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Environmental Impact Assessment Report

Volume 2 – Main Chapters

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Prepared for: NWQ Devco Limited

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Chapter 1 – Introduction

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1. INTRODUCTION

1.1 Introduction

This Environmental Impact Assessment Report (EIAR) is provided on behalf of NWQ Devco Limited (hereinafter referred to as 'the Applicant') to support a 10-year planning application made to Dublin City Council (DCC).

This EIAR has been prepared in respect of the construction of a new 12 no. storey office building including 1 no. floor basement on a site of approximately 0.88 hectares located at 1 North Wall Quay, Dublin 1, D01 T8Y1 (hereinafter referred to as the "Proposed Development"). The application area covers the site of the existing Citigroup Building (hereinafter referred to as the "existing development").

In this chapter of the EIAR, the Proposed Development is introduced, the Environmental Impact Assessment (EIA) process is summarised, and it provides an overview of the methodology used for preparing the EIAR, the competency of the EIAR authors, the consultation undertaken, as well as details of any additional environmental related reports and/or assessments required under Legalisation or EU Directives other than the EIA Directive (Directive 2011/92/EU as amended by 2014/52/EU).

A detailed description of the development is contained in Chapter 2 (Description of the Proposed Development) of this EIAR.

1.2 Relevant Legislative Requirement for Environmental Impact Assessment

1.2.1 Relevant Legislation, Policy, and Guidelines

This EIA Report has been prepared in accordance with the most relevant guidance and legalisation, including the following:

- ▶ EIA Directive (2011/92/EU) as amended by EIA Directive (2014/52/EU);
- ▶ Planning and Development Act 2000 (as amended);
- ▶ Planning and Development Act 2024;
- ▶ Planning and Development Regulations 2001 (as amended);
- ▶ *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment* (Department of Housing, Planning and Local Government, 2018);
- ▶ *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports* (EPA, 2022);
- ▶ *Environmental Impact Assessment of Projects Guidance on Scoping* (Directive 2011/92/EU as amended) (European Commission, 2017);
- ▶ *Environmental Impact Assessment of Projects Guidance on Screening* (Directive 2011/92/EU as amended) (European Commission, 2017); and
- ▶ *Guidance on the preparation of the Environmental Impact Assessment Report* (European Commission, 2017)

1.2.2 Background

EIA is an essential tool in the implementation of EU environmental legislation. According to the Guidelines for Planning Authorities and An Bord Pleanála (ABP) on carrying out Environmental Impact Assessment (August 2018) the objective of the Directive 2011/92/EU as amended by 2014/52/EU ('the EIA Directive'), is to ensure a high level of protection of the environment and human health, through the establishment of minimum requirements for EIA, prior to development consent being given, of public and private developments that are likely to have significant effects on the environment. The requirement for EIAR is

set out in the EIA Directive (Directive 2011/92/EU as amended by 2014/52/EU); the EIA Directives have been transposed into existing Irish planning consent procedures i.e., the Planning and Development Act 2000 as amended (the Act) and Planning and Development Regulations, 2001, as amended (the Regulations).

The process involves the preparation of an EIAR by the Applicant. This report is then subjected to review by the competent authority, who will also consult with the public, relevant prescribed bodies. The competent authority will consider the EIAR as well as any other pertinent information before arriving at a reasoned conclusion regarding the probable significant effects of the Proposed Development on the environment.

1.2.3 EIA Project Thresholds

The EIA Directive lists projects for which an EIA is mandatory (Annex I) and those projects for which an EIA may be required (Annex II) of the EIA Directive (2011/92/EU and 2014/52/EU), these Annex are transposed into Schedule 5 of the Planning and Development Regulations 2001 as amended. The EU Member States can choose to apply thresholds for Annex II projects or use a case-by-case examination, or a combination of both, to assess where EIA is required. In Ireland, a combination of both has been applied.

Ireland's type of projects for which an EIA is mandatory is set out in the Schedule 5 Part 1 and Part 2 of the Regulations. The EPA Guidance (2022) requires an assessment beyond the general description of the project and to consider the component parts of the project and/or any processes arising from it. In considering the wider context and the component parts of the Proposed Development. AWN have identified the thresholds of relevance to the proposal from Part 2 of Schedule 5; outlined in Table 1.1.

Table 1.1 Relevant Part 2 Schedule 5 Thresholds for EIA and determination of EIA requirement.

Development for the Purposes of:	Related Development Details	Exceeds Threshold?
10. Infrastructure Projects (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. <i>(In this paragraph, "business district" means a district within a city or town in which the predominant land use is retail or commercial use.).</i>	The Proposed Development consists of a site of 0.88 ha which does not exceed the relevant threshold of 2 hectares as stated above. The Proposed Development site does not exceed the limit, quantity or threshold set out in Class 10(b)(iv); therefore, an EIA is not mandatory under this Project Class.	No – EIA is not mandatory under this class.

An EIA is still required by Schedule 5, Part 2, Class 15 of the Regulations for sub-threshold development which would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7:

15. Any project listed in this Part which does not exceed a quantity, area or other limit specified in this Part in respect of the relevant class of development but which would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7.

In order to provide information on the likelihood of significant effects from the project (including demolition, construction, and operation) on the environment, and to comply with Schedule 5, Part 2, Class

15 of the Regulations it was decided to prepare an EIA Report to fully address and assess all potential and residual (post-mitigation) environmental effects.

1.3 Methodology and Format of the EIA Report

1.3.1 EIAR Main Structure

This EIAR has been laid out using the grouped format structure, the report examines each environmental factor in a separate chapter (the chapters are listed in Table 1.1). These EIAR chapters have been prepared by suitably qualified expert(s) and have considered the construction and operational phases of the Proposed Development under the following headings:

- ▶ Assessment Methodology;
- ▶ Receiving Environment;
- ▶ Characteristics of the Proposed Development;
- ▶ Potential Impacts of the Proposed Development;
- ▶ Mitigation Measures;
- ▶ Monitoring or Reinstatement Measures;
- ▶ Residual Effects of the Proposed Development; and
- ▶ Cumulative Impacts of the Proposed Development

Interactions between environmental factors will be considered separately in Chapter 15 of this EIAR.

While the EIAR has the focus on the Proposed Development, each specialist chapters also considers the potential cumulative impact (as far as practically possible) of the Proposed Development with the any future development and the cumulative impacts with developments in the locality (including planned and permitted developments).

Table 1-2 EIAR Report Structure

EIAR Chapter No.	Chapter Title
EIAR Volume 1	
-	Non-Technical Summary
EIAR Volume 2	
Chapter 1	Introduction
Chapter 2	Description of the Proposed Development
Chapter 3	Alternatives
Chapter 4	Human Health and Population
Chapter 5	Land, Soils, and Geology
Chapter 6	Hydrology and Hydrogeology
Chapter 7	Biodiversity
Chapter 8	Air Quality
Chapter 9	Climate
Chapter 10	Noise and Vibration
Chapter 11	Archaeological and Cultural Heritage
Chapter 12	Material Assets – Traffic and Transportation
Chapter 13	Material Assets – Waste
Chapter 14	Material Assets – Utilities

EIAR Chapter No.	Chapter Title
Chapter 15	Interactions – Interrelationship between the Aspects
EIAR Volume 3	
-	Townscape, Heritage, Landscape and Visual Impact Assessment
EIAR Volume 4	
-	Appendices

1.3.2 EIA Scoping and Consultation Processes

The scope of the EIAR has been defined at an early stage of the design process, the scoping process involves defining the scope of the EIAR early in the design process to ensure that all relevant environmental issues are addressed in the subsequent studies.

To establish the scope, a comprehensive review of the development site's context, including its locality and any previously permitted developments, is undertaken. This review helps identify the specific matters that need to be covered within the environmental impact assessment. By identifying and addressing these issues upfront, the EIAR aims to provide a comprehensive understanding of the potential environmental impacts associated with the Proposed Development.

The structure and presentation of the EIAR is designed to facilitate the dissemination of information to the public and stakeholders. The EIAR is structured in a clear and accessible manner, allowing easy navigation through its content. Additionally, a non-technical summary is provided, which presents a concise overview of the report's main findings and conclusions. The presentation of the information is done in a way that is understandable to both technical experts and non-experts, enabling a wider audience to grasp the key findings and implications of the assessment.

Public participation in the Environmental Impact Assessment (EIA) process is facilitated through the statutory planning application process. As part of this process, the EIAR is made available to the public, allowing interested individuals and organizations to review and comment on the report. This provides an opportunity for public input, ensuring that a wide range of perspectives are considered before making decisions regarding the Proposed Development.

To further enable public access to the EIAR, information about the report is also made available through the Department of Housing, Planning, and Local Government's EIA Portal. This portal serves as a centralised platform that can be accessed by the public, stakeholders, and regulatory authorities. By utilising this portal alongside the Dublin City Council online planning systems, broader public participation and scrutiny, as well as transparency and accountability in the EIA process is enabled.

Ensuring public awareness and involvement is a core objective of the EIAR process in Ireland. By disseminating the information contained in the EIAR, the aim is to make the public and local community aware of the likely environmental impacts of the proposed project prior to the granting of consent. This empowers the public to participate meaningfully in the decision-making process and voice their concerns or provide feedback.

The scoping and consultation are essential components of the EIAR process. The early definition of the EIAR scope ensures that all pertinent environmental issues are addressed, while the structure and presentation of the report, along with the provision of a non-technical summary, facilitates the dissemination of information. Public participation is actively encouraged through the statutory planning application process and the Department's EIA Portal, aiming to ensure that the public and local community are informed and have a voice in the decision-making process regarding Proposed Developments.

Two pre-planning meetings were undertaken with the Planning Department of Dublin City Council (DCC) on 26/08/2025 and 18/11/2025. Feedback from the consultations was incorporated into the design of the Proposed Development and into the environmental considerations assessed in this EIAR.

1.3.3 Contributors to the EIAR Report

The preparation and co-ordination of this EIAR has been completed by AWN Consulting in conjunction with experienced subject matter experts. Each environmental specialist of the applicants project team was commissioned having regard to their previous experience in EIA; their knowledge of relevant environmental legislation relevant to their topic; familiarity with the relevant standards and criteria for evaluation relevant to their topic; ability to interpret the specialised documentation of the construction sector and to understand and anticipate how their topic will be affected during construction and operation phases of development; ability to arrive at practicable and reliable measure to mitigate or avoid adverse environmental impacts; and to clearly and comprehensively present their findings.

Table 1.2 below outlines the specific responsibilities of each author(s) and their corresponding EIAR chapter(s). Further information regarding the qualifications and relevant experience of the EIAR team can be found below the table.

Table 1-3 EIAR Project Team Qualifications and Technical Chapters

Topic	Main Author(s) Competency Details
Chapter 1 – Introduction	Ana Neary is an Environmental Consultant at AWN working on projects including EIA Reports, EIA screening reports, and waste management plans. She has experience across a range of developments including large residential developments, ICT facilities, and water and energy infrastructure. Ana holds a BSc in Sustainability with Social Sciences, Policy, and Law from University College Dublin, and is a graduate member of the Institute of Sustainability and Environmental Professionals (GradISEP). David Doran is a Senior Environmental Consultant with AWN Consulting. David has a MSc in Environmental and Energy Management and is an Affiliate Member of the Institute of Sustainability and Environmental Professionals (AffISEP). He primarily works in the field of Environmental Impact Assessment (EIA) and EIA Report preparation and coordination. Recent projects include the management of commercial, infrastructure, and residential EIARs, EIA Screening Reports, as well as Operational and Resource Waste Management Plans for residential, office, logistics park, and other commercial and industrial developments. David also specialises in construction environmental compliance.
Chapter 2 – Description of the Proposed Development	Sarah Berry is a Principal Climate Consultant in AWN's Air and Climate Team. She holds a BSc in Physical Geography from the University of Leeds. She has 9 years' experience in climate change and sustainability, with expertise in greenhouse gas permitting, accounting and verification. Her experience includes conducting strategic sector-specific GHG audits across a range of industries (data centres, industrial facilities, hospitals, manufacturing, power stations and airports). She has prepared climate chapters for EIARs for proposed developments across Ireland including large residential developments, windfarms, industrial developments and wastewater treatment works. David Doran (as above)
Chapter 3 – Alternatives	David Doran (as above)

Chapter 4 - Population and Human Health	Marcelle Jordaan is an Environmental Consultant working on a range of projects including EIA reports, EPA license applications and license compliance, site visits, environmental audits, and regulatory compliance for developments across various sectors. Marcelle holds a BSc in Environmental and Biological Sciences from North-West University in South Africa, with a specialization in Environmental Microbiology.
Chapter 5 - Land, Soils, and Geology	Alan Wilson (BSc) is an Environmental Consultant at AWN. Alan holds a BSc Honours in Environmental Management in Agriculture/ Environmental and Geographical Sciences. Alan has worked on a range of large scale projects involving EIA reports, site specific flood risk assessments (Stages 1 & 2), baseline studies, hydrological and hydrogeological risk assessments, water framework directive assessments, environmental due diligences, site investigations and groundwater and surface water monitoring on various operational developments and greenfield and brownfield sites. Alan has over 5 years' experience as an Environmental Consultant including previous roles in Ecology and Forestry related work. Alan is a member of the International Association of Hydrogeologists (IAH). Marcelo Allende (BSc, BEng) is a Principal Environmental Consultant (Hydrologist) at AWN with over 20 years of experience water resources technical studies, conceptual and numerical 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, baselines 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).
Chapter 6 - Hydrology and Hydrogeology	Alan Wilson and Marcelo Allende (as above)
Chapter 7 - Biodiversity	Bryan Deegan (MCIEEM, BSc Applied Marine Biology, MSc Environmental Science) Bryan Deegan, the managing director of Altermar, is an Environmental Scientist and Marine Biologist with 30 years' experience working in Irish terrestrial and aquatic environments, providing services to the State, Semi-State and industry. He is currently lead project ecologist for Project Pembroke and was contracted to Inland Fisheries Ireland as the sole "External Expert" to environmentally assess internal and external projects. He is also chair of an internal IFI working group on environmental assessment. Bryan Deegan (MCIEEM) holds a MSc in Environmental Science, BSc (Hons.) in Applied Marine Biology, NCEA National Diploma in Applied Aquatic Science and a NCEA National Certificate in Science (Aquaculture). Jack Doyle (MSc Sustainable Environments) Jack has extensive experience in carrying out a wide range of fauna surveys, including both roving and static acoustic bat surveys, terrestrial non-avian mammal surveys, and breeding/wintering bird surveys. Jack has also carried out Biodiversity Net Gain (BNG) assessments for a range of residential and commercial projects in Ireland.

Chapter 8 - Air Quality	Tanmay Gojamgunde 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. He has prepared air quality and climate impact assessments as part of EIARs for several residential developments some of which include Ennis LRD (Planning Application Ref. 17495), Cherrywood M1 Phase 2B LRD (Planning Application Ref DZ24A/1016/WEB), Maglin LRD (Planning Application Ref. LRD 2544222). Ciara O'Connor is a Junior Environmental Consultant in the Air Quality and Climate section of Awn Consulting Ltd. She holds a BSc in Environmental Science from University College Cork. Ciara Nolan (Principal Air Quality Consultant) 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 Institute of Environmental Science (MIEnvSc). She specialises in the fields of air monitoring, air quality & climate assessments for EIA and air dispersion modelling.
Chapter 9 - Climate	Caolan Leneghan is a Senior Climate Change Consultant at Awn Consulting. Caolan holds degrees in Geography and International Development (Maynooth University) and Disaster Risk Management & Climate Change Adaptation (Lund University, Sweden). With over five years' experience, he specialises in climate risk assessment, adaptation strategy, and advisory services across sectors including infrastructure (including residential), transport, energy, urban planning, and water. Caolan has prepared climate risk assessment as part of EIARs across residential, water, wastewater, renewable energy and industrial in Ireland, as well as delivering climate change risk assessment reports for large scale residential and energy sector projects in Ireland. Ciara Nolan (as above)
Chapter 10 - Noise and Vibration	Miguel Cartuyvels (Acoustic Consultant) holds a BEng (Hons) in Industrial Engineering and is a member (TechIOA) of the Institute of Acoustics. Miguel previously worked in the construction industry and has worked in the field of acoustics since 2021, where he has contributed to numerous projects related to environmental surveying, noise modelling, and impact assessment for various sectors, including wind energy, industrial, commercial, and residential.

	Jennifer Harmon (Director) holds a BSc in Environmental Science and a Diploma in Acoustics and Noise Control. Jennifer has worked as a consultant since 2000, specialising in acoustics since 2001. She is a member of the Institute of Acoustics and has extensive knowledge in the field of environmental noise and vibration impact assessment, room acoustics, sound insulation and inward impact assessments. She has worked extensively on all aspects of environmental noise assessments and has developed numerous noise models and mitigation assessments for industrial and infrastructural projects throughout the country.
Chapter 11 - Archaeological and Cultural Heritage	CRDS – Stephen Mandal holds an honours degree in Science (Geology) from Trinity College Dublin (1991) and a PhD in Geoarchaeology, also from Trinity College Dublin (1995). Following two years as a post-doctoral researcher in University College Dublin, he founded CRDS Ltd (established in 1997; incorporated in 1999), archaeological, cultural and architectural heritage consultants. As one of Ireland's leading heritage consultancies for almost 25 years, CRDS has employed over 600 archaeologists, undertaken some of the largest and most significant archaeological excavations throughout Ireland, and has won numerous national and international awards. He has overseen the writing of the Archaeology, Architectural and Cultural Heritage Chapters of in excess of 100 EIARs dating from 1997 to present. This experience covers the island a wide range of development types including small scale developments close to culturally sensitive sites, large scale developments and liner developments including roads, ESBI power lines, railways and cycle paths.
Chapter 12 - Material Assets – Traffic and Transportation	This chapter has been prepared by Gordon Finn, Civil and Traffic Engineer with Cronin & Sutton Consulting Engineers (CS Consulting). Gordon holds BA/BAI and MAI degrees in Civil, Structural, and Environmental Engineering from the University of Dublin, and is a member of the Institute of Engineers of Ireland. His relevant professional experience includes the preparation of Traffic and Transport Assessments, Travel Plans, and Environmental Impact Assessment Report chapters for a broad range of residential, commercial, and institutional developments.
Chapter 13 - Material Assets - Waste	Chonaihl Bradley (Bsc ENV,PG Dip Circ Econ, AssocCIWM) is an associate 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). Chonaihl has over 10 years' experience in the environmental consultancy sector and specialises in environmental construction compliance, sustainability, resource and waste management.
Chapter 14 - Material Assets – Utilities	David Doran (As above)
Chapter 15 - Interactions – Interrelationship between the Aspects	This chapter is drafted with input from all relevant EIA team members, each contributing based on their technical and chapter specific expertise.

Volume 3 – Townscape, Heritage, Landscape and Visual Impact Assessment	Richard Coleman The TLHVIA has been supervised by the founder of Citydesigner, Richard Coleman Dip Arch ARB/RIBA/RIAI, with support from the consultancy's team of experienced professionals from the areas of architecture, urban design and heritage. Richard was Deputy Secretary of the Royal Fine Art Commission in the UK (precursor of CABE) for 13 years and during that time developed highly refined skills in assessing architecture, urban design and heritage conservation. These skills are coupled with more than 40 years' experience as a chartered architect, since 1980, and more than 20 years being an independent consultant, since the consultancy was first established in 1997. Richard provides objective and informed judgments on urban design, view assessment and matters concerning new design in heritage contexts. With experience in proposals affecting World Heritage Sites, Royal Parks, sensitive and strategic views, listed and protected buildings and conservation areas, the consultancy has been commissioned to assess over 50 major schemes of Environmental Statement status in London, Dublin and also across the United Kingdom. The consultancy's Dublin work began in 2007.
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1.3.4 EIAR Assessment Description of Effects

The quality, magnitude and duration of potential effects are defined within each specialist chapter of this EIA in accordance with the criteria provided in the EPA *'Guidelines on the information to be contained in Environmental Impact Assessment Reports'* (2022) as outlined in Table 1-4.

Table 1-4 Description of Effects as per EPA Guidelines (2022)

Effect Characteristic	Term	Description
Quality	Positive	A change which improves the quality of the environment
	Neutral	A change which does not affect the quality of the environment
	Negative	A change which reduces the quality of the environment
Significance	Imperceptible	An impact capable of measurement but without noticeable consequences
	Not Significant	An effect which causes noticeable changes in the character of the environment but without noticeable consequences
	Slight	An effect which 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 consistent with existing and emerging trends
	Significant	An effect, which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment

Effect Characteristic	Term	Description
	Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters the majority of a sensitive aspect of the environment.
	Profound	An impact which obliterates sensitive characteristics
Duration of Effects	Momentary Effects	Effects lasting from seconds to minutes
	Brief Effects	Effects lasting less than a day
	Temporary Effects	Effects lasting less than a year
	Short-term Effects	Effects lasting one to seven years.
	Medium-term Effects	Effects lasting seven to fifteen years
	Long-term Effects	Effects lasting fifteen to sixty years
	Permanent Effects	Effects lasting over sixty years
	Reversible Effects	Effects that can be undone, for example through remediation or restoration
Probability of Effects	Likely Effects	The effects that can reasonably be expected to occur as a result of the planned project if all mitigation measures are properly implemented.
	Unlikely Effects	The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.
Type of Effects ¹	Indirect Effects	Impacts on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway.
	Cumulative	The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects.
	'Do Nothing'	The environment as it would be in the future should no development of any kind be carried out
	'Worst case' Effects	The effects arising from a project 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	Degree of environmental change that will occur after the proposed mitigation measures have taken effect
	Synergistic	Where the resultant impact is of greater significance than the sum of its constituents

¹ For the purposes of facilitating the Competent Authority in conducting Environmental Impact Assessment as defined by Annex 1 of the EU Directive, the terms "imperceptible effects", "not significant effects", "Slight effects", and "moderate effects" used within this report, while exhibiting varying degrees of impact, are all considered to be without significant consequence.

1.4 Additional Assessments Required

The additional reports and/or assessments required under Legalisation or EU Directives other than the EIA Directive in respect of the Proposed Development are described in this section.

1.4.1 The Floods Directive (Directive 2007/60/EC)

The Floods Directive (Directive 2007/60/EC) establishes a framework for the assessment and management of flood risks, with the aim to reduce the adverse consequences on human health, the environment and material assets.

The Floods Directive requires Member States to assess if all water courses and coast lines are at risk from flooding, to map the flood extent and assets and humans at risk in these areas and to take adequate and coordinated measures to reduce this flood risk. The Floods Directive also reinforces the rights of the public to access this information and to have a say in the planning process.

The Floods Directive must be implemented in tandem with the WFD. In Ireland, the OPW is the national authority assigned with the implementation of the Floods Directive, which was transposed into Irish law by the EU (Assessment and Management of Flood Risks) Regulations SI 122 of 2010.

A Site-Specific Flood Risk Assessment (FRA) has been prepared by CS Consulting in accordance with the Planning System and Flood Risk Management Guidelines for Local Government (2009). This Site-Specific FRA is included with the planning application.

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

The main EU legislation for conserving biodiversity is the Directive 2009/147/EC of the European Parliament and of the Council of November 2009 on the conservation of wild birds (Birds Directive); and the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive).

The Habitats Directive is the cornerstone of habitats and species protection in Ireland. The Habitats Directive (92/43/EEC) and the associated Birds Directive (2009/147/EC) are transposed into Irish legislation by Part XAB of the 2000 Act and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) as amended.

The environmental sensitivity of the Proposed Development site in respect of Natura 2000 sites designated pursuant to the Habitats Directive and the Birds Directive been considered with reference to the application Appropriate Assessment Screening, which comprises an initial impact assessment of a project; examining the direct and indirect impacts that it might have on its own or in combination with other plans and projects, on one or more Natura 2000 sites in view of the sites' conservation objectives.

The 'Appropriate Assessment Screening' and 'Natura Impact Statement' has been prepared for the Proposed Development by Bryan Deegan of Altamar Environmental Consultants and is included with the planning application.



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Chapter 2 – Description of the Proposed Development

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2. DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1 Introduction

The Proposed Development relates to 1 North Wall Quay, Dublin 1, D01 T8Y1. The site is bound by North Wall Quay to the south and Commons Street to the west. Existing commercial and residential buildings adjoin the site to the north and east. Clarion Quay runs immediately adjacent to the northern boundary of the site.

The Proposed Development comprises the demolition of part of the existing office building and the construction of a new office development comprising between 7 and 12 no. levels over a single level basement, with an overall gross floor area of c. 61,882 m².

This chapter presents the description of the Proposed Development comprising information on the Site, design, size and other relevant features of the Proposed Development. The scope of this chapter aligns with the relevant legislation and guidance which comprises the following:

EIA Directive (2011/92/EU), as amended by the 2014 EIA Directive (2014/52/EU) (herein referred to as the EIA Directive)

European Commission 'Environmental Impact Assessment of Projects - Guidance on the preparation of the Environmental Impact Assessment Report' (2017)

EPA 'Guidelines on the Information to be Contained in Environmental Impact Assessment Reports' (2022) (herein referred to as the EPA EIA Guidelines 2022), and

This chapter draws on and has been informed by the project design and summarises the key relevant details of the Proposed Development and its lifecycle as it relates to EIA Report. This chapter summarises details on the existing site and surrounding context, details of the Proposed Development, and the 'existence of the project'. EPA EIA Guidelines 2022 advises that description of the existence of the project should define all aspects of the proposed lifecycle of the facility, including:

- ▶ Description of Construction;
- ▶ Description of Commissioning;
- ▶ Operation of the Project;
- ▶ Changes to the Project; and
- ▶ Description of Other Related Projects.

This description is not exhaustive, and as such this EIA Report should be read in conjunction with full application package. The description of the Proposed Development is described in this chapter in terms of those environmental topics that will form the basis of the impact assessment process and the characteristics of the Proposed Development and potential effects. The specialist assessments reported in this EIA Report have been conducted using this description, and the full application package as a guide to the details of the development under consideration.

2.2 Description Of The Existing Development Site

The Proposed Development site is c. 0.88 hectares (8,859 m²) located at 1 North Wall Quay, Dublin 1 D01 T8Y1 and currently occupied by the Citigroup Building, a six-storey, over-one-storey-basement office building (total Gross Internal Area of 34,507 m²).

The site is located in the Dublin Docklands and is within walking distance to Dublin City Centre and to the main areas including the Grafton Street to the south west, and O'Connell Street to the west. The site has direct access onto the Quays and is located c. 400 m to the east of the Custom's House.

