- Clonliffe Road Entrance: Permitted as part of previous planning for adjoining hotel.
- Drumcondra Road Entrance: These gates and the boundary wall are part of the inscription on the Record of Protected Structures. It is proposed to take down the existing stone gate pier to the south, and reconstruct this pier in a new location further to the south, widening the gate ope in this location. This will involve the taking down of a small portion of the stone boundary wall and reusing the calp in accordance with the specifications appended to the AHIA.

In the absence of mitigation, effects on boundary walls and gates are predicted to occur as a result of the proposed Project, as detailed in Tables, below.

Table 15.13 Predicted Effects Prior to Planned Mitigations on Walls and Gates – Entrance from Drumcondra Road

Cause	Effect	Impact Characterisation	
Proposed widening of the existing entrance gates and taking down of a section of the Boundary wall	The character and significance of the entrance gates and boundary walls along the Drumcondra Road will be maintained	*Quality*	Neutral
		Significance	Slight
		Extent	Local
		Context	These entrance gates and the adjoining walls are part of a Protected Structure. The southern gate pier will be carefully taken down and reconstructed in a new location in accordance with the specifications appended to the AHIA. The reconstruction of the gate pier will ensure that the architectural character of the entrance is maintained. The taking down of a small section of the wall to enable the widening of the entrance will involve minimal loss of historic fabric and is a necessary intervention.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

15.8 Mitigation Measures

Incorporated Design Mitigation

The design proposal for the site has been developed with regard to the architectural heritage impact of the proposed works in the context of the 2000 Act and the Guidance issued thereunder. The design responds to the evolution and particular conditions of the subject site and elements within and adjoining it and mitigates any negative cultural heritage impacts through the retention and conservation of significant fabric and features, and through the appropriate massing, siting, scaling, materiality and landscaping of new build elements within the overall site, having cognisance of existing views the quality of settings and opportunities to enhance all of these in accordance with the Guidance.

The Proposals have undergone an exhaustive design process and ongoing review which has included a substantial and extended pre-application consultation carried out on the proposals due particularly to sensitivities over potential impact on the architectural heritage outlined above. This included meetings in the Dublin City Council offices with Kiaran Sweeney Senior Planner, Nicci Nolan Senior Executive

Planner and both Niamh Kiernan Architect and Head of Conservation and Mary McDonald Architect and Senior Deputy Conservation Officer. Subsequent to these meetings a full pre-application submission was made and a detailed opinion on the submission was issued by Dublin City Council. There have been subsequent joint meetings both on-line and on-site (14th May 2025) to review and refine the proposals in greater detail and agree salvage scopes and strategies. The current proposals have evolved significantly from those discussed and presented in model form at the early stages and those submitted pre-Opinion. The material changes to the proposals have absorbed the concerns raised within these discussions and reflect the planning authority's regard for the proposals' complete compliance with their policy and with relevant DoHLGH guidance. In addition to assessing the impacts of the designs in their final form, this report sets out the particular response to the LRD Opinion in respect of the relevant policy and guidance.

The mitigations through design have, therefore, been iterative over an extended design process and have resulted in impacts which are far reduced from the potential impacts before mitigation. This is particularly evident for instance on impacts to the Red House setting and associated views as well as on views within the cloistered quadrangle to the west of the seminary. The salvage approach in respect of the 1960s oratory fit out is a further significant mitigation.

Architectural features of interest and surviving historic fabric, as detailed below and in the Salvage Specifications (Appendix XIV in the Architectural Heritage Impact Assessment), will be carefully taken down and salvaged prior to/as part of any demolition works. The re-use of this fabric within the proposed scheme will be considered, and any items not feasible for re-use within the site will be salvaged off site including the significant number of 20th Century sash windows within the New Wing and Library Extension. This will ensure that significant features are not lost as part of the proposed development and that the loss of historic fabric is minimised.

It is proposed to salvage fabric and features of architectural heritage interest within the site. Where possible, these will be re-used within the proposed development for example with the oak joinery to the oratory in the New Wing which will be salvaged to the Assembly Hall. Where their reuse within the proposed development is not feasible, the fabric and features will be advertised by the contractors for salvage off-site to a yard such as Mac's Salvage.

The historic architectural features and fabric to be salvaged are listed in the Brief of Salvage in the Salvage Specification appended to the Architectural Heritage Impact Assessment (AHIA) (Appendix XIV).

A full photographic survey of the site has been carried out, and is appended to the Architectural Heritage Impact Assessment (AHIA) in the form of a photographic record (Appendices IV to X).

The removal of inappropriate later poor-quality extensions and the proposed conservation of the historic fabric will have a positive impact on the site creating new views and enjoyment of the cultural heritage, re-establishing old views and creating new connections from north to south on the site.

The proposed landscaping and the material palette of the new build elements within the site has been carefully considered and selected so as to work with the existing setting character, building heights, scale and character of the site. The material palette of various colours of brick responds to the existing site also without seeking to create a pastiche.

15.8.1 Construction & Operational Phase Mitigations

Demolitions

The extent, location and methodology of the proposed demolitions and interventions has been carefully designed and detailed in order to omit loss of any historic fabric of interest. The removals of the New Wing and Library Extension have been fully justified and materials including the 1960s Oratory fit out as well as salvaged window joinery will profoundly mitigate any potential negative impact on the architectural heritage. All of these works are to be carried out in accordance with specifications and any final detail to be agreed through compliance with the Planning Authority to ensure retained items (eg. the arcade to the north of the quadrangle) will not be damaged and can be fully restored and enjoyed within the new residential neighbourhood.

Refurbishment and Internal Layout Alterations to Protected Structures

The interiors of the College Chapel and the Assembly Hall are now proposed to be retained without alteration to their layout. The most significant alteration proposed is the fit out of part of the Assembly Hall with the 1960s Oratory fabric (from the New Wing). There are significant internal alterations proposed to the seminary but these have been fully justified in the context of the radical 20th Century alterations here with the simple, single-banked corridor honoured by the new residential accommodation. The internal alterations to the South Link, where there is the largest surviving percentage of interior fabric, have been cognisant of this with the layouts seeking to minimise subdivision and retain ceiling plasterwork and joinery.

Provision of New Residential Buildings and Landscape within the Site

The location, footprints, scale, massing, form, architecture and material expression of the proposed new residential buildings has been very carefully considered with regard to the existing setting and architecture qualities on the site and in response to the opportunities to provide new spaces and connections in what is to be a new residential community. Very significant alterations have been made in relation to heights, setbacks, offsets (particularly Block D2 from the Red House) and in relation to the materiality and the depth of the architectural expression of the building envelopes. One of the blocks - D1 - part of the original pre-application submission has now been removed in its entirety to open up wider views of the Red House from the front of the former seminary.

Conservation and Restoration of the Fabric to the Protected Structures

The scope of these works will restore the roofs, external render, stone and mosaics to the Seminary, College Chapel, Assembly Hall, ambulatory and South Link. These buildings are in relatively good condition, other than the flat roofs to the ambulatory so the works will not significantly invade fabric. All of these works will enhance the fabric and architectural character.

15.9 Residual Impact of Final Proposals on Architectural Heritage - Revised in Response to Detailed LRD Opinion from Dublin City Council and Subsequent Meeting On Site

The careful identification of architectural significance on the site and consideration of how best to preserve and enhance it in parallel with the introduction of new, necessary and sustainable use has guided the development of the revised masterplan and the detailed proposals for the individual

buildings on site. The subject site and the adjoining sites at the Red House and Archbishop's House form a significant historic former-institutional campus in the north of the city.

The site has seen a number of significant phases of intense development and alteration since Clonliffe House (now the Red House) was purchased by Archbishop Cullen in 1858 and established as the original location for the seminary. Each of these stages have influenced the site morphology in different ways. Some of these phases have been designed by the eminent 19th C architects Bourke and JJ McCarthy and have added richly to the architectural character of the site. Others have succeeded in diluting some of the qualities of the campus.

The current proposals therefore comprise the 21st Century phase in the evolution of the site. The works will restore amenity to a site which is currently completely vacant whilst altering aspects of it in order to adapt buildings for new use and to redress some of the poor-quality interventions on the site which have damaged the overall quality of the setting and the relationship of the site to its attendant grounds to the north.

15.9.1 Residual Impact on the Main College Building (1863) - John Bourke's Original Seminary (a Protected Structure)

Given the extensive internal reconstruction that was carried out in the 1960s, it would be difficult to consider that the interiors of the building retain considerable architectural significance. The cellular layout reflects the original institutional design but the plasterwork and joinery is all 1960s' replica. The brick arches within are not part of the original and are not performing any structural role. They are cladding to the frame that was added in the 1960s. The proposal to reconfigure the interior of this building as apartments will restore much-needed, appropriate new use to a vacant Protected Structure. The proposals include conservation works to restore roofs, render, stonework and upgrade sash windows all of which will enhance the external expression of the front face of the building and will result in minimal loss of original historic fabric within. It is considered that this is an appropriate intervention which will restore use to the spaces without impacting on important historic fabric.

It is also proposed to remove the rear toilet blocks. As these are late 20th century non-original additions, the removal of these is considered an acceptable intervention which will reveal the original form of the block as it faces onto the quadrangle. The original central return to the rear elevation will be retained and incorporated into the new rear block.

The impact of the new residential buildings and landscaping in providing new focus to the Protected Structures and their settings is dealt with later in this chapter.

Figure 15.92 Photograph showing the complete internal reconstruction of the Main Seminary Block in 1966. Note the new concrete frame and steel frame above it which create a series of new nibs within the building – now covered in brick.

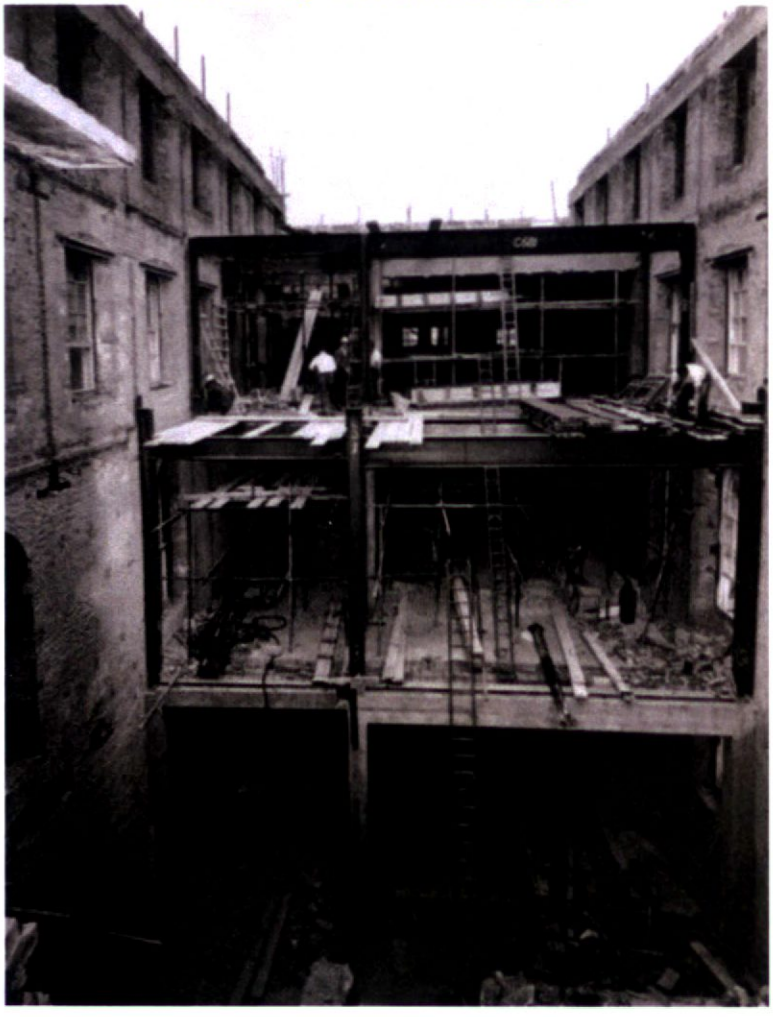


Table 15.14 Predicted Residual Effects on Original Seminary Building

Cause	Effect	Impact Characterisation	
Demolition and reconfiguration of interiors	Replacement of non-original low quality, vacant spaces with residential spaces of high architectural quality	*Quality*	Positive
		Significance	Slight
		Extent	Local
		Context	The interior of the building was reconstructed in modern times and is not considered to be of significance or quality
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case
Demolition and reconfiguration of interiors	No loss of historic fabric and features of interest	*Quality*	Neutral
		Significance	Slight
		Extent	Local
		Context	The interior of the building was reconstructed in modern times and is not considered to be of significance. There is

Cause	Effect	Impact Characterisation	
			no surviving historic fabric or features of interest.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case
Demolition of later inappropriate extensions to the rear	Restoration of historic architectural character opening up light to interiors and reinstating original elevation to quadrangle	*Quality*	Positive
		Significance	Significant
		Extent	Local
		Context	Rear extensions such as the toilet blocks are non-original and detract from the character of the rear elevation and spaces within
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case
Construction of new residential buildings on the subject site	The impact of this effect will be assessed under Section 15.4.10, Setting	*Quality*	Neutral
		Significance	Significant
		Extent	Local
		Context	This will largely impact the front setting of the structure, and its relationship with College lands and the Red House
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

15.9.2 Residual Impact on Original College Chapel by JJ McCarthy (a Protected Structure)

There are no proposed works to the exterior of this building save for necessary conservation/maintenance works to the stone, roofs and windows. It is proposed to open up the Holy Cross Church to the public, for re-use and re-programming as a multi-purpose venue for a range of public-facing community and cultural uses, respectful to the fact that it was formerly a place of worship, and of its building integrity. The opportunity to welcome a broad community to the Holy Cross Church responds to the changing needs of the City.

Please see Community, Social & Cultural Infrastructure Report for further details in this regard.

All existing retained fixtures and features of architectural, historic or artistic interest will be retained in-situ. These, including the ciborium to the altar, statuary and side chapels will be retained in situ. See Section 3.2, above, for full written description of the interiors and detail on the fixtures and fittings of interest.

The impact of the new residential buildings and landscaping in providing new focus to the Protected Structures is dealt with later in this Chapter.

Figure 15.93 Photomontage demonstrating focus given by location of new buildings to the Protected Structure - in this case the chapel front.



Table 15.15 Predicted Residual Effects on Original Seminary Building

Cause	Effect	Impact Characterisation	
Internal modifications to accommodate proposed new use of structure	The proposed works will not impact materially or structurally on the chapel or involve the removal of historic fabric. New services and furniture to allow the space to function as a community and cultural space will have a reversible effect that enhances its amenity.	*Quality*	Positive
		Significance	Significant
		Extent	Local
		Context	Historic fabric and features including the building envelope will be retained in situ and conserved
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case
Construction of new residential blocks on the subject site	The impact of this effect will be assessed under Section 15.4.10, Setting	*Quality*	Neutral
		Significance	Significant
		Extent	Local
		Context	This will largely impact the front setting of the structure, and its relationship with College lands and the Red House
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

15.9.3 Residual Impact on the Original South Link Building by JJ McCarthy (a Protected Structure)

The internal reconfiguration of this structure to contain apartments will restore sustainable use and allow for the enjoyment of the Protected Structure without cellularising the overall volumes of the interiors. The services interventions will be carried out in accordance with specifications and will not impact unduly on the interiors and there will be no impact to the external appearance or contribution to the setting of the College. Internal features of interest including plasterwork and joinery will be restored and retained which will enhance the character and fabric of the Protected Structure. The drawings provided by OMP Architects describe all of this in detail.

Table 15.16 Predicted Residual Effects on Original South Link Building

Cause	Effect	Impact Characterisation	
Internal modifications	The proposed internal works will enhance the architectural quality and fabric of the interiors and reinstate use in the form of new apartments	*Quality*	Positive
		Significance	Significant
		Extent	Local
		Context	All historic fabric and features of interested will be retained and conserved
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case
Construction of new residential blocks on the subject site	The impact of this effect will be assessed under Section 15.4.10, Setting	*Quality*	Negative
		Significance	Significant
		Extent	Local
		Context	This will largely impact the front setting of the structure, and its relationship with the Red House
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

15.9.4 Residual Impact on the Assembly Hall (a Protected Structure)

It is proposed to conserve the Assembly Hall with minor necessary conservation/maintenance works carried out to the roof, external render and leaded glass windows in accordance with the conservation specifications. There are no proposals for major intervention to the interiors or invasive upgrades to the envelope as part of this application.

The Assembly Hall is proposed to accommodate the Diocesan Archive, which will include an enhancement and expansion of the current (limited access) to the Archive, also incorporating temporary exhibition space, research & interpretive centre, and facilitating enhanced public access in keeping with its original communal use.

Please see Community, Social & Cultural Infrastructure Report for further details in this regard.

The surviving proscenium arch has been identified and will be retained.

It is considered that this is a positive intervention as there will be minimal loss of historic fabric, and will enhance the physical and visual connection between the Ambulatory and Assembly Hall.

Table 15.17 Predicted Residual Effects on Original South Link Building

Cause	Effect	Impact Characterisation	
Proposed interior alterations	The architectural character and quality of the space will be enhanced	*Quality*	Positive
		Significance	Significant
		Extent	Local
		Context	The interior of the building was extensively altered in modern times and is not considered to be of significance. The removal of these later interventions and the reinstatement of the proscenium arch will restore the historic architectural character of the space. The relocation of the 1960s Oratory fit out to here is an appropriate salvage proposal.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

15.9.5 Residual Impact on The New Wing (not protected)

The proposed demolition of the new wing is an acceptable intervention as it is a modern structure with little architectural significance (see previous chapters) and has been expressly excluded from the inscription on the RPS. The retention of the ambulatory on the southern elevation recognises it as an element which offers something to the character and form of the formal rear quadrangle. The New Wing is located to the rear of the site and is not visible from the front setting. Its demolition will therefore have no impact on the front setting of the college, the area of primary significance. Its removal will allow for construction of a new detached building in its place which will enhance permeability on the site restoring the connection between the formal quadrangle and the northern parkland. It will also allow for the 19th Century, north-south, seminary range (with the chapel and south link) to read as a separate element without pastiche extensions to east and west.

It should be noted that Dublin City Council have not deemed this structure to be worthy of inclusion on the Record of Protected Structures. It should be noted also that the option of retaining and upgrading the existing building was given very detailed consideration with regard to predicted residential amenity and the building's embodied carbon loss and the construction carbon cost of adaptation. OMP Architects have provided a detailed narrative on the impacts of this option on residential amenity, carbon. BMCE consulting engineers have provided information on the suitability of the structure for adaptation noting in particular the significant structural intervention required to adapt the building in terms of fire safety and services due to the use of mass concrete in its construction.

The arcade to the southern elevation, and its contribution to the character of the quadrangle, is the area of primary significance for this building and his has been recognised in the clarification to the RPS inscription. The demolition of the northern section is not considered to be detrimental to the character of the wider college setting.

With the exception of the 1960s Oratory (in a space that was originally the assembly hall), the subject building is not considered to be of any particular significance internally. Features and fittings of significance, as detailed in the Brief of Salvage, will be carefully disassembled, salvaged and reassembled in the new location as described in the drawings by OMP architects and the conservation specifications appended.

Table 15.18 Predicted Residual Effects on the New Wing

Cause	Effect	Impact Characterisation	
Demolition of the structure	Loss of surviving historic architectural features and fabric of interest	*Quality*	Neutral
		Significance	Slight
		Extent	Local
		Context	There are minimal architectural features of interest in the subject building, with the exception of the Oratory at ground floor level. Features of interest will be salvaged in accordance with the drawings and specifications.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case
Demolition of the structure	The works will enhance the historic architectural character of the rear quadrangle	*Quality*	Positive
		Significance	Slight
		Extent	Local
		Context	The retention of the arcade on the southern façade and the construction of the proposed new Block B1 to its north will ensure that the architectural heritage character of the rear quadrangle is protected and enhanced. The proposed new structure will be a high quality architectural design and will improve the amenity of the site allowing for greater connectivity and integration with the quadrangle and the lands to the north.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

15.9.6 Residual Impact on The Library Wing (not protected)

The proposed demolition of the Library Wing is an acceptable intervention as it is a modern structure with little architectural significance (see previous chapters) and has been expressly excluded from the inscription on the RPS. The demolition of this building will restore the complex of college buildings to their mid-20th century layout. The 1969 Library Wing cannot be considered to be of any particular significance, and its demolition will not detract from the character and significance of the overall site. The Library Wing is visually intrusive to the front setting of the Main Seminary Block and its removal will have a positive impact on the character of the front setting.

As detailed above, it is considered that the Library Wing unbalances the formal character of the front setting of the Main Seminary Block (a Protected Structure) and limits views within the setting.

Its removal will allow for construction of a new detached building in its place which will enhance permeability on the site restoring the connection between the front setting and the northern parkland. It will also allow for the significant north-south, range (of seminary, the chapel and south link) to read in its 19th Century form as a separate element without pastiche 20th Century extensions to east and west.

The building is not considered to be of any particular architectural (or other) significance and the demolition of the building would be an acceptable intervention. It should be noted that Dublin City Council have not deemed this structure to be worthy of inclusion on the Record of Protected Structures. It should be noted also that the option of retaining and upgrading the existing building was given very detailed consideration with regard to the building's embodied carbon loss. OMP Architects have provided a detailed narrative on the impacts of this option on residential amenity, carbon in the Adaptive Reuse Report. BMCE consulting engineers have provided information on the suitability of the structure for adaptation and there would be significant structural intervention required to adapt the building in terms of fire safety and services.

Table 15.19 Residual Effects on the Library Wing

Cause	Effect	Impact Characterisation	
Demolition of the structure	No loss of surviving historic architectural features and fabric of interest	*Quality*	Neutral
		Significance	Slight
		Extent	Local
		Context	There are no architectural features of any particular architectural or other interest in the subject building.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case
Demolition of the structure	The works will enhance the setting of the neighbouring Protected Structures and the setting of the College.	*Quality*	Positive
		Significance	Slight
		Extent	Local
		Context	The demolition of this inappropriate modern structure will have a positive impact on the setting of the College and will enable the construction of new residential buildings of high architectural quality which will enhance the amenity and setting of the site.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

15.9.7 Residual Impact on the Ambulatory (a Protected Structure)

It is proposed to conserve and retain the ambulatory and associated gardens as an open green space within the proposed redevelopment to designs by NMP Landscape Architects. The mosaics are to be restored as part of the works. These works will profoundly enhance the fabric, use and enjoyment of this part of the site. The retention of the northern section of the Ambulatory will be carried out in accordance with specifications and additional invasive investigation and temporary works proposals to be agreed through compliance.

Figure 15.94 Verified CGI showing retained and restored Ambulatory Protected Structure at the heart of new residential landscape proposals



Table 15.20 Residual Effects on Ambulatory

Cause	Effect	Impact Characterisation	
Retention and restoration of existing mosaic panels	Enhancement of architectural and artistic character	*Quality*	Positive
		Significance	Significant
		Extent	Local
		Context	The Ambulatory is a relatively austere structure with few decorative details, with the exception of the mosaic panels. The panels will be retained in situ and restored. The flat roof will be restored also.
		Probability	Likely

Cause	Effect	Impact Characterisation	
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

15.9.8 Residual Impact on the Setting

A number of new apartment buildings are proposed to be constructed in the front setting to the east of the seminary and to the north of the site in accordance with the masterplan by OMP Architects. The layout locates new buildings in a manner that reveals and brings focus to the important architecture and enhances the setting. It also provides a sensitive response to the scale, height and massing of the existing buildings on the site with the heights, massing and setbacks responding to existing geometries, footprints, parapets and ridge heights. The detailed design and its approach to scale and materiality (use of render, granite and red brick) has also been given very careful consideration in the context of the existing buildings. In particular, the proposals reduce in size where they address the more domestically scaled Red House Protected Structure on the adjacent site and the proposals in this area have a more pronounced use of red brick to echo the tone of the Red House. The new development is located at a very significant distance from the Red House. See also the Architectural Design Statement and additional assessment within the AHIA.

A new landscape design is also proposed which has been designed by NMP Landscape Architects. This will profoundly enhance the existing the existing setting to the front and north which is characterised by grassed tarmacked car-parking areas and work with the formal, quadripartite garden to the rear of the former seminary. The sections which follow deal with the detailed impacts on the Red House setting and with regard to the specific DoHLGH Guidance and Development Plan Policy.

The site is bounded by brick and stone walls. These are proposed to be retained in total save for the, already permitted interventions to the Clonliffe Road entrance and some necessary interventions to open up the site to pedestrian and vehicular traffic on Drumcondra Road.

The impact of the proposed works on the setting of the Protected Structures of the former Holy Cross College will be assessed below, along with the impact on the setting of the Red House, a Protected Structure (and Recorded Monument) to the east, and the Archbishop's House, a Protected Structure to the west.

15.9.8.1 Residual Impact of the Proposed New Landscape Design on the Setting of the former Holy Cross College

The proposed redevelopment will utilise the existing circulation routes through the site, with the original entrance avenue to the Red House forming the primary circulation route through the site. It will also establish new routes through the site, in particular creating permeability and connection between the front and rear settings of the seminary through to the north of the site from which it is currently cut off. This will have a positive impact on the architectural heritage of the site as it will ensure that existing views and approaches to the Protected Structures will be maintained with new views opened up to the north of the seminary and new focus given to views of the chapel, whose existing setting is a small, tarmacked carpark. Significant spaces, including the Front Setting and the Formal

Garden will be retained and enhanced within the proposed scheme with activity and focus brought to the front of the seminary and the chapel.

Figure 15.95 Photomontage by NMP showing landscape proposals at recessed space to front of College chapel



Significant features within the setting, including the entrance avenue and the formal front setting to the Main Seminary Block, will be maintained and remade with the inappropriate tarmac surfaces removed. This will ensure that the significance of the setting of the Red House, the Main Seminary Block, the South Link Building and the College Chapel will be properly recognised. Similarly, the formal garden in the quadrangle to the rear of the Main Seminary Block will be retained and enhanced, ensuring that the character and special significance of the Assembly Hall and the Ambulatory is protected.

The proposed landscape design for the Front Setting follows the historic layout of this area, utilising the historic entrance avenue with an entrance plaza at the base of the stone steps to the Main Seminary Block. This area will be planted with grass, and mature trees will be retained. This will ensure that the parkland character of the setting is retained.

Figure 15.96 Late 19th Century Photo of the front setting of the Main Block and Chapel. NLI L_ROY_01108.



The original setting of the College, as seen in historic photos, has been significantly altered by the widespread planting and growth of mature trees within the landscape. This has diminished views within the site, and in some cases severed the visual connections between disparate buildings on the site.

The mature trees contribute significantly to the existing character of the setting and these were a significant influence on the location and size of new building footprints within the master plan. Most of these trees are to be retained therefore. The Arboricultural Report, prepared by the Tree File, gives further detail on this.

Numerous new trees will also be introduced as part of NMP's landscape proposal. The retention of existing mature trees and the planting of new trees within the site will ensure that the sylvan character of the setting will be enhanced. It is considered that this is a positive intervention to the setting.

Figure 15.97 Verified CGI view of restored quadrangle with retained Ambulatory and new landscaping



The proposed landscape design for the cloistered rear quadrangle is a modern interpretation of the quadripartite arrangement implemented in the 1950s.

It is considered that the proposal is a positive intervention and an appropriate interpretation of the Cloister garden type for the new residential use.

Table 15.21 Residual Effects of New Landscape Proposals on Setting

Cause	Effect	Impact Characterisation	
Proposed new landscape design for the subject site	The proposed new landscaped design for the site is respectful of the historic character of the various distinct areas within the site and will retain this character.	*Quality*	Positive
		Significance	Significant
		Extent	Local
		Context	The parkland character of the front setting of the Seminary Block will be retained in the proposed new design. The formal design of the rear quadrangle will be enhanced. The new landscape design will tie the proposed new scheme to the historic character of the College lands.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Residual

15.9.8.2 Residual Impact of Proposed New Residential Buildings on Views and Vistas within the Site

Table 15.22 Residual Effects of Proposed New Residential Buildings on Views & Vistas within the Site

Cause	Effect	Impact Characterisation	
Proposed new residential buildings on site	The proposed new residential buildings will have a positive impact on the setting of the Protected Structures and will retain and give emphasis to significant views.	*Quality*	Positive
		Significance	Significant
		Extent	Local
		Context	Significant views and visual connections within the subject site have been retained and protected in the proposed development. The proposed new residential buildings will emphasise these significant views and will enhance the front setting of the Original Seminary Building.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

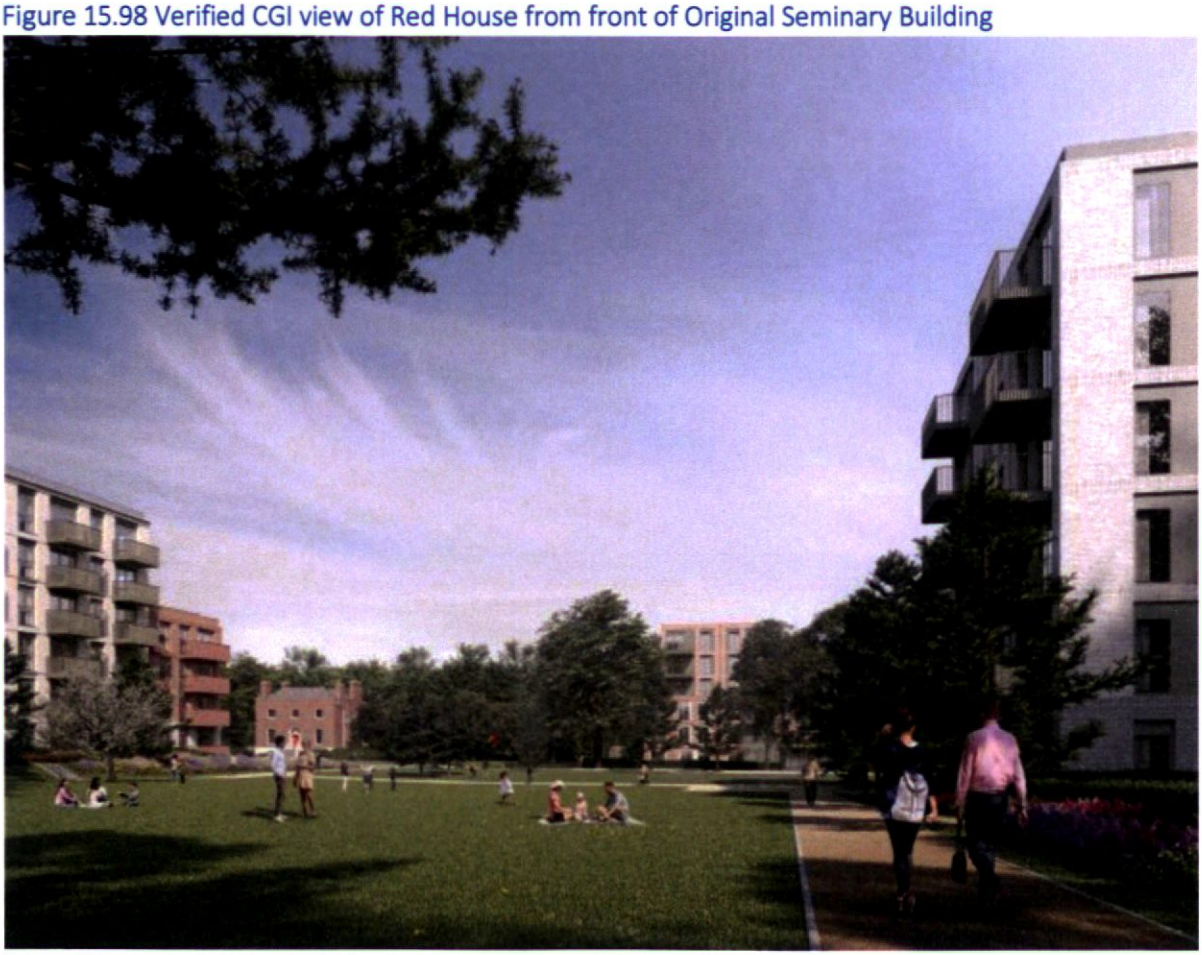
15.9.8.3 Residual Impact of the Proposed New Residential Buildings on the Setting of the Red House, a Protected Structure

No works are proposed here as the building and its immediate, tarmacked front setting lie outside the subject site. The Red House, although it has a significantly reduced curtilage, nevertheless retains a

visual connection with the seminary and the front setting to the seminary can be considered to contribute to the overall setting of the Red House.

Whilst the proposals cannot physically impact on the front setting to the Red House the main impact of the proposals on the Red House will be to provide a new, high-quality landscape adjacent to it. The proposed new buildings are located at very long distances from the Red House and the buildings will reduce in height and mass as they get closer to it so as not to overbear, overlook or overshadow the Red House or indeed its setting. It is important to note that a difference in scale between the Red House and the much larger institutional seminary buildings has existed on this site since the 19th Century. The overall site must be considered to have an institutional scale to it with the earlier Red House somewhat dwarfed by the scale of the existing seminary buildings. The proposed new development in terms of massing, footprint, location and heights takes account of these differences in scale. The significant increases in setbacks, materiality of and reduction in heights of most proximal blocks and the omission of Block D1 will ensure that the Residual Impact on the overall setting of the Red House (the immediate curtilage and front setting will not be impacted) is a positive one, activating the setting whilst retaining a large landscaped setting around it.

Figure 15.98 Verified CGI view of Red House from front of Original Seminary Building



15.9.9 Residual Impact on the Architectural Heritage Character of the Wider Area

Table 15.23 Residual Effects on Architectural Heritage Character of Wider Area

Cause	Effect	Impact Characterisation	
		Quality	Neutral

Cause	Effect	Impact Characterisation	
Proposed new residential buildings on subject site and the adjoining scheme permitted under 2935/20	There will be little or no cumulative visual impact on the setting of or views to the Protected Structures in the wider context of the subject site.	*Significance*	Slight
		Extent	Local
		Context	There are a number of Protected Structures in the immediate and wider context of the subject site. CGI Photomontages clearly show that the proposed scheme will be largely imperceptible from the setting of these Protected Structures.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Cumulative
Proposed new residential buildings on subject site and the adjoining scheme permitted under 2935/20	There will be no cumulative impact on the character of Mountjoy Square Architectural Conservation Area.	*Quality*	Neutral
		Significance	Slight
		Extent	Local
		Context	Mountjoy Square is the closest ACA to the subject site. CGI Photomontages clearly show that the proposed scheme will be completely obscured from views within the ACA.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Cumulative
Proposed new residential buildings on subject site and the adjoining scheme permitted under 2935/20	There will be minimal cumulative visual impact on the character of Z2 Residential Conservation Areas in the wider context of the subject site. Where visible, the proposed new development will have a positive impact on the character of the streetscape.	*Quality*	Positive
		Significance	Slight
		Extent	Local
		Context	There are a number of Z2 Residential Conservation Areas in the wider context of the subject site. The proposed development will largely have little or no visual impact on these. Where visible, the proposed new development will have a positive impact on the character of the streetscape.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Cumulative

15.9.10 Residual Impact of the Proposals on the Boundary Walls and Gates

Table 15.24 Residual Effects on Walls and Gates – Entrance from Drumcondra Road Lower

Cause	Effect	Impact Characterisation	
Proposed widening of the existing entrance gates and	The character and significance of the entrance gates and	*Quality*	Neutral
		Significance	Slight
		Extent	Local

Cause	Effect	Impact Characterisation	
taking down of a section of the Boundary wall	boundary walls along the Drumcondra Road will be maintained	*Context*	These entrance gates and the adjoining walls are a Protected Structure. The southern gate pier will be carefully taken down and reconstructed in a new location. The reconstruction of the gate pier will ensure that the architectural character of the entrance is maintained. The taking down of a small section of the wall to enable the widening of the entrance will involve minimal loss of historic fabric and is a necessary intervention.
		Probability	Likely
		Duration / Frequency	Permanent and constant
		Assumed Scenario	Worst-case

15.10 Consideration of Impact in Response to Specific Policy within Current (2022-2028) Dublin City Council Development Plan and Supreme Court Judgement (2024) IESC 13 2023/74 11th April 2024

"BHA1

Record of Protected Structures

(a) To include those structures that are considered to be of special architectural, historical, archaeological, artistic, cultural, scientific, technical or social interest in the Record of Protected Structures, and to remove those structures where protection is no longer warranted.

(b) To maintain and review the RPS whilst having regard to recommendations for additions to the RPS made by the Minister under Section 53 of the Planning and Development Act, 2000 (as amended)."

Response –

Dublin City Council have made clear and distinct decisions about the parts of the complex which are significant and should be protected on the inscription to the RPS. This has been critical to the design development of the proposals.

"BHA2

Development of Protected Structures

That development will conserve and enhance protected structures and their curtilage and will:"

Response –

The current proposals seek to retain, conserve and enhance a number of Protected Structures and their curtilage as described in detail in this report and throughout the application documentation submitted.

"(a) Ensure that any development proposals to protected structures, their curtilage and setting shall have regard to the Architectural Heritage Protection Guidelines for Planning Authorities (2011) published by the Department of Culture, Heritage and the Gaeltacht."

Response –

The design development has had particular regard to the Guidance in accordance with the Planning & Development Act, 2000, as Amended ('the Act'). The special interest/significance of the overall site and the buildings on it has been detailed, design proposals for the landscape, setting, boundary and the buildings themselves and their impact have been considered and mitigated with regard to that special interest.

"(b) Protect structures included on the RPS from any works that would negatively impact their special character and appearance."

Response –

The proposals seek to enhance the fabric and character of the Protected Structures in accordance with the specifications provided. The proposed demolitions, new buildings and landscaping on the site will enhance the character and amenity of the setting.

"(c) Ensure that works are carried out in line with best conservation practice as advised by a suitably qualified person with expertise in architectural conservation."

Response –

The proposals have been developed by the Design Team in consultation with this office and in discussion and in extended discussions with the Conservation Office and Planners in Dublin City Council. The works, once executed in accordance with conservation specifications appended to the AHIA and compliance conditions imposed by the Planning Authority will be in accordance with best conservation practice.

"(d) Ensure that any development, modification, alteration, or extension affecting a protected structure and/or its setting is sensitively sited and designed, and is appropriate in terms of the proposed scale, mass, height, density, layout and materials."

Response –

The proposals here seek to modify a number of Protected Structures on the subject site and to add a number of sensitively placed and designed new buildings adjacent to these and to the Red House and Archbishop's House which are adjacent. These modifications will affect the setting as detailed above in section 7.8.

Setting

OMP Architects have developed a masterplan layout which locates new buildings in a manner that reveals and brings focus to the important architecture and profoundly enhances the setting.

A new landscape design is also proposed which has been designed by NMP Landscape Architects. This will profoundly enhance the existing setting to the front and north which is characterised by grassed tarmacked carparking areas and work with the formal, quadripartite garden to the rear of the former seminary. See detailed assessments of setting significance and impacts earlier in this Chapter and in the AHIA.

Scale, Height and Massing

The scheme also provides a sensitive response to the scale, height and massing of the existing buildings on the site with the heights, massing and setbacks responding to existing geometries, footprints, parapets and ridge heights. The section and elevation drawings provided by OMP and HJL Architects as well as the Architectural Design Statement show these relationships in detail and the detailed drawings on the Red House indicate how the scale is reduced to the east of the site. The massing of the blocks relates to the existing seminary with similarly sized footprints and parapet heights

Detail and Materials

The detailed design and its approach to scale and materiality (use of render, granite and red brick – omission of aluminium) has also been given very careful consideration in the context of the existing buildings. In particular, the proposals reduce in size where they address the more domestically scaled Red House Protected Structure and the proposals in this area have a more pronounced use of red brick to echo the tone of the Red House. The new developments are located at a very significant distance from the Red House. All of this is set out in detail within the Architectural Design Statement.

"(c) Ensure that the form and structural integrity of the protected structure is retained in any redevelopment and ensure that new development does not adversely impact the curtilage or the special character of the protected structure."

Response –

The proposals retain each of the Protected Structures in terms of their form and integrity indeed restoring the original form in some cases. The new development will not adversely impact the special character of the Protected Structures or their curtilage.

"(d) Respect the historic fabric and the special interest of the interior, including its plan form, hierarchy of spaces, structure and architectural detail, fixtures and fittings and materials."

Response –

The proposals have accounted for the significance and extent of historic fabric and the surviving plan forms and detail within the interiors. Original fabric and significant fabric and spaces are all to be retained and, where possible, revealed. Non-original fabric which has a lesser or negative significance is to be removed in the seminary in order to accommodate new apartments with appropriate residential amenity.

"(e) Ensure that new and adapted uses are compatible with the architectural character and special interest(s) of the protected structure."

Response –

The proposed uses (community and residential) are compatible with the Protected Structures. The historic institutional use no longer exists at the scale required for the site.

"(f) Protect and retain important elements of built heritage including historic gardens, stone walls, entrance gates and piers and any other associated curtilage features."

Response –

The proposals will retain and protect all surviving boundary and landscape features with a minor widening required with (the ope required for pedestrian and vehicular access has been reduced to a minimum – see Systra reporting) on Drumcondra Road where the important calp fabric and pier will be restored and salvaged in accordance with the Conservation Specifications.

"(g) Ensure historic landscapes, gardens and trees (in good condition) associated with protected structures are protected from inappropriate development."

Response –

The proposals to provide a new designed landscape (by NMP Landscape Architects) to the front (east), quadrangle (west) and north will significantly enhance the settings of the Protected Structures.

"(h) Have regard to ecological considerations for example, protection of species such as bats."

Response –

As part of the full application an EIAR has been carried out which involved the carrying out of ecological and habitat surveys. Ecological enhancement has been fully incorporated into the proposed development through significant design proposals which will enhance the setting of the Protected Structures.

"BHA3

Loss of Protected Structures

That the City Council will resist the total or substantial loss of protected structures in all but exceptional circumstances."

Response –

There are no total or substantial losses of any Protected Structures proposed and no 'exceptional circumstances' are relevant therefore. See Section on Supreme Court Decision below also.

"BHA4

Demolition of Regional Rated Building on NIAH

That there is a presumption against the demolition or substantial loss of any building or other structure assigned a 'Regional' rating or higher by the National Inventory of Architectural Heritage (NIAH), unless it is clearly justified in a written conservation assessment that the building has no special interest and is not suitable for addition to the City Council's Record of Protected Structures (RPS); having regard to the provisions of Section 51, Part IV of the Planning and Development Act, 2000 (as amended) and the Architectural Heritage Protection Guidelines for Planning Authorities (2011)."

Response –

There are four no. buildings on or adjacent to the subject site which have been rated as having a Regional significance by the NIAH (now the NBHS). These buildings are as follows –

- 50120174 : Archbishop's House : bishop's palace
- 50120176 : Holy Cross College Chapel : church/chapel
- 50120175 : Holy Cross College\Clonliffe College : college
- 50120177 : Red House : house

There are no proposed total or substantial losses to any of these buildings. The Red House and Archbishop's House will all be retained in their entirety without any physical impact as they lie outside the subject site. The College Chapel is to be retained and conserved for a new community use as described previously in accordance with the CU025 Policy within the current Development Plan. The College is to be retained, altered and adapted to new, much-needed residential use without substantial or total loss.

It should be noted that the New Wing and the Library Wing are NOT identified by the NIAH as having Regional Significance (or at all) and, therefore, this policy here does not relate to these structures. Dublin City Council's original inscription from 2000 is in agreement with this.

"BHA5

Buildings on Historic Maps

That there will be a presumption against the demolition or substantial loss of any building or other structure which appears on historic maps up to and including the Ordnance Survey of Dublin City, 1847. A conservation report shall be submitted with the application and there will be a presumption against the demolition or substantial loss of the building or structure, unless demonstrated in the submitted conservation report this it has little or no special interest or merit having regard to the provisions of the Architectural Heritage Protection Guidelines for Planning Authorities (2011)."

Response –

There are no (total) demolitions or substantial losses proposed to any buildings predating the First Edition to the Ordnance Survey. The only proposed demolitions on the site of note relate to non-original late 20th Century extensions which have been expressly excluded from the RPS.

"BHA15

Twentieth Century Buildings and Structures

(a) To encourage the appropriate development of exemplar twentieth century buildings and structures to ensure their character is not compromised.

(b) To encourage the retention and reinstatement of internal and external features, that contribute to the character of exemplar twentieth century buildings, such as roofscapes, boundary treatments, fenestration pattern, materials, and other features, fixtures and fittings (including furniture and art work), considered worthy of retention."

Response –

The Assembly Hall and Ambulatory are late 20th Century Protected Structures on the subject site and the proposals seek to retain and restore these buildings and bring them back to use as already described in detail in accordance with Policy Cu025 of the current Dublin City Development Plan. In addition, the proposals seek to salvage and relocate an oratory fit out from within the New Wing. See sections above with extracts from OMP plans and isometric views showing the reuse of the panelling. This is to be carried out in accordance with the conservation specifications (appendix xiii to the AHIA).

"BHA21

Retrofitting Sustainability Measures

To have regard to the Department of Environment, Heritage and Local Government's publication on Energy Efficiency in Traditional Buildings (2010) and the Irish Standard IS EN 16883:2017 Conservation of Cultural Heritage- Guidelines for Improving the Energy Performance of Historic Buildings (2017) and any future updates or advisory documents in assessing proposed works on heritage buildings."

Response –

The proposals have had regard to this guidance in order that improvements can be made without unduly impacting on the historic fabric.

"BHA22

Upgrading Environmental Performance

To ensure a sustainable future for historic and other buildings subject to heritage protection, the City Council will encourage and support works to upgrade the environmental performance of the existing building stock that incorporates good standards of design and appearance. Where these works involve historic buildings subject to protection (this includes buildings referenced on the Record of Protected Structures and non-protected structures in an Architectural Conservation Area), the works shall not adversely affect the special interest of the structure and thus a sensitive approach will be required, taking into account:

- *The significance of the structure, and*
- *The extent of intervention, including impact on historic fabric, the technical requirements of a traditionally constructed building, visibility, siting and design.*

The installation of renewable energy measures and equipment will be acceptable where sited and designed to minimise the visual impact and does not result in any significant loss of historic fabric or otherwise affect the significance of the structure."

Response –

The proposed conservation and restoration works will not have a negative impact on the special interest of the Protected Structures. No thermal or energy performance upgrades are proposed and there is no requirement to do so under Part L as these are Protected Structures.

"BHA24

Reuse and Refurbishment of Historic Buildings

Dublin City Council will positively encourage and facilitate the careful refurbishment of the historic built environment for sustainable and economically viable uses and support the implementation of the National Policy on Architecture as it relates to historic buildings, streetscapes, towns and villages, by ensuring the delivery of high quality architecture and quality place-making, and by demonstrating best practice in the care and maintenance of historic properties in public ownership."

Response –

The current proposals represent a good example of exactly this kind of development as they seek to restore use whilst reinstating, revealing and conserving architectural character and historic fabric on the subject site.

"BHA25

Loss of Upper Floor Access

There will be a presumption against the loss of upper floor access to buildings from street frontages, and the City Council will seek reinstatement of upper floor access points wherever possible from the street."

Response –

Access to upper floors (through improved and new circulation) and restoring sustainable and much-needed new use throughout the Protected Structures is a critically important aspect of he proposed scheme.

The proposals, therefore, should be considered fully compliant with all of the relevant policies in the current Dublin City Council Development Plan.

Supreme Court Judgement (2024) IESC 13 2023/74 11th April 2024 and Relevance to Current Proposals

It should be noted that a previous scheme for this site was approved by An Bord Pleanala and that permission was ultimately quashed at the Supreme Court. It is important to acknowledge that one of the main reasons given for the High Court repudiating the permission was that no 'exceptional circumstances' had been invoked or demonstrated with regard to the proposed demolitions to extensions and interiors within the Protected Structures. The High Court argued that these had to be proven in accordance with Section 57 of the Act. The Supreme Court found this not to be the case and that the High Court had erred in law. The demolitions proposed in this scheme are of a similar scale. No exceptional circumstances are required for these proposals.

The Design Team has given careful consideration to the decisions of the High Court and the Supreme Court and through extensive discussion and engagement with Dublin City Council (as detailed above) the proposed development reflects a much more detailed regard to the protected status of the protected structures, as required by the Act:

"10) (a) For the avoidance of doubt, it is hereby declared that a planning authority or the Board on appeal— (i) in considering any application for permission in relation to a protected structure, shall have regard to the protected status of the structure, or proposed protected structure."

There has been very detailed consideration of this impact provided within this report and expressed throughout the planning application submission, especially in terms of the focus of intervention drawings, CGIs, landscape drawings, historic mapping etc. All of this provides the planning authority with the detail necessary to have regard as set out in the Act.

15.11 Monitoring

During the construction phase, the Developer / Contractor will ensure that a qualified conservation architect will oversee any relevant restoration works, the recording, disassembly, taking down, storage and salvaging of any material from the site (including the migration of the Oratory joinery and leaded glass), so as to ensure minimal damage to the historic features.

15.12 Interactions

There are interactions between this chapter and the Landscape and Visual Impact Assessment Chapter and Cultural Heritage – Archaeology Chapter as well as the Architectural Heritage Impact Assessment (AHIA).

15.13 Cumulative Impacts

The cumulative visual impact of the proposed scheme and the proposed development of the adjoining site as permitted under DCC Reg. Ref. 2935/20 (currently under construction) on the architectural heritage character of the wider context has been assessed under Section 15.4.9, above.

15.14 Difficulties Encountered in Compiling the Chapter

No significant difficulties. Full access to detailed archives and to all areas of the site have allowed for an unusually comprehensive assessment to be carried out in all respects of built heritage.

15.15 References

This evaluation has been carried out with reference to a number of important resources. These include the following:

- Trinity College Map Library
- National Library of Ireland
- Irish Architectural Archive
- Dictionary of Irish Architects
- Pearse Street Library – Dublin City Archive
- Britain from Above – Online Photographic Collection
- Irish Photo Archive – Online Photographic Collection
- Irish Times Archive
- Dublin Diocesan Archives

Please refer to the appendices submitted as part of the Architectural Heritage Impact Assessment (David Slattery, 2025) for further detail on the historic maps (Appendix I), drawings (Appendix II) and photographs (Appendix III to X) used in this assessment.

A key secondary source used in the preparation of the historical background section of this report is the book *'Holy Cross College, Clonliffe, 1859 – 1959'* by Reverend Sherry, available in the National Library of Ireland.

16 Cultural Heritage - Archaeology

16.1 Introduction

The following chapter details an archaeological and cultural heritage assessment undertaken in advance of a proposed development at Clonliffe Road, Dublin 3 and Drumcondra Road Lower, Drumcondra, Dublin 9 (**Figure 16.1**, ITM 716277, 736343). This assessment has been carried out to ascertain the potential impact of the proposed development on the archaeological and cultural heritage resources that may exist within the area. The assessment was undertaken by Faith Bailey of IAC Archaeology.

Figure 16.1 Site Location



This study determines, as far as reasonably possible from existing records, the nature of the archaeological resource in and within the vicinity of the development area using appropriate methods of study. Desk-based assessment is defined as a programme of study of the historic environment within a specified area or site that addresses agreed research and/or conservation objectives. It consists of an analysis of existing written, graphic, photographic and electronic information in order to identify the likely heritage assets, their interests and significance and the character of the study area, including appropriate consideration of the settings of heritage assets (CIfA 2014). In order to compile a complete baseline, a site inspection is carried out to complement the results of the desk-based assessment. This leads to the following:

- Determining the presence of known archaeological heritage sites that may be affected by the proposed development;
- Assessment of the likelihood of finding previously unrecorded archaeological remains during the construction programme; and
- Suggested mitigation based upon the results of the above research.

The study involved detailed interrogation of the archaeological and historical background of the development area. This included information from the Record of Monuments and Places of County Dublin (**Figure 16.2**), the City Development Plan, topographical files of the National Museum of Ireland, cartographic and documentary records. A programme of geophysical survey and archaeological testing has also been carried out in order to inform the impact assessment.

An impact assessment and a mitigation strategy have been prepared. The impact assessment is undertaken to outline potential adverse impacts that the proposed development may have on the cultural heritage resource, while the mitigation strategy is designed to avoid, reduce or offset such adverse impacts.

16.1.1 Definitions

In order to assess, distil and present the findings of this study, the following definitions apply:

'Cultural Heritage' where used generically, is an over-arching term applied to describe any combination of archaeological, architectural and cultural heritage features, where –

- the term 'archaeological heritage' is applied to objects, monuments, buildings or landscapes of an (assumed) age typically older than AD 1700 (and recorded as archaeological sites within the Record of Monuments and Places)
- the term 'architectural heritage' is applied to structures, buildings, their contents and settings of an (assumed) age typically younger than AD 1700
- the term 'cultural heritage', where used specifically, is applied to other (often less tangible) aspects of the landscape such as historical events, folklore memories and cultural associations. This designation can also accompany an archaeological or architectural designation.

16.1.1.1 Impact Definitions

***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 a sensitive aspect of the environment.*

***Very Significant**: An effect which, by its character, magnitude, duration or intensity, significantly alters most of a sensitive aspect of the environment.*

***Profound Effects**: An effect which obliterates sensitive characteristics*

Impacts as defined by the EPA 2022 Guidelines on the information to be contained in Environmental Impact Assessment Report.

16.2 Methodology

A study area, defined as 500m from the boundary of the proposed development area, was assessed to inform this chapter. Research has been undertaken in four phases. The first phase comprised a paper survey of all available archaeological, historical and cartographic sources. The second phase involved a field inspection of the proposed development area. The third phase comprised a geophysical survey of the site and this was followed by the fourth phase, which comprised a programme of archaeological test trenching.

16.2.1 Paper Survey

- Record of Monuments and Places from County Dublin;
- Sites and Monuments Record for County Dublin;
- National Monuments in State Care Database;
- Preservation Orders List;
- Topographical files of the National Museum of Ireland;
- Cartographic and written sources relating to the study area;
- Dublin City Development Plan 2022–2028
- Aerial photographs;
- Dublin City Industrial Heritage Record; and
- Excavations Bulletin (1970-2025)

Record of Monuments and Places (RMP) is a list of archaeological sites known to the National Monuments Section, which are afforded legal protection under Section 12 of the 1994 National Monuments Act and are published as a record.

Sites and Monuments Record (SMR) holds documentary evidence and field inspections of all known archaeological sites and monuments. Some information is also held about archaeological sites and monuments whose precise location is not known e.g. only a site type and townland are recorded. These are known to the National Monuments Section as 'un-located sites' and cannot be afforded legal protection due to lack of locational information. As a result, these are omitted from the Record of Monuments and Places. SMR sites are also listed on a website maintained by the Department of Housing, Local Government and Heritage (DoHLGH) – www.archaeology.ie.

National Monuments in State Care Database is a list of all the National Monuments in State guardianship or ownership. Each is assigned a National Monument number whether in guardianship or ownership and has a brief description of the remains of each Monument.

The Minister for the DoHLGH may acquire national monuments by agreement or by compulsory order. The state or local authority may assume guardianship of any national monument (other than dwellings). The owners of national monuments (other than dwellings) may also appoint the Minister or the local authority as guardian of that monument if the state or local authority agrees. Once the site is in ownership or guardianship of the state, it may not be interfered with without the written consent of the Minister.

Preservation Orders List contains information on Preservation Orders and/or Temporary Preservation Orders, which have been assigned to a site or sites. Sites deemed to be in danger of injury or destruction can be allocated Preservation Orders under the 1930 Act. Preservation Orders make any interference

with the site illegal. Temporary Preservation Orders can be attached under the 1954 Act. These perform the same function as a Preservation Order but have a time limit of six months, after which the situation must be reviewed. Work may only be undertaken on or in the vicinity of sites under Preservation Orders with the written consent, and at the discretion, of the Minister.

The topographical files of the National Museum of Ireland are the national archive of all known finds recorded by the National Museum. This archive relates primarily to artefacts but also includes references to monuments and unique records of previous excavations. The find spots of artefacts are important sources of information on the discovery of sites of archaeological significance.

Cartographic sources are important in tracing land use development within the development area as well as providing important topographical information on areas of archaeological potential and the development of buildings. Cartographic analysis of all relevant maps has been made to identify any topographical anomalies or structures that no longer remain within the landscape.

Documentary sources were consulted to gain background information on the archaeological and cultural heritage landscape of the proposed development area.

Development Plans contain a catalogue of all the Protected Structures and archaeological sites within the county. The Dublin City Development Plan (2022–2028) was consulted to obtain information on cultural heritage sites in and within the immediate vicinity of the proposed development area.

Aerial photographic coverage is an important source of information regarding the precise location of sites and their extent. It also provides initial information on the terrain and its likely potential for archaeology. A number of sources were consulted including aerial photographs held by the Ordnance Survey and Google Earth.

Dublin City Industrial Heritage Record (DCIHR) makes recommendations for sites to be added to the Record of Protected Structures (RPS) in the City Development Plan and is maintained by DCC.

Excavations Bulletin is a summary publication that has been produced every year since 1970. This summarises every archaeological excavation that has taken place in Ireland during that year up until 2010 and since 1987 has been edited by Isabel Bennett. This information is vital when examining the archaeological content of any area, which may not have been recorded under the SMR and RMP files. This information is also available online (www.excavations.ie) from 1970-2025.

16.2.2 Field Inspection

Field inspection is necessary to determine the extent and nature of archaeological and historical remains and can also lead to the identification of previously unrecorded or suspected sites and portable finds through topographical observation and local information.

The archaeological field inspection entailed -

- Walking the proposed development and its immediate environs.
- Noting and recording the terrain type and land usage.
- Noting and recording the presence of features of archaeological or historical significance.
- Verifying the extent and condition of any recorded sites.
- Visually investigating any suspect landscape anomalies to determine the possibility of their being anthropogenic in origin.

16.2.3 Geophysical Survey

Geophysical survey is used to create 'maps' of subsurface archaeological features. Features are the non-portable part of the archaeological record, whether standing structures or traces of human activities left in the soil. Geophysical instruments can detect buried features when their electrical or magnetic properties contrast measurably with their surroundings. In some cases, individual artefacts, especially metal, may be detected as well. Readings, which are taken in a systematic pattern, become a dataset that can be rendered as image maps. Survey results can be used to guide excavation and to give archaeologists insight into the pattern of non-excavated parts of the site. Unlike other archaeological methods, the geophysical survey is not invasive or destructive.

A geophysical survey was carried out within the proposed development area in 2020 (Leigh 2020, Licence No. 20R0046; Figure 16.7). A summary of the geophysical report is included in this report, with the full technical report included as **Appendix 16.1.**

16.2.4 Archaeological Testing

Archaeological Test Trenching can be defined as '*a limited programme... of intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site on land or underwater. If such archaeological remains are present test trenching defines their character and extent and relative quality*' (CIfA 2020a, 4). A programme of archaeological testing based on the results of the geophysical survey was carried out within the proposed development area in 2020. A summary of the programme of testing is included in this report, with the full technical report included as **Appendix 16.2.**

16.3 Baseline Environment

16.3.1 Archaeological and Historical Background

The proposed development area is located to the north of Clonliffe Road, east of Drumcondra Road and to the south of the River Tolka, within the townland of Clonliffe East and includes a small section of Clonliffe West. The site is currently occupied by the buildings of Holy Cross College and Diocesan Centre and associated landscaping (**Figure 16.2**).

There are no recorded archaeological sites within the proposed development area. Six recorded monuments are located within the 500m study area. The nearest recorded monument comprises a 17th/18th century house (DU018-019001) that is located to the immediate east of the development area. Record DU018-019002 is also associated with this site but was reclassified as a 'Redundant Record' in 2011, due to it being a replication of DU018-019001.

16.3.1.1 Prehistoric Period

Mesolithic Period (c. 8000–4000 BC)

Although recent discoveries have suggested the possibility of a human presence in the southwest of Ireland as early as the Upper Palaeolithic (Dowd and Carden 2016), the Mesolithic period is the earliest time for which there is widespread evidence of human occupation of the island. During this period, small mobile groups hunted, fished and foraged as a way of life. These small groups migrated seasonally in order to exploit seasonal resources and natural resources, such as the coast and river valleys, which were of key importance for their survival. While there is no recorded evidence of Mesolithic activity in

the immediate surrounding of the proposed development area, the vicinity of the River Tolka, which lies to the immediate north of the proposed development area, would have been an attractive location for Mesolithic communities.

Figure 16.2 Archaeological sites within the study area



Neolithic Period (c. 4000–2500 BC)

The Neolithic period saw the introduction and adoption of agriculture to Ireland. This represented a seismic shift in lifestyle with settlements becoming more permanent, while forests were cleared and field boundaries constructed to facilitate farming. A new concern for claiming land on which to farm contributed to the emergence of the megalithic tomb tradition, which was characteristic of the Neolithic period. There are four main types of megalithic tombs, court cairns, portal tombs, passage tombs and the wedge tombs of the early Bronze Age. There are no recorded Neolithic sites in the vicinity of the proposed development area.

Bronze Age (c. 2500–800 BC)

The Bronze Age was marked by the widespread use of metal for the first time in Ireland. As with the transition from Mesolithic to Neolithic, the transition into the early Bronze Age was accompanied by changes in society. The construction of megalithic tombs went into decline by the end of the early Bronze Age and the burial of the individual became typical. Cremated or inhumed bodies were often placed in a cist, which is a stone-lined grave, usually built of slabs set upright to form a box-like

construction and capped by a large slab or several smaller lintels (Buckley and Sweetman 1991). Barrows and pit burials are also funerary monuments associated with this period. A possible ring-ditch was identified during field work c. 470m north-east of the development area in 2009 (Moriarty 2009, Licence No. 09E437), although this was later determined to represent the remains of a post medieval garden boundary.

Iron Age (c. 800 BC–AD 500)

Until recently, the dearth of evidence representing the Irish Iron Age led to it being one of the most enigmatic and least understood periods in Irish prehistory. However, large scale commercial excavations carried out over the past two decades have produced large quantities of new data relating to Iron Age settlement and industry across the country. There is as yet, no recorded evidence for Iron Age activity within the immediate vicinity of the proposed development area.

16.3.1.2 Early Medieval Period (AD 500–1100)

Settlement across County Dublin advanced during the early medieval period when the area now known as County Dublin straddled the ancient kingdoms of Brega (north of the river Tolka) and Laigin (south of the Tolka). The first steps towards urbanisation in Dublin date to AD 841 when Vikings established a longphort (a semi-permanent Viking encampment), which then developed over the next 60 years into a commercial centre and was an important marketplace for slaves and luxury goods. The precise location of this initial settlement has remained somewhat elusive. It has been suggested that it was located next to the River Poddle and the Liffey, close to the current Dublin Castle. This first phase of settlement only lasted until AD 902, when the Annals of Ulster recorded that the Vikings were driven away from Dublin. The Vikings returned to Dublin in AD 917 and established themselves in a new location overlooking the confluence of the Liffey and the Poddle in an area that stretches today from Dublin Castle to Christchurch Cathedral. This settlement differed in form as it appears to have been founded as a trading town, with archaeological evidence suggesting the presence of individual property plots, a street layout and earthen defences (Bradley 1992, 45).

The Battle of Clontarf (AD 1014) was a key event in the history of Dublin; the Annals of the Four Masters say it was fought '*from Tulcainn to Ath Cliath*'. Tulcainn was the River Tolka and Ath Cliath was probably located at the Droichet Dubhgaill, the bridge that crossed the Liffey at this time (possibly close to Augustine Street). It has been suggested (De Courcy 1996) that the main action of the battle took place in the area bounded by O'Connell Street, Dorset Street, Drumcondra Road, the River Tolka, Ballybough Road and the North Strand. Further references to the battle from Cosgrove (Cosgrove, 1909) also suggested that the Battle of Clontarf took place at nearby Ballybough Bridge (DU018-022001), c. 530m southeast of the development area. Cosgrove refers to '*many a Danish man killed at the fish weir of Ballybough Bridge*'. Ball (1920) also describes an 'engagement between insurgents and forces of the crown at Ballybough Bridge' in reference to the Battle of Clontarf.

A letter to 'The Irish Builder' (Traynor 1897) states "*... there were other discoveries made some ten years previously of bones, swords and spears when excavations were being made for the foundations of houses in North Great George's Street, Summerhill, Gardiners Row, Mountjoy Square ...From the frequent reoccurrence of such discoveries in the surrounding district during the laying out of streets etc ...there is every reason to believe the Battle of Clontarf commenced somewhere between the site of Capel Street and the right bank of the Tolka.*"

An extract from the earlier Dublin Magazine (1763) also states "*Vast quantities of bone were discovered behind New Gardens (Rotunda Gardens) in Britain Street. They were found 2-3ft beneath surface and were also present on Cavendish Row. They are thought to relate to the Battle of Clontarf as the area was consistent with the Battle of Clontarf and the bodies that were found had been covered in quick lime, which was typical of Danish practice*". No archaeological evidence has been recorded for the battle, to date, within the study area of the proposed development.

A holy well (DU018-011), dedicated St. Catherine, is recorded c. 510m northwest of the proposed development area. The veneration of wells is a very widespread and ancient tradition in Ireland. Many holy wells can be found associated with early ecclesiastical sites. Well veneration and its antecedent well worship is not confined to Ireland or even to Europe, and at least some holy wells in Ireland were important venues of pre-Christian ritual activity. Most wells are springs but occasionally other water sources, or hollowed stones which collect water, are treated as holy wells. The St Catherine well (DU018-011) was formerly within an enclosed yard of a house at Millbourne Avenue. The well was a natural spring under the kitchen floor. It was led outside by a short culvert where it was accessible under a pointed arched superstructure. The water was used to cure sore eyes and toothache (SMR File). When the house was demolished, the well was preserved in an ornamental shrubbery.

16.3.1.3 Medieval Period (AD 1100–1600)

The beginning of the medieval period is characterised by political unrest that originated from the death of Brian Borumha in 1014. Diarmait MacMurchadha, deposed King of Leinster, sought the support of mercenaries from England, Wales and Flanders to assist him in his challenge for kingship. Norman involvement in Ireland began in 1169, when Richard de Clare and his followers landed in Wexford to support MacMurchadha. Two years later de Clare (Strongbow) inherited the Kingdom of Leinster and by the end of the 12th century the Normans had succeeded in conquering much of the country.

Under Anglo-Norman occupation, Clonliffe was confirmed to the Abbey of St. Mary's. The grange of Clonliffe was the birthplace of an Abbot of St. Mary's Abbey, Stephen Lawless, who ruled the abbey from 1429–1437. After the dissolution of the religious houses in 1537 by King Henry VIII, the Grange of Clonliffe was granted in common with other possessions of the Abbey, to Walter Peppard (Ball 1920). At that time the property was estimated to contain 150 acres with a messuage. In 1611 the Grange was granted to the Crown and is believed to contain over 200 acres, as well as a messuage, three cottages and a mill (Ball 1920). In the Commonwealth Civil Survey conducted in 1654–1656, lands at the Grange of Clonliffe are recorded as including 250 acres and was in the possession of Viscount Moore. In the early 18th century, the Grange became the residence of Tristram Fortick.

Two castles are recorded within 500m of the proposed development area. A castle (DU018-017, 370m northeast) was recorded on maps during the early 19th century; however, no surface remains of the castle exist today or have been identified to date. Drumcondra Castle (DU018-015001, 475m northeast) was built in the 16th century on the present site of St. Joseph's Asylum for the Blind. Part of the 16th century castle walls are located at ground floor level in the current building and is more intact at semi-basement/ground level where it currently forms part of the kitchen.

16.3.1.4 Post-Medieval Period (AD 1600–1800)

The 18th and early 19th centuries saw a dramatic rise in the establishment of large residential houses around the country. The large country house was only a small part of the overall estate of a wealthy

landowner and provided a base to manage an estate that could be spread nationwide. During the 17th century, lands associated with the large houses were generally formal gardens, which were much the style of continental Europe. Gradually the formal avenues and geometric garden designs were replaced during the mid-18th century by the adoption of parkland landscapes – to be able to view a large house within a natural setting. Although the creation of a parkland landscape involved working with nature, rather than against it, considerable constructional effort went into their creation. Earth was moved, field boundaries disappeared, streams were diverted to form lakes and quite often roads were completely diverted to avoid travelling anywhere near the main house or across the demesne.

The landscape containing the proposed development area was popular for large houses and demesnes during this period, due to the rural landscape but immediate proximity of the city. The eastern portion of the proposed development area once formed part of a demesne landscape established as part of Clonliffe House (DU018-019001), which was later renamed as Red House. Clonliffe House was located in a prominent position above the River Tolka. The house is a detached three-bay two-storey double pile brick built over a raised basement (NIAH file). The entrance is west facing and the form of the staircase with barley-sugar balusters, low risers, broad handrail, paired with staircase panelling would appear to be 17th century. It is located to the west of a mill that was present in the 17th century that may possess earlier medieval origins (DU018-030). An annex is located to the south of the main structure along with the remains of the walled garden, which is located within the proposed development area. Elements of the eastern and southern sections of this wall have been replaced as part of adjacent developments and the southwest section has been removed as part of a recent development. The remaining sections survive within the development area, but are denuded and overgrown.

During 1860 and 1861, part of the western portion of the original demesne landscape was repurposed for the construction of Holy Cross College, which is shown on the 1888 OS map as a large north-south aligned building with a chapel to the immediate south. The main access to Clonliffe House (and adjacent gate lodge) were also utilised by the college and landscaping took place in the form of paths and drives, which created a large overall designed landscape. The landscape remained relatively unchanged up until the second part of the 20th century, when a number of additional structures and extensions were established within the college.

16.3.2 Summary of Previous Archaeological Fieldwork

A review of the Excavations Bulletin (1970–2025) and available excavation reports has revealed that a number of archaeological investigations have taken place within the surrounding landscape, several of which revealed archaeological remains. The investigations are summarised below:

Testing trenching was carried out within a small area that is surrounded by the proposed development area and bounded to the south by Clonliffe Road (Bennett 2024:029, Licence No. 23E1025). This revealed evidence for a 19th century gate lodge, which was formerly associated with Clonliffe House (now Red House). Follow up investigations in 2024 (Licence No. 23E1025 ext.) revealed that the foundation walls of the western half of the lodge survived, with the entire eastern half having been disturbed, likely during its demolition in the middle of the 20th century in advance of the construction of the new entrance gates to the college. The entrance gate and wall (in red brick) replaced the earlier boundaries associated with the original Clonliffe House demesne.

Monitoring was carried out during the River Tolka Flood Alleviation Scheme c. 144m west of the proposed development area in 2003 (McCulllogh 2003, Licence No. 03E0079; Bennett 2003:490). This revealed evidence relating to Distillery Weir and its associated Clonliffe Mill complex to the north of the site, on the south bank of the River Tolka. The house foundations of Tolka Park Cottages were also uncovered.

Testing at 185–189 Richmond Road, c. 360m northwest of the proposed development area (Lynch 2003, Licence No. 03E0615) revealed potential features below the level of 19th century cellars; however, it was not clear how extensive these were, or what period they dated from.

Investigations c. 367m west of the proposed development area in 1993 (Bennett 1993:083, Licence No. 93E0173) suggested that the west bank of the River Poddle was largely used as an industrial area, with tanning forming the major industry. At the southern end of the site, the tanning was associated with the yardages to the rear of the houses along Francis St. The houses fronting on to St Patrick's St. were a later development.

Archaeological testing was carried out at Drumcondra Castle in 2009, c. 460m northeast of the proposed development area (Bennett 2009:306, Licence No. 09E0437). Ten trenches were excavated within the former demesne parkland. A number of post-medieval features were identified including field boundaries, drains and furrows, in addition to a backfilled pond. The trenches excavated to the south of the Drumcondra House, identified a ring ditch, the fill of which contained cremated bone. A number of large pits and ditches, which were interpreted as pre-historic burial monuments of Iron Age date were also revealed (Bennett 2009:306). A second programme of test-trenching was carried out on the same site under licence 16E0167. A total of 17 trenches were excavated across the site revealing extensive post-medieval cultivation, drainage and landscaping to the south of castle DU018-015001. Pits, gullies and a large east-west oriented ditch were identified at 0.7–1.4m below present ground level. Several 18th/19th centuries drains, culverts and garden features were also recorded. A feature identified in the 2009 testing programme interpreted as a possible ring ditch was identified as a curving garden wall (Bennett 2016:231).

A programme of geophysical survey, following by monitoring of site investigations, was carried out within ground associated with St Vincent's Hospital, c. 380m to the northeast of the proposed development area. A total of 49 test pits, foundation pits, slot trenches and soak away pits were excavated across the proposed development area, but no features of archaeological potential were noted. This was followed by a programme of archaeological testing in 2024 (Licence No. 24E0444). No features of archaeological significance were identified during the course of these works.

The following archaeological investigations did not reveal anything of archaeological significance

Table 16.1 Previous archaeological investigations

Licence No.	Location	Reference
03E1067	Distillery Road, 80m east	Phelan 2003, Bennett 2003:521
07E0512	145 Richmond Road, 183m east	Hayden 2007, Bennett 2007:504
06E0729	Waterfall Avenue, 290m northeast	Walsh 2006, Bennett 2006:597
11E0308	All Hallows District Metered Area Dublin, 470m north	Halpin 2021, Bennett 2012:198

Licence No.	Location	Reference
09E0234	St. Vincent's Hospital, 470m northeast	Kyle 2009, Bennett 2009:335
98E0604	St. Patrick's College, 500m north-northwest	Byrne 1998, Bennett 1998:135

16.3.3 Cartographic Analysis

John Rocque's Map of the City and County of Dublin, 1760 (Figure 16.3)

This map shows the proposed development area in some detail, with the area occupied by agricultural fields to the east of Drumcondra Road. Clonliffe Road is named 'Fortick Lane' on this map and leads from Drumcondra Road towards a structure, most likely Clonliffe House (DU018-019001). The area surrounding the structure is named 'Fortick's Grove', with an orchard and formal gardens also illustrated. A mill race can be seen extending from the River Tolka, to the northeast of the structure, although no mill buildings are marked on this map. A small number of structures are also located fronting on to Drumcondra Road.

Figure 16.3 Extract from John Rocque's Map of the City and County of Dublin (1760) showing the approximate location of the proposed development



John Taylor's Map of the Environs of Dublin 1816 (Figure 16.4)

By 1816 Clonliffe Road appears to have been formalized, though it is not labelled as such. The house listed as DU018-019001 is now labelled 'Clonliffe House' and the mill at Clonliffe is now named (DU018-030). A number of structures have also been built off Clonliffe Road and Drumcondra Road.

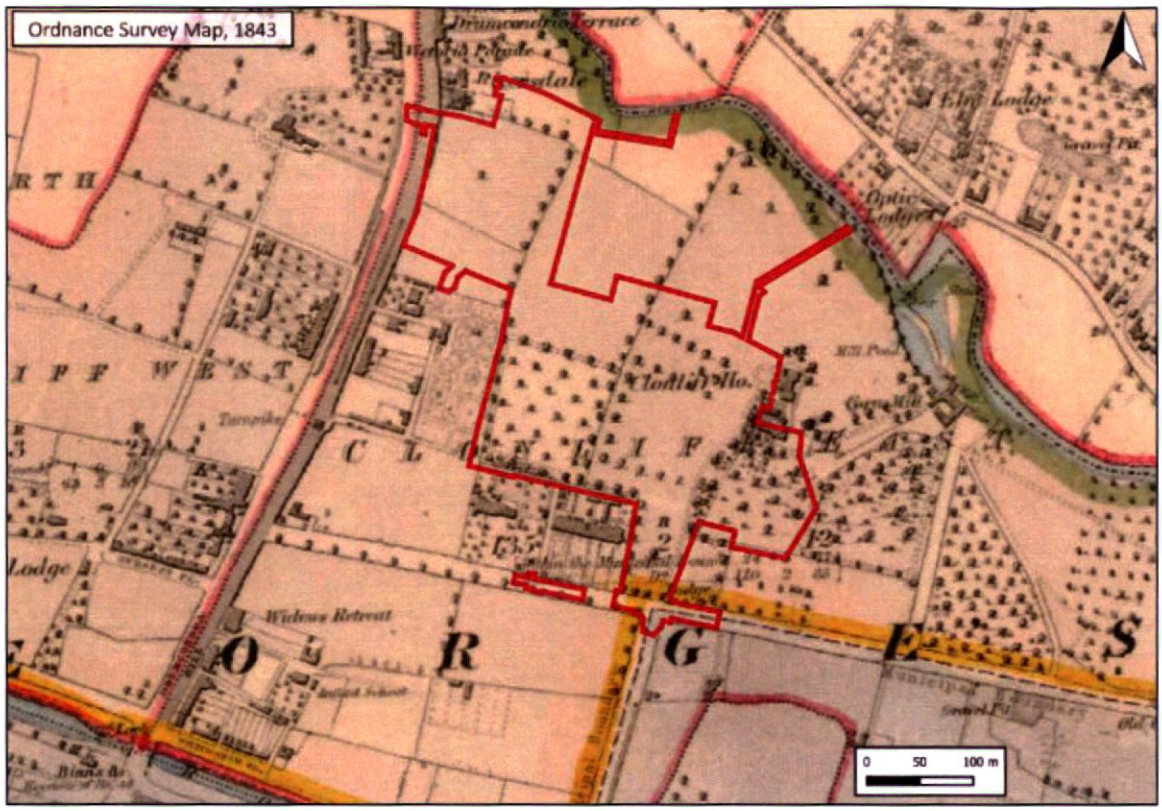
Figure 16.4 Extract from John Taylor's Map of the Environs of Dublin (1816) showing the approximate location of the proposed development



First Edition Ordnance Survey Map, 1843, scale 1:10,560 (Figure 16.5)

This is the first accurate historic mapping coverage of the area containing the proposed development. The eastern portion of the proposed development area is located within the demesne associated with Clonliffe House (DU018-019001), with outbuildings marked to the south of the main house and a possible walled garden, with irregular plan, marked further to the south. The main house is located to the immediate east of the proposed development area, although the main entrance from the south is within the site, with a gate lodge shown to the immediate east. The northwestern portion of the proposed development area is formed by fields that are marked as being under cultivation and a possible orchard. Terraced housing developments are shown as fronting on to the roads to the south and west. The mill (DU018-030) to the east of the proposed development area is clearly labelled, as is the associated mill pond and mill race.

Figure 16.5 Extract from the First Edition 6-inch OS map (1843) showing the proposed development area



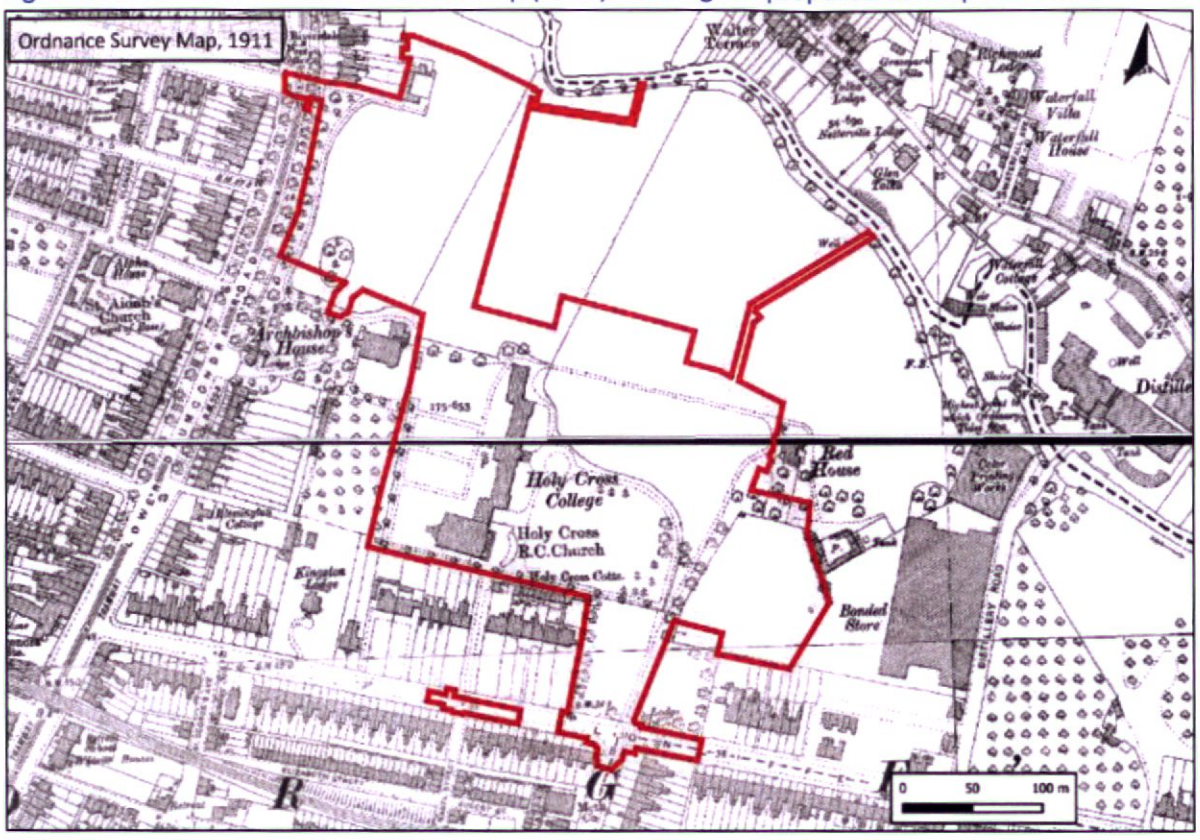
Ordnance Survey Map, 1888, scale 1:1,056

By the time of this map Holy Cross College and chapel have been constructed in the western portion of the proposed development area. Gardens have been laid out to the west of the college and the northwest portion of the site remains as open fields. Clonliffe House (DU018-019001) remains present, although the outbuildings have been removed and rebuilt further to the southeast. The walled garden area remains present and the overall demesne has been relandscaped to allow for the presence of the college.

Ordnance Survey Map, 1911, scale 1:2,500 (Figure 16.6)

There are no major changes to note within the cartography of this map that relate to the proposed development area. Clonliffe House is now named as Red House.

Figure 16.6 Extract from the 25-inch OS Map (1911) showing the proposed development area



Third Edition Ordnance Survey Map, 1935, scale 1:10,560

There are no major changes to note within the cartography of this map that relate to the proposed development area.

16.4 City Development Plan

The Dublin City Development Plan 2022-2028 recognises the statutory protection afforded to all Record of Monuments and Places (RMP) sites under the National Monuments Legislation (1930–2014). The plan lists a number of aims and objectives in relation to archaeological heritage (Appendix 16.4). With regards to proposed development area, it contains a portion of the Zone of Archaeological Interest associated with the adjacent recorded monument (DU018-019001, **Figure 16.2**), and as such the following policies, as laid out in Chapter 11 of the plan, are applicable (Ref.: BHA26):

- To protect and preserve Monuments and Places listed on the statutory Record of Monuments and Places (RMP) as established under Section 12 of the National Monuments (Amendment) Act 1994 which have been identified in the Record of Monuments and Places.
- To protect archaeological material in situ by ensuring that only minimal impact on archaeological layers is allowed, by way of re-use of standing buildings, the construction of light buildings, low impact foundation design, or the omission of basements (except in exceptional circumstances) in the Monuments and Places listed on the statutory Record of Monuments and Places (RMP) as established under Section 12 of the National Monuments (Amendment) Act 1994.

- To seek the preservation in situ (or where this is not possible or appropriate, as a minimum, preservation by record) of all archaeological monuments included in the Record of Monuments and Places.
- Development proposals within the Record of Monuments and Places (RMP) as established under Section 12 of the National Monuments (Amendment) Act 1994, notification of sites over 0.5 hectares size with potential underwater impacts and of sites listed in the Dublin City Industrial Heritage Record, will be subject to consultation with the City Archaeologist and archaeological assessment prior to a planning application being lodged.

Further requirements are also included in Section 15.15, pg 629, Chapter 15 (Development Standards). These include the following:

- All applications for proposed new developments at sites marked as Sites and/or Zones of Archaeological Interest identified on the development plan zoning maps shall be subject to pre application discussion/consultation with the Archaeology Office.
- Where a site is located within a Zone of Archaeological Interest, an Archaeological Assessment as defined in National policy and guidelines shall be prepared in consultation with the City Archaeologist and provided as part of the planning application. The assessment will evaluate the archaeological potential of the site for and the impact of the proposed development on them.
- New basement development in the medieval core and known medieval sites shall be avoided. Approved basements may be rescinded where undue damage to in situ archaeological deposits will occur as a result.
- The impact and merits/demerits of foundation type and soil hydrology shall be archaeologically assessed to determine appropriate mitigation (including avoidance, redesign, etc.).
- Buildings on the first edition OS that are not protected structures shall be recorded as part of the archaeological assessment that accompanies the planning application. Appropriate specifications for the recording of historic buildings will be determined in consultation with the City Archaeologist. Records of historic buildings will inform decisions relating to the approval or implementation of a scheme of development as part of the planning process or to document buildings, or parts of buildings, which will be lost as a result of demolition or alteration.

Whilst the Zone of Archaeological Interest associated with (DU018-019001) is located within the development area, Red House is located to the east of the site boundary. In addition, archaeological geophysical survey and testing has been carried out in the zone and nothing of significance was recorded.

There are six recorded monuments within 500m of the proposed development area (Figure 16.2, Table 16.2, Appendix 16.3).

Table 16.2 Recorded archaeological sites within the study area

RMP/SMR No.	Location	Classification	Distance from Development	RMP Status
DU018-019001	Holy Cross College	House-17th/18th century	To the immediate east	Yes
DU018-030	Distillery Road	Watermill	133m east	Yes
DU018-017	Richmond Road	Castle - unclassified	375m northeast	Yes
DU018-013001-2	Church Avenue	Church and Graveyard	460m north	Yes

RMP/SMR No.	Location	Classification	Distance from Development	RMP Status
DU018-012001	Drumcondra Road Upper	House – 16th/17th century	490m north-northwest	Yes
DU018-015001	Grace Park Road	Castle	490m north	Yes

16.5 Cultural Heritage

16.5.1 Toponomy of townlands

Townland and topographic names are an invaluable source of information on topography, land ownership and land use within the landscape. They can also provide information on the history, archaeological monuments and folklore of an area. A place name may refer to a long-forgotten site and may indicate the possibility that the remains of certain sites may still survive below the ground surface. The Ordnance Survey surveyors wrote down townland names in the 1830s and 1840s when the entire country was mapped for the first time. Some of the townland names in the study area are of Irish origin and through time have been anglicised.

A description and possible explanation of each townland name in the environs of the potential development area is provided in Table 16.3.

Table 16.3 Toponomy of local townlands

Placenames	Derivation	Possible Meaning
Clonliffe East	*Chluain Life Thoir*	Meadow, pasture
Ballybough	*an Bhaile Bhoicht*	Townland, town, homestead
Clonliffe West	*Chluain Life Thiar*	Meadow, pasture
Drumcondra	*Dhroim Conrach*	Ridge
Richmond	*Richmond*	Richmond

16.5.2 Townland Boundaries

The townland is an Irish land unit of considerable longevity as many of the units are likely to represent much earlier land divisions. However, the term townland was not used to denote a unit of land until the Civil Survey of 1654. It bears no relation to the modern word 'town' but like the Irish word *baile* refers to a place. It is possible that the word is derived from the Old English tun land and means 'the land forming an estate or manor' (Culleton 1999, 174).

Gaelic land ownership required a clear definition of the territories held by each sept and a need for strong, permanent fences around their territories. It is possible that boundaries following ridge tops, streams or bog are more likely to be older in date than those composed of straight lines (ibid. 179).

The vast majority of townlands are referred to in the 17th century when land documentation records began. Many of the townlands are mapped within the Down Survey of the 1650s, so called as all measurements were carefully 'laid downe' on paper at a scale of forty perches to one inch. Therefore, most are in the context of pre-17th century landscape organisation (McErlean 1983, 315).

In the 19th century, some demesnes, deer parks or large farms were given townland status during the Ordnance Survey and some imprecise townland boundaries in areas such as bogs or lakes were given

more precise definitions (ibid.). Larger tracks of land were divided into a number of townlands and named Upper, Middle or Lower, as well as Beg and More (small and large) and north, east, south and west (Culleton 1999, 179). By the time the first Ordnance Survey had been completed a total of 62,000 townlands were recorded in Ireland.

The potential development area is located within the townland of Clonliffe East, with a very small section of the western extent of the site located in Clonliffe West. Here the townland boundary is formed by the R132, which has been significantly widened and developed in recent years. The River Tolka, to the northeast of the site, forms a townland and parish boundary

16.5.3 Cultural Heritage Sites

The term 'cultural heritage' can be used as an over-arching term that can be applied to both archaeology and architecture. However, it also refers to more ephemeral aspects of the environment, which are often recorded in folk law or tradition or possibly date to a more recent period.

Holy Cross College itself possesses cultural heritage significance due to its architectural and social history, which commenced with its construction in the 1860s, before it finally closed in 2000. The main range and adjacent chapel are listed in the Record of Protected Structures and the National Inventory of Architectural Heritage. A full background and description of the architectural heritage is given in Chapter 15 of this EIAR.

The original demesne landscape associated with Clonliffe House (Red House) is also of cultural heritage significance, although the construction of Holy Cross College had an impact on the original landscape. Today it has been affected by more recent developments, including the replacement of the main entrance and southern boundary wall and the demolition of the gate lodge. Specimen planting to the west and south of Red House survives, along with sections of a walled garden, although substantial sections of the walling has been replaced or removed as part of adjacent modern developments. The original path of the entrance drive to Red House has also been retained. A large-scale all weather playing pitch has been constructed to the immediate northeast of Red House and extensive modern development is located to the east of the house and the former demesne and walled garden.

16.6 Topographical Files of the National Museum of Ireland

Information on artefact finds from the study area in County Dublin has been recorded by the National Museum of Ireland since the late 18th century. Location information relating to these finds is important in establishing prehistoric and historic activity in the study area. There are no stray finds found within the vicinity of the proposed development area.

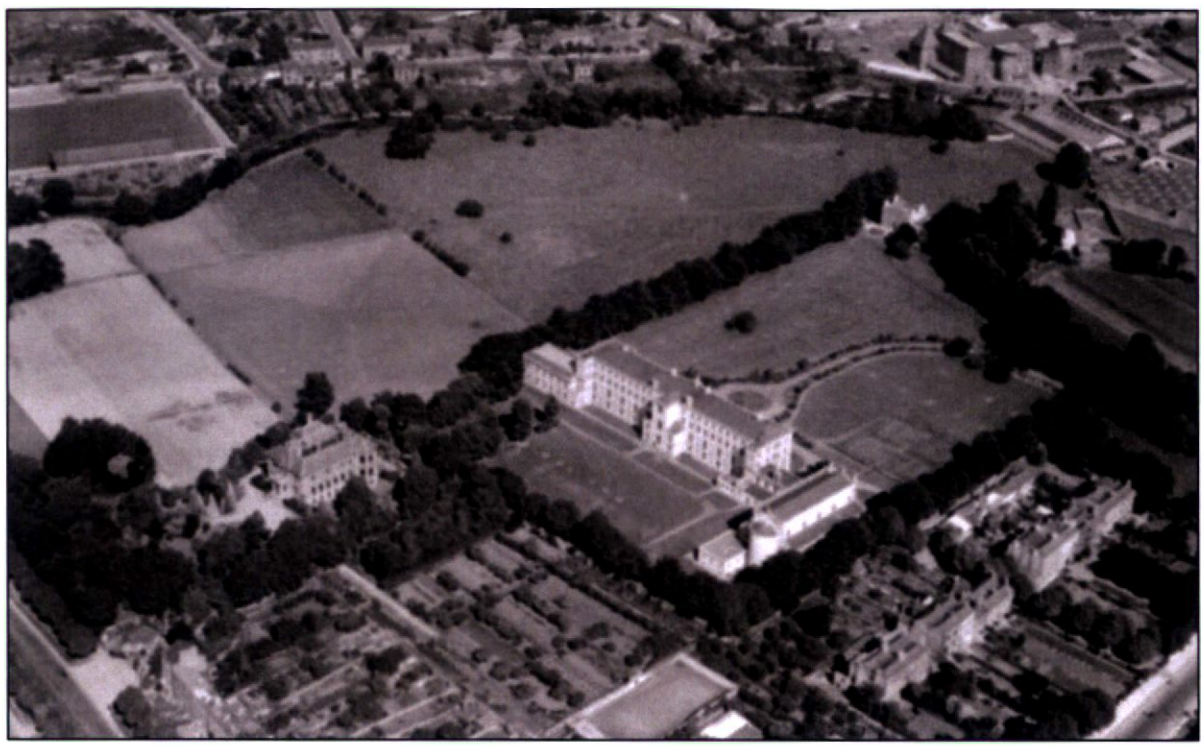
16.7 Aerial Photographic Analysis

Inspection of the aerial photographic coverage of the proposed development area held by the Ordnance Survey (1995–2013), Google Earth (2008–2024) and Bing Maps failed to identify any additional or previously unknown archaeological features.

Plate 16.1 shows an oblique aerial image of the proposed development area dating to 1947. This shows Holy Cross College, before additional development occurred in the second part of the 20th century, with Red House and the path of the River Tolka in the background. Where development has not occurred, the fields are shown as a mixture of pasture and arable.

Plate 16.1 East-northeast oblique aerial view of the development area (1947)

(britainfromabove.org)



16.8 Dublin City Industrial Heritage Record

There are no sites recorded within the DCIHR located within the proposed development area. The closest site is located c. 155m to the north and is formed by Drumcondra Bridge, which is in use as a road bridge and survives in good condition.

16.9 Field Inspection

The field inspection sought to assess the proposed development area, its previous and current land use, the topography and any additional information relevant to the assessment. During the course of the field investigation the proposed development area and its immediate surrounding environs were inspected.

The northern section of the proposed development area is characterised by open greenfield (Plate 16.2). This contains some specimen planting around the western and southern boundaries and the complex of existing Holy Cross College buildings within the western portion of the site, which includes associated modern structures, landscaping and footpaths along with the original 19th century college structures (Plates 16.3 and 16.4).

The eastern and southern portions of the proposed development area comprise greenfield areas that once formed part of the demesne associated with Clonliffe House. The house 'Red House' (DU018-019001) survives in good condition to the immediate east of the proposed development area and is also listed as a protected structure. Demesne planting is located to the north and the south of the house (Plate 16.5) with modern tarmac parking to the immediate west of the house. To the south of the house is a level area of pasture, which was once formed part of a walled garden associated with Clonliffe

House. Today parts of the wall have been replaced as part of adjacent development (Plate 16.6) and the section to the east of the original driveway has become denuded and partially collapsed. Modern recent development has seen the removal of the southwest part of the garden wall.

Plate 16.2 North-western section of the development area, facing north-northwest



Plate 16.3 Central buildings, facing southeast



Plate 16.4 Central buildings, facing southeast



Plate 16.5 Green area in eastern part of the site, facing east



Plate 16.6 Green area in north-eastern part of the site, facing east towards Red House

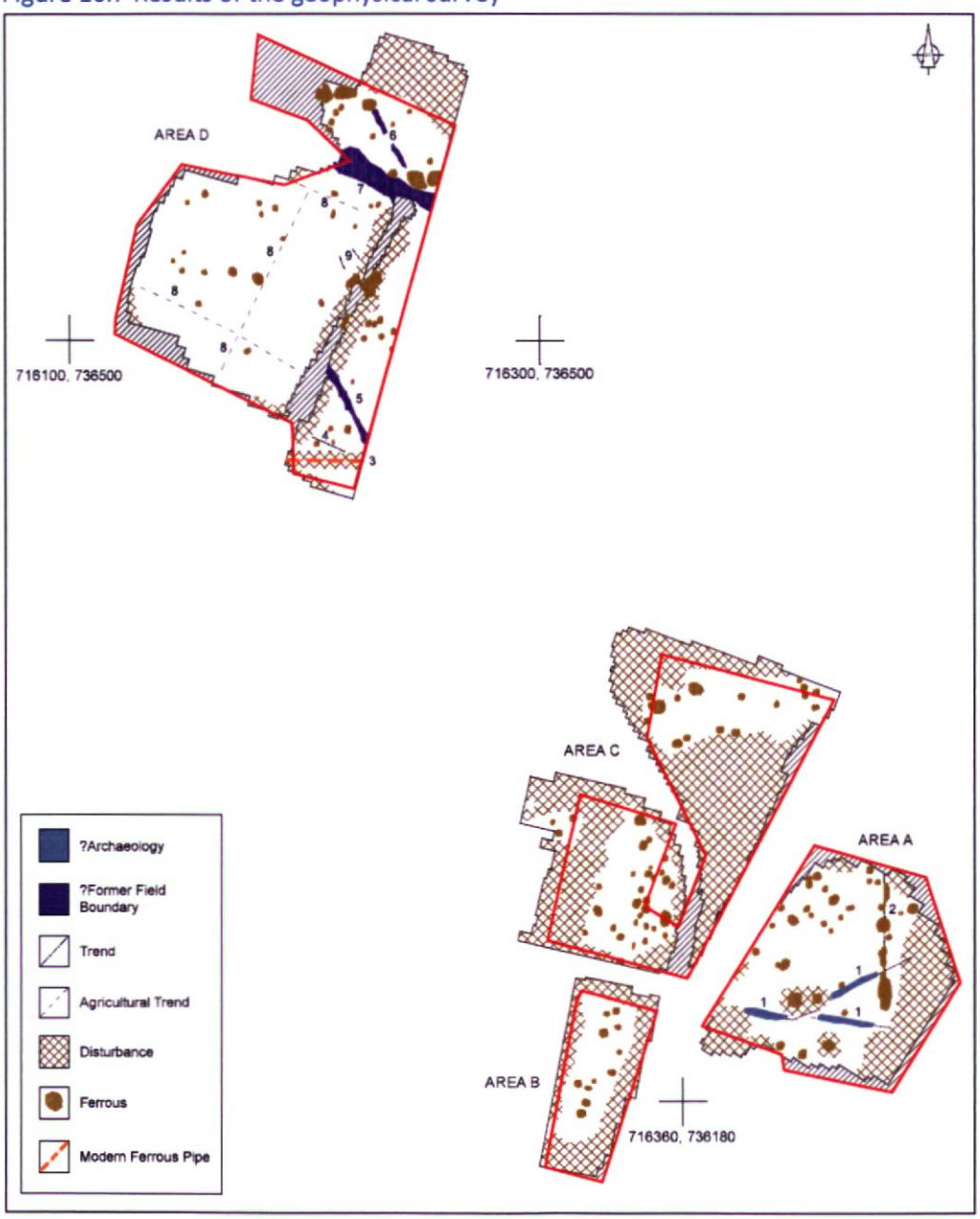


The southern boundary of the proposed development area is formed by a red brick wall and gated entrance, which was constructed as part of the college development and replaced any earlier boundaries associated with Clonliffe House demesne.

16.10 Geophysical Survey

A geophysical survey was carried out by JM Surveys under licence 20R0046 in March 2020 (**Figure 16.7**; **Appendix 16.1**). The dataset was largely dominated by modern ferrous responses and disturbance from multiple buildings, landscaping, and modern services. Several possible former field divisions were identified, some of which correlate with field boundaries depicted on historic mapping. Faint linear trends are suggestive of former agricultural activity, possibly associated with the extant field boundaries.

Figure 16.7 Results of the geophysical survey

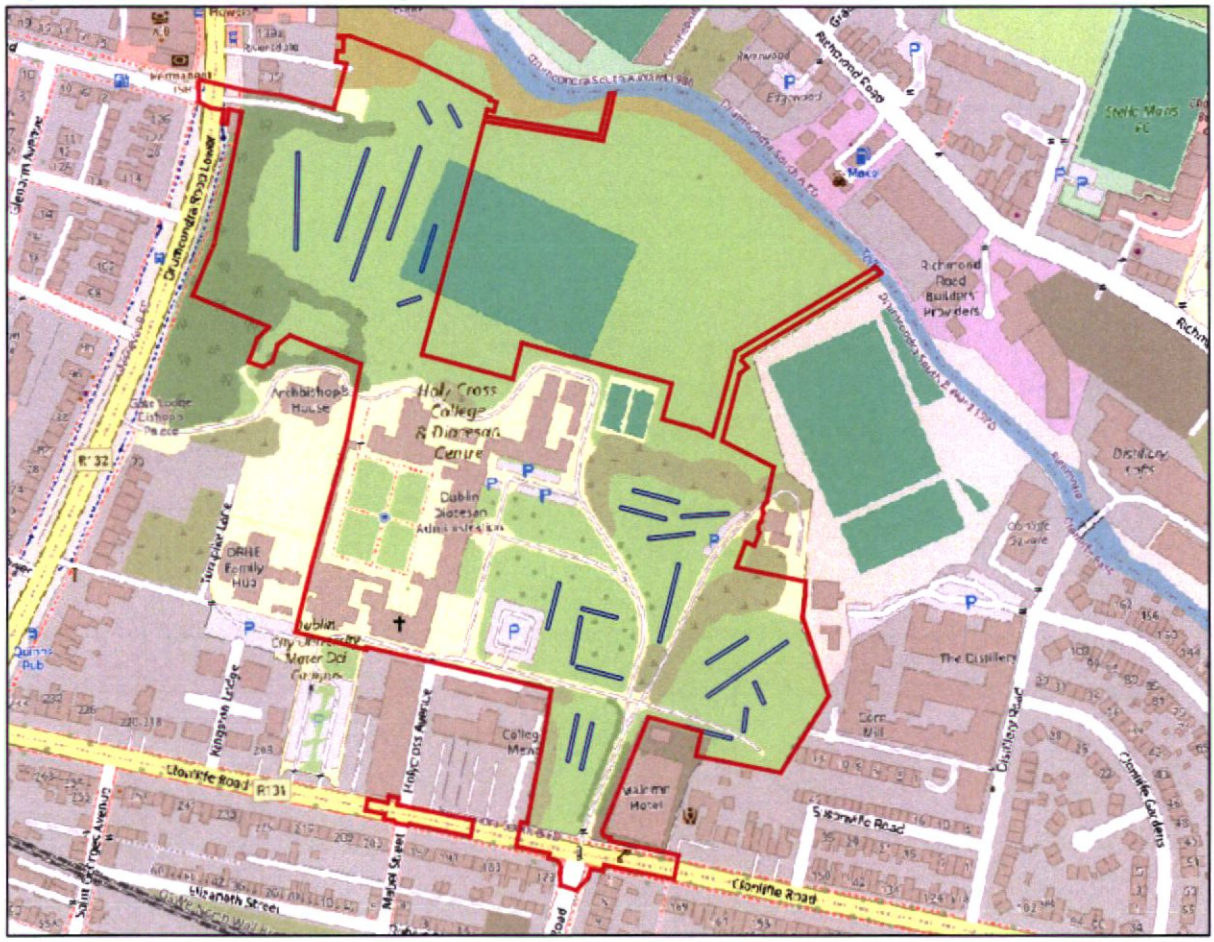


16.11 Test Trenching

A programme of test trenching was undertaken to inform this assessment in March 2020 within the proposed development area (**Appendix 16.2**, Licence No. 20E0286; **Figure 16.8**). The trenches targeted

geophysical anomalies and open green space to fully investigate the archaeological potential of the site. Testing did not reveal any areas or features of archaeological significance. Much of the lands appeared to have been re-landscaped for the purposes of laying out a flat lawn and playing fields associated with Holy Cross College.

Figure 16.8 Location of archaeological test trenches (in blue)



16.12 Conclusions

The proposed development area is located to the north of Clonliffe Road, east of Drumcondra Road and to the south of the River Tolka. The site is currently occupied by the buildings of Holy Cross College and Diocesan Centre and associated landscaping. There are six recorded monuments within 500m of the proposed development. The nearest recorded monument comprises a 17th/18th century house (DU018-019001) that is located to the immediate east of the development area. Record DU018-019002 is also associated with this site but was reclassified as a 'Redundant Record' in 2011, due to it being a replication of DU018-019001.

The assessment was informed by a programme of geophysical survey and archaeological test trenching. Neither survey revealed any features of archaeological significance. Similarly, a field inspection has been carried out as part of the assessment. This confirmed that elements of the development area have been subject to development and landscaping as part of the existing Holy Cross College. Sections of the original boundary wall surrounding the walled garden associated with Clonliffe House survive, although portions have been removed recently as part of a separate development.

A review of the Excavation Bulletin (1970-2025) has shown that no previous archaeological fieldwork has been carried out with the development area, with the exception of the geophysical survey and archaeological testing completed as part of this overall assessment. Fieldwork adjacent to the site, which was carried out in 2024, recorded the remains of the original gate lodge associated with Clonliffe House, which was demolished at the time a new entrance was constructed in the later part of the 19th century, as part of the development of the college.

A review of the historic mapping shows that the proposed development area is located partially within the original demesne landscape associated with Clonliffe House (later Red House). However, this landscape was considerably modified following the development of the college in the later part of the 19th century and a number of boundaries and areas of planting were removed. Some mature demesne planting associated with the original landscape does survive in proximity to Red House, along with the later Victorian landscaping.

16.13 Predicted Impacts of the Proposed Development

16.13.1 Do-Nothing Impact

Given the proposed development is formed by the vacant institutional structures and associated parkland, parts of which were originally associated with Red House (formerly Conliffe House), if the proposed development were not to proceed, it is likely that the structures and parkland would deteriorate with no active use. This represents a direct negative impact on the cultural heritage resource, which has the potential to be significant if the site is left vacant for a long time.

If the proposed development were not to proceed there would be no impact on the archaeological resource.

16.13.2 Construction Phase

Whilst no sites or areas of archaeological potential were noted during the course of the geophysical survey and archaeological testing, it remains possible that small or isolated features survive beneath the current ground level and outside of the footprint of the excavated test trenches. Ground disturbances associated with the construction of the development have the potential to result in **direct, negative (permanent)** impacts on same. Depending on the extent and significance of any such remains, impacts (in the absence of mitigation), may range from **moderate to significant**.

Remaining sections of the northern and western walls of the walled garden will be removed as part of the proposed development. This will result in **direct, negative (permanent)** impact on same. Impacts (in the absence of mitigation) will be **moderate**.

Given construction requires a large number of construction activities on site, the construction phase will result in a **direct, negative (short term)** impact on the former demesne landscape and the setting of Red House, which is located to the immediate east. Impacts (In the absence of mitigation) will be **moderate**.

16.13.3 Operational Phase

Red House is a recorded monument located to the immediate east of the development (RMP DU018-019001). It is also a protected structure and impacts from a built heritage perspective are addressed in Chapter 15 (section 15.4.12). The setting of the structure has been affected by development to the

immediate east and modern car parking to the immediate west. The principal aspect of the structure (to the west) remains intact, albeit directly viewing later buildings of Holy Cross College. The operation of the proposed development will result in the removal of the car park and the establishment of a new landscaped garden to the west of the structure and mature demesne planting will be retained and supplemented. Apartment blocks to the west and south will be set back over 40m. When viewing the principal elevation of the structure from the west, the setting will remain unaffected. Whilst it is acknowledged that wider views of the structure from the north, west and south will include parts of the set-back development, the improvement of grounds to the immediate west of the structure will result in an **indirect, positive (long-term)** impact on the setting of the structure. Overall, the significance of effect on the setting of the recorded monument is assessed as **significant**.

The overall operation of the development will impact part of the original demesne landscape associated with Clonliffe House (now Red House), which the Holy Cross complex was later incorporated into. The eastern portion of the landscape has been subject to development and many of the designed elements have been lost. The surviving aspects of the landscape include mature planting and the route of the access drive to Red House. The development will have a **direct, negative (long term)** impact on the landscape, but the retention of the surviving demesne features and the condition of the landscape means that the significance (In the absence of mitigation) will be **slight.**

16.14 Mitigation Measures

16.14.1 Construction Phase

All topsoil stripping associated with the proposed development will be subject to archaeological monitoring. During archaeological monitoring the remains of the walled garden will be exposed and subject to a full record, including measured and photographic survey. The foundations of the wall will also be investigated and recorded. These works will be carried out under licence to the National Monuments Service of the DoHLGH and in consultation with the DCC Archaeologist. If any archaeological remains are discovered during the course of works further mitigation will be required, such as preservation in situ or by record (excavation). Any further mitigation will require approval from the National Monuments Service and the DCC Archaeologist.

Prior to the commencement of construction, a full photographic survey will be conducted within the former demesne landscape, including a detailed record of all boundaries and designed landscape elements. The survey will include records from ground floor and aerial views. The survey will be carried out by a suitably qualified professional with expertise in designed landscapes.

16.14.2 Operational Phase

The landscape survey that is detailed above and will commence prior to construction, will include Red House and its setting, in order to create a detailed record of same. In addition, all mature trees within the current setting of the building and demesne will be retained where possible and additional trees planted in order to enhance the existing planting and maintain an overall 'parkland' character.

16.15 Residual Impacts

Following the implementation of mitigation at construction stage, **no significant residual impacts** are predicted upon the buried archaeological resource and the remains of the walled garden, as any features that may be present will be identified and preserved by record.

A detailed survey and record will be made of the former demesne landscape and the setting of Red House prior to the commencement of construction and operation. This will reduce the overall construction and operation impact on surviving demesne landscape from **slight to not significant**.

16.16 Monitoring

The mitigation measures recommended above would also function as a monitoring system to allow the further assessment of the scale of the predicted impacts and the effectiveness of the recommended mitigation measures.

16.17 Reinstatement

Not applicable.

16.18 Interactions

Due to the close link between archaeological and cultural heritage with architectural heritage and landscape and visual, the relevant chapters (Chapters 14 and 15) have been reviewed as part of the archaeological and cultural heritage assessment.

16.19 Indirect and/or Secondary Impacts

Indirect impacts are described above in operation impacts – that is where they need to go.

16.20 Cumulative Impacts

All proposed developments within the 500m study area, as detailed in Chapter 23 of this EIAR, have been reviewed for potential construction and operation cumulative impacts upon the archaeological and cultural heritage resource. No cumulative impacts have been identified at construction stage, as any archaeological remains identified during construction will be preserved in-situ or by record.

No operational cumulative impacts are predicted upon the archaeological and cultural heritage resource, as none of the proposed development will results in impacts (direct or indirect) on Red House (RMP DU018-019001).

16.21 Difficulties Encountered

Not difficulties were encountered during the compilation of this assessment.

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17 Microclimate – Daylight & Sunlight

17.1 Introduction

The Holy Cross College LRD ('proposed Project' hereafter) at the former Holy Cross College, Clonliffe Road, Dublin 3 and Drumcondra Road Lower, Drumcondra, Dublin 9, has been considered for its impact on daylight availability on the surrounding environment, including residential buildings and amenity spaces.

The reader should note that a separate, standalone Daylight Assessment report, prepared by ARUP in respect of the proposed Project, has been submitted with this application, under separate cover. Full results, graphics and tables are available in this report if the reader wishes to find more detailed information beyond that given within this Chapter.

17.2 Method

17.2.1 Policy and Guidance

The methods applied are drawn from relevant policy, specifically:

- *The Dublin City Development Plan 2022 – 2028,*
- *The Urban Development and Building Height Guidelines for Planning Authorities (2018) and,*
- *The Sustainable Urban Housing: Design Standards for New Apartments (2023).*

Five documents relating to daylight are mentioned in policy noted above. These are:

- *BR 209 (2011) – Site Layout Planning for Daylight and Sunlight, A Guide to Good Practice.*
- *BS 8206-2:2008 – Lighting for Buildings, Part 2: Code of Practice for Daylighting.*
- *BR 209 (2022) – Site Layout Planning for Daylight and Sunlight, A Guide to Good Practice.*
- *BS EN 17037:2018 Daylight in buildings (+A1:2021).*
- *IS EN 17037:2018 Daylight in buildings.*

However, two of these documents are superseded.

- On June 8th 2022, *BR 209 (2011) – Site Layout Planning for Daylight and Sunlight, A Guide to Good Practice* was replaced with *BR 209 (2022) – Site Layout Planning for Daylight and Sunlight, A Guide to Good Practice.*
- On May 31st 2019, *BS 8206-2:2008 – Lighting for Buildings, Part 2: Code of Practice for Daylighting* was replaced with *BS EN 17037:2018 Daylight in buildings.*

As such, three documents require consideration, being:

- *BR 209 (2022) – Site Layout Planning for Daylight and Sunlight, A Guide to Good Practice.*
- *BS EN 17037:2018 Daylight in buildings (+A1:2021).*
- *IS EN 17037:2018 Daylight in buildings.*

These form the basis of the methodology and recommendations applied in this assessment.

17.2.2 Metrics and Recommendations

The sections below list out the metrics applied and the associated minimum recommendations. Further detail, if required, is available in the standalone Daylight Assessment report prepared by Arup.

17.2.2.1 Vertical Sky Component (VSC)

Vertical Sky Component (VSC) gives a measure of daylight received on the outside of a window. BR 209 (2022) states:

> *This is a measure of the amount of light reaching a window. It is the ratio of that part of illuminance, at a point on a given vertical plane, that is received directly from a CIE standard overcast sky, to illuminance on a horizontal plane due to an unobstructed hemisphere of this sky.*

In determining appropriate recommendations for VSC, the following is stated within BR 209 (2022):

> *If the VSC is greater than 27% then enough skylight should still be reaching the window of the existing building. Any reduction below this level should be kept to a minimum. If the VSC, with the new development in place, is both less than 27% and less than 0.80 times its former value, occupants of the existing building will notice the reduction in the amount of skylight.*

Minimum Recommendation

To meet the recommendations of the guidelines in BR 209 (2022), the VSC, with the new development in place, should be greater than 27% or greater than 0.80 times the baseline value.

17.2.2.2 Annual Probable Sunlight Hours (APSH) and Winter Probable Sunlight Hours (WPSH)

The probable sunlight hours metric is used in BR 209 (2022) to assess the impact of a new development on sunlight availability in the surrounding buildings over the course of a year. BR 209 (2022) states:

> */... 'probable sunlight hours' means the total number of hours in the year that the sun is expected to shine on unobstructed ground, allowing for average levels of cloudiness for the location in question (based on sunshine probability data). The sunlight reaching the window is quantified as a percentage of this unobstructed annual total.*

In defining appropriate target values for probable sunlight hours, BR 209 (2022) states:

> *If a room can receive more than one quarter of annual probable sunlight hours (APSH), including at least 5% in the winter months between 21 September and 21 March, then it should still receive enough sunlight. Also, if the overall loss of APSH is 4% or less, the loss of sunlight is small.*
>
> *Any reduction in sunlight access below these levels should be kept to a minimum. If the available sunlight hours are both less than the amount above and less than 0.80 times their former value, either over the whole year or just in the winter months, and the overall annual loss is greater than 4% of APSH, then the occupants of the existing building will notice the loss of sunlight:... /*

Minimum Recommendation

To meet the guidelines for sunlight availability in BR 209 (2022), the existing window should, with the new development in place, receive more 25% of annual probable sunlight hours (APSH), including at least 5% in the winter months (WPSH) between 21 September and 21 March or be in excess of 0.80

times its baseline value. For the window to be considered outside the guidelines, the total reduction in APSH must be greater than 4%.

17.2.2.3 No Sky Line (NSL)

The No Sky Line gives an indication into the distribution of daylight in a room. In BR 209 (2022), it is defined as "The outline on the working plane from which no sky can be seen".

In determining how the NSL should be applied in daylight for planning assessments, BR 209 (2022) states:

> *Where room layouts are known (for example if they are available on the local authority's planning portal), the impact on the daylighting distribution in the existing building should be found by plotting the no sky line in each of the main rooms.*
>
> *If, following construction of a new development, the no sky line moves so that the area of the existing room which does not receive direct skylight, is reduced to less than 0.80 times its former value, this will be noticeable to the occupants, and more of the room will be appear poorly lit.*

Minimum Recommendation

To be considered as inside the guidelines given in BR 209 (2022), with the new development in place, the area of the existing room which does not receive direct skylight should be greater than 0.80 times its baseline value.

17.2.2.4 Sunlight in Amenity Areas (SiAA)

Within BR 209 (2022), recommendations are given as to the quantity of sunlight penetration in amenity areas that is required to produce a well sunlit space throughout the year. This text is given below:

> *It is recommended that for it to appear adequately sunlit throughout the year, at least half of a garden or amenity area should receive at least two hours of sunlight on 21 March. If as a result of new development, an existing garden or amenity area does not meet the above, and the area which can receive two hours of sun on 21 March is less than 0.80 times its former value, then the loss of sunlight is likely to be noticeable.*

Minimum Recommendation

To sit within the guidelines given in BR 209 (2022), an existing amenity space, with the new development in place, should experience in excess of two hours sunlight on March 21st for at least 50% of its area. If the area does not meet this target, the area which can receive more than two hours sunlight on March 21st should be greater than 0.80 times the baseline value.

17.2.3 Assessment Methods

The following massing models have been considered in the assessment of daylight availability in the surrounding environment:

- **The Baseline Condition**: This configuration is the existing site condition before any works begin. It encompasses all relevant permissions, including the hotel granted as per planning permission DCC 2935/20. The mirror building method described within Section 2.3 of BRE 209 (2022) has been used to set the baseline condition and determine targets in accordance with this.

- **The Proposed Condition**: This configuration represents the subject site including the proposed development and all related works.

These models and their comparative masses are used to demonstrate the difference in daylight and sunlight performance in surrounding areas between the Baseline Condition and the Proposed Condition. The section below outlines how effects are classified when the metrics previously described are applied. Further detail, if required, is available in the standalone Daylight Assessment report prepared by Arup.

17.2.4 Classification of Effects

Appendix H in BR 209 (2022) outlines five categories of impact when conducting environmental impact assessments. These are:

- Negligible
- Minor Adverse
- Moderate Adverse
- Major Adverse
- Beneficial

Alongside these classifications, BR 209 (2022) gives outline descriptions of how each should be applied:

> *Where the loss of light does not meet the guidelines in this document, the impact is assessed as minor, moderate or major adverse. Factors tending towards a minor adverse impact include:*
>
> - *Only a small number of windows or limited area of open space are affected.*
> - *The loss of light is only marginally outside of the guidelines.*
> - *An affected room has other sources of skylight or sunlight.*
> - *The affected building or open space has only a low level requirement for skylight or sunlight.*
> - *There are particular reasons why an alternative, less stringent, guideline should be applied, for example an overhang above the window or a window standing unusually close to the boundary.*
>
> *Factors tendering towards a major adverse impact include:*
>
> - *A large number of windows or large area of open space are affected.*
> - *The loss of light is substantially outside of the guidelines.*
> - *All the windows in a particular property are affected.*
> - *The affected indoor or outdoor spaces haver a particularly strong requirement for skylight or sunlight, e.g. a living room in a dwelling or a children's playground.*
>
> *Beneficial impacts may occur where there is a significant increase in the amount of skylight and sunlight reaching an existing building where it is required, or in the amount of sunlight reaching an open space. Beneficial impacts should be worked out using the same principles as adverse impacts. Thus a tiny increase in light would be classified as negligible impact, not a minor beneficial impact.*

These classifications, along with their descriptors and characterisations, have been applied in determining the impact of the proposed development on the surrounding existing environment.

A key point of note, in simple terms, is that the level of impact and associated classification is determined by the 'loss of light'. This includes all of the metrics in combination with each other (APSH,

WPSH, SiAA, NSL and VSC). Individual metrics should not be used to determine a classification. For example, it is possible to reduce skylight to a window, but not reduce sunlight to the same window or reduce sunlight to a garden in the same property.

17.3 Baseline Environment

The baseline environment includes all existing surrounding properties plus all relevant permissions, including the hotel granted as per planning permission DCC 2935/20.

17.4 Predicted Impacts of the Proposed Development

17.4.1 Do-Nothing Impact

The Do-Nothing scenario will retain the existing daylight availability with no expected reduction.

17.4.2 Construction Phase

The impact to daylight availability during the construction phase of the proposed Project would be minor and temporary, and so, has not been assessed.

17.4.3 Operational Phase

The table below summarises the percentage of points sitting outside of minimum recommendations as a comparative of the total quantity of points assessed. These are grouped by metric and the percentage of points noted is a percentage of the total points tested in the assessment.

Metric Used for Analysis	Summary
VSC	3.5% (19No windows out of 561No assessed)
A/W PSH	1.5% (2No windows out of 123No assessed)
NSL	0% (0No rooms)
SiAA	0% (0No amenity spaces out of 51No assessed)

The effects experienced by the surrounding properties can be found below. A full description of methods and accompanying results are given in the dedicated daylight assessment report and appendices.

No 15 Corn Mill Row

The bullets below summarise the effects experienced for each of the metrics tested. The property contains 11No windows or skylights and a single amenity space.

- 2No windows assessed for VSC sit outside of the minimum recommendations. The proposed VSC values are 23.5% and 24.5% – giving ratios against the baseline values of 0.75 and 0.72 respectively.
- No windows sat outside the minimum recommendations for A/W PSH.
- No rooms sat outside the minimum recommendations for NSL.
- No amenity spaces sat outside the minimum recommendation for SiAA.

Based on the above summaries and the process described within Appendix H of BR 209 (2022), the effects to this property can be classified as **minor adverse**.

No 1 College Mews

The bullets below summarise the effects experienced for each of the metrics tested. The property contains 7No windows and a single amenity space.

- 2No windows assessed for VSC sit outside of the minimum recommendations. The proposed VSC values are 26% and 26% – giving ratios against the baseline values of 0.66 and 0.66 respectively.
- No windows sat outside the minimum recommendations for A/W PSH.
- No rooms sat outside the minimum recommendations for NSL.
- No amenity spaces sat outside the minimum recommendation for SiAA.

Based on the above summaries and the process described within Appendix H of BR 209 (2022), the effects to this property can be classified as **minor adverse**.

No 133 Drumcondra Road Lower

The bullets below summarise the effects experienced for each of the metrics tested. The property contains 8No windows and 2No amenity spaces, being a garden to the rear and a front garden currently in use for vehicle parking.

- 2No windows assessed for VSC sit outside of the minimum recommendations. The proposed VSC values are 23.5% and 26.5% respectively – giving ratios against the baseline of 0.64 and 0.72.
- 1No window assessed for A/W PSH sits outside of the minimum recommendations. The proposed APSH value is 15% – giving a ratio against the baseline of 0.27.
- No rooms sat outside the minimum recommendations for NSL.
- No amenity spaces sat outside the minimum recommendation for SiAA.

Based on the above summaries and the process described within Appendix H of BR 209 (2022), the effects to this property can be classified as **minor adverse**.

No 135 Drumcondra Road Lower

The bullets below summarise the effects experienced for each of the metrics tested. The property contains 14No windows and 2No amenity spaces, being a garden to the rear and a front garden currently in use for vehicle parking.

- 4No windows assessed for VSC sit outside of the minimum recommendations. The proposed VSC values are 23.5%, 26.5%, 21% and 18% respectively – giving ratios against the baseline of 0.70, 0.71 0.67 and 0.64.
- No windows sat outside the minimum recommendations for A/W PSH.
- No rooms sat outside the minimum recommendations for NSL.
- No amenity spaces sat outside the minimum recommendation for SiAA.

Based on the above summaries and the process described within Appendix H of BR 209 (2022), the effects to this property can be classified as **minor adverse**.

No 137 Drumcondra Road Lower

The bullets below summarise the effects experienced for each of the metrics tested. The property contains 15No windows and 2No amenity spaces, being a garden to the rear and a front garden currently in use for vehicle parking.

- 2No windows assessed for VSC sit outside of the minimum recommendations. The proposed VSC values are 25.5% and 17% respectively – giving ratios against the baseline of 0.73 and 0.71.

- 1No window assessed for A/W PSH sat outside of minimum recommendations. The proposed ASH value is 7% - giving a ratio against the baseline of 0.54.
- No rooms sat outside the minimum recommendations for NSL.
- No amenity spaces sat outside the minimum recommendation for SiAA.

Based on the above summaries and the process described within Appendix H of BR 209 (2022), the effects to this property can be classified as **minor adverse**.

No 182 Clonliffe Road

The bullets below summarise the effects experienced for each of the metrics tested. The property contains 31No windows and 2No amenity spaces, with both being used for vehicle parking.

- 1No windows assessed for VSC sat outside of the minimum recommendations. The proposed VSC values drop to 26.5% – giving a ratio against the baseline values of 0.71.
- No windows sat outside the minimum recommendations for A/W PSH.
- No rooms sat outside the minimum recommendations for NSL.
- No amenity spaces sat outside the minimum recommendation for SiAA.

Based on the above summaries and the process described within Appendix H of BR 209 (2022), the effects to this property can be classified as **minor adverse**.

Caretakers Cottage / Belvedere Rugy Ground House

In offering a commentary on this property, the following points are relevant.

- Analysis for VSC and A/W PSH was completed and are presented in the appendices for completeness.
- From relevant planning applications, we understand that the property is not habitable. We understand that this development was permitted as part of the development of the Belvedere College Sports Pitches under DCC Ref: 1160/93, as amended by 0003/94, which included the following condition: Condition 1 stated: The proposed bungalow shall be restricted to use as a single dwelling unit only and shall be used solely in conjunction with the pavilion and associated sports ground. REASON: In the interest of the proper planning and development of the area. While the wider permission, including the bungalow location was revised under 0003/94, from a review of the planning files and comparison against the development from aerial mapping it appears the bungalow was constructed as permitted under 1160/93.

Based on the above points, it is stated that the Caretakers Cottage / Belvedere Rugy Ground House would experience **negligible effects** as a result of the proposed development.

17.4.4 Summary of Impacts

A minor adverse effect is experienced at No 15 Corn Mill Rows, No 1 College Mews, No's 133-137 Drumcondra Road Lower and No 182 Clonliffe Road. All other surrounding properties will experience negligible effects.

17.5 Mitigation Measures

17.5.1 Construction Phase

The impact to daylight availability during the construction phase of the proposed Project would be minor and temporary, and so, has not been assessed. There is no scope for mitigation measures.

17.5.2 Operational Phase

Mitigation measures have been incorporated as the design progressed. No further mitigation measures are proposed.

17.6 Residual Impacts

As no further mitigation measures are expected or proposed, the residual impacts are in line with the predicted impact described above.

17.7 Monitoring

No monitoring is required or proposed.

17.8 Reinstatement

Reinstatement is not relevant to this chapter.

17.9 Interactions

The key interaction between this chapter and other specialist chapters of the EIAR is with Chapter 7 (Population & Human Health), since impacts in relation to daylight and sunlight availability, e.g. overshadowing of neighbouring buildings, can negatively or positively affect residential amenity in the receiving environment. When considering the impact of the proposed project on the daylight and sunlight availability in the existing surrounding environment, it can be stated that the proposed development has a negligible impact on the majority of the surrounding dwellings. No significant effects are predicted during either the construction or operational phase.

17.10 Indirect and/or Secondary Impacts

There are no indirect or secondary impacts relating to daylight.

17.11 Cumulative Impacts

All relevant adjacent permissions have been included within the assessment of the impact of the proposed Project on the surrounding environment. As such, the cumulative impacts can be described as being the same as the impact of the proposed Project, as assessed above.

17.12 Difficulties Encountered

Receptors for analysis in the surrounding area were identified using online mapping systems and survey information as made available to us. Where precise information on window location was not available from a survey, the receptor points were placed using information available online and applying reasonable skill and care.

17.13 References

- *BR 209 (2011) – Site Layout Planning for Daylight and Sunlight, A Guide to Good Practice.*
- *BS 8206-2:2008 – Lighting for Buildings, Part 2: Code of Practice for Daylighting.*
- BRE (2022). BRE 209 - *Site layout planning for daylight and sunlight. A guide to good practice.*
- BS EN 17037:2018 *Daylight in buildings (+A1:2021).*
- IS EN 17037:2018 *Daylight in buildings.*

18 Microclimate – Wind

18.1 Introduction

This chapter of the EIAR assesses the effects of the proposed development on the wind conditions affecting activities in areas within and surrounding the site. This chapter describes the methods used to assess these effects in terms of pedestrian comfort and safety.

The presence of taller buildings among lower buildings provides the potential for windiness in surrounding areas. The windiness depends on the massing of the buildings within their surroundings, their orientation with respect to the wind, and the local climate.

The chapter was prepared by the Wind Team in Arup. Rubina Ramponi, MSc, PhD, CEng, MCIBSE, is an Associate in Arup's Irish Wind Team. Rubina is a chartered engineer with over 15 years of experience in building engineering and wind consulting. She has a degree in building engineering and architecture from the University of Pavia, Italy, and a dual PhD from Eindhoven University (Netherlands) and Politecnico di Milano (Italy) with a focus on the computational modelling of urban wind flow and natural ventilation potential of buildings. She has been involved with high-profile projects across Ireland, the UK and USA undertaking wind microclimate studies for environmental impact assessments and planning studies. Example projects in Dublin have included Carrickmines Q3, Montrose LRD, Bailey Gibson SHD, and Guinness Quarter.

The study is based on drawings and massing models provided in digital format by O'Mahony Pike Architecture and Henry J Lyons Architecture and landscaping information provided in digital format by Niall Montgomery + Partners Landscape and The Tree File Ltd. It considers the influence of the proposed development on the local wind conditions using computational fluid dynamics (CFD) to model the wind flow through the development in conjunction with Arup's previous extensive experience of wind studies around buildings.

18.2 Method

18.2.1 Lawson Comfort Criteria

The criteria used to describe windiness in this study are those of TV Lawson of Bristol University, extracted from "The evaluation of the windiness of a building complex before construction", TV Lawson, London Docklands Development Corporation. These are used widely in Ireland, UK and around the world.

The acceptability of windy conditions is subjective and depends on a number of other factors, which includes the following but is not limited to: windiness of the general environment; normal clothing for the time of the year; expectations of the wind environment; air temperature; humidity and sunshine and most notably the activities to be performed in the area being assessed. The Lawson Criteria describe acceptability for particular activities in terms of 'comfort' and 'distress' (or safety). Acceptable conditions for various activities in order of increasing windiness are described in **Table 18.1**.

18.2.1.1 Comfort Levels

The comfort criteria describe relatively frequent wind conditions (5% exceedance probability on a yearly basis). The onset of discomfort depends on the activity in which the individual is engaged.

The conditions described below are the limiting criteria for comfort. For ideal conditions, the windiness will be a category better than outlined in **Table 18.1**. People undertaking activities that require them to be seated in the same location for long periods, such as regular outdoor dining areas, are more sensitive to small variations in the wind conditions. The wind speed threshold for these activities should be well within the 'sitting' category. Short-term casual sitting is typical for sitting areas in parks and outdoor amenity spaces, which tend to be used during good weather conditions. In this case, people are generally more tolerant to the wind and both 'sitting' and 'standing' criteria are acceptable. In the following assessment, the words 'sitting', 'standing', 'strolling' and 'business walking' are used to describe comfort levels of windiness as described in **Table 18.1**.

The Lawson Comfort Criteria incorporates a probabilistic analysis to ensure the effects in question relate to a given *frequency* to occur. The definition of the Lawson comfort criteria in **Table 18.1** is based on a 5% probability of wind speeds to exceed specific thresholds on a yearly basis. These are referred in this report as Lawson comfort wind speeds. The *significance* of such effects on the wind comfort conditions is evaluated based on the magnitude of exceedance of the comfort wind speeds with the scale defined in **Table 18.1.**

Table 18.1 Comfort Criteria as Defined by T.V. Lawson

Category	Description	Comfort wind speeds (wind speeds to be exceeded less often than 5% of the year (m/s))				
		0 – 4	4 – 6	6 – 8	8 – 10	> 10
Sitting	Regular use for reading a newspaper and eating and drinking					
Standing	Appropriate for bus stops, window shopping, building entrances, and public amenity spaces such as parks					
Strolling	General areas of walking and sightseeing					
Business walking	Local areas around tall buildings where people are not expected to linger					
Uncomfortable	Not comfortable for regular pedestrian access.					

Note: A classification of 'business walking' does not mean that a location will never be suitable for 'sitting', however, it is likely to occur relatively infrequently.

Legend	Qualitative description	Significance of the effects
	Satisfactory	Imperceptible / not significant
	Tolerable	Slight effects
	Uncomfortable	Moderate effects
	Discomfort	Significant

18.2.1.2 Distress levels

The distress criteria (**Table 18.2**) describes wind conditions to be exceeded less often than one hour a year. There is a criterion for 'General Public Access', equivalent to a distress mean speed of 15 m/s and

gust speed of 28 m/s (62 mph). This is intended to identify wind conditions which less able or vulnerable individuals (i.e. children, elderly or infirm) or cyclists may find physically difficult.

There is a further limiting distress criterion beyond which even 'Able-bodied' individuals may find themselves in difficulties at times of severe wind conditions. This corresponds to a distress mean speed of 20 m/s and gust speed of 37 m/s (83 mph) to be exceeded less often than once a year. Under these wind conditions, aerodynamic forces may exceed body weight, which makes it difficult for anyone to remain standing. Where wind speeds exceed these values, pedestrian access should be limited.

The Lawson Distress Criteria defined in **Table 18.2**Table 18.2 relate to a frequency of occurrence that is rare (less often than once a year). The Lawson Distress Criteria enable an assessment of the potential for the proposed development to cause risks to human health as a result of higher than desirable wind speeds using the thresholds listed in **Table 18.2**.

In this report, the *significance* of the effects of the proposed development on the distress wind conditions at any particular location is evaluated based on the estimated number of hours when occupants and visitor may experience wind conditions in exceedance of the distress criteria defined in **Table 18.2**. If at a particular location on the proposed development it is determined that there is no exceedance of the distress criteria, the effect can be described as imperceptible or not significant. Estimated wind conditions that are in exceedance of the distress criteria for up to 5 or 10 hours a year are described as a slight or moderate effect, respectively. Estimated wind conditions that are in exceedance of the distress criteria for more than 10 hours a year are described as a significant effect.

Table 18.2 Distress Criteria as Defined by T.V. Lawson

Activity	Description	Wind speed threshold to be exceeded less often than once a year
General Public Access	Above which the less able and cyclists may at times find conditions physically difficult	Mean wind speed of 15 m/s and gust speed of 28 m/s
Able-bodied Access	Above which it may become impossible at times for an able-bodied person to remain standing	Mean wind speed of 20 m/s and gust speed of 37 m/s

18.2.2 Computational Fluid Dynamics

Computational Fluid Dynamics (CFD) is a numerical technique intended to simulate various phenomena related with fluid flow. In this study, CFD is used to simulate the flow of wind in and around the buildings in the proposed development and the surrounding context. The CFD simulations performed in this study were carried out using the software OpenFOAM and a 3D steady-state Reynolds' Average Navier-Stokes (RANS) approach, commonly used in CFD studies of this kind.

18.3 Baseline Environment

18.3.1 Wind Climate

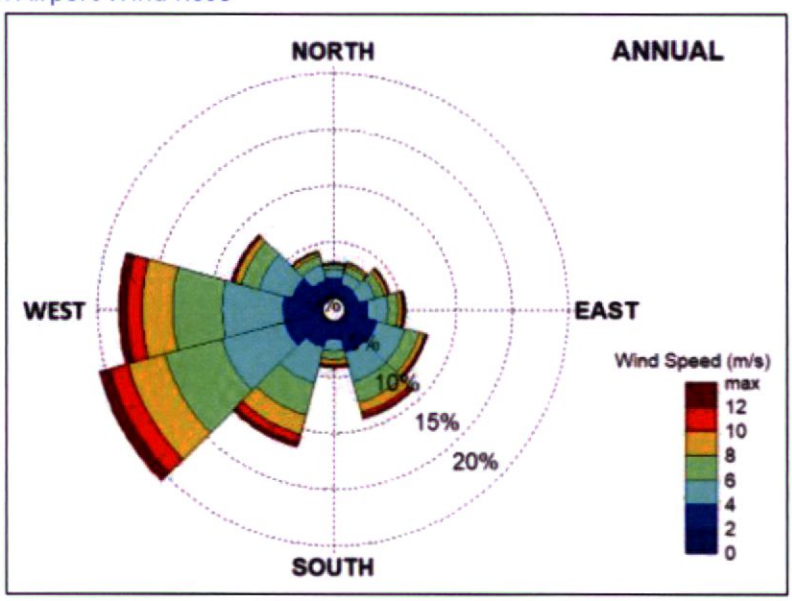
The local wind climate was evaluated based on historical meteorological data recorded at Dublin Airport (approximately 10 km to the north of the site). The expected statistics for wind speed and direction are based on historic wind data recorded at this weather station over the 20-year period between 1999

and 2024. The wind rose for Dublin Airport is shown in **Figure 18.1** and illustrates the frequency and strengths of the recorded winds.

The prevailing wind in Dublin is from the south-west to west. These are relatively warm and often bring rain. The winds from the east are not as common as the westerlies. However, they are relatively cold, which can make them as annoying as the stronger westerlies. The Wicklow Mountains to the south of Dublin influence the wind microclimate in the vicinity of Dublin and tend to shelter the city from southerly winds.

Due to the proposed development's location relative to the city centre, the mountains and the sea, the wind statistics may deviate from the records at Dublin Airport. To account for differences in the terrain exposure, the local wind data from Dublin Airport was transposed to the proposed development site using the Engineering Sciences Data Unit (ESDU, 2001) methodology, which is compatible with Irish practice for wind loading.

Figure 18.1 Dublin Airport Wind Rose



18.3.2 Receiving Environment

The development site consists primarily of the former Holy Cross College, Clonliffe Road, Dublin 3 and Drumcondra Road Lower, Drumcondra, Dublin 9. At present, the site is bounded by Clonliffe Road to the south, Drumcondra Road to the west, the River Tolka to the north, and Belvedere Sport Pitches to the east. In the future, the site will be bounded to the north by GAA pitches. The existing site is an open area covered with the buildings of the former Holy Cross College (up to 4 storeys) and other low-rise buildings, mature vegetation and trees. The site is primarily surrounded by low-rise residential developments, except for the Belvedere Sport Pitches to the north-east and the Croke Park Stadium to the south-east. The receiving environment includes the hotel currently under construction to the south of the site.

Figure 18.2 Site context (source of the base map: Google Maps ©).



18.3.3 Characteristics of the Proposed Development

The development will consist of the construction of a residential development set out in blocks ranging in height up to 13 storeys, to accommodate 1131 no. apartments including retail and crèche units, residential tenant amenity spaces, community/cultural spaces, mobility hubs and public open space.

The proposed development sits as part of a Site Masterplan for a wider landbank which includes an under-construction hotel development and potential future GAA facilities. To facilitate the proposed development the scheme will involve the demolition of a number of existing structures on the site.

The application site contains a number of Protected Structures including The Seminary Building, Holy Cross Chapel, South Link Building, The Assembly Hall and The Ambulatory while the wider lands also include The Red House and the Archbishop's House (both Protected Structures). The application proposes the renovation and reuse of the Seminary Building and the South Link Building to accommodate residential units and the use of the existing Holy Cross Chapel, Assembly Hall and Cloister Garden for use as community/cultural uses.

The residential buildings are arranged around a number of proposed public open spaces and routes throughout the site with extensive landscaping and tree planting proposed. Communal amenity spaces will be located adjacent to residential buildings and at roof level throughout the scheme. To facilitate the proposed development the scheme will involve the removal of some existing trees on the site.

The site is proposed to be accessed by vehicles, cyclists and pedestrians from a widened entrance on Clonliffe Road, at the junction with Jones's Road and through the opening up of an unused access point on Drumcondra Road Lower at the junction with Hollybank Rd. An additional cyclist and pedestrian access is proposed through an existing access point on Holy Cross Avenue. The development will include both basement and podium parking under a number of blocks to accommodate car parking spaces, bicycle parking, storage, services and plant areas.

The proposed development includes all site landscaping works, green roofs, boundary treatments, lighting, servicing and utilities, signage, and associated and ancillary works, including site development works above and below ground.

The proposed development provides a network of walking through new and existing access points, as well as a variety of amenity spaces that include areas for sitting, exercise and play. **Figure 18.3** shows the main pedestrian thoroughfares around the site that were considered in this assessment.



Figure 18.4 **Figure 18.4** provides an overview of the amenity spaces at ground level (sitting areas, play areas, exercise areas and bike stations) and upper level (rooftop terraces) that were considered in this assessment.

Figure 18.3 Location of the main thoroughfares through the development

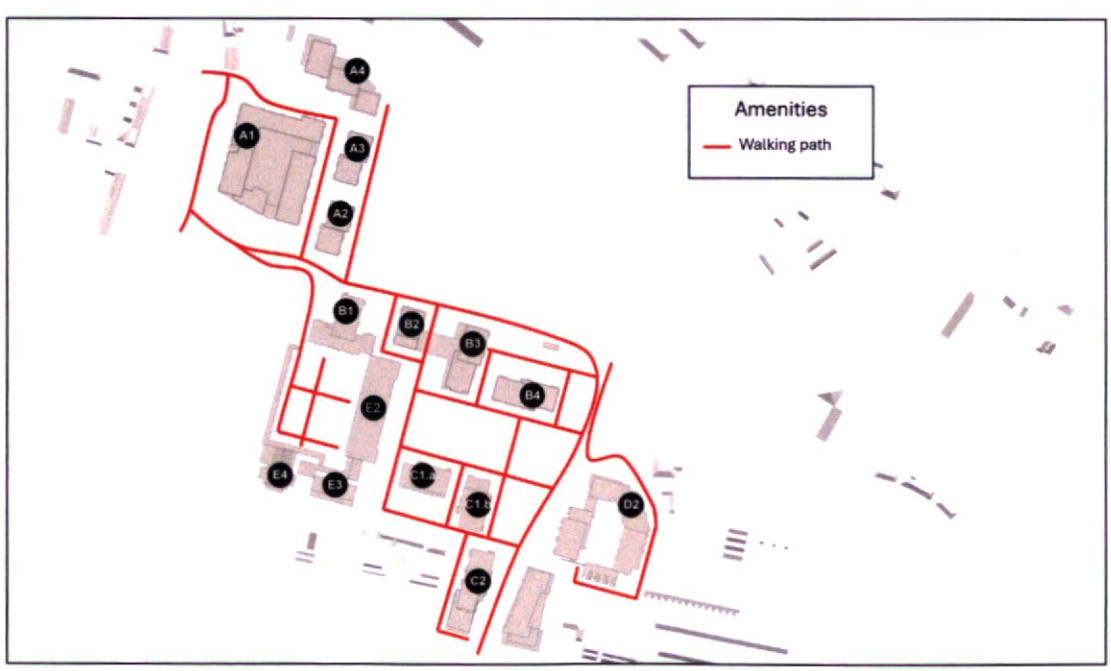
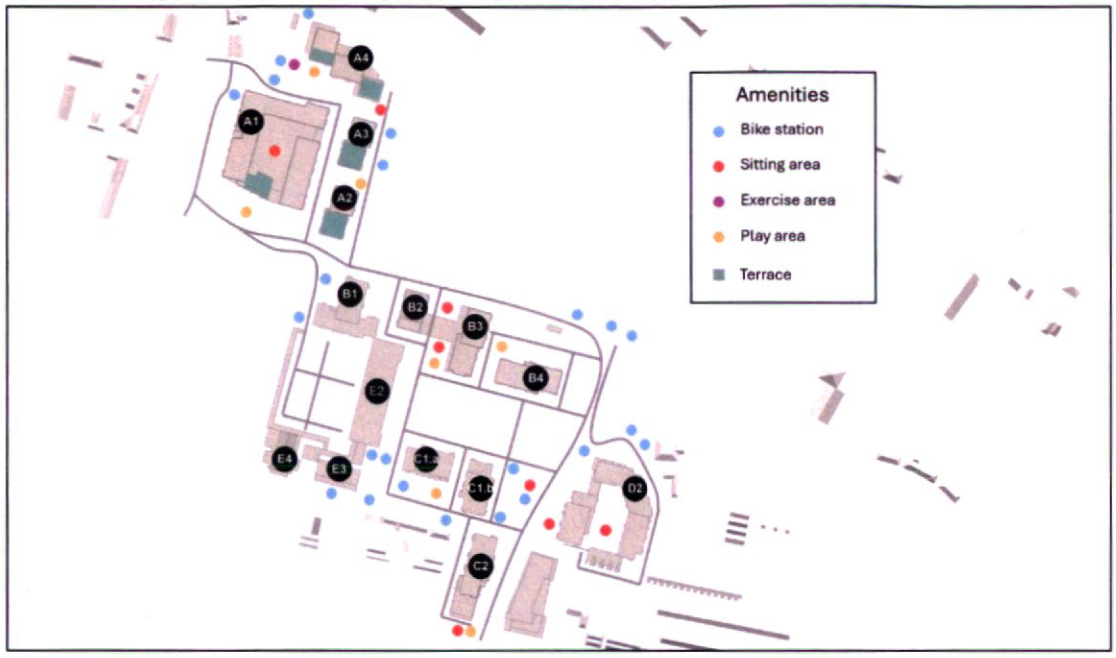


Figure 18.4 Amenity spaces at ground level and roof gardens



The proposed development includes several design features that contribute to the creation of a comfortable wind microclimate:

- The residential balconies in Blocks A1, C1.b and C2 feature 1.1 m tall solid balustrades (**Figure 18.5** and **Figure 18.6)**.
- The residential balconies in Block D2 have 1.1m side screens on both sides of the balconies (**Figure 18.8**Figure 18.8).
- The roof gardens in Plot A feature a 1.8m tall solid balustrade along the perimeter (**Figure 18.5**Figure 18.5).

Figure 18.5 Design features of Plot A that have a positive impact on the wind conditions.

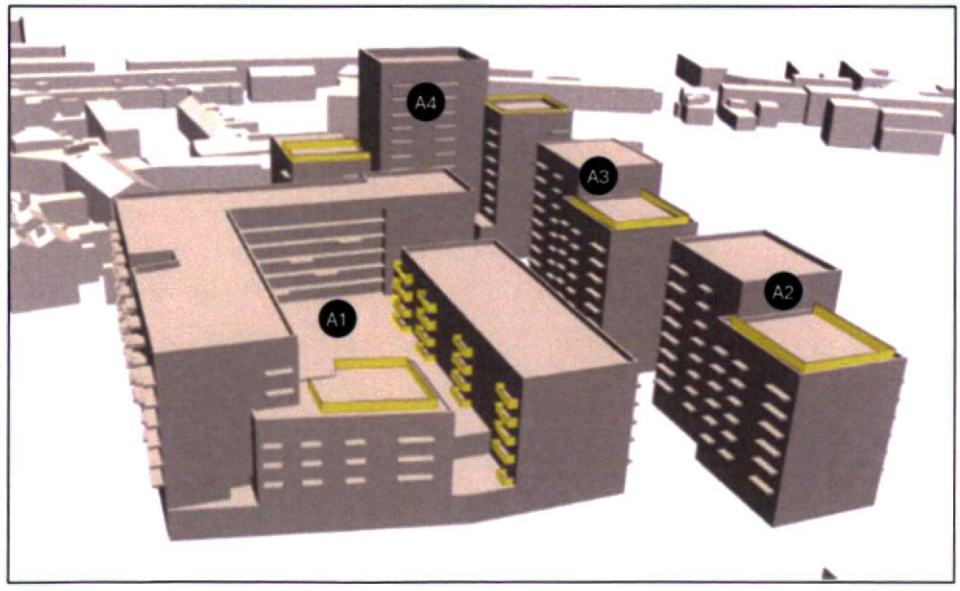


Figure 18.6 Design features of Plot C that have a positive impact on the wind conditions.

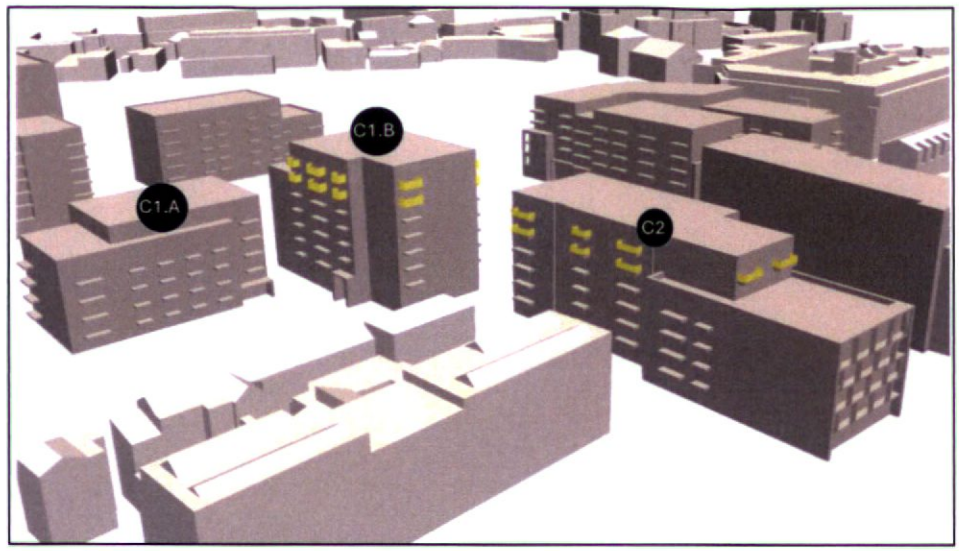

C1.A
C1.B
C2

Figure 18.7 Design features of Plot C that have a positive impact on the wind conditions.

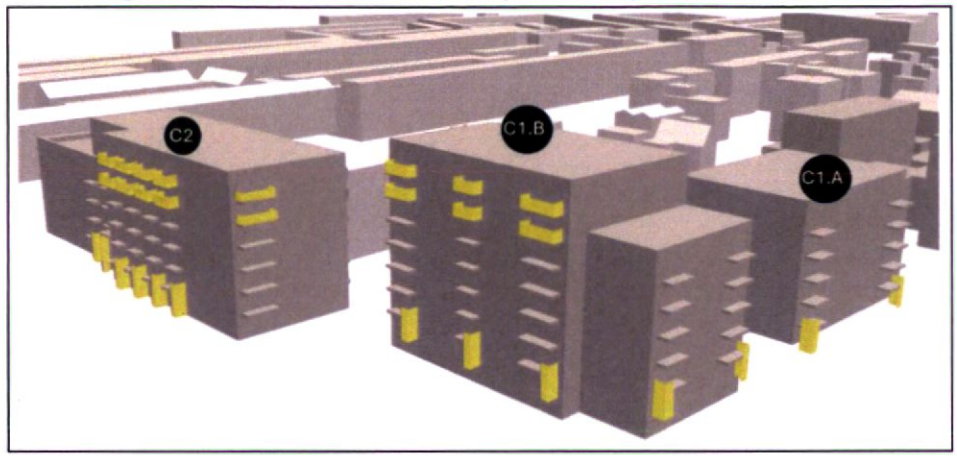
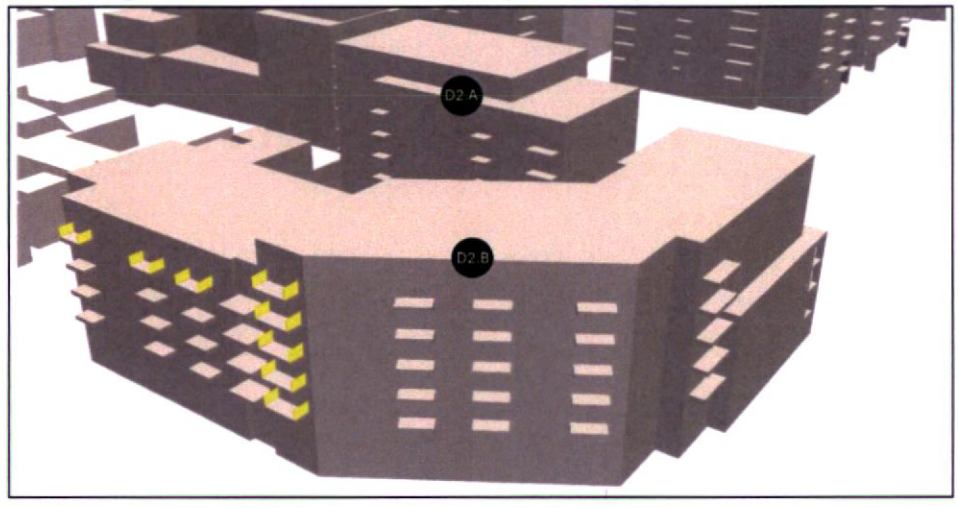


Figure 18.8 Design features of Plot D that have a positive impact on the wind conditions.



18.4 Predicted Impacts of the Proposed Development

18.4.1 Do-Nothing Impact

The 'Do-Nothing' alternative considers the likely scenario that would arise, assuming the proposed development was not progressed, i.e. if nothing were done. If the proposed development was not constructed, the operational phase impacts predicted below would not arise, and the receiving environment would remain as it is at present. Presently, the site is an open area with dispersed low-rise buildings (up to 4 storeys) and mature trees. The urban landscape that surrounds the site to the south-west together with the mature trees on site tends to provide shelter from oncoming prevailing winds. The wind conditions in the baseline are overall expected to be in the 'standing' and 'strolling' range (Lawson wind speeds up to 8 m/s) with the more exposed spaces and the area near the corners of existing buildings encountering more windiness.