The site is bound by North Wall Quay to the south and Commons Street to the west. Existing commercial and residential buildings adjoin the site to the north and east. Clarion Quay runs immediately adjacent to the northern boundary of the site.

The site is located c. 380 m south east of Connolly Station and c. 580 m east of Tara Street Station, which are major commuter rail stations serving the Greater Dublin Area. The subject site is also 580 m east of the proposed MetroLink Tara station. The site is located a short distance south of the Red Line Luas cross city stop's George's Dock (c. 120 m) and Mayor Square – National College of Ireland (c. 170m) and close to the numerous bus routes and further planned BusConnects routes.

The River Liffey is located immediately south from the Proposed Development site.

The below Figure 2.1 presents the Proposed Development lands (hereafter referred to as "the site") shown by the indicative red line boundary.

Figure 2-1 Site Location Plan (Source: 1NWQ-HJL-AX-00-DR-A-0001)

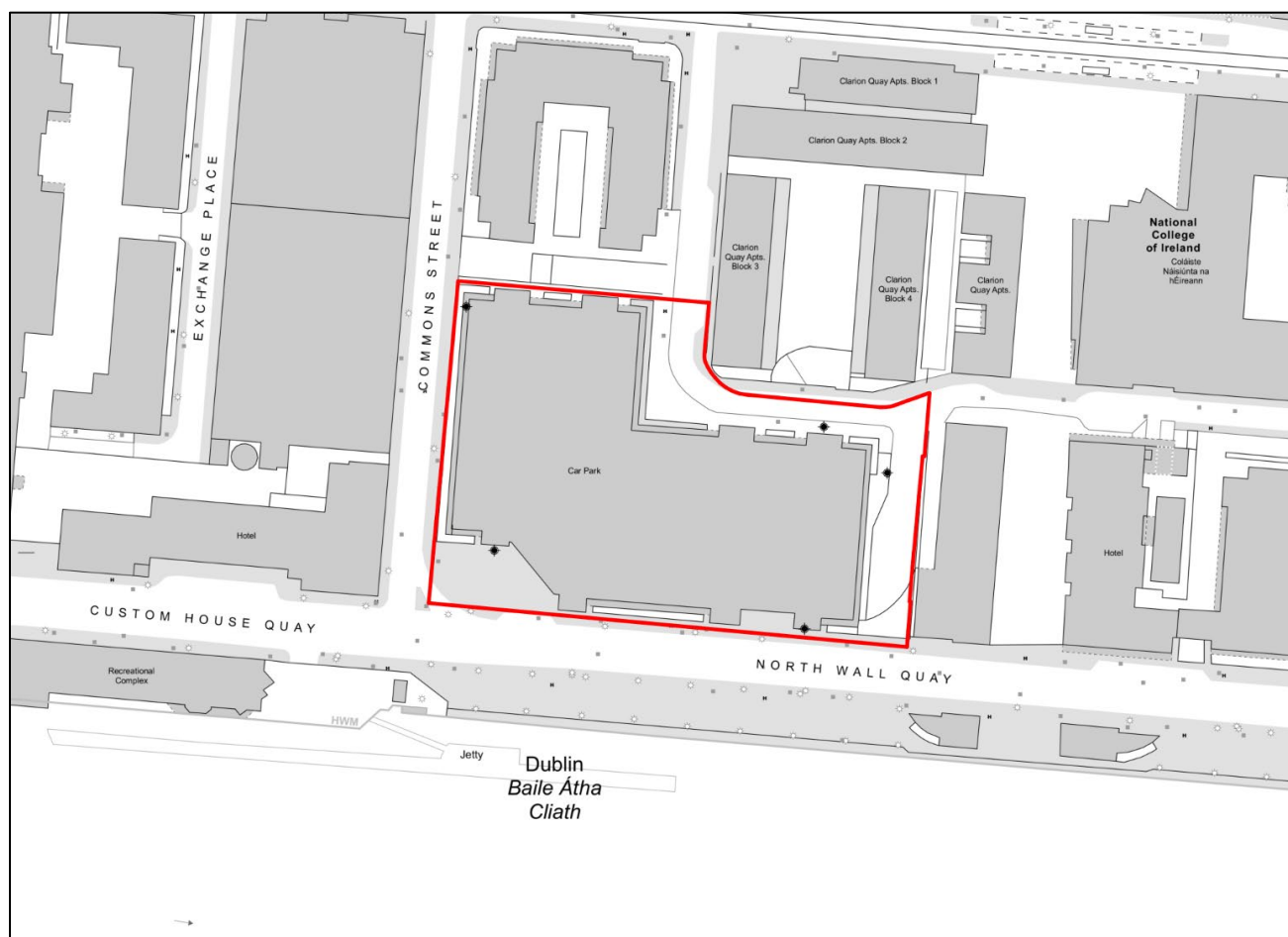


Figure 2-2 Aerial view of subject site with indicative site boundary outlined in red
(Source: Google Earth)



2.2.1 Existing Citigroup Building

The existing Citigroup Building located at the site is a five-storey building with the central block rising to six storeys with a balcony facing the river. The floor plates are arranged around two full height, internal atria capped with glazed roofs.

The existing building was constructed by 2000 as one of a series of blocks within the International Financial Services Centre (IFSC) area of central Dublin established in the 1980s as an urban regeneration area and special economic zone (SEZ) on the derelict state-owned former port authority lands of the reclaimed North Wall and George's Dock areas of the Dublin Docklands.

The existing office building occupying the development site has a total Gross Internal Area of 34,507 m² and a total Net Internal Area of 21,223 m² for office use, and includes 164 no. internal car parking spaces.

1 North Wall Quay fronts onto the River Liffey, with 125 metres of river frontage. It is bound by Commons Street to the west, the 'Dockline' commercial building & Clarion Quay to the north and a mixed-use development to the east comprising residential and retail units.

The land use in the immediate surrounding area is a mix of commercial office, hospitality, retail, education and residential buildings.

2.2.2 Existing Site Utilities, Infrastructure and Access

2.2.2.1.1 Existing Potable Water Infrastructure

The existing potable water connection to the site is via the existing 150mm ductile iron watermain in Clarion Quay.

As outlined in the CS Consulting Engineering Services Report (2025) (included with the application documentation), Uisce Éireann Drainage Records indicates an existing 200mm ductile iron and an existing 600mm cast-iron watermain along North Wall Quay to the development's site southern boundary. The records also indicate an existing 6-inch (150mm approx.) diameter cast-iron watermain is in place in Commons Street as well as the existing 150mm ductile iron watermain in place in Clarion Quay along the western and northern boundaries of the development site, respectively.

For further details on the existing potable water infrastructure see the CS Consulting Engineering Services Report (2025) included with the planning application documentation.

2.2.2.1.2 Existing Foul Wastewater Drainage Infrastructure

As outlined in the CS Consulting Engineering Services Report (2025) (included with the application documentation), Uisce Éireann drainage and supply records indicate that the following relevant existing drainage infrastructure elements are in place surrounding the development site:

- a) An existing 375mm vitrified clay combined sewer running east to west in North Wall Quay, along the development site's southern boundary. This combined sewer turns north at the junction of North Wall Quay and Commons Street and continues to flow northward along the development's western boundary.
- b) An existing 225mm concrete foul sewer to the east and north of the development's site boundary.
- c) The foul sewer in Clarion Quay joins a 375mm diameter foul sewer flowing east to west in Mayor Street Lower, which in turn joins the combined sewer in North Wall Quay. This discharges to the Mayor Street Wastewater Pumping Station (WwPS), from which all effluent ultimately reaches the Ringsend Wastewater Treatment Plant (WwTP).
- d) An existing 375mm storm sewer running west to east in North Wall Quay, along development site's southern boundary. This sewer connects to an existing 1870 brick storm sewer at the junction of North Wall Quay and Commons Street, which ultimately discharges into River Liffey. In addition, there is also an existing 525mm concrete storm sewer running east to west and then turning northwards in Clarion Quay along development site's northern boundary.

Hydraulic performance maps prepared by Dublin City Council as part of the 2005 Greater Dublin Strategic Drainage Study (GDSDS) indicate that the existing public combined sewers on North Wall Quay is under hydraulic pressure in the 2031 modelling scenario, surcharging for 1-year and 2-year storm events.

The hydraulic performance maps also indicate there is a small section of combined sewer along Commons Street which does not surcharge for 1- year and 2-year return period and does not flood for a 30-year return period event or less.

For further details on the existing foul wastewater infrastructure see the CS Consulting Engineering Services Report (2025) included with the planning application documentation.

2.2.2.1.3 Existing Surface Water Drainage Infrastructure

As outlined in the CS Consulting Engineering Services Report (2025) (included with the application documentation), Uisce Éireann drainage and supply records indicate that the following relevant existing dedicated surface water drainage infrastructure elements are in place surrounding the development site:

- A concrete stormwater sewer (between 525mm and 600mm in diameter) in Clarion Quay, at the development site's north-eastern boundary.
- A 375mm diameter vitrified clay stormwater sewer running east to west in North Wall Quay, along the development site's southern boundary.
- A brick stormwater sewer (between 1820mm and 2030mm in diameter) running north to south in Commons Street.

The stormwater sewer running east to west in North Wall Quay discharges to the brick stormwater sewer running north to south in Commons Street, which then outfalls to the River Liffey. The stormwater sewer in Clarion Quay discharges to a 1700mm diameter stormwater sewer running west to east in Mayor Street Lower; this ultimately outfalls to either the River Liffey or the Royal Canal, in proximity to the Samuel Beckett Bridge.

For further details on the existing stormwater infrastructure see the CS Consulting Engineering Services Report (2025) included with the planning application documentation.

2.2.2.1.4 Existing Roads, Access, and Parking

The site is located in the Dublin Docklands, with frontage on three streets: North Wall Way (R801), Commons Street and Clarion Quay. Clarion Quay is a local access street connecting at either end to Mayor Street Lower and provides vehicular access to several buildings between Mayor Street Lower and North Wall Quay. The site has two existing vehicular access points on its northern and eastern boundary, with the primary pedestrian access point located at the site's southwest corner.

The site is located in a highly accessible location with excellent public transport links. It is in close proximity (less than 150m) to both George's Dock and Mayor Square – National College of Ireland Red Line Luas Stops. Connolly Station, Pearse Station and Tara Street Station, which provides frequent services to destinations throughout Dublin and beyond are all located less than 600m from the site. Additionally, the site is located in the vicinity of a number of bus routes, making it easy to access by public transport. Finally, the new cross-city Luas line, which has stops on O'Connell Street / Marlborough Street which are located less than 1 km will also serve the area, providing even more convenient transportation options. Overall, the Proposed Development site is situated in a highly accessible and well-connected location that is ideal for urban development.

Existing pedestrian facilities on North Wall Quay, Commons Street and Excise Walk and neighbouring streets in the vicinity of the development site are of good quality and condition, with raised footpaths, public lighting and signal-controlled pedestrian crossings are present at all nearby major junctions and at intermediate points along the Quays. Two bridges across the Liffey are within a 5-minute walk, one of which carries only pedestrian traffic.

Cycling infrastructure in the immediate vicinity of the site is generally of good standard. The development site is within a 15-minute bicycle journey of the entirety of Dublin city centre, including Heuston railway station. Suburbs as far as Beaumont, Cabra and Rathgar are all within a 20-minute bicycle journey of the site. 3 no. Dublin Bikes stations are located within a 5-minute walk of the development site, which is also situated within the geofenced operating zones for the Bleeper Bikes and Moby Bikes commercial bicycle sharing schemes.

At present, the existing building is an in-use office space. 164 no. parking spaces are available at basement level of the existing building, accessed via a ramp off Clarion Quay.

2.2.2.1.5 Existing Telecommunication Infrastructure

The existing building has connections to telecommunication lines for telephone and broadband services.

2.2.2.1.6 Existing Electricity Infrastructure

The existing site is served by the electrical network. There are existing substations on Commons Street and Clarion Quay respectively, directly adjacent to the development site.

The existing building is served by a redundant MV A and B Utility power supply. It has been estimated by Axiseng that the existing load demand is circa 2.5 MVA which serves a single occupant.

2.2.2.1.7 Existing Natural Gas Infrastructure

There is an existing Natural gas supply provided to the current site.

2.2.3 Protected Structures

The Record of Protected Structures (RPS) under the Dublin City Development Plan 2022-2028 lists all protected structures and buildings in Dublin. There are no protected structures within the Proposed Development site.

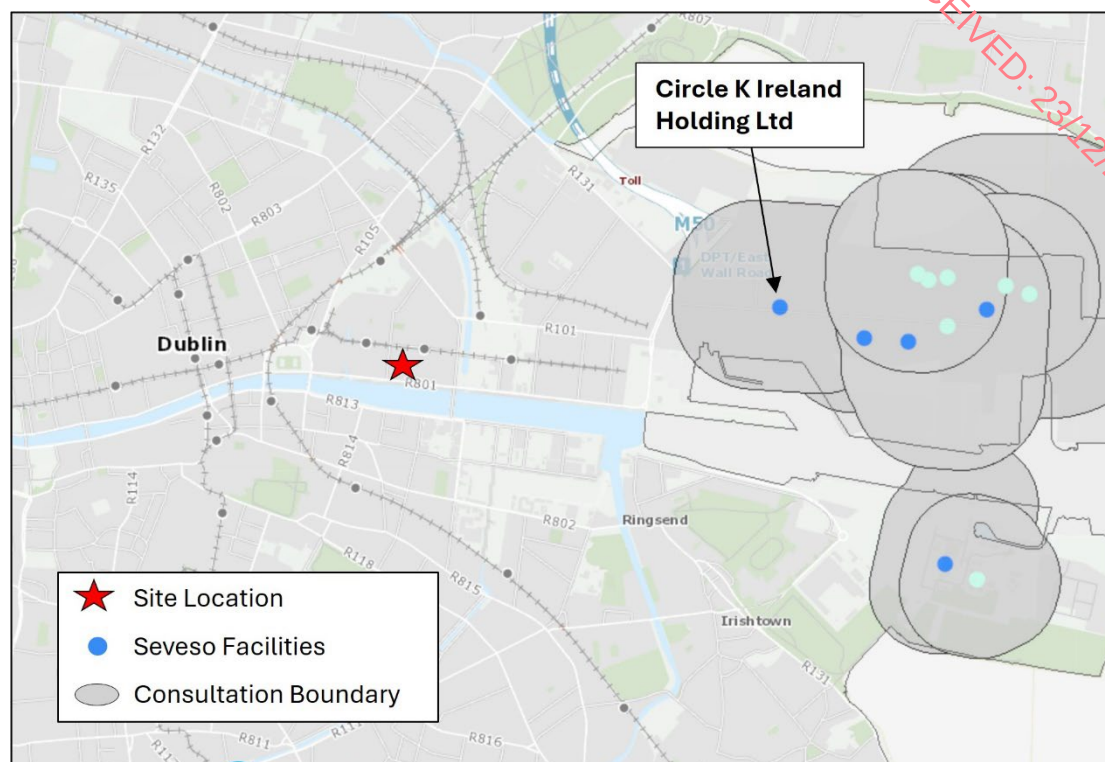
The nearest protect structures to the Proposed Development are the Former Excise Building (RPS Ref. No. 5070) located on Mayor Street Lower, 65 m north, the CHQ Building (RPS Ref. No. 2094) located on Custom House Quay, 100 m west, the Custom House Quay Bridge (RPS Ref. No. 896), 190 m west, George's Dock (RPS Ref. No. 8841), 190 m west and George's Quay Inner Dock (RPS Ref. No. 3995), 140 m north west.

2.2.4 Proximity to a COMAH sites

The Chemical Act (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2015 (S.I. 209 of 2015) or 'COMAH' regulations define the "consultation distance" as a distance or area relating to an establishment, where a major accident at the establishment could have significant consequences for human health or the environment, including residential areas, buildings, public areas, recreational areas, and major transport routes.

The Health and Safety Authority (HSA) list of Notified Seveso Establishments has been used to identify if the Proposed Development falls within the consultation distance of any nearby Seveso Establishments. The closest Notified Seveso Establishments to the Proposed Development is the Upper Tier establishment Circle K Ireland Holding Ltd, located c. 1.4 km from the site. The Proposed Development site is not located within the consultation distance of any notified establishment; therefore, there are no implications for major accident hazards.

Figure 2-3 Consultation Distances of Seveso Establishments within the vicinity of the Proposed Development site (indicative as red star)



2.2.5 Proximity to Industrial Emissions Licensed Facilities

Table 2-1 below shows the closest Integrated Pollution Control (IPC) and Industrial Emissions (IE) licensed facilities to the Proposed Development site according to the EPA (2025). Licensed facility, are required to comply with specific licence conditions, including monitoring and reporting on their emissions (such as emissions into the air, water, and soil), to ensure that they do not pose a risk to human health or the environment.

It is important to note that the proximity of a licensed facility does not necessarily mean that the Proposed Development will be impacted by their emissions. However, it is essential to consider these sites as part of the existing environment and to consider and understand the potential for cumulative impacts or other interactions with the Proposed Development at this location.

Table 2-1 EPA Licenced facilities nearby to the Proposed Development site

Registration number	Name	Category	License type	Distance (km)
P0345-01	Brooks Thomas Limited	Industry	IPC	0.8 km
P0111-01	Independent Newspapers Ltd.	Industry	IEL	1.0 km
P0107-01	Van Leer Ireland Ltd.	Industry	IEL	1.2 km
P0298-01	Cahill Printer Limited	Industry	IEL	1.2 km
P0220-01	Everlac Paint Limited	Industry	IEL	1.8km
P0054-02	Mater Misericordiae University Hospital	Industry	IEL	1.9 km

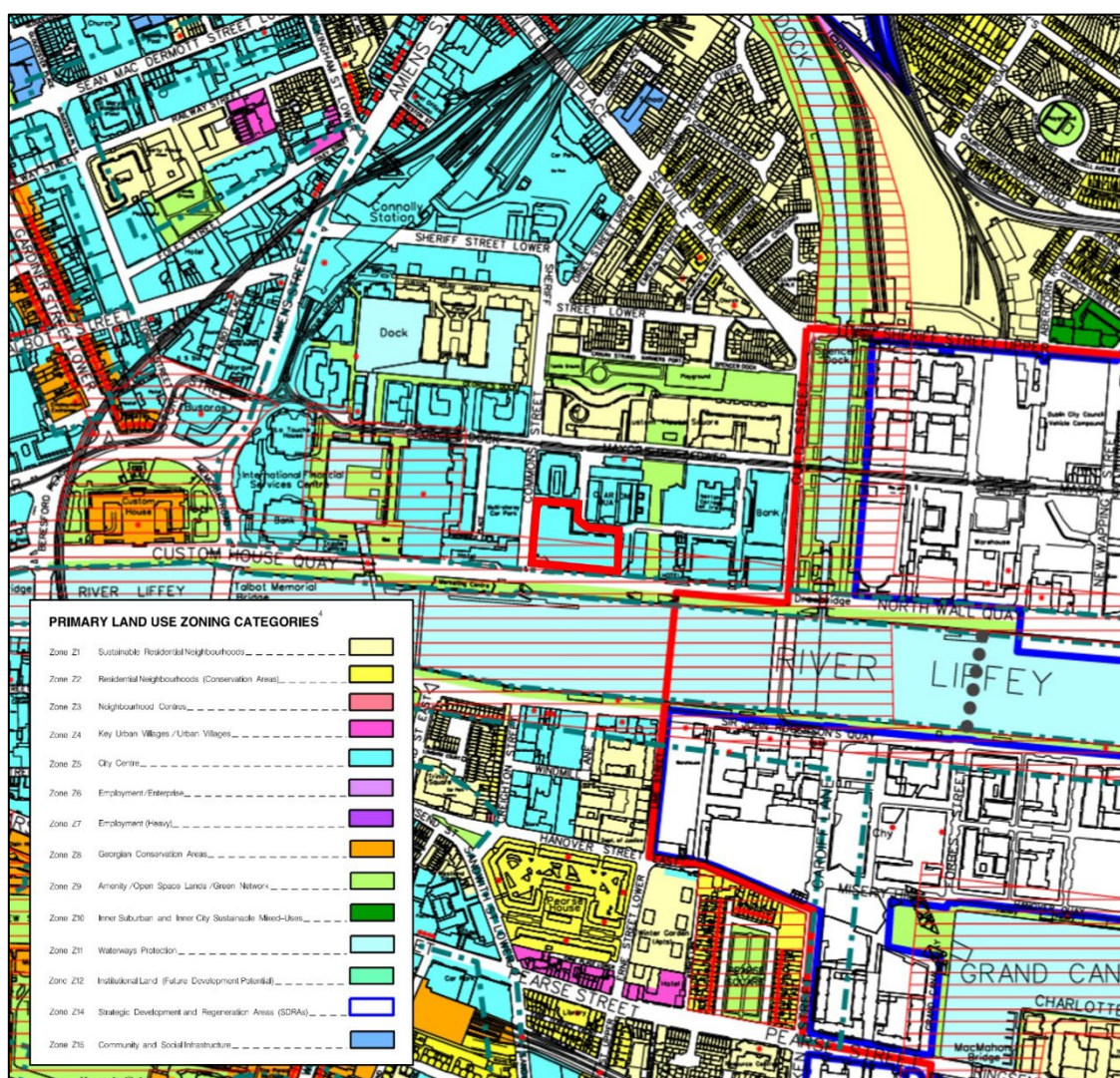
2.2.6 Dublin City Development Plan 2022-2028 Land Use Zoning Objectives

The *Dublin City Development Plan 2022 - 2028* zoning designations have been reviewed. The Proposed Development is located within lands designated Zone Z5 – *City Centre*, a zoning to consolidate and facilitate the development of the central area, and to identify, reinforce, strengthen and protect its civic design character and dignity.

The proposed use is permitted under this zoning designation in the DCC Development Plan 2022–2028. Chapter 14 of the DCC Development Plan 2022–2028 states that 'Ideally, a mix of uses should occur both vertically through the floors of buildings as well as horizontally along the street frontage' – this landmark office development will contribute to the vertical expansion of the city.

Figure 2-4 below illustrates the zoning of the site as well as the surrounding areas.

Figure 2-4 Dublin City Development Plan 2022 – 2028 Zoning (site boundary indicative in red)



2.3 Characteristics Of The Proposed Development

2.3.1 Proposed Development Overview

The proposed development provides for the part- demolition of the existing building and construction of a new building, ranging in height from 7 no. to 12 no. storeys over existing basement comprising of office accommodation and community space. Office accommodation is provided from ground floor to 11th floor level and community space is provided at the ground floor level. Outdoor terraces are located at 4th, 5th, 6th, 9th and 11th, floor levels and a shared atrium between Block B and Block C. The basement comprises 32 no. car parking spaces, 718 no. bicycle parking spaces and 4 no. motorbike spaces as well as a gym, shower/changing facilities and plantroom.

Figure 2-5 Proposed Development Ground Floor Plan (Source: 1NWQ-HJL-AX-00-DR-A-0100)



2.3.2 Proposed Office Space

All levels of the Proposed Development, aside from the existing basement - have space dedicated for office use. This space equates to a total gross internal area (GIA) of 53,774 m² and a net internal area (NIA) of 39,151 m² of office space. The proposed office space can accommodate a total staff population of c. 3,846 persons.

2.3.3 Proposed Community Space

Level 00 Ground Floor contains space dedicate to community use.

The breakdown per level is as follows:

- ▶ Level 00- Internal Community Space 660 m² GIA,
- ▶ Level 00- External Landscaped Community Park 244 m² GIA,

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2.3.4 Proposed Basement

There is an existing 1 no. level of basement, Basement -1, that is contained within the footprint of the Proposed Development site. The basement space will be utilised for a variety of plant and ancillary purposes.

Basement -1 includes 32 no. car parking spaces (a reduction of 132 no. car parking spaces in comparison to the existing office building on the site), 718 no. bicycle parking spaces and 4 no. motorbike spaces, waste storage area, as well as a gym, shower/changing facilities and plantroom.

Vehicular access to the basement car park shall be via a two-car lift system, accessed from Clarion Quay to the north-east corner of the development site.

The overall gross internal area of basement space is 7,176 m².

2.3.5 Architectural Rationale

The redevelopment of lands at 1 North Wall Quay proposes to greatly enhance the site and its urban setting at the corner of the city block fronting onto North Wall Quay and Commons Street.

The development proposal includes the retention of the majority of the existing structural frame and the addition of new floors on top of the existing building. The remodelling of the existing building proposes of a contemporary office building of exemplar design and architectural merit seeks to provide an extensive public benefit by contributing to the improvement of public space at ground plane whilst also providing new publicly accessible arts/cultural space at ground floor level.

A carefully considered building form responds to its docklands riverfront setting - recognising and contributing positively to the local streetscape character and public realm, whilst on a wider scale the proposed design aims to make a valuable contribution to the Dublin cityscape - marking a strategic location on the Liffey where the river widens towards its estuary with the Irish Sea.

Elegant detailing and a palette of high-quality materials are proposed in the design of the building fabric, within which the uses of office workplace, public gallery, acting school and retail are manifest with subtle variations in an overall harmonious composition.

The applicant's focus has been to deliver a building of aesthetic quality, with inspirational flexible spaces, employee wellbeing and enjoyment, sustainability and future proofed 'smart building.' One North Wall Quay will be a Net Zero Carbon building, with highly energy efficient specification including all electric heating and cooling allowing all operational energy to be delivered from renewable resources.

The architectural rationale is explained in detail in Volume 3 of the EIAR (Townscape, Heritage, Landscape and Visual Impact Assessment) and the Architecture Design Statement prepared by Henry J Lyons and included with the planning application documentation.

2.3.6 Proposed Site Utilities and Infrastructure

2.3.6.1 Proposed Potable Water Infrastructure

It is proposed to supply the development with potable water via a new 150mm diameter connection to the existing 150mm diameter ductile iron watermain in Clarion Quay, at the development site's north-eastern boundary, as recommended by Uisce Éireann in its Confirmation of Feasibility (CoF). Refer to CS Consulting drawing no. 1NWQ-CSC-ZZ-00-DR-C- 0108 for details of the development's proposed water

supply connection, which has been designed in accordance with the Uisce Éireann Code of Practice for Water Infrastructure.

A Pre-Connection Enquiry (PCE) was submitted to Uisce Éireann in 2023 on the basis of an office development on the subject site, with a design population of 3,866 people. The current design population for the proposed development is 3,641. A Confirmation of Feasibility (CoF) under Uisce Éireann reference CDS23006147 was subsequently received in response, stating that connection of such a development to the public water network would be feasible without infrastructure upgrade by Uisce Éireann.

For further information refer to the Engineering Services Report and drawing pack, prepared by CS Consulting for details on Watermain arrangement.

2.3.6.2 Proposed Foul Wastewater Drainage Infrastructure

It is proposed to discharge all foul effluent from the proposed development's ground floor and upper storeys by gravity to the existing 375mm combined sewer on Commons Street.

The last private manhole within the site shall be in accordance with DCC and Uisce Éireann requirements and accessible for maintenance purposes.

All water drained from the development's basement levels, shall drain to an internal pumping chamber at the Basement -1. From these, it shall be pumped via a rising main to the development's stand-off manhole at the ground level and subsequently discharged by gravity into the existing 375mm combined sewer on Commons Street.

An oil separator shall be installed prior to the inlet of the internal pumping chamber that collects runoff from the internal car parking areas.

The drainage network for the proposed development has been designed in accordance with:

- ▶ Part H of the Building Regulations 2010
- ▶ the Greater Dublin Regional Code of Practice for Drainage Works (Version 6)
- ▶ the Greater Dublin Strategic Drainage Study (GDSDS)
- ▶ the Uisce Éireann Code of Practice for Wastewater Infrastructure
- ▶ The Regional Code of Practice Drainage Works.

A Pre-Connection Enquiry (PCE) was submitted to Uisce Éireann on 2023 on the basis of an office development on the subject site, with a design population of 3,866 people. The current design population for the proposed development is 3,641. A Confirmation of Feasibility (CoF) under Uisce Éireann reference CDS23006147 was subsequently received in response, stating that connection of such a development to the public wastewater network would be feasible subject to the following:

- ▶ Connection to be made into the 375 CO on Commons Street.
- ▶ Mayor St. Pumping Station (PS) to be upgraded (flow rate to be increased).
- ▶ Completion of an Uisce Éireann Project: Diversion of the existing rising main (RM) from the PS up to the existing 375mm gravity sewer on Spencer Dock.
- ▶ Extension of the new RM for approx. 200m up to the existing 1000mm Brick sewer or upgrade of the 375mm sewer.

The foul wastewater collected on site will discharge to the local foul (combined) drainage network which ultimately discharges to Ringsend WWTP. For further information refer to the Engineering Services Report, prepared by CS Consulting and Drawing set 1NWQ-CSC-ZZ-00-DR-C-0104, 1NWQ-CSC-ZZ-B1-DR-C-0105, and 1NWQ-CSC-ZZ-B6-DR-C-0106 included with this application for the proposed foul drainage network layout.

2.3.6.3 Proposed Surface Water Drainage Infrastructure

It is proposed to discharge the developments surface water drainage runoff at a controlled rate of 2 l/sec via a stand-off manhole into the existing surface water drainage network in Commons Street. The surface water drainage runoff rate is to be controlled via a series of blue roofs with associated flow controls at various roof levels, attenuation tank located at basement level and the use of pumps that will be set to a pump rate of 2 l/sec.

Please refer to CS Consulting drawing no's. 1NWQ-CSC-ZZ-00-DR-C-0104 and 1NWQ-CSC-ZZ-00-DR-C-0105 for details of the proposed surface water drainage network layout.

The proposed stormwater drainage arrangements have been designed in accordance with Part H of the Building Regulations 2010, the Greater Dublin Regional Code of Practice for

Drainage Works (Version 6), and the Greater Dublin Strategic Drainage Study (GSDSDS). The stormwater drainage design has also taken consideration of high tide events, due to the site's proximity to the River Liffey and Dublin Bay Area.

The proposed development shall include a number of Sustainable Drainage Systems (SuDS) measures, in accordance with the requirements of Dublin City Council and the DCC Development Plan policies. SuDS principles entail a two-fold approach to stormwater management:

1. limiting post-development surface water run-off.
2. providing on-site first stage interception of surface water run-off, improving its overall quality prior to ultimate discharge.

Green and blue roofs shall be provided on the proposed building's flat roof areas and terraces, mostly in the form of combined green/blue roof systems. These consist of a green roof element, beneath which is a blue roof storage element. During typical low-intensity rainfall events, the green roof elements shall collect and retain most rainwater falling on the roof areas until it subsequently evaporates. During higher-intensity rainfall events, rainwater shall percolate down through the green roof layers and be held within the blue roof element, which provides attenuation storage and discharges at a controlled rate to the development's internal stormwater drainage network.

This shall reduce the volumes of rainwater discharging to the public sewer network, as well as mitigating peaks in run-off and reducing the potential for contaminants to be washed from the roof, decreasing the development's impact on the receiving environment. Green roofs also have secondary environmental benefits, providing a temperature control effect by absorbing less solar radiation and improving air quality by trapping airborne particulate matter.

The applicant has sought to maximise the provision of the green roof within the proposed development, aiming to meet the 40% coverage targets. The maximum possible green roof coverage in this instance has however been limited by development-specific factors, including the overall height of the building, the segregation of roof areas, fire safety and maintenance requirements and associated health and safety risks. It is therefore submitted that the proposed development provides green blue roof coverage to the maximum practicable extent, satisfying the requirements of Appendix 11 to the *Dublin City Development Plan 2022-2028*.

The development is required to retain stormwater volumes predicted to be experienced during extreme rainfall events. This is defined as the volume of storm water generated during a 1-in-100-year storm event, increased by 20% for the predicted effects of climate change.

The site is currently unattenuated. It is proposed to provide a combination of blue roof attenuation at source and supplementary tank storage at basement level.

The site area is 0.88ha or 8,800m². Subtracting the publicly accessible street on Clarion Quay from the catchment reflects a reduction in catchment area to 8,248m².

An attenuation calculation for the site area of 8,248m² returns a volume of 738m³ for a 1-in-100 year event with a 20% allowance for climate change.

The approximate available area for blue roof provision = 6236m². Allowing for an effective depth of 100mm or 0.1m, the blue roof should provide approximately 624m³ of storage.

The remaining 114m³ shall be directed to a tank at basement level. The basement tank shall be pumped to a stand-off manhole to discharge by gravity to the last private manhole and on to the public network on Commons Street.

For further information refer to the Engineering Services Report and Surface Water Management Plan, prepared by CS Consulting for the proposed surface water drainage network layout. See also Chapter 6 (Hydrology) and Chapter 14 (Material Assets - Utilities) address the potential impacts of the Proposed Development on storm water network.

2.3.6.4 Proposed Roads, Access, and Parking

The development site is located in the Dublin Docklands, with frontage on three streets: North Wall Way (R801), Commons Street and Clarion Quay.

The Proposed Development shall include a total of 32 no. car parking spaces internally at existing basement level -1. This represents a reduction of 132 no. car parking spaces (an 80% reduction) in comparison to the existing office building on the site. The proposed car parking provision equates to 1 no. car parking space per 1,680 m² office space GIA, whereas the existing office building has a car parking ratio of 1 no. space per 129 m² GIA. The development includes 4 no. motorcycle parking spaces, located at basement level -1.

Battery Electric Vehicle charging points shall be provided from the outset at 16 no. car parking spaces within the Proposed Development basement level -1, representing 50% of the development's overall car parking provision. All remaining car parking spaces within the development shall be 'future-proofed' by the inclusion of ducting and/or cabling to permit the rapid future installation of additional Battery Electric Vehicle charging points.

Vehicular access to the basement car park shall be via the existing ramp from Clarion Quay, which shall be retained.

The proposed development shall include a total of 744no. bicycle parking spaces to serve its staff and visitors. 718no. long-term bicycle parking spaces shall be located in secure dedicated bicycle stores at basement level -1, accessed via lifts. An additional 26no. short-stay bicycle spaces (13no. Sheffield stands) shall be located at surface level. A bicycle repair station is also provided at basement level -1.

Existing pedestrian facilities on North Wall Quay, Commons Street and Excise Walk and neighbouring streets in the vicinity of the development site are of good quality and condition, with raised footpaths, public lighting and signal-controlled pedestrian crossings are present at all nearby major junctions and at intermediate points along the Quays. Two bridges across the Liffey are within a 5-minute walk, one of which carries only pedestrian traffic.

Access arrangements and potential traffic safety impacts are considered in Chapter 12 (Traffic and Transportation) and the Traffic and Transport Assessment (CS Consulting, 2025) included with the planning documentation.

2.3.6.5 Proposed Electricity Infrastructure

Once in operation, electricity will be provided to the site via the national grid tying in with existing infrastructure. New electricity and services infrastructure will be put in place to serve the Proposed Development.

The combined electrical load for the development is estimated to be c. 5 MW. Space has been planned for 4 no. Substations in total for the proposed development. The proposed power supply will serve the new substations in accordance with ESB guidelines, which then supplies the tenancies, retail, community, and amenity spaces in the proposed development scheme.

A full connection application will be submitted to ESB following planning permission being received for the Proposed Development. ESB will determine the most economical route to supply the development based on their MV planners load analysis and internal report.

2.3.6.6 Proposed Telecommunications Infrastructure

There are telecommunication lines in existence for telephone and broadband services in the area and fibre provisions for the Proposed Development. Connections will be made to the existing services locally. The site will be provided with a telecommunications network consisting of incoming fibre infrastructure and provided via underground fibre ducts.

This will involve installing additional chambers and ducts on the Common's road, North Wall Quay and on Clarion road.

2.3.6.7 Proposed Natural Gas Infrastructure

There is no requirement for gas connections for the proposed development.

2.4 Description Of Demolition, Construction And Commissioning

The detailed construction programme will be developed by the selected construction Contractor. The key construction works relevant to this EIA Report are summarised in Table 2.2 below.

Table 2-2 Summary of key construction works

Activity	Description of Activity
Site preparation Works and Establishment of Construction Services	The primary activities that will be required during the Site preparation phase for the development will be the establishment of construction fencing and hoarding and site compound. The site area shall be enclosed with hoarding, details of which are to be agreed with Dublin City Council. Hoarding panels shall be maintained and kept clean for the duration of the project. This shall involve erecting the hoarding around the proposed site perimeter in line with the finished development description. Scaffolding will be erected and the entire existing building will be wrapped in a Monarflex sheeting wrap to contain dust and debris. It is envisaged that the northern footpaths shall be utilised for scaffolding. The primary additional activity that will be required following Site preparation for the development will be the establishment of a site compound. The Site compound including offices and welfare facilities is provisionally planned to be located off site (or in as stacked cabins with a gantry), near site will provide, portable sanitary facilities, equipment storage, parking etc for contractors for the duration of the works. The Site compound will be fenced off for health and safety reasons so that access is restricted to authorised personnel only.

	All areas under construction will be fenced for security and safety purposes and temporary lighting supplied, as necessary. All required enabling works and surveying and setting out for structures, archaeological impersonation (if required) etc. are carried out.
Demolition and Site Investigations	The existing 6 no. storey building over single-storey basement (Gross Internal Area of 34,507 m²) is to be part- demolished (c. 33%) as part of the Proposed Development. The works will include: ► Façade demolition. ► Demolition of a portion of the existing 6-storey building on the site at present. The building is understood to be of reinforced concrete flat slab and concrete columns (there are some areas of precast beams and steelwork to be demolished also). ► Demolition of existing roof-top plant rooms and lift rooms; ► Existing single storey basement to be piled through and strengthened to make-way for new foundations for the proposed vertical structure. Details of the demolition methodology are set out in the Demolition Method Statement prepared by CS Consulting (2025) As the site is entirely covered by the existing building, site investigation works will take place following partial demolition of the existing building.
Structural and Building envelope works	The structural construction involves erecting the steel framework for the building or structure and installing the exterior walls, roofing, and insulation. Once the structural works are complete, building envelope works can begin. This involves installing the roof, walls, and other components that make up the exterior envelope of the building or structure. The roofs are intended to support a selection of blue roofs for attenuation purposes, green biodiverse roofs, and landscaped areas. The supporting roof will be of concrete proprietary warranted waterproofing system.
Site Utilities and Infrastructure	The completion of the Proposed Site Utilities and Infrastructure as set out in Section 2.3.6 of this Chapter to each unit will be undertaken in the initial development phase. Once the main structure is complete, services connections will be made to the established main network adjacent to the site. This will be carried out in accordance with the requirements of the various service providers / authorities. The installation of site utilities, such as water supply, sewer lines, and storm drainage systems may also continue throughout the construction phase. New electricity and telecommunications services infrastructure will be put in place to serve the development. This will be carried out in accordance with the requirements of the various service providers / authorities.
Commissioning and Fit Out	The fitout and commissioning will be completed within the construction duration. The fitting out includes the installation of: Initial installation of any stud work when cladding is complete and floor is weathertight. Installation of equipment and associated connection to services. Completion of finishes.
Landscaping	After the main construction works are completed hard and soft landscaping and reinstatement works will be carried out in accordance with the proposed landscaping design.

2.4.1 Demolition and Construction Duration and Phasing

Subject to a successful grant of planning, it is intended for the works to commence in Q3 / Q4 of 2026.

The Proposed Development is anticipated to be completed over a 3.5-year period. The demolition phase duration is approximately 12 months, and the construction phase including structural works and fit out duration is approximately 30 months

Each of the following EIAR chapters (Chapters 4 to 14) include an assessment of the potential impact of construction works on their individual environmental aspect and set out the relevant mitigation measures relating to those aspects.

2.4.2 Site Access, Car Parking, and Traffic Management During Demolition and Construction

It is anticipated that for the duration of the access to the development site is expected to be via a dedicated temporary access on Commons Street, at the site's western boundary.

In addition, one or more separate pedestrian only entrance(s) to the site shall be installed, to segregate vehicular and pedestrian movements to and from site.

Security personnel will be present at the entrance/exit of the site to ensure all egressing traffic will do so safely. A wheel wash will be installed at the exit from the site to prevent any dirt being carried out into the public road. A road sweeper will be employed as required to keep the public road around the site clean.

2.4.3 Site Preparation Works and Establishment of Construction Services

The site area shall be enclosed with hoarding, details of which are to be agreed with Dublin City Council. Hoarding panels shall be maintained and kept clean for the duration of the project. Perimeter hoarding will be provided around the site to provide a barrier against unauthorized access from the public areas. Controlled access points to the site, in the form of gates or doors/ turnstiles, shall be kept for any time that these areas are not monitored (e.g., outside working hours).

It is envisaged that the northern footpaths shall be utilised for scaffolding. Monarflex sheeting may be used to help ensure the safety of passers-by below.

Prior to the commencement of any works a utility survey shall be carried out to identify existing services. All services on site shall be disconnected, diverted or removed as agreed with service providers.

The Site compound including offices and welfare facilities is provisionally planned to be located off site (or in as stacked cabins with a gantry), near site will provide, portable sanitary facilities, equipment storage, parking etc for contractors for the duration of the works. The Site compound will be fenced off for health and safety reasons so that access is restricted to authorised personnel only.

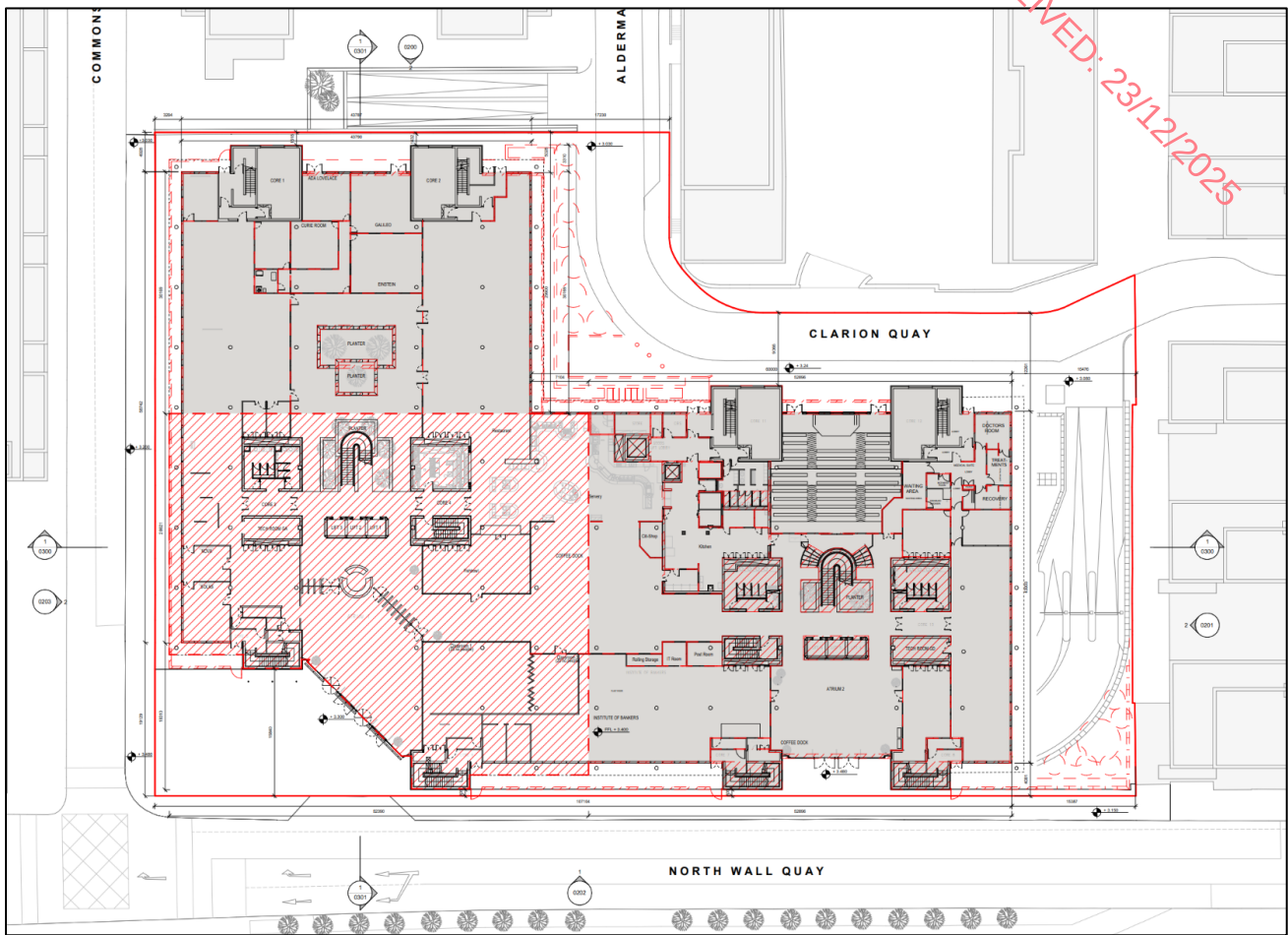
On-site facilities will consist of:

- ▶ a materials and equipment storage area;
- ▶ a site office and meeting room;
- ▶ staff welfare facilities (e.g., toilets, drying room, canteen, etc.)

2.4.4 Demolition and Construction

Part-demolition of the existing buildings on the site is required to facilitate the Proposed Development. The ground floor demolition plan can be seen below. Partial demolition of all existing floors will take place. See Henry j Lyons drawing pack submitted with the planning application for full details.

Figure 2-6 Ground Floor Demolition Plans (Source: HJL drawing 1NWQ-HJL-AX-00-DR-A-0050)



It is anticipated that part of the existing 6-storey building will be demolished utilising a system of back-propping and mini-pulverisers (Brokk or similar). The existing building would be back-propped to allow the pulveriser to locally demolish the structure carefully. It is envisaged that this would be loaded at the existing ramp area using a grab unit and hauled away. This area, once demolished, may provide a location for the placement of a mobile crane to facilitate further demolition stages. Where feasible, sections of the building may be cut up and craned onto vehicles to be hauled away and processed off-site.

An outline Demolition Method Statement for the proposed development has been prepared by CS Consulting (2025) sets out the detailed methodology for the demolition works. The Demolition Method Statement is provided for Planning Permission purposes only. An outline Construction Management Plan has also been prepared by CS Consulting. The construction contractor must develop a detailed Construction Environmental Management Plan (CEMP) including proposed demolition works prior to works taking place at the site. The Contractor must ensure that all demolition material is managed, stored and disposed of in an appropriate manner in accordance with all relevant waste legislation. Work shall be carried out in accordance with BS EN 6187: 2011 Code of Practice for Full and Partial Demolition.

The existing single storey basement is constructed in reinforced concrete box to the site perimeter. The existing concrete structure will be piled through with appropriate types of piles. New piles for new development shall be stitched into the existing foundations, with foundations strengthened where required.

The overall demolition works will include:

- ▶ Façade demolition.
- ▶ Demolition of a portion of the existing 6-storey building on the site at present. The building is understood to be of reinforced concrete flat slab and concrete columns (there are some areas of precast beams and steelwork to be demolished also).
- ▶ Demolition of existing roof-top plant rooms and lift rooms;
- ▶ Existing single storey basement to be piled through and strengthened to make-way for new foundations for the proposed vertical structure.

Details of the demolition methodology are set out in the Demolition Method Statement prepared by CS Consulting (2025)

Construction techniques will include back propping and mini pulverisers, mechanical excavation, piling, structural steel frame building construction, mass concrete rising walls construction, steel roof beam construction, and unitised/stick build façade construction and curtain walling.

A number of cranes may be erected on the project to assist with the superstructure and façade works.

2.4.5 Construction and Demolition Equipment, Techniques and Materials

The typical construction plant equipment expected to be used during the construction phase is:

- ▶ Tracked excavator;
- ▶ Tracked dumper or tractor and trailer;
- ▶ Articulated and rigid trucks ;
- ▶ Bulldozers, excavators, backhoes and ancillary equipment;
- ▶ Concrete delivery trucks and pumps;
- ▶ Scissor, boom and fork lifts,
- ▶ Tower Crane, Mobile Crane, teleporter;
- ▶ Chains / small tools, concrete pump, concrete vibrator; and
- ▶ Brokk mini-pulverisers or similar

Construction techniques will include back propping and mini pulverisers, mechanical excavation, piling, structural steel frame building construction, mass concrete rising walls construction, steel roof beam construction, and unitised/stick build façade construction and curtain walling.

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.

Where possible it is proposed to source general construction materials from the local area to minimise transportation distances. Specialised ICT equipment will likely be imported.

All deliveries to site will be scheduled to ensure their timely arrival and avoid need for storing large quantities of materials on site. Deliveries will be scheduled outside of peak traffic hours, to avoid disturbance to pedestrian and vehicular traffic in the vicinity of the site.

Lorries/trucks will be properly enclosed or covered during transportation of friable construction materials and spoil to prevent the escape material along the public roadway. Where possible it is proposed to source general construction materials from the local area to minimise transportation distances.

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. Liquid materials, such as fuels for construction vehicles, will be stored within temporary bunded areas, doubled skinned tanks or bunded containers (all bunds will conform to standard bunding specifications) to prevent spillage.

As detailed in the Climate Action Energy Statement (BPC Engineers, 2025), as part of the overall embodied carbon reduction strategy, the design is targeting that at least 30% of the cement will be replaced by Ground Granulated Blast Furnace Slag. The project will also target 90% recycled content in rebar and 20% recycled content in structural steel.

2.4.6 Site Utilities and Infrastructure During Demolition and Construction

2.4.6.1 Electricity, Telecommunications and Gas

During construction, contractors will require temporary power for onsite accommodation, and construction equipment /plant. The power requirements will be relatively minor.

Electricity will be provided to the site via the national grid, subject to the restrictions and requirements of ESB Networks. Construction plant shall be powered by mains electricity wherever possible, rather than by generators.

The construction site will require internet phone connectivity for external communication with clients, contractors, and suppliers. Mobile phones are expected to be used for this purpose. Internet connectivity will be achieved through the use of wireless networks.

The insulation of telecoms and ESB electrical infrastructure is not anticipated to cause any disruption off site beyond that of any standard connection works.

A connection to the Natural Gas mains is not required for the construction phase. Once planning has been granted and an application for the removal of Gas services will be submitted into Gas Networks Ireland. It is anticipated that the removal of the gas connection to the site will not cause any disruption beyond that which is necessary by the Gas Networks Ireland.

2.4.6.2 Groundwater and Surface Water Drainage

During excavation works to facilitate piling and other excavation works dewatering (removing of perched groundwater) may necessary to create a dry working environment and prevent water from seeping into the excavation and flooding the construction site.

The contractor will engage with a specialist to install a dewatering system to ensure the works can be carried out safely. The groundwater will be pumped from the local excavations and undergo treatment on-site which would enable pumped groundwaters to be disposed of via re-charge wells, or to sewer under discharge licence. A discharge license will have to be attained from Dublin City Council to pump to the sewer. Treated water will require continual monitoring of flow and to check that the water quality standards are compliant with the requirements of the discharge license.

It will not be permitted to discharge surface waters into any newly constructed storm water systems or existing watercourse without adhering to the conditions of a discharge licence and agreeing the same with the Design Team, Site Manager and Local Authority Area Engineer. Measures will be employed to protect surface water in the receiving environment during construction, and to prevent its contamination by direct run-off or by infiltration from the development site. An Emergency Response Plan shall be prepared, and procedures outlined in a discharge licence will be followed.

An Outline Construction Management Plan (oCMP) has been developed by CS Consulting and is included with this application. The oCMP will be updated by the Construction Manager, Environmental Manager, Resource Manager and/or Ecological Clerk of Works, as required if site conditions change, and for any planning conditions that may be imposed. The oCMP will be implemented and adhered to by the construction Contractor(s). See Chapter 6 (Hydrology) for a full description of mitigation measures proposed. The oCMP will incorporate mitigation measures outlined in the EIA report as they relate to the construction phase.

2.4.6.3 Foul Wastewater

Welfare facilities will be provided for the construction workers on site during the construction works. It is anticipated that for the initial stages of construction portable sanitary facilities will be provided. Foul drainage from site offices and compounds, where not directed to the existing wastewater network, shall 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 temporary connection for foul water drainage will be made to the public network. The locations and size of the temporary connection will be determined through consultation with Uisce Éireann and DCC and shall be subject to any restrictions and requirements they may impose.

2.4.6.4 Potable Water Supply

Water supply to the site will be provided by means of a temporary connection to the public watermain. The locations and size of the temporary connection will be determined through consultation with Irish Water and Dublin City Council and shall be subject to any restrictions and requirements they may impose.

Water will be required for welfare facilities, dust suppression and general construction activities.

2.4.7 Construction Staffing and Working Hours

It is anticipated that the construction of the facility will be completed during normal construction hours i.e. 7am to 6pm Monday to Friday, and 8am to 2 pm on Saturdays. However, it may be necessary for some construction operations to be undertaken outside these times, for example, service diversions and connections, concrete finishing and fit-out works. Any such works will be complete with the advance agreement of DCC. Such occurrences will be kept to a minimum and take place over a short timeframe and as such are unlikely to cause excessive disturbance.