18.4.2 Construction Phase

The potential effects on wind microclimate at the site during the construction phase have not been assessed as they depend on the phasing of the proposed development. Depending on the order of the proposed works, windiness during the construction phase may be greater than in the final condition,

i.e. operational phase. If it is the intention for parts of the proposed development to become operational before construction is completed, then temporary mitigation may be needed or desirable to achieve safe access. It is appropriate, however, to seek guidance on this as the detailed phasing is known.

18.4.3 Operational Phase

The potential effects on wind microclimate at the site during the operational phase has been assessed for the proposed development in the absence of landscaping elements.

18.4.3.1 Overview

Overall, the proposed development is expected to provide a suitable environment for pedestrians and occupants to carry out a wide variety of 'sitting', 'standing' and 'strolling' activities.

The tallest buildings in the proposed development (10-13 storeys) are located to the northeast of Plot A in Blocks A4 and A3, and on the northern side of Block B3. The blocks in Plot A are relatively sheltered from the prevailing south-westerly winds by Block A1. Although the presence of Block A1 limits the downdrafting of the strongest winds off their facades, some of the high-level winds are likely to skim over Block A1 and downdraft off Blocks A4 and A3, increasing the wind near the ground and in the gaps between Blocks A2 and A3, and Blocks A3 and A4. In Plot B, the massing of Block B3 creates an area of lower pressure to the east that attract the wind flow in the gap between Blocks B3 and B4, and within the ground-level central passage through Block B3 where the primary entrances of that block are located.

The circulation spaces oriented along the south-west to north-east directions are likely to experience funnelling and acceleration of the prevailing winds. Areas that may be prone to this wind pattern are, for example, the gaps between Blocks E2 and C1.a, and Blocks C2 and the hotel.

Figure 18.9 Top view of the proposed development



18.4.3.2 Thoroughfares

The Lawson wind speeds estimated along the key thoroughfares in and around the proposed development are shown in **Figure 18.10**. Most of the Lawson wind speeds are estimated up to 8 m/s, which is within the 'strolling' range and suitable for the intended use as a circulation space. In some localised areas, the Lawson wind speeds are in the 'business walking' category and may cause discomfortable conditions for some walkers. These conditions are considered a slight effect on wind comfort for leisure walking activities. These locations include the shared thoroughfare to the northeast of Block A1, at the south-east corners of Blocks A2 and A3, the walkway to the east of Block B3, the walkway to the east of Block C2, and the southeast corner of Block C1.b.

Figure 18.11 **Figure 18.11** shows that there are a few locations where pedestrians may experience wind conditions that are above the distress threshold, due to the interaction of the building blocks with the strong south-westerly winds. These locations are:

- The shared thoroughfare along the eastern side of Plot A at the south-east corners of Blocks A2 and A3. The wind speeds at these locations are driven by the acceleration of the west-southwesterly winds through the gap between the two blocks, and around the corner of Block A3. These wind conditions are in marginal exceedance of the distress criteria for up to about 10 hours a year. This is considered a moderate effect.
- The walkway to the east of Block B3. The wind speeds at this location are driven by the acceleration of the west-southwesterly winds through the central passage through the block, and around the corner. These wind conditions are in marginal exceedance of the distress criteria for up to about 5 hours a year. This is considered a slight effect.
- The walkway to the east of Block C2. The wind speeds at this location are largely driven by the acceleration of the west-southwesterly winds through the gap between the Blocks C1.b and C2. These wind conditions are in marginal exceedance of the distress criteria for up to about 10 hours a year. This is considered a moderate effect.

Figure 18.10 Lawson wind speeds at key locations along the thoroughfares of the proposed development.

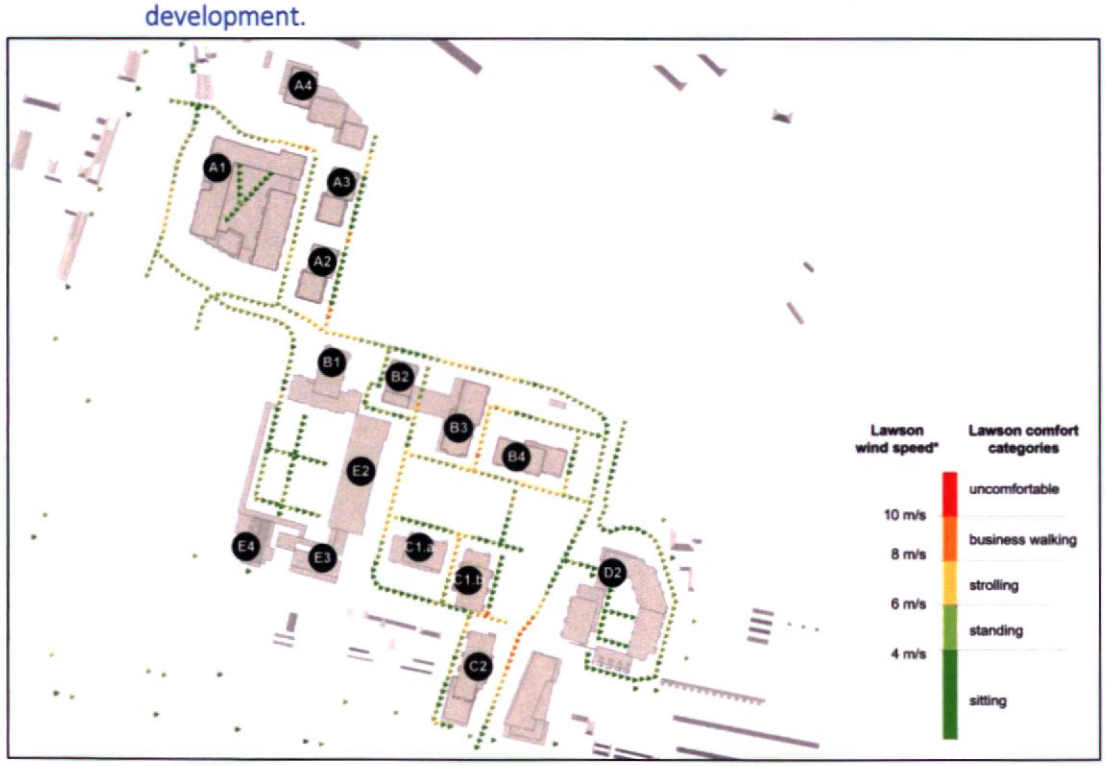
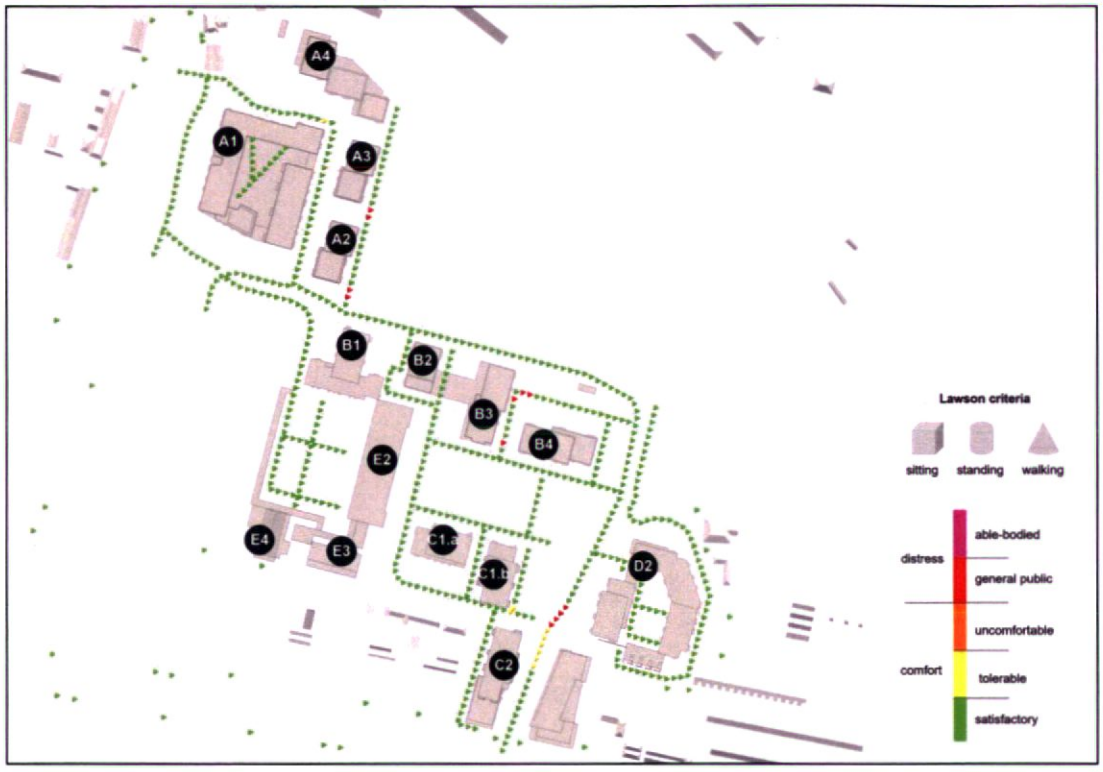


Figure 18.11 Lawson criteria at key locations along the thoroughfares of the proposed development.



18.4.3.3 Public open spaces

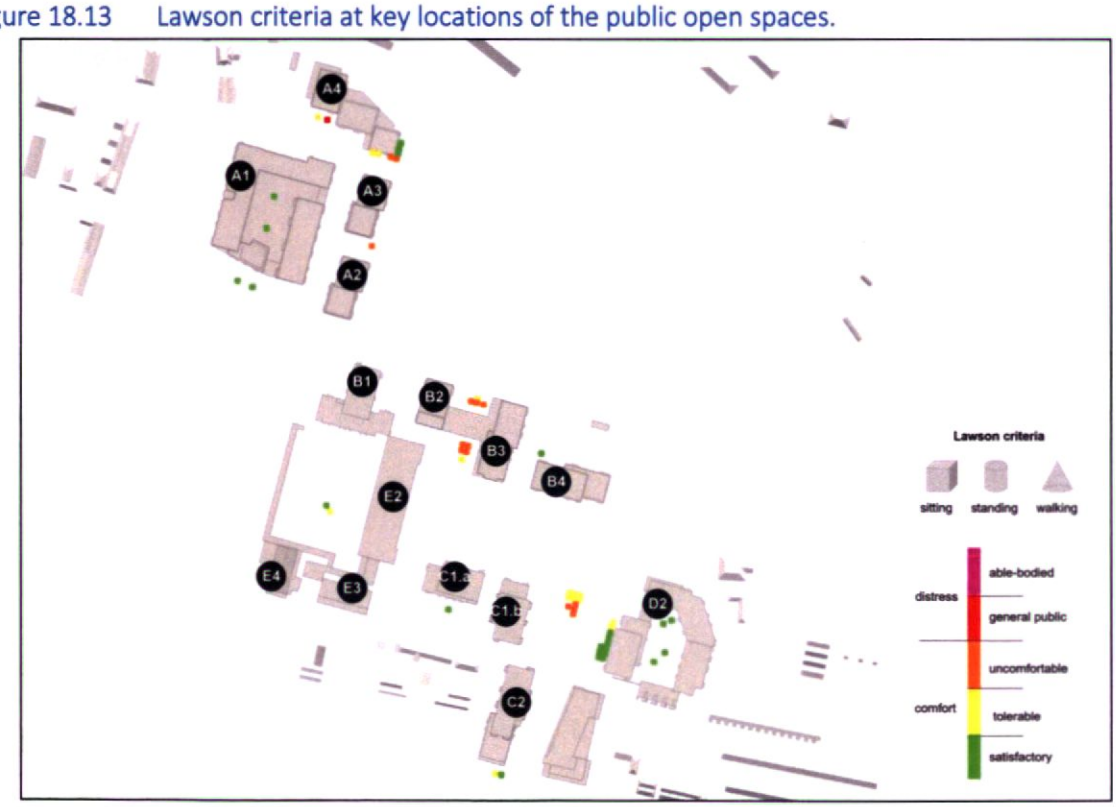
The Lawson wind speeds estimated along the majority of the public open spaces around the proposed development illustrated in **Figure 18.12** are up to approximately 6 m/s and in the 'sitting' to 'standing' range. These wind conditions are very common in Dublin and expected to be 'comfortable' for standing and short-term sitting, like bench seating use. **Figure 18.12** shows that there are a few locations where pedestrians may experience higher Lawson wind speeds and up to the 'strolling' to 'walking' range. These conditions are considered a moderate effect on wind comfort for sedentary activities. Although these wind conditions may feel uncomfortable for some people, there is an expectation to use these spaces in good weather, which improves on the acceptability of the estimated windiness. These locations include the outdoor sitting areas on the south-east corner of Block A4, the play and sit areas between the Blocks B2 and B3, and the outdoor sitting areas between the Blocks C1.b and D2.

Figure 18.13 shows that pedestrians may experience wind conditions that are above the distress threshold in the open space to the south of Block A4. This is due to the downdraft of the strong south-westerly winds off the façade of Block A4. These wind conditions are in marginal exceedance of the distress criteria for up to about 5 hours a year. This is considered a slight effect.

Figure 18.12 Lawson wind speeds at key locations of the public open spaces.



Figure 18.13 Lawson criteria at key locations of the public open spaces.

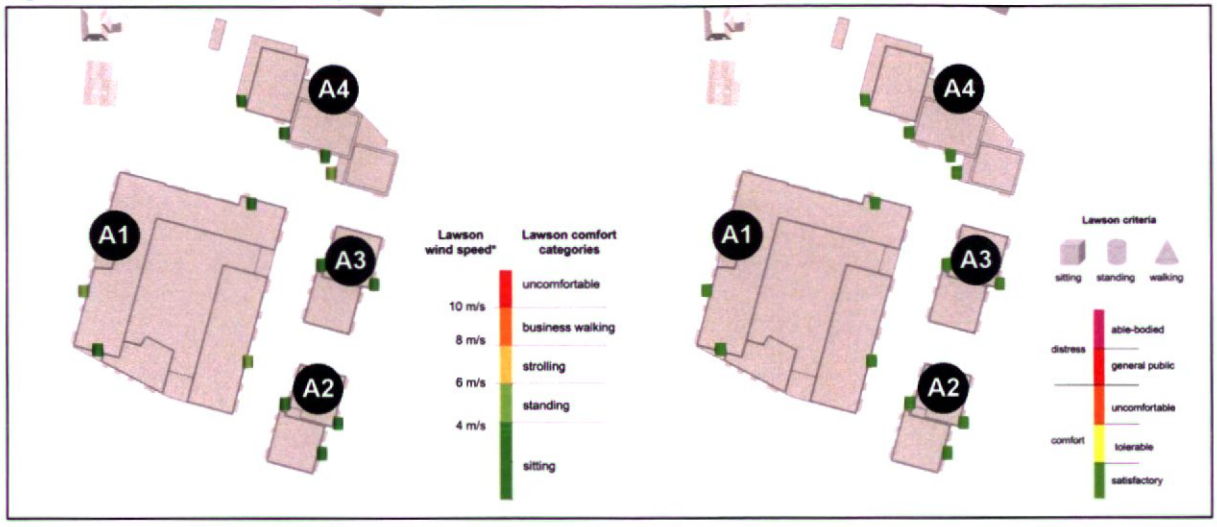


18.4.3.4 Plot A

Primary Entrances

The Lawson wind speeds estimated at the primary entrances of Plot A are up to 6 m/s and within the 'standing' range. These are considered suitable for their intended use and a not-significant effect

Figure 18.14: Lawson wind speeds (left) and Lawson criteria (right) at the primary entrances of Plot A.



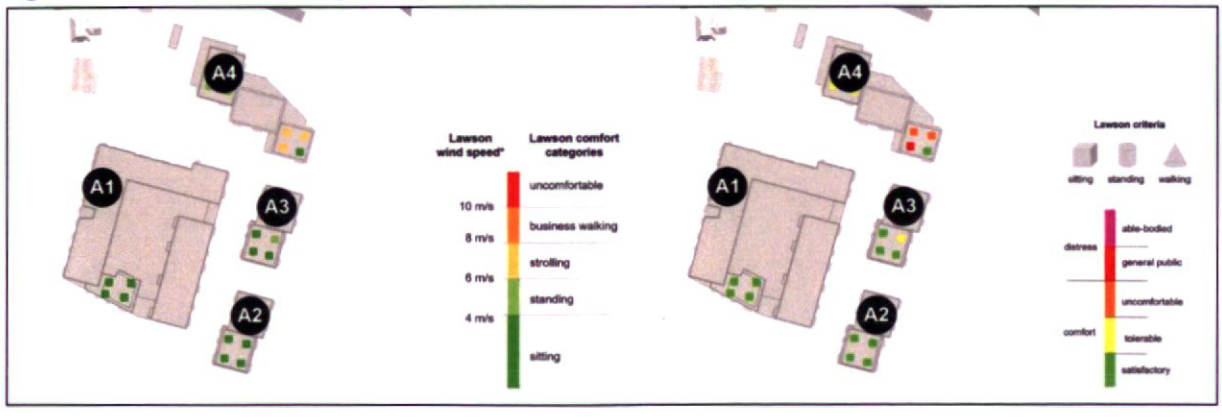
Roof gardens

The roof gardens of Plot A are considered private shared spaces for the building occupants and visitors. The roof gardens feature a solid 1.8m balustrade along the usable space.

The Lawson wind speeds at most locations within the roof gardens are estimated up to about 6 m/s (**Figure 18.15**Figure 18.15, left). These conditions are in the 'sitting' to 'standing' range and reasonable for their intended use as a breakout space during good weather. The wind conditions at some localized locations of the roof gardens are affected by their exposure to the high-level and stronger south-western winds. These drive higher wind speeds at the eastern roof garden of Block A4, where the estimated Lawson wind speeds are up to about 8 m/s and in the 'strolling' range. These conditions are considered a moderate effect on wind comfort for sedentary activities. Although these wind conditions may feel uncomfortable for some people, there is an expectation to use these spaces in good weather, which improves on the acceptability of the estimated windiness.

Figure 18.15 (right) shows that visitors may experience wind conditions that are above the distress threshold on the eastern roof terrace of Block A4. These wind conditions are in marginal exceedance of the distress criteria for up to about 5 hours a year. This is considered a slight effect.

Figure 18.15: Lawson wind speeds (left) and Lawson criteria (right) at the roof gardens of Plot A



Balconies

The balconies of Plot A are considered private spaces for the residents. The figures below provide an overview of the Lawson wind speeds and Lawson criteria at the balcony locations. Except for some of the balconies in Plot A1, all the other balconies have railings.

The Lawson wind speeds estimated at the majority of the balconies of Plot A are in the 'sitting' to 'standing' range and considered 'comfortable' to 'tolerable' for long-term sedentary activities. There are some balconies where people may experience higher wind speeds and up to the 'strolling' to 'walking' range. These conditions are considered a moderate effect on wind comfort for sedentary activities. Although these wind conditions may feel uncomfortable for some people, there is an expectation to use these spaces in good weather, which improves on the acceptability of the estimated windiness.

On a few balconies, people may experience wind conditions that are above the distress threshold due to the interaction with the prevailing winds. Occupants are expected to avoid using their balconies during inclement weather, when the distress wind conditions are most likely to occur.

- The balconies on the western side of Blocks A2 are exposed to the high-level south-westerly winds. The distress wind speeds estimated at these balconies may lead to a marginal exceedance of the distress threshold (**Figure 18.19**) for up to about 5 hours a year. This is considered a slight effect.
- The balconies on the western side of Blocks A3 are exposed to the high-level south-westerly winds. The distress wind speeds estimated at these balconies may lead to a marginal exceedance of the distress threshold (**Figure 18.19**Figure 18.19) for up to about 10 hours a year. This is considered a moderate effect.
- The balconies on the southern side of Block A4 facing the gap between Blocks A4 and A3 are affected by the funnelling of the southwesterly winds through the gap (**Figure 18.22**Figure 18.22). The distress wind speeds estimated at these balconies may lead to a marginal exceedance of the distress threshold for up to about 5 hours a year. This is considered a slight effect.

Figure 18.16: Lawson wind speed (left) and Lawson criteria (right) on the balconies of Block A1 (view from the southeast)

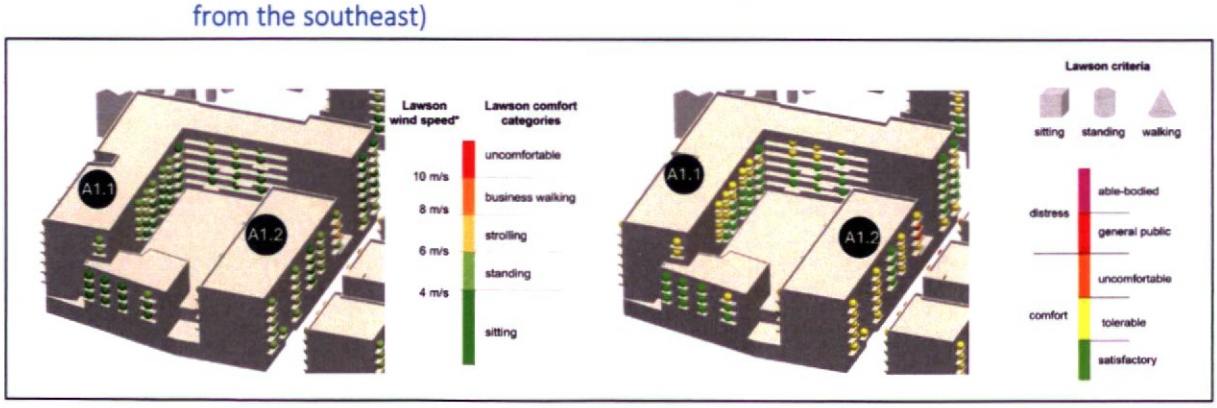


Figure 18.17 Lawson wind speed (left) and Lawson criteria (right) on the balconies of Block A1 (view from the northwest)

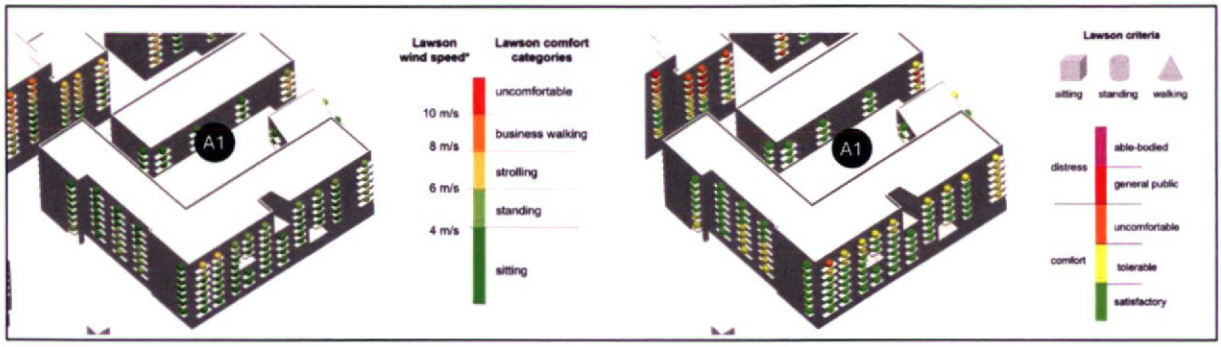


Figure 18.18 Lawson wind speed (left) and Lawson criteria (right) on the balconies of Blocks A2 and A3 (view from the east)

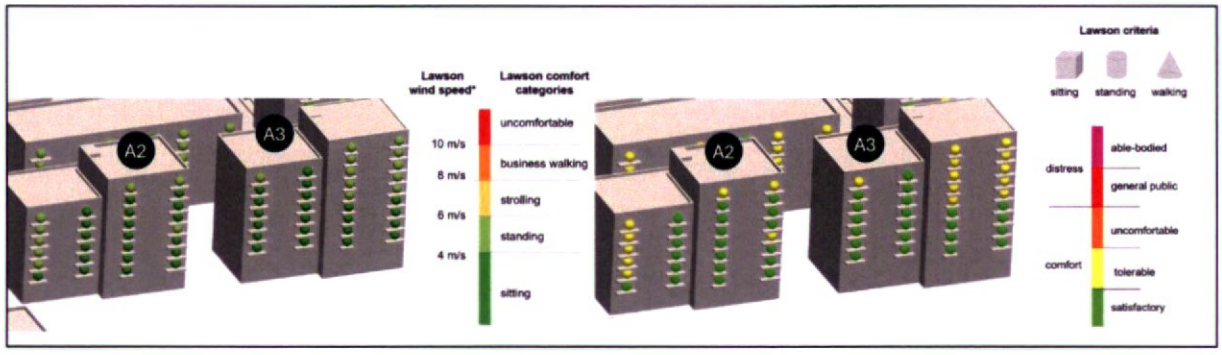


Figure 18.19 Lawson wind speed (left) and Lawson criteria (right) on the balconies of Blocks A2 and A3 (view from the southwest)

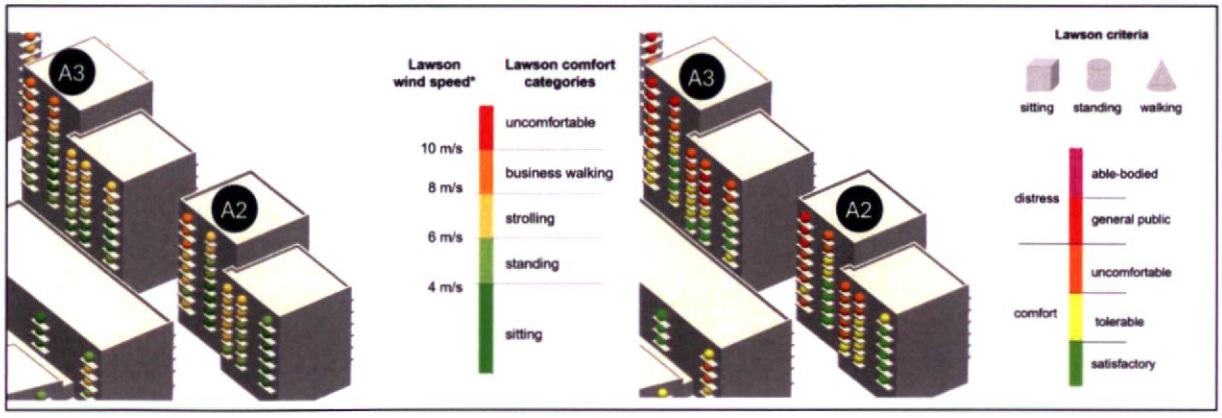


Figure 18.20 Lawson wind speed (left) and Lawson criteria (right) on the balconies of Blocks A4 (view from the east)

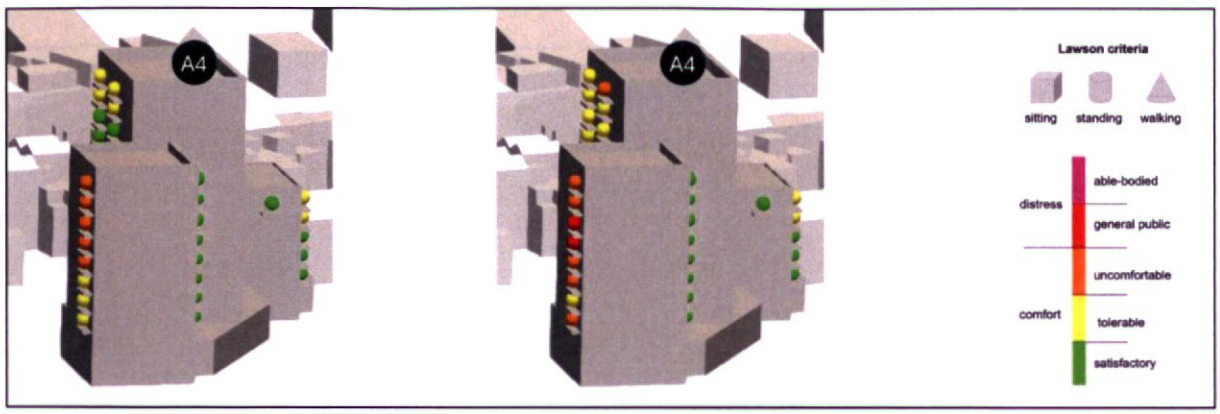


Figure 18.21 Lawson wind speed (left) and Lawson criteria (right) on the balconies of Block A4 (view from the northwest)

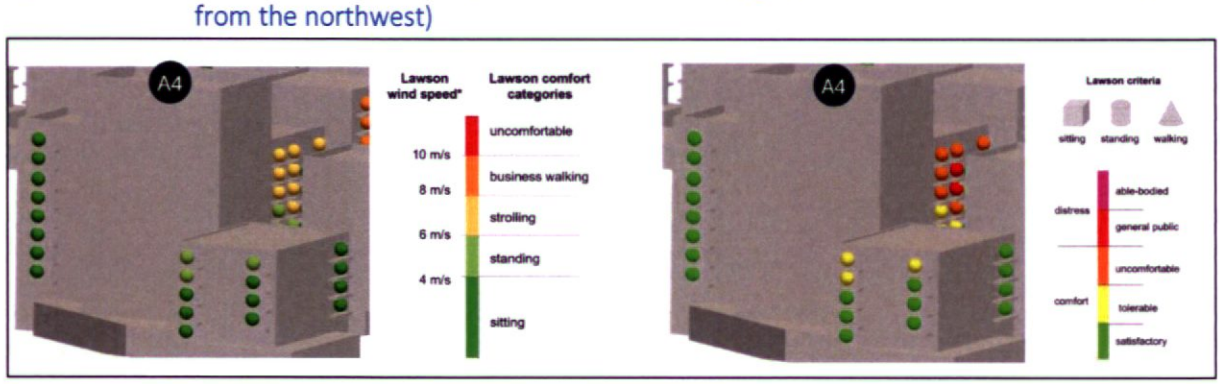
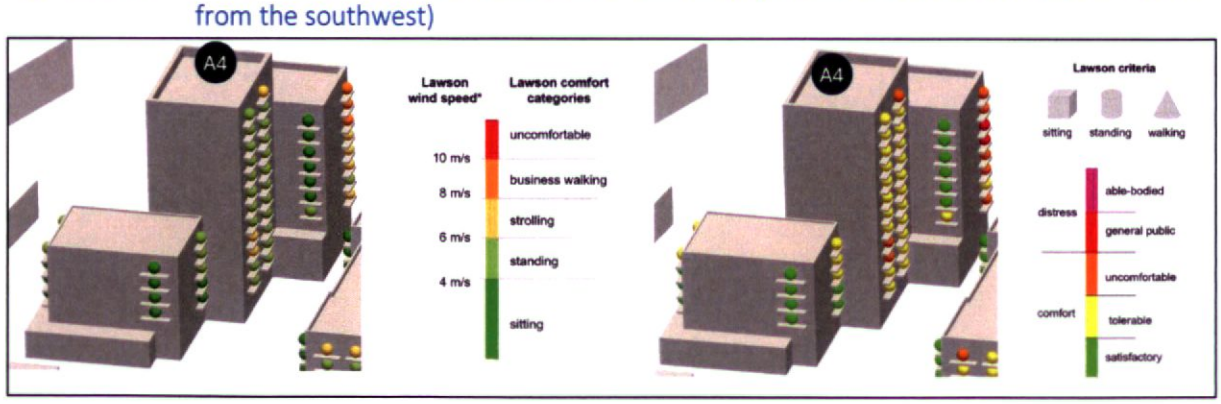


Figure 18.22 Lawson wind speed (left) and Lawson criteria (right) on the balconies of Block A4 (view from the southwest)



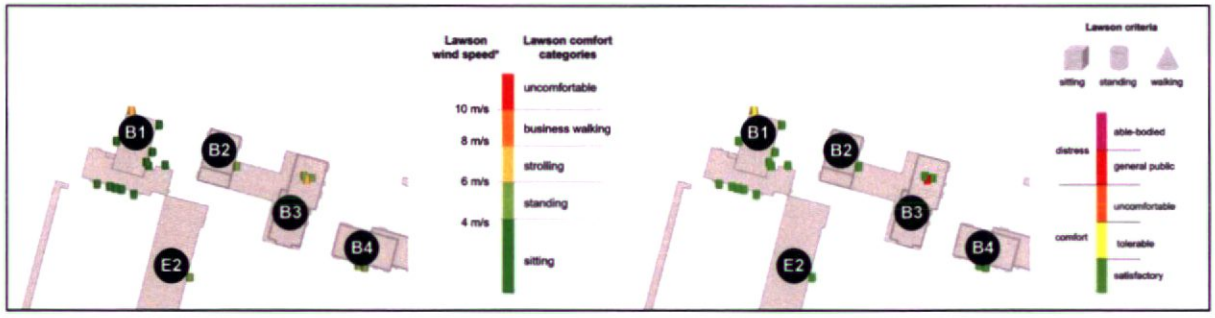
18.4.3.5 Plot B

Primary Entrances

The Lawson wind speeds estimated at most of the primary entrances to Blocks B1, B2 and B4 are up to 6 m/s and within the 'standing' range. These are considered suitable for their intended use. The north-west entrance to Block B1 and the entrance to Block B3 located in the central passage through the block have wind speeds estimated up to about 7 m/s and in the 'strolling' range. These conditions are considered a slight effect on wind comfort for standing activities.

While the wind speeds at the entrance of Block B1 are not estimated to exceed the distress criteria, the wind speeds at the entrance along the southern side of the central passage of Block B3 are in exceedance of the distress criteria for general public for up to about 5 hours a year. These conditions are driven by the pressure difference between the two opposite ends of the passage. This is considered a slight impact.

Figure 18.23 Lawson wind speeds (left) and Lawson criteria (right) at the primary entrances of Plot B



Balconies

The balconies of plot B are considered private spaces for the residents. The figures below provide an overview of the Lawson wind speeds and Lawson criteria at the balcony locations. All balconies of Plot B have railings.

The Lawson wind speeds estimated at the majority of the balconies of Plot B are in the 'sitting' to 'standing' range and considered 'comfortable' to 'tolerable' for long-term sedentary activities. There are some balconies where people may experience higher wind speeds and up to the 'strolling' to 'walking' range. These conditions are considered a moderate effect on wind comfort for sedentary activities. Although these wind conditions may feel uncomfortable for some people, there is an expectation to use these spaces in good weather, which improves on the acceptability of the estimated windiness.

The balconies on the western side of Block B3 are likely to experience higher wind speeds due to the exposure to the prevailing southwesterly winds. The distress wind speeds estimated at the upper balconies may lead to an exceedance of the distress threshold, as shown in **Figure 18.29**Figure 18.29. Occupants may experience distress wind conditions for up to about 10 hours a year. This is considered a moderate effect. Occupants are expected to avoid using their balconies during inclement weather when the distress wind conditions are most likely to occur.

Figure 18.24 Lawson wind speeds (left) and Lawson criteria (right) on the balconies of Block B1 (view from the south)

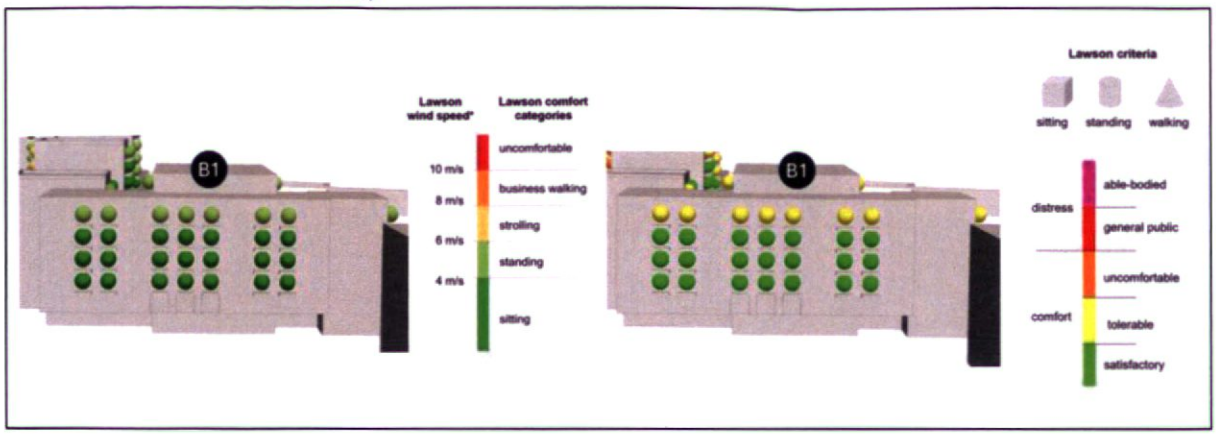


Figure 18.25 Lawson wind speeds (left) and Lawson criteria (right) on the balconies of Block B1 (view from the northeast)

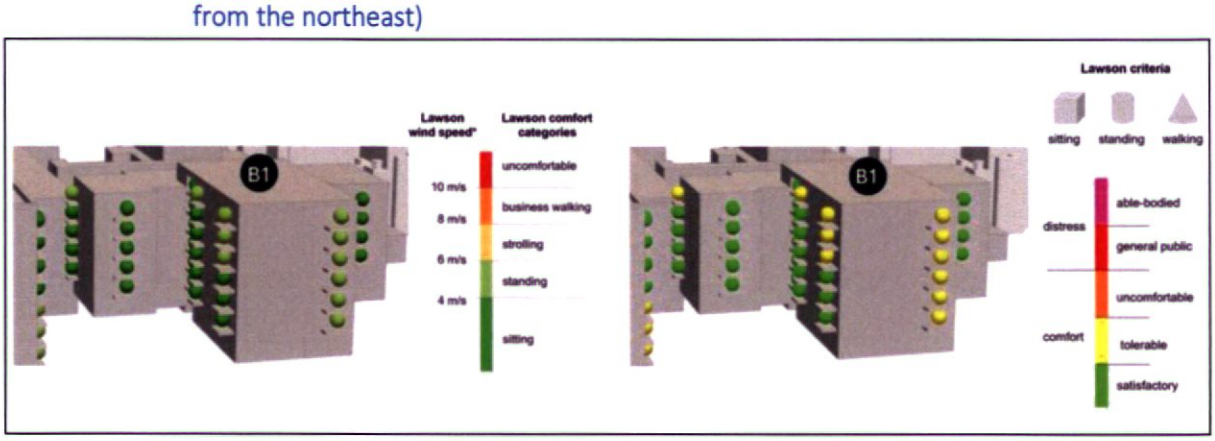


Figure 18.26 Lawson wind speeds (left) and Lawson criteria (right) on the balconies of Block B1 (view from the northwest)

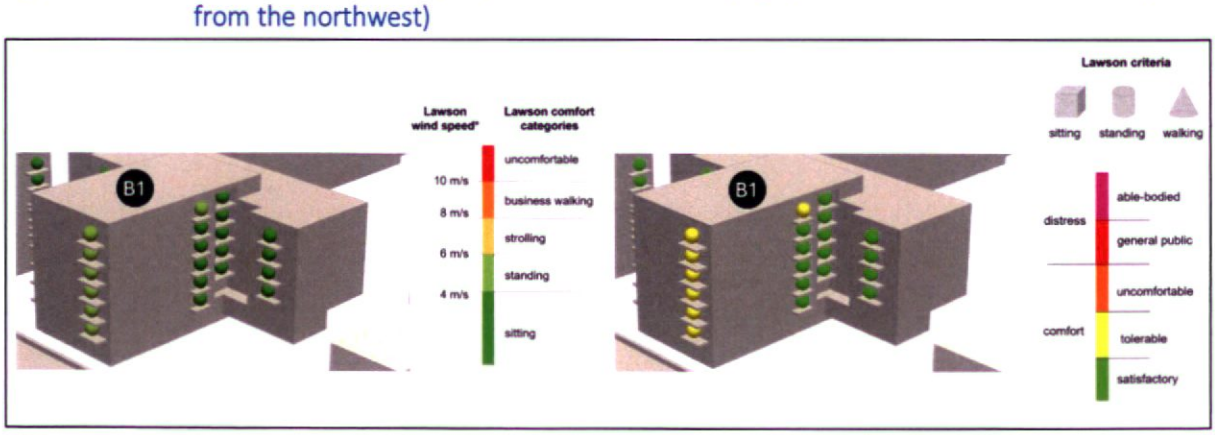


Figure 18.27 Lawson wind speeds (left) and Lawson criteria (right) on the balconies of Block B (view from the south)

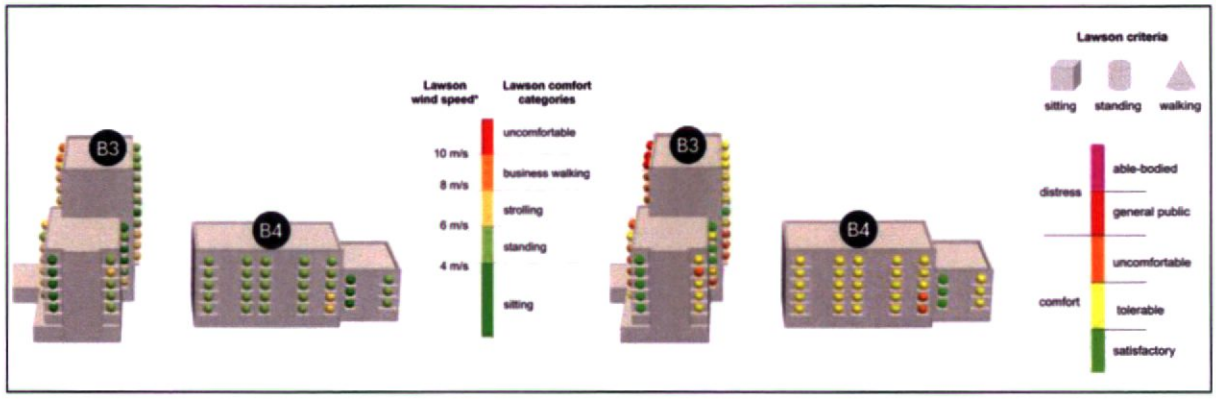


Figure 18.28 Lawson wind speeds (left) and Lawson criteria (right) on the balconies of Block B (view from the northeast)

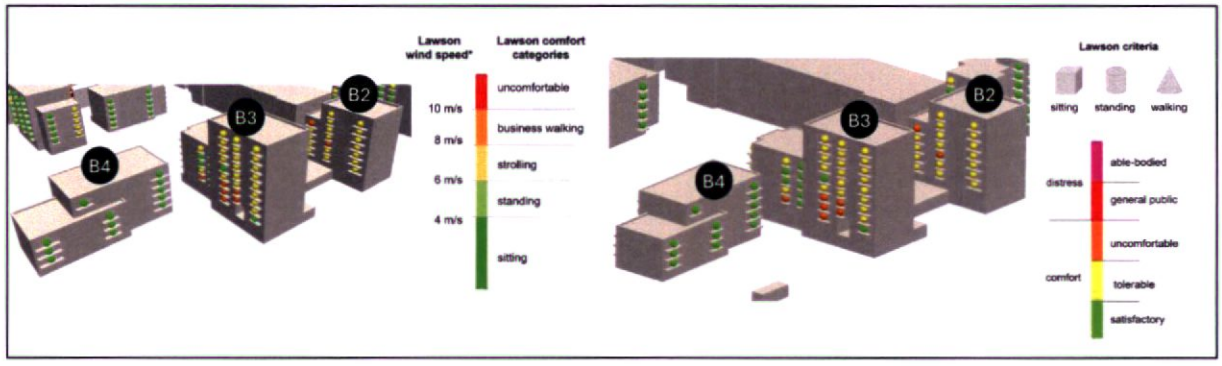
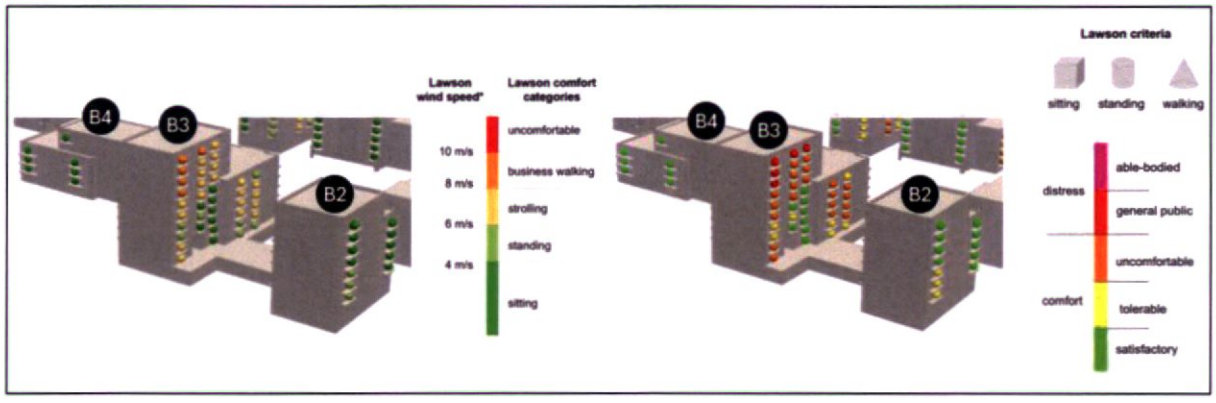


Figure 18.29 Lawson wind speeds (left) and Lawson criteria (right) on the balconies of Block B (view from the northwest)

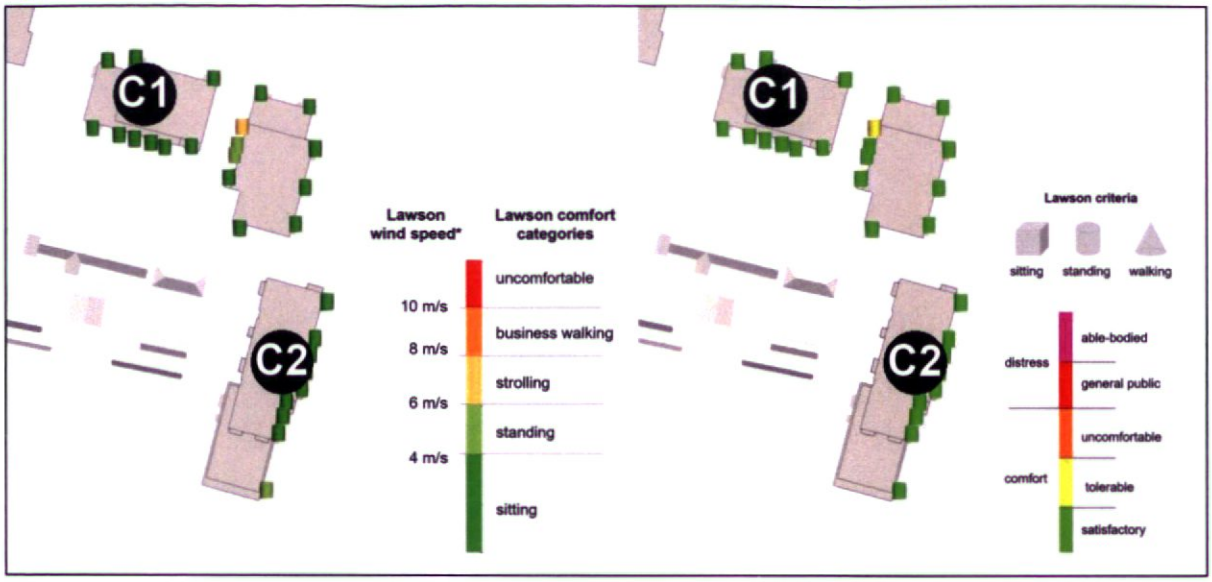


18.4.3.6 Plot C

Primary Entrances

The Lawson wind speeds estimated at the primary entrances to Plot C are up to 6 m/s and within the 'standing' range. The wind speed estimated at one of the western entrances of Block C1.b is marginally above the 'standing' range and up to about 6.5m/s and may feel slightly uncomfortable for some occupants. These conditions are considered a slight effect on wind comfort for standing activities.

Figure 18.30 Lawson wind speeds (left) and Lawson criteria (right) at the primary entrances of Plot C



Balconies

The balconies of plot C are considered private spaces for the residents. The figures below provide an overview of the comfort wind speeds and Lawson criteria at the balcony locations. While the upper-level balconies of Blocks C1 and C2 feature a 1.10 m tall solid balustrade, most of the other balconies have railings.

The Lawson wind speeds estimated at the majority of the balconies of Plot C are in the 'sitting' to 'standing' range and considered 'comfortable' to 'tolerable' for long-term sedentary activities. There are some balconies where people may experience higher wind speeds and up to the 'strolling' to 'walking' range. These conditions are considered a moderate effect on wind comfort for sedentary activities. Although these wind conditions may feel uncomfortable for some people, there is an expectation to use these spaces in good weather, which improves on the acceptability of the estimated windiness.

The balconies on the western side of of Block C1.b are likely to experience higher wind speeds due to their exposure to the prevailing southwesterly winds. The distress wind speeds estimated at some of the upper balconies may lead to an exceedance of the distress threshold, as shown in **Figure 18.31**. Occupants may experience distress wind conditions for up to about 5 hours a year. This is considered a slight effect. Occupants are expected to avoid using their balconies during inclement weather when the distress wind conditions are most likely to occur.

Figure 18.31 Lawson wind speeds (left) and Lawson criteria (right) on the balconies of Block C (view from the southwest)

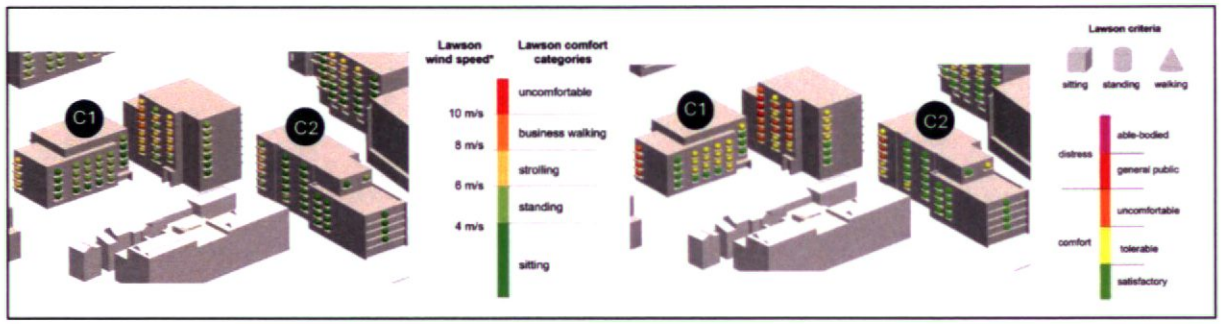
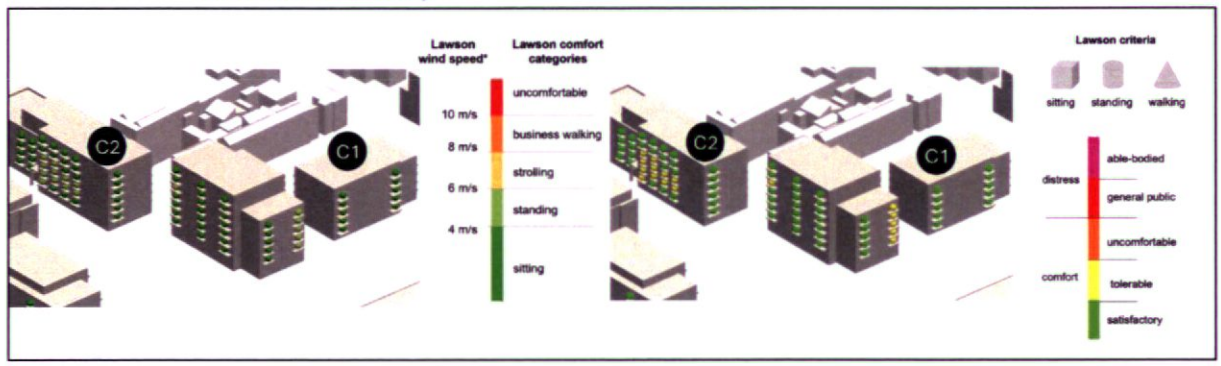


Figure 18.32 Lawson wind speeds (left) and Lawson criteria (right) on the balconies of Block C (view from the northeast)

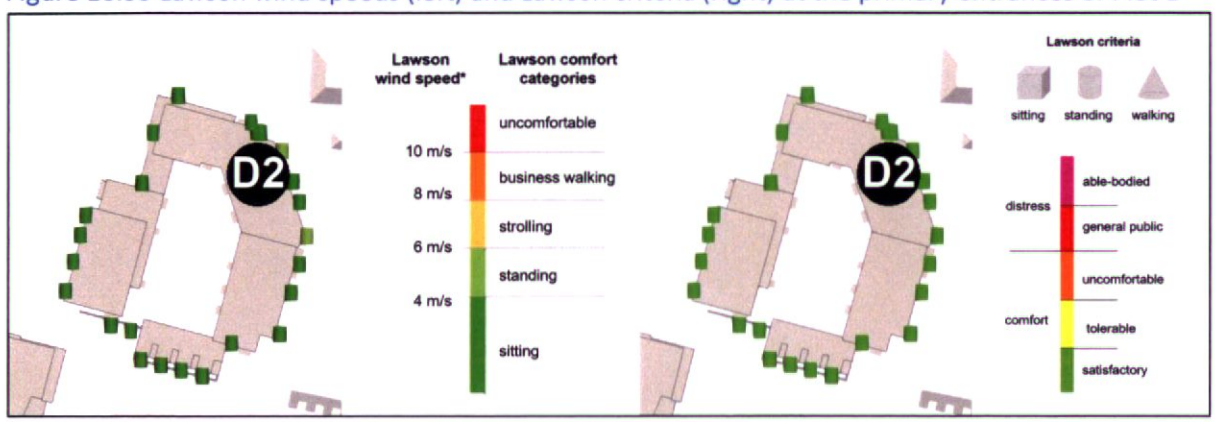


18.4.3.7 Plot D

Primary Entrances

The Lawson wind speeds estimated at the primary entrances to Plot D are up to 6 m/s and within the 'standing' range. These are considered suitable for their intended use.

Figure 18.33 Lawson wind speeds (left) and Lawson criteria (right) at the primary entrances of Plot D



Balconies

The balconies of Plot D are considered private spaces for the residents. The figures below provide an overview of the Lawson wind speeds and Lawson criteria at the balcony locations. The balustrades of most of the balconies in Plot D have railings, with some balconies on the eastern side of the block featuring 1.1m tall solid side screens.

The Lawson wind speeds estimated at the majority of the balconies of Plot D are in the 'sitting' to 'standing' range and considered 'comfortable' to 'tolerable' for long-term sedentary activities. There are some balconies where people may experience higher wind speeds and up to the 'strolling' range. These conditions are considered a moderate effect on wind comfort for sedentary activities. Although these wind conditions may feel uncomfortable for some people, there is an expectation to use these spaces in good weather, which improves on the acceptability of the estimated windiness.

The balconies on the eastern side of Block D2.b are expected to experience higher wind speeds due to the exposure to the southerly and southeasterly winds. The side screens are effective in protecting most of the balconies from the strong winds. The distress wind speeds estimated at one of these balconies may lead to an exceedance of the distress threshold for up to about 10 hours a year. This is considered a moderate effect. Occupants are expected to avoid using their balconies during inclement weather when the distress wind conditions are most likely to occur.

Figure 18.34 Lawson wind speeds (left) and Lawson criteria (right) on the balconies of Block D (view from the northeast)

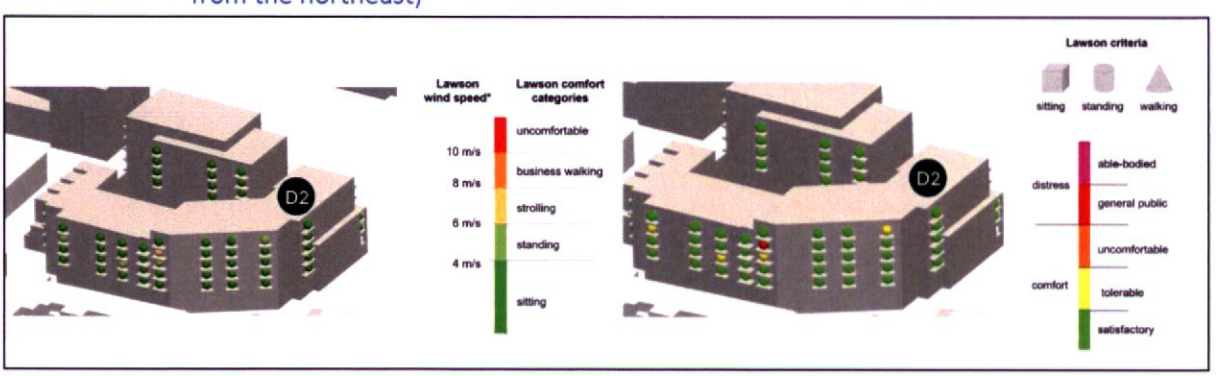


Figure 18.35 Lawson wind speeds (left) and Lawson criteria (right) on the balconies of Block D (view from the south)

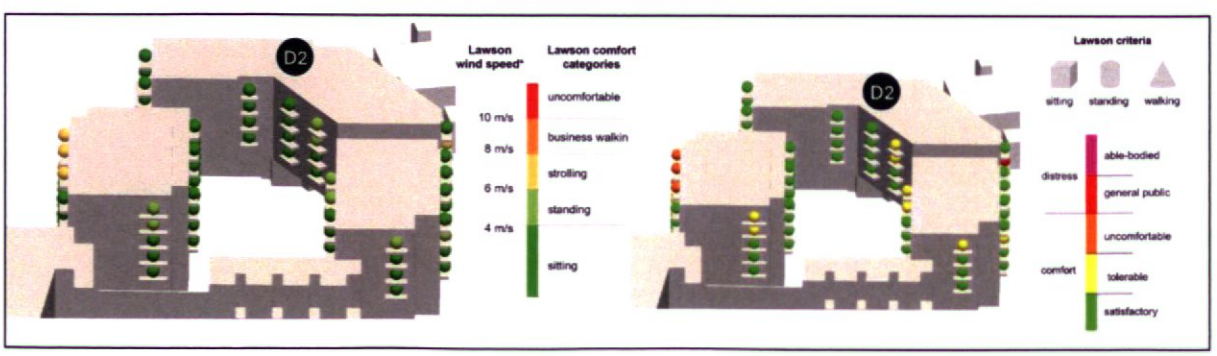
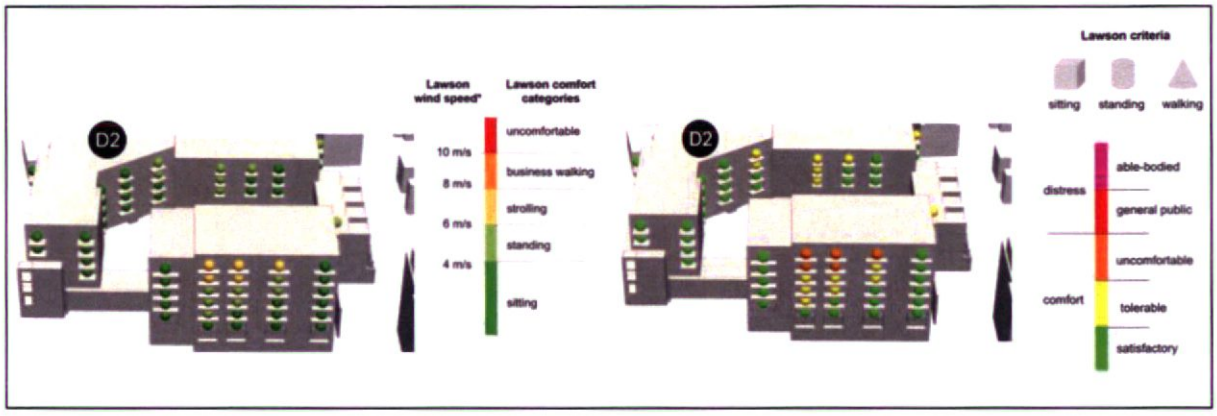


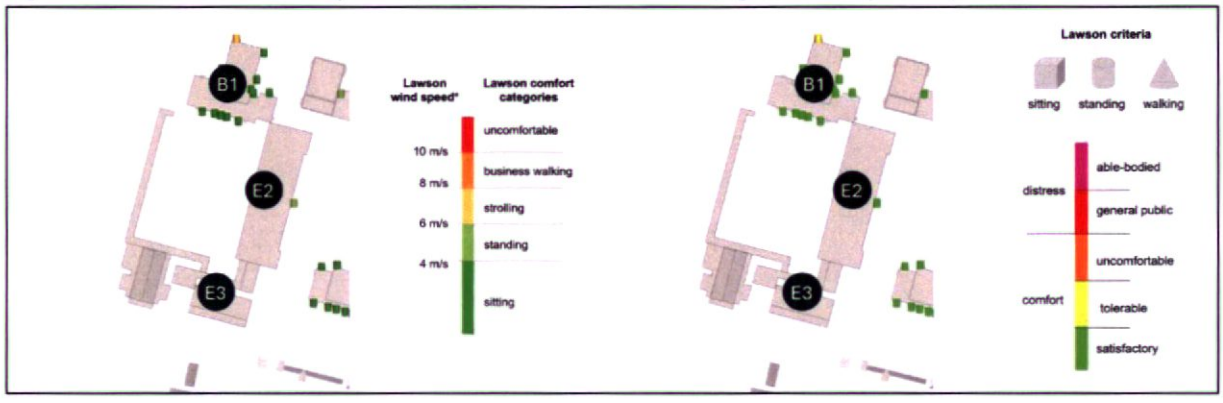
Figure 18.36 Lawson wind speeds (left) and Lawson criteria (right) on the balconies of Block D (view from the west)



18.4.3.8 Plot E

The Lawson wind speeds estimated at the primary entrance to Plot E are up to 6 m/s and within the 'standing' range. These are considered suitable for their intended use.

Figure 18.37: Lawson wind speeds (left) and Lawson criteria (right) at the primary entrances of Plot E



18.5 Mitigation Measures

18.5.1 Construction Phase

The potential effects on wind microclimate at the site during the construction phase have not been assessed and, therefore, no mitigation measures have been proposed for the construction phase.

If it is the intention for parts of the proposed development to become operational before construction is completed, then temporary mitigation may be needed or desirable to achieve safe access. It will be appropriate to seek guidance on this when the detailed phasing is known.

18.5.2 Operational Phase

Mitigation measures to reduce excessive windiness have been developed through the design process and embedded in the building design, as illustrated in Section 18.3.3. These include the use of solid balustrades or side screens in balconies that were exposed to excessive windiness.

The existing and proposed mature landscaping is expected to further mitigate the wind effects in and around the proposed development, especially during the spring and summer seasons when trees are in full foliage. An overview of the landscaping plan is shown in **Figure 18.38**.

Figure 18.38: Landscaping plan as represented in the CFD model (top view)



18.6 Residual Impacts

18.6.1 Construction Phase

The potential effects on wind microclimate at the site during the construction phase have not been assessed. If it is the intention for parts of the proposed development to become operational before construction is completed, then temporary mitigation may be needed or desirable to achieve safe access. It will be appropriate to seek guidance on this when the detailed phasing is known.

18.6.2 Operational Phase

The proposed landscaping plan will have a beneficial impact on the wind conditions in and around the proposed development. The sections below illustrate the wind effects on the proposed development considering mature trees in full foliage. Sections 18.6.2.1 and 18.6.2.2 illustrate the impact of the proposed landscaping on the public realm. Further sections (18.6.2.3 to 18.6.2.5) only focus on areas of the proposed development where wind effects (slight, moderate or significant) were recorded or any place where remedial measures were found to have an adverse impact on the wind conditions. However, in this study no adverse effects were recorded due to the remedial measures.

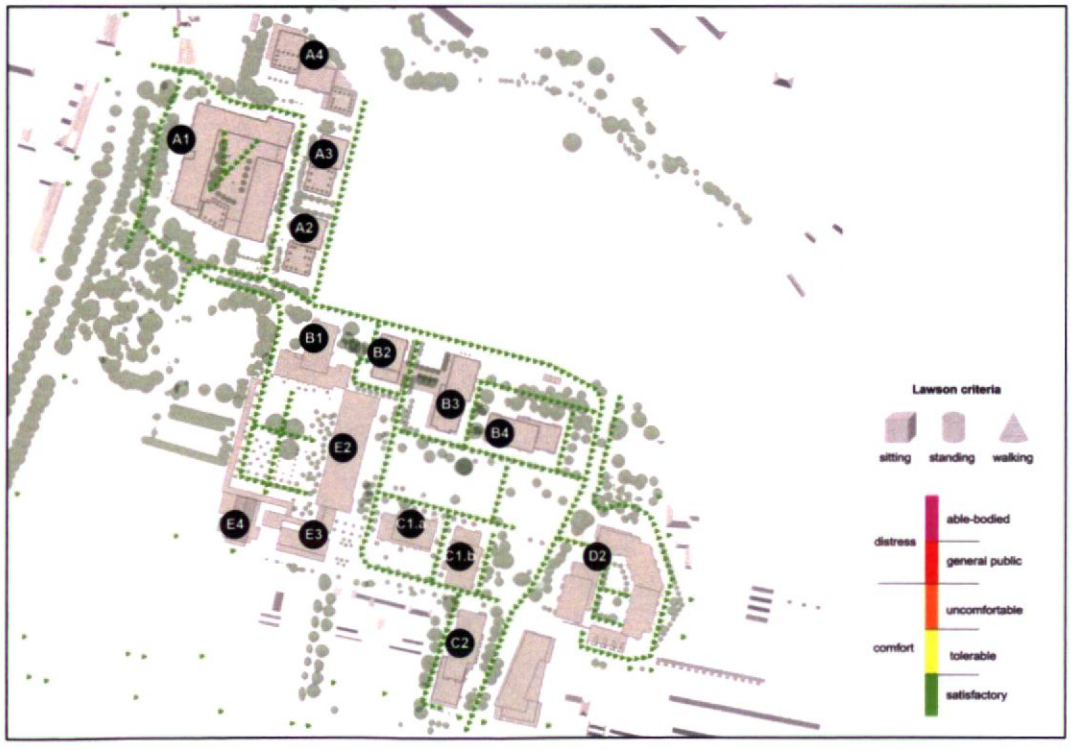
18.6.2.1 Thoroughfares

Figure 18.39 illustrates the Lawson wind speeds predicted along the primary thoroughfares in and around the proposed development. The presence of mature landscaping reduces the comfort wind speeds from up to about 10 m/s to up to about 8 m/s. These conditions are in the 'strolling' range and suitable for pedestrian access (**Figure 18.40**Figure 18.40). This is classified as a not significant effect.

Figure 18.39 Lawson wind speeds along the primary thoroughfares with mature landscaping



Figure 18.40 Lawson criteria along the primary thoroughfares with mature landscaping



18.6.2.2 Public open spaces

Figure 18.41 illustrates the Lawson wind speeds estimated at key locations of the public open spaces around the proposed development. The presence of mature landscaping overall reduces the wind conditions at pedestrian level. The Lawson wind speeds in the sitting areas to the south of Block A4, between Blocks B2 and B3, and between Blocks C1.b and D2 are reduced from up to about 8 m/s to up to about 6 m/s and in the 'standing' range. These wind conditions are very common in Dublin and expected to be 'comfortable' for standing and short-term sitting, like bench seating use (**Figure 18.42**

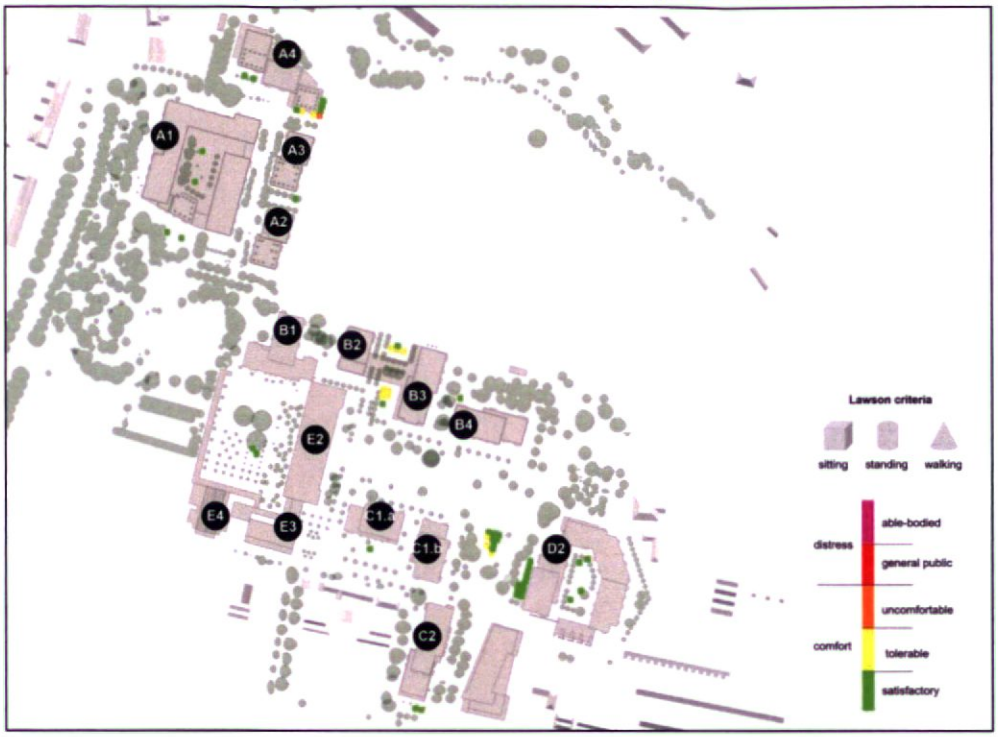
Figure 18.42).

Figure 18.41 shows that the Lawson wind speeds estimated at the southeast corner of Block A4 are up to the 'strolling' range. This is a very localised effect at the location near the corner of the building. These conditions are considered a moderate effect on wind comfort for sedentary activities. Although these wind conditions may feel uncomfortable for some people, there is an expectation to use these spaces in good weather, which improves on the acceptability of the estimated windiness.

Figure 18.41 Lawson wind speeds at key locations of the public open spaces with mature landscaping



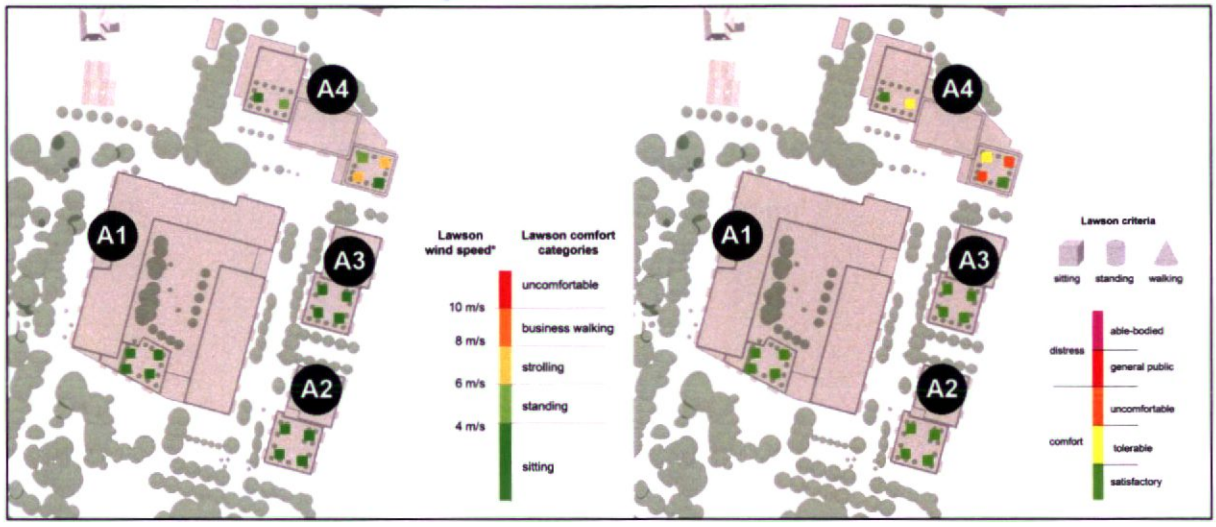
Figure 18.42 Lawson criteria at key locations of the public open spaces with mature landscaping



18.6.2.3 Terraces of Plot A

The proposed landscaping elements with the 1.8m solid balustrade on the roof garden of Plot A show a beneficial effect on the wind conditions. The wind conditions estimated in most accessible areas will be in the 'sitting' to 'standing' range and are considered reasonable for the intended use during good weather conditions. The wind conditions at the roof garden to the east of Block A4 are affected by its exposure to the high-level and stronger south-western winds that drive higher wind speeds estimated are up to about 8 m/s and in the 'strolling' range. These conditions are considered a moderate effect on wind comfort for sedentary activities. Although these wind conditions may feel uncomfortable for some people, there is an expectation to use these spaces in good weather, which improves on the acceptability of the estimated windiness.

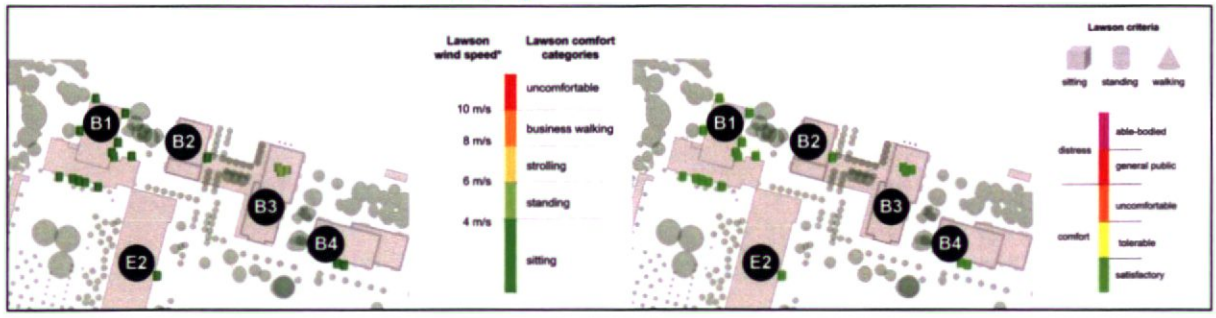
Figure 18.43 Lawson wind speeds (left) and Lawson criteria (right) at the roof gardens of Plot A with the proposed landscaping elements.



18.6.2.4 Primary entrances to Plot B

The mature landscaping around Plot B will have a beneficial effect on the wind conditions at the primary entrances. The wind speeds estimated at the primary entrances are up to 6 m/s and suitable for the intended use.

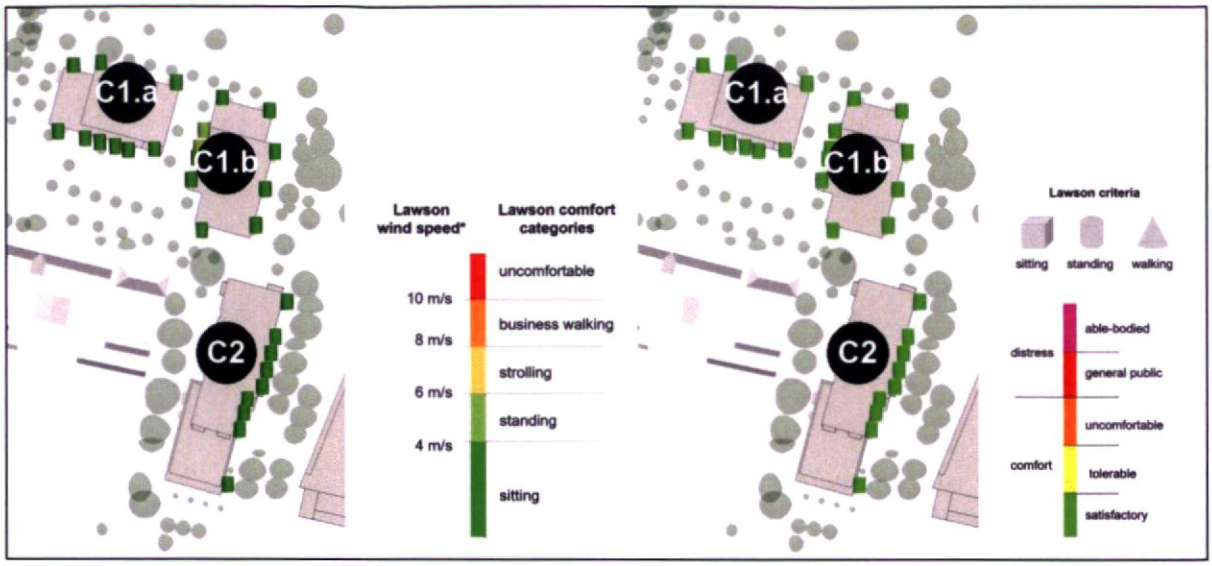
Figure 18.44 Lawson wind speeds (left) and Lawson criteria (right) at the primary entrances of Plot B with the mature landscaping



18.6.2.5 Primary entrances to Plot C

The mature landscaping around Plot C will have a beneficial effect on the wind conditions at the primary entrances. The wind speeds estimated at the primary entrances are up to 6 m/s and suitable for the intended use.