It is estimated that there will initially be 100 - 200 staff on site on a typical day, however during peak construction periods this is expected to fluctuate up to 600 staff and contractors on site per day. Site staff will include; management, engineers, construction crews, supervisors, environment health and safety personal, and maintenance contractors.

2.4.8 Landscaping/Reinstatement

Once the majority of the construction works are completed the landscaping will be completed in accordance with the specification of the project landscape architect and to the agreement with the local authority.

The landscaping process involves restoring the site by adding new plantings, trees, shrubs, grasses, and other features to create an attractive and functional outdoor space. This process may include installing irrigation systems, walkways, lighting, seating, and other amenities to enhance the usability of the outdoor space.

2.4.9 Commissioning Phase

The commissioning involves a process of verifying and testing that all the building systems and components are functioning as intended and meeting the necessary standards and regulations. This process typically includes the mechanical, electrical, plumbing, and fire protection systems, as well as the architectural finishes and other elements of the building.

The process typically involves pre-commissioning planning, construction and installation, testing and verification, training and documentation, final acceptance, and post-occupancy evaluation.

To carry out this process, specialist contractors will be mobilised, who will work on a phased basis as each section /floor of the building is completed. The commissioning process will involve a series of tests and inspections to ensure that the building systems and components are functioning correctly and meeting the necessary standards. For example, this may include testing the heating, ventilation, and air conditioning (HVAC) systems to ensure they are delivering the required airflow and temperature control, checking the plumbing systems for leaks and proper drainage, and testing the fire protection systems to ensure they are functioning correctly.

Overall, the commissioning process is an essential part of the construction and operation of a commercial development. It helps to ensure that the building systems are installed correctly, are functioning as intended, and are meeting the project requirements.

The commissioning will be carried out over a period of several months. The commissioning phase is included in the proposed construction timeline.

2.4.9.1 Construction and Environmental Management

2.4.9.1.1 Outline Construction Management Plan

CS Consulting and the project team have prepared Outline Construction Management Plan (2025) that is included with the application documentation. This outlines and explains the construction techniques and methodologies which will be implemented during construction of the Proposed Development.

The oCMP mitigation measures will be implemented to ensure that pollution and nuisances arising from site clearance and construction activities is prevented where possible and managed in accordance with best practice environmental protection.

Construction works and the proposed mitigation measures are informed by best practice guidance and legislation including but not limited to:

- ▶ Safety, Health and Welfare at Work (Construction) Regulations 2013 (S.I. No. 291 of 2013)
- ▶ Integrated Pollution Prevention and Control Directive (1996/61/EC)
- ▶ The Waste Framework Directive (Directive 2008/98/EC)
- ▶ Environmental Protection Agency Act 1992
- ▶ Waste Management Act 1996, the Waste Management (Amendment) Act 2001 and the Protection of the Environment Act 2003
- ▶ Waste Management (Collection Permit) (Amendment)(No.2) Regulations 2016
- ▶ Waste Management (Permit) Regulations 1998 (SI No. 165 of 1998)
- ▶ Environmental Protection Agency (EPA) – Draft Best Practice Guidelines for the Preparation of Resource Management Plans for Construction & Demolition Projects – April 2021
- ▶ Local Government Water Pollution Act 1977
- ▶ Construction Industry Research and Information Association (CIRIA), Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors (C532)
- ▶ Construction Industry Research and Information Association (CIRIA) Environmental Good Practice on Site (4th edition), (C741)
- ▶ Enterprise Ireland Best Practice Guide, Oil Storage Guidelines (BPGCS005).

The oCMP 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, Resource Manager, and Ecological Clerk of Works where relevant. All personnel working on the Site will be trained in the implementation of the procedures.

The oCMP 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 oCMP will be employed on site during the construction phase. All mitigation measures outlined within this EIAR, and within the

OCMP will be implemented during the construction phase, as well as any additional measures required pursuant to planning conditions which may be imposed.

The oCMP also includes emergency response procedures in the event of a spill, leak, fire or other environmental incident related to construction. This is an active document which is continuously updated to manage risk during the construction programme.

The construction contractor will provide a further detailed CEMP that will include any subsequent planning conditions relevant to the Proposed Development and set out further detail of the overarching vision of how the construction Contractor of the Proposed Development manage the Site in a safe and organised manner.

2.4.9.1.2 Resource Waste Management Plan (RWMP)

The demolition waste will be segregated at source where practical and transferred off site for reuse, recycling and recovery, with landfill disposal only to be used where there are no available reuse, recycling or recovery options.

Chapter 13 contains a detailed description of waste management relating to construction of the Proposed Development. A site-specific Resource Waste Management Plan (RWMP) is included as Appendix 13.1 of this EIAR. This RWMP will be implemented to ensure best practice is followed in the management of waste from the Proposed Development.

It is expected that volumes of wastes generated (other than that of demolition waste and excavated material) from other construction activities will generally comprise waste generated from construction offcuts and construction workers.

During the construction phase there may be a surplus of building materials, such as timber off-cuts, broken concrete blocks, cladding, plastics, metals and tiles generated. There may also be excess concrete during construction which will need to be disposed of. Plastic and cardboard waste from packaging and supply of materials will also be generated. The contractor will be required to ensure that oversupply of materials is kept to a minimum and opportunities for reuse of suitable materials is maximised.

Waste from construction worker activities would generally be composed of organic/food waste, dry mixed recyclables (waste paper, newspaper, plastic bottles, packaging, aluminium cans, tins and Tetra Pak cartons), mixed non-recyclables and potentially sewage sludge from temporary welfare facilities provided at the Site compound during the construction phase. Waste printer/toner cartridges, waste electrical and electronic equipment (WEEE) and waste batteries may also be generated infrequently from site offices.

It should be noted that 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 construction of the Proposed Development as the exact materials and quantities may be subject to some degree of change and variation during the detailed design and construction process.

2.4.10 Potential Impacts and Mitigation Measures During Construction and Commissioning

There are potential short-term nuisances such as dust, noise, as well as the potential for pollution of groundwater associated with excavations and construction.

In order to manage these short-term impacts, a detailed 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, Resource Manager and Ecological Clerk of Works where relevant. The specific mitigation measures to address potential environmental impacts, are presented in each individual EIAR chapter.

The main potential impacts during demolition, excavation, construction, and commissioning which require mitigation are:

- ▶ Control of construction of run-off water in terms of silt runoff and dewatering (if required) (see Chapter 5 (Land, Soils, Geology & Hydrogeology) and Chapter 6 (Hydrology) for further information);
- ▶ Impacts on human beings in terms of nuisances relating to the air quality of the environs due to dust and other particulate matter generated (see Chapter 8 (Air Quality) for further information);
- ▶ Potential impacts on Natura 2000 sites (SPA and SAC) linked to the proposed development site (See Chapter 7 (Biodiversity) and the accompanying Appropriate Assessment Screening and Natural Impact Statement);
- ▶ Potential Impacts on human beings in terms of nuisances due to plant noise and vibration from equipment (see Chapter 10 (Noise and Vibration) for further information); and;
- ▶ Potential impacts on Archaeology, Architectural and Cultural Heritage during the demolition and excavation works (See Chapter 11 (Archaeology and Cultural Heritage), and Volume 3 (Heritage, Townscape, Landscape and Visual Impact Assessment) for further details;
- ▶ Potential; impacts on the road network (due to construction workers and other staff attending site (see Chapter 12 (Traffic and Transportation) for further information).
- ▶ The generation of construction waste materials generated will be soil from excavation works and litter (see Chapter 13 (Waste Management) for further information).

The potential for significant impacts depends on the type of construction activity being carried out in conjunction with environmental factors including prevailing weather conditions i.e. levels of rainfall, wind speeds and wind direction; as well as the distance to potentially sensitive receptors.

2.5 Operation Of The Proposed Development

The Proposed Development, when operational, will generate typical anthropogenic impacts associated with the usual operation of a large-scale office building.

The main potential impacts are associated with surface and foul water emissions, visual impacts and wastes generation, due to changes from a 6-storey office block to a 12-storey office block.

2.5.1 Staffing and Building Management

During the operational phase the Proposed Development will have a property management company, and inclusive of the office staff there are some general staffing requirements that will be necessary for the functioning and operational maintenance and management of the proposed office development including building/property management staff, including reception, security, maintenance and landscaping, IT etc.

CS Consulting have calculated the predicted number of office employees within the development, the following average staff density figure has been sourced from the UK Homes & Community Agency's Employment Density Guide (3rd Edition):

- ▶ General Offices (max. density) – 1 staff member per 10m² NIFA

This gives a projected total office population of 3,846 people, at full occupancy. A total of 20 no. staff members is assumed across the development's retail and cultural elements. A typical daily staff absence rate of 7% is assumed across the development as a whole (in line with CSO Labour Force Survey findings). For all assessment purposes, the proposed development's operational design population is therefore taken to be 3,596 people.

2.5.2 Transportation and Accessibility

All vehicular traffic accessing the development's basement car parking shall do so via its two- car lift off Clarion Quay, which connects at either end to Mayor Street Lower. It has likewise been assumed that all

operational-phase vehicular servicing, including passenger set-down and collection, shall be conducted on Clarion Quay.

The development shall include only a limited number of carparking spaces, a total of 32 no. spaces, located internally at basement level -1. This will equate to a reduction of carparking spaces with respect to the 164 no. car parking spaces currently provided at the existing development. Hence, most office staff will utilise alternative means of travel to the Proposed Development during the operational phase.

The development site is within a 10-minute walk of Connolly railway station, as well as the other two principal city-centre stations on the Dundalk-Dublin-Wexford railway line (Tara Street and Pearse Street). Connolly Station is also on the Maynooth-Longford-Sligo line, is connected to the southern Kildare line via the Phoenix Park tunnel, and forms the southern terminus of the Dublin-Belfast Enterprise service. Frequent Dublin Area Rapid Transit (DART) trains also serve this station, running between Howth/Malahide in the north and Bray/Greystones in the south. Commuter rail services operating to and from Connolly Station directly serve towns as far as Dundalk in the north, Wexford in the south, and Newbridge and Maynooth in the west, while Intercity services to and from this station extend as far as Belfast and Sligo.

Also within a 10-minute walk of the development site is the Docklands railway station. Commuter rail services operate between this station and the M3 Parkway Park & Ride facility near Dunboyne.

The development site is within a 4-minute walk of the George's Dock and Mayor Square – National College of Ireland tram stops, both on the Luas Red Line. Light rail services operating to and from these stops run to The Point, 1km to the east, and to Tallaght or Saggart in the south-west (11km and 15km away, respectively). Trams serve the George's Dock and Mayor Square stops at average intervals of 6 minutes at peak times. Bus stops within a 5-minute walk of the site are served by a total of 42 no. NTA-licensed bus routes operated by Dublin Bus, Bus Éireann, Go-Ahead Ireland, and other private operators.

A Workplace Travel Plan has been prepared by CS Consulting, with the following objectives:

- ▶ To encourage/increase the use of public transport, walking and cycling for development occupants and visitors, and to facilitate travel by bicycle, bus, light rail and train.
- ▶ To minimise the overall number of single-occupant vehicles trips for journeys to work and work-related travel.
- ▶ To integrate mobility management into the development decisions, policies and practices, and to work closely with governing bodies on means and use of transport services around the vicinity of the development site.
- ▶ To provide information and have resources readily available to increase awareness and continue education on sustainable modes of travel for both development occupants and visitors to the development.

The development shall include a total of 718 no. long-term bicycle parking spaces for office employees, located in a secure dedicated bicycle store at basement level-1.

The physical aspects of parking and access arrangement are discussed further for in Chapter 12 (Traffic and Transportation).

2.5.3 Site Utilities and Infrastructure (Resource Consumption)

2.5.3.1 Electricity

Once the Proposed Development is operational, electricity will be provided to the site via the national grid tying in with existing infrastructure in neighbouring areas. Electricity is required for internal and external lighting, heating, ventilation, and air conditioning (HVAC) systems, security systems, office and kitchen equipment etc. New electricity and services infrastructure will be put in place to serve the Proposed Development.

All connection works will be carried out in accordance with the requirements of the various service providers / authorities.

2.5.3.2 Telecommunications

Connections will be made to the existing services locally for internet connectivity and telephone services. The site will be provided with a telecommunications network consisting of separate incoming fibre infrastructure and provided via underground fibre ducts. This will be carried out in accordance with the requirements of the various service providers / authorities.

2.5.3.3 Surface Water Drainage

The development is required to retain stormwater volumes predicted to be experienced during extreme rainfall events. This is defined as the volume of storm water generated during a 1-in-100-year storm event, increased by 20% for the predicted effects of climate change.

It is proposed to limit the surface water run-off volume and discharge into the existing 375mm diameter storm sewer along North Wall Quay.

Please refer to CS Consulting drawing no. 1NWQ-CSC-ZZ-00-DR-C-0104, 1NWQ-CSC-ZZ-00-DR-C-0105 and 1NWQ-CSC-ZZ-00-DR-C-0106 for details of the proposed surface water drainage network layout.

2.5.3.4 Foul Wastewater

A foul wastewater connection and drainage is required for the Proposed Development for toilets and showers, hand basins, sinks, and dishwashers, etc.

Based on the development's calculated office staff population of 3,596 no. people, the maximum average effluent flow (dry weather flow or DWF) to be generated by the Proposed Development's office element has been calculated by CS Consulting to be 2.08 l/s and the corresponding peak effluent flow (Design Flow) has been calculated to be 9.365 l/s.

2.5.3.5 Potable Water Supply

A water supply is for the Proposed Development required for a variety of purposes, including, drinking water, flushing toilets, washing hands, and other sanitary purposes; cleaning and maintaining the building, including washing floors, cleaning equipment, and maintaining landscaping. As well as a requirement for fire protection sprinkler systems, and HVAC systems.

Based on the development's calculated office staff population of 3,596 no. people, the maximum average potable water demand to be generated by the Proposed Development's office element has been calculated. The average daily water demand for the proposed office space is 2.08 l/s with a peak water demand of 10.45 l/s (CS Consulting, 2025).

2.5.3.6 Natural Gas

There is no requirement for natural gas connections.

2.5.4 Waste Generation and Management

During the operation phase, waste will be generated by the office space and community space. One dedicated waste storage areas have been allocated for the tenants at basement level -1. The waste storage areas have been appropriately sized to accommodate the estimated waste arisings. The waste storage area has been allocated to ensure a convenient and efficient management strategy with source segregation a priority.

Bins from the Proposed Development will be brought to the collection point for collection immediately prior to collection by the waste contractor. There will be no staging area provided and bins/bales will be brought to grade for collection at the time of arrival of the waste collection vehicle to minimise the impact on pedestrians. Waste will be collected by permitted waste contractors and removed off-site for re-use, recycling, recovery and/or disposal.

Networks of waste collection, treatment, recovery and disposal infrastructure are in place in the region to manage waste efficiently from this type of development. Waste which is not suitable for recycling is typically sent for energy recovery. There are also facilities in the region for segregation of municipal recyclables which is typically exported for conversion into recycled products (e.g. paper mills and glass recycling).

An Operational Waste Management Plan (Appendix 13.2 of Chapter 13) has been prepared by Awn has been prepared which provides a strategy for segregation at source, storage and collection of wastes generated within the development during the operational phase including dry mixed recyclables, organic waste, mixed non-recyclable waste and glass as well as providing a strategy for management of waste batteries, WEEE, printer/toner cartridges, chemicals, textiles, waste cooking oil and furniture (to be supplied). The Plan will comply with all legal requirements, waste policies and best practice guidelines and demonstrates that the required storage areas have been incorporated into the design of the development.

2.5.5 Sustainability, Energy Efficiency, and Resource Use

Photovoltaic (PV) Cell technology has been incorporated into the proposed development design at roof level. PV Cells technology involves the conversion of the sun's energy into electricity. This electricity can be used to offset electricity consumption from the grid or it could be used to heat hot water through an electric immersion if electricity demand were low.

Air Source Heat Pumps (ASHPs) have been incorporated into the proposed development design. ASHP's take heat from the air outside and release it inside. The technology works based on a vapor-compression refrigeration cycle. ASHPs supply more energy than they consume, by using this vapour compression cycle to extract heat from their surroundings and release it elsewhere (inside). The proposed design uses multifunctional (4-pipe) heat pumps for generating low temperature hot water.

Water saving devices are to be considered for use within the Proposed Development units, in order to conserve the use of water, as part of the internal fit-out. Water metering arrangements are to be upgraded at the connection location, to meet Uisce Éireann criteria. A bulk water meter is to be provided at the connection to the public watermain at the development entrance. All metering is to be provided in accordance with Uisce Éireann requirements.

2.5.6 Potential Impacts During Operation and Mitigation Measures

The proposed development shall incorporate several design elements (mitigation by design) intended to mitigate the impact of the proposed development during the operational phase on the surrounding environment.

The main potential impacts during operation which require mitigation are:

- ▶ Impacts on human beings in terms of nuisances relating to the air quality of the environs due to dust and other particulate matter generated (see Chapter 8 (Air Quality) for further information);
- ▶ Potential impacts on Natura 2000 sites (SPA and SAC) linked to the proposed development site (See Chapter 7 (Biodiversity) and the accompanying Appropriate Assessment Screening and Natural Impact Statement);
- ▶ Impacts on human beings in terms of nuisances due to plant noise and vibration from mechanical and services plant (see Chapter 10 (Noise and Vibration) for further information);

- ▶ Interventions in the visual and landscape environment from the introduction of new buildings and structures (see Volume 3 (Heritage, Townscape, Landscape and Visual Impact Assessment) for further information);
- ▶ Effects on the road network due to staff (see Chapter 14 (Traffic and Transportation) for further information); and
- ▶ The management and segregation of operational waste generated (see Chapter 15 (Waste Management) for further information).

Each chapter of the EIA Report prepared assesses the potential impact of the operation of the proposed development on the receiving environment. Please refer to each specialist chapter respectively.

2.6 Changes To The Project

The lifespan of the Proposed Development is not defined but it is anticipated that it will be maintained, and periodic upgrading and re-fit undertaken over the long-term (i.e. 15-60 years).

If the Proposed Development is no longer required, then full decommissioning and demolition in accordance with prevailing best practice will be undertaken.

2.7 Description Of Other Related Projects

There are no other known related projects (such as Uisce Éireann network upgrades) that are required in order to facilitate the Proposed Development.

2.8 Description Of Potential Cumulative Developments

As part of the assessment of the impact of the Proposed Development, account has been taken of relevant developments that are currently permitted, or under construction and substantial projects for which planning has been submitted within the surrounding areas. The potential for Cumulative Impacts arising from these other related projects has been addressed within each specialist chapter of this EIA Report (Chapter 4 – 14).

The identification of relevant, currently permitted, and future developments follows a two-fold approach. Firstly, a comprehensive search is undertaken to identify all developments within the vicinity of the Proposed Development site. Subsequently, a review of the magnitude, size, scale, location and current status of these developments is undertaken to assess their potential to contribute to significant cumulative effects. This secondary stage is conducted in alignment with the 2017 guidance from the European Union (EU), which underscores the necessity to focus on effects that are either inherently significant or possess the potential for significance. This comprehensive review is crucial in the context of assessing the potential cumulative effects of a proposed project. It aids in gauging the extent to which these existing and future undertakings might, interact with the Proposed Development, and allow for the exclusion of insignificant developments from any further consideration. This strategic approach ensures that resources are not expended on negligible or inconsequential effects.

The initial stage of this process is facilitated through the utilisation of the planning search tools listed below which collectively hold a comprehensive inventory of planning applications, which systematically generated a comprehensive list of relevant planning permissions granted within the immediate environs of the Proposed Development. A combination of online mapping tools was used for this search including:

- ▶ The Department of Housing, Local Government and Heritage EIA Portal¹
- ▶ An Bord Pleanála Map Search²
- ▶ My Plan National Planning Application Map Viewer³

¹ <https://www.gov.ie/en/publication/9f9e7-eia-portal/>

² <https://www.pleanala.ie/en-ie/Map-search>

³ <https://www.myplan.ie/national-planning-application-map-viewer/>

► Dublin City Council Planning Map Viewer⁴

The search also showed a significant number of retention and other minor alterations. These permissions were for established business within the vicinity of the development and have been considered as a part of the overall project impact. Given their proximity to the Proposed Development, scale, and extent the majority of developments in Appendix 2.1 are not likely to result in any cumulative effect, with the Proposed Development.

2.8.1 Potential Impacts from Cumulative Development and Mitigation Measures

The potential for Cumulative Impacts arising from these other related projects has been addressed within each specialist chapter of this EIA Report (Chapter 4 – 14). The precise timeline for the construction of the developments listed in Appendix 2.1 are not known and as such, for the purposes of this EIAR the precautionary principle has been applied by assessing in this EIAR the potential for cumulative construction impacts occurring in tandem with the Proposed Development.

This EIAR also considers the likelihood for cumulative impacts associated with the operational phase of the Proposed Development and the operational phase of the developments listed in Appendix 2.1.

Any future application on these lands will be subject to planning approval and environmental assessment as required. Any new development proposed on the lands after the submission of the Proposed Development would be accompanied by an EIA, or EIA Screening as required and take into consideration the development of this site.

⁴https://mapzone.dublincity.ie/MapZonePlanning/MapZone.aspx?map=PlanningApplication&search=Plan_Ref&tooltip=Plan_Ref/



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Chapter 3 – Alternatives

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3. ALTERNATIVES

3.1 Introduction

The requirement to consider alternatives within an EIAR is set out in Annex IV (2) of the EIA Directive (Directive 2011/92/EU, as amended by Directive 2014/52/EU), and in Schedule 6 of the Planning and Development Regulations, 2001, as amended ("the Regulations"), which states:

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.

Schedule 6(2)(b) of the Regulations elaborates on this requirement by requiring the following information:

(b) a description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) 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 selecting the chosen option, including a comparison of the environmental effects;

Reasonable alternatives may include project design proposals, location, size and scale, which are relevant to the proposed development and its specific characteristics. The regulations require that an indication of the main reasons for selecting the preferred option, including a comparison of the environmental effects to be presented in the EIAR.

The EPA's *Guidelines on the information to be contained in Environmental Impact Assessment Reports (2022)* – states:

The presentation and consideration of the various reasonable alternatives investigated by the developer is an important requirement of the EIA process.

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.

As such, the consideration and presentation of the reasonable alternatives studied by the project design team is an important requirement of the EIA process.

This chapter provides an outline of the reasonable alternatives examined during the design phase. It sets out the main reasons for choosing the development as proposed, taking into account and providing a comparison on the environmental effects.

3.2 Methodology

This chapter assesses the evolution of the Proposed Development and the alternatives examined by the Applicant relating to the location, size and scale, and project design and processes of the Proposed Development. This chapter provides a justification for the Proposed Development and provides a comparison of the environmental effects of each alternative option.

- ▶ Alternatives must be relevant to the proposed development and its specific characteristics. In line with the EIA Directive and EPA guidance, this chapter considers the potential alternatives under the following headings: Do nothing alternative;
- ▶ Alternative project locations;
- ▶ Alternative layout, size and scale;
- ▶ Alternative processes; and
- ▶ Alternative mitigation measures.

This chapter describes the alternatives that were considered for the Proposed Development, where applicable, under each of these headings and the reasons for the selection of the chosen options. Where applicable, the alternatives were described with an indication of the main reasons for selection, taking into account environmental considerations alongside design and operational requirements.

3.3 Do Nothing Alternative

If the Proposed Development does not proceed, the existing development would remain in place.

A do-nothing scenario would result in the current environmental conditions continuing. No new construction or operational related impacts (e.g., noise, dust, traffic) would occur.

The demand for additional office space in Dublin City Centre would still persist, necessitating the construction of the Proposed Development or multiple smaller developments elsewhere. The designated site for the proposed development is classified as 'Zone Z5 - City Centre' in the Dublin City Development Plan 2022 – 2028, for which the zoning objective is to “*consolidate and facilitate the development of the central area, and to identify, reinforce, strengthen and protect its civic design character and dignity*”. Leaving the site unchanged would conflict with this zoning objective and represent an inefficient use of strategically located land.

Considering an alternative location for the project would essentially mean adopting a 'do-nothing' approach for the current site.

While the do-nothing alternative avoids new environmental impacts, it does not deliver the intended economic or planning benefits and would be underutilising this strategically positioned city centre site. For these reasons, the do-nothing alternative was not selected.

3.4 Alternative Project Locations

As noted in Section 4.13 of the Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (August 2018) “some projects may be site specific so the consideration of alternative sites may not be relevant.” Similarly, the EPA Guidelines (2022), acknowledge that in some instances alternative locations may not be applicable or available for a specific project which is identified for a specific location.

The current zoning designation of the site already recognises its compatibility with the Proposed Development, ensuring that it is in line with the intended land use objectives set forth by the local authority. Moreover, the presence of nearby developments of a similar nature further supports the appropriateness of the proposed project within the surrounding context.

From an environmental perspective, the current site offers significant advantages due to the availability of necessary services and infrastructure in the vicinity enhances the feasibility and practicality of the proposed development. This ensures that the site is adequately equipped to accommodate the project's requirements without significant challenges or limitations. Relocating the development could increase car dependency, generate higher emissions, and require additional infrastructure, leading to greater cumulative environmental impacts.

Considering the site-specific nature of the project, the present zoning of the site, the surrounding land uses, the close proximity to similar associated developments, and the availability of necessary services and infrastructure, it is evident that the proposed development aligns with the most suitable use for this particular location. Given these factors, beyond the consideration of alternative locations at a strategic level, it is deemed unnecessary to explore alternative site locations for this project.

3.5 Alternative Layout, Size and Scale, and Design

The project design team lead by HJL Architects undertook a comprehensive design process to determine an effective and efficient design and layout of the proposed development that had regard to the environmental sensitivities of the site, and the surrounding site context.

The design evolved as part of a multi-disciplinary process with input from the EIAR Team, design team and the Applicant. This process was informed by:

- ▶ The potential for significant environmental effects which informed this consideration primarily related to cultural heritage and conservation, landscape and visual impact, sunlight and daylight assessment and potential impacts on the amenities of established properties and uses in the area.
- ▶ The alternative designs and layouts for the site were considered and assessed with regard to environmental effects prior to the finalisation of the site layout plan and design of the proposed development by the design team.
- ▶ The arrangements considered the environmental sensitivities associated with surrounding land use and integration with the consented and proposed developments in the area.

The Architectural Design Statement prepared by HJL Architects included with the planning application sets out the design process undertaken.

The reasonable site alternative layouts were assessed before finalising the proposed design:

- ▶ Option 1 – 12 Storey Extend Option (Chosen Design Submission)
- ▶ Option 2 – 17 Storey Extend Option
- ▶ Option 3 – New Build – 17-Storey Over Basement Option

3.5.1 Option 1 – 12 Storey Extend Option

Option 1 considers the partial demolition (9,740 m²) of the existing 5-6 storeys office building (34,507 m²) at 1 North Wall Quay. 24,767 m² of the existing building is to be retained along with the construction of an additional 37,115 m².

The Proposed Development comprises:

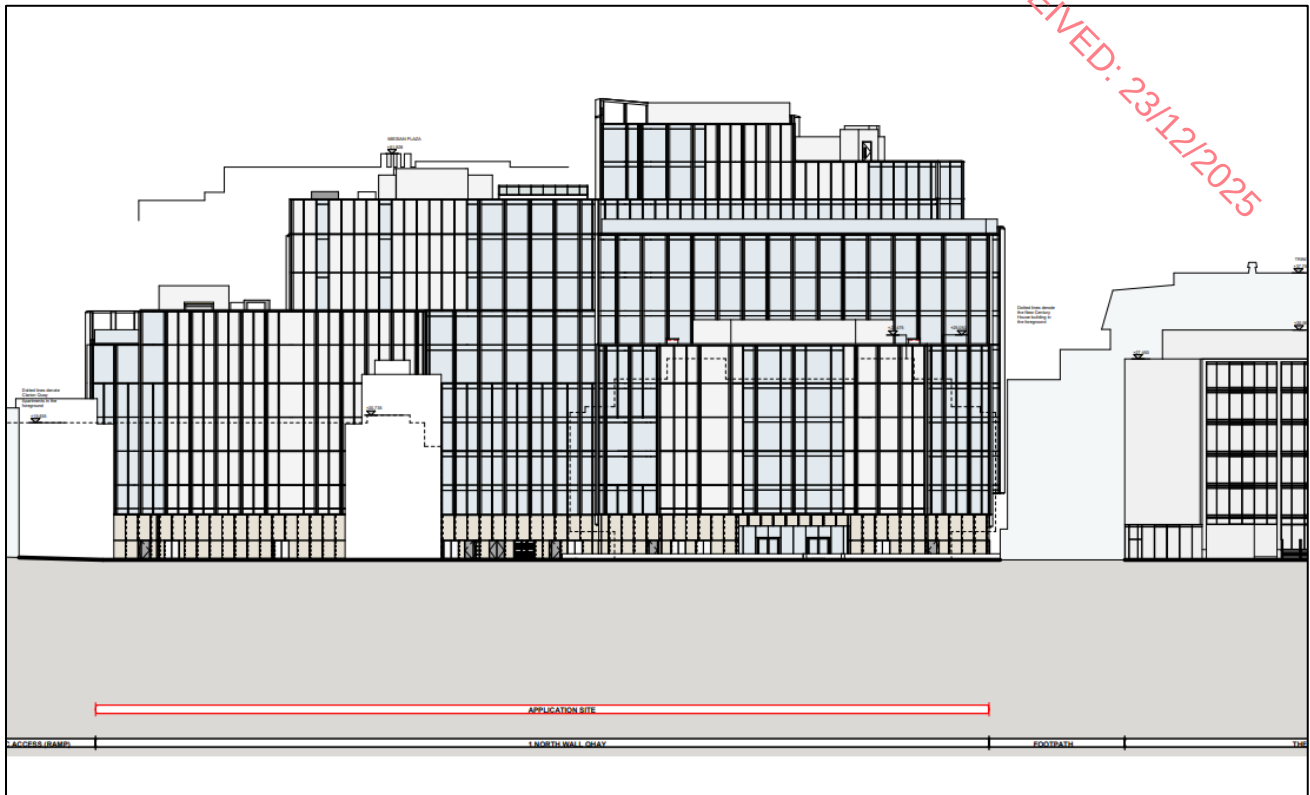
- ▶ Partial demolition, removal of existing facades and extension of existing 5-6 storeys office building;
- ▶ The resulting proposed extended office development ranges in height from 7 no. to 12 no. storeys in height over existing basement comprising office accommodation and 2 no. community spaces;
- ▶ The development comprises 4 no. blocks ranging in heights of 7-11 no. storeys (Block A), 12 no. storeys (Block B), 10 no. storeys (Block C) and 7 storeys (Block D) which represents a maximum height increase of 6 storeys above the existing building;
- ▶ Office accommodation is proposed at ground floor to 11th floor level;
- ▶ 2 no. internal community spaces are provided at ground floor level;
- ▶ Outdoor terraces are provided at 4th, 5th, 6th, 8th, 9th, and 11th floor levels;
- ▶ Provision of a shared atrium between Block B and Block C;
- ▶ Green roofs and blue roofs are provided across the scheme;
- ▶ 32 no. car parking spaces will be provided at basement level to serve the development. This represents a reduction of 132 no. car parking spaces in comparison to the existing office building on the site;

- ▶ 718 no. bicycle spaces and 4 no. motorcycle spaces are proposed at basement level;
- ▶ The development includes the fill and cover of existing access ramp to existing basement to provide a landscaped pocket park to the east of the building connecting North Wall Quay with Clarion Quay. The park will include a pedestrian link from North Wall Quay to Clarion Quay.
- ▶ Provision of upgrades to existing public realm within application site including public footpaths along North Wall Quay, Commons Street and Clarion Quay;
- ▶ All ancillary and associated works to facilitate the development including plant, switch rooms, generators, water tanks, sprinkler plant, ESB substations, landscaping, telecommunications infrastructure and utilities connections and infrastructure.

Figure 3.1 Ground floor plan for Option 1 (Source: HJL Architects drawing ref: 1NWQ-HJL-AX-00-DR-A-0100)



Figure 3.2 Northern Elevation of Option 1 (Source: HJL Architects drawing ref: 1NWQ-HJL-AX-ZZ-DR-A-0200)



3.5.2 Option 2 – 17 Storey Extend Option

Option 2 considers retaining and refurbishing the current 6-storey over basement structure, while extending the current building an additional nine floors. The result of Option 2 is an 17-storey over 1 storey basement structure.

Option 2 would result in the establishment of 87,244 m² GIA (including basement).

The 17 Storey Extend option assumes the majority of the existing structure (foundations, floor slabs, beams, columns) are retained, building is extended so that the floor area is the same as Option 3 (see below), only includes a single storey basement as per the existing building and the basement floor area is assumed to increase slightly to approximately match the area of Option 3, but the rest of the additional floor area is created in the superstructure.

3.5.3 Option 3 – New Build – 17-Storey Over Basement

Option 3 considers the demolition of the existing development and the construction of 17-storey office building over 2 no. basement levels. Option 3 entails the complete demolition of the existing structure. Option 3 represents the development that was previously refused by DCC (Reg. Ref. 3274/24), however this remains an alternative that the developer has considered.

Option 3 would result in the establishment of 87,244 m² GIA (including basement) and of 49,397 m² net area of office space.

Figure 3.3 Ground floor plan for Option 3 (Source: HJL Architects)

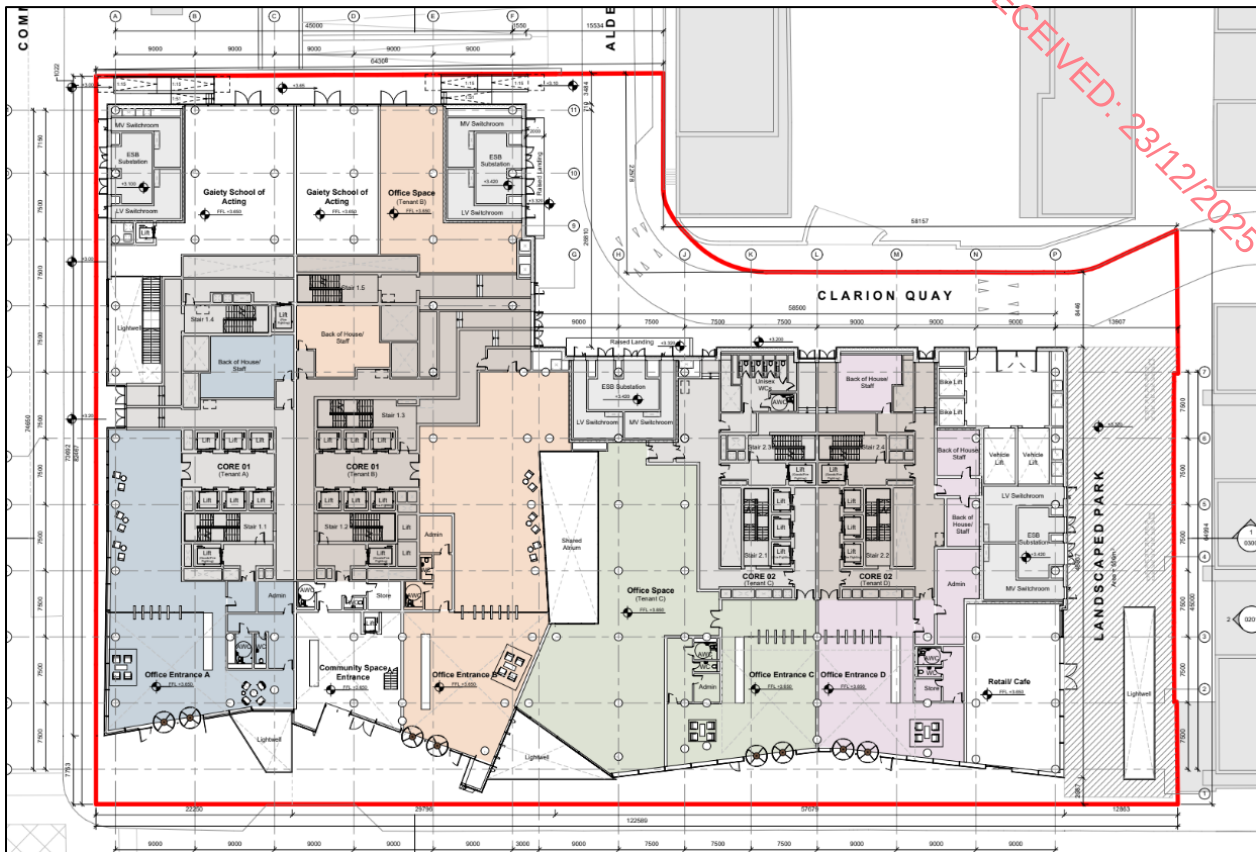
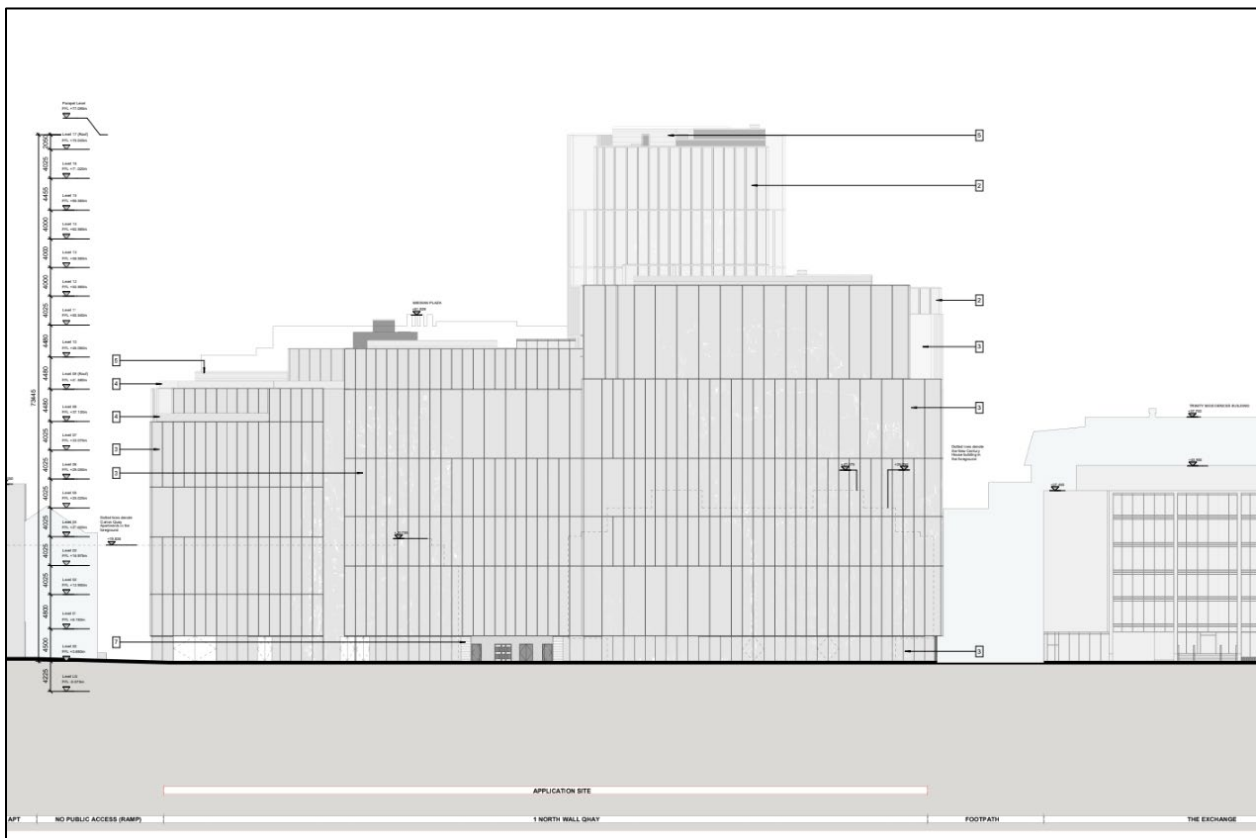


Figure 3.4 Northern Elevation of Option 3 (Source: HJL Architects)



3.5.4 Consideration and Chosen Option

The project team evaluated the feasibility and advantages of moving forward with the options detailed in Sections 3.5.1, 3.5.2 and 3.5.3. This included reviewing the architectural and engineering plans, financial implications, and the overall suitability of the options. This section documents the alternatives and the environmental reasons for selecting the preferred option.

Option 1 – 12-Storey Extend Option (Chosen Design Submission)

This option includes a partial demolition and vertical extension of the existing structure to 12 storeys. Represents a moderate scale of development, closely aligned with surrounding building massing and urban context.

Option 2 – 17-Storey Extend Option

This option includes a partial demolition with a more substantial vertical extension to 17 stories. Offers increased floor space but introduces greater visual prominence and potential for overshadowing impacts.

Option 3 – New Build – 17-Storey Over Basement Option

Complete demolition and redevelopment. Provides design flexibility but results in significant demolition waste, higher embodied carbon, and increased construction-phase impacts. This option reflects a previously refused scheme (DCC Reg. Ref. 3274/24) and is included for completeness.

Main Environmental Considerations

Option 1 and Option 2 considers only a partial demolition of the existing structure which results in a reduced impact on land soils geology and hydrogeology; air quality and noise and vibration during the demolition/construction phase.

Option 1 represents development more closely resembling the massing of the surrounding buildings with respect of Option 2 and Option 3 and hence a lesser chance of visual impact during the operational phase.

It is determined that Option 1 is the optimal choice. Factors such as visual and townscape impact and evolving design preferences influenced this decision. The selected option, Option 1 Chosen Design, was deemed to better align with the project's current goals and objectives.

In respect of environmental effects, Table 3.1 below outlines where an option is more preferred over another and where the preference is neutral.

The chosen design—Option 1 (12-Storey Extend Option)—represents the most balanced solution, achieving project objectives while minimising environmental impacts.

Table 3.1 Summary of route preference for each environmental factor

Environmental Factor	Phase	Option 1	Option 2	Option 3
Human Health and Populations	Demolition and Construction			
	Operational			
Land, Soils, Geology and Hydrogeology	Demolition and Construction			
	Operational			
Hydrology	Demolition and Construction			

	Operational			
Biodiversity	Demolition and Construction			
	Operational			
Air Quality	Demolition and Construction			
	Operational			
Climate	Demolition and Construction			
	Operational			
Noise and Vibration	Demolition and Construction			
	Operational			
Archaeology and Cultural Heritage	Demolition and Construction			
	Operational			
Traffic and Transportation	Demolition and Construction			
	Operational			
Material Assets - Waste	Demolition and Construction			
	Operational			
Material Assets - Utilities	Demolition and Construction			
	Operational			
Landscape and Visual	Demolition and Construction			
	Operational			

3.6 Alternative Processes (Technologies)

The EPA's EIA Guidelines (2022) state that within each design solution there can be a number of different options as to how the processes or activities of the development can be carried out. These can include management of emissions, residues, traffic and the use of natural resources. A key consideration in the various options which were considered, as discussed above, was the overall scale of development proposed and the resulting impact on neighbouring and residential amenities.

The following passive strategies will be implemented to reduce the energy consumption for the proposed development:

- ▶ Low air permeability
- ▶ High performance u-values
- ▶ Limiting thermal bridging
- ▶ Optimisation of solar gain
- ▶ Maximising daylight

Various renewable energy technologies included as part of the design process:

Air Source Heat Pumps (ASHP) (Multifunctional [4-pipe] heat pumps.)

Air source heat pumps take heat from the air outside and release it inside. The technology works based on a vapor-compression refrigeration cycle. They are highly efficient because they produce more heat energy than the electricity they use.

An air source heat pump system is one of the most efficient solutions to supply heating hot water for this development. These systems will supply low-temperature hot water for space heating, while connected units will also produce domestic hot water for taps and showers. This system was chosen because it is reliable, energy-efficient, and suitable for the building's needs.

Photovoltaics (PV)

PV Cell technology has been incorporated into the proposed development design at roof level. PV Cells technology involves the conversion of the sun's energy into electricity. This electricity can be used to offset electricity consumption from the grid or it could be used to heat hot water through an electric immersion if electricity demand were low.

Other Alternative renewable energy technologies that were considered but are not proposed are:

Ground Source Heat Pump

Ground source heat pumps (GSHPs) use the same principle as air source heat pumps but instead of taking heat from the air they take heat from the ground. This is known as ground heat exchange (GHE) or "geo-exchange". The primary advantage of ground heat exchange over air heat exchange is that higher annual efficiencies can typically be achieved due to fairly constant moderate temperatures in the ground. The major issue with a ground-exchange system for this development is that they require a balanced heating and cooling load in order to operate efficiently over a sustained period of time. Balanced heating and cooling conditions do not exist for this development. It is heating dominated. GSHPs are considerably more expensive to install. Due to the unbalanced load affecting the long-term operating efficiency there is unlikely to be an attractive return on investment (ROI). For these reasons, and considering the environmental impact of extensive ground works, this option was not chosen.

Biomass Heating

Biomass heating works on the principle that the combustion of wood chip or pellets can create heat for space heating and hot water loads. The combustion of biomass could be done in a dedicated biomass boiler or a CHP (combined heat and power) plant. This technology requires substantial space allowance, access for delivery trucks, a buffer vessel and considerable space for fuel storage. The system also requires regular maintenance to remove ash, etc. Additionally, the use of biomass calls for a continuous local supply of suitable fuel to be truly sustainable. Concerns exist over the level of NOx, SOx and other particulate emissions from burning biomass, particularly in urban areas. Given these issues and the potential environmental drawbacks, biomass heating was not considered suitable for this development.

Solar Hot Water Collectors

Solar hot water collectors (SHWC) utilise solar radiation to heat water for use in buildings. Solar collectors are typically designed to meet a development's base domestic hot water load. For office developments, the hot water demand is usually a relatively low proportion of the overall heating demand, unless there are large changing facilities with showers. Even so, a SHWC system would require substantial roof space to generate enough hot water for a development of this scale. This would also compete with Photovoltaics (PV) which will be more efficient at heating water if coupled with an electric water heater. For these reasons, solar hot water collectors were not included in the design.

Small Scale Wind (Micro Turbines)

Micro wind turbines can be fitted to the roof of a building but in urban environments, it is difficult to achieve consistent high wind speeds with laminar flow that would make the operation of turbines viable. Vertical axis wind turbines (VAWT) are generally the most suitable for urban applications. For the proposed development VAWTs would have to be placed close to the edges of the roof. This would interfere with the window cleaning systems. There are also obvious aesthetic and noise issues to contend with. These factors make micro wind turbines impractical for this development. Instead, the design focuses on technologies that are proven to work well in city environments, such as air source heat pumps and solar panels.

3.7 Alternative Mitigation

The EIAR process for the proposed development involved a team of specialists, each with expertise in a specific aspect of the environment. For each aspect of the environment, each specialist has considered the existing environment, likely impacts of the proposed development and reviewed feasible mitigation measures to identify the most suitable measures appropriate to the environmental setting of the proposed development. In making a decision on the most suitable mitigation measure the specialist has considered relevant guidance and legislation. In each case, a comparison of environmental effects was made, and the specialist has reviewed the possible mitigation measures available and considered the use of the mitigation in terms of the likely residual impact on the environment. The four established strategies for mitigation of effects have been considered: avoidance, prevention, reduction and offsetting (not required in this development). Mitigation measures have also been considered based on the effect on quality, duration of impact, probability and significance of effects.

The selected mitigation measures for the proposed development are outlined in each of the EIA Report Chapters 4 - 14. These measures have been specifically chosen to address the potential environmental impacts of the proposed development and to minimize any adverse effects on the environment. By considering a range of mitigation measures and strategies, the specialist team has sought to ensure that the proposed development is as environmentally sustainable and responsible as possible.

3.8 Conclusions

Based on the assessment of reasonable alternatives (in relation to scale, design, technology, mitigation) relevant to the proposed development and its specific characteristics as set out in this chapter, the selected site is considered to be a suitable location for the proposed development from both an environmental perspective and a planning perspective.

In terms of processes/technologies, the chosen technologies were selected for their efficiency, reliability, and ability to reduce environmental impacts.

The site is currently zoned for City Centre use and the proposed development is in line with keeping with the policies and objectives of the Dublin City Development Plan 2022-2028.

The siting of the project has been selected based on a suitably comprehensive assessment of reasonable alternative site locations, designs and processes. The proposed development will enhance the utilisation of the site. The proposal will allow the development potential of the site to be maximised while improving natural screening through landscaping treatments within the development site and along the site perimeter.



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Chapter 4 – Human Health and Populations

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4. POPULATIONS AND HUMAN HEALTH

4.1 Introduction

This chapter has been prepared to assess the likely significant impacts on Population and Human Health in respect of the Proposed Development.

The EU (2017) *Guidance on the preparation of the Environmental Impact Assessment Report* outlines that human health is a very broad factor that is be highly project dependent. This guidance states:

The notion of human health should be considered in the context of the 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.

Human health should be considered in the context of environmental pathways which may affect health such as air quality, noise, water, and soil quality. All can contribute to negative effects on human health by facilitating the transport of contaminants or pollutants. An evaluation of the effects of these pathways on health, by considering the accepted standards of safety in dose, exposure or risk of air quality and noise levels for example, is considered appropriate, as these standards have been arrived at via scientific and medical research.

The EPA Guidelines (2022), notes that the transposing legislation does not require assessment of land-use planning, demographic issues, or detailed socioeconomic analysis (EPA, 2022).

Furthermore, in accordance with the EPA (EPA, 2022), 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 the Environmental Impact Assessment Report (EIAR). The likely significant impacts on with Human Health and Population regarding issues such as soils, geology and hydrogeology, water, air quality, noise and vibration, traffic and landscape are addressed in detail within the following EIAR chapters:

- ▶ Chapter 5 – Land, Soils, Geology and Hydrogeology;
- ▶ Chapter 6 - Hydrology;
- ▶ Chapter 8 - Air Quality;
- ▶ Chapter 10 - Noise and Vibration;
- ▶ Chapter 12 – Material Assets - Traffic and Transportation; and
- ▶ EIAR Volume 3 - Townscape, Heritage, Landscape and Visual Impact Assessment

Where these topics are dealt with in further detail elsewhere in this EIAR, the relevant chapters have been cross referenced in this chapter to provide the Planning Authority with a context for their determination.

The assessment of other health and safety issues that are carried out under other EU Directives are also relevant. These may include reports prepared under the Industrial Emissions, Waste Framework, Landfill, Strategic Environmental Assessment, Seveso III, Water Framework Directive, Floods or Nuclear Safety Directives. In keeping with the requirement of the amended Directive, an EIAR considers the results of such assessments without duplicating them

4.2 Methodology

4.2.1 Relevant Legislation and Guidance

This chapter has been prepared in accordance with:

- ▶ Guidelines on the Information to be Contained in Environmental Impact Assessment Reports. Environment Protection Agency (EPA, 2022)
- ▶ Health Impact Assessment Guidance. Institute of Public Health (IPH), (IPH, 2021).
- ▶ Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report European Commission (EU, 2017)

This chapter follows these guidelines and will examine the health effects relevant to the Proposed Development as they relate to the relevant study area.

The description of the sensitivity, magnitude, and significance, outlined within this assessment are based on the Health Impact Assessment Guidance (IPH, 2021) criteria, while the probability and duration of effects are based on the definitions set out within Section 3.7 of the 'Guidelines on information to be contained in Environmental Impact Assessment Reports' (EPA, 2022).

4.2.2 Data Sources of Information

The following sources of information have been used in this assessment:

- ▶ 2022 Census carried out by the Central Statistics Office (CSO) 03 April 2022. Made available from <https://www.cso.ie/en/>
- ▶ 2016 Census carried out by the Central Statistics Office (CSO) 24 April 2016. Made available from <https://www.cso.ie/en/>
- ▶ Pobal HP Deprivation Index based on 2016 Census Data (CSO) Made available from <https://www.pobal.ie/>
- ▶ Pobal HP Deprivation Index based on 2022 Census Data (CSO) Made available from <https://www.pobal.ie/>
- ▶ Google maps available from <https://www.google.com/maps>
- ▶ OpenStreetMap and contributors available from <https://www.openstreetmap.org>
- ▶ GeoHive contributors and available from <https://www.geohive.ie/>
- ▶ Health and Safety Authority (HSA) online register of Notified Seveso Establishments available from https://www.hsa.ie/eng/your_industry/chemicals/legislation_enforcement/comah/list_of_establishments/.

4.2.3 Study Area

There is no specific guidance available on an appropriate study area to focus the assessment of existing land use and/or permitted projects. The research area has been established using expert judgement and based on the accessibility of data and taking into consideration the potential for impact from the Proposed Development.