Figure 18.45 Lawson wind speeds (left) and Lawson criteria (right) at the primary entrances of Plot C with the mature landscaping



18.7 Monitoring

The proposed building heights are up to 13 storeys across the proposed mixed-used development. It is anticipated that the proposed development will be constructed using conventional methods. It is recommended that the local weather conditions should be considered and reviewed routinely for the construction works which will be carried out at a height. It is not considered necessary to undertake any formal wind speed and direction monitoring on site to verify this wind assessment.

18.8 Reinstatement

There is no reinstatement required in accordance with this study.

18.9 Interactions

The principal interactions between this Environmental Impact Assessment topic and others addressed herein is with Chapter 7 (Population & Human Health), as wind conditions have the potential to affect human health and amenity in the receiving environment, as discussed above. No likely significant effects on human health or amenity are predicted to result from changes to the wind microclimate due to the proposed development with the proposed mitigations and landscaping plan.

18.10 Indirect and/or Secondary Impacts

There is no indirect and/or impacts identified.

18.11 Cumulative Impacts

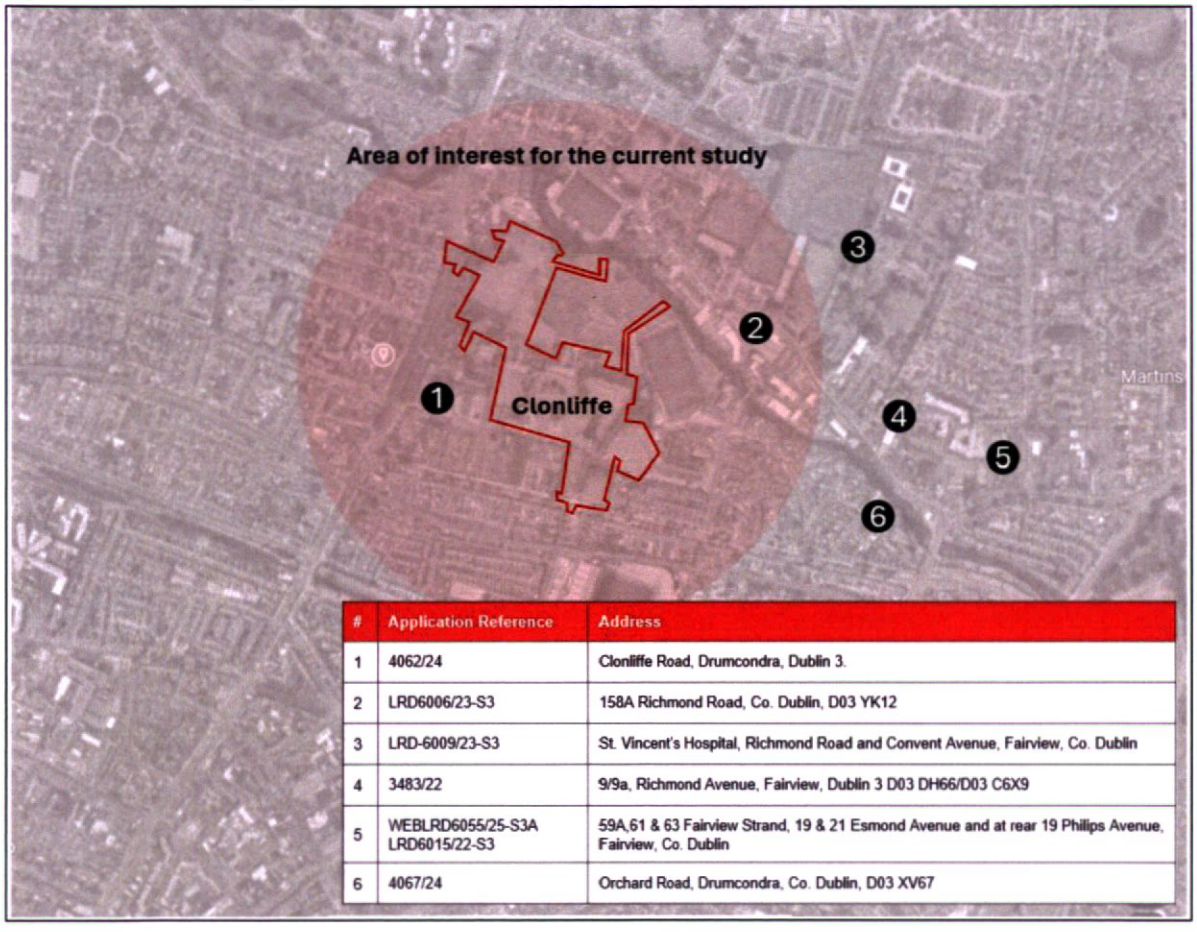
The wind microclimate assessment considers the impact of the surrounding buildings in the vicinity of the proposed development. A distance of about 300 m from the site is considered appropriate for a wind microclimate assessment of this kind.

Chapter 23 provides a summary of the permitted and proposed developments to which regard has been had in the assessment of potential cumulative impacts. These developments have been assessed

in relation to potential cumulative effects with the proposed development. **Figure 18.46** illustrates the permitted developments situated in closest proximity to the proposed development. The ones located outside of the area of interest for the current study, marked in red, have been excluded from any further analysis.

An assessment of their impacts has been undertaken, and the results are discussed below. Overall, the permitted developments have a minimal impact on the wind conditions in and around the site. The sections below illustrate the effects of the cumulative developments on the wind conditions along the thoroughfares, public open spaces, primary entrances to all plots, and roof gardens of Plot A.

Figure 18.46 Planning applications in the vicinity of the proposed development



#	Application Reference	Address
1	4062/24	Clonliffe Road, Drumcondra, Dublin 3.
2	LRD6006/23-S3	158A Richmond Road, Co. Dublin, D03 YK12
3	LRD-6009/23-S3	St. Vincent's Hospital, Richmond Road and Convent Avenue, Fairview, Co. Dublin
4	3483/22	9/9a, Richmond Avenue, Fairview, Dublin 3 D03 DH66/D03 C6X9
5	WEBLRD6055/25-S3A LRD6015/22-S3	59A,61 & 63 Fairview Strand, 19 & 21 Esmond Avenue and at rear 19 Philips Avenue, Fairview, Co. Dublin
6	4067/24	Orchard Road, Drumcondra, Co. Dublin, D03 XV67

18.11.1 Thoroughfares

Figure 18.47 and **Figure 18.48** illustrates the Lawson wind speeds and Lawson criteria predicted along the primary thoroughfares in and around the proposed development. The permitted 6-storey residential building to the southwest of the site has a marginal impact on the wind conditions in Plot A and Plot B.

The presence of the cumulative buildings has a negligible impact on the Lawson wind speeds along the thoroughfares. Most of the Lawson wind speeds under the cumulative scenario are estimated up to 8 m/s, which is within the 'strolling' range and suitable for the intended use as a circulation space. In some localised areas, the Lawson wind speeds are in the 'business walking' category and may cause discomfortable conditions for some walkers. These conditions are considered a slight effect on wind comfort for leisure walking activities. These locations include the shared thoroughfare to the northeast

of Block A1, at the south-east corners of Blocks A2 and A3, the walkway to the east of Block B3, the walkway to the east of Block C2, and the southeast corner of Block C1.b. These locations have been already identified and discussed in Section 18.4.3.2.

The presence of the cumulative buildings has a slightly positive impact on the distress wind conditions. **Figure 18.48** shows that there are a few locations where pedestrians may experience wind conditions that are above the distress threshold, due to the interaction of the building blocks with the strong south-westerly winds. These locations are the northeast corner of Block A1 and the walkway to the east of Block C2.

Figure 18.47 Lawson wind speeds at key locations along the thoroughfares of the proposed development.



Figure 18.48 Lawson criteria at key locations along the thoroughfares of the proposed development.



18.11.2 Public open spaces

Figure 18.49 and **Figure 18.50** illustrate the Lawson wind speeds and Lawson criteria predicted at key locations of the public open spaces around the proposed development. The permitted 6-storey residential building to the southwest of the site has a very marginal impact on the wind conditions in Plot A and Plot B.

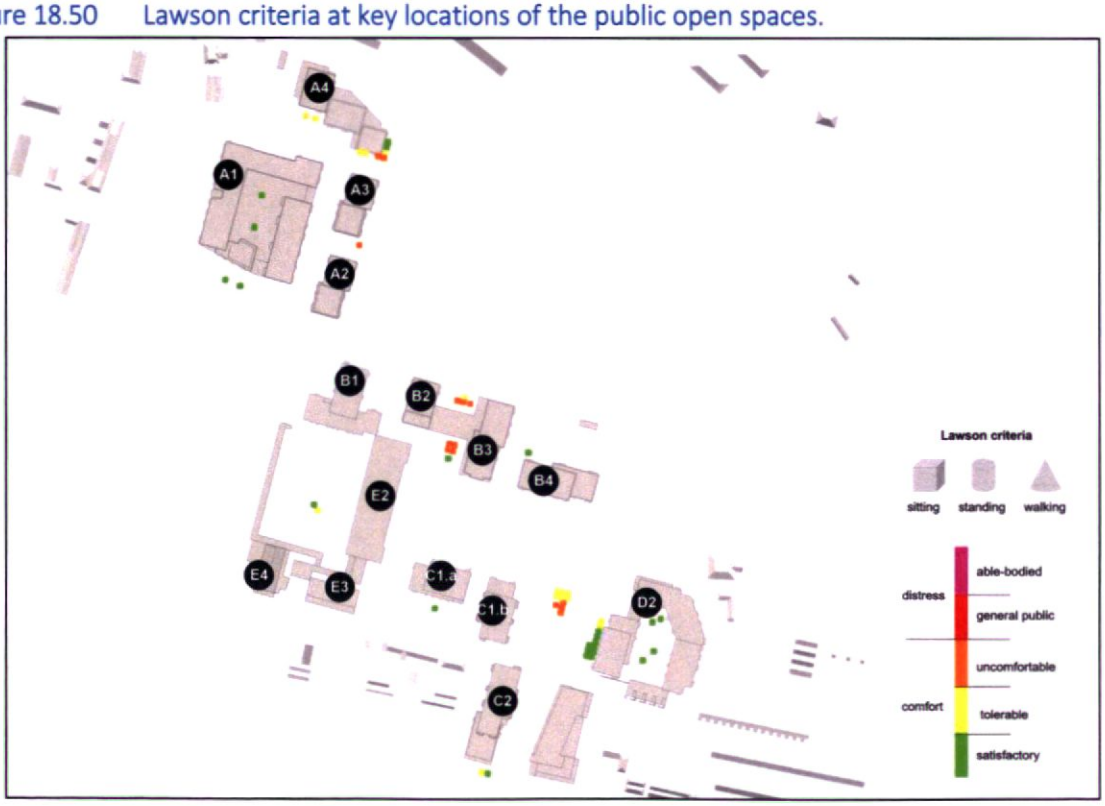
The presence of the cumulative buildings has a negligible impact on the Lawson wind speeds along the public open spaces. Most of the Lawson wind speeds under the cumulative scenario are estimated up to 8 m/s, which is within the 'strolling' range and suitable for the intended use as a circulation space. In some localised areas, the Lawson wind speeds are in the 'walking' category and may cause discomfortable conditions for people. These conditions are considered a moderate to significant effect on wind comfort for sedentary activities. These locations include the outdoor sitting areas on the south-east corner of Blocks A4 and A3, the play and sit areas between the Blocks B2 and B3, and the outdoor sitting areas between the Blocks C1.b and D2.

The presence of the cumulative buildings has a positive impact on the distress wind conditions in the open space to the south of Block A4, where the wind conditions are estimated within the acceptable range.

Figure 18.49 Lawson wind speeds at key locations of the public open spaces.



Figure 18.50 Lawson criteria at key locations of the public open spaces.

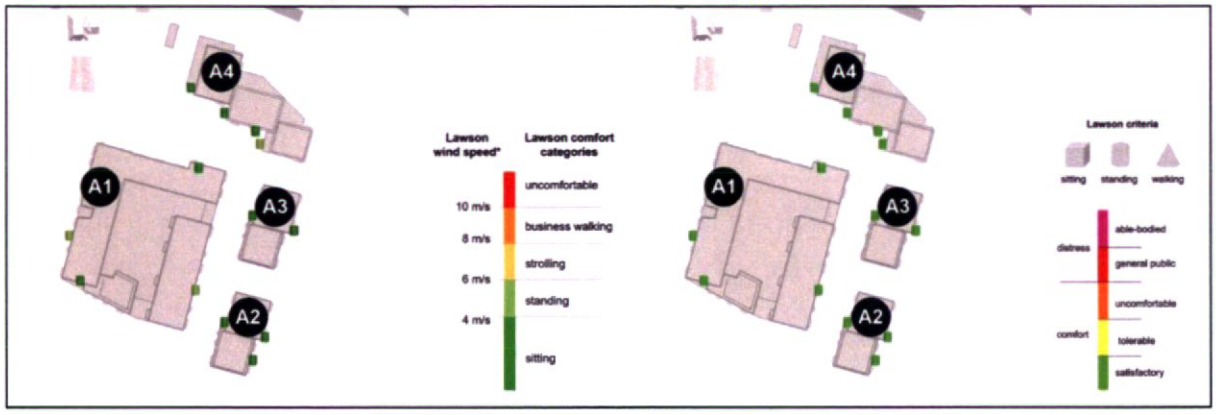


18.11.3 Plot A

18.11.3.1 Primary Entrances

The presence of the cumulative buildings has a negligible impact on the wind conditions estimated at the primary entrances of Plot A. The Lawson wind speeds are up to 6 m/s and within the 'standing' range. These are considered suitable for their intended use and a not-significant effect

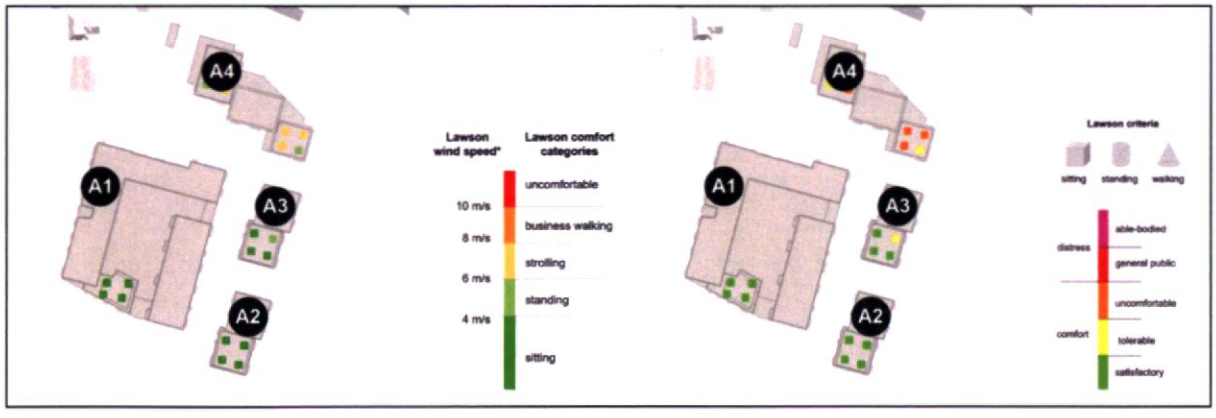
Figure 18.51 Lawson wind speeds (left) and Lawson criteria (right) at the primary entrances of Plot A



18.11.3.2 Roof Gardens

The presence of the cumulative buildings has a negligible impact on the Lawson wind speeds estimated at the roof gardens of Plot A. It is estimated a slightly positive impact on the distress wind speeds at the roof garden to the east of Block A4, where the wind conditions have marginally improved and are below the distress threshold.

Figure 18.52 Lawson wind speeds (left) and Lawson criteria (right) at the roof gardens of Plot A

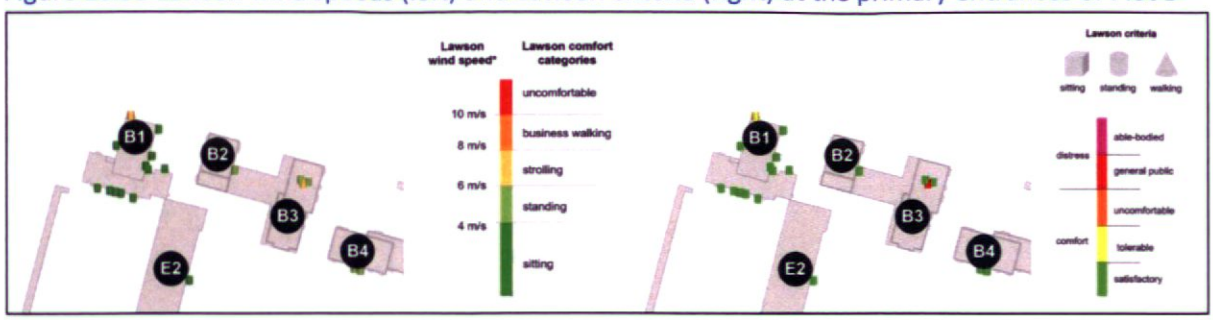


18.11.4 Primary entrances to Plot B

Primary Entrances

The presence of the cumulative buildings has a negligible impact on the wind conditions estimated at the primary entrances of Plot B.

Figure 18.53 Lawson wind speeds (left) and Lawson criteria (right) at the primary entrances of Plot B

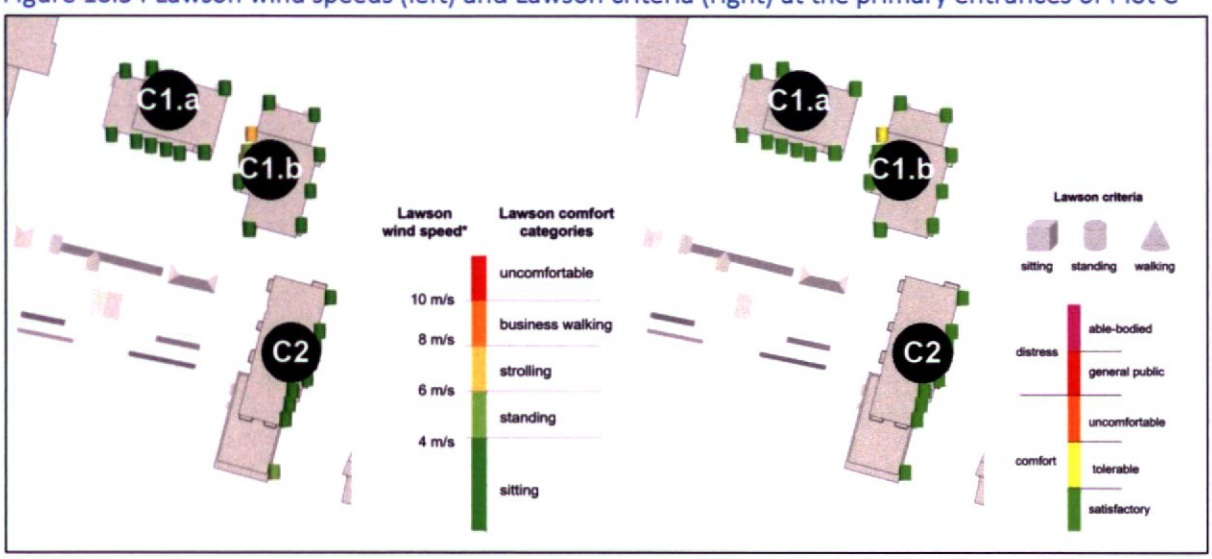


18.11.5 Primary entrances to Plot C

Primary Entrances

The presence of the cumulative buildings has a negligible impact on the wind conditions estimated at the primary entrances of Plot B.

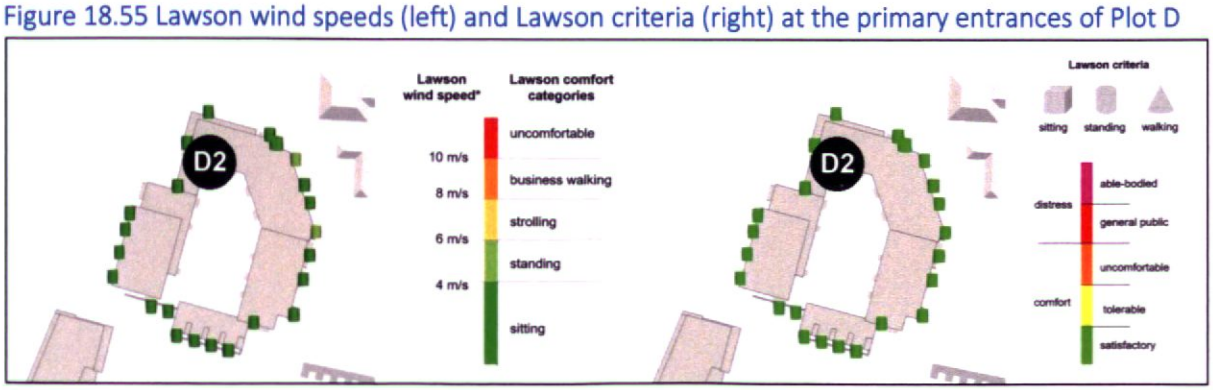
Figure 18.54 Lawson wind speeds (left) and Lawson criteria (right) at the primary entrances of Plot C



18.11.6 Primary entrances to Plot D

The presence of the cumulative buildings has a negligible impact on the wind conditions estimated at the primary entrances of Plot B.

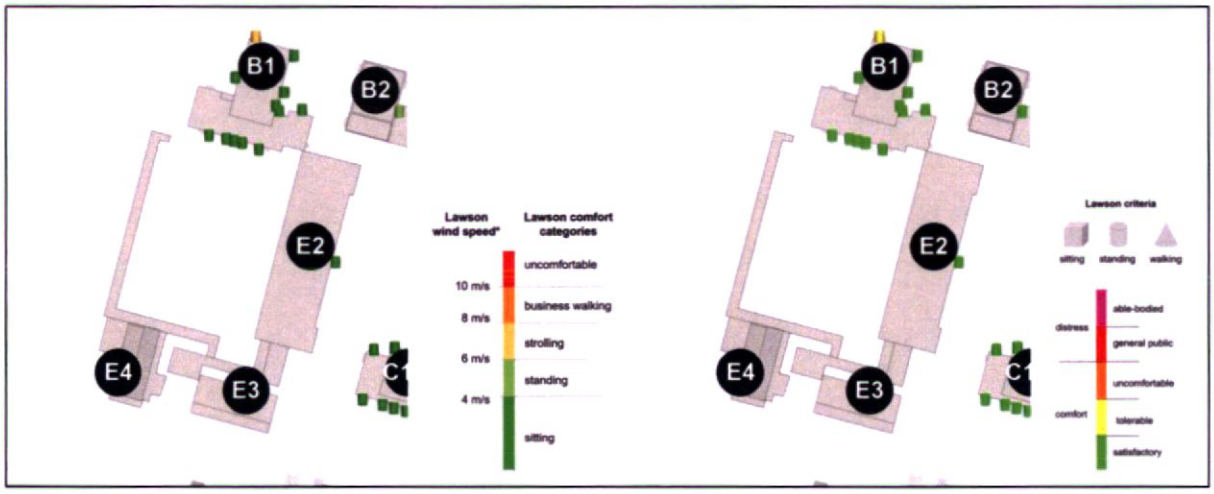
Figure 18.55 Lawson wind speeds (left) and Lawson criteria (right) at the primary entrances of Plot D



18.11.7 Primary entrances to Plot E

The presence of the cumulative buildings has a negligible impact on the wind conditions estimated at the primary entrances of Plot B.

Figure 18.56 Lawson wind speeds (left) and Lawson criteria (right) at the primary entrances of Plot E



18.12 Difficulties Encountered

There were no particular difficulties encountered in undertaking the assessment of this chapter.

18.13 References

- Department of Housing, Local Government and Heritage, 2020. Urban Development and Building Height Guidelines for Planning Authorities (UD and BHG 2018).
- Dublin City Council. Dublin City Development Plan 2022-2028
- ESDU (Engineering Science Data Unit) Item 01008, 2001. Computer program for wind speeds and turbulence properties: flat or hilly sites in terrain with roughness.
- Lawson, TV, 1990. The evaluation of the windiness of a building complex before construction. London Docklands Development Corporation / Department of aerospace engineering, University of Bristol report Number TVL 9025.
- Lawson, TV, 2001. Building aerodynamics. Imperial College Press, London, UK

19 Traffic & Transportation

19.1 Introduction

This chapter of the EIAR has been prepared to assess the potential impact of the proposed project in terms of traffic and transportation. This chapter provides an overview of the existing receiving environment, a detailed and robust assessment of the potential impact of the proposed project on the operation of the local road network, both during the short-term construction phase and long-term operational phase, and outlines mitigation measures to ensure any significant effects are minimised or avoided.

19.2 Expertise and Qualifications

This Chapter has been prepared by Glen Moon MA (Hons) TPP, a Principal Engineer with SYSTRA. Glen is a Chartered Member of the Chartered Institute of Highways and Transportation, with 17 years of industry experience, specializing in the field of Development Planning, Traffic & Transportation Assessments and EIAR appraisal. In addition, he has spent five years in the renewables industry as an EIA Senior Project Manager. Glen has recently produced the Traffic and Transport section of the EIARs for the following projects:

- Haggardstown, County Louth, Large-scale Residential Development;
- Ringwood / Stoneview Masterplan LRD, Blarney; and
- Mixed-use residential and supermarket development, Kilkenny.

19.3 Method

19.3.1 Policy and Guidance

This chapter has been prepared having regard to, inter alia, the following guidelines:

- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2022);
- Transport Infrastructure Ireland's (TII's) Traffic & Transport Assessment Guidelines (2014); and
- Institute of Environmental Management and Assessment (IEMA) publication - "Environmental Assessment of Traffic and Movement", 2023 ("the IEMA Guidelines").

There are also a number of relevant national and regional policies which have guided the assessment. These include the following documents:

- Project Ireland 2040 – National Planning Framework (First Revision April 2025)
- Regional Spatial and Economic Strategy for the Southern Region, Project Ireland 2040;
- Dublin City Development Plan 2022 – 2028;
- Greater Dublin Area Transport Strategy 2022-2042;
- National Sustainable Mobility Policy 2022;
- Design Manual for Urban Roads and Streets (DMURS, updated 2019); and
- Cycle Design Manual 2023.

19.3.2 Potential Environmental Effects

The assessment is structured around the consideration of potential environmental effects relating to traffic and transport. The EPA EIAR guidelines (2022) outlines a number of definitions that can be used to describe effects, as set out in **Figure 19.1.**

Figure 19.1 EPA effects Criteria (Extract from EPA Guidelines 2022, Section 3 p48)

a) 'the magnitude and spatial extent of the impact (for example geographical area and size of the population likely to be affected);
b) the nature of the impact;
c) the transboundary nature of the impact;
d) the intensity and complexity of the impact;
e) the probability of the impact;
f) the expected onset, duration, frequency and reversibility of the impact;
g) the cumulation of the impact with the impact of other existing and/or approved projects;
h) the possibility of effectively reducing the impact.'

Potential traffic and transport effects as identified by the IEMA Guidelines including the following:

- Severance;
- Road vehicle and passenger delay;
- Non-motorised user delay and amenity;
- Fear and intimidation on and by road users;
- Road user and pedestrian safety.

The IEMA guidance suggests that in order to determine the scale and extent of the assessment and the level of effect the proposed development will have on the surrounding road network, the following two 'rules' should be followed:

- Rule 1 – Include highway links where flows are predicted to increase by more than 30% (10% if affecting a sensitive area) or where the number of heavy goods vehicles (HGVs) is predicted to increase by more than 30%
- Rule 2 – Include any other specifically sensitive area where traffic flows are predicted to increase by 10% or more

Paragraph 2. 5 of the IEMA Guidelines identifies groups, locations and special interests which may be sensitive to changes in traffic conditions as follows:

- People at home;
- People in workplaces;
- Sensitive groups including children, elderly and disabled;
- Sensitive locations, e. g. hospitals, churches, schools, historic buildings;
- People walking or cycling;

- Open spaces, recreational sites, shopping areas;
- Sites of ecological / nature conservation value; and
- Tourist attractions.

The significance of each effect is considered against the criteria within the IEMA Guidelines, where possible, however the guidelines state that:

"For many effects there are no simple rules or formulae which define the thresholds of significance and there is, therefore, a need for interpretation and judgement on the part of the assessor, backed-up by data or quantified information wherever possible. Such judgements will include the assessment of the numbers of people experiencing a change in environmental impact as well as the assessment of the damage to various natural resources."

19.3.3 Threshold Assessment

Where the impact of construction or operational traffic exceeds 30% on any particular road link for cars or HGVs (10% on sensitive links), then a detailed assessment of the significance of effect has been undertaken, which further considers the link sensitivity and the magnitude of change.

For qualifying links, the subsequent detailed assessment considers the criteria set out in the IEMA Guidelines, such as severance, driver delay, pedestrian delay, pedestrian amenity and safety.

19.3.4 Assessment of Significance

The following section sets out the methodology used to assess the significance of effects at locations along the proposed routes within the study area, where total traffic levels exceed the screening thresholds set out by IEMA.

19.3.4.1 Sensitivity

The sensitivity to a change in traffic levels of any given road segment or at a junction is generally assessed by considering the residual capacity of the network under existing conditions, and the sensitivity of any receptors in the vicinity.

The criteria that have been used to make judgements on the sensitivity of the receptor(s) and the magnitude of change are presented in **Table 19.1.**

Table 19.1 Framework for determining Sensitivity of Receptors [39]

Sensitivity	Description
High	The receptor / resource has little ability to absorb change without fundamentally altering its present character is of international or national importance. Sensitive Receptors such as schools, colleges, hospitals and accident hotspots.
Medium	The receptor / resource has moderate capacity to absorb change without significantly altering its present character, or is of high importance.
Low	The receptor / resource is tolerant of change without detriment to its character, or is of low / local importance. Areas such as trunk road or 'R' class roads constructed to accommodate significant HGV volumes.

[39] Informed by IEMA Guidelines 'Environmental Assessment of Traffic and Movement (2023)

Sensitivity	Description
Negligible	Users not sensitive to transport effects. Includes very small settlements and roads with no significant settlements including new strategic trunk roads or motorways.

19.3.4.2 Magnitude of Effects

The magnitude of effects has been assessed as a function of:

- The percentage and / or absolute change in traffic volumes increase and change due to the proposed development; and
- Changes in the type of traffic and the temporal distribution of traffic (day of week, time of day). For example, increases in the number of HGVs on a particular road will have a larger effect on receptors than smaller vehicles would.

The criteria that has been used to make judgement on the magnitude of the effect on the receptor(s) is presented in **Table 19.2**.

Table 19.2 Framework for determining Magnitude of Effect[40]

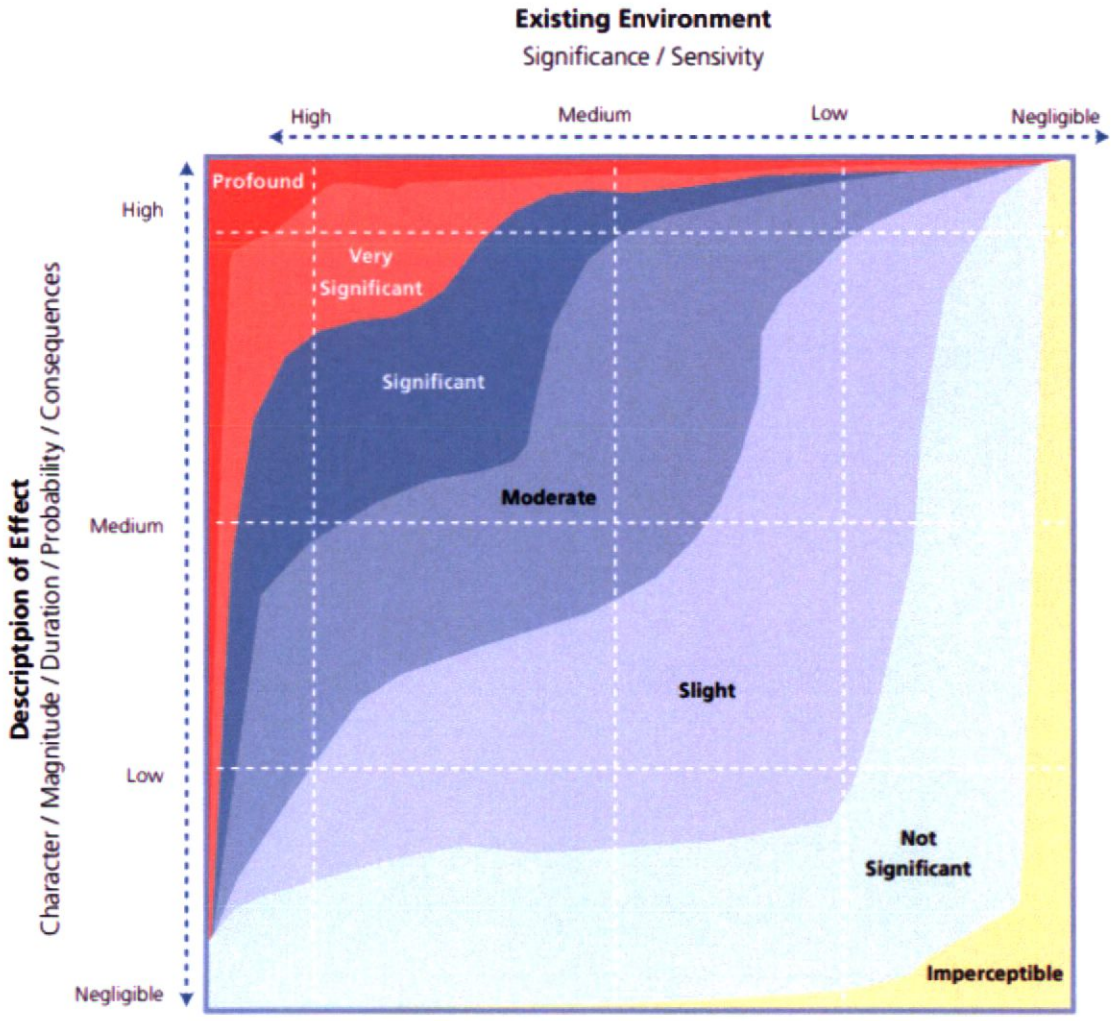
Magnitude	Description
High	Total loss of, or major / substantial alteration to, key elements/features of the baseline (pre-development) conditions such that the post development character/composition/attributes will be fundamentally changed. Generally, a rule of >90% (or >70% at sensitive receptors) change in traffic is considered to be a High magnitude.
Medium	Loss or alteration to one or more key elements/features of the baseline conditions such that post development character / composition / attributes of the baseline will be materially changed. Generally, a rule of 60% - 90% (or 40% - 70% at sensitive receptors) change in traffic is considered to be a Medium magnitude.
Low	A minor shift away from baseline conditions. Change arising from the loss / alteration will be discernible/detectable but not material. The underlying character / composition / attributes of the baseline condition will be similar to the pre-development circumstances / situation. Generally, a rule of 30 – 60% (or 10% - 40% at sensitive receptors) change in traffic is considered to be a Low magnitude.
Negligible	Very little change from baseline conditions. Change barely distinguishable, approximating to a 'no change' situation. Generally, a rule of <30% (or <10% at sensitive receptors) change in traffic is considered to be a Negligible magnitude.

[40] Informed by IEMA Guidelines 'Environmental Assessment of Traffic and Movement (2023)

19.3.4.3 Significance

The criteria used for determining the significance of traffic related effects is set out in **Figure 19.2**, which is extracted from the EPA Guidelines.

Figure 19.2 Significance of Effects (Source: EPA Guidelines)

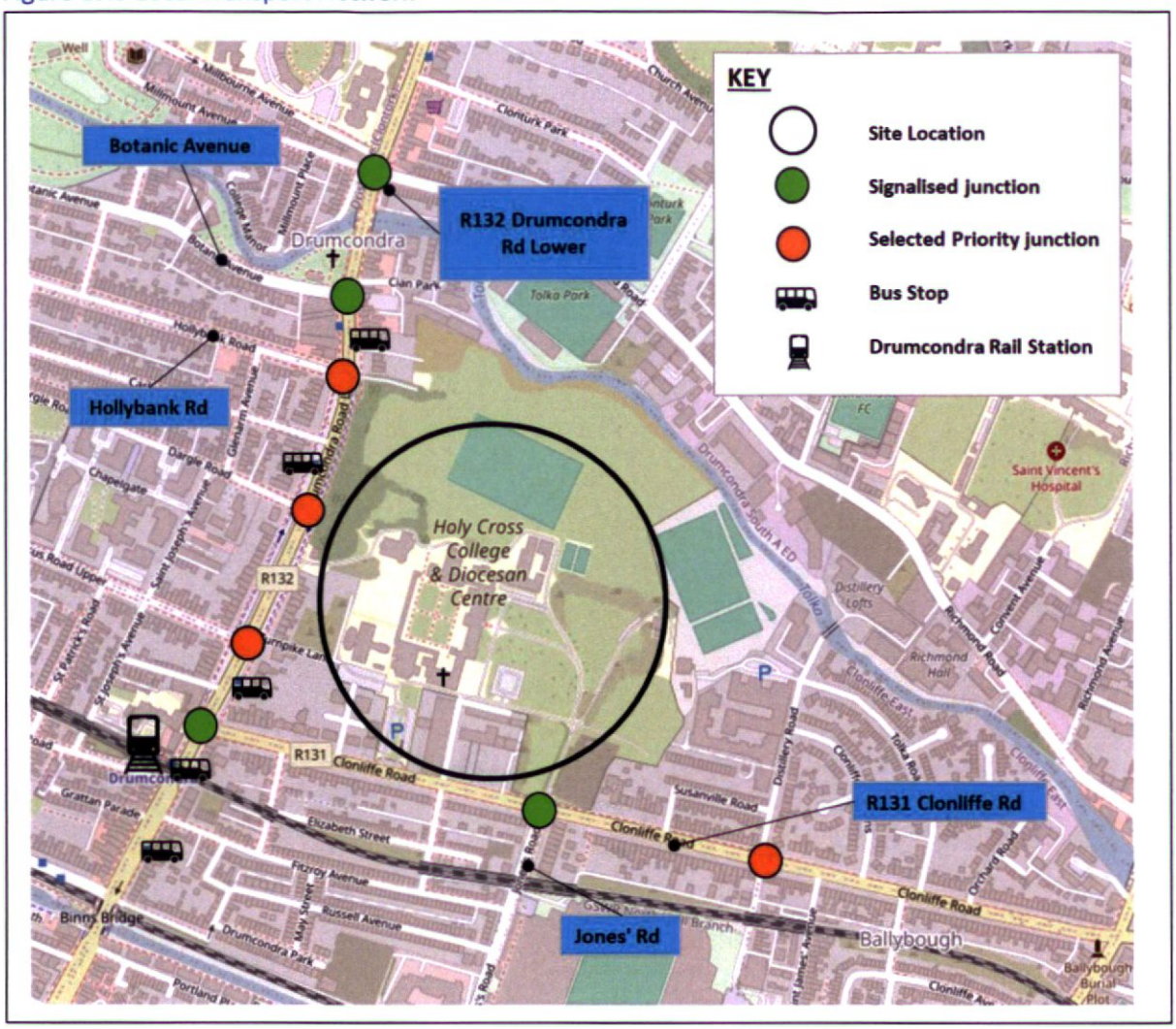


As per the EPA Guidelines, Significance has been categorised on a seven-point scale, from Profound to Imperceptible. Effects that have a Significance of Effect of 'Significant', 'Very Significant' or 'Profound' are those which have been considered to be 'Significant'.

19.4 Baseline Environment

A detailed review of the baseline environment is presented in Section 3 of the Transport Assessment (TA) that accompanies the planning application. The local transport network surrounding the site is shown in **Figure 19.3**, and a summary is provided below.

Figure 19.3 Local Transport Network



19.4.1.1 Road Network

The site is located to the east of the R132 Drumcondra Road Lower and north of the R131 Clonliffe Road.

R132 Drumcondra Road Lower runs north to south between the Swords area and the City Centre. In the vicinity of the site, it has two lanes in either direction, with the inside lanes being 24-hr bus lanes.

Numerous residential streets join the R132 from the west, including Hollybank Road, Dargle Road and St Alphonsus Road Lower. The residential streets form the minor arms of priority junctions.

R131 Clonliffe Road runs in a south-east direction between the junction with R132 Drumcondra Road Lower and Ballybough Road. Clonliffe Road is residential in nature and is a single carriageway road with unrestricted kerbside on-street parking that does not obstruct the flow of traffic.

The two signalised junctions in the area are:

- R132 Drumcondra Road Lower / R131 Clonliffe Road; and
- R131 Clonliffe Road / Jones's Road.

The former main entrance to Holycross College is located opposite Jones's Road on Clonliffe Road, and there are gated accesses into the site from Drumcondra Road and Holycross Avenue, both of which are currently unused.

19.4.1.2 Link Flow Data

As part of the baseline assessment for the Transport Assessment, traffic counts were undertaken at the following locations on Tuesday 1st April 2025. These locations were agreed during Pre-Application discussions.

A. R132 Drumcondra Road Lower / Hollybank Road priority junction;
B. R132 Drumcondra Road Lower / R131 Clonliffe Road signalised junction; and
C. R131 Clonliffe Road / Jones's Road signalised junction.

Surveys were undertaken between 07:00 – 10:00 and 16:00 – 19:00. The following peak hours were identified:

- AM Peak Hour: 07:15 – 08:15; and
- PM Peak Hour: 16:15 – 17:15.

Peak hour flows, presented in Section 3.6 of the TA, have been factored to Annual Average Daily Traffic flows (AADT) using expansion factors set out in TII's *Project Appraisal Guidelines for National Roads Unit 16.1 document PE-PAG-02034 – 'Expansion Factors for Short Period Traffic Counts'*. As set out in the document, Tuesday traffic flows are typically slightly higher than average, as are traffic flows in April. On this basis, no daily or monthly factoring was deemed to be required.

Combined AM and PM peak hour counts were divided by a calculated factor of 0.16 (calculated using the TII OE-PAG-02034 guidelines) to generate AADT for each surveyed road link. These are presented in **Table 19.3**.

Table 19.3 AADT Two-way Flows for Selected Links, with HGV Percentage for 2025 Base year

Link	Location	2025 Base AADT (all veh)	2025 AADT (HGV)	% HGV
A	R132 Drumcondra Rd Lower north of Hollybank Rd	25,185	1,617	6.4%
B	Hollybank Rd	2,750	37	1.3%
C	R132 Drumcondra Rd Lower between Hollybank Rd and R131 Clonliffe Rd	24,275	1,600	6.6%
D	R132 Drumcondra Rd Lower south of R131 Clonliffe Rd	27,269	1,634	6.0%
E	R131 Clonliffe Rd between R132 Drumcondra Rd Lower and Jones' Road	11,463	187	1.6%
F	Jones' Rd	5,606	155	2.8%
G	R131 Clonliffe Rd east of site access	12,894	270	2.1%

19.4.1.3 Road Link Sensitivity

Table 19.4 presents SYSTRA's assessment of the sensitivity of each of the above road links, based upon the IEMA Guidance.

Table 19.4 Assessed sensitivity of road links

Link	Location	Considered to be a sensitive link?	Rationale	Threshold for detailed assessment
A	R132 Drumcondra Rd Lower north of Hollybank Rd	No	Regional road corridor and major bus route	30%
B	Hollybank Rd	Yes	Wide, traffic calmed road, largely residential in nature	10%
C	R132 Drumcondra Rd Lower between Hollybank Rd and R131 Clonliffe Rd	No	Regional road corridor and major bus route	30%
D	R132 Drumcondra Rd Lower south of R131 Clonliffe Rd	No	Regional road corridor and major bus route	30%
E	R131 Clonliffe Rd between R132 Drumcondra Rd Lower and Jones' Road	Yes	Local connecting road, with residential frontages, and parallel parking, on both sides.	10%
F	Jones' Rd	Yes	Local connecting road, with residential frontages, and commercial premises on either side	10%
G	R131 Clonliffe Rd east of site access	Yes	Local connecting road, with residential frontages, and parallel parking, on both sides.	10%

19.4.1.4 Public Transport

The site is very well connected by public transport with a wide array of both bus and rail services located nearby. The R132 Drumcondra Road Lower corridor is one of the core bus corridors into Dublin, with a high frequency of services running from North Fingal, Swords, Dublin Airport and Ballymun into the city. Services 1, 16, 19,3 3, 41 and 44 travel along Drumcondra Road Lower). Even in off peak periods, there is typically no more than a five-minute wait for a bus to the City Centre.

Bus services will be further improved in the future, with the introduction of the 'Swords to City Centre' Core Bus Corridor (CBC) that was consented in June 2024. The 12km-long route runs from Swords, passes to the east of Dublin Airport, and runs south though Glasnevin, Drumcondra and Phibsborough, before terminating at Parnell Street. In the vicinity of the site, the Swords CBC runs along Drumcondra Road Lower. As for the majority of the CBC corridor, continuous bus lanes will be provided on both sides of the corridor, along with segregated cycle and pedestrian facilities. Enhanced pedestrian and cycle crossing facilities will be provided at all junctions along this section.

Drumcondra Railway Station is a five-minute walk from the development, and is served by services running between the City Centre and Maynooth, Hazelhatch, Longford, and Sligo. At peak times there is typically no more than a 10-minute wait for a train to the City Centre.

Rails services for residents of the development will be further enhanced by the roll-out of the Dart + programme, which will deliver a more sustainable, reliable, and faster rail service with increased train frequencies and customer carrying capacity. A key development is the establishment of a new station

Glasnevin which will service both DART West and DART South-West and is in close proximity to Drumcondra, the area in which the site is situated. The new DART station will provide even better connections for new to the wider Dublin Metropolitan area.

In addition, the proposed Metrolink 19km high-frequency automated metroline, that will run between Swords Estuary and Charlemont Station via Dublin Airport and the City Centre, will further enhance public transport links. The nearest station to the site which will be at Glasnevin junction, which is a 20-minute walk from the development

19.4.1.5 Walking Accessibility & Network

The main pedestrian routes to and from the site are generally of a good quality. The site is within a convenient walking distance of the city centre and several large employment centres as well as leisure and retail facilities. The Mater and Rotunda Hospitals are within a 20-minute walk of the site, as is Phibsborough to the west, and O'Connell Street to the south.

19.4.1.6 Cycling Accessibility & Network

The N1 / R132 Drumcondra Road / Drumcondra Road Lower and Dorset Street corridor has continuous cycle facilities along its length between Griffith Avenue and the city centre. The type and quality of provision varies, being a mixture of bus lanes, cycle lanes within bus lanes, and separated tracks. As part of the consented Swords to City Centre Core Bus Corridor project, segregated cycle facilities will run along the full length of the N1 in this area.

The majority of central-north Dublin is within a 15-minute cycle of the site. The site's location, coupled with the NTA's ambitious Cycle Network Plan, will mean that cycling will be an attractive mode of travel for the residents of the development. The internal design of the site, and plentiful supply of a range of cycle parking will fully support this.

19.5 Predicted Impacts of the Proposed Development

19.5.1 Site Transport Strategy

The proposed site access strategy is set out below:

- **Vehicle, cycle and pedestrian access** into the site will be taken at the Clonliffe Rd Jones' Road signalised junction, where a fourth signalised arm will be added to serve the development. The signalised junction has been approved as part of the consented hotel application. This upgraded junction will provide vehicular access to Blocks B, C, D and E, the potential future GAA facilities, along with the permitted hotel on Clonliffe Road.
- **A second vehicle, cycle and pedestrian access point** will be taken onto Drumcondra Road opposite the Drumcondra Rd / Access / Hollybank Rd priority junction. This 'left-in, left-out' priority junction will provide vehicular access to Block A, and the creche and retail units in this area.
- It will not be possible for private vehicles to travel through the site as a barrier will prevent through travel. Refuse and emergency vehicles will be able to pass through the barrier as required.
- **An additional cyclist and pedestrian access** is proposed through an existing access point on Holy Cross Avenue.

- The site will provide a range of walking and cycling routes that will be safe and attractive, and provide permeability throughout the development, linking destinations inside and outside of the site.
- Two **'Mobility Hubs'** will be provided within the site. It is intended that these will form a focus for Car Club, bike and scooter hire (including cargo bikes), and feature bike maintenance / washing stations, and parcel collection lockers.
- The site will initially provide space for **eight Car Club vehicles,** which will be available to residents as well as the general public.

19.5.2 Do-Nothing Impact

19.5.2.1 Future Year Scenarios

The full site would be constructed over a period of 60 months. The busiest period in terms of construction activity is expected to be between March 2028 and January 2029, when Phases 1a, 1b and 2 will be under construction at the same time. Section 19.5.3.1 has further details.

As presented in the TA, traffic flows have been calculated for the following future years:

- Base 2028 (Construction Year);
- Base 2029 (Year of Opening);
- Base 2034 (YoO + 5); and
- Base 2044 (YoO + 15).

Base 2025 traffic flows have been factored to future year flows using guidance set out in the 'Project Appraisal Guidelines for National Roads Unit 5.3', specifically Table 6.2 'Link Based Growth Rates' for the North Dublin City Area.

The following traffic growth rates have been adopted:

- 2025-2028 – Light vehicles 1.049, Heavy Vehicles 1.134;
- 2025 - 2029 (Year of Opening) – Light vehicles 1.066, Heavy Vehicles 1.514;
- 2025 - 2034 (YoO + 5) – Light vehicles 1.094, Heavy Vehicles 1.266; and
- 2025 – 2044 (YoO + 15) – Light vehicles 1.148, Heavy Vehicles 1.522.

Light Vehicles comprise Car and Light Goods Vehicles (LGV) under 3.5 tonnes. Heavy vehicles comprise the Other Goods Vehicles (OGV) 1 and OGV2 categories.

19.5.2.2 Future Year Do-Nothing Traffic Flows

Table 19.5 presents the Do-Nothing Future Year traffic flows, which have been factored from the Base 2025 using the factors presented above,

Table 19.5 AADT Two-way Flows for Selected Links, with HGV Percentage for 2025 Base year

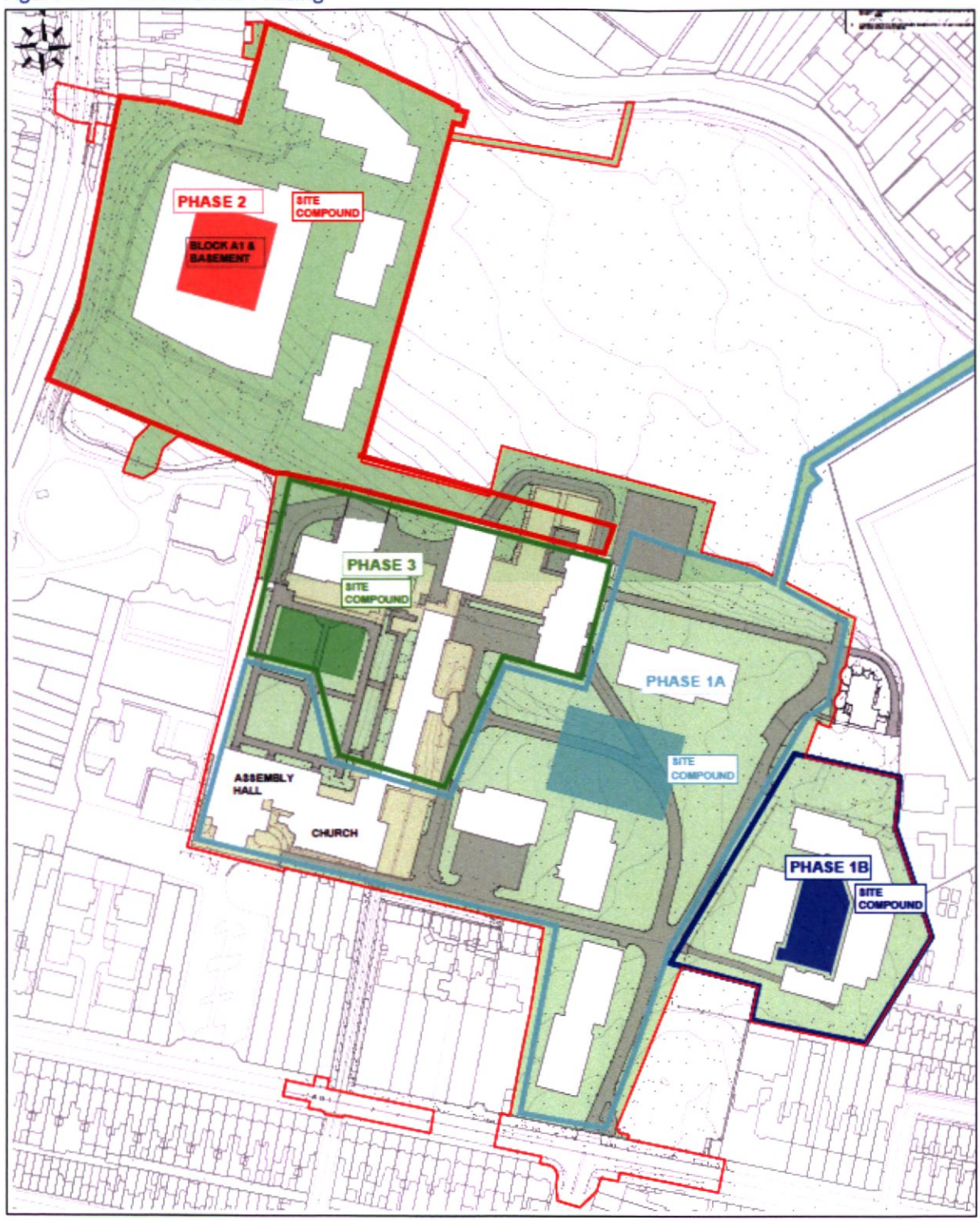
Link	Location	2028 Base AADT	2029 DN AADT	2034 DN AADT	2044 DN AADT	HGV %
A	R132 Drumcondra Rd Lower north of Hollybank Rd	26,532	26,999	28,240	29,096	6.4%
B	Hollybank Rd	2,888	2,936	3,024	3,161	1.3%
C	R132 Drumcondra Rd Lower between Hollybank Rd and R131 Clonliffe Rd	25,577	26,027	27,238	28,050	6.6%
D	R132 Drumcondra Rd Lower south of R131 Clonliffe Rd	28,720	29,223	30,527	31,490	6.0%
E	R131 Clonliffe Rd between R132 Drumcondra Rd Lower and Jones' Road	12,041	12,240	12,618	13,178	1.6%
F	Jones' Rd	5,893	5,992	6,199	6,453	2.8%
G	R131 Clonliffe Rd east of site access	13,548	26,999	14,220	14,831	2.1%

19.5.3 Construction Phase

19.5.3.1 Construction Phasing

It is anticipated that the development will be constructed in four stages: 1a, 1b, 2 and 3, as shown in **Figure 19.4.**

Figure 19.4 Indicative Site Phasing



The following number of units would be constructed in each Phase:

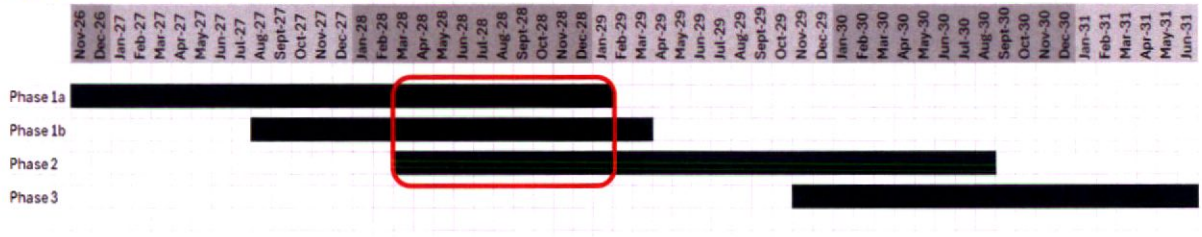
- Phase 1a: 254 units;
- Phase 1B: 145 units;
- Phase 2: 478 units; and
- Phase 3: 254 units.

Access to the Phase 1 construction site would be via the Clonliffe Road, all movements, access junction. Access for Phases 2 and 3 would be from the left in – left-out access junction on Drumcondra Road Lower.

19.5.3.2 Construction Phasing

It is anticipated that construction will proceed as set out in **Figure 19.5**.

Figure 19.5 Construction Phasing



The full site would be constructed over a period of 60 months. The busiest period in terms of construction activity is expected to be between March 2028 and January 2029, when Phases 1a, 1b and 2 will be under construction at the same time.

19.5.3.3 Construction Routes

19.5.3.3.1 HGV

It is anticipated that the majority of HGV traffic will arrive from, and return to, the M50, using the routes shown in **Figure 19.6.**

- The R131 Clonliffe Road / Jones's Road signalised junction; or
- The Left-in / Left-out junction on R132 Drumcondra Road Lower.

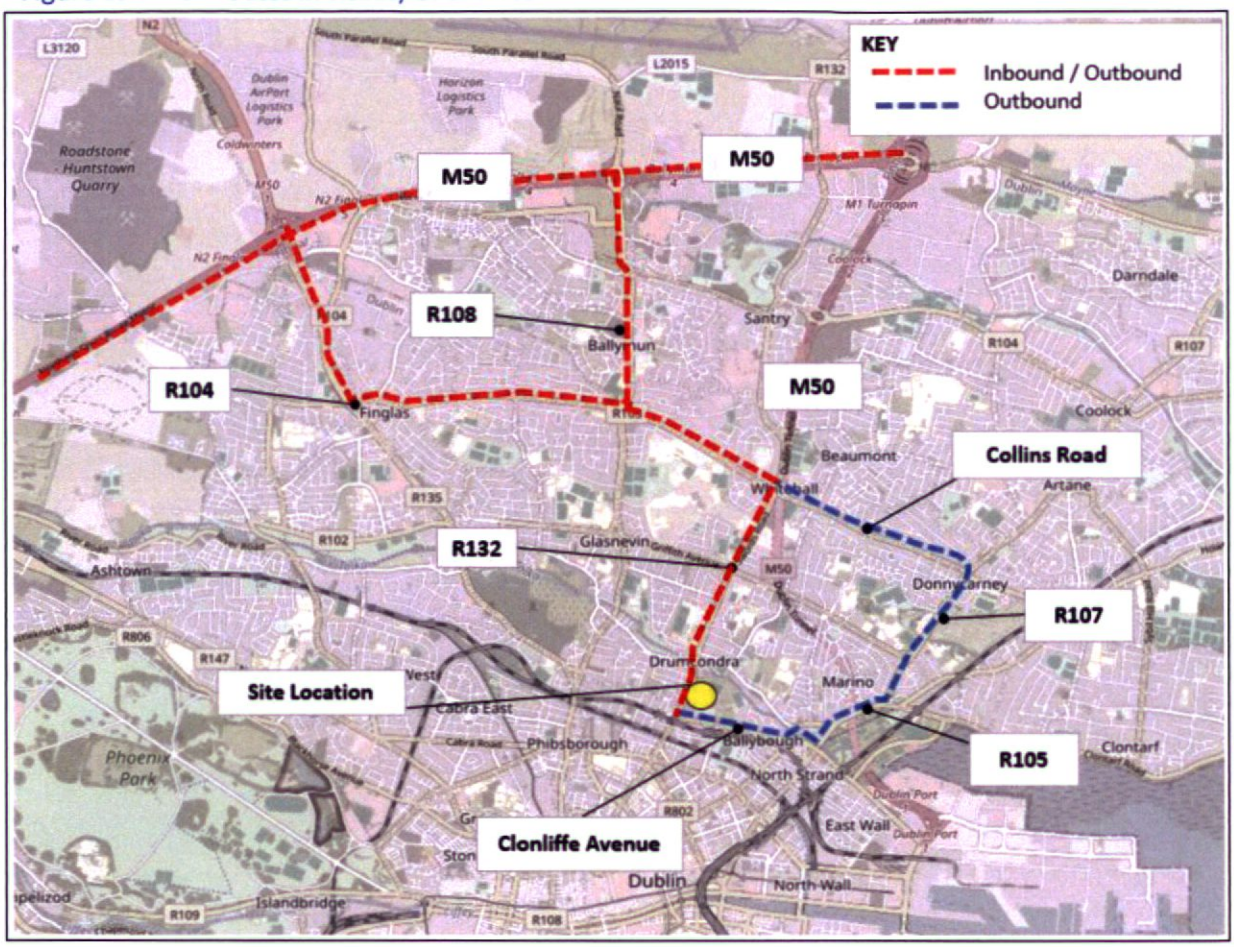
Traffic associated with Phases 2 and 3 will enter via the Drumcondra site entrance, with a left in/ left out operation.

Traffic associated with Phase 1 will travel further along Drumcondra Road and turn left on to Clonliffe Road, accessing the site from the Clonliffe Road/ Jones Road access.

Vehicles entering the site from R131 Clonliffe Road will be able to return the way that they have come, and so both arrive and leave via the M50 and R104 / R108.

Vehicles entering the site at the junction on Drumcondra Road will not be able to turn right when leaving the site, and so are likely to route back to the M50 north of the city, using Clonliffe Road, R107 and Collins Road to rejoin the N1. These routes are shown on **Figure 19.6**.

Figure 19.6 HGV routes in vicinity of the site



19.5.3.3.1 Other vehicles

Cars, LGVs and vans travelling to the site are likely to arrive from throughout the Dublin urban area, and will not be particularly restricted to the main road corridors.

19.5.3.4 Site Operating Hours

Working hours will be determined and conditioned by the Grant of Permission. It is envisaged that these will be 07:00 – 18:00 Monday to Friday and 08:00 – 14:00 on Saturday.

This will mean that the majority of workers will have arrived on site before the 'traditional' morning peak hour. Construction workers will typically depart the site from 16:00 onwards. HGVs will arrive and depart from the site at regular intervals throughout the day.

19.5.3.5 Volume of Construction Traffic

The estimated **total numbers** of construction vehicle trips, across all construction phases, is presented in **Table 19.6.**

Table 19.6 Estimated Construction Phase Traffic Volumes (Inbound trips)

Vehicle Type	Total No. Trips
Spoil & Hardcore Stone Truck	13,332
HGV (20 tonnes)	3,726
Curtain Sided Trailer	3,318
Concrete Truck	6,875
Miscellaneous Cars / Vans	37,500
Miscellaneous Ancillary Deliveries	22,500
Total	**87,252**

Table 19.7 provides a breakdown of the total number of expected inbound vehicle trips per construction phase, broken down to an average daily basis.

Table 19.7 Estimated Traffic Volume per Phase

Phase	No. units	Total Inbound Trips		Phase Duration		Daily inbound trips	
		Car / van	HGV	Months	Working days	Car / van	HGV
1a	254	8,422	11,173	27	567	15	20
1b	145	4,808	6,378	20	420	11	15
2	478	15,849	21,027	30	630	25	33
3	254	8,422	11,173	20	420	20	27
TOTAL	**1,131**	**37,500**	**49,752**				

During the peak construction period in 2028, when Phases 1a, 1b and 2 are active on site at the same time, it is anticipated that there will be a daily average of:

- 68 inbound HGV trips; and
- 51 inbound car / van trips.

19.5.3.6 Impacts of Construction Traffic

Table 19.8 presents the predicted increases in traffic during the construction stage, on the roads in the vicinity of the site. For the purposes of the assessment, construction impact has been assessed in 2028.

Table 19.8 Traffic impact during the Construction Phase (Two way)

Link	Location	2028 Base (AADT)		Construction Traffic AADT			% impact of Construction Traffic	
		(all veh)	(HGV)	Car / van	(HGV)	Total	(HGV)	Total
A	R132 Drumcondra Rd Lower north of Hollybank Rd	26,532	1,801	31	96	127	5.3%	0.5%
B	Hollybank Rd	2,888	41	0	0	0	0.0%	0.0%
C	R132 Drumcondra Rd Lower between Hollybank Rd and R131 Clonliffe Rd	25,577	1,781	61	96	157	5.4%	0.6%
D	R132 Drumcondra Rd Lower south of R131 Clonliffe Rd	28,720	1,820	44	0	44	0.0%	0.2%
E	R131 Clonliffe Rd between R132 Drumcondra Rd Lower and Jones' Road	12,041	208	60	96	156	46.2%	1.3%
F	Jones' Rd	5,893	172	0	0	0	0.0%	0.0%
G	R131 Clonliffe Rd east of site access	13,548	301	28	40	68	13.4%	0.5%

Table 19.8 shows that the percentage increases in total traffic during the construction stage will be negligible, ranging from 0.2% to 1.3%. In terms of HGV traffic, HGVs are expected to increase by 5.3% and 5.4% on Drumcondra Road Lower, to the north and south of R131 Clonliffe Road respectively. This is below the 10% threshold where more detailed analysis would be required.

The predicted increase in HGVs on R131 Clonliffe Road between the R132 and the site access junction during the construction stage is 46%. In terms of an absolute increase, this equates to 96 two-way HGV trips per day, around 6 inbound HGVs per hour, or one every 10 minutes. These is also a predicted 13.4% increase in HGV traffic on Clonliffe Road to the east of the site access.

As 'sensitive links', these increases are above the IEMA 10% threshold, and a more detailed assessment is required. This assessment is presented below.

Beyond the assessed links, the effects of HGV traffic would be expected to reduce with distance from the site, as HGV traffic diverges towards different destinations throughout the Greater Dublin area. For example, the M50 between Junctions 4 and 5 had an AADT of 150,737 in 2024[41], of which 11,395 (7.6%) were HGVs. If all of the development's generated daily HGV movements (136) were to travel on this section of the M50, it would constitute an increase of 1.2%.

19.5.3.7 Severance

The IEMA Guidelines advise that "*Severance is the perceived division that can occur within a community when it becomes separated by a major traffic artery*".

[41] Source: trafficdata.tii.ie, ATC Site 1501.

The potential for traffic associated with the proposed development to cause severance is assessed on a case-by-case basis using professional judgement where traffic increases are predicted on roads through residential settlements.

Increased severance can result in the isolation of areas of a settlement or individual properties.

Severance may result from the difficulty of crossing a heavily trafficked road or a physical barrier created by the road itself. Severance effects could equally be applied to residents, motorists or pedestrians.

With reference to **Table 19.1**, the sensitivity of R131 Clonliffe Road to changes in traffic levels is assessed as Medium for severance. There are residential properties on both sides, but the road is currently subject to a moderate level of traffic, and so a degree of severance already exists.

With reference to **Table 19.2** the magnitude of change in HGV traffic on R131 Clonliffe Road is assessed as Low to Moderate as the predicted increases are between 13.4% and 46.2%

When the Low to Medium magnitude of effect is combined with the Medium sensitivity of the receptor, in accordance with **Figure 19.2**, it can be concluded that there will be **short-term, slight to moderate** Severance effects, which are considered to be **Not Significant** in accordance with the EIA Directive.

19.5.3.8 Road Vehicle Driver and Passenger Delay

IEMA Guidelines advise *"delays are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system"*.

Additional delay to non-development traffic will occur at several points on the road network in the vicinity of the subject site, including:

- At the R132 / R131 signalised junction, which experiences traffic delays during peak hours;
- At the R132 / Jones's Road / Site access junction, where there will be additional turning movements;
- At junctions along the local road network which might be affected by increased traffic; and
- At side roads where the ability to find gaps in mainline traffic may be reduced, thereby lengthening delays.

With reference to **Table 19.1**, the sensitivity of R131 Clonliffe Road to changes in Driver Delay is assessed as Medium. The nearby R132 / R131 signalised junction, experiences congestion at peak hours, which can affect traffic flows on Clonliffe Road.

With reference to **Table 19.2** the magnitude of change in HGV traffic on R131 Clonliffe Road is assessed as Low to Moderate as the predicted increases are between 13.4% and 46.2%.

When the Low to Moderate magnitude of effect is combined with the Medium sensitivity of the receptor, in accordance with **Figure 19.1**, it can be concluded that there will be **short-term, slight to moderate** Driver Delay effects, which are considered to be **Not Significant** in accordance with the EIA Directive.

19.5.3.9 Non-Motorised User Delay and Amenity

Traffic volume, composition, speed, pedestrian footways and crossings all contribute to the level of delay and amenity experienced by pedestrians and other vulnerable road users.

Clonliffe Road is a Local Connector Road that provides an east-west link between the N1 / R132 corridor and the M50 to the east. It therefore, accommodates a moderate level of traffic throughout the day. Existing footways are generally ~2m in width, and of good quality. The footway alongside the south side of the road is separated from traffic by parallel parking bay. The overall pedestrian environment is reasonably pleasant, and pedestrians need not walk in close proximity to moving traffic.

With reference to **Table 19.1**, the sensitivity of R131 Clonliffe Road to changes in Pedestrian Delay and Amenity is assessed as Low.

With reference to **Table 19.2** the magnitude of change in HGV traffic on R131 Clonliffe Road is assessed as Low as the predicted increases are between 13.4% and 46.2%.

When the Low to Moderate magnitude of effect is combined with the Medium sensitivity of the receptor, in accordance with **Figure 19.1**, it can be concluded that there will be **short-term, slight to moderate** effects on Non-Motorised User Delay and Amenity, which are considered to be **Not Significant** in accordance with the EIA Directive.

19.5.3.10 Fear and Intimidation on and by road users

The IEMA Guidelines advise that the extent of fear and intimidation is dependent on:

- The total volume of traffic;
- The heavy vehicle composition;
- The speed these vehicles are passing; and
- The proximity of traffic to people.

The Guidelines continue, "*In the absence of commonly agreed thresholds, previous work that put forward thresholds for fear and intimidation based on an earlier study (Crompton and Gilbert, 1976) can be useful. These thresholds define the degree of hazard to pedestrians by average traffic flow, 18-hour heavy vehicle flow and average speed over an 18-hour day in miles/hour*".

Existing footways on Clonliffe Road are generally ~2m in width, and of good quality. The footway alongside the south side of the road is separated from traffic by parallel parking bay. The overall pedestrian environment is reasonably pleasant, and pedestrians need not walk in close proximity to moving traffic.

With reference to **Table 19.1**, the sensitivity of R131 Clonliffe Road to changes in Fear and Intimidation is assessed as Low.

SYSTRA has calculated the 'Degree of Hazard' for the sections of Clonliffe Road to the east and west of the Clonliffe Road site access junction, based upon the criteria set out in Table 3.1, 3.2 and 3.3 of the IEAMA Guidelines.

The existing Fear and Intimidation impact for users of these links is assessed as 'Moderate', based upon a 'Degree of Hazard' score of 30.

During the construction phase, an additional 40-96 daily two-way HGV trips are expected on Clonliffe Road. Traffic speeds, and overall average hourly trips will remain similar to present.

Despite the increase in HGV trips, and small increase in average hourly flows, the calculated 'Degree of Hazard' score for Clonliffe Road remains at 30, meaning that the resultant Fear and Intimidation impact

for users of these links remains as 'Moderate', meaning the magnitude of effect of the development compared to the existing situation is 'Negligible'.

When the Negligible magnitude of effect is combined with the Low sensitivity of the receptor, in accordance with **Figure 19.1**, it can be concluded that there will be **short-term, Not Significant** effects on Fear and Intimidation, which are considered to be **Not Significant** in accordance with the EIA Directive.

19.5.3.11 Road User and Pedestrian Safety

A calculation has been undertaken to quantify the increased level of accident risk that could be expected due to an increase in traffic associated with the proposed development. This has been undertaken using accident rates for different link types set out in DMRB. SYSTRA requested local accident data from the Road Safety Authority (RSA), but as documented in the TA, it is not able to share accident data at present, due to GDPR issues.

The likelihood of an accident occurring is commonly expressed in terms of '*accidents per million vehicle-km*'. Accidents that are appraised in relation to transport are predominantly those in which personal injury is sustained by those involved (personal injury accidents (PIAs)).

Between R132 Drumcondra Road Lower and the R131 / Ballybough Road / Poplar Road junction, R131 Clonliffe Road is approximately 1km in length. The road can be classified as 'urban typical single carriageway' in accordance with the criteria set out within DMRB. Accident rates from the DMRB for this standard of road are:

- Urban typical single carriageway: 0. 844 PIA per million vehicle km.

The calculated annual change in predicted PIAs on this section of Clonliffe Road as a result of the development is 0.04 PIA per year. It is considered that the magnitude of this effect is negligible, but receptor sensitivity to this effect is always considered as high. When combined, the effect can be classified as **short-term, slight** and overall, **Not Significant** in accordance with the EIA Directive.

19.5.4 Operational Phase

19.5.4.1 Modelled Hours & Years

Traffic flows have been calculated for the following scenarios:

- DN 2029 (Year of Opening);
- DN 2029 + Development;
- DN 2034 (YoO+ 5);
- DN 2034 + Development;
- DN 2044 (YoO + 15); and
- DN 2044 + Development.

The assessment assumes that Phases 1a and 1b of the development are operational in 2029, and that Phase 2 of construction is also ongoing on site. The assessment assumes that the whole development is fully complete by 2034.

19.5.4.2 Impacts during Operation

Table 19.9 presents the predicted increases in traffic during the operational stage, on the roads in the vicinity of the site.

Table 19.9 Traffic impact during the Operational Phase (Two Way)

Link	Location	2029			2034			2044		
		DN AADT	DN + DEV	% increase	DN AADT	DN + DEV	% increase	DN AADT	DN + DEV	% increase
A	R132 Drumcondra Rd Lower north of Hollybank Rd	26,999	27,341	1%	28,240	29,088	3.0%	29,096	29,943	2.9%
B	Hollybank Rd	2,936	2,952	1%	3,024	3,069	1.5%	3,161	3,206	1.4%
C	R132 Drumcondra Rd Lower between Hollybank Rd and R131 Clonliffe Rd	26,027	26,459	2%	27,238	28,254	3.7%	28,050	29,066	3.6%
D	R132 Drumcondra Rd Lower south of R131 Clonliffe Rd	29,223	29,529	1%	30,527	31,331	2.6%	31,490	32,294	2.6%
E	R131 Clonliffe Rd between R132 Drumcondra Rd Lower and Jones' Road	12,240	12,706	4%	12,618	13,795	9.3%	13,178	14,354	8.9%
F	Jones' Rd	5,992	6,046	1%	6,199	6,352	2.5%	6,453	6,606	2.4%
G	R131 Clonliffe Rd east of site access	13,774	13,955	1%	14,220	14,589	2.6%	14,831	15,200	2.5%
H	Development Access (Drumcondra Rd Lower)		448			938			938	
I	Development Access (Clonliffe Rd)		452			1,281			1,281	

Table 19.9 shows that the predicted percentage increase in AADT as a result of the development, in all scenarios, ranges between 1% and 4%, except for Link E, the section of Clonliffe Road between R132 Drumcondra Road Lower and Jones' Road. On this link, the predicted impact is 9.3% in 2034, and 8.9% in 2044.

None of the predicted increases during the Operational phase of the development is predicted to exceed 10% therefore, in accordance with the IEMA Guidelines, a detailed assessment is not required.

19.5.4.3 Junction Assessment

Section 12 of the Transport Assessment that accompanies the planning application provides the results of junction capacity assessments undertaken as part of the traffic modelling exercise.

Travel demand from the development has been calculated using the TRICS trip-rate database, to which a 'target' mode split (as agreed with DCC during the TA Scoping Stage) has been assigned, to calculate the number of trips by mode, in each hour between 07:00 and 19:00 across a typical day.

The proposed development is expected to generate in the region on 45 arrivals and 135 departures (180 two-way trips) by car in the AM peak hour, and in the region of 114 arrivals and 61 departures (175 two-way trips) in the PM peak.

This vehicular traffic has been split proportionally between the R132 Drumcondra Road Lower and Clonliffe Road access junctions, based upon the number of units served by each. Development traffic has then been assigned through the external road network based upon the observed turning proportions obtained from the April 2025 traffic surveys.

Junction capacity modelling, using industry-standard Junctions and LINSIG software was then undertaken at the following locations:

- Drumcondra Road Lower / Hollybank Road priority junction;
- Drumcondra Road Lower / Clonliffe Road signalised junction; and
- Clonliffe Road / Jones's Road signalised junction.

The modelling found that each of the junctions is expected to operate within capacity with the development place, in both the 2030 and 2045 future years. Full details are provided in **Section 12** of the TA.

19.5.4.4 Overall Effect

The overall effect during the Operational Stage is assessed to be **negative, likely and long-term, and of slight significance**, and therefore **Not Significant** in accordance with the EIA Directive.

19.6 Mitigation Measures

19.6.1 Incorporated Design Mitigation

The following mitigation measures have been incorporated into the design, which will assist in the uptake of sustainable travel modes:

- A reduced level of car parking (compared to DCC maximum standards) will be provided, which reflects the accessible location of the site close to high-frequency bus services and Drumcondra Rail Station.

- Substantial numbers of cycle parking spaces have been provided within the site for residents, employees and visitors. These include standard, accessible and cargo bike spaces.
- Two Mobility Hubs will be provided within the site, which it is anticipated will bring together, car and bike hire (electric and standard), travel information and bike maintenance and cleaning facilities into two prominent locations within the site.
- Eight car-club spaces have been located at prominent positions with the site, to support residents who need occasional access to a car.
- An internal site layout that has been designed in accordance with DMURS, which prioritises pedestrian and cycle movement over vehicular movements, creating a safer environment for those on foot or bike.
- The entire site, and external access junction proposals, has been the subject of a Stage 1 / 2 Road Safety Audit, which has assessed safety aspects for all modes of transport. The recommendations of the Audit have been accepted by the Design Team.

19.6.2 Construction Phase

A Construction Management Plan (CMP) and Construction Environmental Management Plan (CEMP), which have been produced by DCON Safety Consultants, accompany the planning application. These documents (amongst other things) set out the principles by which construction traffic will be planned for, managed, and monitored, to ensure that any impacts on local communities, vulnerable users and road users, will be minimised as far as possible. These include:

- A commitment to limit HGV traffic to specific construction routes, and avoid sensitive times of the day (which can include peak network times, school arrival times etc).
- Daily construction programmes to minimis disruption by staggering HGV arrival times.
- Provision of sufficient staff parking within the site.
- A requirement for the works contractor to promote sustainable and shared travel.
- Wheel washing facilities and dust-suppression measures within the site.
- Measures to safeguard pedestrian routes in the vicinity of the site.
- A Construction Stage Health and Safety Plan.

19.6.3 Operational Phase

A Mobility Management Plan (MMP) has also been prepared by SYSTRA and is included in the Transport Assessment (as part of the planning application submission), as a 'best practice' measure, to accompany the planning application.

The overall aim of the MMP is to minimise the number of car trips to and from the development, and promote sustainable transport modes. The suggested measures are primarily focussed on encouraging walking, cycling and the use of public transport.

The MMP builds upon the site's excellent location in terms of promoting sustainable transport, and the infrastructure and facilities that will be provided as part of the development. As noted in Section 19.4, the site is located next to the R132 Drumcondra Road Lower bus corridor, which is one of the core bus corridors serving the city centre, and Drumcondra Rail Station is a 5-minute walk from the development. These services will be enhanced in the future with the advent of Bus Connects, DART and Metrolink. Within the development, over 2,500 cycle parking spaces will be provided, along with bike hire and

maintenance facilities. New pedestrian and cycle routes will be opened up through the site, which will enhance permeability through the area.

19.7 Residual Impacts

19.7.1 Construction Phase

The residual impacts during the Construction Phase are set out below:

- There will be **short-term, slight** Severance effects, which are considered to be **Not Significant** in accordance with the EIA Directive.
- There will be **short-term, slight** Road Vehicle Driver and Passenger Delay effects, which are considered to be **Not Significant** in accordance with the EIA Directive.
- There will be **short-term, slight** effects on Non-Motorised User Delay and Amenity, which are considered to be **Not Significant** in accordance with the EIA Directive.
- There will be **short-term, Not Significant** Fear and Intimidation effects, which are considered to be **Not Significant** in accordance with the EIA Directive.
- There will be **short-term, slight** effects on Road User and Pedestrian Safety, which are considered to be **Not Significant** in accordance with the EIA Directive.

No significant residual impacts have therefore been identified during the construction phase.

19.7.2 Operational Phase

The overall residual effect during the Operational Stage is assessed to be **negative, likely and long-term, and of slight significance**, and therefore **Not Significant** in accordance with the EIA Directive.

19.8 Monitoring

No specific monitoring is proposed. The MMP is intended to be a 'live' document that is intended to be kept up-to-date and reviewed throughout the construction period. Annual travel surveys are proposed as part of the MMP, to track changes in mode-share over the first three years of the development.

19.9 Interactions

This chapter pertaining to the Traffic and Transport aspects of the Proposed Development, has the potential to interact with aspects of the following chapters of this EIAR:

- Chapter 7: Population and Human Health;
- Chapter 9: Land, Soils, Geology and Hydrogeology;
- Chapter 11: Air Quality;
- Chapter 12: Climate;
- Chapter 13: Noise and Vibration; and
- Chapter 20: Material Assets - Waste

19.9.1 Population and Human Health

An assessment of the potential impact of the Proposed Development on human health is included in Chapter 7 of this EIAR. There is a potential risk of dust generated from excavation and stockpiling of soil during the Construction Phase of the Proposed Development posing a human health risk in the absence

of standard avoidance and mitigation measures which will be implemented to be protective of human health.

Appropriate industry standard and health and safety legislative requirements will be implemented during the Construction Phase of the Proposed Development that will be protective of site workers.

19.9.2 Lands, Soils, Geology and Hydrogeology

An assessment of the potential impact of the Proposed Development in the form of impacts on lands, soils and geology associated with the Proposed Works are laid out in Chapter 9 - 'Lands, Soils and geology.

The main potential impacts could occur during the construction stage, primarily as a result of the import and export of materials to the site, and the way in which soils and stockpiles of fuels and chemicals are managed. These procedures are set out in Chapter 9.

19.9.3 Air Quality

An assessment of the potential impact of the Proposed Development in the form of impacts on air quality associated with the Proposed Works are laid out in Chapter 11 - 'Air Quality'.

Two main elements are considered:

- The potential increase in dust during construction; and
- Impacts on air quality as a result of increased traffic.

The assessment concludes that no adverse air quality impacts are likely to occur at sensitive receptors during either the construction or operational stages. It proposes standard dust suppression measures, which are detailed in the CEMP.

19.9.4 Climate

An assessment of the potential impact of the Proposed Development on Climate is set out in Chapter 12 - 'Climate.

All traffic generated by the development, during both the construction and operational stages, will have an associated carbon impact, which will have an effect on climate. The extent to which this will impact climate change is related to the nature and type of the vehicle, and how private and commercial vehicle fleets will evolve over time – likely transitioning from fossil fuel to electric.

The location of the development supports sustainable travel, either on foot, by bike or by nearby high-frequency public transport links. The Mobility Management Plan that accompanies the application aims to maximise use of these modes by residents of the site.

19.9.5 Noise and Vibration

An assessment of the potential impact of the Proposed Development in the form of noise impacts associated with the Proposed Works are laid out in Chapter 13 - 'Noise and Vibration'.

Three main traffic-related elements are considered:

- The increase in noise caused by construction vehicles; and
- The increase in noise caused by vehicles entering and leaving the site; and
- Increases in noise caused by additional traffic on the external road network.

The assessment concludes that the impact of noise from operational traffic will be negligible and will not have a significant negative impact.

19.9.6 Material Assets: Waste

An assessment of the potential impact of the Proposed Development on Waste is set out in Chapter 20 'Material Assets: Waste'.

All waste generated during the construction phase of the site will need to be either re-used on site, or transported off-site for suitable re-use / disposal. Vehicle trips resulting from the transport of this waste have been factored into the construction traffic figures used in the Traffic and Transport Assessment.

When operational, the development will generate commercial and residential waste, which will generate small, regular movements of service vehicles. This is typical of any residential development, and is not assessed as significant.

19.10 Indirect and/or Secondary Impacts

No indirect or Secondary Impacts have been identified. Beyond the assessed road links, the effects of Construction and Operational traffic would be expected to reduce with distance from the site, as HGV traffic diverges towards different destinations throughout the Greater Dublin area.

19.11 Cumulative Impacts

19.11.1 Initial Assessment

Table 19.10 lists the projects that have been considered for potential cumulative effects, and provides a summary of the likely effects of each.

Table 19.10 Cumulative Projects

Planning Ref	Description	Assessment	Potential significant cumulative effect?
DCC-2935/20, ABP-308193	Lands off Clonliffe Road – Hotel Development	Traffic demands from the development have already been considered within the assessment.	Yes. Traffic from the hotel development has already been included in the calculation of development flows, meaning that the impacts of the hotel are already included in the main assessment.
D4062/24, ABP-321745-25	Residential Development at Drumcondra Road	Minimal cumulative traffic impact as only two parking spaces associated with the development	No
LRD6067/23-S3	Permission for amendments to a permitted Mixed-Use LRD	Permission related to amendments to roof structure - no traffic impact.	No
ABP-317136-23, LRD6006-23-S3	Permission for development LRD site along Richmond Road	Development trip generation provided in the 2023 TA states that in the AM peak hour, 4 pcu would turn left from Richmond Road onto the N1 southbound, with 2 pcu making the same movement in the PM peak hour. At the east end of Richmond Road, 4 pcu would turn right onto the R803 in the AM peak hour and 1 in the PM peak hour. Minimal traffic impact in the vicinity of the Proposed Development.	No
WEBLRD6055/25-S3A	Proposed amendment seeking permission for LRD application on Esmond Ave	Small development on brownfield site, minimal traffic impact.	No

Planning Ref	Description	Assessment	Potential significant cumulative effect?
LRD6015/22-S3, ABP-315584	Planning permission for LRD & Protected Structure on Esmond Ave	Information provided in the 2022 TA indicates the development will generate minimal levels of traffic, with 9 pcu[42] expected to route from Richmond Road to Luke Kelly Bridge in the AM peak and 4 in the PM peak. From Richmond Avenue, 4 pcu are expected to route west on Richmond Road and 12 are expected to route east in the AM peak. In the PM peak 2 are expected to route west and 6 east. This low level of trip generation would have a minimal impact in the vicinity of the Proposed Development as traffic would dissipate via several routes.	No
4067/24	Planning Permission for Residential development on Orchard Road	Small development with only 4 parking spaces, no parking provided for residents. Minimal traffic impact.	No

[42] Passenger Car Unit (pcu) is a metric used in traffic engineering to represent the space occupied on a road by different types of vehicles relative to a standard passenger car, which equals 1 pcu. For comparison, goods vehicles have pcu factors of 2 - 2.5pcu.

Planning Ref	Description	Assessment	Potential significant cumulative effect?
LRD6001/22-S3A, ABP-315062-22	Proposed Amendment to Parent Permission LRD site at Daneswell Place	Information provided in the 2022 TA indicates the development will generate 25 vehicle arrivals in the AM peak and 75 departures. In the PM peak the development would generate 69 vehicle arrivals and 36 departures. The TA indicates the vehicle trips would mainly travel north/south on the R108 corridor from which the site is accessed, or north-west on the R135. Due to dissipation from the site there would be minimal traffic impact in the vicinity of the Proposed Development.	No
LRD 6009/23-S3, ABP-317438-23	LRD at St. Vincent's Hospital at Richman Road	Information provided in the EIAR chapter for the development indicates that at the junction of Richmond Road and the N1 there would be an impact of 39 development trips (1.78%) in the AM peak and 61 (2.92%) in the PM peak. At the junction of the N1/Clonliffe Road there would be an impact of 21 development trips (0.80%) in the AM peak and 28 (1.20%) in the PM peak, and at the junction of Clonliffe Road and the R803 there would be an impact of 18 trips (0.88%) in the AM peak and 27 (1.29%) in the PM peak. This low level of trip generation would have a negligible cumulative impact.	No
ABP-317121	BusConnects - Swords to City Centre Core Bus Corridor Scheme	Potential cumulative effects during both construction and operation.	Yes – further analysis provided in Section below.

Planning Ref	Description	Assessment	Potential significant cumulative effect?
ABP-314610	BusConnects – Ballymun/Finglas to City Centre Core Bus Corridor Scheme	No direct impact on N1 corridor or Clonliffe Road.	No
ABP-313182	BusConnects – Clongriffin to City Centre Core Bus Corridor Scheme	No direct impact on study area roads.	No
ABP-314724	Railway (Metrolink-Estuary to Charlemont via Dubin Airport) Order 2022	Construction effects only during construction of Section AZ4 Northwood to Charlemont. N1 indicated as a potential construction traffic haul route to O'Connell Street station and construction compound.	Yes – further analysis provided in Section below.
DCC 3483/22, ABP-314092	Permission for development on Richmond Ave	Small development, no trip generation information available. Minimal traffic impacts due to distance from site.	No
ABP-314232	Dart+ West Railway Order- Dublin City to Maynooth and M3 Parkway	Construction effects only. Outwith area of influence to north-east of Proposed Development	No
ABP-320164	DART + Coastal North Railway Order 2024 - Northern Line between Dublin City Centre and Drogheda including the Howth Branch	Construction effects only. Outwith area of influence to north-east of Proposed Development	No

Planning Ref	Description	Assessment	Potential significant cumulative effect?
ABP-313289	'Hartfield Place', Swords Road, Whitehall, Dublin 9	Located on and accessed from Swords Road to the north-west of the proposed development. Information contained within the ES for the development indicates that during the construction phase, the increase in traffic would not exceed 10% at the Swords Road / Iveagh Road / Site Access junction in either the AM or PM peak. During the operational phase the increase in traffic would not exceed 6% at the Swords Road / Iveagh Road / Site Access junction in the AM or PM peak. When dissipated from the point of origin the effects in the vicinity of the proposed development are likely to be minimal.	No
D0533-01	Greater Dublin Drainage Project consisting of a new wastewater treatment plant, sludge hub centre, orbital sewer, outfall pipeline and regional biosolids storage facility in County Dublin	North of M50, outwith area of influence.	No

19.11.2 Bus Connects – Swords to City Centre

The 'Swords to City Centre' Core Bus Corridor (CBC) was consented in June 2024. The 12km-long route commences in Swords, passes to the east of Dublin Airport, and then runs south though Glasnevin, Drumcondra and Phibsborough, before terminating at Parnell Street.

In the vicinity of the site, the Swords CBC runs along R132 Drumcondra Road Lower. As for the majority of the CBC corridor, continuous bus lanes will be provided on both sides of the Drumcondra Road Lower, along with segregated cycle and pedestrian facilities. Enhanced pedestrian and cycle crossing facilities will be provided across all of the main junctions along this section. The R132 / R131 Clonliffe Road signalised junction will be reconfigured, with the removal of a traffic lane on each of the R132 approaches, and the provision of dedicated Toucan cycle crossings.

19.11.2.1 Construction effects

The Bus Connects website[43] states that it is expected that all twelve CBC corridors will be completed by 2030, with construction of the first corridor expected to start in late 2025. No specific dates are provided for each Corridor. The website notes that "*The construction of the corridors will be delivered on a phased basis in order to reduce the traffic impacts that could arise should all twelve be constructed concurrently*".

Information provided in the Construction chapter of the Swords CBC EIAR indicates that:

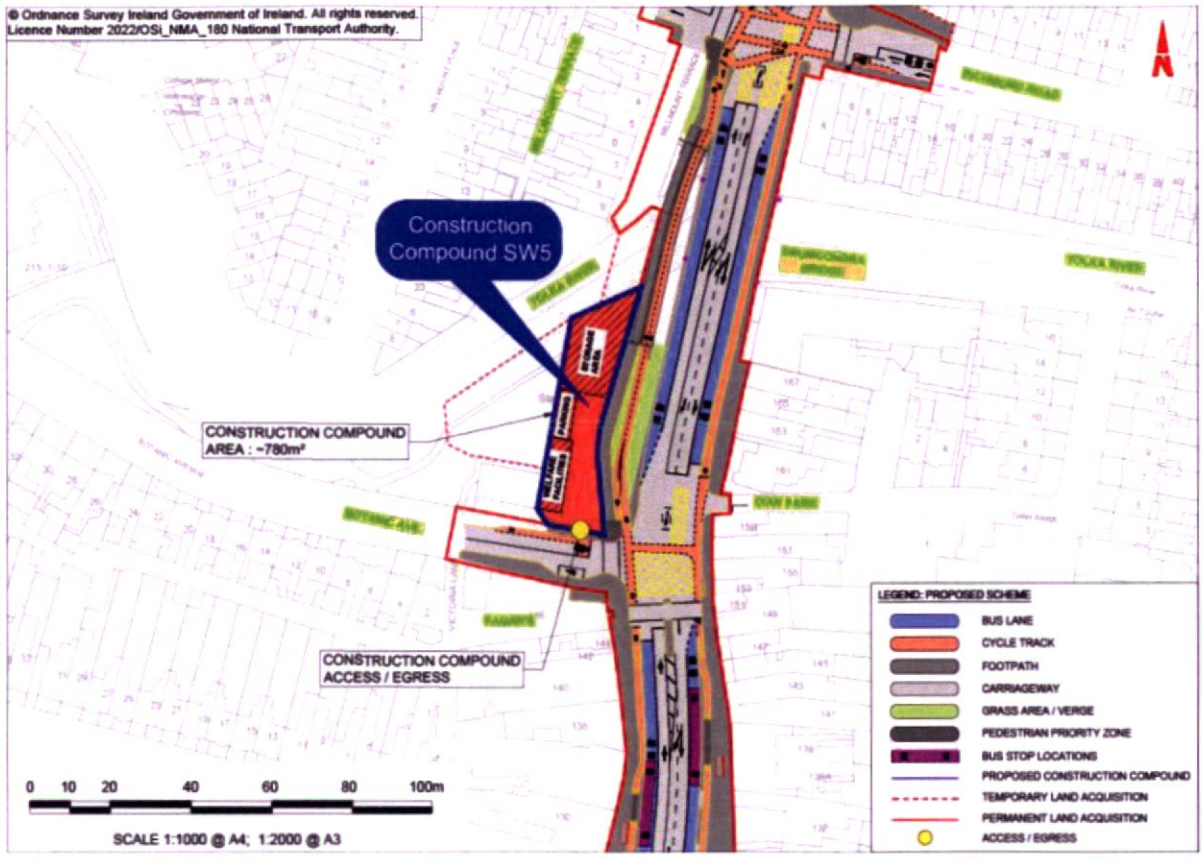
- Construction of Section 4b (Griffith Avenue to Botanic Avenue) is expected to take 18 months from Q2 of year 2 until Q3 of year 2; and
- Section 5a (Botanic Avenue to North Frederick Street) is expected to be constructed over 12 months from Q1 to Q4 of year 2.

This means that there will be a period of around 12 months when construction of the Swords CBC on Drumcondra Road Lower could run concurrently with the Clonliffe LRD construction programme.

The Construction Compound for this section would be located at Frank Flood Bridge, between the River Tolka and Botanic Avenue, with access/egress from Botanic Avenue, therefore construction traffic accessing this compound would route via the N1 in the vicinity of the Proposed Development.

[43] https://busconnects.ie/cities/dublin/core-bus-corridors/#:~:text=Subject%20to%20completion%20of%20various,the%20delivery%20of%20the%20Scheme, accessed 06/06/25

Figure 19.7 Swords CBC Construction Compound Location



'Chapter 5: Construction' within the CBC EIAR states that bus lane closures will be in place on Section 4b and 5, but that no traffic lanes will be closed (other than an overnight or weekend closure on the R132 at Frank Flood Bridge whilst the main deck span for the proposed cycle and pedestrian bridge is lifted into place). Traffic flows could be affected by:

- Service buses being diverted into traffic lanes; and
- Additional HGV trips associated with CBC construction. The Construction Chapter estimates that the peak daily plant and equipment numbers on Sections 4b will be 34 vehicles, which would have a negligible impact on traffic flow.

SYSTRA assessed the cumulative impact of the Swords CBC scheme during the Construction Stage will be Medium. Combined with the Low sensitivity of the R132 Drumcondra Road Lower, this results in an assessed **short-term, slight to moderate** cumulative effect, which is considered to be Not Significant in accordance with the EIA Directive.

This effect can be mitigated through coordination between the two schemes, which would aim to avoid peak works on both sites occurring at the same time. The CBC EIAR states that, *"Interface liaison will take place on a case-by-case basis through the NTA, as will be set out in the Construction Contract, to ensure that there is coordination between projects, that construction access locations remain unobstructed by the Proposed Scheme works and that any additional construction traffic mitigation measures required to deal with cumulative impacts are managed appropriately".*

19.11.2.2 Operational Effects

A design for the Clonliffe LRD site access junction on Drumcondra Road Lower has been produced that integrates with the consented CBC scheme.

The overall effect of the CBC scheme will be to increase bus travel and reduce the number of private vehicles on Drumcondra Road Lower.

The reconfigured R132 / R131 Clonliffe Road is assessed within the Swords CBC 'Junction Design Report', which models the junction in LINSIG, using predicted traffic and bus flows with the CBC in place. In the presumed opening year of 2028, the model predicts that the junction will have a Practical Reserve Capacity (PRC) of 13.7% in the AM peak hour, and 21.1% in the PM peak hour.

The Clonliffe TA predicted that, when fully built out, the development will contribute an additional 135 turning movements at the R132 / R131 junction in the AM peak hour, and 100 in the PM peak hour. In SYSTRA's opinion, given the predicted PRC within the Bus Connects analysis, this level of traffic will be able to be accommodated at the junction without causing it to go over capacity.

The CBC scheme will be of great benefit to residents of the Clonliffe LRD, both in terms of improving the frequency and reliability of bus services into the City Centre, and out to the Airport, but also in terms of improving pedestrian and cycle facilities on Drumcondra Road Lower. Residents will have a high quality, segregated cycle route directly adjacent to the site.

The overall cumulative effect during operation is therefore assessed as **Positive, Moderate and Long-Term.**

19.11.3 Railway (Metrolink-Estuary to Charlemont via Dubin Airport) Order 2022

The MetroLink project is a planned high-capacity, high-frequency, automated railway line in Dublin, Ireland, connecting Estuary to Charlemont. It will be an underground line with 16 stations, connecting Dublin Airport, Irish Rail, DART, Dublin Bus, and Luas services. The project aims to create a fully integrated public transport network for the Greater Dublin Area.

Transport Infrastructure Ireland (TII) applied for a Railway Order for the project on 30 September 2022. The planning process is ongoing, with a decision expected later in 2025. Once an Enforceable Railway Order has been granted, work can commence on site. It is anticipated that the construction work will take between 6-8 years to complete.

19.11.3.1 Construction effects

Information provided in the Metrolink EIAR identifies that traffic flows on R132 Drumcondra Road Lower, between Griffith Avenue and Clonliffe Road are expected to increase by between 10% and 30% during the Central Dublin Main Works stage, as a result of both construction traffic, and traffic re-routeing away from the R108 corridor to the east.

Should this coincide with the construction period for the Clonliffe LRD scheme, then there would be an additional cumulative effect on R132 Drumcondra Road Lower.

This effect can be mitigated through coordination between the two schemes, which would aim to avoid peak works on both sites occurring at the same time. The Metrolink EIAR sets out strategic and remedial mitigation measures, which includes the establishment of a Project Construction Traffic Forum- with representatives from key stakeholders.

SYSTRA assesses the cumulative impact of the Metrolink scheme during the Construction Stage will be Medium. Combined with the Low sensitivity of R132 Drumcondra Road Lower, this results in an assessed **short-term, slight to moderate** cumulative effect, which is considered to be **Not Significant** in accordance with the EIA Directive.

19.11.4 Overall Cumulative Effects

The overall cumulative effect during the construction stage is assessed as **negative, likely and short-term, and of slight to moderate** significance, and therefore **Not Significant** in accordance with the EIA Directive.

The overall cumulative effect during the operational stage, is assessed as **positive, likely and long-term**, and of **moderate** significance, and therefore **Not Significant** in accordance with the EIA Directive. This effect is deemed to be positive due to the greatly enhanced public transport provision that will be available to residents of the area.

19.12 Difficulties Encountered

No difficulties were encountered when preparing this Chapter.

19.13 References

- Bus Connects Dublin – Swords to City Centre Environmental Impact Assessment Report:
  - Chapter 5: Construction
  - Volume 4: Appendices A6.3 Junction Design Report
- Cycle Design Manual 2023.
- Design Manual for Urban Roads and Streets (DMURS, updated 2019); and
- Guidelines on the Information to be contained in Environmental Impact Assessment Reports (EPA, 2022).
- Institute of Environmental Management and Assessment (IEMA) publication - "Environmental Assessment of Traffic and Movement", 2023 ("the IEMA Guidelines").
- Transport Infrastructure Ireland's (TII's) Traffic & Transport Assessment Guidelines (2014).
- Transport Infrastructure Ireland 'Metrolink Environmental Impact Assessment Report' Chapter 9: Traffic and Transport.
- TII Publications: "Project Appraisal Guidelines for National Toads Unit 5.3 – Travel Demand Projections".
- TII Publications: "Project Appraisal Guidelines for National Toads Unit 16.1 – Expansion Factors for Short Period Traffic Counts".

20 Material Assets – Waste

20.1 Introduction

This chapter evaluates the likely impacts, if any, which the proposed development may have on Material Assets (related to waste management) as defined in the EIA Directive (Directive 2011/92/EU (inc 3.1(d)) as amended by Directive 2014/52/EU) and the Environmental Protection Agency (EPA) *Guidelines on the information to be contained in Environmental Impact Assessment Reports* (2022).

This chapter has also been prepared to address the issues associated with waste management during the construction and operational phases of the proposed development as described in Chapter 5 (Description of Proposed Development).

This chapter was completed by Chonaill Bradley (Bsc ENV, PG Dip Circ Econ, AssocCIWM) of AWN Consulting. Chonaill Bradley is a Principal Environmental Consultant in the Environment Team at AWN. He holds a BSc in Environmental Science from Griffith University, Australia and a Postgraduate Diploma in Circular Economy Leadership for the Built Environment from the Atlantic Technological University, Galway. He is an Associate Member of the Institute of Waste Management (AssocCIWM). Chonaill has over 10 years' experience in the environmental consultancy sector and specialises in sustainability, resource and waste management.

A site-specific Resource & Waste Management Plan (RWMP) has been prepared by AWN Consulting Ltd. to deal with resource use and waste generation during the demolition, excavation and construction phases of the proposed development and has been included as **Appendix 20.1** in Volume 3 of this EIAR. The RWMP was prepared in accordance with the Environmental Protection Agency's (EPA) document '*Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction & Demolition Projects*' (2021).

A separate Operational Waste Management Plan (OWMP) has also been prepared by AWN for the operational phase of the proposed development and is included as **Appendix 20.2** in Volume 3 of this EIAR.

The Chapter has been prepared in accordance with European Commission's Guidelines, '*Guidance on the preparation of the Environmental Impact Assessment Report* (2017)' and the EPA '*Guidelines on the Information to be contained in Environmental Impact Assessment Reports* (2022)'.

These documents will ensure the sustainable management of wastes arising at the development site in accordance with the legislative requirements and best practice standards.

20.1.1 Legislation and Guidance

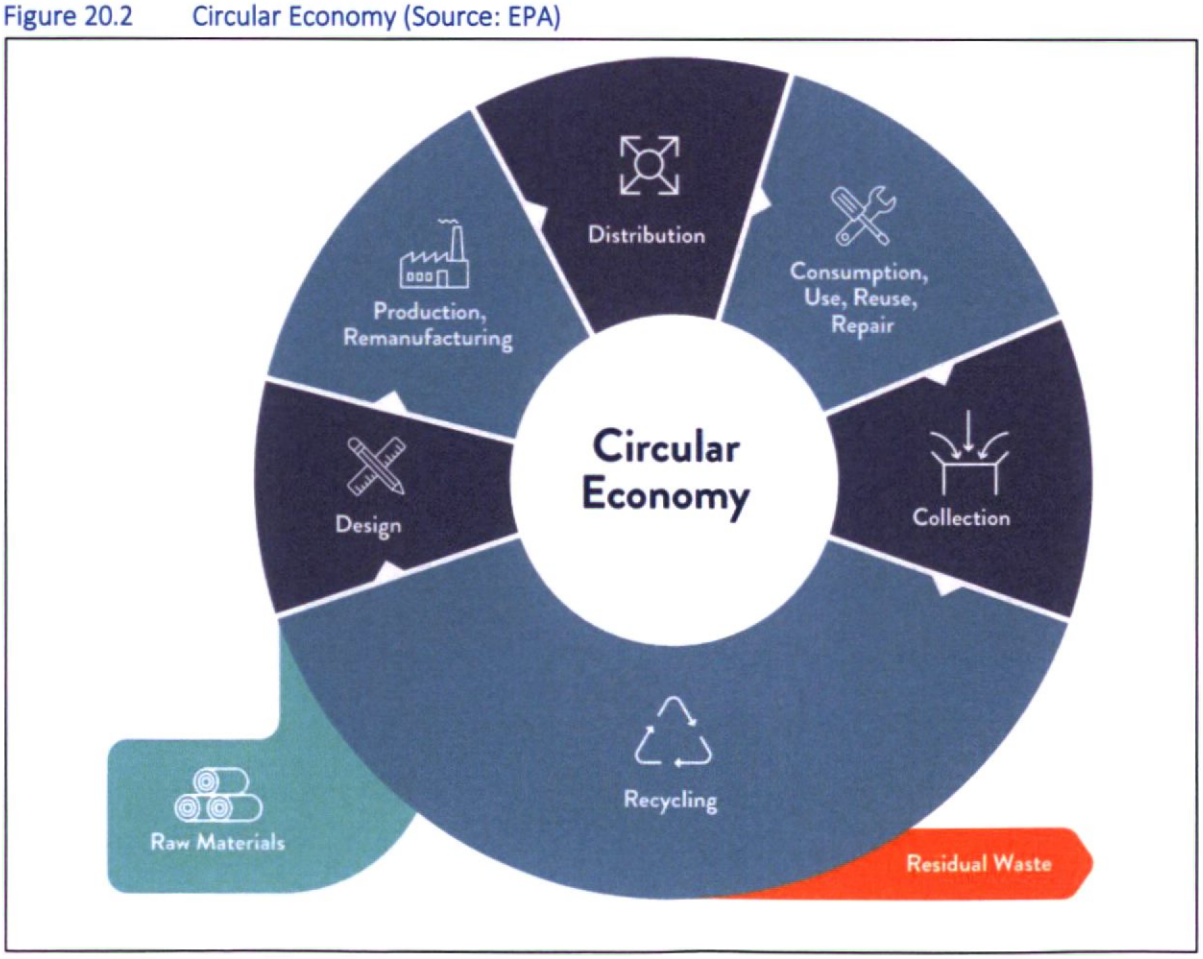
Waste management in Ireland is subject to EU, national and regional waste legislation, which defines how waste materials must be managed, transported and treated. The overarching EU legislation is the 'Waste Framework Directive (2008/98/EC)' as amended, which is transposed into national legislation in Ireland. The cornerstone of Irish waste legislation is the 'Waste Management Act 1996 (as amended)'. European and national waste management policy is based on the concept of 'waste hierarchy', which sets out an order of preference for managing waste (prevention > preparing for re-use > recycling > recovery > disposal) (**Figure 20.1**).

Figure 20.1 Waste Hierarchy (Source: European Commission)



EU and Irish national waste policy also aims to contribute to the circular economy by extracting high-quality resources from waste as much as possible. Circular Economy (CE) is a sustainable alternative to the traditional linear (take-make-dispose) economic model, reducing waste to a minimum by reusing, repairing, refurbishing and recycling existing materials and products (**Figure 20.2**).

Figure 20.2 Circular Economy (Source: EPA)



The Irish Government issues policy documents which outline measures to improve waste management practices in Ireland and help the country to achieve EU targets in respect of recycling and disposal of waste. The policy document, 'Waste Action Plan for a Circular Economy – Waste Management Policy in Ireland' (WAPCE), was published in 2020 and shifts focus away from waste disposal and moves it back up the production chain. The move away from targeting national targets is due to Irish and international waste context changing in the years since the launch of the previous waste management plan, 'A Resource Opportunity', in 2012.

One of the first actions to be taken from the WAPCE was the development of the Whole of Government Circular Economy Strategy 2022-2023 'Living More, Using Less' (2021) to set a course for Ireland to transition across all sectors and at all levels of Government toward circularity and was issued in December 2021.

The Circular Economy and Miscellaneous Provisions Act 2022 was signed into law in July 2022. The Act underpins Ireland's shift from a "take-make-waste" linear model to a more sustainable pattern of production and consumption, that retains the value of resources in our economy for as long as possible and that will significantly reduce our greenhouse gas emissions. The Act defines Circular Economy for the first time in Irish law, incentivises the use of recycled and reusable alternatives to wasteful, single-use disposable packaging, introduces a mandatory segregation and incentivised charging regime for commercial waste and streamlines the national processes for End-of-Waste and By-Products decisions.

The National Waste Management Plan for a Circular Economy 2024-2030 (2023) has been published and replaces the Regional Waste Management Plans. The Plan sets out a framework for the prevention and management of waste in Ireland for the period 2024 to 2030.

This Plan recognises Climate Change as a key driver for both behavioural change and improved waste management practices. The ambition of this Plan is 0% total waste growth per person over the life of the Plan with an emphasis on non-household wastes including waste from commercial activities and the construction and demolition sector. This ambition is underpinned with a comprehensive series of targets, policies, actions and a suite of key deliverables.

The strategy for the management of waste from the construction phase is in line with the requirements of the *'Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction and Demolition Projects'* document, produced by the EPA in November 2021. The guidance document *'Construction and Demolition Waste Management: A Handbook for Contractors and Site Managers'* (FÁS & Construction Industry Federation 2002) was also consulted in the preparation of this assessment.

Dublin City Development Plan 2022 – 2028 (2022) advises that good design has a key role to play in both reducing waste and emissions which contribute to climate change. It states that these issues must be considered from the outset of the design process. Development proposals will be expected to minimise energy use and emissions that contribute to climate change during the lifecycle of the development with an aspiration towards zero carbon, and ensure the reduction, re-use or recycling of resources and materials, including water, waste and aggregates.

It provides the following key sustainable principles which were considered and further details can be found in **Appendix 20.1.**

- Buildings should be designed to minimise resource consumption, reduce waste, conserve water, promote efficient energy use and use appropriate renewable technologies.
- Materials should be selected which are sustainably sourced and existing materials reused and recycled wherever possible. The use of green building materials and low embodied energy products such as low carbon cement and recycled materials is encouraged.

There are currently no Irish guidelines on the assessment of operational waste generation, and guidance is taken from industry guidelines, plans, and reports including the '*National Waste Management Plan for a Circular Economy 2024 - 2030* (NWMPCE) (2024)', '*BS 5906:2005 Waste Management in Buildings – Code of Practice*', the Dublin City Council *Waste Management (Storage, Presentation and Segregation of Household and Commercial Waste) Bye-Laws* (2018), the EPA *National Waste Database Reports 1998 – 2020*, the *Circular Economy and National Waste Database Report 2021* -2022 (2024) and the EPA National Waste Statistics Web Resource.

20.1.2 Terminology

Note that the terminology used herein is generally consistent with the definitions set out in Article 3 of the Waste Framework Directive. Key terms are defined as follows:

- **Waste:** Any substance or object which the holder discards or intends or is required to discard.
- **Prevention:** Measures taken before a substance, material or product has become waste, that reduce:

  (a) the quantity of waste, including through the re-use of products or the extension of the life span of products;
  (b) the adverse impacts of the generated waste on the environment and human health; or
  (c) the content of harmful substances in materials and products.

- **Reuse:** Any operation by which products or components that are not waste are used again for the same purpose for which they were conceived.
- **Preparing for Reuse:** Checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing.
- **Treatment:** Recovery or disposal operations, including preparation prior to recovery or disposal.
- **Recovery:** Any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy. Annex II of the Waste Framework Directive sets out a non-exhaustive list of recovery operations.
- **Recycling:** Any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.
- **Disposal:** Any operation which is not recovery even where the operation has, as a secondary consequence, the reclamation of substances or energy. Annex I sets out a non-exhaustive list of disposal operations.
- **Circular Economy:** A model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible.

20.2 Method

The assessment of the impacts of the Proposed Development, arising from the consumption of resources and the generation of waste materials, was carried out, taking into account the methodology specified in relevant guidance documents, along with an extensive document review to assist in identifying current and future requirements for waste management; including national and regional waste policy, waste strategies, management plans, legislative requirements and relevant reports.

This chapter is based on the Proposed Development, as described in Chapter 5 (Description of Proposed Development) and considers the following aspects:

- Legislative context;
- Construction phase (including demolition, excavation and site preparation); and
- Operational phase.

A desktop study was carried out, which included the following:

- Review of applicable policy and legislation which creates the legal framework for resource and waste management in Ireland;
- Description of the typical waste materials that will be generated during the construction and operational phases; and
- Identification of mitigation measures to prevent waste generation and promote management of waste in accordance with the waste hierarchy.

Estimates of waste generation during the construction and operational phases of the Proposed Development have been calculated. The waste types and estimated quantities are based on published data by the EPA in the National Waste Reports and National Waste Statistics, data recorded from similar previous developments, Irish and US EPA waste generation research as well as other available research sources.

Mitigation measures are proposed to minimise the effect of the Proposed Development on the environment during the construction and operational phases, to promote efficient waste segregation, and to reduce the quantity of waste requiring disposal. This information is presented in Section 20.5.

A detailed review of the existing ground conditions on a regional, local and site-specific scale is presented in Chapter 9 (Land, Soils, Geology & Hydrogeology). Chapter 9 also discusses the environmental quality of any soils which will have to be excavated to facilitate construction of the Proposed Development.

20.3 Baseline Environment

In terms of waste management, the receiving environment is largely defined by DCC as the local authority responsible for setting and administering waste management activities in the area. This is governed by the requirements set out in the NWMPCE 2024 – 2030 and the Waste Action Plan for a Circular Economy – Waste Management Policy in Ireland.

The waste management plans set out the following targets for waste management in the region:

- Achieve a recycling rate of 55% of managed municipal waste by 2025; and;
- Reduce to 0% the direct disposal of unprocessed residual municipal waste to landfill (from 2016 onwards) in favour of higher value pre-treatment processes and indigenous recovery practices.

The Regional Waste Management Planning Offices have issued a National Waste Management Plan for a Circular Economy 2024 - 2030 in March 2024, which supersedes the Eastern midlands regional (EMR) waste management plan and the two other regional waste management plans. The NWMPCE does not however dissolve the three regional waste areas. The NWCPCE sets the ambition of the plan to have a 0% total waste growth per person over the life of the Plan with an emphasis on non-household wastes including waste from commercial activities and the construction and demolition sector.

The Dublin City Development Plan 2022 – 2028 (2022) also sets out policies and objectives for the DCC area which reflect those set out in the regional waste management plan.

In terms of physical waste infrastructure, DCC no longer operates any municipal waste landfills in the area. There are a number of waste permitted and licensed facilities located in the EMR, in the surrounding counties and over Ireland and Northern Ireland, for management of waste from the construction industry as well as municipal sources. These include soil recovery facilities, inert C&D waste facilities, hazardous waste treatment facilities, municipal waste landfills, material recovery facilities, waste transfer stations and two waste-to-energy facilities.

However, these sites may not be available for use when required or may be limited by the waste contractor selected to service the Proposed Development in the appropriate phase. In addition, there is potential for more suitably placed waste facilities or recovery facilities to become operational in the future, which may be more beneficial from an environmental perspective.

A non-exhaustive list of licensed waste facilities within the DCC region has been included in Appendix A of Appendix 20.1. The ultimate selection of waste contractors and waste facilities would be subject to appropriate selection criteria proximity, competency, capacity and serviceability.

The ultimate selection of waste contractors and waste facilities would be subject to appropriate selection criteria proximity, competency, capacity and serviceability.

A full description of the Proposed Development can be found in Chapter 5 (Description of the Proposed Development). The characteristics of the Proposed Development that are relevant in terms of waste management are summarised below.

20.3.1 Construction Phase

There will be a quantity of waste materials generated from the demolition and renovation of the demolition of a number of former office/college buildings on site, including the New Wing, Library Wing Buildings and associated hardstanding areas on site, as well as from the excavation of the building foundations.

Further detail on the waste materials likely to be generated during the demolition works are presented in the project-specific RWMP in **Appendix 20.1**. The RWMP provides an estimate of the main waste types likely to be generated during the C&D phase of the Proposed Development. The reuse, recycling / recovery and disposal rates for the demolition phase have been estimated using the EPA National Waste Reports and these are summarised in **Table 20.1**.

An Asbestos Survey Report was prepared by Phoenix Environmental Safety Limited in May 2020 (Refer to **Appendix 5.1**). During the asbestos survey, asbestos containing materials (ACMs) were detected in several locations within some of the buildings, including in floor tiling, insulating boards, downpipes, bitumen and stair nosings. Asbestos removal works will be carried out to structures prior to demolition,

as set out in the Construction Management Plan prepare by DCON and submitted under separate cover. This will involve removal of asbestos and asbestos containing materials (ACMs) under licence, and reoccupation certification for all areas prior to soft strip.

Soft strip works will be carried out to structures following asbestos removal (where required) and prior to demolition, subject to safe isolation of energy services. This will include the removal of all non-load-bearing internal structures, finishes, fixtures, furniture and equipment.

The scope of the asbestos survey was confined to all accessible areas of the surveyed buildings. At the time of the survey, destructive sampling and surveying was curtailed and all survey areas were limited to accessible areas. Prior to demolition, these non-accessible areas will be investigated for the presence of ACMs. In the event that additional ACMs are identified a report will be issued containing a register showing the location and type of asbestos and the risks and recommendations in relation to the material found.

Table 20.1 Estimated off-site reuse, recycle and disposal rates for demolition waste

Waste Type	Tonnes	Reuse		Recycle / Recovery		Disposal	
		%	Tonnes	%	Tonnes	%	Tonnes
Glass	341.7	0	0.0	85	290.4	15	51.2
Concrete, bricks, tiles, ceramics	1936.1	85	1645.7	5	96.8	10	193.6
Plasterboard	151.8	30	45.6	60	91.1	10	15.2
Asphalts	38.0	25	9.5	70	26.6	5	1.9
Metals	569.4	5	28.5	80	455.5	15	85.4
Slate	303.7	0	0.0	85	258.1	15	45.6
Timber	455.5	10	45.6	60	273.3	30	136.7
Asbestos	5.0	0	0.0	0	0.0	100	5.0
Total	**3801.2**		**1774.7**		**1491.9**		**534.6**

During the construction phase, waste will be produced from surplus materials such as broken or off-cuts of timber, plasterboard, concrete, tiles, bricks, etc. Waste arising from packaging (cardboard, plastic, timber) and oversupply of materials may also be generated. The appointed contractor will be required to ensure that oversupply of materials is kept to a minimum and opportunities for reuse of suitable materials is maximised.

In addition, topsoil, subsoil, made ground and existing roadbed / hardstanding will require excavation to facilitate site levelling, construction of foundations and the installation of underground services. The project quantity surveyor has estimated that c. 30,000 m^3 of material will require excavation. It is envisaged that the majority of this material will be removed off-site (c. 20,000 m^3; c. 66.5%), with c. 10,000 m^3 (c. 33.5%) being retained and reused on-site. These estimates will be refined prior to commencement of construction.

If the material that requires removal from site is deemed to be a waste, removal and reuse / recycling / recovery / disposal of the material will be carried out in accordance with the 'Waste Management Act 1996' (as amended), the 'Waste Management (Collection Permit) Regulations 2007' as amended, and the 'Waste Management (Facility Permit & Registration) Regulations 2007' as amended. The volume of waste requiring recovery / disposal will dictate whether a Certificate of Registration (COR), permit or license is required for the receiving facility. Alternatively, the material may be classed as by-product

under Article 27 classification (European Communities (Waste Directive) Regulations 2011, S.I. No. 126 of 2011), as amended'.

In order to establish the appropriate reuse, recovery and / or disposal route for the soils and stones to be removed off-site, it will first need to be classified. Waste material will initially need to be classified as hazardous or non-hazardous in accordance with the EPA publication 'Waste Classification – List of Waste and Determining If Waste is Hazardous or Non-Hazardous'. Environmental soil analysis will be carried out prior to removal of the material on a number of the soil samples in accordance with the requirements for the acceptance of waste at landfills (Council Decision 2003/33/EC Waste Acceptance Criteria). This legislation sets limit values on landfills for acceptance of waste material based on properties of the waste including potential pollutant concentrations and leachability.

It is anticipated that the surplus of material will be suitable for acceptance at either inert or non-hazardous soil recovery facilities / landfills in Ireland or, in the unlikely event of hazardous material being encountered, be transported for treatment / recovery or exported abroad for disposal in suitable facilities.

Waste will also be generated from construction phase workers e.g. organic / food waste, dry mixed recyclables (wastepaper, newspaper, plastic bottles, packaging, aluminium cans, tins, Tetra Pak cartons) and mixed non-recyclables from temporary welfare facilities provided on-site during the construction phases. Waste printer / toner cartridges, waste electrical and electronic equipment (WEEE) and waste batteries may also be generated infrequently from site offices.

Further details on the waste materials likely to be generated during the excavation and construction works are presented in the project-specific RWMP. The RWMP provides an estimate of the main waste types likely to be generated during the construction phase of the Proposed Development and these are summarized in **Table 20.2**.

Table 20.2 Estimated off-site reuse, recycle and disposal rates for construction waste

Waste Type	Tonnes	Reuse		Recycle / Recovery		Disposal	
		%	Tonnes	%	Tonnes	%	Tonnes
Mixed C&D	1962.1	10	196.2	80	1569.7	10	196.2
Timber	1664.8	40	665.9	55	915.7	5	83.2
Plasterboard	594.6	30	178.4	60	356.8	10	59.5
Metals	475.7	5	23.8	90	428.1	5	23.8
Concrete	178.4	30	53.5	65	115.9	5	8.9
Other	891.9	20	178.4	60	535.1	20	178.4
Total	**5767.5**		**1296.2**		**3921.3**		**550.0**

The Proposed Development will generate a range of non-hazardous and hazardous waste materials during demolition, site excavation and construction. General housekeeping and packaging will also generate waste materials, as well as typical municipal wastes generated by construction employees. Waste materials will be required to be temporarily stored on-site pending collection by a waste contractor.

20.3.2 Operational Phase

As noted in Section 20.1, an OWMP has been prepared for the Proposed Development and is included as **Appendix 20.2**. The OWMP provides a strategy for segregation (at source), storage and collection of

all wastes generated within the building during the operational phase including dry mixed recyclables (DMR), organic waste and mixed non-recyclable waste (MNR), as well as providing a strategy for management of PET bottles, waste glass, batteries, WEEE, printer / toner cartridges, chemicals, textiles, waste cooking oil, furniture and abandoned bicycles.

The total estimated waste generation for the Proposed Development for the main waste types, based on the AWN waste generation model (WGM), is presented in **Table 20.3**, below, and is based on the predicted occupancy of the residential units. While the floor area usage (m^2) has been used to estimate the waste arising from the crèche, retail and community/cultural units (commercial units). Further unit breakdowns can be found in **Appendix 20.2**.

Table 20.3 Estimated waste generation for the development for the main waste types

Waste type	m^3 per week	
	Residential	Commercial
Organic waste	16.88	0.42
Dry Mixed Recyclables	119.63	9.36
Glass	3.27	0.21
Mixed Non-Recyclables	62.91	4.19
Total	**202.69**	**14.17**

The residents and commercial tenants will be required to provide and maintain appropriate waste receptacles within their units to facilitate segregation at source of these waste types. The location of bins within the unit will be at the discretion of the resident and tenants. As required, the residents and tenants will need to bring these segregated wastes to the allocated Waste Storage Areas (WSA). The location of the WSA can be viewed on the drawings submitted with the planning application under separate cover.

The OWMP seeks to ensure the development contributes to the targets outlined in the NWMPCE, Waste Action Plan for a Circular Economy – Waste Management Policy in Ireland and the DCC waste Bye-laws.

Mitigation measures proposed to manage impacts arising from wastes generated during the operational phase of the development are summarised in Section 20.5, below.

20.4 Predicted Impacts of the Proposed Development

20.4.1 Do-Nothing Impact

If the Proposed Development were not to go ahead (i.e. in the Do-Nothing scenario) there would be no demolition, excavation, construction or operational waste generated at this site. There would, therefore, be a **neutral** effect on the environment in terms of waste.

The site is zoned for development and it is likely that, in the absence of this subject proposal, a development of a similar nature would be progressed on the site that accords with national and regional policies, which can be found in Appendix 20.1 and Appendix 20.2, and therefore the likely effects would be similar to this proposal.

20.4.2 Construction Phase

If waste materials are not managed and stored correctly, it is likely to lead to litter, odour or pollution issues at the Proposed Development site and in adjacent areas. The indirect effect of litter issues is the presence of vermin/flies in areas affected. In the absence of mitigation, the effect on the local and regional environment is likely to be **short-term**, **significant** and **negative**.

The use of non-permitted waste contractors or unauthorised waste facilities could give rise to inappropriate management of waste, resulting in indirect negative environmental impacts, including pollution. It is essential that all waste materials are dealt with in accordance with regional and national legislation, as outlined previously, and that time and resources are dedicated to ensuring efficient waste management practices. In the absence of mitigation, the effect on the local and regional environment is likely to be **long-term, significant** and **negative**.

C&D wastes arising will need to be taken to suitably registered / permitted / licenced waste facilities for processing and segregation, reuse, recycling, recovery, and / or disposal, as appropriate. There are numerous licensed waste facilities in the EMR and across the island of Ireland which can accept hazardous and non-hazardous waste materials, and acceptance of waste from the Proposed Development site would be in line with daily activities at these facilities. At present, there is sufficient capacity for the acceptance of the likely C&D waste arisings at facilities in the region. The majority of construction materials are either recyclable or recoverable. However, in the absence of mitigation, the effect on the local and regional environment is likely to be **short-term, significant** and **negative.**

There is a quantity of material that will need to be excavated to facilitate the Proposed Development. A detailed review of the existing ground conditions on a regional, local and site-specific scale are presented in Chapter 9 (Land, Soils, Geology & Hydrogeology). Correct classification and segregation of the excavated material is required to ensure that any potentially contaminated materials are identified and handled in a way that will not impact negatively on workers, or on the water and soil environments, both on and off-site. However, in the absence of mitigation, the effect on the local and regional environment is likely to be **short-term**, **significant** and **negative**.

20.4.3 Operational Phase

The potential impacts on the environment of improper, or a lack of, waste management during the operational phase would be a diversion from the priorities of the waste hierarchy, which would lead to small volumes of waste being sent unnecessarily to landfill and diverted from reuse or recycling. In the absence of mitigation, the effect on the local and regional environment is likely to be **long-term, significant** and **negative.**

The nature of the Proposed Development means the generation of waste materials during the operational phase is unavoidable. Networks of waste collection, treatment, recovery and disposal infrastructure are in place in the region to manage waste effectively from this type of development. Waste unsuitable for recycling is typically sent for energy recovery. There are also facilities in the region for segregation of municipal recyclables, which is typically exported as a raw material for the production of recycled products (e.g. paper mills and glass recycling).

If waste material is not managed and stored correctly, it is likely to lead to litter or pollution issues at the development site and in adjacent areas. The knock-on effect of litter issues is the presence of

vermin in affected areas. In the absence of mitigation, the effect on the local and regional environment is likely to be **long-term**, **significant** and **negative**.

Waste contractors will be required to service the Proposed Development on a regular basis to remove waste. The use of non-permitted waste contractors or unauthorised facilities could give rise to inappropriate management of waste and result in negative environmental impacts or pollution. It is essential that all waste materials are dealt with in accordance with regional and national legislation, as outlined previously, and that time and resources are dedicated to ensuring efficient waste management practices. In the absence of mitigation, the effect on the local and regional environment is likely to be **indirect, long-term**, **significant** and **negative**.

20.5 Mitigation Measures

This section outlines the measures that will be employed in order to reduce the amount of waste produced, manage the wastes generated responsibly and handle the waste in such a manner as to minimise the effects on the environment.

The concept of the 'circular economy' (CE) and 'waste hierarchy' are employed when considering all mitigation measures.

While the waste hierarchy states that the preferred option for waste management is prevention and minimisation of waste, followed by preparing for reuse and recycling / recovery, energy recovery (i.e. incineration) and, least favoured of all, disposal.

20.5.1 Construction Phase

The following mitigation measures will be implemented during the construction phase of the Proposed Development:

WM_1:
As previously stated, a project-specific RWMP has been prepared in line with the requirements of the EPA *'Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction & Demolition Projects'* (2021) and is included as **Appendix 20.1.** The mitigation measures outlined in the RWMP will be implemented in full and form part of the mitigation strategy for the site. The mitigation measures presented in this RWMP will ensure effective waste management and minimisation, reuse, recycling, recovery and disposal of waste material generated during the excavation and construction phases of the Proposed Development.

- Prior to commencement, the appointed Contractor(s) will be required to refine / update the RWMP (**Appendix 20.1**) in agreement with DCC and in compliance with any planning conditions, or submit an addendum to the RWMP to DCC, detailing specific measures to minimise waste generation and resource consumption, and provide details of the proposed waste contractors and destinations of each waste stream.
- The Contractor will implement the RWMP throughout the duration of the proposed excavation and construction phases.

WM_2:

A quantity of topsoil and sub soil will need to be excavated to facilitate the Proposed Development. The quantity surveyors have estimated that the majority excavated material will need to be removed off-site. Correct classification and segregation of the excavated material is required to ensure that any

potentially contaminated materials are identified and handled in a way that will not impact negatively on workers as well as on water and soil environments, both on and off-site.

In addition, the following mitigation measures will be implemented:

WM_3:

- Building materials will be chosen to 'design out waste';

WM_4:

- On-site segregation of waste materials will be carried out to increase opportunities for off-site reuse, recycling and recovery. The following waste types, at a minimum, will be segregated:
  - Clean Soil
  - Contaminated soil (if located onsite)
  - Concrete rubble (including ceramics, tiles and bricks);
  - Plasterboard;
  - Metals;
  - Glass;
  - Timber;
  - Asbestos.

WM_5:

- Left over materials (e.g. timber off-cuts, broken concrete blocks / bricks) and any suitable construction materials shall be re-used on-site, where possible; (alternatively, the waste will be sorted for recycling, recovery or disposal);

WM_6:

- All waste materials will be stored in skips or other suitable receptacles in designated areas of the site;

WM_7:

- Any hazardous wastes generated (such as chemicals, solvents, glues, fuels, oils) will also be segregated and will be stored in appropriate receptacles (in suitably bunded areas, where required);

WM_8:

- A Resource Manager will be appointed by the main Contractor(s) to ensure effective management of waste during the excavation and construction works;

WM_9:

- All construction staff will be provided with training regarding the waste management procedures;

WM_10:

- All waste leaving site will be reused, recycled or recovered, where possible, to avoid material designated for disposal;

WM_11:

- All waste leaving the site will be transported by suitably permitted contractors and taken to suitably registered, permitted or licenced facilities;

WM_12:

- All waste leaving the site will be recorded and copies of relevant documentation maintained;

WM_13:

- Nearby sites requiring clean fill material will be contacted to investigate reuse opportunities for clean and inert material, if required. If any of the material is to be reused on another site as by-product (and not as a waste), this will be done in accordance with Regulation 27 (By-products), as amended, European Union (Waste Directive) Regulations 2011-2020. EPA approval will be obtained prior to moving material as a by-product.

These mitigation measures will ensure that the waste arising from the construction phase of the Proposed Development is dealt with in compliance with the provisions of the Waste Management Act 1996, as amended, associated Regulations and the Litter Pollution Act 1997, as amended and the NWCPE. It will also ensure optimum levels of waste reduction, reuse, recycling and recovery are achieved and will promote more sustainable consumption of resources.

20.5.2 Operational Phase

The mitigation measures to be implemented during the operational phase of the development are as follows:

WM_14:

All waste materials will be segregated into appropriate categories and will be temporarily stored in appropriate bins or other suitable receptacles in designated, easily accessible areas of the site.

WM_15:

As previously stated, a project specific OWMP has been prepared and is included as **Appendix 20.2.** The mitigation measures outlined in the OWMP will be implemented in full and form part of the mitigation strategy for the site. Implementation of this OWMP will ensure a high level of recycling, reuse and recovery at the development. All recyclable materials will be segregated at source to reduce waste contractor costs and ensure maximum diversion of materials from landfill, thus achieving the targets set out in the NWMPCE, Waste Action Plan for a Circular Economy – Waste Management Policy in Ireland and the DCC waste bye-laws.

Residents, tenants and facilities management of the site during the operational phase will be responsible for ensuring – allocating personnel and resources, as needed – the ongoing implementation of the OWMP, ensuring a high level of recycling, reuse and recovery at the site of the Proposed Development.

WM_16:

In addition, the following mitigation measures will be implemented:

- On-site segregation of all waste materials into appropriate categories including (but not limited to):
  - Organic waste;
  - Dry Mixed Recyclables;
  - Mixed Non-Recyclable Waste;
  - Glass;
  - Waste electrical and electronic equipment (WEEE);
  - Batteries (non-hazardous and hazardous);

- Cooking oil;
- Light bulbs;
- Cleaning chemicals (pesticides, paints, adhesives, resins, detergents, etc.);
- Furniture (and from time-to-time other bulky waste); and
- Abandoned bicycles.

WM_17:

- Residents, tenants and facilities management will ensure that all waste materials will be stored in colour coded bins or other suitable receptacles in designated, easily accessible locations. Bins will be clearly identified with the approved waste type to ensure there is no cross contamination of waste materials.

WM_18:

- Residents, tenants and facilities management will ensure that all waste collected from the site of the Proposed Development will be reused, recycled, or recovered, where possible, with the exception of those waste streams where appropriate facilities are currently not available.

WM_19:

- Residents, tenants and facilities management will ensure that all waste leaving the site will be transported by suitably permitted contractors and taken to suitably registered, permitted, or licensed facilities.

These mitigation measures will ensure the waste arising from the development is dealt with in compliance with the provisions of the Waste Management Act 1996, as amended, associated Regulations, the Litter Pollution Act 1997, as amended, The NWMPCE and the DCC waste bye-laws. It will also ensure optimum levels of waste reduction, reuse, recycling and recovery are achieved.

20.6 Residual Impacts

The implementation of the mitigation measures outlined in Section 20.5 will ensure that a high rate of reuse, recovery and recycling is achieved at the Proposed Development during the excavation and construction phases as well as during the operational phase. It will also ensure that European, national and regional legislative requirements with regard to waste are met, and that associated policy targets for the management of waste are achieved.

20.6.1 Construction Phase

A carefully planned approach to waste management as set out in Section 20.5 and adherence to the RWMP (which includes mitigation) **(Appendix 20.1)** during the construction phase will promote resource efficiency and waste minimisation. When the mitigation measures are implemented and a high rate of prevention reuse, recycling and recovery is achieved, the predicted impact of the construction phase on the environment will be **short-term, imperceptible** and **neutral.**

20.6.2 Operational Phase

During the operational phase, a structured approach to waste management as set out in Section 20.5 and adherence to the OWMP (which includes mitigation) **(Appendix 20.2)** will promote resource efficiency and waste minimisation. When the mitigation measures are implemented and a high rate of reuse, recycling and recovery is achieved, the predicted impact of the operational phase on the environment will be **long-term, imperceptible** and **neutral.**

20.7 Monitoring

The management of waste during the construction phase will be monitored by the Contactor's appointed Resource Manager to ensure compliance with the above-listed mitigation measures, and relevant waste management legislation and local authority requirements, including maintenance of waste documentation.

The management of waste during the operational phase will be monitored by the Operator / Facilities Management to ensure effective implementation of the OWMP internally and by the nominated waste contractor(s).

Table 20.4 Monitoring Proposals

Likely Significant Effect	Monitoring Proposals
Litter Pollution	The Contractor will review and maintain waste records and site audits
Unlicensed Waste Collection (Illegal Dumping)	A register will be maintained and reviewed. A copy of all waste collection permits will be maintained.
Insufficient Waste Facilities	A register will be maintained and reviewed. A copy of all waste collection permits will be maintained.
Lack of Waste Classification	An appointed Resource Manager will monitor all on-site waste segregation and classification
Unlicensed Waste Collection (Illegal Dumping)	The operator/ facilities management company will maintain waste receipts on-site for a period of 7 years and make available to DCC as requested.
Poor Waste Segregation	Waste generation volumes and cross contamination will be monitored by the operator / facilities management company
Litter Pollution	Waste storage areas will be monitored by the operator / facilities management company

20.7.1 Construction Phase

The objective of setting targets for waste management is only achieved if the actual waste generation volumes are calculated and compared. This is particularly important during the excavation and construction phases where there is a potential for waste management to become secondary to progress and meeting construction schedule targets.

The management of waste during the construction phase shall be monitored to ensure compliance with relevant local authority requirements, and effective implementation of the RWMP, including maintenance of waste documentation.

The mitigation measures in the RWMP specify the need for a Resource Manager to be appointed who will have responsibility to monitor the actual waste volumes being generated and to ensure that contractors and sub-contractors are segregating waste as required. Where targets are not being met, the Resource Manager shall identify the reasons for targets not being achieved and work to resolve any issues. Recording of waste generation during the construction phase will enable better management of waste contractor requirements and identify trends. The data will be maintained to advise on future projects.

20.7.2 Operational Phase

The management of waste during the operational phase shall be monitored to ensure effective implementation of mitigation measures by facilities management and the nominated waste contractor(s). Waste generation volumes shall be monitored against the predicted waste volumes outlined in the OWMP. There may be opportunities to reduce the number of bins and equipment required in the Waste Storage Area where estimates have been too conservative. Reductions in bin and equipment requirements will improve efficiency and reduce waste contactor costs.

20.8 Interactions

20.8.1 Land, Soils, Geology & Hydrogeology

A quantity of soil, stones, clay and made ground will need to be excavated to facilitate the Proposed Development. The project quantity surveyors have estimated that c. 30,000 m^3 of material will be excavated to facilitate the construction of new foundations, underground services and basements. It is estimated that, of this, c. 20,000 m^3 (66.5%) will need to be removed off-site.

Correct classification and segregation of the excavated material is required to ensure that any potentially contaminated materials are identified and handled in a way that will not impact negatively on workers, or the water and soil environments, both on and off-site. Where material has to be taken off-site, it will be taken for reuse or recovery, where practical, with disposal a last resort.

Adherence to the mitigation measures in Chapter 9 and the requirements of the RWMP will ensure the associated effect is **long-term, imperceptible** and **neutral.**

20.8.2 Traffic & Transportation

Local traffic and transportation will be impacted by the additional vehicle movements generated by removal of waste from the site during the construction and operational phases of the Proposed Development. The increase in vehicle movements as a result of waste generated during the construction phase will be temporary in duration. There will be an increase in vehicle movements in the area as a result of waste collections during the operational phase, but these movements will be imperceptible in the context of the overall traffic and transportation increase and have been addressed in Chapter 19 (Traffic & Transportation).

Provided the mitigation measures detailed in Chapters 19 & 20 and the requirements of the RWMP and OWMP (included as **Appendix 20.1 and Appendix 20.2**) are adhered to, the associated effect will be **short to long-term, imperceptible** and **neutral.**

20.8.3 Population & Human Health

The potential impacts on human beings in relation to the generation of waste during the construction and operational phases are that the incorrect management of waste could result in littering, which could cause a nuisance to the public, attract vermin and cause a visual impact. Adherence to the mitigation measures detailed in Chapter 20 and Chapter 7 (Population & Human Health), along with a carefully planned approach to waste management, adherence to the project-specific RWMP and OWMP (**Appendices 20.1** and **20.2**, respectively) will ensure appropriate management of waste and avoid any negative impacts on the local population. The associated effect will be **long-term, imperceptible** and **neutral.**

20.8.4 Biodiversity

The potential impacts on biodiversity in relation to the generation of waste during the construction or operational phases are that the incorrect management of waste could result in littering, pollution issues or vermin in areas affected.

An Invasive Species Management Plan (ISMP) has been prepared by Invas Biosecurity for the Proposed Development. The incorrect management or disposal of contaminated material soil material could result in the spread of Invasive species around the site and to other receiving sites. The ISMP outlines the measures for the management of Japanese knotweed. Adherence to the mitigation measures set out in this chapter, the ISMP and in Chapter 8 (Biodiversity) will ensure the associated effect is **long-term, imperceptible** and **neutral.**

20.9 Indirect and/or Secondary Impacts

The following **Table 20.5** summarises the identified likely significant effects during the construction phase including site excavations and demolition works of the Proposed Development before mitigation measures are applied.

Table 20.5 Summary of Construction Phase Likely Significant Effects in the Absence of Mitigation

Likely Significant Effect	Quality	Significance	Extent	Probability	Duration	Type
Litter Pollution	Negative	Significant	Local	Likely	Short-Term	Indirect & Direct
Unlicensed Waste Collection (Illegal Dumping)	Negative	Significant	Local & Regional	Likely	Long-Term	Direct
Insufficient Waste Facilities	Negative	Significant	Local & Regional	Unlikely	Short-Term	Direct
Lack of waste Classification	Negative	Significant	Local & Regional	Likely	Short-Term	Direct

The following **Table 20.6** summarises the identified likely significant effects during the operational phase of the Proposed Development before mitigation measures are applied.

Table 20.6 Summary of Operational Phase Likely Significant Effects in the Absence of Mitigation

Likely Significant Effect	Quality	Significance	Extent	Probability	Duration	Type
Unlicensed Waste Collection (Illegal Dumping)	Negative	Significant	Local & Regional	Likely	Long-Term	Direct
Poor Waste Segregation	Negative	Significant	Local & Regional	Likely	Long-Term	Direct
Litter Pollution	Negative	Significant	Local & Regional	Likely	Long-Term	Direct

20.10 Cumulative Impacts

20.10.1 Construction

Other developments in the area will be required to manage waste in compliance with national and local legislation, policies and plans which will minimise / mitigate any potential cumulative impacts associated with waste generation and waste management. As such, the cumulative effect in terms of waste will be **short-term**, **imperceptible** and **neutral**.

Table 20.7 Permitted and Proposed Developments to which regard has been had in the assessment of potential cumulative impacts

Ref.	Location	Description - overview	Status
DCC 2935/20 ABP 308193	Lands off Clonliffe Road (formerly part of the Holy Cross College Lands), Clonliffe Road, Drumcondra, Dublin 3	**Lands off Clonliffe Road – Hotel Development** Permission for a hotel development on Lands off Clonliffe Road comprising of 7 storeys and the demolition of the existing boundary wall, repositioning of the gate piers and widening of the entrance on Clonliffe Road to facilitate two-way traffic, the creation of 2 no. pedestrian accesses off Clonliffe Road, and the construction of a replacement plinth boundary wall with railings along Clonliffe Road, landscaping, boundary treatments, street lighting, SuDS drainage, piped and other services.	Permission granted by DCC in August 2020. Decision appealed to An Board Pleanála (ABP). Permission granted by ABP with revised conditions on 08 April 2021. Currently under construction.
D4062/24 ABP-321745-25	Turnpike Lane at the Rear of No. 59-69 Drumcondra Road Lower, Co. Dublin	**Residential Development at Drumcondra Road** The development will consist of the construction of 46 no. apartments consisting of 33 no. 2-bedroom 4 person apartments, 1 no. 2-bedroom 3 Person, and 12 no. 1 bedroom apartments all with balconies to the South, West, East and North in a single block ranging in height from 2 to 6 storeys with 408sqm of landscaped communal open space at ground level and 89sqm of communal roof terrace at fifth floor level; the provision of 2 no regular car parking spaces, 1 no. disabled space, 100 no regular secured bicycle parking spaces, 2 no secured cargo bicycle spaces, bicycle maintenance area, bin store, ESB distribution station, ancillary plant/services with enabling and site development works, landscaping, boundary treatment, lighting, services and connections, waste management and other ancillary works. The gross floor area of the building to be 4233 sqm all at this site of 0.17 hectares.	Permission granted by DCC in December 2024. Decision appealed to An Board Pleanála (ABP). Permission granted by ABP with revised conditions on 16 May 2025.

Ref.	Location	Description - overview	Status
ABP-317136-23 LRD6006/23-S3	158A, The Former Leydens Wholesalers & Distributors, Richmond Road, Co. Dublin, D03 YK12	**Permission for development LRD site along Richmond Road** The development consists of demolition of existing industrial structures on site and a construction of a mixed-use development including artist studios, creche, retail unit, gym, and 133 no. residential Units across 3 no blocks and ranging in height from 1-8 storeys. The proposed development will provide ancillary residential amenities and facilities including parking including EV charging, loading bays, communal open space, roof gardens, lighting, ESB substation, common rooms, stores, and associated works above and below ground. Improvement works to Richmond Road are also proposed including carriageway widening up to circa six metres in width, a 1.5-metre-wide one-way cycle track/lane in both directions, widening footpaths both directions, and adding a pedestrian crossing facility.	Permission granted by DCC in April 2023. Decision appealed to An Board Pleanála (ABP). Permission granted by ABP with revised conditions on 31 August 2023.
LRD6067/24-S3	The Former Leydens Wholesalers & Distributors 158A, Richmond Road, Co. Dublin, D03 YK12	**Permission for amendments to a permitted Mixed-Use LRD** Permission sought for amendments to a permitted LRD whose parent permission was granted under DCC under Reg. Ref. LRD6006/23-S3. The 0.55-ha site will consist of a revised roof design layout to provide 9 no. PV panels on Block A and 1 PV Panel on Block C.	Permission granted by DCC on 29 August 2024.
WEBLRD6055/25-S3A	No. 19 Esmond Avenue (D03 P5C7 & D03 Y2R2), No. 21 Esmond Avenue (D03 P923), & at rear No. 19 Philipsburg Avenue (D03 Y0A2), Fairview, Co. Dublin	**Proposed amendment seeking permission for LRD application on Esmond Ave** The proposed development is sitting on a site of 0.161 ha consisting of a new apartment block (Block C) and constitutes an amendment to the permitted LRC granted permission previously (LRD6015/22-23 and ABP-315584-23). Proposed Block C will be 3 storeys high, with blue-green roof and roof mounted solar p.v. There will be 21 apartments, internal bin storage, bicycle parking. A communal area will be to be back of the block with a children's play area. The proposed development includes demolition of existing warehouse building at No. 21 Esmond Avenue (234.60 sqm), two	Permission granted by DCC on 27 May 2025.

Ref.	Location	Description - overview	Status
		storey business centre, single storey temporary building and warehouse building at No.19 Esmond Avenue (418.31 sqm), as permitted per Planning Reg. Ref. No. LRD6015/22-S3 (An Bord Pleanála Ref. ABP. 315584-23).	
LRD6015/22-S3 ABP-315584	61 & 63 Fairview Strand, 59A Fairview Strand, at Warehouse on Esmond Avenue, at 19 Esmond Avenue and 21 Esmond Avenue and at rear 19 Philips Avenue, Fairview, Co. Dublin	**Planning permission for LRD & Protected Structure on Esmond Ave** Planning permission for development of a 0.58 ha includes two a derelict warehouse, dry-cleaner, and a disused underground car park on Fairview Strand/Esmond Ave for three blocks ranging from 2-5 storeys with 114 apartments and a street-level gym, café, shop, and relocated dry-cleaner. Block A will contain 35 apartments in 5 no. storeys with ground floor units of a gym and a shop unit. Block B will 2-5 storeys with 47 apartments with a ground floor café. Two protected Georgian-era houses, at No. 61 & 63 Fairview Strand are restored and converted to four flats with a small contemporary wing added. 26 Underground car spaces will be kept along with 263 bicycle spaces, green roofs, solar-PV panels, two pocket plazas, playgrounds, and widened footpaths. Total open space provision of 1,409.6 square m including a public plaza with cycle parking. Public realm upgrades including new surface treatment of Esmond Avenue and upgraded pedestrian crossing points at the junction of Esmond Avenue and Fairview Strand.	Permission granted by DCC in December 2022. Decision appealed to An Board Pleanála (ABP). Permission granted by ABP with revised conditions on 05 May 2023.
4067/24	Former Dublin City Council Depot, Orchard Road, Drumcondra, Co. Dublin, D03 XV67	**Planning Permission for Residential development on Orchard Road** The development consists of a 0.26 ha site along the River Tolka and is the former site of DCC depot and boxing club. The development will consist of the demolition of existing single storey sheds, warehouses and structures on site used as part of the former DCC depot and boxing club and provision of 2-5 story building including 38 no. apartments with a gross floor area of 2,825 sqm.	Permission granted (with conditions) by Dublin City Council on 19 February 2025.

Ref.	Location	Description - overview	Status
		Vehicular and pedestrian access will still be provided via existing access on Orchard Road, and a new pedestrian access is provided to Tom Clake House. Ancillary works includes green roofs, plant rooms, nine stores, ESB substation, and community room at ground floor level.	
LRD6001/22-S3A ABP-315062-22	Site at Daneswell Place, Former Printworks/Smurfit Site, Botanic Road, Glasnevin, Co. Dublin	**Proposed Amendment to Parent Permission LRD site at Daneswell Place** Proposed development consisting of amendments to the development permitted under DCC Reg 3665/15 and ABP ref 315062-22, as amended by DCC Reg Ref: 4267/17 and 2133/18 and extended by DCC reg ref: 3665/15X2 The development will include 168 no. apartments within 5 no. blocks ranging from 1-6 storeys. The proposal also includes a creche, café, resident amenity space, and an amenity management suit in Block A and a resident's gym. Vehicular/pedestrian/cyclist access will be from Botanic Road. Car, cycle, and motorcycle parking at surface and basement are included. All associated site development works, public and communal open space, roof gardens, landscaping, boundary treatment, plant areas, waste management areas, and service provision (including ESB substations) will be provided.	Permission granted by DCC in October 2022. Decision appealed to An Board Pleanála (ABP). Permission granted by ABP with revised conditions on 06 March 2023.
LRD6009/23-S3 ABP-317438-23	St. Vincent's Hospital, Richmond Road and Convent Avenue, Fairview, Co. Dublin	**LRD at St. Vincent's Hospital at Richmond Road** The proposed development comprises of a LRD at Saint Vincent's Hospital, Richmond Road and Convent Avenue, Fairview, Dublin. The proposed development will consist of the redevelopment of the site to provide for a new hospital building, providing mental health services, provision of 9 no. residential buildings (Blocks A, B, C, D-E, F, G, H, J, and L), and community facilities, and public open space. The proposed building heights range from 2 to 13 storeys. The residential development includes a total of 811 no. residential units, including 494 no. standard design apartments	Permission granted by DCC in May 2023. Decision appealed to An Board Pleanála (ABP). Permission granted by ABP with revised conditions on 11 October 2023.

Ref.	Location	Description - overview	Status
		(SDA) and 317 no. Build to Rent (BTR) apartments. The development includes the partial demolition and change of use, including associated alterations, of the existing hospital building (part protected structure under RPS Ref.: 2032), to provide residential amenity areas, a gym, a café, co-working space, a community library, a childcare facility, and a community hall (referred to as Block K). The development also includes additional residential amenities and facilities, a retail unit and a café. The proposed development includes for the demolition of existing structures on site, including extensions of and buildings within the curtilage of the existing hospital buildings under RPS Ref.: 2032, and other existing buildings and ancillary structures on the site; and the change of use, refurbishment and alterations of a number of buildings and protected structures on the site including Brooklawn (RPS Ref: 8789), Richmond House (RPS Ref.: 8788), the Laundry building and Rose Cottage.	
ABP-317121	Swords Co. Fingal to Dublin City Centre Co. Dublin	**BusConnects - Swords to City Centre Core Bus Corridor Scheme** The Swords to City Centre Core Bus Corridor Scheme consists of roadworks to facilitate bus, cycle, and urban realm improvements along with any associated ancillary/accommodation works for the scheme. The scheme has an overall length of approximately 12 km. The scheme commences south of Swords at Pinnock Hill Junction and travel in a southerly direction along the R132 Swords Road past Airside Retail Park, Dublin Airport and Santry Park. The route will continue on the R132 past Santry Demesne, where the Swords Road joins the R104 at Coolock Lane. The route will continue on the R132 in a southerly direction through Santry village. It will continue along the Swords Road past Whitehall to Griffith Avenue. The route will follow Drumcondra Road Upper past the DCU St Patrick's Campus to the river Tolka. It will continue through Drumcondra, on Drumcondra Road Lower to Binns Bridge on the Royal Canal. From there it	Permission granted (with conditions) on 19 June 2024 by An Bord Pleanála.