It is acknowledged that projects like the one proposed can have an impact on activity in a larger area than only the site itself. Generally, the closer to the works, the greater the potential for impacts. The most significant environmental impacts are likely to be confined within 50-150 m of the Proposed Development. Some effects from the Proposed Development, including air quality and traffic, might have a larger area of effect, and these are addressed in further detail in the corresponding expert assessments that set out the chapters within this EIAR.

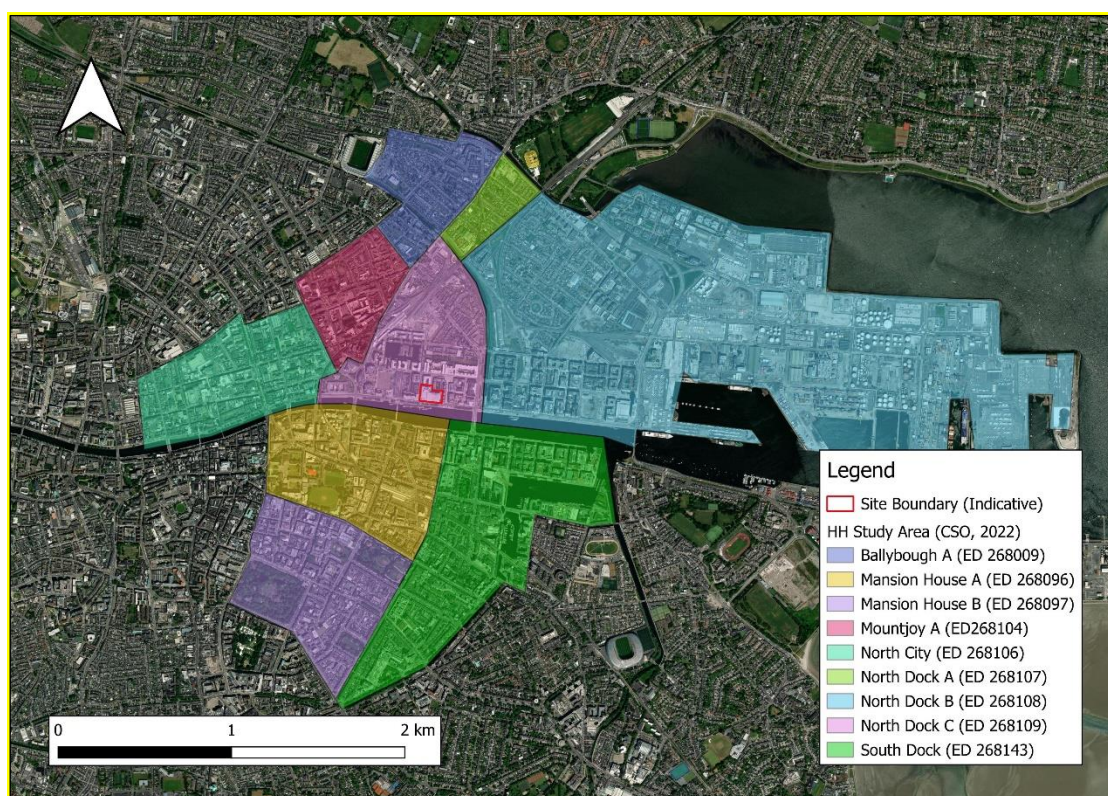
The project being considered is not expected to have Regional, National, or International, or Transboundary impacts on Human Health. Therefore, the study area has been restricted to the

neighbouring community (site-specific population), and wider community (local population). A general study area of 1 km from the site location is included for population statistics, while the wider area of 2.5 km from the site location has been used to inform the baseline description of the area.

In the desk-based assessment of Population Health Sensitivity the use of Electoral Divisions (ED) statistics from CSO have been utilised. Electoral Divisions are the smallest legally defined administrative areas in the state; developed with the intention of producing areas roughly equivalent in both population and "rateable value" (CSO).

The selection of ED within the study area has included ED that are either entirely contained within or partially within 1 km of the Proposed Development site. In the case of the Proposed Development, the site is located within the North Dock C ED (268109), and within 1km of the development site are the EDs of North City (268106), Ballybough A (268009), Mountjoy A (268104), North Dock A (268107), North Dock B (268108), Mansion House A (268096), Mansion House B (268097) and South Dock (268143).

Figure 4-1 Location of the Proposed Development within the Study Area



4.2.4 Population Impact Assessment Categories

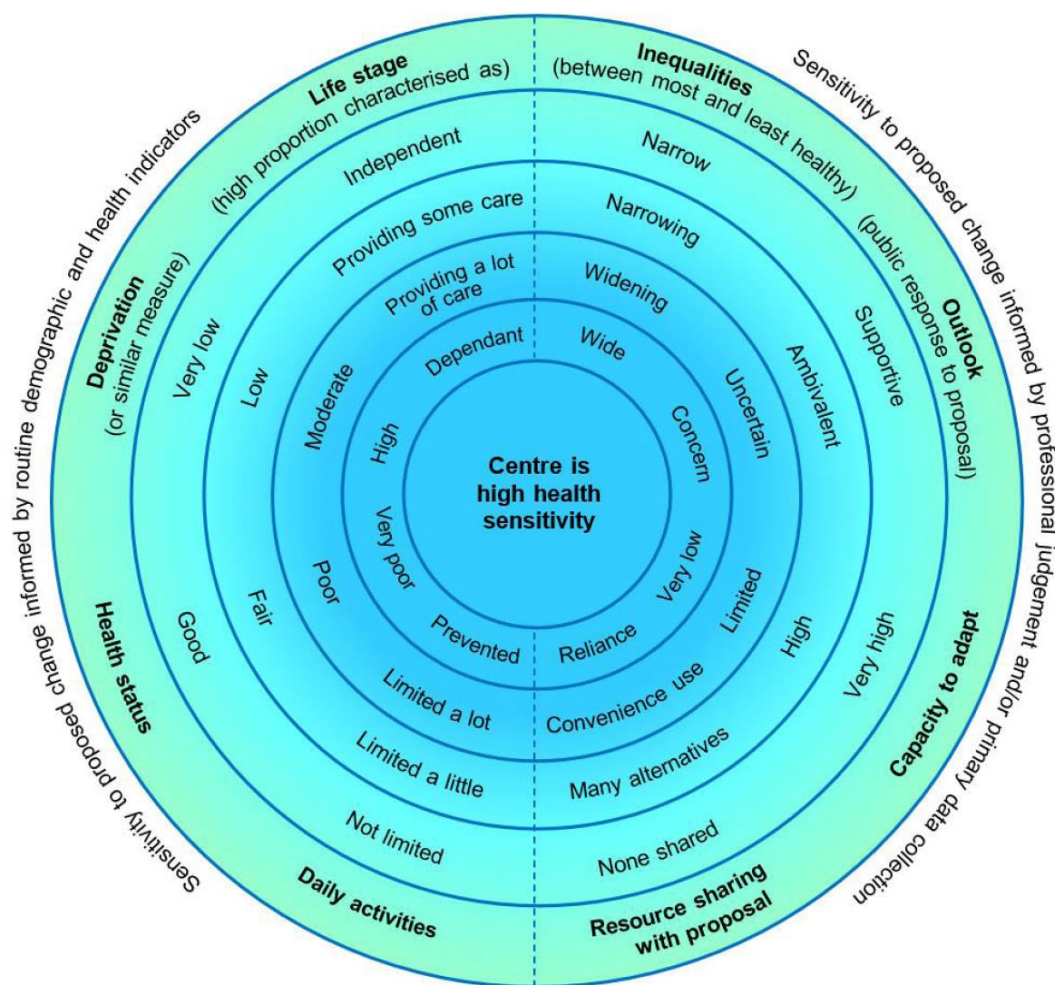
4.2.4.1 Assessment of Sensitivity of Population

The assessment of significance of an impact is a professional appraisal based on the sensitivity of the receptor and the magnitude of effect. Within any area, the sensitivity of individuals in a population will vary. The Health Impact Assessment Guidance (IPH, 2021) sets out conceptual model of the different components of sensitivity (Figure 4-2). It uses criteria (segments) and indicative classifications (levels) to explore, and explain, a finding of sensitivity. The conclusion may be summarised as a high, medium, low, or negligible sensitivity to change.

The existing sensitivity of the receiving environment (in terms of population and human health) has been appraised for the study area with a desk-based assessment of routine demographic and health indicators,

rather than the use of surveys or collection of primary data. This includes analysis of existing data (based on the availability of information) from the Central Statistics Office (CSO) and Pobal to build up a profile of the baseline population information within the study area. Topographical maps and Google maps have also been used to inform the baseline description of the area to inform the proximity of the site to areas of economic activity, employment, community infrastructure, emergency services, tourism, and recreation amenities.

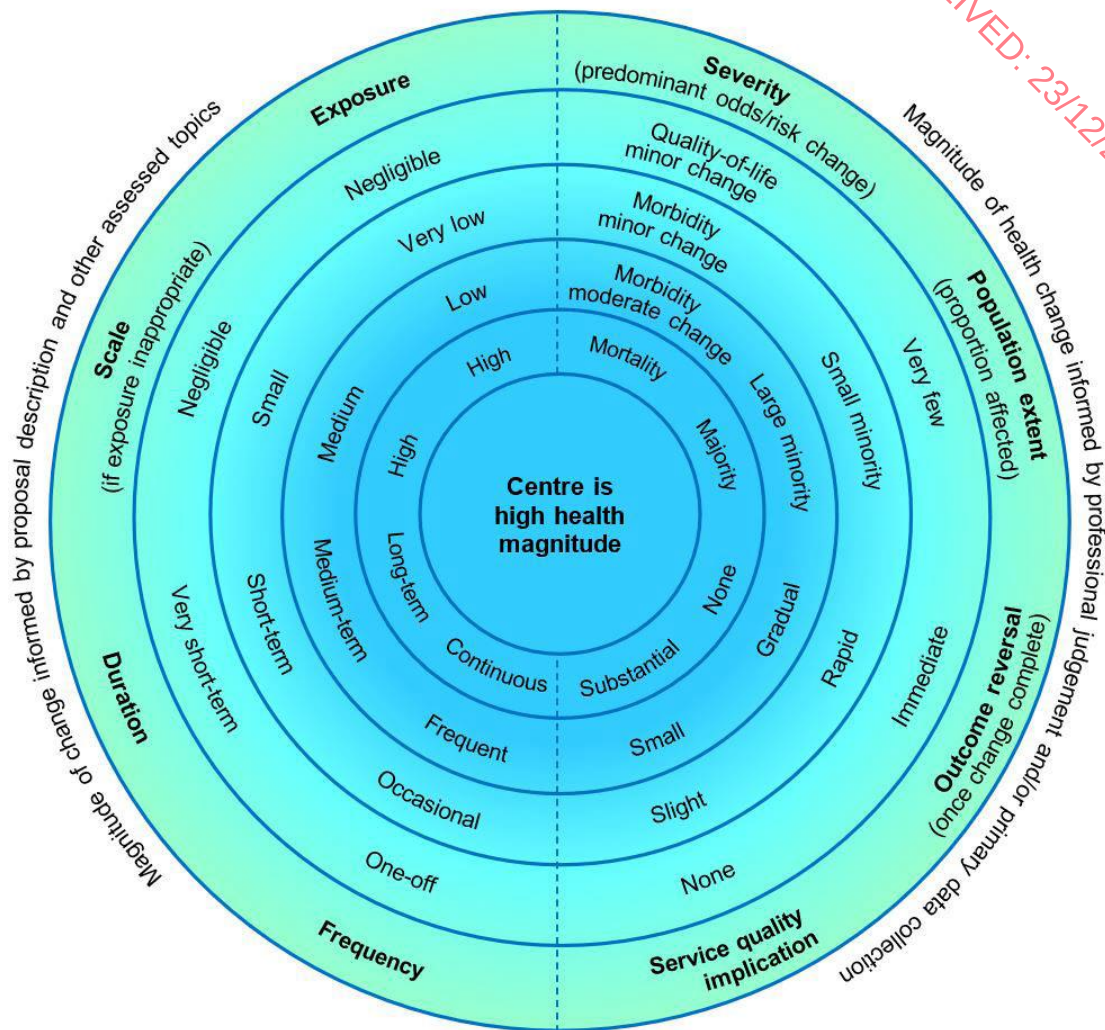
Figure 4-2 Health sensitivity: conceptual model (Source: Health Impact Assessment Guidance (IPH, 2021))



4.2.4.2 Magnitude of Impact

Magnitude considers the characteristics of the change which would affect the receptor because of the proposal. The Health Impact Assessment Guidance (IPH, 2021) sets out a conceptual model of the different components of sensitivity (Figure 4.3). Again, this model provides different components of *magnitude*. It uses criteria (segments) and indicative classifications (levels) to explore, and explain, a finding of *magnitude*. The conclusion may be summarised as a high, medium, low, or negligible magnitude of change.

Figure 4-3 Health magnitude: conceptual model (Source: Health Impact Assessment Guidance (IPH, 2021))



4.2.4.3 Significance of Effects

Significance relies on informed, expert judgement about what is important, desirable, or acceptable with regards to changes triggered by the proposal in question. The assessment of the significance of effects in this assessment is a professional appraisal and has been based on the relationship between the magnitude of the effects and the sensitivity of the receptor.

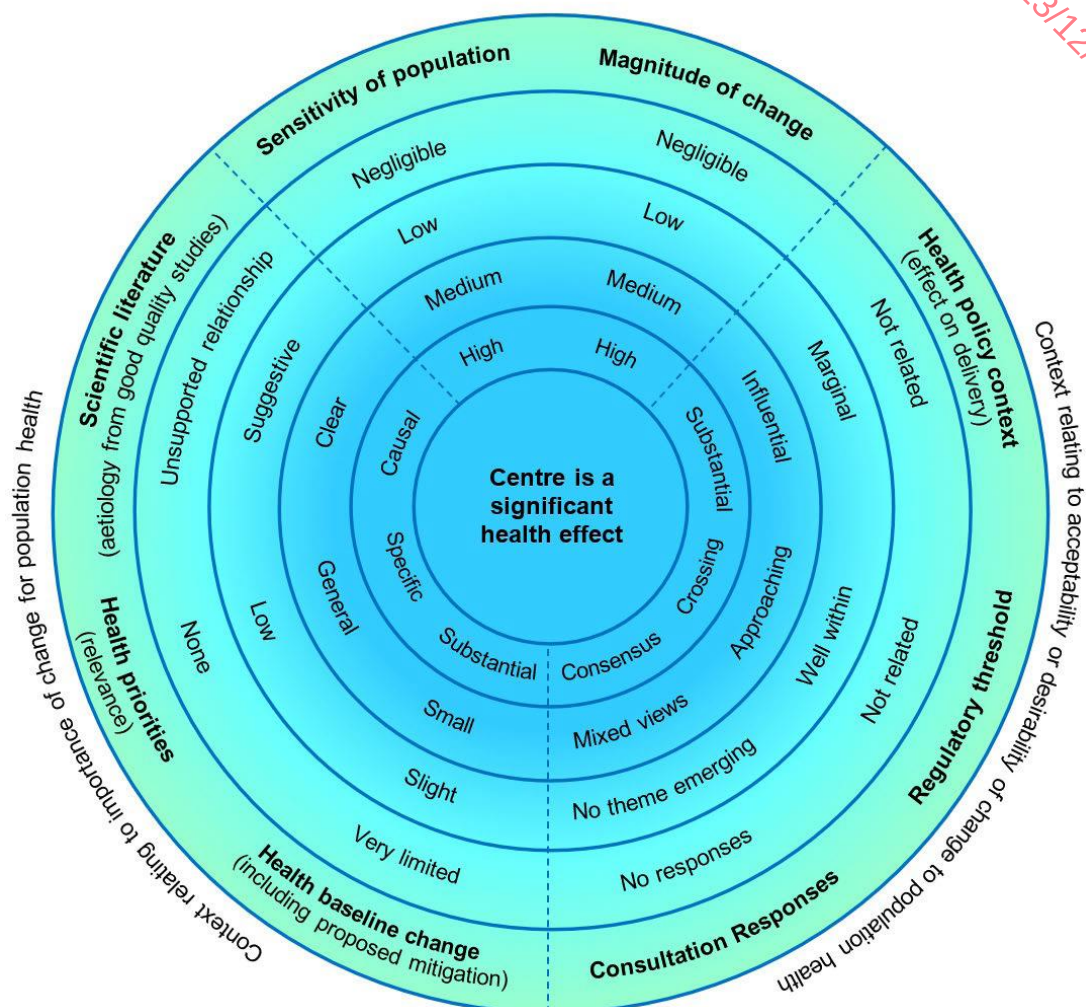
The Health Impact Assessment Guidance (IPH, 2021) sets out a conceptual model of the different components of significance. It uses criteria (segments) and indicative classifications (levels) to explore, and explain, a finding that a health effect is significant or not significant.

The Health Impact Assessment Guidance (IPH, 2021) model brings together different types of evidence, e.g., scientific literature, public health priorities, regulatory standards, and health policy. The model thus not only considers a range of evidence sources, but also a diversity of professional perspectives, e.g., academics, public health practitioners, regulators, and policy makers.

The model below, includes the factors of magnitude of impact and the sensitivity of receptors as determined in Section 4.2.1 and Section 4.2.2 above. This EIA assessment typically relies on regulatory

thresholds, where there would be formal monitoring by regulators, to set out the acceptability or desirability of change to population health.

Figure 4-4 Health significance: conceptual model



4.2.5 Forecasting Methods and Difficulties Encountered

No difficulties were encountered in preparing the population assessment.

There are uncertainties in relation to assessing impacts on individuals or communities due to the lack of individual health data and the difficulty in predicting effects, which can only be based on general guidance and assumptions.

Forecasting methods and methodology, if any, are set out within the specialist chapters that this assessment relies upon.

4.3 Receiving Environment

4.3.1 Population Health Sensitivity within the Study Area

The purpose of the population health sensitivity assessment is to identify the likely sensitivity of the local population and its capacity to absorb change. It is considered that for the purpose of this assessment that

available data on: Population; Deprivation; Life Stage; and Health Status within the Study Area provides sufficient information to establish the population sensitivity and to provide the Planning Authority with a context for this assessment.

4.3.1.1 Population

The most recent census of population was carried out by the CSO on the 3 April 2022. The census compiles data for the whole state as well as smaller individual areas including counties, cities, towns, and electoral divisions. Taking into consideration the location of the Proposed Development, the census information on population, age profile, employment, and social class, has been analysed in relation to the development site.

Table 4-1 denotes the population change of the State and the electoral divisions which make up the study area for the census years 2016 and 2022. The latest census data (2022) shows that the populations in Mountjoy A ED, South Dock ED, North City and North Dock B ED saw a higher population growth as compared with the Republic of Ireland (ROI). North Dock C ED, North Dock A ED and Ballybough A ED also saw population growth, but lower than that of the ROI. Mansion House A ED and Mansion House B ED saw population decrease as compared with that of the ROI (Table 4-1).

Table 4-1 Population changes at National, County and Electoral Division level from 2016 – 2022 (Source: www.cso.ie)

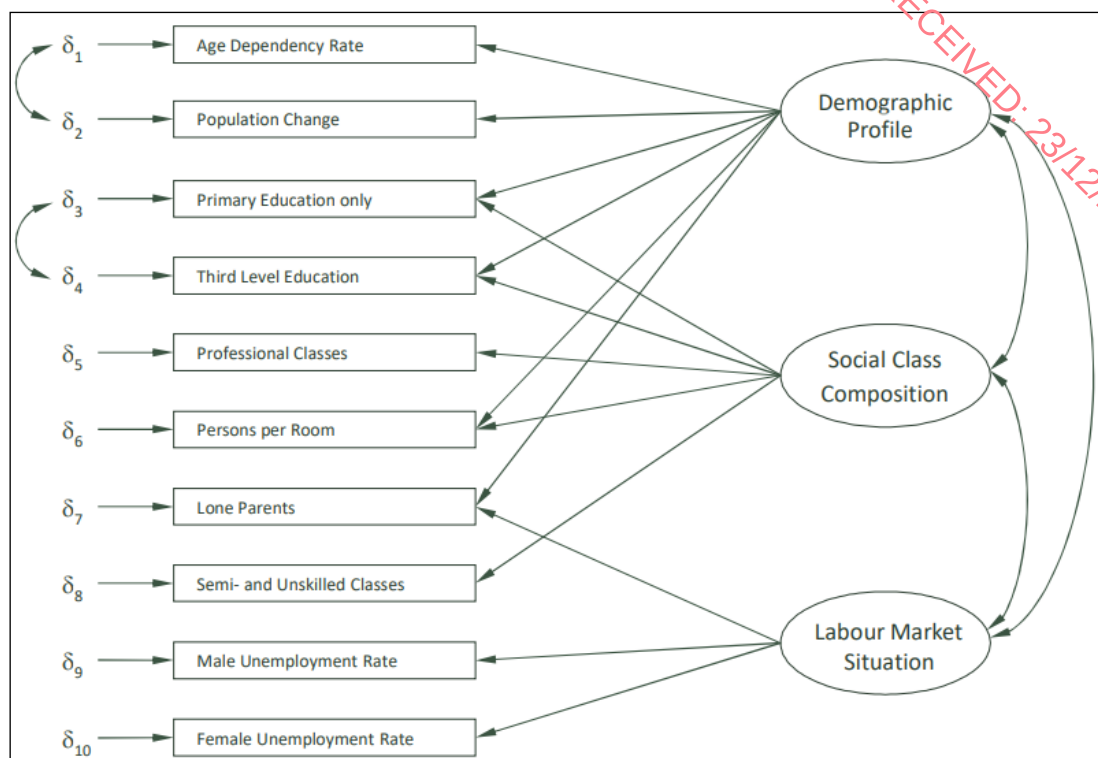
Area	Population for Census Year		% Change 2016-2022
	2016	2022	
State - Republic of Ireland	4,761,865	5,149,139	+8.1%
North Dock C	4,214	4,328	+2.7%
Mansion House A	4,665	4,298	-7.9%
Mansion House B	1,311	1,021	-22.1%
Mountjoy A	5,389	7,374	+36.8%
North City	5,654	6,749	+19.4%
South Dock	7,004	8,320	+18.8%
North Dock A	1,365	1,406	+3.0%
North Dock B	7,695	10,173	+32.2%
Ballybough A	3,718	4,004	+7.7%

4.3.1.2 Deprivation

The Health Impact Assessment Guidance (IPH 2021) outlines that impact assessments should consider if the population is already stressed by limited resources or high burdens as well as if groups are affected that have reduced access to financial, social, and political resources. Deprivation differences between areas are indicative of social gradients, which are central to the consideration of health inequalities.

Deprivation statistics for Ireland are available from the Pobal HP Deprivation Index that shows the overall affluence and deprivation. This Index draws on data from the national Census and combines three dimensions of relative affluence and deprivation: Demographic Profile, Social Class Composition and Labour Market Situation that are measured by ten key socio-economic indicators from the Census of Population.

Figure 4-5 Basic Model of the Pobal HP Deprivation Index



The Pobal HP Deprivation Index Relative Index Score allows for the provision of descriptive labels with the scores, which are grouped by standard deviation as seen in Table 4-2 below.

To make a uniform assessment using the conceptual model as set out in Figure 4-2 above a relative Population Sensitivity the Deprivation Score of 'Very disadvantaged', or 'Extremely disadvantaged' would represent a high sensitivity. Conversely, a 'Extremely affluent' or 'Very affluent' would represent a very low sensitivity.

Table 4-2 Pobal HP Index Relevant Index Score labels (Source: Pobal HP Deprivation Index)

Deprivation Score	Pobal HP Description	Sensitivity of Population
> 30	Extremely affluent	Very Low
20 to 30	Very affluent	Very Low
10 to 20	Affluent	Low
0 to 10	Marginally above average	Low
0 to -10	Marginally below average	Moderate
-10 to -20	Disadvantaged	Moderate
-20 to -30	Very disadvantaged	High
< -30	Extremely disadvantaged	High

The data in in Table 4-3 shows the Pobal HP Deprivation Index Relevant Index Scores for the Study Area based on the 2022 Census. Pobal have not released deprivation scores at the national level for 2022, so the Dublin County score has been utilised for comparison here instead. These figures show for the year 2022 that the study area is 'Marginally Below Average' to 'Affluent' compared to Dublin County, which is 'Marginally Above Average'. This indicates a Low to Moderate Population Sensitivity (Deprivation) within the study area.

Table 4-3 Deprivation Score within the Study Area (Pobal HP Deprivation Index, 2022 Census)

Area	Deprivation Score	Pobal HP Description
Dublin County	2.69	Marginally Above Average
North Dock C	1.18	Marginally Above Average
Mansion House A	-2.02	Marginally Below Average
Mansion House B	12.83	Affluent
Mountjoy A	-4.08	Marginally Below Average
North City	6.43	Marginally Above Average
South Dock	11.48	Affluent
North Dock A	5.23	Marginally Above Average
North Dock B	8.52	Marginally Above Average
Ballybough A	-5.55	Marginally Below Average

4.3.1.3 Life Stage (Age Dependency)

The Health Impact Assessment Guidance (IPH, 2021) outlines that life-course analysis is often used in public health and reflects differing health sensitivities and needs at different ages. Typically, children and older people are particularly sensitive to change, including due to being dependants. Dependents are defined for statistical purposes as people outside the normal working age of 15-64. Dependency ratios are used to give a useful indication of the age structure of a population with young (0-14) and old (65+) shown as a percentage of the population of working age (15-64).

A low dependency ratio indicates that there is a larger proportion of working population age (15-64) years as compared to young (0-14) and old (65+). Conversely, a high dependency ratio indicates that there is a larger proportion of young (0-14) and old (65+) as compared to working population age. High dependency ratio can also indicate if some groups are more likely to be at home during the day (for example, due to childcare, or retired persons) and would therefore be more likely to be impacted by a development within the area.

Age dependency ratio is available through the Pobal Online Geo-Profiling tools (<https://maps.pobal.ie/>) which are based on the national Census.

The age dependency ratio for the study area is shown in Table 4-4 below. From these dependency ratios we can tell that the study area is less dependent when compared with the national average. This indicates a largely 'independent' study area as compared with ROI, which can be defined as per the conceptual model as 'providing some care' to 'providing a lot of care'. This indicates that there is a larger proportion of working population within the Study Area, likely to be more mobile, and out of the home during the day, and would therefore be less likely to be impacted by a development within the area as compared to a more dependant population.