Ref.	Location	Description - overview	Status
		will continue on Dorset Street Lower as far as Eccles Street, from where it will continue on Dorset Street Upper to North Frederick Street and Parnell Square, all in County Dublin and within the Fingal County Council (FCC) and Dublin City Council (DCC) administrative areas.	
ABP-314610	Ballymun/Finglas to City Centre Core Bus Corridor Scheme	**BusConnects – Ballymun/Finglas to City Centre Core Bus Corridor Scheme** The Balllymun/Finglas to City Centre Core Bus Corridor Scheme comprises of an overall length of c. 10.9km including roadworks to facilitate bus, cycling and urban realm improvements along with any associated ancillary/accomodation works for the scheme. It is routed along Ballymun Road from the junction at St. Margaret's Road southwards along St. Mobhi Road, Botanic Road, Prospect Road, Phibsborough Road, Constitution Hill, and Church Street as far as the junction with Arran Quay/Ormond Quay on the River Liffey, and along the Finglas Road from the St. Margaret's Road junction to Prospect Road at Hart's Corner, as well as quiet-street cycle routes along Royal Canal Bank in Phibsborough, and through the Markets Area from Constitution Hill to Ormond Quay.	Permission granted (with conditions) on 12 March 2024 by An Bord Pleanála.
ABP - 313182	Clongriffin to City Centre Core Bus Corridor Scheme	**BusConnects – Clongriffin to City Centre Core Bus Corridor Scheme** The Clongriffin to City Centre Core Bus Corridor Scheme has an overall length of c. 5.7km and is routed along the R107 Malahide Road from Mayne River Avenue – R107 Malahide Road Junction to the junction with Marino Mart – Fairview and also routed for cyclists via the junction with Malahide Road- Brian Road along Carleton Road, St. Aidan's Park, Haverty Road and Marglann Marino.	Permission granted (with conditions) on 08 January 2024 by An Bord Pleanála.
ABP-314724	Metrolink - Estuary through Swords, Dublin Airport, Ballymun, Glasnevin, and City Centre to Charlemont, Co. Dublin	**Railway (Metrolink-Estuary to Charlemont via Dubin Airport) Order 2022** The proposed development comprises of a fully segregated and automated railway and metro mostly underground approximately 18.8km in length with 16 stations running from north of Swords at Estuary through Swords, Dublin Airport, Ballymun, Glasnevin and the	Awaiting decision. Application lodged on 30 September 2022 to An Bord Pleanála.

Ref.	Location	Description - overview	Status
		City Centre to Charlemont in the south of Dublin City Centre. It includes a 9.4km section of single bore tunnel running beneath Dublin City Centre running from Charlemont to Northwood Station and a 2.3km section of single bore tunnel running beneath Dublin Airport. North of Dublin Airport the railway will emerge from tunnel and will run at surface level and in cut and cover structures to Estuary Station. A new 99m bridge will be constructed over the M50 and a 261m long multi-span Viaduct over the Broadmeadow and Ward River. There will be a total of 16 stations, including 11 underground stations at Dublin Airport, Northwood, Ballymun, Collins Avenue, Griffith Park, Glasnevin, Mater, O'Connell Street, Tara, St. Stephen's Green and Charlemont; 4 retained cut stations at Seatown, Swords Central, Fosterstown and Dardistown and 1atgrade station at Estuary. A multi-storey 3000 space park and ride close to the M1 Motorway will be provided at Estuary Station, a maintenance depot is located near Dardistown Station which will house all the facilities required for the maintenance and operation of the MetroLink and its rolling stock and the Operational Control Centre. The works will also include railway signalling, command and control and communications systems; provision of electrical substations; establishment of temporary construction compounds; establishment of temporary traffic management and road diversions; new and realigned access routes and road junction improvements; diversion of existing utilities; provision of new drainage infrastructure; provision of environmental mitigation measures; and other infrastructural modifications to facilitate the overall project.	
DCC 3483/22 ABP-314092	9/9a, Richmond Avenue, Fairview, Dublin 3 D03 DH66/D03 C6X9	**Permission for development on Richmond Ave** The development will consist of 28 no. residential units in 2 no. apartment buildings ranging in height from 3-6 storeys (east block fronting Richmond Avenue 6 no. storeys, west block to rear of site 3 no. storeys). The east block provides 22 no. apartment units and the west block provides 6 no. apartment units. All units are intended to provide housing accommodation for the elderly. Access to the development will be from Richmond Avenue. This entrance will provide access and egress for pedestrians only to the	Granted permission with conditions by Dublin City Council on 20 June 2022. The decision was appealed to ABP. Appeal withdrawn and final permission granted on 16 March 2023.

Ref.	Location	Description - overview	Status
		development. The development also proposes approx. 214 sq.m of communal open space, balconies/terraces associated with individual apartment units, associated secure bicycle and bin storage, hard and soft landscaping and all other associated site works and services above and below ground on an overall site area of approx. 908.48 sq.m. The development proposes the demolition of approx. 595 sq.m of floorspace comprising single storey industrial units.	
ABP-314232	40km rail upgrade from Connolly Station and new Spencer Dock station in the east to M3 Parkway and a new depot west of Maynooth.	**Dart+ West Railway Order- Dublin City to Maynooth and M3 Parkway** Railway works from the city centre to Maynooth and M3 Parkway, largely on existing railway lines (approx.40km). Works include electrification, closure of level crossings, modification of bridges, a new depot and new Spencer Dock station.	Railway order permitted (with conditions) by An Board Pleanála on 18 July 2024
ABP-320164	Modifications to the existing railway line between Dublin City Centre and Drogheda, located in Counties Dublin, Meath and Louth.	**DART + Coastal North Railway Order 2024 - Northern Line between Dublin City Centre and Drogheda including the Howth Branch** The proposed development includes extension of the existing electrification from Malahide to Drogheda (approx. 37km) including the installation of overhead line equipment & associated substations; infrastructure works to facilitate the increase in service frequency and capacity.	Decision is awaited on the application. The application was lodged in July 2024.
ABP - 313289	'Hartfield Place', Swords Road, Whitehall, Dublin 9	**'Hartfield Place', Swords Road, Whitehall, Dublin 9** The proposed development comprises of strategic housing development for 472 no. residential units, residential amenities, a creche, a café and all associated site development works.	Permission granted with conditions on 16 November 2022 by An Bord Pleanála
D0533-01	New wastewater treatment plant in the townland of Clonshagh and associated sludge hub centre, orbital sewer, outfall pipeline and regional biosolids storage facility in various townlands in County Dublin	**Greater Dublin Drainage Project consisting of a new wastewater treatment plant, sludge hub centre, orbital sewer, outfall pipeline and regional biosolids storage facility in County Dublin** The Proposed Project will comprise a new Wastewater Treatment Plant (WwTP) at Clonshaugh and associated infrastructure that will serve the projected wastewater treatment requirements of existing and future drainage catchments in the north and north-west of the Ringsend Agglomeration (i.e. catchments currently draining to Ringsend WwTP), up to the Proposed Project's 2050 design horizon.	Decision awaited. The application was lodged in December 2021.

Ref.	Location	Description - overview	Status
		The Proposed Project will therefore protect public health, safeguarding the environment and facilitating social and economic growth to 2050 and beyond.	

20.10.2 Operation

There are existing residential and commercial developments close by, along with the multiple permissions granted and remaining to be decided in the area. All of the current and potential developments will generate similar waste types during their operational phases. Authorised waste contractors will be required to collect waste materials segregated, at a minimum, into recyclables, organic waste and non-recyclables. An increased density of development in the area is likely to improve the efficiencies of waste collections in the area.

Other developments in the area will be required to manage waste in compliance with national and local legislation, policies and plans which will minimise/mitigate any potential cumulative impacts associated with waste generation and waste management. As such the effect will be a **long-term, imperceptible and neutral.**

20.11 Difficulties Encountered

Until final materials and detailed construction methodologies have been confirmed, it is difficult to predict with a high level of accuracy the construction waste that will be generated from the proposed works as the exact materials and quantities may be subject to some degree of change and variation during the construction process.

While it is possible to initially select a licensed waste facility for soil disposal, there is potential to encounter contaminated material or material with naturally occurring variations in minerals and chemicals that necessitates sending it to a different suitably licensed facility. The sampling and testing carried out in the Site Investigation (SI) **(Appendix 9.1)** process provides spot samples, and further testing may be required during the excavation process, as the true condition of all excavated materials cannot be ascertained with certainty until this is undertaken.

There is a number of licensed, permitted and registered waste facilities in the Dublin region, in the surrounding counties, the eastern midlands waste region and in Ireland and Northern Ireland. However, these sites may not be available for use when required or may be limited by the waste contractor selected to service the development in the appropriate phase. In addition, there is potential for more suitably placed waste facilities or recovery facilities to become operational in the future which may be more beneficial from an environmental perspective.

Licensed waste facilities have annual limitations on material that they can import as part of their license agreements. Because of this it would not make it possible to commit to a singular specific receiving facility as it is not available throughout the excavation phase. It would not be viable to cease a development and wait until a receiving facilities annual receiving quotas are reset. In a normal development waste facilities would switch between facilities with available capacity.

The ultimate selection of waste contractors and waste facilities would be subject to appropriate selection criteria proximity, competency, capacity, serviceability, and cost.

20.12 References

- Waste Management Act 1996 as amended.
- Environmental Protection Agency Act 1992 as amended.
- Litter Pollution Act 1997 as amended.
- Regional Waste Management Planning Offices, The National Waste Management Plan for a Circular Economy 2024 - 2030 (2024).
- Forum for the Construction Industry – Recycling of Construction and Demolition Waste.
- Department of Communications, Climate Action and Environment (DCCAE), Waste Action Plan for the Circular Economy - Ireland's National Waste Policy 2020-2025 (Sept 2020).
- DCCAE, Whole of Government Circular Economy Strategy 2022-2023 'Living More, Using Less' (2021).
- Circular Economy and Miscellaneous Provisions Act 2022, as amended.
- Environmental Protection Agency (EPA) 'Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction & Demolition Projects' (2021).
- Department of Environment, Heritage and Local Government, Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects (2006).
- FÁS and the Construction Industry Federation (CIF), Construction and Demolition Waste Management – a handbook for Contractors and site Managers (2002).
- Dublin City Council (DCC), Dublin City Development Plan 2022-2028 (2022).
- DCC Dublin City Council (Storage, Presentation and Segregation of Household and Commercial Waste) Bye-Laws (2018).
- Planning and Development Act 2000 (S.I. No. 30 of 2000) as amended.
- EPA, Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous (2018).
- European Waste Catalogue - Council Decision 94/3/EC (as per Council Directive 75/442/EC).
- Hazardous Waste List - Council Decision 94/904/EC (as per Council Directive 91/689/EEC).
- Council Decision 2003/33/EC, establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC.
- Environmental Protection Agency (EPA), *National Waste Database Reports 1998 – 2020* and the Circular Economy and National Waste Database Report 2021 – 2022 (2024).
- EPA and Galway-Mayo Institute of Technology (GMIT), EPA Research Report 146 – A Review of Design and Construction Waste Management Practices in Selected Case Studies – Lessons Learned (2015).
- Department of Transport, Tourism and Sport and Department of Housing, Planning and Local Government, *Design Manual for Urban Roads and Streets* (2019)

21 Material Assets – Services

21.1 Introduction

Material assets are resources that are valued and intrinsic to the site of the proposed development and the surrounding area. These may be of either natural or human origin and the value may arise for economic or cultural reasons. This chapter considers and assesses the effects of the proposed development on the material assets, including the existing major utilities within and around the site, during the construction and operational phases.

In relation to material assets, the EPA guidelines state that:

> *"In Directive 2011/92/EU this factor included architectural and archaeological heritage. Directive 2014/52/EU includes those heritage aspects as components of cultural heritage. Material assets can now be taken to mean built services and infrastructure. Traffic is included because in effect traffic consumes transport infrastructure. Sealing of agricultural land and effects on mining or quarrying potential come under the factors of land and soils."*

As per the EPA guidelines, 'built services and infrastructure' addressed in this chapter include water supply infrastructure, sewerage (surface water drainage and foul water drainage), and utilities (electricity, telecommunications and gas) infrastructure in the receiving environment.

This chapter has been prepared by Namrata Kaile, Ecologist & Environmental Consultant at Brady Shipman Martin, with input from Barrett Mahony Civil & Structural Consulting Engineers (BMCE) and O'Connor Sutton Cronin (OCSC). A technical review was completed by Thomas Burns, Partner at Brady Shipman Martin. Refer to **Table 1.4** in Chapter 1 (Introduction) for qualifications of authors and reviewers.

Traffic-related impacts have been addressed under the scope of Chapter 19 (Traffic & Transportation). Water quality, land / soils and other hydrological / hydrogeological impacts of the proposed development have been assessed under the scope of Chapters 9 (Land, Soils, Geology & Hydrogeology) and 10 (Hydrology). Waste management infrastructure has been addressed under Chapter 20 (Material Assets – Waste) and built historic environment is covered under Chapter 15 (Cultural Heritage - Architectural Heritage) and Chapter 16 (Cultural Heritage – Archaeology).

The proposed development is described in Chapter 5, and these details are reiterated in this chapter only insofar as is relevant to Material Assets – Services.

This leaves the following outstanding material assets to be addressed herein:

- Ownership and access;
- Drainage and water supply;
- Gas supply;
- Electricity supply;
- Telecommunications and broadband.

21.2 Method

The potential impacts to material assets as a result of the proposed development were assessed through a desktop study of available information. The following principal sources were consulted:

- Uisce Éireann utility plans (for surface water drainage, foul water drainage and water supply);
- ESB Networks utility plans;
- Gas Networks Ireland (GNI) service plans;
- Eir e-maps; and
- Virgin Media maps.

The methodology is consistent with the following relevant guidance:

- EPA (2022). Guidelines on the information to be contained in Environmental Impact Assessment Reports; and
- National Roads Authority (NRA) (2008). Environmental Impact Assessment of National Road Schemes – A Practical Guide.

Effects and impacts have been characterised in accordance with the criteria set out in the EPA guidelines (as reproduced in **Table 1.5** in Chapter 1 (Introduction)).

Surface water run-off, foul drainage discharge and water usage calculations have been carried out in accordance with the following guidelines:

- Greater Dublin Strategic Drainage Strategy (GDSDS);
- Irish Water's Code of Practice for Wastewater Infrastructure 2020;
- Irish Water's Code of Practice for Water Infrastructure 2020;
- The Planning System and Flood Risk Management, Guidelines for Planning Authorities (2009).

The proposed development is materially consistent with the DCC Development Plan 2022-2028 which was the subject of separate assessments under the SEA Directive (SEA), the Habitats and Birds Directives (AA), the Water Framework Directive and the Floods Directive (see SFRA), and this Plan and the results of those assessments have been considered in the preparation of this EIAR.

21.2.1 Consultation

As part of the design development and planning application processes, consultations have been held with Uisce Éireann in relation to utilities infrastructure. A pre-connection enquiry was submitted to Uisce Éireann in relation to the water and wastewater strategy for the proposed development. A confirmation of feasibility letter was received from Uisce Éireann (formerly Irish Water) in May 2025, stating that the proposed water connection and wastewater connection to the Uisce Éireann network(s) can be facilitated at this moment in time. It was further stated that the connections were feasible without infrastructure upgrade by Uisce Éireann. A statement of design acceptance was received from Uisce Éireann in June 2025, stating that Uisce Éireann has no objection to the proposed connections.

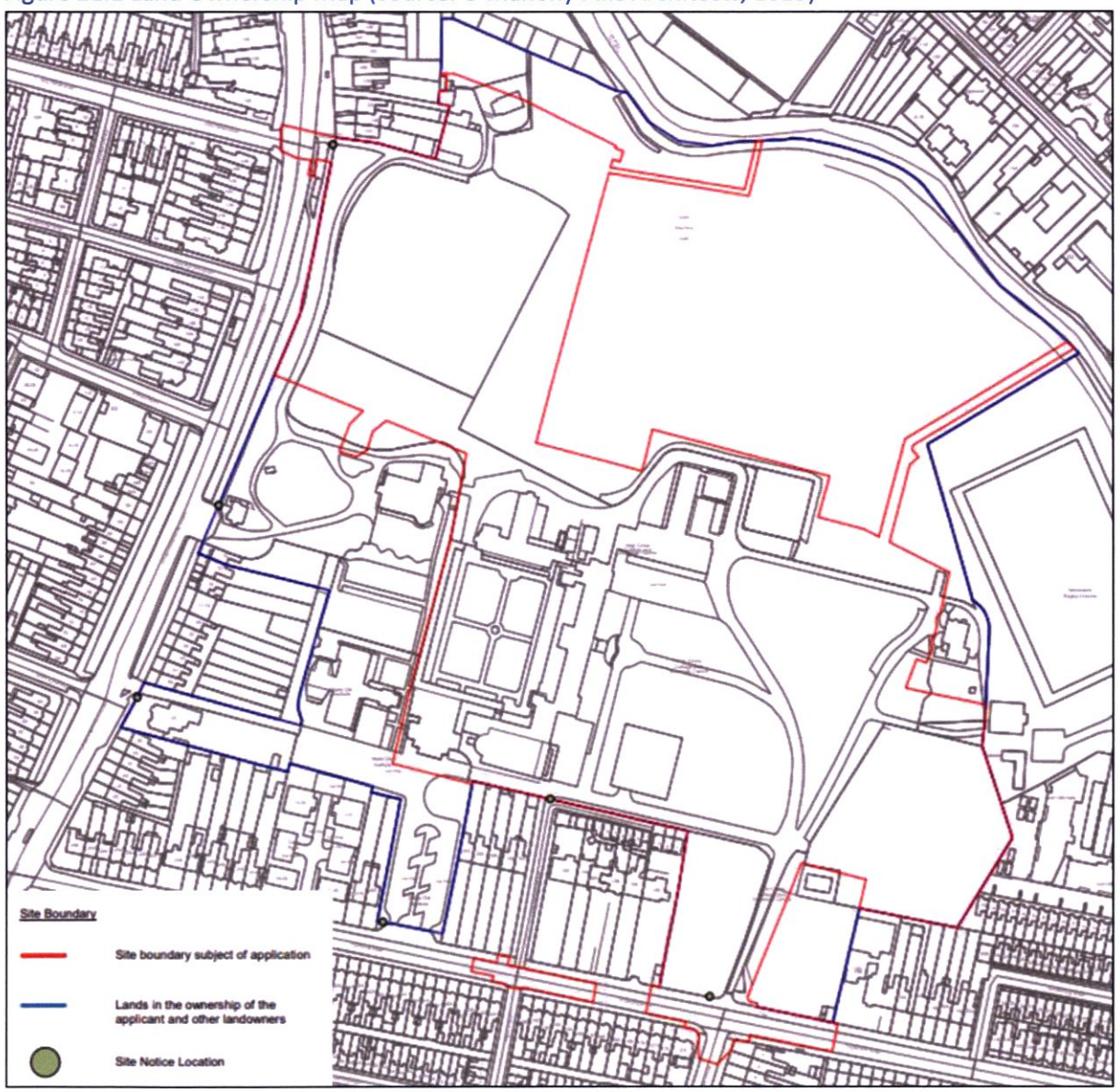
21.3 Baseline Environment

21.3.1 Ownership & Access

The site is located within the grounds of the former Holy Cross College seminary. These lands were acquired by the Archdiocese in 1859 and college facilities were developed. They housed a seminary for

the Catholic Church in Ireland and administration offices for the Archdiocese and various diocesan activities. The seminary ceased operation in 2000. Thereafter, the site was predominantly used for offices and activities of the Archdiocese and charitable organisations, which occupied relatively little space in the large site, and they have now vacated the site. The land and buildings on the site are significantly underutilised at present.

Figure 21.1 Land Ownership Map (Source: O'Mahony Pike Architects, 2025)



The Archdiocese entered into an agreement with Cumann Lúthchleas Gael / the Gaelic Athletic Association (GAA) to acquire these lands, who subsequently entered into an agreement to onward sell these to the applicant CWTC Multi Family ICAV acting solely on behalf of its sub-fund the DBTR DR1 Fund. The Archdiocese retains the Archbishop's residence and surrounding lands, and lands in the south-west corner of the Holy Cross College property, which includes the former Mater Dei building, a Family Hub, and a large surface car park. These lands are included in the wider Masterplan.

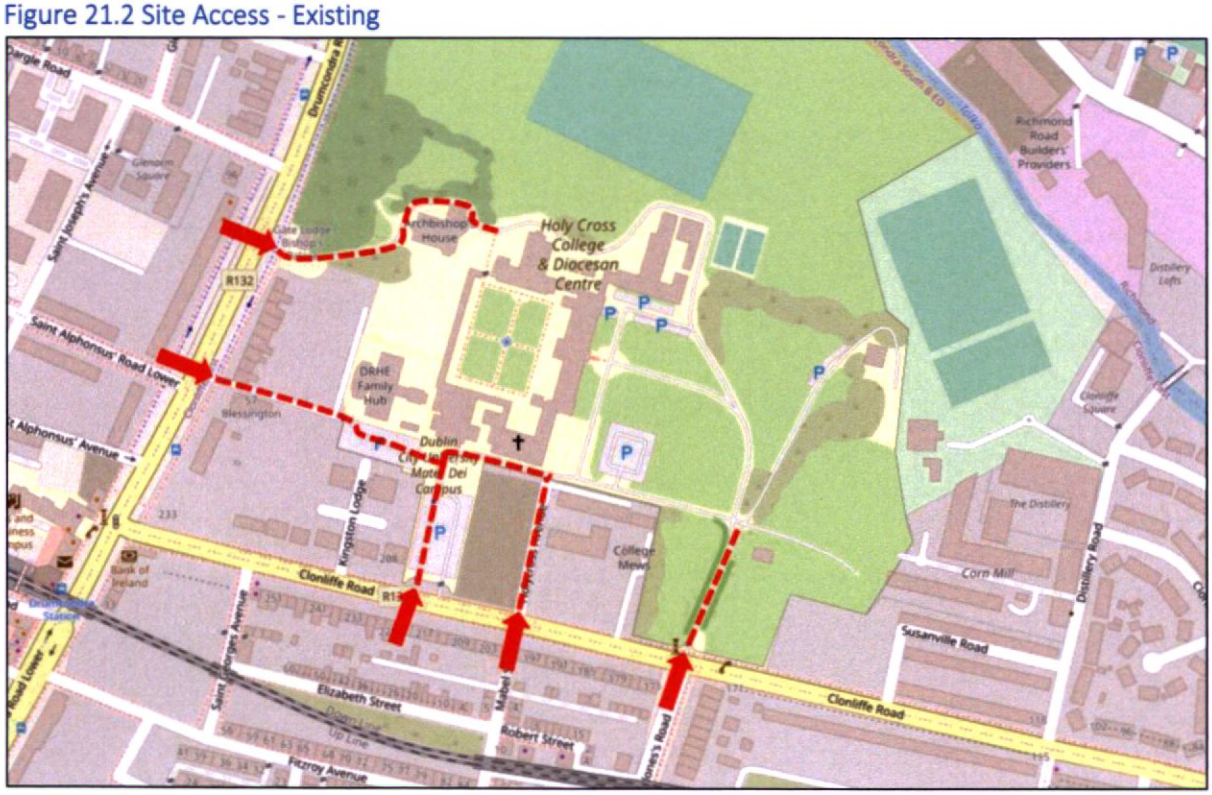
The Red House (Dublin City Council Registered Protected Structure Reference Number 1902 and Recorded Monument Ref. No. 018-019) and curtilage is owned by Páirc an Chrócaigh Teoranta Cuideachta Faoi Theorainn Ráthaíochta / GAA as well as the land at the south-eastern corner of the

Holy Cross College lands which has been subject to an approval by An Bord Pleanála for a 2 to 7 storey 200 room hotel. The land parcel to the north of the Holy Cross College lands, former grass playing pitches, are operated by the GAA and are due to be formally acquired by the GAA from the Archdiocese of Dublin.

As noted above the Red House and its curtilage are owned by the GAA and does not form part of the proposed development, other than in respect of proposed adjacent landscaping. The setting and curtilage of the Red House need to be preserved in line with its protected structure status. The Red House was the original Holy Cross College before it was relocated to the Seminary Building. The historic affiliation between these buildings means a visual connection needs to be preserved. The proposed development, and orientation of the adjoining B and D2 Blocks and plots, retains the visual connection of these buildings and enhances both the Seminary and front central lawn in this location. Views to this Protected Structure and its architectural heritage is therefore be maintained.

The lands are currently accessed via two entrances on Drumcondra Road and three entrances on Clonliffe Road, as illustrated in **Figure 21.2**, below. It should be noted that, since March 2020, the proposed development site has been closed to the public, with restricted access to essential staff and visitors only.

Figure 21.2 Site Access - Existing



21.3.2 Drainage

The proposed drainage design is detailed in the Infrastructure Planning Report (2025) prepared by Barrett Mahony Civil & Structural Consulting Engineers (BMCE) and the corresponding drawings from BMCE, submitted under separate cover as part of this application.

The design of the drainage system will be detailed in accordance with Part H of the Building Regulations, *EN 752: Drain and Sewer Systems outside Buildings*, the *Greater Dublin Regional Code of Practice for*

Drainage Works, Irish Water's *Code of Practice for Wastewater*, and in accordance with all Dublin City Council Drainage Division and Uisce Éireann requirements.

21.3.2.1 Foul Drainage System

There is an existing 375mm foul network sewer on Clonliffe Road. There is an existing 675mm foul network sewer which crosses the site at the northern corner heading in a south-western direction.

The proposed foul drainage system will be designed to take discharges from the new residential units. The foul system will connect to the Uisce Éireann network at three locations, including two connection points into the existing 675 mm combined sewer below the potential future GAA pitches, and a third connection on Clonliffe Road. Refer to BMCE drawings CLN-BMD-00-ZZ-DR-C-1008 – Sheets S1 – S4 (submitted under separate cover) for layout of the proposed foul drainage.

It is calculated that the proposed development will have a total hydraulic loading of 719m^3 per day during the operational phase. This equates to an average flow of 6.15 litres/second (over a 24-hour period) and a peak flow of 18.45 litres/second.

A Pre-connection Enquiry application was submitted to Uisce Éireann to confirm capacity in the receiving network and a confirmation of feasibility was obtained (refer to appendices of BMCE's Infrastructure Planning Report, submitted under separate cover).

21.3.2.2 Surface Water Drainage System

The existing drainage systems on the site are mainly combined systems (carrying foul and surface water). There are connections from the site to the existing sewerage network on Clonliffe Road and also to the 675mm diameter combined sewer, which traverses the north-east quadrant of the masterplan lands. There is an existing 225mm combined sewer on Holy Cross Avenue which discharges in a southerly direction and connects to the 375mm diameter combined sewer on Clonliffe Road. This 375mm sewer on Clonliffe Road discharges in an easterly direction and connects into a 450mm diameter combined sewer downstream. There also is a 675mm diameter combined sewer in the north-east quadrant of the masterplan lands, crossing the lower lying grassed area in a south easterly direction. The existing sewerage network in the vicinity of the site eventually discharges to the Poplar Row pumping station (to the east) and from there sewage is pumped to the municipal wastewater treatment at Ringsend.

On site, there is a combination of combined drains and surface water drains. There is an existing surface water system which collects run-off from the internal access roads, via road gullies, before discharging in a southerly direction into the 375mm diameter combined sewer on Clonliffe Road. There is an existing combined system serving the cluster of Seminary Buildings, the majority of which discharges in a southerly direction, into the 225mm combined sewer on Holy Cross Avenue, and from there into the 375mm combined sewer on Clonliffe Road. A small portion of the combined drainage system discharges in a northerly direction and into the 675mm diameter combined public sewer.

Surface water run-off from the proposed development will drain by gravity and will be attenuated prior to discharge into the River Tolka via two new surface water outfalls, with the exception of Building C2 adjacent to Clonliffe Road, which will discharge at a restricted attenuated flow into the Uisce Éireann combined sewer on Clonliffe Road. The surface water has been redesigned with an outfall rate equal to

Qbar for any surface out falling into the River Tolka and surface water outfall to Clonliffe Road is restricted to 2 l/s/ha.

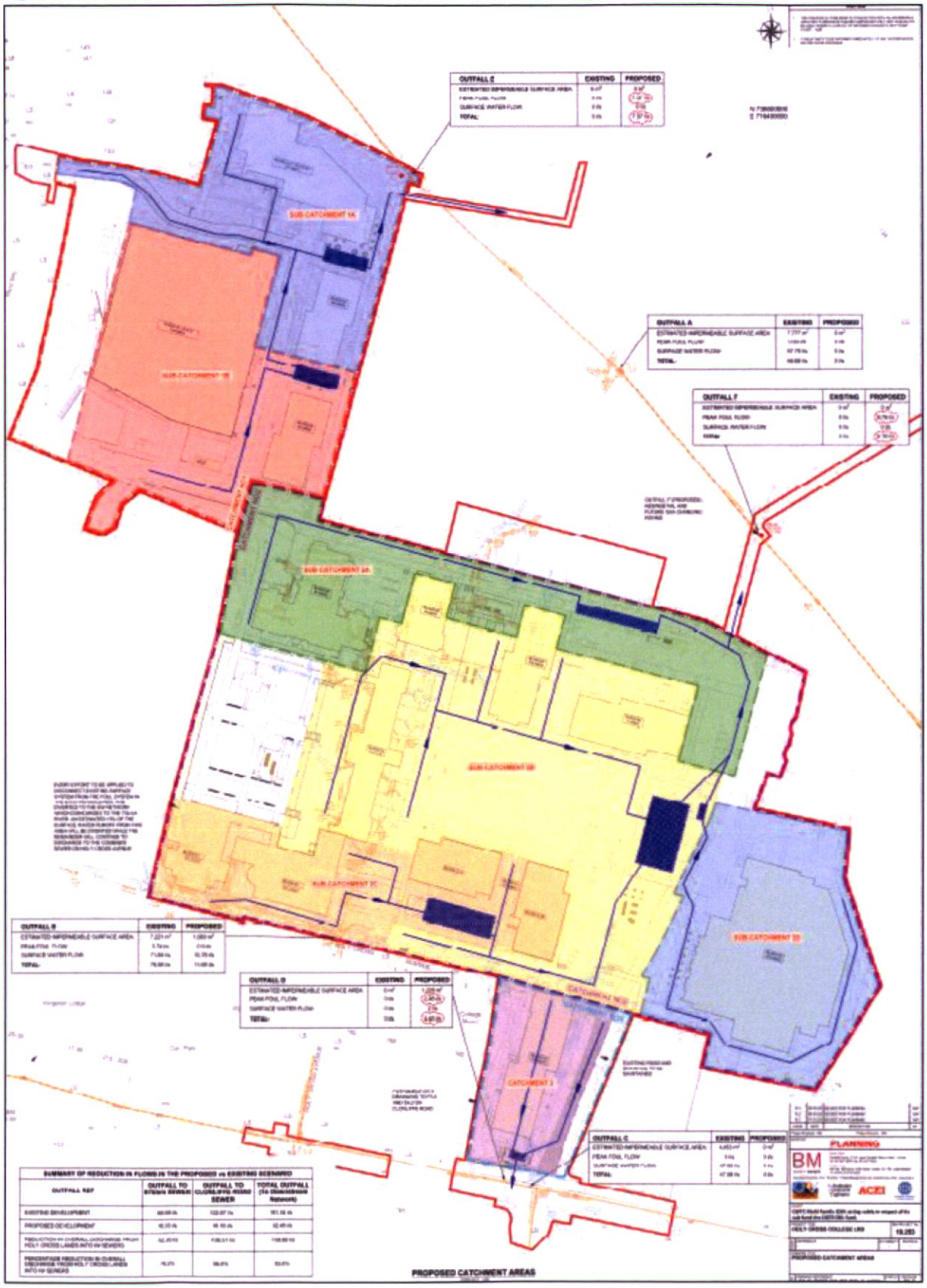
In line with the DCC Development Plan 2022-2028, blue roofs have been introduced to all new roof areas over 100m^2 in size, and the capacity of buried attenuation systems has been reduced as much as possible. The design seeks to place greater emphasis on integrating increased opportunities for interception of surface water at source, through natural retention measures, such as tree pits, infiltration trenches and bio retention areas.

The development will be served by 3 no. separated surface water drainage sub catchment areas (refer **Figure 21.3**). Each sub catchment will be served by a gravity drainage network, with run-off attenuated in each catchment prior to discharging to the River Tolka or the public network in Clonliffe road. The proposed catchment division is as follows: 1. Blocks A and surrounds (will drain by gravity towards the Tolka river) 2. Blocks B, C, D, E – with the exception of block C2, which will drain towards the River Tolka. 3. Block C2 – which will drain to the existing network in Clonliffe Road.

Owing to constraints on the site arising from the existing mature trees and protection of these tree root zones, pavement run-off will be intercepted and treated using a variety of SuDS components including gravel filter drains, permeable paving and rain gardens, which have been strategically selected and positioned where space permits. The majority of pedestrianised areas and footpaths are proposed to be permeable paving or will be constructed such that the impermeable paths drain to gravel trenches adjacent to the path, allowing for full interception and full infiltration of rainwater back to source. To ensure the risk of pollutants entering the River Tolka has been minimised significantly, roads for the most part will either discharge to gravel filter drains along the verges, tree pits, or raingardens. Where adjacent to existing tree root protection zones, the run-off will discharge to trapped road gullies with sumps. Pipework from these will discharge into catchpit (silt trap) manholes followed by proprietary treatment systems such as Hydro International 'Downstream Defender' and bypass petrol interceptors which will remove any final silts and oils to discharge into the River Tolka.

For further information on the proposed drainage design, please refer to the aforementioned documents submitted as part of the application pack.

Figure 21.3 Catchment layout and indicative surface water drainage layout (Source: BMCE, 2025)



21.3.4 Water Supply

The proposed water supply design is detailed in the Infrastructure Planning Report (2025) prepared by Barrett Mahony Civil & Structural Consulting Engineers (BMCE) and the corresponding drawings from BMCE, submitted under separate cover as part of this application.

There are numerous Uisce Éireann watermains in the vicinity of the site including, a 100mm, 150mm and 800mm diameter watermains, to the south of the proposed development, on Clonliffe Road, a 150mm watermain on Holy Cross Avenue, to the south-west of the proposed development and a 600mm and a 225mm watermain on Drumcondra Road Lower, to the north-west of the proposed development. In addition, there is a network of existing on-site watermains serving the various existing buildings across the Holy Cross lands.

The proposed water supply connection to the new development will be from the existing 600mm public main on Drumcondra Road Lower with a cross-connection to the existing 225mm public main on Drumcondra Road Lower, as directed by Uisce Éireann. In addition, it is proposed that the development will be serviced by a second connection to the 800mm diameter public main on Clonliffe Road.

The proposed watermain system through the site will be 250mm diameter. Refer to drawings CLNBMD-00-ZZ-DR-C-1009 Sheets 1-4 for the layout of the proposed watermains. The peak flow demand during the operational phase of the development will be c. 34.95 litres/second, equivalent to an average daily demand of 604 m^3. The installation of low flow fittings and a rainwater harvesting system for the development will reduce the demand on the existing water supply network.

The proposed water main layout is arranged such that all buildings are a maximum of 46m from a hydrant in accordance with the Department of the Environment's Building Regulations "Technical Guidance Document Part B Fire Safety". Hydrants are to be installed in accordance with Uisce Éireann's Code of Practice and Standard Details. Final positions of hydrants will be agreed as part of the Fire Safety Certificate requirements.

21.3.5 Utilities Infrastructure

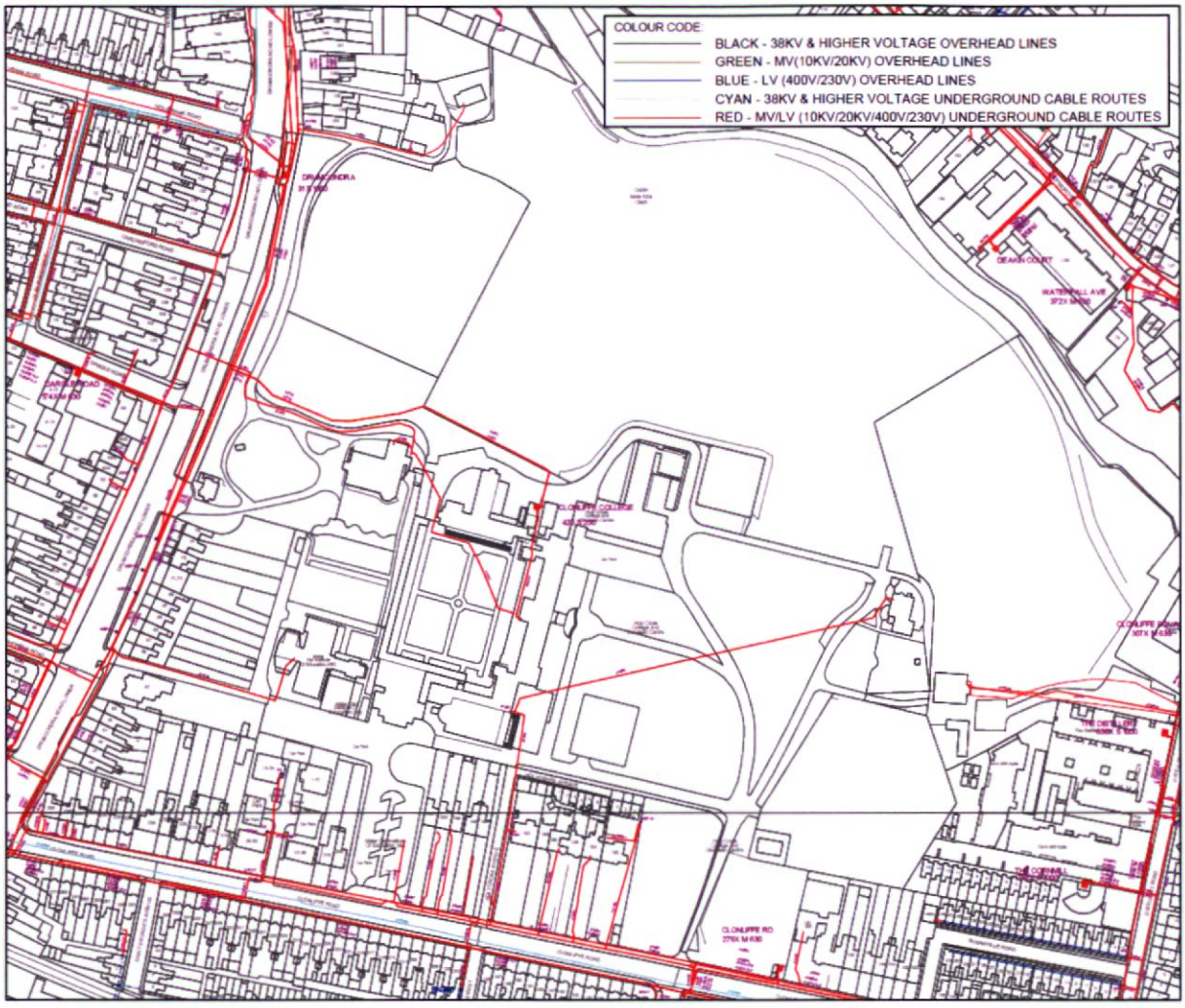
As expected given the urban location and the ongoing (albeit limited) use of the site, the proposed site is served by gas, electricity and telecommunications infrastructure, with broadband infrastructure situated in close proximity / at the periphery of the site but not connected to the site or its buildings directly. Utilities infrastructure on the site is less dense than it is in the immediate surrounding areas, because of open nature of the site, with large undeveloped, greenfield areas and scattered buildings.

Details of the existing electricity, gas, telecommunications and broadband infrastructure have been obtained from the various utility providers / authorities, as illustrated in **Figures 21.4 – 21.6**, below.

21.3.5.1 Electricity Supply

Figure 21.4 shows that the existing buildings on the Site are served by MV / LV underground cables, fed from both the Drumcondra Road and Clonliffe Road. There are also higher voltage (38 KV) cables under Clonliffe Road, where works are proposed. There is an existing oil-filled ESB substation on the site at present.

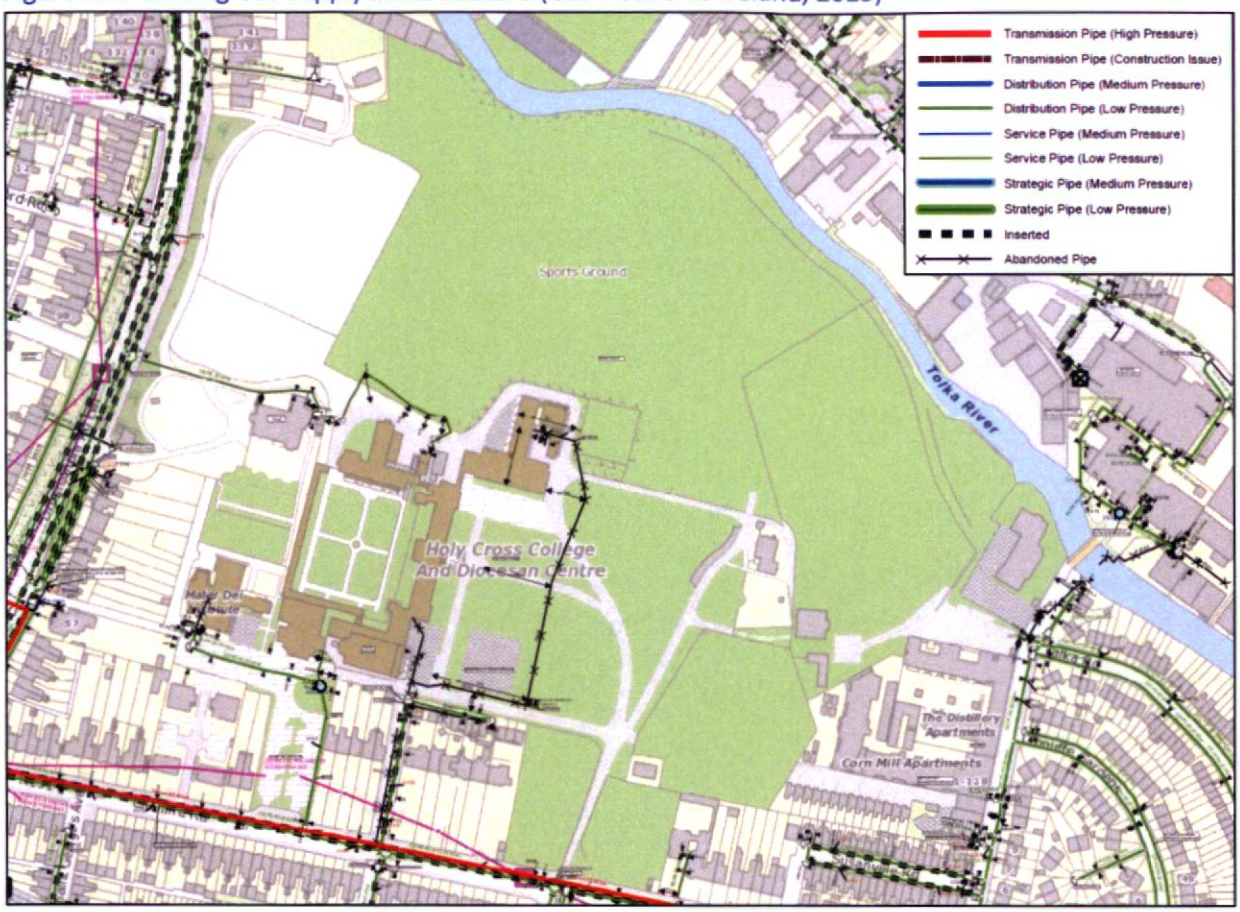
Figure 21.4 Existing Electricity Supply Infrastructure (Electricity Supply Board, 2025)



21.3.5.2 Gas Supply

Figure 21.5 shows the existing on-site gas supply infrastructure, as provided by Gas Networks Ireland (GNI). The existing gas infrastructure is comprised of low-pressure service pipes and abandoned pipes. The existing live feed enters the proposed development via Drumcondra Road Lower and passes alongside the Archbishop's House and under the gates to the rear of the Palace. The remainder of the on-site gas infrastructure (marked 'abandoned' on **Figure 21.5**) has been confirmed to be dead. As shown in **Figure 21.5**, there is a high pressure (40 bar) GNI transmission main under Clonliffe Road where it passes within the proposed development.

Figure 21.5 Existing Gas Supply Infrastructure (Gas Networks Ireland, 2025)



21.3.5.3 Telecommunications & Broadband

Figure 21.6, below, shows that the site is fed telecommunications infrastructure from Drumcondra Road via the Archbishop's House. **Figure 21.7** shows the existing broadband infrastructure in the vicinity, as provided by Virgin Media. There is currently no broadband connectivity at the Site.

Figure 21.6 Existing Telecommunications Connection to the Project Site (left: Eir, 2025)

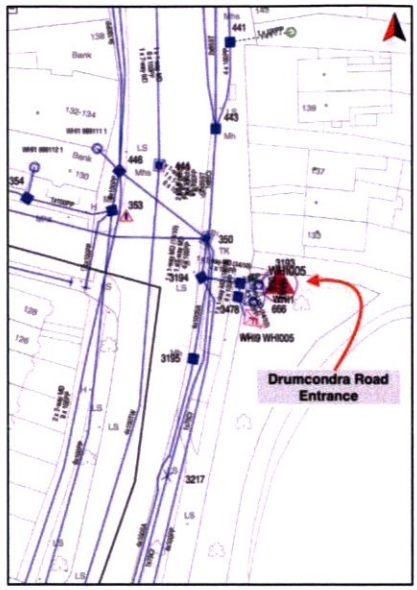
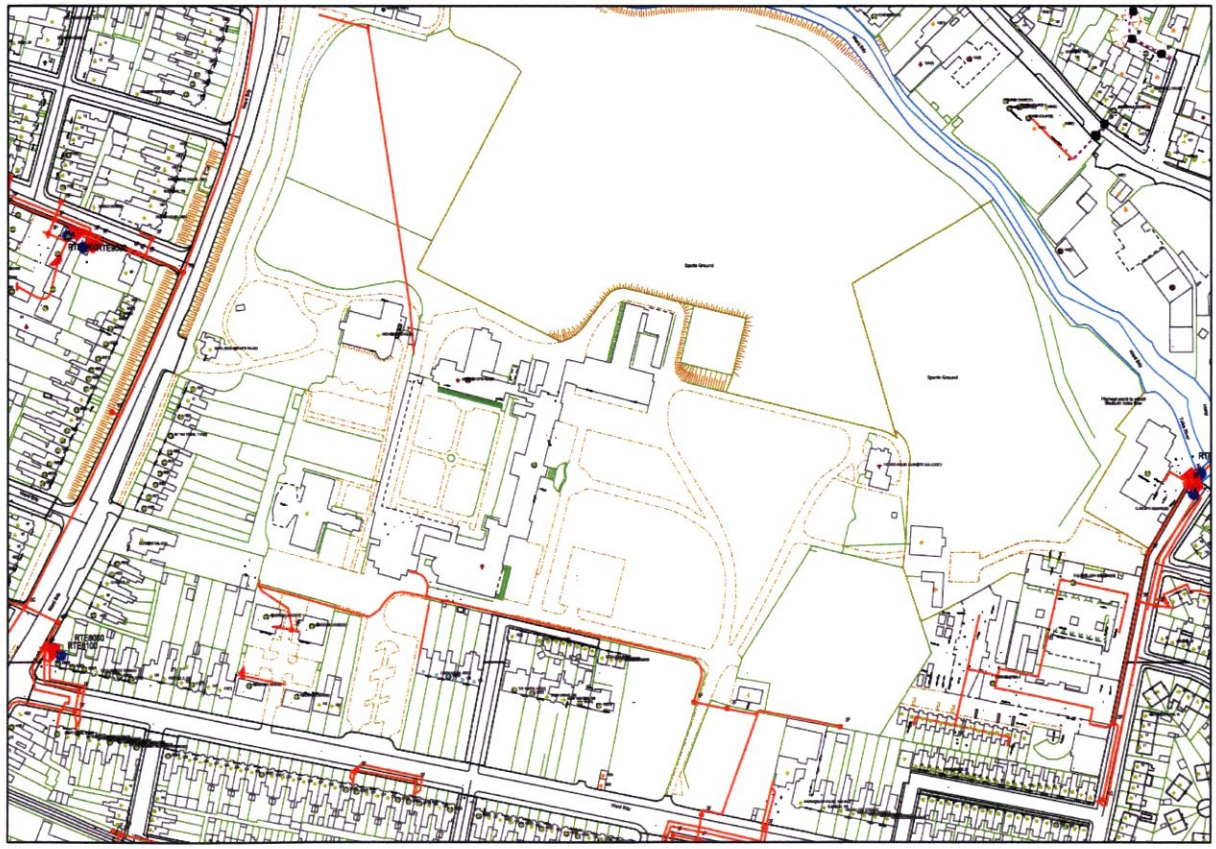




Figure 21.7 Existing Broadband Supply Infrastructure (shown in red) (Virgin Media, 2025)



21.4 Predicted Impacts of the Proposed Development

21.4.1 Do-Nothing Impact

In the do-nothing scenario (i.e. assuming the proposed development were not progressed), the built services and infrastructure at the site of the proposed development would likely remain as they are at present (as described above). No likely significant effects would arise in relation to material assets in this scenario.

However, development (likely residential) under the scope of a separate application / proposal, at some point in the future is considered somewhat more likely, considering the nature of the lands, their zoning status, and the ongoing trends and policies in relation to housing and residential development at the national and regional levels. It is not possible to assess the likely impacts under this scenario, as the nature and scale of any potential future proposals for the site (in the absence of the proposed development) are not known.

21.4.2 Construction Phase

21.4.2.1 Ownership and Access

Construction works are likely to take place over a c. 60-month period (i.e. five years). During this time, there will be no severance of land, loss of rights of way or amenities as a result of the proposed development. As illustrated in Figures 5.6 – 5.8 in Chapter 5 (Description of the Proposed Development), access to the site by persons associated with diocesan activities will be maintained during the construction phase. The layout and internal road network of the proposed development has been designed to tie-in with (and thereby facilitate) permitted and future proposed developments in the immediate vicinity, including the permitted hotel development off Clonliffe Road (ABP Ref.: PL29N.308193), the potential future GAA facilities to the north of the site.

The proposed works will be carried out on lands under the ownership of the Applicant and on lands within the wider site with the approval of the other landowners. Works on lands identified as under the control of Dublin City Council will also be carried out in consultation and agreement with them. As such, there will be no compulsory purchase of private property under the scope of a Compulsory Purchase Order (CPO).

No significant impacts are predicted to occur in relation to ownership or access as a result of the proposed development.

21.4.2.2 Services / Utilities Infrastructure

In order to facilitate the proposed development, upgrades and diversions of existing utilities infrastructure will be required during the construction phase. These may be summarised as follows:

- The new development will comprise a separated drainage system, wherein the vast majority of surface water will not discharge into IW combined sewers but rather will be attenuated on site for up to a 1in 100-year storm event plus an additional 20% allowance for climate change, and discharged into the Tolka at the equivalent Qbar rate.
- Existing ESB substation to be removed and new substation to be provided at different location on site. Electricity supply infrastructure to be upgraded / diverted / replaced, as needed.

- It is envisaged that the existing telecommunications infrastructure will be terminated at the Archbishop's House and removed from façades of buildings on-site, with new infrastructure installed to serve the proposed development. It is possible that some existing telecommunications infrastructure on Clonliffe Road may need to be diverted to facilitate the construction of the temporary site access at this location. Some diversions / relocations of overhead cables are also envisaged.
- The proposed development will not require any gas connections as the proposed heating system will utilise heat pumps. Therefore, the existing gas infrastructure is to be carefully removed and isolated at the site boundary to the rear of the Archbishop's House.
- Addition of broadband infrastructure to the site.

On-site utilities works and diversions, if improperly executed, have the potential to result in:

- Damage to material assets;
- Accidental discharge of sediments and harmful substances, due to exposed soils or accidental spills of harmful substances can be flushed into the public wastewater network or the nearby surface water network;
- Interruptions to supply / services in neighbouring areas; and / or
- Human health impacts related to accidents (e.g. involving live power cables or gas mains).

All utilities works (i.e. removals, replacements, diversions and additions) shall be carried out in consultation with and in accordance with the relevant requirements of the respective service providers / authorities (i.e. Uisce Éireann, ESB, GNI, Eir, Virgin Media, Health and Safety Authority (HSA) and any others of relevance). These works will be carried out so as to avoid / minimise interruptions of service which might affect local residents and / or businesses. Additionally, all utilities works will be carried out in a manner which does not impede other developments on the wider Holy Cross College lands, such as the permitted hotel development (ABP Ref.: PL29N.308193) and the potential future GAA facilities.

In the absence of mitigation measures ***negative, slight and short-term impacts*** are predicted in relation to built services or infrastructure during the construction phase.

21.4.3 Operational Phase

During the operational phase, the site will contain operational surface water drainage, foul water drainage, water supply, electrical, and telecommunications systems, serving the proposed residential units. These systems are being designed and specified in accordance with the applicable codes and standards of the respective service providers and authorities (i.e. Uisce Éireann, ESB, GNI and Eir / Virgin Media), and will be sufficient to provide for the operational demands of the proposed development. Demand from the proposed development is not predicted to negatively affect the existing networks in the receiving environment. Maintenance of built services and infrastructure on the site will be carried out on an ongoing basis during the operational phase, as per the relevant requirements of the respective service providers and authorities.

No likely significant impacts are predicted in relation to built services or infrastructure during the operational phase.

21.4.3.1 Ownership and Access

During the operational phase, there will be no severance of land, loss of rights of way or amenities. The proposed residential development is located such that it will not have any traffic impact on the existing residential development in the area. The access and internal layout is designed in accordance with DMURS and provides strong permeability for pedestrians and cyclists and will promote and facilitate sustainable travel patterns as part of the overall development.

As part of this application, pedestrian and cyclists access points into the site from the local network will be provided from the following points:

- Clonliffe Road at Holycross Avenue (southern edge of site);
- Clonliffe Road at the existing access into Holy Cross College at the junction with Jones's Road (southern edge of site); and
- Drumcondra Road at the junction with Hollybank Road (western edge of the site);

Vehicular access to the proposed development from the local road network will be provided from the following two points:

- Primary access: from Clonliffe Road via an upgraded 4-arm signalised crossroads junction between Clonliffe Road, Jones's Road and the Proposed Development. It is anticipated that the majority of vehicles to the development will utilise this access; and
- Secondary access: from Drumcondra Road Lower via a new left-in/left-out arrangement creating a 4-arm priority crossroads junction between Drumcondra Road, Hollybank Road and the proposed development. Only a small proportion of vehicles will utilise this access to reach the residential element of the development.

Figure 21.8 Proposed Access Strategy- Pedestrian and Cycle

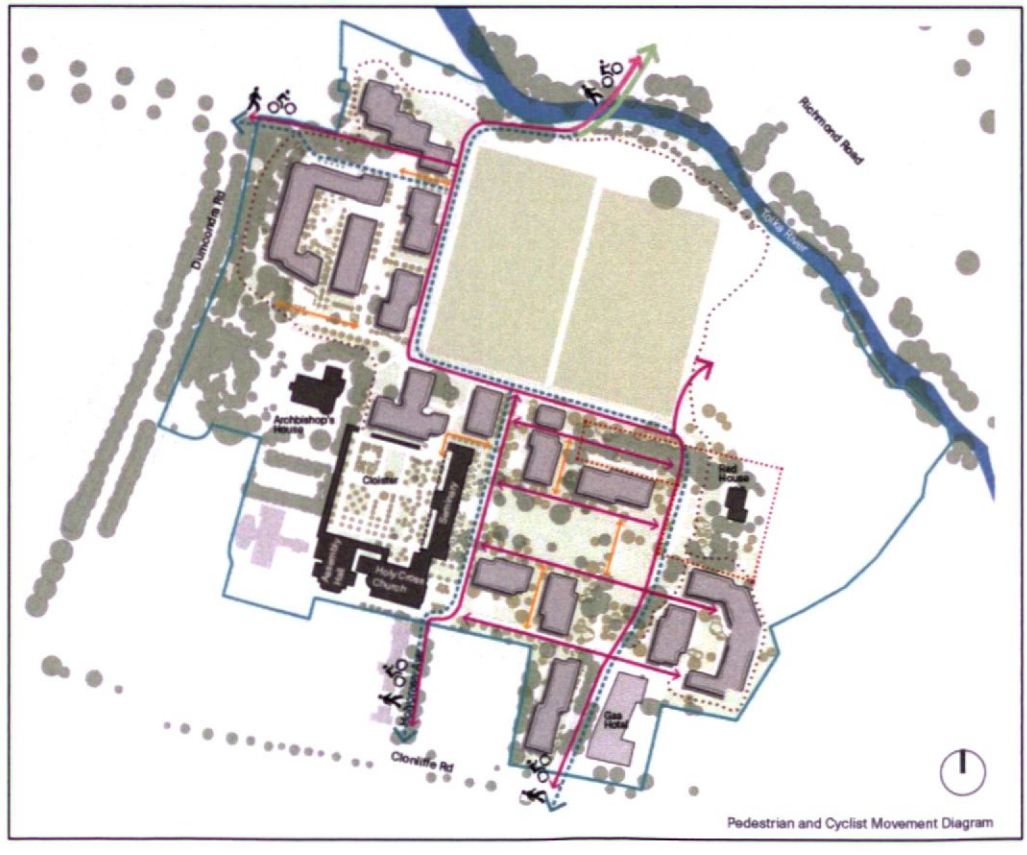
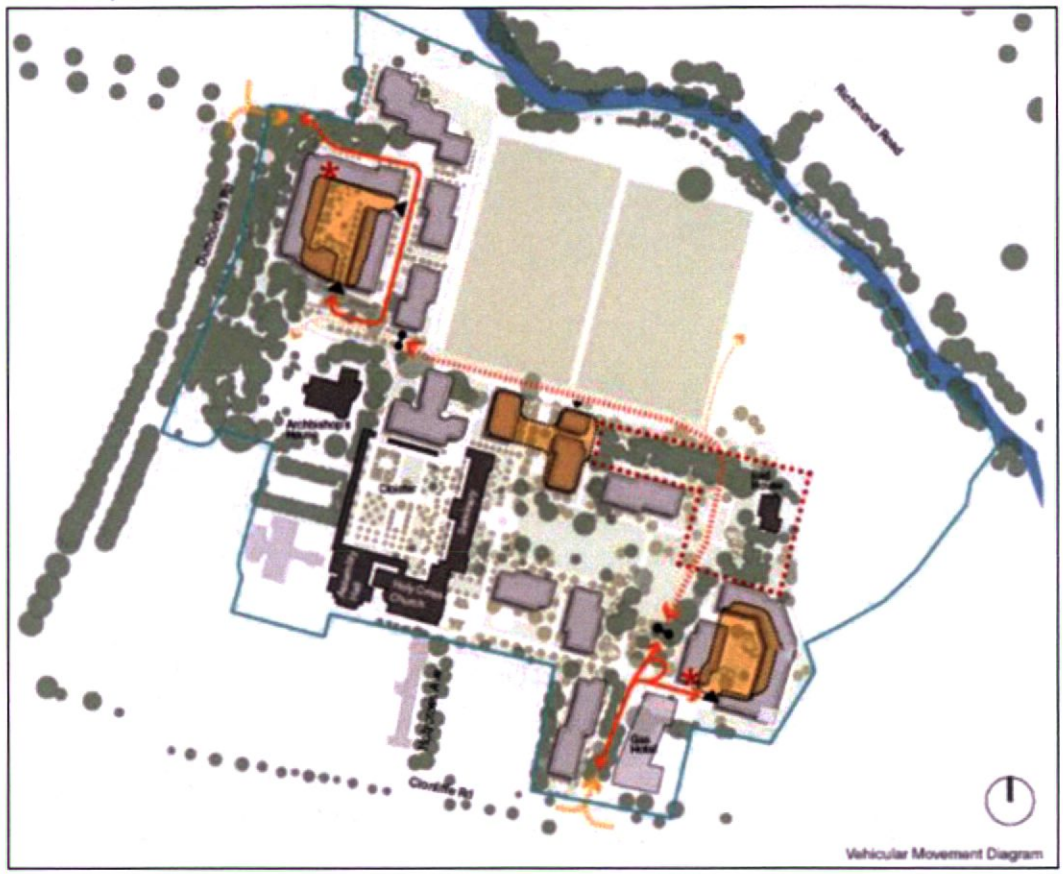


Figure 21.9 Proposed Access Strategy- Vehicles



The secondary access from Drumcondra Road will be for car park/delivery/crèche/retail and servicing/emergency access to the site only. The primary access from Clonliffe Road will provide access into all vehicular-designated areas of the site.

Circulation through the site has been designed so that it will not be possible for car traffic to cut through the development between Drumcondra Road and Clonliffe Road to avoid creating a "rat run". A barrier system will be installed to serve the dual purpose of calming traffic and controlling through movements.

Overall, the completion of the proposed development will increase permeability across the site for pedestrians and cyclists, resulting in a ***positive, moderate, long-term impact*** in terms of access.

No significant impacts are predicted to occur in relation to ownership or access as a result of the operational phase of the proposed Project.

21.4.3.2 Services / Utilities Infrastructure

Maintenance of utilities infrastructure on the Site will be carried out during the operational phase, as per the relevant requirements of the various utility providers / authorities. The on-Site utilities infrastructure will be sufficient to provide for the operation of the proposed development and ***no significant impacts*** on services or the infrastructure itself are predicted to occur as a result of the operational phase.

Surface Water Drainage

The proposed Surface Water Management Plan for the development is in line with the requirements of the Dublin City Drainage Division and the Dublin City Development Plan 2022-2028 with respect to Sustainable Drainage Systems. SuDS will be incorporated into the development and will include green blue roofs, permeable paving, filter drains, rain garden and shallow infiltration systems. Surface water run-off will go through a minimum of two-stage treatment prior to discharge by gravity into the receiving systems. The design seeks to place greater emphasis on integrating increased opportunities for interception of surface water at source, through natural retention measures, such as tree pits, infiltration trenches and bio retention areas.

Foul Water Drainage

The proposed foul water drainage network has been designed in accordance with the Building Regulations and specifically in accordance with the principles and methods set out in the IS EN 1825 Part 1 and Part 2, and the recommendations of the '*Greater Dublin Strategic Drainage Study*', (GDSDS) and the Uisce Éireann Connection and Developer Services, '*Code of Practice for Wastewater Connections*'.

As described previously, the new development will comprise a separated drainage system, wherein the vast majority of surface water will not discharge into IW combined sewers but rather will be attenuated on site for up to a 1in 100-year storm event plus an additional 20% allowance for climate change, and discharged into the Tolka at the equivalent Qbar rate.

The proposed drainage design is detailed in the Infrastructure Planning Report (2025) prepared by Barrett Mahony Civil & Structural Consulting Engineers (BMCE) and the corresponding drawings from BMCE, submitted under separate cover as part of this application.

Water Supply

The proposed water supply network has been designed in accordance with *Irish Water's Code of Practice for Water Infrastructure* and *Water Infrastructure Standard Details*.

The proposed water supply connection to the new development will be from the existing 600mm public main on Drumcondra Road Lower with a cross-connection to the existing 225mm public main on Drumcondra Road Lower, as directed by Irish Water. In addition, it is proposed that the development will be serviced by a second connection to the 800mm diameter public main on Clonliffe Road.

Electricity Supply

The proposed development will contain underground electricity cables and above-ground substations, which will tie-in with existing infrastructure in the receiving environment, providing power to the proposed development. A new electricity connection application will be submitted to ESB Networks if planning is approved.

Gas

As mentioned previously, there are no proposals to provide natural gas for the proposed residential scheme.

Telecommunications

Telecommunications ducting for both Eir and Virgin Media will be provided for the proposed development.

21.5 Mitigation Measures

21.5.1 Construction Phase

As stated above, no significant impacts are predicted in relation to material assets (services) as a result of the construction or operation of the proposed development. However, in order to avoid / minimise impacts insofar as practicable, the following mitigation measures shall be implemented during the construction phase:

- The precise locations of all existing on-site services (underground and overhead) will be confirmed prior to the commencement of works;
- The precise routing of electricity, gas and telecommunications infrastructure on the site are to be agreed with ESB, GNI and Eir / Virgin Media, respectively, prior to the commencement of on-site works;
- All reasonable precautions shall be taken to avoid unplanned disruptions to any services / utilities during the proposed works;
- Consultation with the relevant services providers shall be undertaken in advance of works. This will ensure all works are carried out to the relevant standards and ensure safe working practices are implemented;
- There will be an interface established between the contractor and the relevant utilities service providers / authorities during the construction phase of the proposed development. This interface will be managed in order to ensure a smooth construction schedule with no / minimal disruption to the local community;
- All new foul water drainage pipes will be pressure tested and subject to an internal CCTV survey in order to identify any possible defects prior to operation, under the supervision of Dublin City Council;
- DCON Safety Consultants have prepared a Construction & Environmental Plan (2025) and Construction Management Plan (2025) that is submitted separately under planning documentation. It contains best practice measures and protocols to be implemented during the construction phase of the proposed development to avoid / minimise environmental impacts, including in relation to surface water and foul water. These measures and those listed within Ch 10 Hydrology will be implemented in full;
- In planning and executing the proposed works, regard shall be had to the Gas Networks Ireland *Guidelines for Designers and Builders – Industrial and Commercial (Non-Domestic) Sites (2018),* the Health & Safety Authority (HSA) *Code of Practice for Avoiding Danger from Underground Services (2016)*, and the ESB Networks & Health and Safety Authority *Code of Practice for Avoiding Danger from Overhead Electricity Lines (2019);*
- Prior to the operational phase of the proposed development, utilities infrastructure connections (wastewater, water supply, gas and electricity) will be tested by a suitable qualified person under the supervision of DCC;
- Construction traffic will be limited to certain routes and times of day, with the aim of keeping disruption to existing traffic and residents to a minimum. To minimise disruption to the local areas, construction traffic volumes will be managed through the following measures. During peak morning and evening hours, ancillary, maintenance and other site vehicular movements will be discouraged. Daily construction programmes will be planned to minimise the number of disruptions to surrounding streets by staggering HGV movements to avoid site queues;

- Maintenance of access to local roadways, footways and Dublin Bus stops is secured. It is not envisaged with the exception of hoarding construction works (where working space is required to erect hoarding safely) that temporary traffic management measures, maintenance and removal and utility connection works will impact on the use of bounding roadways and footways; and
- Should a need arise to provide further temporary pedestrian/ vehicle access outside the hoarding line, a detailed temporary Traffic Management Plan will be developed in compliance with the requirements of the Department of Transport Chapter 8 Temporary Traffic Measures and Signs for Roadworks manual. This plan will be shared with DCC Roads/Traffic Section for acknowledgement prior to implementation with appropriate forward notice (in compliance with the Community Liaison Plan) shared with all development stakeholders.

21.5.2 Operational Phase

As stated above, no significant impacts are predicted in relation to material assets (services) as a result of the operation of the proposed development. However, in order to avoid / minimise impacts insofar as practicable, the following mitigation measures shall be implemented during the operational phase:

- Any necessary maintenance and / or upgrades of on-site utilities infrastructure during the operational phase of the proposed development, will be carried out in accordance with the specifications of the relevant service providers;
- Proposed drainage systems are to be maintained on a regular basis to reduce the risk of blockage and resulting flooding. Internal finished floor levels are set at a minimum of 150mm above highest external surface levels in the vicinity.

21.6 Residual Impacts

The mitigation measures that will be put in place at the proposed development will ensure that the proposed development complies with all the specifications and guidelines of the relevant service providers. ***No likely significant residual impacts*** in relation to built services and infrastructure are predicted as a result of the construction or operation of the proposed development.

21.7 Monitoring

Monitoring will be provided by each utility company with an overseeing responsibility by the appointed contractor during the construction phase. Any monitoring of the built services required during the operational phase will be as advised by the relevant services provider.

21.8 Interactions

Regard has been had to the following key interactions in the preparation of this chapter:

- **Chapter 7 (Population & Human Health):** In worst-case scenarios (e.g. where works are not carried out safely or in accordance with the applicable codes and standards), accidents during works (e.g. contact with live powerline or gas explosions) or water quality impacts resulting from works to utilities infrastructure, have the potential to result in human health impacts. Service outages resulting from works can temporarily affect the residential amenity of local residents and / or the operation of local businesses. The mitigation measures that will be put in place at the proposed development will ensure that the impact of the proposed development complies with all the specifications and guidelines of the relevant service providers. Therefore, a predicted ***no likely***

significant impact is envisaged with respect to population and human health during construction and operational phase.

- **Chapter 14 (Landscape / Visual):** The removal and replacement of existing services on site has potential to give rise to slight visual impacts, which can be positive in removing / undergrounding existing services or negative in terms of proposed services. A predicted ***no likely significant impact*** is envisaged during construction and operational phase.
- **Chapters 15 & 16 (Architectural, Archaeological and Cultural Heritage):** The removal and replacement of existing services on site has potential to give rise to slight impacts in the context of proximity to protected structures or disturbance of over or underground heritage, including unknown heritage. Any potential impact will be adequately addressed by the mitigation measures detailed in Chapters 15, 16 and this chapter (21). A predicted ***no likely significant impact*** is envisaged during construction and operational phase.
- **Chapter 20 (Material Assets – Waste):** The removal and replacement of existing services on site has potential to generate waste. A carefully planned approach to waste management as set out in Section 20.5 and adherence to the RWMP (which includes mitigation) **(Appendix 20.1)** during the construction phase will promote resource efficiency and waste minimisation. When the mitigation measures are implemented and a high rate of prevention reuse, recycling and recovery is achieved. Therefore, a predicted ***no likely significant impact*** is envisaged during construction and operational phase.

No significantly likely impacts are predicted in relation to built services or infrastructure. Likewise, no interactions are predicted to occur in this regard such that significant impacts would arise in relation to other environmental / EIA topics.

21.9 Indirect and/or Secondary Impacts

It is not envisaged that there will be any indirect and/or secondary impacts outside of the items covered in this chapter.

21.10 Cumulative Impacts

The list of plans and projects set out in Chapter 23 has been considered in terms of the potential for significant negative cumulative impacts to arise as a result of one or more of these in combination with the proposed development. There are numerous permitted or proposed development in the receiving environment.

With the full and proper implementation of the mitigation measures set out herein there will be no residual impacts during construction or operational phases of the proposed development. In addition, given that the design, construction and operation of utilities infrastructure are strictly controlled by the respective utility provider and authorities (i.e. Uisce Éireann, ESB, GNI and so on); it is concluded that there are ***no likely significant cumulative impacts*** in this regard.

21.11 Difficulties Encountered

No particular difficulties were encountered in the preparation of this chapter.

21.12 References

- EPA (2022). *Guidelines on the information to be contained in Environmental Impact Assessment Reports.*
- NRA (2008). *Environmental Impact Assessment of National Road Schemes – A Practical Guide.*
- Dublin Drainage Consultancy (2005). *Greater Dublin Strategic Drainage Study.*
- ESB Networks and Health and Safety Authority (2019). *Code of Practice for Avoiding Danger from Overhead Electricity Lines.*
- Irish Water (2020). *Code of Practice for Water Infrastructure (Revision 2).*
- Gas Networks Ireland (2018). *Guidelines for Designers and Builders – Industrial and Commercial (Non-Domestic) Sites.*
- Health and Safety Authority (2016). *Code of Practice for Avoiding Danger from Underground Services.*

22 Interactions

22.1 Introduction

This chapter provides an overview of the key interactions identified and addressed in the foregoing chapters of the EIAR.

It is a requirement of the EIA Directive that, not only are the impacts in respect of the individual specialist topics (hydrology, biodiversity, air quality and climate, etc.) to be addressed in the EIAR, but so too must the interactions and inter-relationships between these topics be addressed. As stated in Article 3 of the amended Directive:

> *"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:*
>
> *(a) population and human health;*
>
> *(b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC;*
>
> *(c) land, soil, water, air and climate;*
>
> *(d) material assets, cultural heritage and the landscape;*
>
> *(e) the **interaction** between the factors referred to in points (a) to (d)."*

The EPA guidelines state that interactions should be addressed, where relevant, in the corresponding specialist EIAR chapters, with an 'interactions matrix' and brief text provided by way of summary:

> *"The interactions between effects on different environmental factors should be addressed as relevant throughout the EIAR. For example, where it is established in the Hydrology section that there will be an increase in suspended solids in discharged surface waters during construction, then the Biodiversity section should assess the effect of that on sensitive aquatic receptors. [...] It is general practice to include a matrix to show where interactions between effects on different factors have been addressed. [...] This is typically accompanied by text describing the interactions." (Section 3, p. 56).*

A brief description of these interactions is presented below, as is an interactions matrix (**Table 22.1**).

Note that this chapter provides an overview of the potential impacts that may arise as a result of interactions between environmental topics, and as a direct or indirect result of the proposed development. It does not repeat the detailed characterisation of these impacts or reiterate any mitigation measures that have been prescribed in relation to them. These are addressed under the scope of the corresponding EIAR chapters, as referenced below.

Table 22.1 Interactions matrix

Receptor / Source	Population & Human Health	Biodiversity	Land, Soils, Geology & Hydrogeology	Hydrology	Air Quality	Climate	Noise & Vibration	Landscape & Visual	Cultural Heritage & Archaeology	Architectural Heritage	Microclimate – Daylight & Sunlight	Microclimate - Wind	Traffic & Transportation	Material Assets - Waste	Material Assets - Services
Population & Human Health					✓		✓	✓			✓	✓	✓	✓	✓
Biodiversity			✓	✓	✓			✓							
Land, Soils, Geology & Hydrogeology		✓		✓	✓				✓	✓			✓	✓	
Hydrology		✓	✓			✓									
Air Quality	✓	✓	✓			✓							✓		
Climate			✓		✓							✓	✓	✓	
Noise & Vibration	✓												✓		
Landscape & Visual	✓	✓								✓					
Cultural Heritage & Archaeology								✓		✓					
Architectural Heritage								✓	✓						
Microclimate – Daylight & Sunlight	✓														
Microclimate – Wind	✓														
Traffic & Transportation	✓		✓		✓	✓	✓							✓	
Material Assets – Waste	✓	✓	✓										✓		
Material Assets - Services	✓													✓	

22.2 Summary of Interactions

Interactions addressed in this EIAR are discussed under the headings of the corresponding receptor topics / media, below.

22.2.1 Population and Human Health

Population and human health is an EIA topic which tends to interact with numerous other environmental topics addressed elsewhere in the EIAR. Where the potential for impacts on population and human health has been identified as a result of such interactions, these have been addressed comprehensively above.

The noteworthy interactions with population and human health and other topics are summarised below. All of these interactions have been addressed above and, where feasible, appropriate mitigation measures have been prescribed in the corresponding specialist chapter.

Air Quality (Chapter 11)

There is potential for nuisance impacts on the local receptors due to dust-generating activities of proposed development during construction phase. With appropriate mitigation measures in place the interaction will be **negative, not significant and short-term impact.** During operation phase of the proposed development the predicted impact on population and health due to air quality and climate will be **long-term, not significant and negative**.

Noise & Vibration (Chapter 13)

The interaction between population and human health and noise and vibration during construction phase is due to potential nuisance and disturbance due to noisy construction activities, plant and equipment and construction traffic noise. Appropriate mitigation measures will be implemented in this regard. The predicted impact for the demolition and construction period will be **negative, slight to significant and temporary,** and will vary depending on the proximity of the works to the site boundary. For the remaining phases of construction work, structural development and general construction, the residual construction noise and vibration effects will be **negative, slight to moderate and short-term** depending on the proximity of the works to the site boundary.

During the operational phase there is no potential for significant nuisance and potential disturbance due to additional operational phase traffic. With appropriate mitigation measures in place, **no significant impacts** are predicted in relation to this interaction.

Landscape & Visual (Chapter 14)

During the construction phase there is potential for interaction between population and human health and landscape and visual due to negative impacts due to presence of construction site and effects of construction activities (e.g. dust, dirt, stockpiling of soils, removal of vegetation, etc.). The predicted impact will be **significant to slight, negative and short-term**.

The operational phase will result in positive contribution to the emerging residential community of the wider area, as well as enhancing green infrastructure and green space connectivity. The overall assessment of the impact on townscape effects is that the development is consistent with emerging trends in development within the city and that key characteristics are not adversely altered, therefore, the impact is assessed as being moderate, neutral and long-term. The predicted visual impact will be

significant to moderate, negative in the short-term, and significant, neutral / positive in the long-term as the landscape (including replacement tree planting) matures and the views become more residential.

Traffic & Transportation (Chapter 18)

There is potential for impacts on population and human health during the construction phase due to negative impacts on journey characteristics due to additional (construction) traffic on road network and the potential for nuisance and disturbance due to construction traffic noise. With appropriate mitigation measures in place such as warning signage and designated haul route for HGVs the predicted impact will be **negative, slight to moderate**, over the **short term**.

During the operational phase there is potential for negative impacts on population and human health due to journey characteristics and additional traffic on road network during the operational phase. However, the development will create additional road network and enhance connectivity in the area with the provision of active travel measures. With appropriate mitigation measures in place the predicted impact will be **positive, slight and long-term**.