Table 4-4 Age Dependency Ratio within the Study Area (Pobal Geo-Profiling, 2022 Census)

Area	Age Dependency Ratio for Census Year	
	2016	Pobal HP Description
State - Republic of Ireland	52.70	State - Republic of Ireland
North Dock C	15.78	North Dock C
Mansion House A	20.81	Mansion House A
Mansion House B	15.34	Mansion House B
Mountjoy A	17.20	Mountjoy A
North City	12.05	North City
South Dock	13.39	South Dock
North Dock A	23.95	North Dock A
North Dock B	18.91	North Dock B
Ballybough A	28.37	Ballybough A

4.3.1.4 Health Status (General Health)

The CSO as part of the census records an overall self-reported measure of population health within Ireland. Areas with a poor health status are typically considered to be of a higher sensitivity and more susceptible to change in environmental conditions.

Table 4-5 below shows the self-reported measure of population health within the Study Area compared to ROI. This shows the area predominately self-reports their health as 'Very Good' in-line with national trends.

Table 4-5 Self-reported measure of population health (CSO, 2022 Census)

Area	% population describing their general health					
	Not Stated	Very Bad	Bad	Fair	Good	Very Good
State - Republic of Ireland	6.7%	0.3%	1.4%	8.6%	29.7%	53.2%
North Dock C	16.1%	0.3%	1.7%	8.1%	29.2%	44.5%
Mansion House A	20.9%	0.4%	1.9%	8.1%	27.1%	41.3%
Mansion House B	29.8%	0.0%	0.7%	4.3%	20.1%	44.9%
Mountjoy A	31.5%	0.4%	1.7%	7.1%	24.7%	34.4%
North City	43.2%	0.3%	1%	4.8%	21.9%	28.8%
South Dock	14.2%	0.2%	0.8%	5.7%	25.6%	53.3%
North Dock A	15.9%	0.4%	1.8%	8.4%	30.1%	43.3%
North Dock B	17.7%	0.3%	1.3%	6.6%	25.9%	48.4%
Ballybough A	16.3%	0.7%	2.8%	9.8%	27.6%	42.7%

4.3.1.5 Ability to Perform Daily Activities

People's ability to perform day-to-day activities is relevant to population sensitivity, particularly where there are changes in access to services or community amenities. Persons with disabilities can also be more susceptible to the changes in environmental conditions. The CSO as part of the census records an overall self-reported measure of persons with disabilities within Ireland.

Table 4-6 details the number of persons with a disability compared to the total population of the ROI. The data shows that seven (7 no.) EDs within the study area have a lower % of Persons with a disability than the national average, indicating that for persons within the area there are relatively limited restrictions on daily activity. Two (2 no.) EDs within the study area have a higher % of Persons with a disability than the national average, indicating that there is a slight increase of restrictions on daily activity.

Table 4-6 Persons with a disability (CSO, 2022 Census)

Area	Persons with a disability	Population	% Persons with a disability
State - Republic of Ireland	1,109,557	5,149,139	21.5%
North Dock C	867	4328	20%
Mansion House A	914	4298	21.2%
Mansion House B	123	1021	12.0%
Mountjoy A	1,206	7374	16.3%
North City	786	6749	11.6%
South Dock	1,425	8320	17.1%
North Dock A	346	1406	24.6%
North Dock B	1,805	10173	17.7%
Ballybough A	932	4004	23.2%

4.3.1.6 Summary of Population Health Sensitivity

The sensitivity of the surrounding area has been considered based on the details of the published data available from CSO and Pobal.

Seven (7 no.) EDs in the study area (North Dock C, Mountjoy A ED, North City ED, South Dock ED, North Dock A ED, North Dock B ED, and Ballybough A ED) have seen population growth between the 2016 and 2022 census. Two (2 no.) EDs in the study Mansion House A ED, Mansion House B ED have seen a population decrease between the 2016 and 2022 census. The Pobal HP Deprivation Index shows the area be Marginally Below Average to Very Affluent indicating a Very Low to Moderate Population Sensitivity (Deprivation) within the study area.

There is a low age dependency ratio, therefore a large proportion of the population is within working age, thus considered as largely independent and judged to be not sensitive to change. The information presented above for the study area shows, a high proportion [28.8 – 53.3%] describes their health status as 'Very Good' and low proportion as 'bad' or 'very bad'. The data shows that seven EDs within the study area have a lower % of persons with a disability than the national average, indicating that for persons within the area there are relatively limited restrictions on daily activity. Two EDs within the study area have a higher % of persons with a disability than the national average, indicating that there is a slight increase of restrictions on daily activity.

Taking these factors into consideration, it can be concluded that the population in the study area exhibits a relatively lower sensitivity to change, categorising it with regard to the criteria set out in Figure 4.2 as having a low to medium population sensitivity.

4.3.2 Location and Character of the Local Environment

The purpose of describing the location and character of the local environment provides useful information on the current local community and usage within the study area provide the Planning Authority with a context for this assessment. This includes community and social infrastructure that covers a range of services and facilities that meet local and strategic needs and contribute towards a good quality of life. In this context it includes local business, residential areas, education, health facilities, emergency services, and places of worship, and green infrastructure.

Furthermore, the baseline identifies tourism and landscape amenity within the study Area which provides an indication on current intrinsic values placed on the area for local, national, and international users that may be impacted by the Proposed Development.

The local environment also includes areas of natural resources that relate to populations and human health that may be impacted by the Proposed Development, this includes economic resources, recreational and bathing waters.

While a general study area of ED's within 1 km from the site location is included for population statistics, the wider area of 2.5 km from the site location has been used to inform the baseline description of the area.

4.3.2.1 Community and Social Infrastructure within the Study Area

4.3.2.1.1 Residential and Employment Areas

The Proposed Development site is c. 0.88 hectares and is the site of the current Citigroup Building, at 1 North Wall Quay, Dublin 1 D01 T8Y1. The site is located in Dublin Docklands and is bound by North Wall Quay to the south and Commons Street to the west. Existing commercial and residential buildings adjoin the site to the north and east. Clarion Quay Clarion Quay/Alderman Way and an access ramp to the existing basement to the east.

The Proposed Development is located within lands designated Zone Z5 – City Centre, a zoning to consolidate and facilitate the development of the central area, and to identify, reinforce, strengthen, and protect its civic design character and dignity.

The proposed use is permitted under this zoning designation in the DCC Development Plan 2022 – 2028. Chapter 14 of the DCC Development Plan 2022-2028 states that 'Ideally, a mix of uses should occur both vertically through the floors of buildings as well as horizontally along the street frontage' – this landmark office development will contribute to the vertical expansion of the city.

The subject site is strategically located at 1 North Wall Quay, fronting onto the River Liffey along its southern boundary. The site is in the city centre and within walking distance to the main areas of the city including the Docklands to the east, Grafton Street to the southwest, and O'Connell Street to the west. The site has direct access onto the Quays and is located to the east of the Custom's House and west of the Convention Centre, which are both also located on the north quays.

The closest shopping areas of note are the Grafton Street area, located c. 1 km southwest of the site, and the Henry Street area, located c. 1 km northwest of the site.

The nearest residential settlement occurs to the immediate east of the site in the mixed use development comprising residential and retail units. The land use in the immediate surrounding area is a mix of commercial office, hospitality, retail, education and residential buildings.

The surrounding area is currently evolving with numerous developments completed, underway or on stream. Such developments include the A & L Goodbody office development currently underway, located at 25 North Wall Quay c. 90m east of the Proposed Development.

4.3.2.1.2 Education, Childcare, Schools

There are several childcare facilities and schools in the vicinity of the Proposed Development, including:

- ▶ Giraffe Childcare IFSC – 40 m north
- ▶ Giraffe Childcare National College of Ireland – 180 m northeast
- ▶ St Laurence O'Toole's CBS – 412 m north
- ▶ St Laurence O'Toole's National School – 330 m northwest
- ▶ Safari Childcare Hanover Street – 380 m southeast
- ▶ City Quay National School – 386 m southwest
- ▶ Hyde and Seek Creche and Montessori – 497 m southwest.
- ▶ Saint Andrews Childcare Centre – 622 m southeast
- ▶ Trinity College Day Nursey – 662 m southwest
- ▶ St Laurence O'Toole's Special School – 634 m north
- ▶ Central Model Senior School – 738 m northwest
- ▶ St. Paul's Special School – 780 m northwest
- ▶ Holy Child Pre-School – 740 m northwest
- ▶ Rutland National School – 795 m northwest
- ▶ Scoil Chaoimhín – 850 m northwest

4.3.2.1.3 Healthcare Services

The Healthcare Services within the vicinity of the site is the Custom House Square Medical Centre, located c. 130 m north of the site.

There is one (1 no.) hospital within the study area, the Rotunda Hospital located c. 1.2 km northwest of the site.

4.3.2.1.4 Emergency Services

Dublin Fire Brigade Headquarters are located c. 615 m southwest of the site, and Store Street Garda Station is located c. 500 m northwest of the site.

4.3.2.1.5 Places of Worship

There are several places of worship in the vicinity of the development:

- ▶ Selah Church – 90m east
- ▶ Immaculate Heart of Mary Catholic Church – 395 m southwest
- ▶ St Laurence O'Toole's Church – 330 m northeast
- ▶ St Mark's Church – 505 m southwest
- ▶ Trinity Church Dublin – 580 m northwest
- ▶ St Andrew's Parish Church – 580 m south
- ▶ Grace Bible Fellowship Church – 622 m southwest
- ▶ Abbey Street Methodist Church (Dublin Central Mission) – 825 m west
- ▶ Immanuel Church Dublin – 975 m west
- ▶ Dublin Church of Christ – 982 m southwest
- ▶ Our Lady of Lourdes Catholic Church – 822 m northwest
- ▶ St Marys Pro Cathedral – 900 north west

4.3.2.1.6 Green Infrastructure and Landscape Amenity, within the Study Area

The nearest noteworthy features for recreational use are Merrion Square Park, located c. 910 m south of the site, St. Stephen's Green park, located c. 1.2 km southwest of the site.

The River Liffey flows to the immediate south of the site, flowing east before discharging into Dublin Bay.

In terms of landscape amenity, the site is located immediately adjacent to North Wall Quay with a view of Dublin's streetscape along the quays to the east and west.

The site and its surrounds are zoned 'Z5 – City Centre' a zoning 'to consolidate and facilitate the development of the central area, and to identify, reinforce, strengthen and protect its civic design character and dignity'.

The subject site falls into the River Liffey Conservation Area (CA) located on the same road as the Custom House. The River Liffey CA traverses the city centre, providing unobstructed views of many different buildings and character areas. Important elements of this character are the quays, the bridges, the curving nature of the river, the changing vistas along its course, the canals, basins and other waterways and the historic built fabric.

The O'Connell Street Architectural Conservation Area (ACA) is located c. 725 m from the Proposed Development at its eastern boundary. The area is both architecturally and historically significant and the most formal of all public streets in the city. It is also a place of public congregation both for statuary and architectural monuments.

There are no protected structures or National Monuments on the site. The closest protected structures to the site are the Former Exise Store (RPS ref. 5070), located c. 70 m north of the Proposed Development and the three RPS associated with Custom House Quay located c. 110 m west of the Proposed Development; the CHQ Building (RPS ref. 2094), the Custom House Quay Bridge (RPS ref. 896) and George's Dock (RPS ref. 8841).

Full detail on the CA, ACA and protected structures relevant to the Proposed Development can be found in Volume 3: Townscape, Heritage, Landscape and Visual Impact Assessment of this EIAR.

4.3.2.2 Tourism within the Study Area

There are several policies and objectives within the Dublin City Development Plan 2022-2028, all of which focus on the recognition of the strong tourism asset in Dublin City Centre and the need to ensure that it is capitalised and augmented. The Dublin City Council Development Plan 2022-2028 plan calls out the Irish Emigration Museum (EPIC) on Custom House Quay which is situated on the opposite of the River Liffey from the Proposed Development. The Dublin City Development Plan 2022-2028 notes:

'Dublin is the most important overseas tourism destination in the country and tourism is a central pillar of the city's economy. Fáilte Ireland estimate that in 2019 Dublin welcomed 6.3 million overseas tourists and 1.7 million domestic trips, generating a total spend of €2.4 billion and supporting 65,000 jobs. The sector however, has been significantly impacted by the COVID-19 pandemic and a significant effort will be required to rebuild tourism in Dublin.'

The Proposed Development will provide a significant mixed-use asset to the Tara Street area. It is a stated policy (Policy CEE26) of the Dublin City Council Development Plan 2022-2028 'To promote and facilitate tourism as one of the key economic pillars of the city's economy and a major generator of employment and to support the appropriate, balanced provision of tourism facilities and visitor attractions' and 'To promote and enhance Dublin as a world class tourist destination for leisure, culture, business and student visitors and to promote Dublin as a setting for conventions and cultural events'.

With respect to Strategic Regeneration Areas, and the subject lands in particular, it is an aim of the Dublin City Council Development Plan 2022-2028 to promote sustainable tourism including cultural, recreational, and business tourism, and to support Fáilte Ireland in implementing the aims of its Docklands Visitor Experience Development Plan (2020) including various projects promoting sustainable tourism. As noted in the Dublin City Development Plan 2022-2028:

'Fáilte Ireland initiated a number of tourism ventures of note such as the Docklands Visitor Experience Development (VEDP) Plan, a Visitor Orientation Strategy and have collaborated with Dublin City Council to develop 'Dubline', an international quality, walking heritage trail from Parnell Square to Kilmainham'.

The Fáilte Ireland Docklands VEDP sets out several catalyst projects one of which is the creation of a Custom House Visitor Centre. One of the desired outcomes of this visitor centre is to 'review options to develop the public realm to enhance The Custom House area and entrance to the Docklands'. The subject lands are contained within the Custom House visual envelope and form a corner stone in the townscape setting for the Custom House, presenting an ideal opportunity to mark the entrance to the docklands.

4.3.2.3 Natural Resources within the Study Area

4.3.2.3.1 Geological Heritage, and Economic Resources

Natural resources and land use in the Study Area has also been considered as they may have implications for the development of the lands. A review of Geological Survey Ireland online maps has shown that there are no extractive industries, active quarries, mineral localities, or areas of geological heritage within the study area.

4.3.2.3.2 Recreational Waters and Bathing Waterbodies

A review of EPA maps that includes the Register of Protected Areas (RPA) under the Water Framework Directive (WFD) has shown that there are no protected Recreational Waters or Bathing Waterbodies within the study area. The site is adjacent to the River Liffey, which ultimately flows to Dublin Port, where there are no RPAs located.

4.3.2.3.3 Drinking Water Resources

A review of EPA Maps and Geological Survey of Ireland online maps that includes the Water Abstraction locations, and Groundwater Source Protection Areas has been undertaken. This shows no Groundwater Source Protection Areas or Water Abstraction locations within the development site.

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.

This current index shows multiple wells in the vicinity of the proposed development site. 1 no. Borehole (GSI Name: 2923SEW054) is located c. 0.9 km southeast of the site, adjacent to Barrow Street and Grand Canal rail line station. None of the wells listed 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.

4.3.2.4 *Risk of Major Accident Hazards or Disasters*

The potential for a project to cause risks to human health, cultural heritage, or the environment due to its vulnerability to external accidents or disasters is considered where such risks are significant, e.g., the potential effects of floods on sites with sensitive facilities. Where such risks are significant then the specific assessment of those risks in the form of a Seveso Assessment (where relevant) or Flood Risk Assessment may be required.

4.3.2.4.1 Landslides, Seismic Activity and Volcanic Activity

In general, risk of landslides in Ireland is considered to be low, as the country is not located in a region with high seismic activity or large mountain ranges. Landslides are more common in unconsolidated material than in bedrock, and where the sea constantly erodes the material at the base of a cliff landslides and falls lead to recession of the cliffs. Landslides have occurred in Ireland in recent years in upland peat areas due to disturbance of peat associated with construction activities. The landslide susceptibility map (GSI spatial map viewer) identifies areas which are subject to landslides and is measured from low to high. The landslide susceptibility map considers the location of landslides and what causes them (slope, soil type and the impact of the flow of water). Based on the GSI spatial map viewer, the Proposed Route Corridor is not in an area susceptible to landslides, with a GSI Landslide Susceptibility Classification of Low.

There are no active volcanoes in Ireland so there is no risk of volcanic activity.

In Ireland, seismic activity is recorded by the Irish National Seismic Network. The Geophysics Section of the School of Cosmic Physics, Dublin Institute for Advanced Studies, has been recording seismic events in Ireland since 1978 (www.dias.ie). This network consists of several seismometers that are located throughout Ireland. Seismic activity and earthquake risk in Ireland are generally considered to be low. This is because Ireland is located on the western edge of the Eurasian Plate, which is a tectonic plate that is not known for its seismic activity. However, earthquakes can still occur in Ireland, although they are typically small and have little impact. There is a very low risk of seismic activity to the Proposed Development site. This means that there is less than a 2% chance of potentially damaging earthquake shaking in the next 50 years.

The Proposed Development site is not vulnerable to landslides, seismic activity or volcanic activity within its boundary. Therefore, there is no significant potential for the Proposed Development to cause risks to human health due to its vulnerability to landslides, seismic activity or volcanic activity.

4.3.2.4.2 Proximity to Seveso or Industrial Emissions Sites

The potential for major accidents to occur at the facility has also been considered with reference to establishments registered with the Health and Safety Authority in accordance with the Control of Major Accident Hazards (COMAH) Regulations that implements the Seveso III Directive.

The Seveso Directive (Directive 82/501/EEC, Directive 96/82/EC, Directive 2012/18/EU) was developed by the EU after a series of catastrophic accidents involving major industrial sites and dangerous substances. Such accidents can give rise to serious injury to people or serious damage to the environment, both on and off the site of the accident. The Chemicals Act (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2015 (S.I. No. 209 of 2015) (the "COMAH Regulations"), implement the latest Seveso III Directive (2012/18/EU).

The purpose of the COMAH Regulations is to transpose the Seveso Directive into Irish law and lay down rules for the prevention of major accidents involving dangerous substances, and to seek to limit as far as possible the consequences for human health and the environment of such accidents, with the overall objective of providing a high level of protection in a consistent and effective manner.

Establishments are either lower tier establishments or upper-tier COMAH sites with above threshold quantities of dangerous substances present, and to which the provisions of the COMAH regulations apply.

The Health and Safety Authority (HSA) list of Notified Seveso Establishments, and the Environmental Sensitivity Mapping webtool (<https://enviromap.ie/>), have been used to identify if the Proposed Development falls within the consultation distance of any nearby Seveso Establishments. The closest Notified Seveso Establishments to the Proposed Development is the Upper Tier establishment Circle K Ireland Holding Ltd, located c. 1.4 km from the site. The Proposed Development site is not located within the consultation distance of any notified establishment; therefore, there are no implications for major accident hazards.

The site is not a Seveso facility and is not within the consultation distance of any Seveso facility. There are no significant risks in relation to the Proposed Development and Major Accident Hazards.

The closest Integrated Pollution Control (IPC) and Industrial Emissions (IE) licensed facilities to the Proposed Development site according to the EPA (2025) is the Brooks Thomas Limited (P0345-01) on Upper Mayor Street, Dublin 1 which is c. 0.85km from the Proposed Development site. A full list of licensed facilities within a 2km radius of the Proposed Development is shown in Table 4-7 below. Licensed facilities are required to comply with specific licence conditions, including monitoring and reporting on their emissions (such as emissions into the air, water, and soil), to ensure that they do not pose a risk to human health or the environment.

Table 4-7 EPA Licenced facilities nearby to the Proposed Development site

Registration number	Name	Category	License type	Distance (km)
P0345-01	Brooks Thomas Limited	Industry	IPC	0.8 km
P0111-01	Independent Newspapers Ltd.	Industry	IEL	1.0 km
P0107-01	Van Leer Ireland Ltd.	Industry	IEL	1.2 km
P0298-01	Cahill Printer Limited	Industry	IEL	1.2 km
P0220-01	Everlac Paint Limited	Industry	IEL	1.8km
P0054-02	Mater Misericordiae University Hospital	Industry	IEL	1.9 km

It is important to note that the proximity of a licensed facility does not necessarily mean that the Proposed Development will be impacted by their emissions. However, it is essential to consider these sites as part of the existing environment and to consider and understand the potential for cumulative impacts or other interactions with the Proposed Development at this location.

4.3.2.4.3 Risk of Flooding

The potential risk of flooding on the site was also assessed. As stated in Section 6.3.5 of Chapter 6 (Hydrology), a Site-Specific Flood Risk Assessment (FRA) has been prepared by CS Consulting for the Proposed Development site. The FRA notes the site is predominantly within Flood Zone C of the CFRAM fluvial flood extents. A minor portion of the application area (along Clarion Quay, at the site's north-eastern boundary) is within Flood Zone B, but this is generally outside the Proposed Development site

The FRA also considers sources of tidal flooding and pluvial flooding. The assessment indicates that the subject site is largely within the area at risk from a 0.1% AEP tidal flooding event (i.e. a 1-in-1000-year occurrence). The Dublin City Development Plan 2022–2028 Strategic Flood Risk Assessment includes a map of modelled pluvial flooding depths for a 3-hour duration rainfall event with 1% AEP. For such a rainfall event, this model indicates that the development site may experience pluvial flooding up to a depth of approximately 0.5m.

The Proposed Development shall have a storm water attenuation system to address a 1-in-100-year extreme storm event, increased by 30% for predicted climate change effects. This shall significantly reduce the volume of storm water leaving the site during extreme storms, which in turn shall have the effect of reducing the loading on the existing public drainage system and reducing the risk of flooding on neighbouring sites due to runoff from the development site.

The FRA concludes that the Proposed Development is deemed to be suitable for the site location, as historical and potential flood routes have been reviewed and the likelihood of the development being subject to flooding is low, given the implementation of the mitigation measures described.

4.4 Characteristics of the Proposed Development

The purpose of this section is to provide an overview of the key relevant details of the construction phase and operational phase of the Proposed Development particularly in areas where potential impacts to human health and populations may occur. The information presented in this section is informed by the project design, but it is not a complete description of the Proposed Development. Therefore, it should be read in conjunction with the full development package. For a more comprehensive understanding of the Proposed Development, please refer to Chapter 2 of the EIA Report. Chapter 2 provides a detailed overview of the lifecycle of the project, including reference to the architectural and civil engineering, drawings, plans, reports, and other relevant documents to define the Proposed Development.

4.4.1 Construction Phase

Construction activities can generate noise and vibrations, dust emission have the potential to impact air quality, which can potentially impact the health and well-being of nearby residents and workers. Dust emissions will primarily occur because of site preparation works, earthworks and the movement of trucks on site and exiting the site. The construction phase may result in temporary disruptions to nearby businesses, residents, and public amenities.

The construction phase can result in increased traffic congestion, particularly during the delivery of construction materials and equipment. It is anticipated that for the duration of the works all access and egress for deliveries will be via a dedicated temporary access on Commons Street, at the site's western boundary, allowing vehicles to avoid the Quays where possible. In addition, one or more separate pedestrian only entrance(s) to the site shall be installed, to segregate vehicular and pedestrian movements

to and from site. Due to the site's city centre location and constrained nature, no personal carparking is to be provided on or near the site for construction personnel or for visitors.

4.4.2 Operational Phase

The Proposed Office development will provide job opportunities for the local population, contributing to economic growth and stability. In addition, the building itself will have staffing requirements, including building/property management staff, reception, security, maintenance and landscaping, IT etc.

4.5 Potential Impacts of the Proposed Development

The main potential impacts on population and human health from the Proposed Development are potential for spills/leaks, air emissions, noise, visual, and traffic impacts. The baseline environment, pollution pathways, relevant mitigation measures and residual impacts have been assessed in greater detail within the corresponding specialist chapters; Chapter 5 (Land, Soils, Geology and Hydrogeology); Chapter 6 (Hydrology); Chapter 8 (Air Quality), Chapter 10 (Noise and Vibration); Chapter 12 (Material Assets - Traffic and Transportation) and EIAR Volume 3 (Heritage, Townscape, Landscape and Visual Impact Assessment).

A summary of the main potential impacts as they are relevant to human health criteria during construction, commissioning, operation, and decommissioning of the Proposed Development is presented herein.

4.5.1 Construction Phase

4.5.1.1 Potential Impacts on Businesses and Residences

The main potential impacts on local businesses and residences associated with the Proposed Development will be in relation to air quality, noise, visual impact and traffic. The potential impacts and mitigation measures to address them are dealt with within the corresponding chapters of this EIAR as follows:

- ▶ Chapter 8 – Air Quality
- ▶ Chapter 10 – Noise and Vibration
- ▶ Chapter 12 – Material Assets (Traffic and Transportation)
- ▶ EIAR Volume 3 – Townscape, Heritage, Landscape and Visual Impact Assessment

The potential increase in the temporary population of the area during construction as a result of the employment of workers from outside the Dublin City Centre area that may choose to reside in the immediate and wider local area is likely to amount to only a small percentage of the workforce employed during the construction phase but will result in some additional trade for local accommodation and services. It is expected that the majority of the work force will travel from existing places of residence to the construction site rather than reside in the immediate environs of the site. However, some local employment from within the wider local area is expected.

Construction will have an indirect positive effect on support industries such as builder suppliers, construction material manufacture, maintenance contracts, equipment supply, landscaping and other local services. There will also be a need to bring in specialist workers on a regular basis that may increase the above estimated working population at times. Specialists are only likely to stay for shorter periods depending on the nature of the work. The construction phase, therefore, is considered to have the potential to have a positive, not significant, short term impact on the economy and employment of the local and wider area.

4.5.1.2 Potential Impacts on Landscape, Amenity and Tourism

There will be no significant impacts on the local parks or the larger amenity areas. The Proposed Development will not create any wastewater discharge which could have a potential impact on local amenities or the local population. There is no loss of historic or culturally significant buildings or sites.

Construction activities can generate significant noise, dust, and air pollution. These factors can negatively impact the amenity and tranquillity of the surrounding environment. Construction projects in tourism-dependent areas like central Dublin can result in a decline in tourism appeal. Potential tourists may be deterred by the presence of ongoing construction, resulting in a negative perception of the destination. It is not anticipated the Proposed Development will have any significant impact on local tourism or shopping amenities. Construction activities can lead to increased traffic congestion and limited access to certain areas. This can impact the ease of travel for tourists, potentially causing frustration and affecting the overall tourism experience. It is noted that these impacts are likely to occurring during the construction working hours. The potential impact is **negative, short term, and moderate**.