Microclimate- Daylight & Sunlight (Chapter 17)

There is potential impacts due to changes to daylight and sunlight availability on the population and human health e.g. overshadowing of neighbouring buildings, can negatively or positively affect residential amenity in the receiving environment. As described in Section 7.4, **no significant impacts** to neighbouring residential areas are predicted, and the proposed development itself will provide well-lit homes and amenity areas.

Microclimate – Wind (Chapter 18)

There is a potential interaction between Chapter 7 (Population & Human Health) and Chapter 17 (Microclimate – Wind), since the wind conditions at the proposed development site can affect the amenity and safety of residents and visitors. The proposed development will deliver a wind microclimate that is either suitable for all intended pedestrian uses, or calmer than required for the intended uses. In a number of instances, the proposed development will result in an improved (i.e., calmer) wind microclimate relative to the baseline scenario. Therefore, **no significant impacts** on population and human health are predicted as a result of the wind effects of the proposed development.

Material Assets- Waste (Chapter 20)

During the construction and operational phase there is potential for impacts on human beings in relation to the generation of waste and if wastes are not managed correctly and in accordance with the RWMP or the OWMP could result in fly-tipping, littering and reduced recycling, and re-use opportunities which could cause a nuisance to the public and attract vermin. The implementation of the RWMP and the OWMP, will ensure appropriate the impact of waste arisings are impacts on the local population and human health are **neutral, imperceptible and long-term**.

Material Assets- Services (Chapter 20)

In worst-case scenarios (e.g. where works are not carried out safely or in accordance with the applicable codes and standards), accidents during works (e.g. contact with live powerline or gas explosions) or water quality impacts resulting from works to utilities infrastructure, have the potential to result in human health impacts. Service outages resulting from works can temporarily affect the residential

amenity of local residents and / or the operation of local businesses. The mitigation measures that will be put in place at the proposed development will ensure that the impact of the proposed development complies with all the specifications and guidelines of the relevant service providers. Therefore, the predicted impact **no likely significant impact** is envisaged with respect to population and human health during construction or operational phase.

22.2.2 Biodiversity

At the proposed development site, the main interactions of importance to biodiversity relate to **Land, Soils, Geology & Hydrogeology (Chapter 9), Hydrology (Chapter 10), and Landscape & Visual (Chapter 14).** The mitigation measures for the proposed development have been designed to minimise the potential impact that the demolition, construction and operational phases may have on the receiving environment, including, in particular, the River Tolka.

As noted in **Chapter 11 (Air Quality),** dust generation can occur during extended dry weather periods due to construction traffic along haul routes and construction activities such as excavations and infilling works. Dust emissions can coat vegetation leading to a reduction in the photosynthesising ability as well as other effects. There are no designated ecological sites within 250 m of the proposed development site area. Significant dust impacts are not predicted beyond this distance. Dust mitigation measures will be implemented on site as set out in Section 11.6.

The landscape design for the proposed development takes into account the requirements to maximise the benefits to biodiversity, both locally and within the wider landscape. The landscape scheme (refer to Chapter 14 and the Landscape Design Statement, prepared by NMP Landscape Architecture and submitted as part of this application under separate cover) proposes significant ecologically sensitive planting to provide for potentially diverse habitats.

22.2.3 Land, Soils, Geology & Hydrogeology

The main interactions of importance to land, soils, geology, and hydrogeology relate to Biodiversity (Chapter 8), Hydrology / Water (Chapter 10), and Air Quality (Chapter 11) as follows:

Biodiversity

The proposed development may have temporary negative impacts on biodiversity at site level during construction due to excavation and removal of soil with resultant impact on local biodiversity. It will not result in any significant impact on nearby natura 2000 conservation sites. Standard best practice mitigation measures coupled with the large distance involved in the pathway and significant dilution factor downstream in the Tolka Estuary and Dublin Bay.

Hydrology

During construction of the proposed development, there will be soil excavation that could impact surface water quality if not adequately mitigated.

Air Quality

During construction of the proposed development, there will be a proportion of dust created during excavation (enabling works) and construction activities that could impact air quality if not adequately mitigated.

Cultural Heritage, Archaeology, & Architectural Heritage

Excavation could result in the discovery / finding or unearthing of shallow subsurface archaeology. Prior to any subsurface excavations, the site will be assessed by an archaeologist and appropriate mitigation measures agreed accordingly.

Waste

Waste: Excavation could result in encountering contaminated soil. This will undergo environmental testing and be disposed of at a suitable licenced waste facility as required.

Traffic and Transportation

Local Traffic and transportation will be implemented by the additional vehicle movements generated by the volume of excavated soil that will have to be transported off site, resulting in an increase of heavy good vehicles (HGVs) during construction. The increase in vehicle movements as a result of excavated soil removal during the construction phase will be temporary in duration. Traffic-related impacts during the construction and operational phases are addressed in the Traffic & Transportation chapter of this EIAR.

22.2.4 Hydrology

The main interactions of importance to hydrology relate to Biodiversity (Chapter 8), Land, soil, geology, hydrogeology (Chapter 9), and Climate (Chapter 12) as follows.

Biodiversity

There is no potential for significant impacts on water quality within European Designated sites. Standard good practice mitigation measures coupled with the large distance involved in the pathway and significant dilution factor downstream in the Tolka Estuary and Dublin Bay will result in no significant impacts.

Climate and Flood Risk

The proposed development will not have a negative impact on flood risk as a result of climate change. The proposed development is located within Flood Zone C. The proposed drainage plan incorporates adequate attenuation taking consideration of a climate safety factor. In addition, it is proposed to provide underground attenuation within the development. The attenuation system for the proposed development shall be designed to cater for a 1-in-100-year storm event plus 20% climate change factor. It is proposed to limit stormwater discharge from the site to the greenfield discharge rate which will further reduce the risk of pluvial flooding on site and downstream. By reducing the run-off from the site into the existing drainage system the potential risk of flooding from pluvial action is deemed to be within acceptable limits. No habitable floors of buildings will be at risk of flooding by any surface water ponding. Internal finished floor levels are set at a minimum of 150mm above highest external surface levels in the vicinity. Therefore, the risk of pluvial flooding is considered low, due to existing and proposed measures in place.

Land, Soil, Geology, and Hydrogeology

There will be a reduced recharge to the underlying aquifer (decrease in drainage percolation / infiltration to ground) due to hardstand cover and installation of a drainage system. However, no negative impact is expected due to surface water runoff management and infiltration through permeable paving.

22.2.5 Air Quality

Population & Human Health

Construction Phase

Air quality does not have a significant number of interactions with other topics. The most significant interactions are between Population and Human Health and Air Quality. An adverse air quality impact during the construction phase can cause health and dust nuisance issues. There is a low risk of dust-related human health impacts during the construction phase of the proposed development. Best practice mitigation measures will be implemented during the construction phase to ensure that the impact of the proposed development complies with all ambient air quality legislative limits. Therefore, the predicted impact is **direct, short-term, negative, localised and not significant** with respect to Population and Human Health during the construction phase.

Operational Phase

Vehicles accessing the site will emit pollutants which may impact Air Quality and Human Health. However, the increased number of vehicles associated with the proposed development will not cause a significant change in air pollutant emissions in the locality. It has been assessed that emissions will be in compliance with the ambient air quality standards which are set for the protection of human health. Impacts will be **long-term, localised, direct, negative and not significant**.

Climate

Air Quality and Climate have interactions as the emissions from the burning of fossil fuels (in relation to construction vehicles and equipment) during the construction and operational phases generate both air quality and climate impacts. There is no impact on climate due to air quality. However, the sources of impacts on air quality and climate are strongly linked.

Land & Soils

Construction Phase

Construction phase activities such as land clearing, excavations, stockpiling of materials etc. have the potential for interactions between Air Quality and Land & Soils in the form of dust emissions. With the appropriate mitigation measures to prevent fugitive dust emissions, it is predicted that there will be no significant interactions between air quality and land and soils during the construction phase.

Operational Phase

There are no potentially significant interactions identified between Air Quality, and Land & Soils during the operational phase.

Biodiversity

Construction Phase

Dust generation can occur during extended dry weather periods due to construction traffic along haul routes and construction activities such as excavations and infilling works. Dust emissions can coat vegetation leading to a reduction in the photosynthesising ability as well as other effects. There are no designated ecological sites within 250 m of the proposed development site area. Significant dust impacts are not predicted beyond this distance. Dust mitigation measures will be implemented on site

as set out in Section 11.6. With the implementation of these mitigation measures dust emissions will be minimised and impacts will be **direct, short-term, negative, localised and not significant** with respect to biodiversity.

Operational Phase

There are no potentially significant interactions identified between Air Quality, and Biodiversity during the operational phase.

Material Assets – Traffic & Transport

Construction Phase

Interactions between Air Quality and Traffic can be significant. With increased traffic movements and reduced engine efficiency, i.e. due to congestion, the emissions of vehicles increase. The impacts of the proposed development on air quality are assessed by reviewing the change in annual average daily traffic on roads close to the site. In this assessment, the impact of the interactions between Traffic and Air Quality are linked but there is no potential for significant impacts from traffic on air quality. The effects are considered to be **direct, short-term, neutral, localised and not significant** during the construction phase.

Operational Phase

The impact of the interactions between Traffic and Air Quality are considered to be ***long*-term, direct, neutral and not significant** during the operational phase.

22.2.6 Climate

Climate has the potential to interact with several other environmental attributes.

Land, Soils, Geology and Hydrology

The impact of flood risk has been assessed, and the surface water drainage network has been designed to cater for increased rainfall in future years due to climate change. The effect of the interactions between climate and land, soils, geology and hydrology are **direct, short-term, negative and imperceptible** during the construction phase and **direct, long-term, negative and imperceptible** during the operational phase, which is overall **not significant** in EIA terms.

Air Quality

Air quality and climate have interactions due to the emissions from the burning of fossil fuels during the construction and operational phases generating both air quality and climate impacts. Air quality modelling outputs are utilised within the Climate Chapter. There is **no impact** on climate due to air quality. However, the sources of impacts on air quality and climate are strongly linked.

Traffic and Transportation

During the construction and operational phase, there is the potential for interactions between climate and traffic. Vehicles accessing the site will result in emissions of CO_2, a greenhouse gas. The effects of the proposed development on climate are assessed by reviewing the change in annual average daily traffic on roads close to the site. In this assessment, the effects of the interactions between traffic and climate are **direct, short-term, negative and not significant** during the construction phase and **direct,**

long-term, negative and not significant during the operational phase, which is overall **not significant** in EIA terms.

Microclimate - Wind

There is the potential for the proposed development to be impacted by the local wind microclimate. More detail can be found in Ch. 18 Microclimate – Wind. This chapter identified no significant effects on the proposed development due to the wind microclimate. Therefore, in this assessment the effects of the interactions between microclimate - wind and climate are considered **direct, short-term, negative** and **imperceptible** during the construction phase and **direct, long-term, negative** and **imperceptible** during the operational phase, which is overall **not significant** in EIA terms.

Waste

Waste management measures (detailed in Ch. 20 Material Assets – Waste) will be put in place to minimise the amount of waste entering landfill, which has higher associated embodied carbon emissions than other waste management such as recycling. The effect of the interactions between waste and climate are considered **direct, short-term, negative and not significant** during the construction phase and **direct, long-term, negative and not significant** during the operational phase, which is overall **not significant** in EIA terms.

22.2.7 Noise & Vibration

There are interactions between the noise and vibration assessment, traffic assessment and the population and human health assessment. With increased traffic movements, the noise levels in the surrounding area increase. The impacts of the proposed development on the noise environment are assessed by reviewing the change in traffic flows on roads close to the site. In this assessment, the impact of the interactions between traffic and noise are considered to be **imperceptible** due to the low-level changes in traffic flows associated with the proposed development.

22.2.8 Landscape & Visual

The landscape and visual assessment has been prepared having regard to the interaction between environmental factors. In particular, interactions arise with:

Population

The introduction of the development would deliver a high-quality mixed density residential neighbourhood well served by public and communal open space and this will have a **significant, positive, long-term effect** enlivening the landscape setting of the proposed development (by providing homes offering a high level of residential amenities).

Biodiversity

While some trees and planting will be removed, a significant majority of trees are retained and incorporated and new tree and other planting is proposed and the Masterplan includes a range of open spaces of varying character, which, in addition to providing recreation amenities and contributing to the area's place-identity, would deliver a range of ecosystem services. The effect of the interaction would be **moderate, negative in the short-term** due to removal of plantings **but would become neutral into the long-term** as the proposed Masterplan and landscape becomes established.

Cultural Heritage - Built Heritage

The wider setting of Red House, the Main Seminary Building and adjoining retained buildings and of the Archbishop's Residence would be dramatically altered – but purposively and positively incorporated and rejuvenated within the proposed development. The effect of the interaction would be **significant, negative in the short-term due to the disruption** of the setting of the landscape setting of the historic structures **becoming a positive into the long-term** as the proposed Masterplan and landscape becomes established.

22.2.9 Cultural Heritage – Architectural Heritage

There are interactions between this chapter and the Chapter 14 Landscape and Visual Impact Assessment Chapter and Chapter 16 Cultural Heritage – Archaeology Chapter as well as the Architectural Heritage Impact Assessment (AHIA). These are addressed throughout these aforementioned chapters.

22.2.10 Cultural Heritage – Archaeology

Due to the close link between archaeological and cultural heritage with architectural heritage and landscape and visual, the relevant chapters (Chapters 14 and 15) have been reviewed as part of the archaeological and cultural heritage assessment.

22.2.11 Microclimate – Daylight & Sunlight

The key interaction between this chapter and other specialist chapters of the EIAR is with Chapter 7 (Population & Human Health), since impacts in relation to daylight and sunlight availability, e.g. overshadowing of neighbouring buildings, can negatively or positively affect residential amenity in the receiving environment. When considering the impact of the proposed project on the daylight and sunlight availability in the existing surrounding environment, it can be stated that the proposed development has a negligible impact on the majority of the surrounding dwellings. No significant effects are predicted during either the construction or operational phase.

22.2.12 Microclimate – Wind

The principal interactions between this Environmental Impact Assessment topic and others addressed herein is with Chapter 7 (Population & Human Health), as wind conditions have the potential to affect human health and amenity in the receiving environment, as discussed above. No likely significant effects on human health or amenity are predicted to result from changes to the wind microclimate due to the proposed development with the proposed mitigations and landscaping plan.

22.2.13 Traffic & Transportation

This chapter has potential to interact with aspects of the following chapters of this EIAR:

Population and Human Health

An assessment of the potential impact of the Proposed Development on human health is included in Chapter 7 of this EIAR. There is a potential risk of dust generated from excavation and stockpiling of soil during the Construction Phase of the Proposed Development posing a human health risk in the absence of standard avoidance and mitigation measures which will be implemented to be protective of human health.

Appropriate industry standard and health and safety legislative requirements will be implemented during the Construction Phase of the Proposed Development that will be protective of site workers.

An assessment of the potential impact of the Proposed Development in the form of impacts on lands, soils and geology associated with the Proposed Works are laid out in Chapter 9 - 'Lands, Soils and geology.

The main potential impacts could occur during the construction stage, primarily as a result of the import and export of materials to the site, and the way in which soils and stockpiles of fuels and chemicals are managed. These procedures are set out in Chapter 9.

Air Quality

An assessment of the potential impact of the Proposed Development in the form of impacts on air quality associated with the Proposed Works are laid out in Chapter 11 - 'Air Quality'.

Two main elements are considered:

- The potential increase in dust during construction; and
- Impacts on air quality as a result of increased traffic.

The assessment concludes that no adverse air quality impacts are likely to occur at sensitive receptors during either the construction or operational stages. It proposes standard dust suppression measures, which are detailed in the CEMP.

Climate

An assessment of the potential impact of the Proposed Development on Climate is set out in Chapter 12 - 'Climate.

All traffic generated by the development, during both the construction and operational stages, will have an associated carbon impact, which will have an effect on climate. The extent to which this will impact climate change is related to the nature and type of the vehicle, and how private and commercial vehicle fleets will evolve over time – likely transitioning from fossil fuel to electric.

The location of the development supports sustainable travel, either on foot, by bike or by nearby high-frequency public transport links. The Mobility Management Plan that accompanies the application aims to maximise use of these modes by residents of the site.

Noise and Vibration

An assessment of the potential impact of the Proposed Development in the form of noise impacts associated with the Proposed Works are laid out in Chapter 13 - 'Noise and Vibration'.

Three main traffic-related elements are considered:

- The increase in noise caused by construction vehicles; and
- The increase in noise caused by vehicles entering and leaving the site; and
- Increases in noise caused by additional traffic on the external road network.

The assessment concludes that the impact of noise from operational traffic will be negligible and will not have a significant negative impact.

Material Assets: Waste

An assessment of the potential impact of the Proposed Development on Waste is set out in Chapter 20 'Material Assets: Waste'.

All waste generated during the construction phase of the site will need to be either re-used on site, or transported off-site for suitable re-use / disposal. Vehicle trips resulting from the transport of this waste have been factored into the construction traffic figures used in the Traffic and Transport Assessment.

When operational, the development will generate commercial and residential waste, which will generate small, regular movements of service vehicles. This is typical of any residential development, and is not assessed as significant.

22.2.14 Material Assets – Waste

Land, Soils, Geology & Hydrogeology

A quantity of soil, stones, clay and made ground will need to be excavated to facilitate the Proposed Development. The project quantity surveyors have estimated that c. 30,000 m^3 of material will be excavated to facilitate the construction of new foundations, underground services and basements. It is estimated that, of this, c. 20,000 m^3 (66.5%) will need to be removed off-site.

Correct classification and segregation of the excavated material is required to ensure that any potentially contaminated materials are identified and handled in a way that will not impact negatively on workers, or the water and soil environments, both on and off-site. Where material has to be taken off-site, it will be taken for reuse or recovery, where practical, with disposal a last resort.

Adherence to the mitigation measures in Chapter 9 and the requirements of the RWMP will ensure the associated effect is **long-term, imperceptible** and **neutral.**

Traffic & Transportation

Local traffic and transportation will be impacted by the additional vehicle movements generated by removal of waste from the site during the construction and operational phases of the Proposed Development. The increase in vehicle movements as a result of waste generated during the construction phase will be temporary in duration. There will be an increase in vehicle movements in the area as a result of waste collections during the operational phase, but these movements will be imperceptible in the context of the overall traffic and transportation increase and have been addressed in Chapter 19 (Traffic & Transportation).

Provided the mitigation measures detailed in Chapters 19 & 20 and the requirements of the RWMP and OWMP (included as **Appendix 20.1 and Appendix 20.2**) are adhered to, the associated effect will be **short to long-term, imperceptible** and **neutral.**

Population & Human Health

The potential impacts on human beings in relation to the generation of waste during the construction and operational phases are that the incorrect management of waste could result in littering, which could cause a nuisance to the public, attract vermin and cause a visual impact. Adherence to the mitigation measures detailed in Chapter 20 and Chapter 7 (Population & Human Health), along with a carefully planned approach to waste management, adherence to the project-specific RWMP and OWMP (**Appendices 20.1** and **20.2**, respectively) will ensure appropriate management of waste and avoid any negative impacts on the local population. The associated effect will be **long-term, imperceptible** and **neutral.**

Biodiversity

The potential impacts on biodiversity in relation to the generation of waste during the construction or operational phases are that the incorrect management of waste could result in littering, pollution issues or vermin in areas affected.

An Invasive Species Management Plan (ISMP) has been prepared by Invas Biosecurity for the Proposed Development. The incorrect management or disposal of contaminated material soil material could result in the spread of Invasive species around the site and to other receiving sites. The ISMP outlines the measures for the management of Japanese knotweed. Adherence to the mitigation measures set out in this chapter, the ISMP and in Chapter 8 (Biodiversity) will ensure the associated effect is **long-term, imperceptible** and **neutral.**

22.2.15 Material Assets - Services

Regard has been had to the following key interactions in the preparation of this chapter:

Chapter 7 (Population & Human Health)

In worst-case scenarios (e.g. where works are not carried out safely or in accordance with the applicable codes and standards), accidents during works (e.g. contact with live powerline or gas explosions) or water quality impacts resulting from works to utilities infrastructure, have the potential to result in human health impacts. Service outages resulting from works can temporarily affect the residential amenity of local residents and / or the operation of local businesses. The mitigation measures that will be put in place at the proposed development will ensure that the impact of the proposed development complies with all the specifications and guidelines of the relevant service providers. Therefore, a predicted **no likely significant impact** is envisaged with respect to population and human health during construction and operational phase.

Chapter 14 (Landscape / Visual)

The removal and replacement of existing services on site has potential to give rise to slight visual impacts, which can be positive in removing / undergrounding existing services or negative in terms of proposed services. A predicted **no likely significant impact** is envisaged during construction and operational phase.

Chapters 15 & 16 (Architectural, Archaeological and Cultural Heritage)

The removal and replacement of existing services on site has potential to give rise to slight impacts in the context of proximity to protected structures or disturbance of over or underground heritage, including unknown heritage. Any potential impact will be adequately addressed by the mitigation measures detailed in Chapters 15, 16 and this chapter (21). A predicted **no likely significant impact** is envisaged during construction and operational phase.

Chapter 20 (Material Assets – Waste)

The removal and replacement of existing services on site has potential to generate waste. A carefully planned approach to waste management as set out in Section 20.5 and adherence to the RWMP (which includes mitigation) **(Appendix 20.1)** during the construction phase will promote resource efficiency and waste minimisation. When the mitigation measures are implemented and a high rate of prevention reuse, recycling and recovery is achieved. Therefore, a predicted **no likely significant impact** is envisaged during construction and operational phase.

No significantly likely impacts are predicted in relation to built services or infrastructure. Likewise, no interactions are predicted to occur in this regard such that significant impacts would arise in relation to other environmental / EIA topics.

23 Cumulative Impacts

23.1 Introduction

This chapter discusses the potential for cumulative impacts to arise as a result of the proposed development in combination with other projects.

Annex III (3)(g) of the EIA Directive requires the EIAR to include the potential for significant cumulative effects of projects on the environment and it states to include "*the cumulation of the impact with the impact of other existing and/or approved projects*." Annex IV (5)(e) of the EIA Directive states that EIAR should include "*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*."

The European Commission *Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions* (1999) define cumulative impacts as "*Impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project*" (p. iii).

Similarly, the EPA guidelines define cumulative effects as *"The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects"* (Section 3, p. 52). The EPA guidelines further state that:

> *"While a single activity may itself result in a minor impact, it may, when combined with other impacts (minor or insignificant), result in a cumulative impact that is collectively significant. For example, effects on traffic due to an individual industrial project may be acceptable; however, it may be necessary to assess the cumulative effects taking account of traffic generated by other permitted or planned projects. It can also be prudent to have regard to the likely future environmental loadings arising from the development of zoned lands in the immediate environs of the proposed project."* (Section 3, p. 54)

23.2 Assessment of Cumulative Impacts

Cumulative impacts have been assessed by taking account of the baseline environment and the predicted impacts of the construction and operation of the proposed development in combination with those of other existing and / or permitted projects in the zone of influence relevant to individual environmental factors.

Therefore, each of the specialist contributors to this EIAR have considered the potential for cumulative impacts to arise, with particular reference to the projects listed in this Chapter.

This EIAR has considered three categories of potential cumulative plans / projects for the proposed development based on the following:

- Existing or commenced projects with a valid planning permission within the vicinity of the proposed development that have the potential for significant cumulative effects with the proposed development;
- Approved projects with a valid planning permission that have not commenced construction but with the potential for significant cumulative effects with the proposed development; and

- Proposed projects that do not have planning permission but have the potential for significant cumulative effects with the proposed development.

23.3 Key Plans & Developments

A search for other developments that may have the potential to result in cumulative impacts with the proposed development was carried out, and a list of key developments for consideration was developed (**Table 23.1**). In identifying these developments, the following principal sources were consulted (as of July 2025):

- Dublin City Council planning portal;
- Dublin City Council weekly lists of applications received;
- An Bord Pleanála (ABP) website;
- Department of Housing, Local Government and Heritage EIA Portal;
- *Dublin City Development Plan 2022-2028.*

As detailed in Chapter 3 (Planning & Development Context) the proposed development lies within the DCC administrative area. Therefore, the site is subject to the land use policies and objectives of the Development Plan, which has zoned the lands in question as Z12, 'Institutional Land (Future Development Potential)' which has the stated aim *'to ensure existing environmental amenities are protected in the predominantly residential future use of these lands'*. As such, the use of the lands as proposed in this LRD application is in accordance with the zoning and envisaged future development for the lands, as set out in the Development Plan.

As required under Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (the 'SEA Directive') and the Habitats Directive, a Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA) have been completed in respect of the Development Plan, respectively.

Table 23.1 provides a list of relevant permitted and proposed developments in the vicinity of the site, which have been given due consideration in the assessment of potential cumulative impacts. **Figure 23.1** maps these developments in relation to the proposed development site.

It is noted that the list of developments in this Chapter is non-exhaustive. There are a wide variety of other applications and permissions in the area. However, minor developments, such as one-off housing, erection of signage and other minor structures and extensions, have been excluded due to the absence of potential for significant cumulative impacts. Lapsed and refused permissions have also been excluded.

The lands to the immediate north of the site are owned by the GAA. The GAA is considering proposals to provide playing pitches, an associated clubhouse and car parking on these lands. As part of the masterplan prepared for the overall lands, the layout of the proposed development has taken account of these potential proposals and facilitates such a future development by the GAA. Any such development would be subject to separate planning application and assessment. Given the amenity, recreation nature of any such development it is not anticipated that it would give rise to significant negative environmental impacts.

23.4 Conclusion

For topic-specific assessments of the potential for cumulative impacts, please refer to the foregoing specialist EIAR chapters. Assuming the full and proper implementation of the mitigation measures set out in this EIAR, it has been assessed within those specialist chapters that no significant negative cumulative impacts are likely to arise during the construction or operational phases of the proposed development.

Table 23.1 Permitted and proposed developments to which regard has been had in the assessment of potential cumulative impacts

Ref.	Applicant	Location	Description - overview	Status	Environmental Assessments
Permitted Developments / Under Construction					
DCC 2935/20 ABP 308193	Páirc An Chrócaigh	Lands off Clonliffe Road (formerly part of the Holy Cross College Lands), Clonliffe Road, Drumcondra, Dublin 3	**Lands off Clonliffe Road – Hotel Development** Permission for a hotel development on Lands off Clonliffe Road comprising of 7 storeys and the demolition of the existing boundary wall, repositioning of the gate piers and widening of the entrance on Clonliffe Road to facilitate two-way traffic, the creation of 2 no. pedestrian accesses off Clonliffe Road, and the construction of a replacement plinth boundary wall with railings along Clonliffe Road, landscaping, boundary treatments, street lighting, SuDS drainage, piped and other services.	Permission granted by DCC in August 2020. Decision appealed to An Board Pleanála (ABP). Permission granted by ABP with revised conditions on 08 April 2021. Currently under construction.	-
D4062/24 ABP-321745-25	Ginxo Trading Ltd.	Turnpike Lane at the Rear of No. 59-69 Drumcondra Road Lower, Co. Dublin	**Residential Development at Drumcondra Road** The development will consist of the construction of 46 no. apartments consisting of 33 no. 2-bedroom 4 person apartments, 1 no. 2-bedroom 3 Person, and 12 no. 1 bedroom apartments all with balconies to the South, West, East and North in a single block ranging in height from 2 to 6 storeys with 408sqm of landscaped communal open space at ground level and 89sqm of communal roof terrace at fifth floor level; the provision of 2 no regular car parking spaces, 1 no. disabled space, 100 no regular secured bicycle parking spaces, 2 no secured cargo bicycle spaces, bicycle maintenance area, bin store, ESB distribution station, ancillary plant/services with enabling and site development works, landscaping, boundary treatment, lighting, services and connections, waste management and other ancillary works. The gross floor area of the building to be 4233 sqm all at this site of 0.17 hectares.	Permission granted by DCC in December 2024. Decision appealed to An Board Pleanála (ABP). Permission granted by ABP with revised conditions on 16 May 2025.	AA Screening

Shipman Martin

Ref.	Applicant	Location	Description - overview	Status	Environmental Assessments
LRD6067/24-S3	Malkey Limited	The Former Leydens Wholesalers & Distributors 158A, Richmond Road, Co. Dublin, D03 YK12	**Permission for amendments to a permitted Mixed-Use LRD** Permission sought for amendments to a permitted LRD whose parent permission was granted under DCC under Reg. Ref. LRD6006/23-S3. The 0.55-ha site will consist of a revised roof design layout to provide 9 no. PV panels on Block A and 1 PV Panel on Block C.	Permission granted by DCC on 29 August 2024.	NIS; AA
ABP-317136-23 LRD6006/23-S3	Malkey Limited	158A, The Former Leydens Wholesalers & Distributors, Richmond Road, Co. Dublin, D03 YK12	**Permission for development LRD site along Richmond Road** The development consists of demolition of existing industrial structures on site and a construction of a mixed-use development including artist studios, creche, retail unit, gym, and 133 no. residential Units across 3 no blocks and ranging in height from 1-8 storeys. The proposed development will provide ancillary residential amenities and facilities including parking including EV charging, loading bays, communal open space, roof gardens, lighting, ESB substation, common rooms, stores, and associated works above and below ground. Improvement works to Richmond Road are also proposed including carriageway widening up to circa six metres in width, a 1.5-metre-wide one-way cycle track/lane in both directions, widening footpaths both directions, and adding a pedestrian crossing facility.	Permission granted by DCC in April 2023. Decision appealed to An Board Pleanála (ABP). Permission granted by ABP with revised conditions on 31 August 2023.	NIS, EIA Screening & EclA
WEBLRD6055/25-S3A	Banner A Cuig Limited	No. 19 Esmond Avenue (D03 P5C7 & D03 Y2R2), No. 21 Esmond Avenue (D03 P923), & at rear No. 19 Philipsburg Avenue (D03 Y0A2), Fairview, Co. Dublin	**Proposed amendment seeking permission for LRD application on Esmond Ave** The proposed development is sitting on a site of 0.161 ha consisting of a new apartment block (Block C) and constitutes an amendment to the permitted LRC granted permission previously (LRD6015/22-23 and ABP-315584-23). Proposed Block C will be 3 storeys high, with blue-green roof and roof mounted solar p.v. There will be 21 apartments, internal	Permission granted by DCC on 27 May 2025.	NIS; EclA; EIA Screening Report

Ref.	Applicant	Location	Description - overview	Status	Environmental Assessments
			bin storage, bicycle parking. A communal area will be to be back of the block with a children's play area. The proposed development includes demolition of existing warehouse building at No. 21 Esmond Avenue (234.60 sqm), two storey business centre, single storey temporary building and warehouse building at No.19 Esmond Avenue (418.31 sqm), as permitted per Planning Reg. Ref. No. LRD6015/22-S3 (An Bord Pleanála Ref. ABP. 315584-23).		
LRD6015/22-S3 ABP-315584	Banner A Cuig Limited	61 & 63 Fairview Strand, 59A Fairview Strand, at Warehouse on Esmond Avenue, at 19 Esmond Avenue and 21 Esmond Avenue and at rear 19 Philips Avenue, Fairview, Co. Dublin	**Planning permission for LRD & Protected Structure on Esmond Ave** Planning permission for development of a 0.58 ha includes two a derelict warehouse, dry-cleaner, and a disused underground car park on Fairview Strand/Esmond Ave for three blocks ranging from 2-5 storeys with 114 apartments and a street-level gym, café, shop, and relocated dry-cleaner. Block A will contain 35 apartments in 5 no. storeys with ground floor units of a gym and a shop unit. Block B will 2-5 storeys with 47 apartments with a ground floor café. Two protected Georgian-era houses, at No. 61 & 63 Fairview Strand are restored and converted to four flats with a small contemporary wing added. 26 Underground car spaces will be kept along with 263 bicycle spaces, green roofs, solar-PV panels, two pocket plazas, playgrounds, and widened footpaths. Total open space provision of 1,409.6 square m including a public plaza with cycle parking. Public realm upgrades including new surface treatment of Esmond Avenue and upgraded pedestrian crossing points at the junction of Esmond Avenue and Fairview Strand.	Permission granted by DCC in December 2022. Decision appealed to An Board Pleanála (ABP). Permission granted by ABP with revised conditions on 05 May 2023.	NIS; EclA; Bat Survey and Assessment of Associated buildings

Ref.	Applicant	Location	Description - overview	Status	Environmental Assessments
4067/24	Fold Housing Association Ireland CLG	Former Dublin City Council Depot, Orchard Road, Drumcondra, Co. Dublin, D03 XV67	**Planning Permission for Residential development on Orchard Road** The development consists of a 0.26 ha site along the River Tolka and is the former site of DCC depot and boxing club. The development will consist of the demolition of existing single storey sheds, warehouses and structures on site used as part of the former DCC depot and boxing club and provision of 2-5 story building including 38 no. apartments with a gross floor area of 2,825 sqm. Vehicular and pedestrian access will still be provided via existing access on Orchard Road, and a new pedestrian access is provided to Tom Clake House. Ancillary works includes green roofs, plant rooms, nine stores, ESB substation, and community room at ground floor level.	Permission granted (with conditions) by Dublin City Council on 19 February 2025.	NIS, EIA Screening Report, EcIA
LRD6001/22-S3A ABP-315062-22	Scanron Ltd.	Site at Daneswell Place, Former Printworks/Smurfit Site, Botanic Road, Glasnevin, Co. Dublin	**Proposed Amendment to Parent Permission LRD site at Daneswell Place** Proposed development consisting of amendments to the development permitted under DCC Reg 3665/15 and ABP ref 315062-22, as amended by DCC Reg Ref: 4267/17 and 2133/18 and extended by DCC reg ref: 3665/15X2 The development will include 168 no. apartments within 5 no. blocks ranging from 1-6 storeys. The proposal also includes a creche, café, resident amenity space, and an amenity management suit in Block A and a resident's gym. Vehicular/pedestrian/cyclist access will be from Botanic Road. Car, cycle, and motorcycle parking at surface and basement are included. All associated site development works, public and communal open space, roof gardens, landscaping, boundary treatment, plant areas, waste management areas, and service provision (including ESB substations) will be provided.	Permission granted by DCC in October 2022. Decision appealed to An Board Pleanála (ABP). Permission granted by ABP with revised conditions on 06 March 2023.	AA Screening, EcIA, EIA Screening

Ref.	Applicant	Location	Description - overview	Status	Environmental Assessments
LRD6009/23-S3 ABP-317438-23	St. Vincent's Hospital Fairview	St. Vincent's Hospital, Richmond Road and Convent Avenue, Fairview, Co. Dublin	**LRD at St. Vincent's Hospital at Richman Road** The proposed development comprises of a LRD at Saint Vincent's Hospital, Richmond Road and Convent Avenue, Fairview, Dublin. The proposed development will consist of the redevelopment of the site to provide for a new hospital building, providing mental health services, provision of 9 no. residential buildings (Blocks A, B, C, D-E, F, G, H, J, and L), and community facilities, and public open space. The proposed building heights range from 2 to 13 storeys. The residential development includes a total of 811 no. residential units, including 494 no. standard design apartments (SDA) and 317 no. Build to Rent (BTR) apartments. The development includes the partial demolition and change of use, including associated alterations, of the existing hospital building (part protected structure under RPS Ref.: 2032), to provide residential amenity areas, a gym, a café, co-working space, a community library, a childcare facility, and a community hall (referred to as Block K). The development also includes additional residential amenities and facilities, a retail unit and a café. The proposed development includes for the demolition of existing structures on site, including extensions of and buildings within the curtilage of the existing hospital buildings under RPS Ref.: 2032, and other existing buildings and ancillary structures on the site; and the change of use, refurbishment and alterations of a number of buildings and protected structures on the site including Brooklawn (RPS Ref: 8789), Richmond House (RPS Ref.: 8788), the Laundry building and Rose Cottage.	Permission granted by DCC in May 2023. Decision appealed to An Board Pleanála (ABP). Permission granted by ABP with revised conditions on 11 October 2023.	EIAR & NIS
ABP-317121	National Transport Authority (NTA)	Swords Co. Fingal to Dublin City Centre Co. Dublin	**BusConnects - Swords to City Centre Core Bus Corridor Scheme** The Swords to City Centre Core Bus Corridor Scheme consists of roadworks to facilitate bus, cycle, and urban realm improvements along	Permission granted (with conditions) on 19 June 2024 by An Board Pleanála.	EIAR & NIS;

Ref.	Applicant	Location	Description - overview	Status	Environmental Assessments
			with any associated ancillary/accommodation works for the scheme. The scheme has an overall length of approximately 12 km. The scheme commences south of Swords at Pinnock Hill Junction and travel in a southerly direction along the R132 Swords Road past Airside Retail Park, Dublin Airport and Santry Park. The route will continue on the R132 past Santry Demesne, where the Swords Road joins the R104 at Coolock Lane. The route will continue on the R132 in a southerly direction through Santry village. It will continue along the Swords Road past Whitehall to Griffith Avenue. The route will follow Drumcondra Road Upper past the DCU St Patrick's Campus to the river Tolka. It will continue through Drumcondra, on Drumcondra Road Lower to Binns Bridge on the Royal Canal. From there it will continue on Dorset Street Lower as far as Eccles Street, from where it will continue on Dorset Street Upper to North Frederick Street and Parnell Square, all in County Dublin and within the Fingal County Council (FCC) and Dublin City Council (DCC) administrative areas.		
ABP-314610	National Transport Authority (NTA)	Ballymun/Finglas to City Centre Core Bus Corridor Scheme	**BusConnects – Ballymun/Finglas to City Centre Core Bus Corridor Scheme** The Balllymun/Finglas to City Centre Core Bus Corridor Scheme comprises of an overall length of c. 10.9km including roadworks to facilitate bus, cycling and urban realm improvements along with any associated ancillary/accomodation works for the scheme. It is routed along Ballymun Road from the junction at St. Margaret's Road southwards along St. Mobhi Road, Botanic Road, Prospect Road, Phibsborough Road, Constitution Hill, and Church Street as far as the junction with Arran Quay/Ormond Quay on the River Liffey, and along the Finglas Road from the St. Margaret's Road junction to Prospect Road at Hart's Corner, as well as quiet-street cycle routes along Royal Canal	Permission granted (with conditions) on 12 March 2024 by An Board Pleanála.	EIAR & NIS

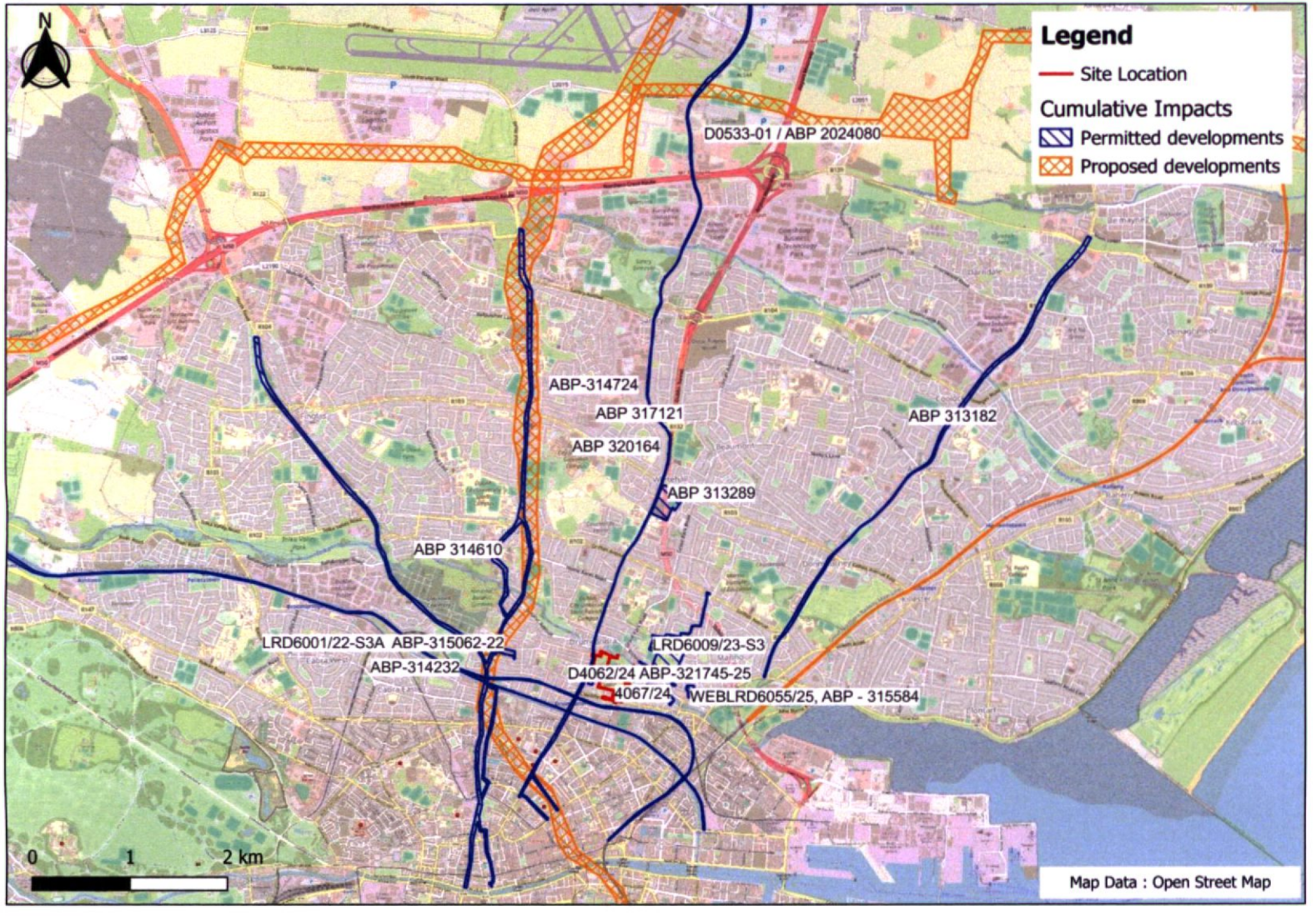
Ref.	Applicant	Location	Description - overview	Status	Environmental Assessments
			Bank in Phibsborough, and through the Markets Area from Constitution Hill to Ormond Quay.		
ABP - 313182	National Transport Authority (NTA)	Clongriffin to City Centre Core Bus Corridor Scheme	**BusConnects – Clongriffin to City Centre Core Bus Corridor Scheme** The Clongriffin to City Centre Core Bus Corridor Scheme has an overall length of c. 5.7km and is routed along the R107 Malahide Road from Mayne River Avenue – R107 Malahide Road Junction to the junction with Marino Mart – Fairview and also routed for cyclists via the junction with Malahide Road- Brian Road along Carleton Road, St. Aidan's Park, Haverty Road and Marglann Marino.	Permission granted (with conditions) on 08 January 2024 by An Board Pleanála.	EIAR & NIS
ABP-314724	Transport Infrastructure Ireland (TII)	Metrolink - Estuary through Swords, Dublin Airport, Ballymun, Glasnevin, and City Centre to Charlemont, Co. Dublin	**Railway (Metrolink-Estuary to Charlemont via Dubin Airport) Order 2022** The proposed development comprises of a fully segregated and automated railway and metro mostly underground approximately 18.8km in length with 16 stations running from north of Swords at Estuary through Swords, Dublin Airport, Ballymun, Glasnevin and the City Centre to Charlemont in the south of Dublin City Centre. It includes a 9.4km section of single bore tunnel running beneath Dublin City Centre running from Charlemont to Northwood Station and a 2.3km section of single bore tunnel running beneath Dublin Airport. North of Dublin Airport the railway will emerge from tunnel and will run at surface level and in cut and cover structures to Estuary Station. A new 99m bridge will be constructed over the M50 and a 261m long multi-span Viaduct over the Broadmeadow and Ward River. There will be a total of 16 stations, including 11 underground stations at Dublin Airport, Northwood, Ballymun, Collins Avenue, Griffith Park, Glasnevin, Mater, O'Connell Street, Tara, St. Stephen's Green and Charlemont; 4 retained cut stations at Seatown, Swords Central, Fosterstown and Dardistown and 1atgrade station at Estuary. A multi-storey 3000 space park and ride	Awaiting decision. Application lodged on 30 September 2022 to An Board Pleanála.	EIAR & NIS

Ref.	Applicant	Location	Description - overview	Status	Environmental Assessments
			close to the M1 Motorway will be provided at Estuary Station, a maintenance depot is located near Dardistown Station which will house all the facilities required for the maintenance and operation of the MetroLink and its rolling stock and the Operational Control Centre. The works will also include railway signalling, command and control and communications systems; provision of electrical substations; establishment of temporary construction compounds; establishment of temporary traffic management and road diversions; new and realigned access routes and road junction improvements; diversion of existing utilities; provision of new drainage infrastructure; provision of environmental mitigation measures; and other infrastructural modifications to facilitate the overall project.		
DCC 3483/22 ABP-314092	Real Estate Acquisitions and Sales Limited	9/9a, Richmond Avenue, Fairview, Dublin 3 D03 DH66/D03 C6X9	**Permission for development on Richmond Ave** The development will consist of 28 no. residential units in 2 no. apartment buildings ranging in height from 3-6 storeys (east block fronting Richmond Avenue 6 no. storeys, west block to rear of site 3 no. storeys). The east block provides 22 no. apartment units and the west block provides 6 no. apartment units. All units are intended to provide housing accommodation for the elderly. Access to the development will be from Richmond Avenue. This entrance will provide access and egress for pedestrians only to the development. The development also proposes approx. 214 sq.m of communal open space, balconies/terraces associated with individual apartment units, associated secure bicycle and bin storage, hard and soft landscaping and all other associated site works and services above and below ground on an overall site area of approx. 908.48 sq.m. The	Withdrawn appeal and written evidence was given to the Board March 8, 2023. Granted permission with conditions by Dublin City Council on 20 June 2022. The decision was appealed to the ABP. Appeal withdrawn and final permission granted on 16 March 2023.	AA Screening Report

Ref.	Applicant	Location	Description - overview	Status	Environmental Assessments
			development proposes the demolition of approx. 595 sq.m of floorspace comprising single storey industrial units.		
ABP-314232	Córas Iompair Éireann	40km rail upgrade from Connolly Station and new Spencer Dock station in the east to M3 Parkway and a new depot west of Maynooth.	**Dart+ West Railway Order- Dublin City to Maynooth and M3 Parkway** Railway works from the city centre to Maynooth and M3 Parkway, largely on existing railway lines (approx.40km). Works include electrification, closure of level crossings, modification of bridges, a new depot and new Spencer Dock station.	Railway order permitted (with conditions) by An Board Pleanála on 18 July 2024	EIAR & NIS
ABP-320164	Córas Iompair Éireann	Modifications to the existing railway line between Dublin City Centre and Drogheda, located in Counties Dublin, Meath and Louth.	**DART + Coastal North Railway Order 2024 - Northern Line between Dublin City Centre and Drogheda including the Howth Branch** The proposed development includes extension of the existing electrification from Malahide to Drogheda (approx. 37km) including the installation of overhead line equipment & associated substations; infrastructure works to facilitate the increase in service frequency and capacity.	Decision is awaited on the application. The application was lodged in July 2024.	EIAR & NIS
ABP - 313289	Eastwise Constructi on Swords Limited	'Hartfield Place', Swords Road, Whitehall, Dublin 9	**'Hartfield Place', Swords Road, Whitehall, Dublin 9** The proposed development comprises of strategic housing development for 472 no. residential units, residential amenities, a creche, a café and all associated site development works.	Permission granted with conditions on 16 November 2022 by An Bord Pleanála	EIAR & AA Screening
D0533-01	Uisce Eireann	New wastewater treatment plant in the townland of Clonshagh and associated sludge hub centre, orbital sewer,	**Greater Dublin Drainage Project consisting of a new wastewater treatment plant, sludge hub centre, orbital sewer, outfall pipeline and regional biosolids storage facility in County Dublin** The Proposed Project will comprise a new Wastewater Treatment Plant (WwTP) at Clonshaugh and associated infrastructure that will serve the	Decision awaited. The application was lodged in December 2021.	EIAR & NIS

Ref.	Applicant	Location	Description - overview	Status	Environmental Assessments
		outfall pipeline and regional biosolids storage facility in various townlands in County Dublin	projected wastewater treatment requirements of existing and future drainage catchments in the north and north-west of the Ringsend Agglomeration (i.e. catchments currently draining to Ringsend WwTP), up to the Proposed Project's 2050 design horizon. The Proposed Project will therefore protect public health, safeguarding the environment and facilitating social and economic growth to 2050 and beyond.		

Figure 23.1 Permitted and proposed developments to which regard has been had in the assessment of potential cumulative impacts



24 Mitigation Measures & Monitoring

24.1 Introduction

This chapter collates the mitigation measures and monitoring set out in the preceding chapters of the EIAR. Note that this section does not include 'mitigation by design', i.e. features already integrated into the proposed development (as assessed) that mitigate environmental impacts.

24.2 General Mitigation Measures

Table 24.1 Mitigation measures - General

Ref.	Mitigation measure
Construction phase	
GE01	In order to minimise the volume of material being exported off-site, excavated material will be reused on-site (e.g. as fill material) where feasible.
GE02	Hydrocarbons, solvents and other such hazardous substances will be stored in secure, bunded hardstanding areas.
GE03	Re-fuelling and servicing of construction plant and machinery will only be permitted at suitably located, designated hardstanding areas.
GE04	Spill kits will be present on-site at all times.
GE05	The proposed construction phase working hours are as follows, subject to conditions of the planning authority: ▪ Monday – Friday: 07:00 – 19:00 ▪ Saturday: 08:00 – 14:00 ▪ Sundays and Bank Holidays: No works Any works proposed outside of these hours, e.g. for water mains / foul drainage connections, will be subject to prior approval by Dublin City Council.
GE06	**Construction & Environmental Management Plan** A Construction Environmental Management Plan (CEMP) has been prepared in respect of the proposed development by DCON Safety Consultants and submitted under separate cover as part of this application. The CEMP identifies the control measures to alleviate environmental impacts and specifies an environmental monitoring programme. It contains best practice measures and protocols to be implemented during the construction phase of the proposed development to avoid / minimise environmental impacts. In the preparation of this Environmental Impact Assessment Report, regard has been had to the mitigation measures and protocols proposed in the CEMP. It addresses construction phase measures in relation to: ▪ Direct impacts – those impacts associated directly with the environmental aspect, such as increased dust, noise or vibration levels. ▪ Indirect impacts – those impacts associated indirectly with the environmental aspect, such as transport and disposal of waste. ▪ Normal situations – progress according to plan. ▪ Abnormal situations – the Project programme not progressing as planned because of unforeseen or unpredictable circumstances. ▪ Emergency situations – an unplanned or unwanted situation has occurred, such as fire, explosion or malicious damage.

Ref.	Mitigation measure
	To ensure the CEMP remains fit for purpose, it will be maintained as a live document. The appointed contractor will be responsible for updating the CEMP, as required; e.g. to reflect the publication of relevant new or revised guidelines and / or new statutory requirements. The full schedule of environmental commitments (i.e. all mitigation measures set out in the CEMP and Environmental Impact Assessment Report submitted as part of the planning application, as well as any applicable conditions of development consent) will be included in the CEMP by the appointed contractor.
GE07	**Construction Phase Health & Safety Plan** The appointed Contractor will be required to prepare a Construction Phase Health and Safety (H&S) Plan in advance of the commencement of works, and all on-site contractors and subcontractors will also be required adhere to this Plan.
GE08	**Construction Management Plan** A Construction Management Plan (CMP) (also referred to as the 'Development Construction Management Plan (DCMP)) has been prepared in respect of the proposed development by DCON Safety Consultants and submitted under separate cover as part of this application. The aim of the CMP is to ensure that all works are planned and managed in a safe and organised manner, undertaken and coordinated by competent contractors, and while obtaining the necessary confidences of all project stakeholders. It presents: ▪ A construction programme sequence supported by projected construction methodologies; ▪ Techniques that will be adopted by the contractor during the construction of the proposed development; ▪ A summary of foreseeable potential impacts resulting from the proposed works and mitigating factors; and ▪ A pro forma construction management plan boiler plate for each contractor prior to works commencing on site. The CMP shall be finalised by the successful Contractor prior to the commencement of the construction phase, in accordance with any corresponding conditions of the planning permission and will be prepared in having regard to the CMP and any mitigation identified in this EIAR.
GE09	**Construction Surface Water Management Plan** An Outline Construction Surface Water Management Plan (CSWMP) has been prepared by BMCE and submitted under separate cover as part of this application. The CSWMP aims ensure that surface water quality and quantity is managed throughout the construction process to mitigate impacts off site (and in particular on the nearby River Tolka). It provides the water management principles and minimum measures to be implemented by the Contractor to ensure that work is carried out with minimal impact on the water environment during the proposed works. The CSWMP shall be finalised by the successful Contractor prior to the commencement of works, in accordance with any corresponding conditions of the planning permission and shall be implemented by all on-Site contractors and subcontractors, as appropriate, throughout the construction phase.
GE10	**Construction Traffic Management Plan** A site-specific construction Traffic Management Plan will be prepared by each contractor in advance of their respective works commencing on-Site. These will be in accordance with the Dublin City Council document *'Directions for the Control & Management of Roadworks in Dublin City'*, with Chapter 19 of this EIAR (Traffic & Transportation) and any corresponding conditions attached to the planning permission. They will address the movement of construction traffic, machinery and plant,

Ref.	Mitigation measure
	and loading / unloading areas, with a view to minimising disruption and other construction traffic-related impacts. Prior to works commencing on-site, a Construction Traffic Management Plan will be prepared by the appointed contractor in accordance with the following guidance documents: ■ Department of Transport, Tourism and Sport (DTTS) (2019). Chapter 8: Temporary Traffic Measures and Signs for Roadworks, in Traffic Signs Manual; ■ DTTS (2013). Design Manual for Urban Roads & Streets ('DMURS'); ■ Department of Transport (2010). Guidance for the Control and Management of Traffic at Road Works (Second Edition); ■ NRA (2015). Design Manual for Roads and Bridges ('DMRB'). **Construction Travel Plan** As stipulated in the CEMP & CMP (DCON Safety Consultants, 2025) a Construction Travel Plan shall be developed by appointed Contractor, addressing access to / from the Site for construction personnel and detailing how more sustainable mobility modes (e.g. carpooling, public transport use, walking and cycling) will be promoted, and individual private car use minimised, among construction personnel.
GE11	**Resource & Waste Management Plan** A project-specific Resource & Waste Management Plan (RWMP) has been prepared by AWN Consulting (2025) in line with the requirements of the EPA *'Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction & Demolition Projects' (2021)* and is included as **Appendix 20.1** Volume 3 of the EIAR. The implementation of the mitigation measures presented in the RWMP will ensure effective waste management and minimisation, reuse, recycling, recovery and disposal of waste material generated during the excavation and construction phases of the proposed development. Prior to commencement, the appointed Contractor(s) will be required to refine / update the RWMP in agreement with DCC, detailing specific measures to minimise waste generation and resource consumption, and provide details of the proposed waste contractors and destinations of each waste stream. The Contractor will be required to fully implement the RWMP throughout the duration of the proposed construction phase.
GE12	**Arboricultural Impact Assessment & Method Statement** A tree survey and arboricultural impact assessment have been carried out by the Tree File Consulting Arborists ('the Arborist' hereafter) in respect of the proposed Project, in accordance with *BS5837:2012 – Trees in Relation to Design, Demolition and Construction – Recommendations*. Please refer to the Arboricultural Report prepared by the Arborist and submitted under separate cover as part of this application. The Arboricultural Report includes a Tree Protection Plan and Arboricultural Method Statement, which shall be implemented in full during the proposed works.
GE13	**Community Liaison Plan** The Applicant shall develop a Community Liaison Plan in advance of the commencement of the proposed works, in accordance with the requirements set out in the CMP, as well as any corresponding conditions of the planning permission. The Community Liaison Plan will include a Good Neighbour Policy covering the following areas: ■ Designated Community Liaison Official (CLO); ■ Early implementation;

Ref.	Mitigation measure
	▪ Good client, staff and neighbourhood liaison; ▪ Reduction of nuisance factors; ▪ Clear access for neighbouring premises; and ▪ Clear and concise and accurate information. The Applicant will establish a Designated Community Liaison Officer (CLO) so that particular issues / complaints raised by local residents may be quickly identified and responded to. The details of the CLO will be shared with local residents once appointed. The CLO shall be responsible for the preparation and implementation of the Community Liaison Plan. The Community Liaison Plan will be updated, as required, taking in to account: ▪ Changes in the design and construction programme; ▪ Changes in stakeholder and community needs; and ▪ Changes in contractor activities and stakeholder and community information requirements. The Community Liaison Plan will include, as sub–plans, separate 'Stakeholder and Community Involvement Plans' that are specific to separate projects and contractor activities. Further details of the Community Liaison Plan are set out in the CMP, submitted under separate cover.
Operational phase	
GE14	**Mobility Management Plan** A Mobility Management Plan (MMP) has been prepared by SYSTRA (2025) for the operational phase of the proposed development (refer to standalone document submitted under separate cover), to promote sustainable mobility among the residents of the proposed development through a range of measures. The appointed Mobility Manager of the site during the operational phase will be responsible for ensuring – allocating personnel and resources, as needed – the ongoing implementation of the MMP. This is intended to be a live document, to be updated by the Applicant / Operator, where appropriate, e.g. to ensure the Plan remains fit for purpose and up-to-date with relevant policy.
GE15	**Operational Waste Management Plan** An Operational Waste Management Plan (OWMP) has been prepared by AWN Consulting (2025), containing measures to promote operational phase waste management in accordance with the waste hierarchy, i.e. high rates of reuse, recycling and recovery. Refer to **Appendix 20.2** Volume 3 of the EIAR. The Operator / Facilities Management of the site during the operational phase will be responsible for ensuring – allocating personnel and resources, as needed – the ongoing implementation of the OWMP. This is intended to be a live document, to be updated by the Applicant / Operator, where appropriate, e.g. to ensure the Plan remains fit for purpose and up-to-date with relevant policy.

24.3 Specific Mitigation & Monitoring Measures

24.3.1 Population & Human Health

Table 24.2 Mitigation measures - Population and Human Health

Ref.	Mitigation measure
Construction phase	
PHH01	A Construction & Environmental Management Plan (CEMP) and Construction Management Plan (CMP) have been prepared in respect of the proposed development by DCON Safety Consultants, 2025 (refer to standalone document submitted as part of the planning pack). They contain best practice measures and protocols to be implemented during the construction phase of the proposed development to avoid / minimise environmental impacts. The appointed contractor will be responsible for the implementation of the CEMP & CMP. To ensure these documents remain fit for purpose, they will be maintained as live documents. The appointed contractor will be responsible for updating the CEMP & CMP, as required; e.g. to reflect the publication of relevant new or revised guidelines and / or new statutory requirements. The full schedule of environmental commitments (i.e. all mitigation measures set out in the CEMP and Environmental Impact Assessment Report as part of the planning application, as well as any applicable conditions of development consent) will be included in the CEMP & CMP by the appointed contractor.
PHH02	A Community Liaison Officer (CLO) will be appointed by the contractor for the duration of the construction phase. They will be responsible for keeping the local community and businesses informed of the timing and duration of potentially disruptive works, and for receiving and addressing concerns of local residents and businesses in relation to the proposed works.
PHH03	Chapter 11 (Air Quality) & Chapter 12 (Climate) include a suite of mitigation measures to minimise air quality (including dust) impacts during the construction phase. Dust minimisations measures are included in Chapter 11 and shall be finalised by the appointed contractor in agreement with Dublin City Council, and implemented during the proposed works. Other mitigation measures are included in relation to community liaison, site management, maintenance of site, control of construction machinery, waste management especially demolition works, earthworks and measures specific to trackout. Further, as detailed in Chapter 5 & CEMP, adequate surface water drainage and management during construction phase shall be undertaken so as to avoid impacts on local population and human health.
PHH04	Chapter 13 (Noise & Vibration) includes a suite of mitigation measures to minimise noise impacts during the construction phase. Mitigation measures are included in relation to selection of quiet plant, noise control at source, screening, adherence to noise limits and community liaison.
PHH05	Chapter 14 (Landscape & Visual) includes a number of mitigation measures to minimise the impacts of the proposed works on landscape and visual amenity. These include measures in relation to visual impact of construction works, landscape character and existing vegetation.
PHH06	Chapter 19 (Traffic & Transportation) includes measures in relation to construction traffic and parking management to minimise the impacts of construction traffic on the local community and the operation of the existing road network in the area. Additionally, each appointed contractor will ensure that their compound set up accounts for appropriate spatial provision for waste management segregation, logistical deliveries and day to day contractor car parking. Appropriate overflow contractor carparking can be made

Ref.	Mitigation measure
	available in areas of client landholding. This area(s) may change subject to works phasing and ongoing construction activities.
PHH07	Chapter 20 (Material Assets - Waste) includes a suite of measures in relation to management of construction waste to minimise the impacts of all site construction activities. A Resource and Waste Management Plan (**Appendix 20.1**, Volume 3) prepared as part of the application shall be implemented throughout the construction phase of the proposed development.
PHH08	Chapter 21 (Material Assets – Services) includes a suite of measures in relation to management of services in the vicinity of the works and regard shall be had to the Gas Networks Ireland *Guidelines for Designers and Builders – Industrial and Commercial (Non-Domestic) Sites (2018),* the Health & Safety Authority (HSA) *Code of Practice for Avoiding Danger from Underground Services (2016),* and the ESB Networks & Health and Safety Authority *Code of Practice for Avoiding Danger from Overhead Electricity Lines (2019).*
Operational phase	
PHH09	Chapter 19 (Traffic & Transportation) includes measures in relation to mobility management and car parking management during the operational phase. It requires the implementation of a Mobility Management Plan, to encourage sustainable travel patterns among residents of the proposed development.
PHH10	Chapter 14 (Landscape & Visual) includes a number of mitigation measures to minimise the impacts of the proposed works on landscape and visual amenity. These include measures in relation to good quality architectural design, retained setting for Red House, provision of open spaces, retention, enhancement and management of existing mature trees, tree groups and woodland blocks, enhanced and additional tree planting etc.
PHH11	Chapter 11 (Air Quality) & Chapter 12 (Climate) includes a suite of mitigation measures to minimise future climate change impacts during the operational phase. These measures have been incorporated into the design of the development to mitigate against the impacts of future climate change. For example, adequate attenuation and drainage have been incorporated into the design of the development to avoid potential flooding impacts as a result of increased rainfall events in future years. The proposed development has been designed to reduce the impact on climate as a result of energy usage during operation.
PHH12	Chapter 20 (Material Assets- Waste) includes a suite of measures in relation to management of operational phase waste to minimise the impacts of the operational phase of the proposed development. An Operational Waste Management Plan (**Appendix 20.2**, Volume 3) prepared as part of the application shall be implemented throughout the operational phase of the proposed development.

Table 24.3 Monitoring - Population and Human Health

Phase	Monitoring measure
Construction	Monitoring and maintenance recommended in Chapters 11 (Air Quality), 13 (Noise & Vibration), 14 (Landscape & Visual), 19 (Traffic & Transportation), 20 (Material Assets - Waste) and 21 (Material Assets – Services) shall be implemented in full during the construction and / or operational phases of the proposed development, as specified in those respective chapters.

Phase	Monitoring measure
	Beyond that which has been recommended elsewhere in this EIAR, no additional monitoring is considered necessary in respect of population and human health.

24.3.2 Biodiversity

Table 24.4 Mitigation measures - Biodiversity

Ref.	Mitigation measure
Construction phase	
BIO01	The proposed development incorporates a comprehensive landscape design, with biodiversity-focussed planting (refer to Chapter 14 (Landscape & Visual) and the Landscape Design Statement, prepared by NMP Landscape Architecture and submitted as part of this application under separate cover). The planting and long-term management proposed in the Landscape Design Statement will enhance the biodiversity resource on the proposed development site by creating new, pollinator-friendly habitats.
BIO02	**Habitats –** The proposed planting/landscaping strategy includes a mix of appropriate species, incorporating species that will attract feeding invertebrates, including moths, butterflies and bees. It takes account of the All-Ireland Pollinator Plan (2020 - 2025)[44]. The proposed planting schedule as set out in the Landscape Design Statement contains no invasive species and none will be introduced, either deliberately or inadvertently, to the proposed development site. The Invasive Species Management Plan (see Section 8.4.5) currently being implemented at the Holy Cross College Lands will continue until all these invasive species are entirely eradicated from the site. Biosecurity measures will be included in the final CMP by the appointed contractor.
BIO03	**Nesting Birds-** Where feasible and practicable, the clearance of scrub and other vegetation that may be suitable for use by nesting birds will be undertaken outside the bird nesting season (avoiding the period 1 March to 31 August). Should the construction programme require vegetation clearance between March and August, bird nesting surveys will be undertaken by suitably qualified ecologists. If no active nests are recorded, vegetation clearance will take place within 24 hours. In the event that active nests are observed, an appropriately sized buffer zone (up to 5 m radius around the nest) will be maintained around the nest until such time as all the eggs have hatched and the birds have fledged – a period that may be three weeks from the date of the survey. Once it is confirmed that the birds have fledged and no further nests have been built or occupied, vegetation clearance may take place immediately.
BIO04	**Otters and other large mammals** - There will be no impacts on otters or other large mammals. Regardless, a pre-construction check for otters will be undertaken prior to the installation of the two surface water outfalls to the River Tolka, to ensure this remains the case.
BIO05	**Bats-** No bat roosts have been recorded at the proposed development site, and it will not be necessary to apply for a derogation licence under Regulation 54 or 55 of the *European Communities (Birds and Natural Habitats) Regulations 2011, as amended*.

[44] NBDC (2021)

Ref.	Mitigation measure
	Nevertheless, as bats are highly mobile creatures, all mature trees shall be checked for bats by a bat specialist to identify trees with the highest potential prior to felling or major surgery. From this, trees with the highest roost potential as determined by the bat specialist shall be subjected to a higher level of examination that shall include thorough checking of all suitable crevices, cavities, ivy cover or loose bark. This will require access via a hoist to reach all suitable cavities and crevices. Should bats be noted during this evaluation, a derogation shall be required from NPWS. Similarly, for all buildings proposed for demolition or where there is a need to undertake repairs / building work at roof level for the remaining buildings, a bat specialist shall examine each area for the presence of bats prior to commencement. Sufficient time must be allowed to seek a derogation if bats are present.
BIO06	**Bats and Bird Boxes-** Notwithstanding the limited roosting potential of the site, it is proposed to install bat (and bird) boxes both within the proposed development itself and within the retained woodland blocks. The reason for the installation of additional bat boxes is not to provide replacement roosts; rather, it is to augment the overall ecological value of the site. This will contribute to maximising the ecological value of the proposed development. To that end a number of bat and bird boxes will be erected, with advice from the Project Ecologist, in appropriate areas. The boxes proposed are as follows (this list is subject to revision based on the availability of suitable boxes in the future): ▪ Bat boxes proposed by the bat specialist (see also Appendix 8.1) □ 6 no. Schwegler 2F with double front panel or similar; □ 2 no. Eco bat boxes (wooden); ▪ Additional boxes proposed: □ 4 no. Schwegler 1MF combined bat and swift boxes or similar (to be located within the facades of four of the taller buildings proposed); □ 6 no. assorted wooden or woodcrete bird boxes, suitable for use by robins, blue tits and tree creepers. □ 10 no. insect hotels, to be distributed through the landscaped areas, as advised by the project ecologist during the construction phase. □ The landscaping for the proposed development will include a dedicated series of 2m x 2m bare soil nesting habitat areas for mining solitary bees with locations to be confirmed by the project ecologist during the construction phase. The installation of boxes that can accommodate swifts will increase the available nesting potential of the proposed development site for this species, which has not been recorded at the subject site, and which has undergone significant decline in recent years[45], and has now been placed on the red list of BoCCI[46].
BIO07	No badger setts will be in any way affected by the proposed development, and no mitigation measures will be required for the protection of badgers. Nevertheless, a watching brief will

[45] Swift Conservation Ireland
[46] Gilbert *et al.* (2021)

Ref.	Mitigation measure
	be maintained by the project ecologist throughout the construction phase, in the event that badgers should establish a territory at the site.
BIO08	Any ponds/wet areas found (although there are none on the site at present) will be inspected by a suitably experienced ecologist prior to works being undertaken. Should any frog spawn or tadpoles be discovered, a licence to remove frog spawn may be required from NPWS.
BIO09	The installation of two surface water outfalls has the potential to result in highly localised (in the vicinity of the outfall – not downstream), short-term (only the duration of the outfall construction period) impacts on surface water quality in the River Tolka. The surface water mitigation measures proposed in Chapter 10 (Hydrology) and in the Outline Construction Surface Water Management Plan (CSWMP), prepared by BMCE, and Construction Management Plan (CMP), prepared by DCON Safety Consultants (all submitted as part of this application under separate cover), will ensure that no sediment contamination, contaminated run-off or untreated wastewater will enter any on-site surface water drains and, in particular, the River Tolka as a result of the construction of the proposed development.
BIO10	The measures set out in Chapter 11 (Air Quality) of this EIAR will be implemented to ensure that no air-related impacts arise on biodiversity. No further mitigation measures, in the context of biodiversity, are required.
Operational phase	
BIO11	**Lighting-** The lighting for the proposed development has been designed in accordance with the following guidelines: ▪ Bats and Lighting – Guidance Notes for Planners, Engineers, Architects and Developers (Bat Conservation Ireland, 2010)[47]; ▪ Bats and Artificial Lighting at Night, Institute of Lighting Professionals, 2023[48]; ▪ Guidance Notes for the Reduction of Obtrusive Light GN01-21 (Institute of Lighting Professionals, 2021)[49]; ▪ Dark Sky Ireland's Environmentally Friendly Lighting Guide[50], ▪ Guidelines for consideration of bats in lighting projects (Eurobats Publication Series No 8, 2018)[51]. The proposed lighting will have the following characteristics: ▪ The minimum level of lighting will be provided within the developed areas, within the lux level criteria required by Dublin City Council. ▪ No flood lighting will be provided within the proposed development and all light fittings will be LED and are designed to shine downwards and will avoid sky glow and light spill. ▪ Lighting will be directed onto the working areas only – and away from retained woodland areas, which will be retained as dark areas, within the requirements of Dublin City Council.

[47] https://www.batconservationireland.org/wp-content/uploads/2013/09/BCIrelandGuidelines_Lighting.pdf
[48] https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/
[49] https://theilp.org.uk/publication/guidance-note-1-for-the-reduction-of-obtrusive-light-2021/
[50] https://www.darksky.ie/lighting-documents/#guidelines
[51] https://www.eurobats.org/sites/default/files/documents/publications/publication_series/WEB_DIN_A4_EUROBATS_08_ENGL_NVK_28022019.pdf

Ref.	Mitigation measure
BIO12	There will be no impacts related to surface water, including the River Tolka, as a result of the proposed development. The proposed development is designed in accordance with the principles of SuDS as embodied in the recommendations of the Greater Dublin Strategic Drainage Study (GDSDS), which addresses the issue of sustainability by requiring designs to comply with a set of drainage criteria which aim to minimize the impact of urbanization, by replicating the run-off characteristics of the greenfield site. The criteria provide a consistent approach to addressing the increase in both rate and volume of run-off, as well as ensuring the environment is protected from any pollution from roads and buildings. No corresponding mitigation measures are required. No mitigation is proposed for the operational phase of the proposed development, once the measures required during the construction phase are implemented.

Table 24.5 Monitoring- Biodiversity

Phase	Monitoring measure
Construction	A suitably experienced Project Ecologist (Ecological Clerk of Works) will be appointed for the duration of the construction phase and regular monitoring of all related works will take place to ensure the correct and full implementation of all mitigation measures. The Project Ecologist will ensure that all construction works take place in accordance with the development Construction Management Plan, Construction Environmental Management plan, the Construction Surface Water Management Plan and the mitigation measures set out in this EIAR.
	Should vegetation clearance be required during the bird nesting season, this work will take place only after the Project Ecologist has undertaken a survey to ensure that no active bird nests or recently fledged birds are present. Similarly, no evidence of roosting bats was recorded on the site during any of the comprehensive bat surveys undertaken (there is one confirmed roost, in the Red House, outside of the proposed development site). Regardless, a pre-construction survey will be required to ensure that any necessary tree felling or works to buildings continue to have no impact on roosting bats.
Operational	No long-term ecological monitoring is required, other than post-construction monitoring of the bat and bird boxes installed. The bat and bird boxes installed on the site will be checked annually for a period of two years post-completion of the works, to ensure that they continue to be accessible to these species.
	On completion of construction, the lighting installed will be reviewed by the Project Ecologist and a bat specialist, to ensure that it is operating according to the approved specifications.

24.3.3 Land, Soils, Geology & Hydrogeology

Table 24.6 Mitigation measures - Land, Soils, Geology & Hydrogeology

Ref.	Mitigation measure
Construction phase	
LSG01	A Construction Environmental Management Plan (CEMP) and Construction Management Plan (CMP) have been included with the application documentation and contained in this EIAR. This outlines the best practice construction techniques and methodologies which will be

Ref.	Mitigation measure
	implemented during construction of the proposed development including measures to protect waterbodies. The CEMP sets out the proposed procedures and operations to be utilised on the proposed construction site to protect water quality. The mitigation and control measures outlined in the CEMP and this EIAR will be employed on site during the construction phase. The CEMP and mitigation measures set out in this EIAR will be implemented and adhered to by the construction Contractor and will be overseen and updated as required if site conditions change by the Project Manager, Environmental Manager and Ecological Clerk of Works where relevant. All personnel working on the site will be trained in the implementation of the procedures. All mitigation measures outlined in this chapter, and within the CEMP will be implemented during the construction phase, as well as any additional measures required pursuant to planning conditions which may be imposed. The CEMP and this EIAR contains best practice measures and protocols to be implemented during the construction phase of the proposed development to avoid / minimise environmental impacts. Construction works and the proposed mitigation measures are informed by best practice guidance on the prevention of pollution during development projects including but not limited to: ▪ Construction Industry Research and Information Association (CIRIA), Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors (C532); ▪ Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters (2016); ▪ Construction Industry Research and Information Association (CIRIA) Environmental Good Practice on Site (4th edition), (C741); and ▪ Enterprise Ireland Best Practice Guide, Oil Storage Guidelines (BPGCS005).
LSG02	According to the subject CEMP prepared by DCON Safety Consultants (2025), all existing surface water drainage elements (including adjacent River Tolka) shall be maintained free from waste materials generated during the construction of the proposed development, including the initial site clearance and excavation. Routine visual inspections by the contractor shall reduce any risk of excess construction materials causing obstructions to surface water drainage and any potential flooding occurring. A maintenance schedule and operational schedule must be established by the contractor for silt and pollution control measures during the construction period. This should be undertaken in consultation with the relevant statutory authorities.
LSG03	Run-off from the working site or any areas of exposed soil shall be channelled and intercepted at regular intervals for discharge to silt traps or lagoons. A temporary positive drainage system shall be installed prior to the commencement of the construction works, to collect surface water runoff from the site during construction. A temporary surface water management will throttle runoff and allow silt and suspended solids to be settled out and removed before being discharged in a controlled manner to the agreed outfall.
LSG04	Further measures are as follows: ▪ The CEMP provides actions and measures which will be undertaken for the purpose of environmental management and pollution prevention during the construction phase. As

Ref.	Mitigation measure
	there is potential for run-off to indirectly discharge to the local drainage network or a watercourse (River Tolka) in the vicinity of the site and in order to manage the potential impact associated with sediment and sediment runoff the following mitigation measures will be implemented during the construction phase: ▪ SuDS will be constructed in line with manufacturer's guidelines / best practice methods. ▪ During construction, any surfaces which are intended to enable infiltration must be protected from compaction. This includes protecting from heavy traffic or storage materials. ▪ Any surface water run-off collecting in excavations will likely contain a high sediment load. This will not be allowed to discharge directly to the local drainage network or the River Tolka. ▪ During construction water contaminated with silt will not be allowed to enter a watercourse or drain. All parts of the drainage system will be protected from construction runoff to prevent silt clogging the system and causing pollution downstream. Silt reduction measures to prevent this include, early construction of sediment management basins, channelling runoff away from watercourses and surface water drains and erosion prevention measures. Following construction, subsoil that has been compacted during construction should be broken up prior to the re-application of topsoil to reinstate the natural infiltration performance of the ground. ▪ Process water used during construction will be disposed of appropriately. Rainwater will also accumulate on the site during construction. This water will be discharged directly via suitable pollution control and attenuation measures either directly to ground within the site or to foul sewer systems via portions of the DCC sewer network. ▪ Where available proposed permanent connections to the public sewer systems required for the operational phase will be used temporarily for the construction phase, to optimise efficiencies and avoid the creation of new outfalls for temporary construction only. ▪ De-watering operations and surface water run-off discharge on the site, during construction and prior to completion will be controlled and discharged only to the existing sewerage system at an agreed rate of flow in consultation with Irish Water, DCC Environment Division and Pollution Control Section. Local dewatering and collection of groundwater or rainfall during construction may require disposal. Disposal of groundwater during construction will be to the surface water sewer system following suitable pollution control and attenuation measures protecting the River Tolka. The precise measures to be used will be agreed in advance with the Project Ecologist. ▪ On-site treatment measures will be installed to treat surface water run-off from the site prior to discharge to the receiving surface water sewer. This treatment will be achieved by the construction of filter strips incorporating Straw Bales to reduce sediment loading, settlement tanks, the installation of proprietary surface water treatment systems including Class 1 full retention petrol interceptors and spill protection control measures. Settlement tanks will be sized to deal with surface run-off and any groundwater encountered. All measures will be approved prior to commencement with the Pollution Section of DCC. ▪ Pipe systems and orifices will be checked for blockages or partial blockages. ▪ Soils will be stabilised and protected from erosion whilst planting becomes established. All exposed soil surfaces will be within the main excavation site which limits the potential for any offsite impacts.

Ref.	Mitigation measure
	▪ The temporary storage of soil will be carefully managed. Stockpiles will be tightly compacted to reduce runoff and graded to aid in runoff collection. ▪ Pollution control measures will be implemented to control run-off from the site and prevent run-off which is potentially contaminated with sediments or hazardous chemicals entering the drainage network. ▪ A response procedure will be put in place to deal with any accidental pollution events and spillage kits will be available on site. ▪ Any hard surface site roads will be swept to remove mud and aggregate materials from their surface while any unsurfaced roads shall be restricted to essential site traffic only. ▪ A power washing facility or wheel cleaning facility will be installed near to the site compound for use by vehicles exiting the site when appropriate. ▪ Aggregate materials such as sands and gravels will be stored in clearly marked receptacles within a secure compound area to prevent contamination. ▪ Movement of material will be minimised to reduce the degradation of soil structure and generation of dust. ▪ Excavations will remain open for as little time as possible before the placement of fill. This will help to minimise the potential for water ingress into excavations. ▪ Weather conditions will be considered when planning construction activities to minimise the risk of run-off from the site. ▪ All excavated materials will be visually assessed by suitably qualified persons for signs of possible contamination such as staining or strong odours. Should any unusual staining or odour be noticed, samples of this soil will be analysed for the presence of potential contaminants to ensure that historical pollution of the soil has not occurred. Should it be determined that any of the soil excavated is contaminated, this will be segregated and appropriately disposed of by a suitably permitted/licensed waste disposal contractor.
LSG05	**Soil Management** The strategy for controlling and mitigating potential adverse environmental issues related to soil and contamination during construction will include the following, as appropriate: ▪ Identification and assessment of the potential for residual ground contamination to be present prior to the start of any excavation works. ▪ Minimisation of potential risks to site workers as required by the Safety, Health and Welfare (Construction Regulations) 2013, as amended. ▪ Testing and sampling of excavated soils in order to assess the suitability of materials for re-use on site. ▪ Dust suppression from any contaminated soils by the regular use of water spray during any dry conditions, sheeting of haulage vehicle loads. ▪ Stockpiling of contaminated materials will be avoided where possible. ▪ Stockpiles will be treated to prevent windblown dust. ▪ The handling and storage of any potentially hazardous liquids on site, e.g. fuels and chemicals, will be controlled and best practice guidelines applied. Storage tanks/container facilities will have appropriate bunding within the designated area. ▪ If hazardous liquids escape, remedial action will be taken as soon as possible. ▪ Where unforeseen contamination is identified during the course of the work, specific investigations will be carried out in the areas in question and appropriate health and safety procedures will be implemented during the removal of the material. A strategy will be prepared to identify, analyse, segregate and control existing contaminated materials

Ref.	Mitigation measure
	on site. In addition to the measures above, all excavated materials will be visually assessed by suitably qualified persons for signs of possible contamination such as staining or strong odours. Should any unusual staining or odour be noticed, samples of this soil will be analysed for the presence of potential contaminants to ensure that historical pollution of the soil has not occurred. Should it be determined that any of the soil excavated is contaminated, this will be segregated and appropriately disposed of by a suitably permitted/licensed waste disposal contractor.
LSG06	**Run Off Suspended Solids** ▪ A buffer zone of at least 50m separating working machinery from watercourses; ▪ During construction, any surfaces which are intended to enable infiltration must be protected from compaction. This includes protecting from heavy traffic or storage materials. ▪ Silt deposited during construction will be removed. ▪ Soils will be stabilised and protected from erosion whilst planting becomes established. ▪ Hydrocarbons or any hazardous chemicals will be stored in specific bunded areas. Refuelling of plant and machinery will also be carried out in bunded areas to minimise risk of any potential pollutants being discharged from the site. ▪ Pollution control measures will be implemented to control run-off from the site and prevent run-off which is potentially contaminated with sediments or hazardous chemicals entering the drainage network. ▪ Foul drainage from site offices and compound, where not directed to the existing wastewater network, will be contained and disposed of off-site in an appropriate manner and in accordance with the relevant statutory regulations to prevent the pollution of watercourses. ▪ A response procedure will be put in place to deal with any accidental pollution events and spillage kits will be available on site. Construction staff will be familiar with the emergency procedures and use of the equipment. ▪ During earthworks and excavation works care will be taken to ensure that exposed soil surfaces are stable to minimise erosion. All exposed soil surfaces will be within the main excavation site which limits the potential for any offsite impacts; ▪ Silt reduction measures on site and settlement measures (e.g. silt traps and settlement tanks/ponds or equivalent); ▪ Any hard surface site roads will be swept to remove mud and aggregate materials from their surface while any unsurfaced roads shall be restricted to essential site traffic only; ▪ A power washing facility or wheel cleaning facility will be installed near to the site compound for use by vehicles exiting the site when appropriate; ▪ Aggregate will be established at the site entrance points from the construction site boundary extending for at least 10 m; ▪ The temporary storage of soil will be carefully managed. Stockpiles will be tightly compacted to reduce runoff and graded to aid in runoff collection; ▪ Construction materials, including aggregates etc. will be stored a minimum of 50-meter buffer distance from any surface water bodies and surface water drainage points; ▪ Aggregate materials such as sands and gravels will be stored in clearly marked receptacles within a secure compound area to prevent contamination; ▪ Movement of material will be minimised to reduce the degradation of soil structure and generation of dust;

Ref.	Mitigation measure
	▪ Excavations will remain open for as little time as possible before the placement of fill. This will help to minimise the potential for water ingress into excavations; ▪ Weather conditions will be considered when planning construction activities to minimise the risk of run-off from the site.
LSG07	**Sources of Fill and Aggregates** ▪ All fill and aggregate for the proposed development will be sourced from reputable suppliers per the project Contract and Procurement Procedures. All suppliers will be vetted for: □ Aggregate compliance certificates/declarations of conformity for the classes of material specified for the proposed development; □ Environmental Management status; and □ Regulatory and Legal Compliance status of the Company.
LSG08	**Cement /concrete works** Where feasible all ready-mixed concrete will be brought to site by truck. A suitable risk assessment for wet concreting will be completed prior to works being carried out which will include measures to prevent discharge of alkaline wastewaters or contaminated storm water to the underlying subsoil. No wash-down or wash-out of ready-mix concrete vehicles during the construction works will be carried out at the site within 10 meters of an existing surface water drainage point. Washouts will only be allowed to take place in designated areas with an impervious surface where all wash water is contained and removed from site by road tanker or discharged to foul sewer submit to agreement with Irish Water / DCC. Pouring of cement-based materials for works will only be carried out in dry conditions. Pumped concrete will be monitored to ensure there is no accidental discharge. Mixer washings and excess concrete will not be discharged directly into the drainage network. Concrete washout areas will be created to avoid any accidental discharge from the proposed development site. The construction contractor will be required to implement emergency response procedures, and these will be in line with industry guidance. All personnel working on the Site will be suitably trained in the implementation of the procedures.
LSG09	**Hydrocarbons and other construction chemicals** The following mitigation measures will be implemented during the construction phase to prevent any accidental leakage of fuels and other construction chemicals to ground and prevent any spillages impacting the surface water and groundwater quality: ▪ Designation of bunded refuelling areas on the Site; ▪ Provision of spill kit facilities across the Site; ▪ Where mobile fuel bowsers are used, the following measures will be taken: □ Any flexible pipe, pump, tap or valve will be fitted with a lock and will be secured when not in use; □ All bowsers to carry a spill kit and operatives must have spill response training; □ Portable generators or similar fuel containing equipment will be placed on suitable drip trays.

Ref.	Mitigation measure
	In the case of drummed fuel or other potentially polluting substances which may be used during the construction phase, the following measures will be adopted: ▪ Secure storage of all containers that contain potential polluting substances in a dedicated internally bunded chemical storage cabinet unit or inside a concrete bunded area; ▪ Oil and fuel storage tanks shall be stored in designated areas, and these areas shall be located within temporary bunded areas, doubled skinned tanks or bunded containers to a volume of 110% of the capacity of the largest tank/container. Drainage from the bunded area(s) shall be diverted for collection and safe disposal. ▪ Clear labelling of containers so that appropriate remedial measures can be taken in the event of a spillage; ▪ All drums to be quality approved and manufactured to a recognised standard; ▪ If drums are to be moved around the Site, they will be secured and on spill pallets; and ▪ Drums will be loaded and unloaded by competent and trained personnel using appropriate equipment. Refuelling of construction vehicles and the addition of hydraulic oils or lubricants to vehicles will take place in a designated area or within the construction compound (or, where possible, off the site). In the event of a machine requiring refuelling outside of this area, fuel will be transported in a mobile double skinned tank. An adequate supply of spill kits and hydrocarbon adsorbent packs will be stored in this area. All relevant personnel will be fully trained in the use of this equipment. Guidelines such as "*Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors*" (CIRIA 532, 2001) will be complied with. The construction contractor will be required to implement emergency response procedures, and these will be in line with industry guidance. All personnel working on the Site will be suitably trained in the implementation of the procedures.
Operational phase	
LSG10	The proposed development design includes hardstand cover across the site and the proposed surface water drainage system for this development has been designed as a sustainable urban drainage system (SuDS). The surface water design has been designed in accordance with the Greater Dublin Regional Code of Practice for Drainage Works and Sewers for adoption. The drainage network will consist of attenuation to the green-field runoff using a flow control device (hydrobrake) from the site. Any localised car leaks will therefore discharge to the stormwater drainage and be treated in Petrol interceptors (oil separators) prior to outfalling into the main system. Therefore, the risk of accidental discharge has been adequately addressed through design. The purpose of these SuDS features is to treat runoff and remove pollutants to improve quality, restrict outflow and control quantity and increase overall amenity value.

Table 24.7 Monitoring- Land, Soils, Geology & Hydrogeology

Phase	Monitoring measure
Construction	During construction phase the following monitoring measures will be implemented: ▪ Soil sampling to confirm disposal options for excavated soils in order to avoid contaminated run-off; and ▪ Regular inspection of construction / mitigation measures (e.g., concrete pouring, refuelling, etc).

Phase	Monitoring measure
	▪ Pouring of cement-based materials for works will only be carried out in dry conditions. ▪ Groundwater level monitoring adjacent to basement excavations and near sensitive receptors to ensure stability of any temporary slopes, retaining walls and that the zone of influence for dewatering is outside of any protection areas.
Operational	There will be no requirement for groundwater monitoring as there is no likely discharge to ground, long term dewatering or abstraction of groundwater.

24.3.4 Hydrology

Table 24.8 Mitigation measures - Hydrology

Ref.	Mitigation measure
Construction phase	
HYD01	A Construction Environmental Management Plan (CEMP) and Construction Management Plan (CMP) has been included with the application documentation and contained in this EIAR. This outlines the best practice construction techniques and methodologies which will be implemented during construction of the proposed development including measures to protect waters bodies. The CEMP sets out the proposed procedures and operations to be utilised on the proposed construction site to protect water quality. The mitigation and control measures outlined in the CEMP and this EIAR will be employed on site during the construction phase. The CEMP and mitigation measures set out in this EIAR will be implemented and adhered to by the construction Contractor and will be overseen and updated as required if site conditions change by the Project Manager, Environmental Manager and Ecological Clerk of Works where relevant. All personnel working on the site will be trained in the implementation of the procedures. All mitigation measures outlined in this chapter, and within the CEMP will be implemented during the construction phase, as well as any additional measures required pursuant to planning conditions which may be imposed. The CEMP and this EIAR contains best practice measures and protocols to be implemented during the construction phase of the proposed development to avoid / minimise environmental impacts. Construction works and the proposed mitigation measures are informed by best practice guidance on the prevention of pollution during development projects including but not limited to: ▪ Construction Industry Research and Information Association (CIRIA), Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors (C532); ▪ Inland Fisheries Ireland (IFI), Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters (2016); ▪ Construction Industry Research and Information Association (CIRIA) Environmental Good Practice on Site (4th edition), (C741); and ▪ Enterprise Ireland Best Practice Guide, Oil Storage Guidelines (BPGCS005).
HYD02	According to the subject CEMP prepared by DCON Safety Consultants (2025), all existing surface water drainage elements (including adjacent River Tolka) shall be maintained free

Ref.	Mitigation measure
	from waste materials generated during the construction of the proposed development, including the initial site clearance and excavation. Routine visual inspections by the contractor shall reduce any risk of excess construction materials causing obstructions to surface water drainage and any potential flooding occurring. A maintenance schedule and operational schedule must be established by the contractor for silt and pollution control measures during the construction period. This should be undertaken in consultation with the relevant statutory authorities.
HYD03	Run-off from the working site or any areas of exposed soil shall be channelled and intercepted at regular intervals for discharge to silt traps or lagoons. A temporary positive drainage system shall be installed prior to the commencement of the construction works, to collect surface water runoff from the site during construction. A temporary surface water management will throttle runoff and allow silt and suspended solids to be settled out and removed before being discharged in a controlled manner to the agreed outfall.
HYD04	Further measures are as follows: ▪ The CEMP provides actions and measures which will be undertaken for the purpose of environmental management and pollution prevention during the construction phase. As there is potential for run-off to indirectly discharge to the local drainage network or a watercourse (River Tolka) in the vicinity of the site and in order to manage the potential impact associated with sediment and sediment runoff the following mitigation measures will be implemented during the construction phase: SuDS will be constructed in line with manufacturer's guidelines / best practice methods. ▪ During construction, any surfaces which are intended to enable infiltration must be protected from compaction. This includes protection from heavy traffic or storage materials. ▪ Any surface water run-off collecting in excavations will likely contain a high sediment load. This will not be allowed to discharge directly to the local drainage network or the River Tolka. ▪ Water contaminated with silt will not be allowed to enter a watercourse or drain as it can cause pollution. All parts of the drainage system will be protected from construction runoff to prevent silt clogging the system and causing pollution downstream. Silt reduction measures to prevent this include, early construction of sediment management basins, channelling runoff away from watercourses and surface water drains and erosion prevention measures. Following construction, subsoil that has been compacted during construction should be broken up prior to the re-application of topsoil to reinstate the natural infiltration performance of the ground. ▪ Process water used during construction will be disposed of appropriately. Rainwater will also accumulate on the site during construction. This water will be discharged via suitable pollution control and attenuation measures either directly to ground within the site or to foul sewer systems via portions of the DCC sewer network. ▪ Where available proposed permanent connections to the public sewer systems required for the operational phase will be used temporarily for the construction phase, to optimise efficiencies and avoid the creation of new outfalls for temporary construction only. ▪ De-watering operations and surface water run-off discharge on the site, during construction and prior to completion will be controlled and discharged only to the existing sewerage system at an agreed rate of flow in consultation with Irish Water, DCC Environment Division and Pollution Control Section.

Ref.	Mitigation measure
	▪ On-site treatment measures will be installed to treat surface water run-off from the site prior to discharge to the receiving surface water sewer. This treatment will be achieved by the construction of filter strips incorporating Straw Bales to reduce sediment loading, settlement tanks, the installation of proprietary surface water treatment systems including Class 1 full retention petrol interceptors and spill protection control measures. Settlement tanks will be sized to deal with surface run-off and any groundwater encountered. All measures will be approved prior to commencement with the Pollution Section of DCC. ▪ Pipe systems and orifices will be checked for blockages or partial blockages. ▪ Soils will be stabilised and protected from erosion whilst planting becomes established. All exposed soil surfaces will be within the main excavation site which limits the potential for any offsite impacts. ▪ The temporary storage of soil will be carefully managed. Stockpiles will be tightly compacted to reduce runoff and graded to aid in runoff collection. ▪ Pollution control measures will be implemented to control run-off from the site and prevent run-off which is potentially contaminated with sediments or hazardous chemicals entering the drainage network. ▪ A response procedure will be put in place to deal with any accidental pollution events and spillage kits will be available on site. ▪ Any hard surface site roads will be swept to remove mud and aggregate materials from their surface while any unsurfaced roads shall be restricted to essential site traffic only. ▪ A power washing facility or wheel cleaning facility will be installed near to the site compound for use by vehicles exiting the site when appropriate, ▪ Aggregate materials such as sands and gravels will be stored in clearly marked receptacles within a secure compound area to prevent contamination. ▪ Movement of material will be minimised to reduce the degradation of soil structure and generation of dust. ▪ Excavations will remain open for as little time as possible before the placement of fill. This will help to minimise the potential for water ingress into excavations. ▪ Weather conditions will be considered when planning construction activities to minimise the risk of run-off from the site. ▪ All excavated materials will be visually assessed by suitably qualified persons for signs of possible contamination such as staining or strong odours. Should any unusual staining or odour be noticed, samples of this soil will be analysed for the presence of potential contaminants to ensure that historical pollution of the soil has not occurred. Should it be determined that any of the soil excavated is contaminated, this will be segregated and appropriately disposed of by a suitably permitted/licensed waste disposal contractor. ▪ Surface water discharge from the site will be managed and controlled for the duration of the construction works until the permanently attenuated surface water drainage system of the proposed site is complete.
HYD05	**Cement/concrete works** Where feasible all ready-mixed concrete will be brought to site by truck. A suitable risk assessment for wet concreting will be completed prior to works being carried out which will include measures to prevent discharge of alkaline wastewaters or contaminated storm water to the underlying subsoil.

Ref.	Mitigation measure
	Pouring of cement-based materials for works will only be carried out in dry conditions. Pumped concrete will be monitored to ensure there is no accidental discharge. Mixer washings and excess concrete will not be discharged directly into the drainage network. Concrete washout areas will be created to avoid any accidental discharge from the proposed development site. No wash-down or wash-out of ready-mix concrete vehicles during the construction works will be carried out at the site within minimum of 10 meters of an existing surface water drainage point. Washouts will only be allowed to take place in designated areas with an impervious surface where all wash water is contained and removed from site by road tanker or discharged to foul sewer subject to agreement with Dublin City Council and / or Uisce Éireann. The construction contractor will be required to implement emergency response procedures, and these will be in line with industry guidance. All personnel working on the Site will be suitably trained in the implementation of the procedures.

HYD06	**Hydrocarbons and other construction chemicals**
	
	The following mitigation measures will be implemented during the construction phase in order to prevent any spillages to ground of fuels and other construction chemicals and prevent any resulting impacts to surface water and groundwater systems:
	
	▪ Designation of bunded refuelling areas on the Site;
	▪ Provision of spill kit facilities across the Site;
	▪ Where mobile fuel bowsers are used, the following measures will be taken:
	  □ Any flexible pipe, tap or valve will be fitted with a lock and will be secured when not in use;
	  □ The pump or valve will be fitted with a lock and will be secured when not in use;
	  □ All bowsers to carry a spill kit and operatives must have spill response training;
	  □ Portable generators or similar fuel containing equipment will be placed on suitable drip trays.
	
	▪ In the case of drummed fuel or other potentially polluting substances which may be used during the construction phase, the following measures will be adopted:
	  □ Secure storage of all containers that contain potential polluting substances in a dedicated internally bunded chemical storage cabinet unit or inside a concrete bunded area;
	  □ Oil and fuel storage tanks shall be stored in designated areas, and these areas shall be located within temporary bunded areas, doubled skinned tanks or bunded containers to a volume of 110% of the capacity of the largest tank/container. Drainage from the bunded area(s) shall be diverted for collection and safe disposal;
	  □ Clear labelling of containers so that appropriate remedial measures can be taken in the event of a spillage;
	  □ All drums to be quality approved and manufactured to a recognised standard;
	  □ If drums are to be moved around the Site, they will be secured and on spill pallets; and Drums will be loaded and unloaded by competent and trained personnel using appropriate equipment.
	
	▪ Refuelling of construction vehicles and the addition of hydraulic oils or lubricants to vehicles will take place in a designated area or within the construction compound (or, where possible, off the site). In the event of a machine requiring refuelling outside of this

Ref.	Mitigation measure
	area, fuel will be transported in a mobile double skinned tank. An adequate supply of spill kits and hydrocarbon adsorbent packs will be stored in this area. All relevant personnel will be fully trained in the use of this equipment. ■ The construction contractor will be required to implement emergency response procedures, and these will be in line with industry guidance. All personnel working on the Site will be suitably trained in the implementation of the procedures.
HYD07	**Rainwater Run-off** Rainfall at the construction site will be managed and controlled for the duration of the construction works until the permanently intercepted and attenuated surface water drainage system of the proposed site is complete. In the meantime, rainwater will continue to discharge to ground as currently occurs. Temporary construction surface drainage and sediment control measures, including the use of SuDS, will be provided before earthworks commence. The drainage design follows the natural topography of the site and utilises the existing storm water infrastructure within the surrounding infrastructure where possible including the River Tolka.
HYD08	**Wastewater Management** Foul drainage from site offices and compound, where not directed to the existing wastewater network, will be contained and disposed of off-site in an appropriate manner or to a licenced facility and in accordance with the relevant statutory regulations to prevent the pollution of watercourses.
HYD09	**Surface Water Flow and Quantity** During construction a site drainage and protection system will be built to reduce the flow of run-off from the site, prevent soil erosion, and protect water quality in the adjacent River Tolka or the downstream Tolka Estuary. Temporary excavated channels, bunds, or ridges or a combination of the three, may be constructed to divert sediment-laden water to an appropriate sediment retention structure. These may be installed to provide permanent diversion of clean stormwater away from erosion exposed soil areas, or to provide a barrier between exposed areas and unexposed areas of the construction site. Runoff diversion channels/bunds need regular maintenance to keep functioning throughout their life.
Operational phase	
HYD10	**Surface Water Quality** The design has taken account of the potential impacts of the development on surface water quality; measures have been incorporated in the design to mitigate these potential impacts. The proposed development stormwater drainage network design includes sustainable drainage systems (SuDS). These measures by design ensure the stormwater leaving the site is to be attenuated and treated within the new development site boundary to ensure suitable quality, before discharging to the existing local drainage network which subsequently outfalls to the nearby River Tolka. SuDS are drainage systems that are environmentally beneficial, causing minimal or no long-term detrimental damage. The SuDs design is set out in the Infrastructure Planning Report (Barrett Mahony Consulting Engineers, 2025) and uses extensive / intensive green blue roofs, underground attenuation tanks, detention basins, flow control devices (Hydrobrake), bioretention areas, rain gardens, tree pits, permeable paving (porous surfacing), an oil separator, and petrol / hydrocarbon interceptors (or equivalent).

Ref.	Mitigation measure
	The purpose of the SuDs design is to: ▪ Treat runoff and remove pollutants to improve quality; ▪ Restrict outflow and control quantity; ▪ Increase amenity value. The layout of the proposed surface water drainage network is shown on Barrett Mahony Consulting Engineers (2025) Drawing Set included with this Application. It is proposed to strictly separate the surface water and wastewater drainage networks, which will serve the proposed development, and provide independent connections to the surface water (stormwater) and wastewater (foul) sewer networks respectively.
HYD11	**Surface Water Flow and Quantity** The design has taken account of the potential impacts of the development on surface water flow; measures have been incorporated in the design to mitigate these potential impacts. As set out in the Infrastructure Planning Report (BMCE, 2025), flow restriction is achieved by means of a hydro-brake installed at the outfall of the surface water catchment within the development, with the excess storm water stored on site for the duration of the storm periods of up to 1 in 100 years. All the storm water from the proposed development shall be collected in separate storm pipes and shall be discharged into an underground attenuation system. The attenuation tanks shall be designed for 1-in 100 year storm event plus 20% climate change factor without any overland flooding. The attenuation tank shall be provided with flow control device to restrict the storm water run-off to greenfield rate. The proposed development includes a new surface water network which will mitigate any flood risk to the site in line with SuDS measures. The DCC FRA project considers the subject site to be low risk of pluvial flooding as it is not located in low lying areas. The proposed SuDS measures will reduce the risk of flooding downstream of the subject site. The proposed surface system will be designed for the 1 in 100 year storm event plus 20% for climate change, in line with DCC Drainage Division guidelines. No habitable floors of buildings will be at risk of flooding by any surface water ponding. Internal finished floor levels are set at a minimum of 150mm above highest external surface levels in the vicinity. Therefore, the risk of pluvial flooding is considered low, due to existing and proposed measures in place. The existing drainage on site will be improved as a result of the proposed works including the removal of the surface drainage system from the combined network on Clonliffe Road to substantially reduce both the peak and volume of runoff into the network. The proposed storm attenuation facilities will restrict flows to Qbar into the River Tolka which will further reduce the risk of pluvial flooding on site and downstream. Waterproof construction methods and measures will be employed to seal and prevent ingress of ground water into the basement. No buildings, ancillary buildings, roads, or footpaths are located in the flood. Only the 2 no. surface water outfall pipes are located in the flood zone, and are required here in order to reach the River Tolka. All finished floor levels are at grade and therefore are elevated well above the flood level. Internal finished floor levels are set at a minimum of 150mm above highest external surface levels in the vicinity, any runoff or ponding will be retained on access road and car park surfaces. This measure during the unlikely event is considered appropriate for the nature of the development.

Table 24.9 Monitoring - Hydrology

Phase	Monitoring measure
Construction	During construction phase the following monitoring measures will be considered: ▪ Silt remediation / interception treatment system; ▪ Contractors will carry out regular inspections to confirm compliance with the CEMP; ▪ Daily inspections by contractors will address potential environmental impacts including dust, litter, waste management and general housekeeping; ▪ Regular inspection of surface water run-off and sediments controls (e.g., silt remediation treatment e.g. silt traps/fence or equivalent). Inspection and maintenance of the silt fences during the construction phase is crucial to ensuring that they work as intended. They will remain in place throughout the entire construction phase; ▪ In accordance with Transport Infrastructure Ireland (TII)'s 'Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan', surface water monitoring during the construction phase to ensure maintenance of water quality protection will be undertaken for parameters including; temperature, dissolved oxygen, pH, nitrates, suspended solids, BODs (Biochemical Oxygen Demand), phenolic compounds petroleum hydrocarbons, non-ionized ammonia, total ammonium, total residual chlorine and electrical conductivity; ▪ Soil sampling to confirm disposal options for excavated soils in order to avoid contaminated water run-off; and ▪ Regular inspection or auditing of construction / mitigation measures (e.g., concrete pouring, refuelling, etc).
Operational	No future surface water monitoring is proposed for the proposed development due to the low hazard potential at the site. Oil / hydrocarbon / petrol separators or interceptors will be maintained and cleaned out in accordance with the manufacturer's instructions. Maintenance of the surface water drainage system and foul sewers as per normal urban developments is recommended to minimise any accidental discharges to surface water.

24.3.5 Air Quality

Table 24.10 Mitigation measures – Air Quality

Ref.	Mitigation measure
Construction phase	
AQ01	The following dust mitigation measures shall be implemented during the construction phase of the proposed development. These measures are appropriate for sites with a high risk of dust impacts and aim to ensure that no significant nuisance occurs at nearby sensitive receptors. The mitigation measures draw on best practice guidance from Ireland (DCC (2018), DLRCC (2022)), the UK (IAQM (2024), BRE (2003), The Scottish Office (1996), UK ODPM (2002)) and the USA (USEPA, 1997). These measures will be incorporated into the Construction Environmental Management Plan (CEMP) prepared for the site. The measures are divided into different categories for different activities.
AQ02	<u>Communications</u> ▪ Develop and implement a stakeholder communications plan that includes community engagement before work commences on site. Community engagement includes explaining the nature and duration of the work to local residents and businesses.

Ref.	Mitigation measure
	▪ The name and contact details of a person to contact regarding air quality and dust issues shall be displayed on the site boundary, this notice board should also include head/regional office contact details.
AQ03	<u>Site Management</u> ▪ During working hours, dust control methods will be monitored as appropriate, depending on the prevailing meteorological conditions. While dry and windy conditions are favourable to dust suspension, they may also enhance dispersion. Therefore, appropriate mitigation measures must be implemented if undertaking dust generating activities during such weather conditions. ▪ A complaints register will be kept on site detailing all telephone calls and letters of complaint received in connection with dust nuisance or air quality concerns, together with details of any remedial actions carried out.
AQ04	<u>Preparing and Maintaining the Site</u> ▪ Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible. ▪ Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site. ▪ Avoid site runoff of water or mud. ▪ Keep site fencing, barriers and scaffolding clean using wet methods. ▪ Remove materials that have potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below. ▪ Cover, seed or fence stockpiles to prevent wind whipping. ▪ Fully enclose sites or specific operations where there is a high potential for dust production and the site is active for an extensive period.
AQ05	<u>Operating Vehicles / Machinery and Sustainable Travel</u> ▪ Ensure all vehicles switch off engines when stationary - no idling vehicles. ▪ Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable. ▪ Impose and signpost a maximum-speed-limit of 15 kph on haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate). ▪ Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials. ▪ Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing)
AQ06	<u>Operations</u> ▪ Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems. ▪ Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate. ▪ Use enclosed chutes and conveyors and covered skips.

Ref.	Mitigation measure
	▪ Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate. ▪ Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.
AQ07	<u>Waste Management</u> ▪ Avoid bonfires and burning of waste materials.
AQ08	<u>Measures Specific to Demolition</u> ▪ Prior to demolition blocks should be soft striped inside buildings (retaining walls and windows in the rest of the building where possible, to provide a screen against dust). ▪ During the demolition process, water suppression should be used, preferably with hand-held spray. Only the use of cutting, grinding or sawing equipment fitted or used in conjunction with a suitable dust suppression technique such as water sprays/local extraction should be used. ▪ Drop heights from conveyors, loading shovels, hoppers and other loading equipment should be minimised, if necessary fine water sprays should be employed. ▪ Avoid explosive blasting, using appropriate manual or mechanical alternatives.
AQ09	<u>Measures Specific to Earthworks</u> ▪ Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable. ▪ Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable. ▪ Only remove the cover in small areas during work and not all at once. ▪ During dry and windy periods, and when there is a likelihood of dust nuisance, a bowser will operate to ensure moisture content is high enough to increase the stability of the soil and thus suppress dust.
AQ10	<u>Measures Specific to Construction</u> ▪ Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place. ▪ Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery. ▪ For smaller supplies of fine power materials, ensure bags are sealed after use and stored appropriately to prevent dust. ▪ Avoid scabbling (roughening of concrete surfaces) if possible. ▪ Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.
AQ11	<u>Measures Specific to Trackout</u> ▪ A speed restriction of 15 kph will be applied as an effective control measure for dust for on-site vehicles. ▪ Avoid dry sweeping of large areas.

Ref.	Mitigation measure
	▪ Ensure vehicles entering and leaving sites are covered to prevent the escape of materials during transport. ▪ Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable. ▪ Record all inspections of haul routes and any subsequent action in a site logbook. ▪ Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned. ▪ Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable). ▪ Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permit. ▪ Access gates to be located at least 10 m from receptors where possible.
Operational phase	
There is no mitigation required for the operational phase of the development	

Table 24.11 Monitoring- Air Quality

Phase	Monitoring measure
Construction	▪ Undertake daily on-site and off-site inspections, where receptors (including roads) are nearby, to monitor dust, record inspection results in the site inspection log. This should include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100 m of site boundary, with cleaning to be provided if necessary. ▪ Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions. ▪ Monitoring of construction dust deposition along the site boundary to nearby sensitive receptors during the construction phase of the proposed development is recommended to ensure mitigation measures are working satisfactorily. This can be carried out using the Bergerhoff method in accordance with the requirements of the German Standard VDI 2119. The Bergerhoff Gauge consists of a collecting vessel and a stand with a protecting gauge. The collecting vessel is secured to the stand with the opening of the collecting vessel located approximately 2m above ground level. The TA Luft limit value is 350 mg/m^2/day during the monitoring period of 30 days (+/- 2 days). Monitoring shall ensure that the dust mitigation measures are working satisfactorily as construction works progress.

24.3.6 Climate

Table 24.12 Mitigation measures – Climate

Ref.	Mitigation measure
Construction phase	
C01	**Incorporated Design Mitigation** Several measures have been incorporated into the design of the development to mitigate against the impacts of future climate change. For example, adequate attenuation and drainage have been incorporated into the design of the development to avoid potential

Ref.	Mitigation measure
	flooding impacts due to increased rainfall events in future years. These measures have been considered when assessing the vulnerability of the proposed development to climate change. Landscaping planting elements have been chosen with consideration for climate change impacts in future years. In relation to operational energy usage information included in the Climate Action Energy Statement prepared by OCSC, and included with this planning application, has been used to inform this assessment. The incorporated design measures in relation to operational energy are outlined below: The proposed development will be NZEB (near zero energy building) compliant in line with the Part L requirements and the measures in the Dublin City Development Plan 2022 – 2028. A minimum BER (Building Energy Ratio) of A3 has been targeted. The residential units will have an energy performance coefficient (EPC) that complies with NZEB (maximum permitted under NZEB requirements is <0.3). The units will also have a carbon performance coefficient (CPC) and renewable energy ratio (RER) that comply with NZEB requirements (maximum permitted CPC under NZEB requirements is <0.35 and RER is 0.20). Like the residential units, the non-domestic spaces will also comply with the NZEB requirements. The EPC will comply with the NZEB requirements (maximum permitted under NZEB requirements is <1.0). The units will also have a CPC and RER that comply with NZEB requirements (maximum permitted CPC under NZEB requirements is <1.15 and RER is 0.20). The Climate Action Energy Statement outlines that the design of the development has incorporated the principles of the energy hierarchy which are: 1. Be Lean – this encourages a passive strategy whereby space heating, cooling and lighting energy demand is minimised through a fabric first approach. 2. Be Clean – this stage encourages that energy supplied to the development, such as heating or domestic hot water is delivered efficiently through communal or highly efficient systems. 3. Be Green – this stage ties in with the Renewable Energy Ratio requirement of Part L 2022, whereby any remaining requirements are addressed through on-site renewable energy or low zero carbon technologies. Additionally, the development will incorporate the following measures: ▪ Use of natural daylight has been maximised through the design where possible. Where artificial lighting is needed this will use energy efficient lighting. ▪ The proposed ventilation strategy for the non-residential areas will be natural ventilation where possible and/or mechanical ventilation. The mechanical ventilation system will be a high efficiency, variable speed drive system that also incorporates heat recovery and CO_2 control. ▪ The feasibility and appropriateness of PV solar panels will be investigated at the detailed design stage to satisfy the renewable energy requirement for the proposed development. ▪ The feasibility of air source heat pumps and exhaust air heat pumps will be investigated at the detailed design stage. ▪ The proposed development will incorporate measures to reduce water usage through the appropriate selection of low consumption sanitary fittings, leak detection systems and water monitoring facilities.

Ref.	Mitigation measure
	The development incorporates 2,619 bicycle parking spaces and also includes E.V charging facilities to promote more sustainable transport methods. A minimum of 50% of all car parking spaces will be equipped with fully functional EV charging points and the remaining spaces will be designed to facilitate the relevant infrastructure to accommodate future EV charging. The development is also located in an area with good bus routes and is in proximity to the Drumcondra train station which will facilitate sustainable travel modes. As per Chapter 19 Traffic & Transport, the majority of central-north Dublin is within a 15-minute cycle of the proposed development. The site's location, coupled with the NTA's ambitious Cycle Network Plan, will mean that cycling will be an attractive mode of travel for the residents of the development. The internal design of the proposed development, and plentiful supply of a range of cycle parking will fully support this. This aligns with the climate action goal of a 15-minute city which is promoted as part of the Dublin City Council Climate Action Plan 2024-2029. These identified measures will aid in reducing the impact to climate during the operational phase of the proposed development in line with the goals of the Climate Action Plan.
C02	**Demolition Phase Mitigation** Embodied carbon of demolition waste materials will be the primary source of climate impacts during the demolition phase. The following measures will aid in reducing the embodied carbon impact of the demolition wastes: ▪ Creating a demolition and construction program which allows for sufficient time to determine reuse and recycling opportunities for demolition wastes. ▪ Appointing a suitably competent demolition contractor who will undertake a pre-demolition audit detailing resource recovery best practice and identify materials/building components that can be reused/recycled. ▪ Materials will be reused on site within the new build areas where possible. ▪ The reuse, recycling / recovery and disposal rates for the demolition phase have been estimated using the EPA National Waste Reports and further detail can be found in Ch. 20 Material Assets – Waste. The demolition phase will also involve the removal of asbestos within the existing buildings. A total of 1774.7 tonnes (46.7% of total) will be reused and a 1491.9 tonnes (39.2% of total) recycled/recovered. ▪ Although demolition results in short-term emissions, it is considered justified in this instance due to the overall efficiency gains of the proposed development and the alignment with national density and housing targets. Opportunities to reuse materials from the demolished structures, either on-site or off-site, will be explored as part of the construction waste management strategy, further reducing the climate impact of the demolition phase.
C03	**Construction Phase Mitigation** Embodied carbon of materials and construction activities will be the primary source of climate impacts during the construction phase. The following measures to reduce the embodied carbon of the construction works are: ▪ Alignment with requirements under the Local and National Climate Action Plan; ▪ Where possible, adoption of the methods set out in the Construction Industry Federation 2021 report Modern Methods of Construction.

Ref.	Mitigation measure
	▪ Creating a construction program which allows for sufficient time to determine reuse and recycling opportunities for construction wastes; ▪ Materials will be reused on site where possible; ▪ Material choices and quantities will be reviewed during detailed design, to identify and implement lower embodied carbon options where feasible. ▪ Appointing a suitably competent contractor who will undertake waste audits detailing resource recovery best practice and identify materials can be reused/recycled; ▪ Prevention of on-site or delivery vehicles from leaving engines idling, even over short periods; ▪ Ensure all plant and machinery are well maintained and inspected regularly; ▪ Minimising waste of materials due to poor timing or over ordering on site will aid to minimise the embodied carbon footprint of the site; and ▪ Sourcing materials locally where possible to reduce transport related CO_2 emissions. In terms of impact on the proposed development due to climate change, during construction the Contractor will be required to mitigate against the effects of extreme rainfall/flooding and other extreme weather events through site risk assessments and method statements. Contractors' Environmental Management System (EMS) should consider all measures deemed necessary to manage extreme weather events and should as a minimum, cover training of personnel and, prevention and monitoring arrangements. Construction method statements should also consider extreme weather events where risks have been identified. Emergency preparedness and contingency procedures in place for an extreme weather event on the construction site or within the supply chain. All materials used during construction will be accompanied by certified datasheets which will set out the limiting operating temperatures. Temperatures can affect the performance of some materials, and this will require consideration during construction i.e. concrete should not be poured during extreme temperatures. During construction, the Contractor will be required to mitigate against the effects of fog, lighting and hail through site risk assessments and method statements. Throughout detailed design and construction phase, guidance documents to inform with design detail decisions shall be reviewed e.g. the EU Commission *Technical Guidance on Adapting Buildings to Climate Change* (European Commission (2021a), LETI emergency design guide (LETI, 2020), and the latest IPCC report.
Operational phase	
C04	The proposed development has been designed to reduce the impact on climate due to energy usage during operation. These measures are outlined above as incorporated design mitigation. In relation to the landscaping planting elements and potential impacts from future climate change; sedum roofs might be impacted by drought if they are not correctly maintained or watered in the establishment period. As such, a water source shall be applied to help during establishment. No other operational phase mitigation is required.

Table 24.13 Monitoring- Climate

Phase	Monitoring measure
Construction	Monitoring and reporting of the embodied carbon in the construction phase will be conducted. The aim of monitoring will be to seek further ways to minimise climate impacts. Monitoring will include contractual obligations, in line with the most recent Climate Action Plan and sectoral targets, for the successful tenderer to ensure that the proposed development stays in line with updated aims. Commitments to monitor GHG emissions during the construction phase will also be secured through the final Construction Environmental Management Plan (CEMP). Monitoring will include embodied carbon of construction materials, water usage, power and fuel usage, and waste generation (including reuse and recycling rates). Where monitoring shows that the proposed development is not meeting its targets, further mitigation will be put in place. Monitoring should also include reviewing potential for extreme weather events which may cause damage during construction. Contractors' Environmental Management System (EMS) will include measures to address risks during such events i.e. flooding.

24.3.7 Noise & Vibration

Table 24.14 Mitigation measures – Noise & Vibration

Ref.	Mitigation measure
Construction phase	
NV01	With regard to demolition and construction activities, best practice control measures for noise and vibration from construction sites are found within *BS 5228 (2009 +A1 2014)* Code of Practice for Noise and Vibration Control on Construction and Open Sites Parts 1 and 2, which include guidance on several aspects of construction site practices, including, but not limited to: ▪ Selection of quiet plant; ▪ Control of noise sources; ▪ Screening (boundary and / or localised plant screening); ▪ Hours of work; ▪ Liaison with the public; and ▪ Monitoring. Noise control measures that will be implemented include the selection of quiet plant, enclosures and screens around noise sources, limiting the hours of work and noise monitoring.
NV02	**Selection of Quiet Plant** In general, selection of quiet plant is recommended in relation to sites with static plant such as compressors and generators. In this case, the Contractor shall ensure that these units be supplied with manufacturers' proprietary acoustic enclosures, where possible. The potential for any item of plant to generate noise will be assessed prior to the item being brought onto the site. To facilitate this, each item of plant equipment will be required to comply with the EC Directive on Outdoor Noise Emissions 2000/14/EC. The least noisy item will be selected, wherever possible.
NV03	**Noise Control at Source** If replacing a noisy item of plant is not a viable or practical option, the Contractor will ensure that consideration is given to noise control 'at source' and that corresponding measures are

Ref.	Mitigation measure
	implemented, where possible. This refers to the modification of an item of plant or the application of improved sound reduction methods in consultation with the supplier. For example, resonance effects in panel work or cover plates can be reduced through stiffening or application of damping compounds, while rattling and grinding noises can often be controlled by fixing resilient materials in between the surfaces in contact. BS 5228 states that *"as far as reasonably practicable sources of significant noise should be enclosed"*, and the Contractor shall be obliged to comply with this measure. In applying this guidance, constraints such as mobility, ventilation, access and safety must be taken into account. Items suitable for enclosure include pumps and generators. BS 5228 makes a number of recommendations in relation to the use and siting of equipment, which are directly relevant to the proposed development. The Contractor will ensure that these recommendations are adopted on Site: ▪ Plant shall always be used in accordance with manufacturers' instructions. ▪ Care shall be taken to keep site equipment away from noise-sensitive areas. Where possible, loading and unloading will be carried out away from such areas. ▪ Machines whose use is intermittent in nature, such as cranes, shall be shut down between work periods or throttled down to a minimum. ▪ Plant known to emit noise strongly in one direction shall, where possible, be orientated so that the noise is directed away from noise-sensitive areas. ▪ Acoustic covers to engines shall be kept closed when the engines are in use and idling. The use of compressors that have effective acoustic enclosures and are designed to operate when their access panels are closed is recommended. ▪ Materials shall be lowered whenever practicable and shall not be dropped. Where appropriate, the surfaces on to which materials are being moved will be covered by resilient material. Other forms of noise control at source relevant to the proposed works are set out below, and shall be adhered to by the Contractor insofar as possible and practicable: ▪ For mobile plant items such as cranes, dump trucks, excavators and loaders, the installation of an acoustic exhaust and / or maintaining enclosure panels closed during operation will be considered, and can reduce noise levels by up to 10 dB. ▪ Mobile plant will be switched off when not in use and not left idling. ▪ For percussive tools such as pneumatic concrete breakers, noise control measures include fitting muffler or sound reducing equipment to the breaker 'tool' and ensure any leaks in the air lines are sealed. Such measures will be considered in implemented, as appropriate. The Contractor will erect localised screens around breaker or drill bit when in operation in close proximity to noise sensitive boundaries. ▪ For concrete mixers, control measures will be employed during cleaning to ensure no impulsive hammering is undertaken at the mixer drum. ▪ For all materials handling, the Contractor will ensure that materials are not dropped from excessive heights. Drop chutes and dump trucks will be lined with resilient materials. ▪ Demountable enclosures will be used to screen operatives using hand tools / breakers and will be moved around site as necessary. ▪ All items of plant will be subject to regular maintenance. Such maintenance can prevent unnecessary increases in plant noise and can serve to prolong the effectiveness of noise control measures.

Ref.	Mitigation measure
NV04	**Screening** Typically, screening is an effective method of reducing the noise level at a receiver location and can be used successfully as an additional measure to all other forms of noise control. The effectiveness of a noise screen will depend on the height and length of the screen and its position relative to both the source and receiver. Screening is a useful form of noise control when works are taking place at basement and ground level to screen noise levels at ground floor adjacent buildings. The Contractor will ensure that appropriate and effective screening is erected, where needed. In addition, careful planning of the site layout will also be considered. The use of localised mobile hoarding screens and / or acoustic quilts to items of plant with the potential to generate high levels of noise is an effective noise control measure. Localised screening will be used by the Contractor, where relevant, when percussive works are taking place in close proximity to the nearest sensitive perimeter buildings.
NV05	**Liaison with the Public** A designated Community Liaison Officer (CLO) will be appointed to site by the Contractor for the duration of the construction works. All noise complaints will be logged and followed up in a prompt fashion by the CLO, including the implementation of all necessary mitigation measures. In addition, prior to particularly noisy construction activity (e.g. demolition, breaking, piling, etc.), the CLO will inform residents at the nearest noise sensitive locations of the time and expected duration of the noisy works.
NV06	**Hours of Work** Construction works will be limited to the times below: ▪ Monday to Friday 07:00 to 18:00 hrs ▪ Saturdays 08:00 to 14:00 hrs ▪ Sundays and Public Holidays No work on site However, where required for specific circumstances (e.g. connections to public service systems or utilities), it may be necessary for certain construction operations to be undertaken outside these times. The timing of such works will be agreed in advance with Dublin City Council.
Operational phase	
NV07	**Building Services Plant** Plant rooms of apartment buildings and outdoor plant areas will be designed to ensure that noise levels at the façades of the noise-sensitive locations both within the site and in the surrounding area do not exceed the criteria of 50dB $L_{Aeq,15\ min}$ day time and 45dB $L_{Aeq,15\ min}$ for night time, outside any noise-sensitive location, as discussed in Section 13.1.2.1. During the detailed design of the proposed development, the selection and location of mechanical and electrical plant will be undertaken in order to ensure the noise emission criterion of 45dB $L_{Aeq,15\ min}$, outside any noise-sensitive location are not exceeded. In addition to selecting plant with suitable noise levels, the contractor shall ensure that the following best practice measures will be adhered to, insofar as possible, for all plant items, in

Ref.	Mitigation measure
	order to minimise potential noise disturbance for residents of on-site and adjacent buildings during the operational phase: ▪ Where ventilation is required for plant rooms, consideration will be given to acoustic louvers or attenuated acoustic vents, where required to reduce noise breakout. ▪ Ventilation plant serving plant rooms and car parks will be fitted with effective acoustic attenuators to reduce noise emissions to the external environment. ▪ Perimeter plant screens will be used, where required, for roof top plant areas, to screen noise sources. ▪ Attenuators or silencers will be installed on external air handling plant, as required. ▪ All mechanical plant items (e.g. fans, pumps, etc.) shall be regularly maintained to ensure that excessive noise generated by any worn or rattling components is minimised. ▪ Any new or replacement mechanical plant items, including plant located inside new or existing buildings, shall be designed so that all noise emissions from Site do not exceed the noise thresholds of 50dB $L_{Aeq,15\ min}$ for daytime and 45dB $L_{Aeq,15\ min}$ for nighttime, outside any noise-sensitive location outlined in this document. ▪ Installed plant will have no tonal or impulsive characteristics when in operation.

Table 24.15 Monitoring – Noise & Vibration

Phase	Monitoring measure
Construction	During the demolition and construction phase, noise and vibration monitoring shall be carried out by the contractor to ensure that the recommended threshold levels set out in Chapter 13 (Table 13.1 and Table 13.2) and / or any additional noise and vibration thresholds conditioned in the planning permission (if granted) are not exceeded. Noise monitoring will be conducted in accordance with the International Standard ISO 1996: 2017: *Acoustics – Description, measurement and assessment of environmental noise* and located a distance of greater than 3.5 m away from any reflective surfaces, e.g. walls, in order to ensure a free-field measurement without any influence from reflected noise sources.

24.3.8 Landscape & Visual

Table 24.16 Mitigation measures – Landscape & Visual

Ref.	Mitigation measure
Construction phase	
LV01	The proposed development is to be delivered in 3 Phases (with Phase one split into two sub-phases), which will assist in mitigating the intensity and scale of construction required to deliver the proposed development. Construction works will adhere to standard best practice construction site management and to the requirements of the Construction and Environmental Management Plan. Other than where interventions are proposed, existing Site boundaries and associated tree and other plantings will be protected from construction works. The immediate setting of Red House, including all areas surrounding areas outside of where works are proposed will be retained and appropriately protected during construction phase.

Ref.	Mitigation measure
	Key areas of proposed open space, including the woodland on the boundary with Drumcondra Road Lower, tree groups in the central core parkland, and the northern open space, including the corridor along the River Tolka will be protected during the construction phase and will not be used for storage of earthworks or construction materials.
LV02	**Retention of Existing Trees** Given the importance of the existing trees, a qualified Arborist will be retained for the duration of the construction phase to ensure protection of trees to be retained. Trees to be retained will be fenced off and protected in accordance with BS5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations and to the requirements the Arboricultural Report and the Clonliffe Tree Protection Plans prepared by The Tree File. Works to and in the vicinity of the RPA of retained trees shall be carried out in accordance with an Arboricultural Methodology Statement to be approved by a retained Arborist.
LV03	**Hoarding and Screening** In addition to the fencing and protection of retained trees, tree groups and existing boundaries, c.2.4m high hoarding for the purposes of screening will be required – particularly on the western, southern and eastern boundaries.
Operational phase	
LV04	The proposed development is the culmination of a detailed design development process, weighing development opportunity of a strategic land resource with retention of key landscape characteristics of the receiving environment and visual sensitivities of the Site and surrounding areas. Therefore, the arrangement, layout and design of the proposed development is critical to the avoidance and mitigation of adverse landscape and visual impacts. In particular, landscape and visual mitigation has been considered in: ▪ Compliance with the Z12 land use zoning for the Site and wider college lands; ▪ The retained setting for Red House and the manner in which the wider proposed development respects the setting and identified view corridor to the Main Seminary Block from Red House; ▪ The manner in which the setting of the existing retained structures is incorporated into the wider development on the Site; ▪ Retention of key existing mature trees, tree groups and woodland blocks; ▪ The arrangement and layout of buildings, heights, and finishes; ▪ Provision of high-quality public open spaces and communal open space; ▪ Extensive new landscape works, including public realm and new tree and other planting proposals; and ▪ Maintenance and aftercare of the new landscape. These considerations are important for the successful integration of the proposed development into its Site and immediate context. Detailed high-quality landscape proposals are set out in the Landscape Design Statement (NMP Landscape Architects, 2025) which accompanies the application.

Table 24.17 Monitoring – Landscape & Visual

Phase	Monitoring measure
Construction	A project Arborist and Landscape Architect will be retained for the duration of the construction works. Monitoring of retained trees and landscape is an integral aspect of the proposed scheme, and includes monitoring of: ▪ Tree and hedgerow removal, retention and protection; ▪ Topsoil stripping and storage; ▪ Disturbance by site works, services etc. ▪ Excavation / alteration of ground levels; ▪ Landscape build-up; profiling and cultivation; ▪ Landscape finishing and implementation; ▪ Proposed planting and grass seeding; ▪ 12 months aftercare of landscape measures. All works associated with soil stripping and movement, landscape build-up and finishing, and landscape implementation will be approved and monitored by a qualified Landscape Architect. All works associated with removal, retention and protection of existing trees and tree surgery works will be approved and monitored by a qualified Arborist.
Operational	On completion of construction, all landscape areas will be managed under the direction of the Management Company for the overall development.

24.3.9 Cultural Heritage - Architectural Heritage

Table 24.18 Mitigation measures - Cultural Heritage – Architectural Heritage

Ref.	Mitigation measure
Construction & operational phase	
CHAR01	**Incorporated Design Mitigation** The design proposal for the site has been developed with regard to the architectural heritage impact of the proposed works in the context of the 2000 Act and the Guidance issued thereunder. The design responds to the evolution and particular conditions of the subject site and elements within and adjoining it and mitigates any negative cultural heritage impacts through the retention and conservation of significant fabric and features, and through the appropriate massing, siting, scaling, materiality and landscaping of new build elements within the overall site, having cognisance of existing views the quality of settings and opportunities to enhance all of these in accordance with the Guidance. The Proposals have undergone an exhaustive design process and ongoing review which has included a substantial and extended pre-application consultation carried out on the proposals due particularly to sensitivities over potential impact on the architectural heritage outlined above. This included meetings in the Dublin City Council offices with Kiaran Sweeney Senior Planner, Nicci Nolan Senior Executive Planner and both Niamh Kiernan Architect and Head of Conservation and Mary McDonald Architect and Senior Deputy Conservation Officer. Subsequent to these meetings a full pre-application submission was made and a detailed opinion on the submission was issued by Dublin City Council. There have been subsequent joint meetings both on-line and on-site (14th May 2025) to review and refine the proposals in greater detail and agree salvage scopes and strategies. The current proposals have evolved

Ref.	Mitigation measure
	significantly from those discussed and presented in model form at the early stages and those submitted pre-Opinion. The material changes to the proposals have absorbed the concerns raised within these discussions and reflect the planning authority's regard for the proposals' complete compliance with their policy and with relevant DoHLGH guidance. In addition to assessing the impacts of the designs in their final form, this report sets out the particular response to the LRD Opinion in respect of the relevant policy and guidance. The mitigations through design have, therefore, been iterative over an extended design process and have resulted in impacts which are far reduced from the potential impacts before mitigation. This is particularly evident for instance on impacts to the Red House setting and associated views as well as on views within the cloistered quadrangle to the west of the seminary. The salvage approach in respect of the 1960s oratory fit out is a further significant mitigation. Architectural features of interest and surviving historic fabric, as detailed below and in the Salvage Specifications (Appendix XIV in the Architectural Heritage Impact Assessment), will be carefully taken down and salvaged prior to/as part of any demolition works. The re-use of this fabric within the proposed scheme will be considered, and any items not feasible for re-use within the site will be salvaged off site including the significant number of 20th Century sash windows within the New Wing and Library Extension. This will ensure that significant features are not lost as part of the proposed development and that the loss of historic fabric is minimised. It is proposed to salvage fabric and features of architectural heritage interest within the site. Where possible, these will be re-used within the proposed development for example with the oak joinery to the oratory in the New Wing which will be salvaged to the Assembly Hall. Where their reuse within the proposed development is not feasible, the fabric and features will be advertised by the contractors for salvage off-site to a yard such as Mac's Salvage. The historic architectural features and fabric to be salvaged are listed in the Brief of Salvage in the Salvage Specification appended to the Architectural Heritage Impact Assessment (AHIA) (Appendix XIV). A full photographic survey of the site has been carried out, and is appended to the Architectural Heritage Impact Assessment (AHIA) in the form of a photographic record (Appendices IV to X). The removal of inappropriate later poor-quality extensions and the proposed conservation of the historic fabric will have a positive impact on the site creating new views and enjoyment of the cultural heritage, re-establishing old views and creating new connections from north to south on the site. The proposed landscaping and the material palette of the new build elements within the site has been carefully considered and selected so as to work with the existing setting character, building heights, scale and character of the site. The material palette of various colours of brick responds to the existing site also without seeking to create a pastiche.
CHAR02	**Demolitions** The extent, location and methodology of the proposed demolitions and interventions has been carefully designed and detailed in order to omit loss of any historic fabric of interest. The removals of the New Wing and Library Extension have been fully justified and materials including the 1960s Oratory fit out as well as salvaged window joinery will profoundly mitigate

Ref.	Mitigation measure
	any potential negative impact on the architectural heritage. All of these works are to be carried out in accordance with specifications and any final detail to be agreed through compliance with the Planning Authority to ensure retained items (eg. the arcade to the north of the quadrangle) will not be damaged and can be fully restored and enjoyed within the new residential neighbourhood.
CHAE03	**Refurbishment and Internal Layout Alterations to Protected Structures** The interiors of the College Chapel and the Assembly Hall are now proposed to be retained without alteration to their layout. The most significant alteration proposed is the fit out of part of the Assembly Hall with the 1960s Oratory fabric (from the New Wing). There are significant internal alterations proposed to the seminary but these have been fully justified in the context of the radical 20th Century alterations here with the simple, single-banked corridor honoured by the new residential accommodation. The internal alterations to the South Link, where there is the largest surviving percentage of interior fabric, have been cognisant of this with the layouts seeking to minimise subdivision and retain ceiling plasterwork and joinery.
CHAE04	**Provision of New Residential Buildings and Landscape within the Site** The location, footprints, scale, massing, form, architecture and material expression of the proposed new residential buildings has been very carefully considered with regard to the existing setting and architecture qualities on the site and in response to the opportunities to provide new spaces and connections in what is to be a new residential community. Very significant alterations have been made in relation to heights, setbacks, offsets (particularly Block D2 from the Red House) and in relation to the materiality and the depth of the architectural expression of the building envelopes. One of the blocks - D1 - part of the original pre-application submission has now been removed in its entirety to open up wider views of the Red House from the front of the former seminary.
CHAE05	**Conservation and Restoration of the Fabric to the Protected Structures** The scope of these works will restore the roofs, external render, stone and mosaics to the Seminary, College Chapel, Assembly Hall, ambulatory and South Link. These buildings are in relatively good condition, other than the flat roofs to the ambulatory so the works will not significantly invade fabric. All of these works will enhance the fabric and architectural character.

Table 24.19 Monitoring – Cultural Heritage – Architectural Heritage

Phase	Monitoring measure
Construction	The mitigation measures recommended above would also function as a monitoring system to allow the further assessment of the scale of the predicted impacts and the effectiveness of the recommended mitigation measures.

24.3.10 Cultural Heritage – Archaeology

Table 24.20 Mitigation measures - Cultural Heritage - Archaeology

Ref.	Mitigation measure
Construction phase	

Ref.	Mitigation measure
CHA01	All topsoil stripping associated with the proposed development will be subject to archaeological monitoring. During archaeological monitoring the remains of the walled garden will be exposed and subject to a full record, including measured and photographic survey. The foundations of the wall will also be investigated and recorded. These works will be carried out under licence to the National Monuments Service of the DoHLGH and in consultation with the DCC Archaeologist. If any archaeological remains are discovered during the course of works further mitigation will be required, such as preservation in situ or by record (excavation). Any further mitigation will require approval from the National Monuments Service and the DCC Archaeologist.
CHA02	Prior to the commencement of construction, a full photographic survey will be conducted within the former demesne landscape, including a detailed record of all boundaries and designed landscape elements. The survey will include records from ground floor and aerial views. The survey will be carried out by a suitably qualified professional with expertise in designed landscapes.
Operational phase	
CHA03	The landscape survey that is detailed above and will commence prior to construction, will include Red House and its setting, in order to create a detailed record of same. In addition, all mature trees within the current setting of the building and demesne will be retained where possible and additional trees planted in order to enhance the existing planting and maintain an overall 'parkland' character.

Table 24.21 Monitoring – Cultural Heritage - Archaeology

Phase	Monitoring measure
Construction	The mitigation measures recommended above would also function as a monitoring system to allow the further assessment of the scale of the predicted impacts and the effectiveness of the recommended mitigation measures.

24.3.11 Microclimate – Daylight & Sunlight

Mitigation measures have been incorporated as the design progressed. No further mitigation measures are proposed.

24.3.12 Microclimate – Wind

Mitigation measures to reduce excessive windiness have been developed through the design process and embedded in the building design, as illustrated in Chapter 18. These include the use of solid balustrades or side screens in balconies that were exposed to excessive windiness.

The existing and proposed mature landscaping is expected to further mitigate the wind effects in and around the proposed development, especially during the spring and summer seasons when trees are in full foliage.

24.3.13 Traffic & Transportation

Table 24.22 Mitigation measures – Traffic & Transportation

Ref.	Mitigation measure
Construction phase	
TT01	**Incorporated Design Mitigation** The following mitigation measures have been incorporated into the design, which will assist in the uptake of sustainable travel modes: ▪ A reduced level of car parking (compared to DCC maximum standards) will be provided, which reflects the accessible location of the site close to high-frequency bus services and Drumcondra Rail Station. ▪ Substantial numbers of cycle parking spaces have been provided within the site for residents, employees and visitors. These include standard, accessible and cargo bike spaces. ▪ Two Mobility Hubs will be provided within the site, which it is anticipated will bring together, car and bike hire (electric and standard), travel information and bike maintenance and cleaning facilities into two prominent locations within the site. ▪ Eight car-club spaces have been located at prominent positions with the site, to support residents who need occasional access to a car. ▪ An internal site layout that has been designed in accordance with DMURS, which prioritises pedestrian and cycle movement over vehicular movements, creating a safer environment for those on foot or bike. ▪ The entire site, and external access junction proposals, has been the subject of a Stage 1 / 2 Road Safety Audit, which has assessed safety aspects for all modes of transport. The recommendations of the Audit have been accepted by the Design Team.
TT02	A Construction Management Plan (CMP) and Construction Environmental Management Plan (CEMP), which have been produced by DCON Safety Consultants, accompany the planning application. These documents (amongst other things) set out the principles by which construction traffic will be planned for, managed, and monitored, to ensure that any impacts on local communities, vulnerable users and road users, will be minimised as far as possible. These include: ▪ A commitment to limit HGV traffic to specific construction routes, and avoid sensitive times of the day (which can include peak network times, school arrival times etc). ▪ Daily construction programmes to minimis disruption by staggering HGV arrival times. ▪ Provision of sufficient staff parking within the site. ▪ A requirement for the works contractor to promote sustainable and shared travel. ▪ Wheel washing facilities and dust-suppression measures within the site. ▪ Measures to safeguard pedestrian routes in the vicinity of the site. ▪ A Construction Stage Health and Safety Plan.
Operational phase	
TT03	A Mobility Management Plan (MMP) has also been prepared by SYSTRA and is included in the Transport Assessment (as part of the planning application submission), as a 'best practice' measure, to accompany the planning application. The overall aim of the MMP is to minimise the number of car trips to and from the development, and promote sustainable transport modes. The suggested measures are primarily focussed on encouraging walking, cycling and the use of public transport.

Ref.	Mitigation measure
	The MMP builds upon the site's excellent location in terms of promoting sustainable transport, and the infrastructure and facilities that will be provided as part of the development. As noted in Section 19.4, the site is located next to the R132 Drumcondra Road Lower bus corridor, which is one of the core bus corridors serving the city centre, and Drumcondra Rail Station is a 5-minute walk from the development. These services will be enhanced in the future with the advent of Bus Connects, DART and Metrolink. Within the development, over 2,500 cycle parking spaces will be provided, along with bike hire and maintenance facilities. New pedestrian and cycle routes will be opened up through the site, which will enhance permeability through the area.

Table 24.23 Monitoring- Traffic & Transportation

Phase	Monitoring measure
Operation	The MMP is intended to be a 'live' document that is intended to be kept up-to-date and reviewed throughout the construction period. Annual travel surveys are proposed as part of the MMP, to track changes in mode-share over the first three years of the development.

24.3.14 Material Assets – Waste

Table 24.24 Mitigation measures - Material Assets – Waste

Ref.	Mitigation measure
Construction phase	
WA01	The concept of the 'circular economy'(CE) and 'waste hierarchy' are employed when considering all mitigation measures. While the waste hierarchy states that the preferred option for waste management is prevention and minimisation of waste, followed by preparing for reuse and recycling / recovery, energy recovery (i.e. incineration) and, least favoured of all, disposal.
WA02	As previously stated, a project-specific RWMP has been prepared in line with the requirements of the EPA *'Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction & Demolition Projects'* (2021) and is included as **Appendix 20.1.** The mitigation measures outlined in the RWMP will be implemented in full and form part of the mitigation strategy for the site. The mitigation measures presented in this RWMP will ensure effective waste management and minimisation, reuse, recycling, recovery and disposal of waste material generated during the excavation and construction phases of the Proposed Development. ▪ Prior to commencement, the appointed Contractor(s) will be required to refine / update the RWMP (**Appendix 20.1**) in agreement with DCC and in compliance with any planning conditions, or submit an addendum to the RWMP to DCC, detailing specific measures to minimise waste generation and resource consumption, and provide details of the proposed waste contractors and destinations of each waste stream. ▪ The Contractor will implement the RWMP throughout the duration of the proposed excavation and construction phases.
WA03	A quantity of topsoil and sub soil will need to be excavated to facilitate the Proposed Development. The quantity surveyors have estimated that the majority excavated material will need to be removed off-site. Correct classification and segregation of the excavated

Ref.	Mitigation measure
	material is required to ensure that any potentially contaminated materials are identified and handled in a way that will not impact negatively on workers as well as on water and soil environments, both on and off-site.
WA04	Building materials will be chosen to 'design out waste'.
WA04	On-site segregation of waste materials will be carried out to increase opportunities for off-site reuse, recycling and recovery. The following waste types, at a minimum, will be segregated: ■ Clean Soil ■ Contaminated soil (if located onsite) ■ Concrete rubble (including ceramics, tiles and bricks); ■ Plasterboard; ■ Metals; ■ Glass; ■ Timber; ■ Asbestos.
WA05	Left over materials (e.g. timber off-cuts, broken concrete blocks / bricks) and any suitable construction materials shall be re-used on-site, where possible; (alternatively, the waste will be sorted for recycling, recovery or disposal).
WA06	All waste materials will be stored in skips or other suitable receptacles in designated areas of the site
WA07	Any hazardous wastes generated (such as chemicals, solvents, glues, fuels, oils) will also be segregated and will be stored in appropriate receptacles (in suitably bunded areas, where required).
WA08	A Resource Manager will be appointed by the main Contractor(s) to ensure effective management of waste during the excavation and construction works.
WA09	All construction staff will be provided with training regarding the waste management procedures.
WA10	All waste leaving site will be reused, recycled or recovered, where possible, to avoid material designated for disposal.
WA11	All waste leaving the site will be transported by suitably permitted contractors and taken to suitably registered, permitted or licenced facilities.
WA12	All waste leaving the site will be recorded and copies of relevant documentation maintained.
WA13	Nearby sites requiring clean fill material will be contacted to investigate reuse opportunities for clean and inert material, if required. If any of the material is to be reused on another site as by-product (and not as a waste), this will be done in accordance with Regulation 27 (By-products), as amended, European Union (Waste Directive) Regulations 2011-2020. EPA approval will be obtained prior to moving material as a by-product.
WA14	These mitigation measures will ensure that the waste arising from the construction phase of the Proposed Development is dealt with in compliance with the provisions of the Waste Management Act 1996, as amended, associated Regulations and the Litter Pollution Act 1997, as amended and the NWCPE. It will also ensure optimum levels of waste reduction, reuse,

Ref.	Mitigation measure
	recycling and recovery are achieved and will promote more sustainable consumption of resources.
Operational phase	
WA15	All waste materials will be segregated into appropriate categories and will be temporarily stored in appropriate bins or other suitable receptacles in designated, easily accessible areas of the site.
WA16	. As previously stated, a project specific OWMP has been prepared and is included as **Appendix 20.2.** The mitigation measures outlined in the OWMP will be implemented in full and form part of the mitigation strategy for the site. Implementation of this OWMP will ensure a high level of recycling, reuse and recovery at the development. All recyclable materials will be segregated at source to reduce waste contractor costs and ensure maximum diversion of materials from landfill, thus achieving the targets set out in the NWMPCE, Waste Action Plan for a Circular Economy – Waste Management Policy in Ireland and the DCC waste bye-laws. Residents, tenants and facilities management of the site during the operational phase will be responsible for ensuring – allocating personnel and resources, as needed – the ongoing implementation of the OWMP, ensuring a high level of recycling, reuse and recovery at the site of the Proposed Development.
WA17	On-site segregation of all waste materials into appropriate categories including (but not limited to): ▪ Organic waste; ▪ Dry Mixed Recyclables; ▪ Mixed Non-Recyclable Waste; ▪ Glass; ▪ Waste electrical and electronic equipment (WEEE); ▪ Batteries (non-hazardous and hazardous); ▪ Cooking oil; ▪ Light bulbs; ▪ Cleaning chemicals (pesticides, paints, adhesives, resins, detergents, etc.); ▪ Furniture (and from time-to-time other bulky waste); and ▪ Abandoned bicycles.
WA18	Residents, tenants and facilities management will ensure that all waste materials will be stored in colour coded bins or other suitable receptacles in designated, easily accessible locations. Bins will be clearly identified with the approved waste type to ensure there is no cross contamination of waste materials.
WA19	Residents, tenants and facilities management will ensure that all waste collected from the site of the Proposed Development will be reused, recycled, or recovered, where possible, with the exception of those waste streams where appropriate facilities are currently not available.
WA20	Residents, tenants and facilities management will ensure that all waste leaving the site will be transported by suitably permitted contractors and taken to suitably registered, permitted, or licensed facilities.
WA21	These mitigation measures will ensure the waste arising from the development is dealt with in compliance with the provisions of the Waste Management Act 1996, as amended, associated Regulations, the Litter Pollution Act 1997, as amended, The NWMPCE and the DCC

Ref.	Mitigation measure
	waste bye-laws. It will also ensure optimum levels of waste reduction, reuse, recycling and recovery are achieved.

Table 24.25 Monitoring- Material Assets – Waste

Phase	Monitoring measure
Construction	The management of waste during the construction phase will be monitored by the Contactor's appointed Resource Manager to ensure compliance with the above-listed mitigation measures, and relevant waste management legislation and local authority requirements, including maintenance of waste documentation. The management of waste during the operational phase will be monitored by the Operator / Facilities Management to ensure effective implementation of the OWMP internally and by the nominated waste contractor(s). ▪ Litter Pollution - The Contractor will review and maintain waste records and site audits ▪ Unlicensed Waste Collection (Illegal Dumping) - A register will be maintained and reviewed. A copy of all waste collection permits will be maintained. ▪ Insufficient Waste Facilities - A register will be maintained and reviewed. A copy of all waste collection permits will be maintained. ▪ Lack of Waste Classification - An appointed Resource Manager will monitor all on-site waste segregation and classification ▪ Unlicensed Waste Collection (Illegal Dumping - The operator/ facilities management company will maintain waste receipts on-site for a period of 7 years and make available to DCC as requested. ▪ Poor Waste Segregation - Waste generation volumes and cross contamination will be monitored by the operator / facilities management company ▪ Litter Pollution - Waste storage areas will be monitored by the operator / facilities management company
	The objective of setting targets for waste management is only achieved if the actual waste generation volumes are calculated and compared. This is particularly important during the excavation and construction phases where there is a potential for waste management to become secondary to progress and meeting construction schedule targets. The management of waste during the construction phase shall be monitored to ensure compliance with relevant local authority requirements, and effective implementation of the RWMP, including maintenance of waste documentation. The mitigation measures in the RWMP specify the need for a Resource Manager to be appointed who will have responsibility to monitor the actual waste volumes being generated and to ensure that contractors and sub-contractors are segregating waste as required. Where targets are not being met, the Resource Manager shall identify the reasons for targets not being achieved and work to resolve any issues. Recording of waste generation during the construction phase will enable better management of waste contractor requirements and identify trends. The data will be maintained to advise on future projects.
Operation	The management of waste during the operational phase shall be monitored to ensure effective implementation of mitigation measures by facilities management and the nominated waste contractor(s). Waste generation volumes shall be monitored against the predicted waste volumes outlined in the OWMP. There may be opportunities to reduce the

Phase	Monitoring measure
	number of bins and equipment required in the Waste Storage Area where estimates have been too conservative. Reductions in bin and equipment requirements will improve efficiency and reduce waste contactor costs.

24.3.15 Material Assets – Services

Table 24.26 Mitigation measures - Material Assets – Services

Ref.	Mitigation measure
Construction phase	
SE01	No significant impacts are predicted in relation to material assets (services) as a result of the construction or operation of the proposed development. However, in order to avoid / minimise impacts insofar as practicable, the following mitigation measures shall be implemented during the construction phase: ▪ The precise locations of all existing on-site services (underground and overhead) will be confirmed prior to the commencement of works; ▪ The precise routing of electricity, gas and telecommunications infrastructure on the site are to be agreed with ESB, GNI and Eir / Virgin Media, respectively, prior to the commencement of on-site works; ▪ All reasonable precautions shall be taken to avoid unplanned disruptions to any services / utilities during the proposed works; ▪ Consultation with the relevant services providers shall be undertaken in advance of works. This will ensure all works are carried out to the relevant standards and ensure safe working practices are implemented; ▪ There will be an interface established between the contractor and the relevant utilities service providers / authorities during the construction phase of the proposed development. This interface will be managed in order to ensure a smooth construction schedule with no / minimal disruption to the local community; ▪ All new foul water drainage pipes will be pressure tested and subject to an internal CCTV survey in order to identify any possible defects prior to operation, under the supervision of Dublin City Council; ▪ DCON Safety Consultants have prepared a Construction & Environmental Plan (2025) and Construction Management Plan (2025) that is submitted separately under planning documentation. It contains best practice measures and protocols to be implemented during the construction phase of the proposed development to avoid / minimise environmental impacts, including in relation to surface water and foul water. These measures and those listed within Ch 10 Hydrology will be implemented in full; ▪ In planning and executing the proposed works, regard shall be had to the Gas Networks Ireland *Guidelines for Designers and Builders – Industrial and Commercial (Non-Domestic) Sites (2018),* the Health & Safety Authority (HSA) *Code of Practice for Avoiding Danger from Underground Services (2016)*, and the ESB Networks & Health and Safety Authority *Code of Practice for Avoiding Danger from Overhead Electricity Lines (2019);* ▪ Prior to the operational phase of the proposed development, utilities infrastructure connections (wastewater, water supply, gas and electricity) will be tested by a suitable qualified person under the supervision of DCC; ▪ Construction traffic will be limited to certain routes and times of day, with the aim of keeping disruption to existing traffic and residents to a minimum. To minimise disruption to the local areas, construction traffic volumes will be managed through the following

Ref.	Mitigation measure
	measures. During peak morning and evening hours, ancillary, maintenance and other site vehicular movements will be discouraged. Daily construction programmes will be planned to minimise the number of disruptions to surrounding streets by staggering HGV movements to avoid site queues; ▪ Maintenance of access to local roadways, footways and Dublin Bus stops is secured. It is not envisaged with the exception of hoarding construction works (where working space is required to erect hoarding safely) that temporary traffic management measures, maintenance and removal and utility connection works will impact on the use of bounding roadways and footways; and ▪ Should a need arise to provide further temporary pedestrian/ vehicle access outside the hoarding line, a detailed temporary Traffic Management Plan will be developed in compliance with the requirements of the Department of Transport Chapter 8 Temporary Traffic Measures and Signs for Roadworks manual. This plan will be shared with DCC Roads/Traffic Section for acknowledgement prior to implementation with appropriate forward notice (in compliance with the Community Liaison Plan) shared with all development stakeholders.
Operational phase	
SE02	No significant impacts are predicted in relation to material assets (services) as a result of the operation of the proposed development. However, in order to avoid / minimise impacts insofar as practicable, the following mitigation measures shall be implemented during the operational phase: ▪ Any necessary maintenance and / or upgrades of on-site utilities infrastructure during the operational phase of the proposed development, will be carried out in accordance with the specifications of the relevant service providers; ▪ Proposed drainage systems are to be maintained on a regular basis to reduce the risk of blockage and resulting flooding. Internal finished floor levels are set at a minimum of 150mm above highest external surface levels in the vicinity.

Table 24.27 Monitoring- Material Assets – Services

Phase	Monitoring measure
Construction	Monitoring will be provided by each utility company with an overseeing responsibility by the appointed contractor during the construction phase. Any monitoring of the built services required during the operational phase will be as advised by the relevant services provider.

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