Visual impacts and amenity impacts perceived by individual persons are highly subjective and difficult to characterise however, generally, the effects would be negative since construction is an inherently, unavoidably unsightly activity. The potential impact varies with proximity to the Proposed Development site, with the potential impact on the closest receptors considered to be **negative, moderate to substantial and short term**. This impact reduces with distance from the site, with the potential impact on the furthest receptors considered to be **negative, slight to very slight and short term**.

4.5.1.3 Potential Impact from Land and Water Emissions on Human Health

With reference to Chapter 5 (Land, Soils, Geology & Hydrogeology), a reduction in groundwater quality via unmitigated pollutants entering the soil or Dublin GWB 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. 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 Study Area 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. The site is not located near any public groundwater supplies or group schemes. There are no groundwater source protection zones in the immediate vicinity of the site, due to 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).

Therefore, 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**.

With reference to Chapter 6 (Hydrology), a reduction in water quality via unmitigated pollutants entering the Liffey Estuary Lower transitional waterbody (as set out in Section 6.5.1.2) 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. 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 Liffey Estuary.

The Dollymount Strand and Sandymount Strand bathing water areas may be indirectly hydrologically connected to the proposed development site but are located further away than the Liffey Estuary (c. 5.3 km and 2.6 km from the subject site, respectively); therefore, they were excluded from the assessment

due to their distance from the development, significant dilution factor through its pathway and the tidal characteristics of the downstream hydrological environment.

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 hydrological environment are **negative, imperceptible** and **short term**.

4.5.1.4 Potential Impacts from Air Quality on Human Health

The key elements of construction of the Proposed Development with potential impacts on populations and human health from air quality and climate impacts are:

- ▶ Potential for Dust Soiling Effects on People and Property from general site preparation, vehicles, and construction activities;
- ▶ Potential Human Health Impacts from dust (PM₁₀ and PM_{2.5}.) emissions from general site preparation, vehicles, and construction activities;
- ▶ Engine emissions from construction vehicles, traffic, and machinery.
- ▶ A change in traffic flows on road links nearby the Proposed Development.

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 and through human health impacts from PM₁₀ and PM_{2.5} emissions. While construction dust tends to be deposited within 350 m of a construction site, the majority of the deposition occurs within the first 50 m. 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 station meteorological data indicates that the prevailing wind direction is westerly to south-westerly with generally moderate wind (see Section 8.3.1 of Chapter 8). 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, 2025). Therefore, it can be determined that over 54% of the time dust generation will be negligible due to natural meteorological conditions.

In line with the UK Institute of Air Quality Management (IAQM) guidance document '*Guidance on the Assessment of Dust from Demolition and Construction*' (2014) as referenced in Chapter 8 Air Quality (Section 8.3.3) the overall sensitivity of the area to dust soiling impacts is considered **medium** based on the IAQM criteria outlined in Table 8.6. Based on the IAQM criteria outlined in Table 8.7, the worst-case sensitivity of the area to human health is considered to be **low**.

In the absence of mitigation there is the potential for **temporary, negative** and **not significant** impact to human health from air quality.

4.5.1.5 Potential Impact from Noise and Vibration on Human Health

Exposure to excessive noise is becoming recognised as a large environmental health concern. According to the 2015 European Commission report 'Noise Impacts on Health', (European Commission, 2015), the most common effects of noise on the vulnerable include:

- ▶ Annoyance
- ▶ Sleep Disturbance
- ▶ Heart and circulation problems
- ▶ Quality of Life
- ▶ Cognitive Process
- ▶ Hearing

It is acknowledged that humans are particularly sensitive to vibration stimuli and that any perception of vibration may lead to concern. In the case of road traffic, vibration is perceptible at around 0.5mm/s and may become disturbing or annoying at higher magnitudes. Noise and vibration impacts associated with the development have been fully considered within Chapter 10 (Noise and Vibration) of this EIAR.

A variety of items of plant will be in use for the purpose of demolition, site clearance and construction works. There will also 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 the generation of elevated levels of noise in the vicinity of existing noise sensitive properties.

As detailed in Chapter 10 - Noise and Vibration, for structural construction works, predicted noise levels are expected to result in a **negative, moderate** to **significant, short-term** impact. This impact will reduce to within the CNT as works progress further into the site, beyond 80 m, where it is likely to be negative, slight to moderate, and short term.

During general construction phases relating to the superstructure, the predicted impact will be **negative, moderate**, and **short term**, reducing to **negative, slight** to **moderate**, and **short term** at distances greater than 25 m from the works.

It is appropriate to consider the relative increase in noise level associated with traffic movements on existing roads and junctions with and without the Proposed Development, given that traffic from the development will make use of the existing road network. The calculated change in traffic noise associated with the addition of construction related traffic is less than 1 dB (A) along all site access roads, therefore the potential related impact of additional noise generated by traffic is **negative, imperceptible** and **short-term**.

The main potential source of vibration during the construction programme is associated with excavation into hard ground and potentially the requirement for rock breaking. The likely levels of vibration from this activity is expected to be significantly below the vibration criteria for building damage. In terms of human response, there is potential for a negative, moderate, brief impact for building occupants within 20m of this activity using a 6 Tonne Breaker or equivalent. The predicted vibration effect during this phase of works is **neutral, not significant** and **short term**.

4.5.1.6 Potential Impact from Traffic and Transportation on Human Health

The World Health Organisation Report 'Health Effects and Risks of Transport Systems: The Hearts Project' (World Health Organisation, 2006) states that road traffic is a major cause of adverse health effects - ranking with smoking and diet as one of the most important determinants of health in Europe. The report states;

"Traffic-related air pollution, noise, crashes, and social effects combine to generate a wide range of negative health consequences, including increased mortality, cardiovascular, respiratory, and stress-related diseases, cancer, and physical injury. These affect not only transport users but also the population at large, with particular impact on vulnerable groups such as children and elderly people, cyclists, and pedestrians".

In the Department of Communications, Climate Action & Environment document Cleaning Our Air – Public Consultation to Inform the Development of a National Clean Air Strategy vehicle emissions are included as a key source of health impacts in Ireland (DOCCA&E, 2017).

As noted in Chapter 12 – Material Assets (Traffic and Transportation), the Proposed Development's construction phase shall generate vehicular traffic comprising Heavy Goods Vehicles (HGVs), Light Goods Vehicles (LGVs), cars, and bicycles, increasing traffic flows at nearby existing junctions.

It is also recognised that there is potential during the construction phase for construction-related activity to impact upon the surrounding road network in ways beyond junction operational performance. These further impacts would potentially take the form of surrounding roads being temporarily obstructed by stopped/parked construction vehicles or by delivery/loading operations, or their condition being temporarily degraded by the presence of dirt/debris originating from the construction site.

The overall potential construction-phase effect of the Proposed Development on the operation of the surrounding road network (in the absence of mitigation measures) is therefore considered to be negative, short-term, and moderate.

4.5.1.7 Potential Impacts from Major Accident Hazards and/or Natural Disasters on Population and Human Health

The Proposed Development has the potential for an impact on the health and safety of workers employed during the construction phase. The activities of the applicant's contractors during the construction phase will be carried out in accordance with the Safety, Health, and Welfare at Work (Construction) Regulations 2013 (S.I. No. 291 of 2013) to minimise the likelihood of any impacts on workers' health and safety.

As outlined in Section 4.3.2.4 there is a negligible risk of external natural disasters; including landslides, seismic activity, volcanic activity, and sea level rise. There is a negligible risk of major accidents to occur at the facility due to the lack of proximity to Seveso/Control of Major Accident Hazards (COMAH) Regulations sites.

As stated in the FRA prepared by CS Consulting, the site is located predominately in Flood Zone C. A minor portion of the application area (along Clarion Quay, at the site's north-eastern boundary) is within Flood Zone B, but this is generally outside the development site proper. SUDS features will be implemented into the surface water drainage system, which will allow storage of water for the 1 in 100 year storm event plus a 30% allowance for climate change.

The potential effect is therefore imperceptible and unlikely in respect of Major Accident Hazards or Natural Disasters on Population and Human Health during the construction phase of the Proposed Development.

4.5.2 Operational Phase

4.5.2.1 Potential Impacts on Businesses and Residences

The main potential impacts on local businesses and residences associated with the Proposed Development will be in relation to nuisances; air quality, noise, visual impact, and traffic. The potential impacts and mitigation measures to address them are dealt with within the corresponding chapters of this EIA Report as follows:

- ▶ Chapter 8 – Air Quality
- ▶ Chapter 10 – Noise and Vibration
- ▶ Chapter 12 – Material Assets (Traffic and Transportation)
- ▶ Volume 3 - Townscape, Heritage, Landscape and Visual Impact Assessment

The Proposed Development will result in an **imperceptible, positive** and **long-term** impact on the local population due to increased employment opportunities during the operation phases, through both the office space provided and the staffing requirements of the building itself.

4.5.2.2 Potential Impacts on Landscape Amenity and Tourism

The Proposed Development once operational will have no impact shopping amenities. The Proposed Development will not create any wastewater discharge which could have a potential impact on local amenities or the local population.

The Proposed Development design includes spaces dedicated to community, arts and cultural uses. In addition, the Proposed Development design includes an external landscaped community park along the eastern boundary of the site. Therefore, the Proposed Development when operational will have a positive, **not significant** and **long term** impact on local tourism and amenities.

With reference to Volume 3 (Townscape, Heritage, Landscape and Visual Impact Assessment), the high quality design of the Proposed Development ensures that it is likely to complement and enhance the character, legibility and connectivity of the North Wall Quay area, and it is considered that the Proposed Development would add interest to North Wall Quay's regenerated waterfront. 16 no. viewpoints were analysed and the potential impacts of the Proposed Development on the local population are permanent and range from neutral (the significance of neutral impacts are imperceptible to slight to positive (the significance of positive impacts are slight to substantial)).

4.5.2.3 Potential Impact from Land and Water Emissions on Human Health

With reference to Chapter 5 (Land, Soils, Geology and Hydrogeology), There are no abstractions of ground water, or discharges of contaminated waters to ground proposed during the operational phase, therefore there is no potential for impact on drinking water resources. There is no sensitive economic, or historical geology at the site. The Basement Impact Assessment undertaken by CS Consulting Group (2025) confirms that proposed basement shall have no impact on existing lateral groundwater flows during the operational phase of the proposed development.

During the operational phase of the proposed development there is no potential for impact on human health and populations due to changes in land, soil, geology and hydrogeology.

Therefore, on this basis in the absence of mitigation measures the potential impacts during the operational phase on human health and populations due to the potential for contamination of soil and groundwater are **neutral, imperceptible** and **long term**.

With reference to Chapter 6 (Hydrology), a reduction in water quality via unmitigated pollutants entering the Liffey Estuary (as set out in Section 6.5.2.1) 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 Liffey Estuary.

The potential for unmitigated off-site flooding as a result of the increased hardstanding areas, and due to the flood risk at the site (as set out in section 6.5.2.2) the Proposed Development has the potential to impact on human health, populations, and material assets located downstream of the site.

In the absence of mitigation measures the potential impacts during the construction phase on human health and populations due to changes to the hydrological environment are **negative, not significant** and **long term**.

4.5.2.4 Potential Impact from Air Emissions on Human Health

As outlined in Chapter 8 (Air Quality), traffic related air emissions have the potential to impact air quality which can affect human health. A detailed air dispersion modelling assessment of traffic emissions was conducted and it was determined that emissions of air pollutants are predicted to be significantly below the ambient air quality standards which are based on the protection of human health. Therefore, it can be determined that the impact to human health during the operational stage is **direct, long-term, negative** and **imperceptible**.

4.5.2.5 Potential Impact from Noise and Vibration Emissions on Human Health

As detailed in Chapter 10 section 5.2.1, the main potential sources of outward noise from the development during the operational phase will be traffic flows to and from the development via public roads, and mechanical and electrical plant used to service the buildings. Based on a review of the baseline noise environment and the BS 4142 assessment methodology, cumulative plant noise associated with the development shall be designed to not exceed 45 dB $L_{Aeq,15min}$ at the façade of the closest residential buildings at night and do not contain audible tones at NSLs outside of the site. This is set to ensure no significant increase in the prevailing background noise level occurs at existing residential NSLs. At commercial facades, an operational noise limit of 50 dB $L_{Aeq,15min}$ is proposed.

The above limits are set to ensure the operational impact associated with plant items serving the proposed development are **neutral, not significant** and **long-term**.

4.5.2.6 Potential Impact from Traffic and Transportation on Human Health

As detailed in Chapter 12 – Material Assets (Traffic and Transportation), the Proposed Development will result in negligible changes to the existing vehicular traffic flows on the surrounding street network, due to elements of the development's design such as restricted car parking provision, a significant secure bicycle parking provision, and ancillary facilities such as showers and lockers to support active travel modes.

However, there is also the potential during the development's operational phase for the surrounding road network to be affected in ways beyond junction operational performance. This relates primarily to waste collection and deliveries, which, if not properly managed, could result in adjacent streets being temporarily obstructed by stopped/parked servicing vehicles. There is also a risk of overspill car parking on surrounding streets by development occupants driving to work but not being able to park on site.

Therefore, in the absence of mitigation measures, there is the potential for a **negative, slight** and **long term** impact on human health and local populations as a result of additional traffic generation.

4.5.2.7 Potential Impacts from Major Accident Hazards and/or Natural Disasters on Population and Human Health

The Proposed Development has been designed with consideration given to the health and safety risks of people living and working in the vicinity. The facility has been designed by skilled personnel in accordance with internationally recognised standards, design codes, legislation, good practice and experience.

As outlined in Section 4.3.2.4 there is a negligible risk of external natural disasters, including landslides, seismic activity, volcanic activity and sea level rise. There is a negligible risk of major accidents occurring at the facility due to the lack of proximity to Seveso/Control of Major Accident Hazards (COMAH) Regulations sites.

As noted in Section 4.3.2.4, the site is located predominately in Flood Zone C. A minor a portion of the application area (along Clarion Quay, at the site's north-eastern boundary) is within Flood Zone B, but this is generally outside the development site proper. SUDS features will be implemented into the surface water drainage system, which will allow storage of water for the 1 in 100 year storm event plus a 30% allowance for climate change.

The potential effect is therefore imperceptible, and unlikely, respect of Major Accident Hazards or Natural Disasters on Population and Human Health Operational Phase of the Proposed Development.

4.6 Mitigation Measures

Mitigation measures proposed to minimise the potential impacts on human health in terms of Land and Water Emissions, Air Quality, Noise and Vibration, Landscape and Visual and Traffic are discussed in the relevant sections of Chapters 5, 6, 8, 10 and 12 of this EIAR respectively, and Volume 3 of this EIAR.

4.6.1 Construction Phase

Any perceived nuisance impacts on the immediate local population will be short-term in nature due to the length of the construction process for the Proposed Development. The remedial and mitigation measures to address the potential effects on population and human health from the Proposed Development have been assessed within the corresponding chapters of the EIAR.

4.6.1.1 *Businesses and Residences*

The construction contractor will establish a feedback mechanism for residents to report any concerns or issues related to construction activities. The construction contractor will engage with the community to address concerns and provide updates on mitigation efforts.

4.6.1.2 *Landscape Amenity and Tourism*

As outlined in Volume 3 – Townscape, Heritage, Landscape and Visual Impact Assessment, Section 7.14 – 7.18, the mitigation of potential construction effects will follow industry best practice construction standards, such as the use of appropriate hoarding. Site lighting would be designed to minimise light pollution on the surroundings of the site, using light sources of the minimum intensity required and ensuring that light is only used where needed.

4.6.1.3 *Land and Water Emissions*

As outlined in Chapter 5 (Section 5.3.7), there are no recorded groundwater boreholes for domestic use within the vicinity of the site, and it is not located near any public groundwater supplies, group schemes, or groundwater source protection zones. On a precautionary basis, the mitigation measures in Section 5.6.1.1 will be implemented during construction to protect human health and populations.

All excavated materials will be visually assessed by suitably qualified personnel for signs of contamination such as staining or strong odours. If unusual staining or odour is detected, soil samples will be analysed for potential contaminants to confirm whether historical pollution has occurred. Any contaminated soil will be segregated and disposed of by a suitably permitted waste contractor. All sampling and handling will be carried out by qualified and trained personnel using appropriate personal protective equipment.

Additional mitigation measures outlined in Chapter 6 (Section 6.6.1) will also be implemented during construction to protect human health and populations. These measures address suspended solids, cement/concrete works, hydrocarbons and other construction chemicals, rainfall runoff, perched water, and wastewater management. It has been established (Section 6.5.1.3) that there are no recorded Recreational Waters, Bathing Waterbodies, or Surface Water Drinking RPAs located downstream in the Liffey Estuary Lower transitional waterbody. On a precautionary basis, the measures in Sections 6.6.1.1 and 6.6.1.2 will be applied during construction.

4.6.1.4 *Air Emissions*

In order to mitigate the potential dust-related health impacts during the construction phase, dust related mitigation measures have been provided in Chapter 8 Air Quality of this EIAR. The mitigation measures draw on best practice guidance from Ireland (DCC, 2018), the UK (IAQM (2023), BRE (2003), The Scottish Office (1996), UK ODPM (2002)) and the USA (USEPA, 1997). The measures relate to site management

and maintenance, operating vehicles and machinery, waste management, demolition, earthworks and trackout.

4.6.1.5 Noise and Vibration Emissions

Best practice noise and vibration control measures will be employed by the contractor during the construction phase in order to avoid significant impacts at the nearest sensitive buildings. The best practice measures set out in BS 5228 (2009 +A1 2014) Parts 1 and 2 will be complied with. Further details are provided in Chapter 10 (Noise and Vibration).

4.6.1.6 Traffic and Transportation

With reference to Chapter 12 Material Assets (Traffic and Transportation) Section 12.6.1, to minimise construction impacts upon the surrounding road network, a Construction Traffic management Plan will be in place during the construction phase. All HGV construction traffic to and from the site will follow a designated route, ensuring that heavy construction vehicles avoid sensitive streets to the greatest extent possible and travel as little as possible within the city centre. Construction personnel will be encouraged to make use of the available high-quality public transport links to the area and/or to commute by bicycle, to minimise private car trips to and from the site.

4.6.1.7 Major Accident Hazards and/or Natural Disasters

There are no specific mitigation measures required during construction in respect of Major Accident Hazards and Disasters.

4.6.2 Operational Phase

4.6.2.1 Businesses and Residences

Once construction works are completed there are no specific mitigation measures required in respect of local businesses and residences.

4.6.2.2 Amenity and Tourism

Once construction works are completed there are no specific mitigation measures required in respect of amenity and tourism.

As outlined in Volume 3 – Townscape, Heritage, Landscape and Visual Impact Assessment, Section 2.86 – 2.88, the most appropriate form of mitigation is 'primary mitigation' where mitigation is fully incorporated into a series of iterations on the design of the new development. The Proposed Development would incorporate primary mitigation through its high-quality design. Potential impacts on views more widely would also be mitigated by high quality detailing and a sensitive approach to the visibility and use of materials and colour.

In this case, the scale, proportion and composition of the Proposed Development would embody not only mitigation, as outlined above, but also significant benefits in terms of enhancement. The qualities of the design would be such that its visibility and high quality of design would add to the townscape, making it more legible and creating a more characterful frontage along North Wall Quay.

4.6.2.3 Land and Water Emissions

As outlined in Section 5.3.7, there are no recorded groundwater boreholes for domestic use within the vicinity of the site, and it is not located near public groundwater supplies, group schemes, or groundwater source protection zones. On a precautionary basis, the mitigation measures in Section 5.6.2.1 will be implemented during the operational phase to protect human health and populations.

Similarly, Section 6.5.2.3 confirms that there are no recorded Recreational Waters, Bathing Waterbodies, or Surface Water Drinking RPAs located downstream in the Liffey Estuary. Nevertheless, the mitigation measures detailed in Sections 6.6.2.1 and 6.6.2.2 will be applied during the operational phase to safeguard human health, populations, and downstream material assets.

4.6.2.4 Air Emissions

With reference to Chapter 8 (Air Quality), There is no mitigation required for the operational phase of the development as impacts to air quality are predicted to be **not significant** (see Section Error! Reference source not found.).

4.6.2.5 Noise and Vibration Emissions

With due consideration as part of the detailed design process, this approach will result in the site operating within the constraints of the best practice guidance noise limits that have been adopted as part of the detailed assessment included in Chapter 10 (Noise and Vibration).

Changes to traffic flows will not result in a perceptible increase in noise level in the surrounding environment. Therefore, no mitigation measures are necessary in this case.

4.6.2.6 Traffic and Transportation

With reference to Chapter 12 Material Assets (Traffic and Transportation) Section 12.6.2, a Travel Plan Coordinator shall be appointed for the Proposed Development, with the remit to implement and oversee an ongoing Workplace Travel Plan (WTP). In conjunction with the development's intrinsic mitigation measures (reduced car parking, significant bicycle parking, and ancillary facilities), this shall assist development occupants and visitors in making the most of sustainable transport opportunities and in avoiding single-occupant car journeys to and from the development site, which shall in turn reduce the likelihood of overspill parking on surrounding streets.

On the basis that the AM peak is often the busiest hour for servicing, the operation of the development will spread deliveries throughout the day wherever possible. Refuse collection will be undertaken outside of peak hours where possible, with the specific collection times being arranged with the private waste contractors to minimise the impacts on the operation of the site and of the surrounding street network.

4.6.2.7 Major Accident Hazards and/or Natural Disasters

Once construction works are completed there are no specific mitigation measures required in respect of Major Accident Hazards and Disasters.

4.7 Monitoring or Reinstatement Measures

4.7.1 Construction Phase

The construction Contractor will prepare a detailed CEMP that will include all mitigation measures set out within this EIAR and any subsequent planning conditions relevant to the Proposed Development. It will also set out in detail the overarching vision of how the construction Contractor of the Proposed Development will manage the site in a safe and organised manner. The Contractor will appoint a competent person who will prepare and maintain the noise, vibration, dust, and groundwater monitoring plan.

Additional monitoring requirements are set out in Chapters 5: Land, Soils, Geology and Hydrogeology, 6: Hydrology, 8: Air Quality, 10: Noise & Vibration, 12: Material Assets (Traffic and Transportation) of this EIAR and Volume 3: Townscape, Heritage, Landscape and Visual Impact Assessment of this EIAR.

4.7.2 Operational Phase

No additional monitoring other than that which is set out in Chapters 5: Land, Soils, Geology and Hydrogeology, 6: Hydrology, 8: Air Quality, 10: Noise & Vibration, 12: Material Assets (Traffic and Transportation) of this EIAR and Volume 3: Townscape, Heritage, Landscape and Visual Impact Assessment of this EIAR are required.

4.8 Residual Effects of the Proposed Development

4.8.1 Construction Phase

4.8.1.1 Businesses and Residences

The construction stage is considered to have the potential to have a **positive, not significant, short term** residual impact on the economy and employment of the local and wider area.

4.8.1.2 Landscape Amenity and Tourism

With reference to Volume 3: Townscape, Heritage, Landscape and Visual Impact Assessment, the mitigation measures set out in Section 4.6.1.2 are likely to have the greatest effect in the areas closer to the site, where hoarding would screen views of the construction activities related to the lower elements of the Proposed Development. The residual effect on the local population regarding the landscape and visual environment is considered to be negative, slight to moderate, and short term.

The residual effect on local tourism from the construction phase of the Proposed Development will remain negative, moderate and short term.

4.8.1.3 Land and Water Emissions

The implementation of the mitigation measures detailed in Section 4.6.1 (and Section 5.6.1 of Chapter 5 Land, Soils, Geology and Hydrogeology, and Section 6.6.1 of Chapter 6 Hydrology) will ensure that the potential impacts on human health and populations during the construction phase are adequately mitigated. The residual effect on human health and populations from land and water emissions during the construction phase is considered to be **neutral, imperceptible** and **short-term**.

4.8.1.4 Air Emissions

Best practice mitigation measures are proposed for the construction phase of the Proposed Development which will focus on the pro-active 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 of the Proposed Development will ensure that the impact of the development complies with all EU ambient air quality legislative limit values which are based on the protection of human health. Therefore, the impact of construction of the Proposed Development will be **direct, short-term, negative, localised** and **not significant** with respect to human health.

4.8.1.5 Noise and Vibration Emissions

The application of binding noise limits and hours of operation, along with implementation of appropriate noise and vibration control measures (outlined fully in Section 10.6.1 of Chapter 10 Noise and Vibration, will ensure that noise and vibration impact is kept to a minimum as far as practicable. Residual noise impacts during the construction phase will be negative, imperceptible to significant and brief to short-term at the closest NSLs. Vibration impacts during the construction phase will be negative, not significant to slight, and brief to temporary.

4.8.1.6 Traffic and Transportation

Provided the mitigation measures outlined in Chapter 13 – Material Assets (Traffic and Transportation) and Section 4.6.1.6 are incorporated during the construction phase, the residual impact upon the local population from traffic is predicted to be short-term in duration, negative in nature and of slight significance.

4.8.1.7 Major Accident Hazards and/or Natural Disasters

There are no significant potential impacts on Human Health from Major Accident Hazards and/or Natural Disasters; therefore, there are no residual impacts.

4.8.2 Operational Phase

4.8.2.1 Businesses and Residences

No mitigation is proposed regarding this factor as impacts will be positive. The operational phase, therefore, is considered to have the potential to have a **positive, imperceptible, long term** residual impact on the local population.

4.8.2.2 Amenity and Tourism

With reference to Volume 3: Townscape, Heritage, Landscape and Visual Impact Assessment, the mitigation against visual impacts for the Proposed Development are embedded in the design of the building, therefore the residual effects are unchanged from the potential impacts. The residual effects of the Proposed Development on the local population are permanent and range from neutral (the significance of neutral impacts are imperceptible to moderate to positive (the significance of positive impacts are slight to substantial)).

No mitigation is proposed regarding impacts on local tourism or amenities as impacts will be positive. The operational phase, therefore, is considered to have the potential to have a **positive, not significant, long term** residual impact on the local population.

4.8.2.3 Land and Water Emissions

The implementation of the mitigation measures detailed in Section 4.6.2.3 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 from land and water emissions during the operational stage is considered to be **neutral, imperceptible and long term**.

4.8.2.4 Air Emissions

As detailed in Chapter 8 (Air Quality), no significant residual effects are predicted for the operational phase of the Proposed Development.

4.8.2.5 Noise and Vibration Emissions

Following the implementation of the mitigation measures set out in Section 4.6.2.5, the predicted change in noise levels associated with additional traffic is expected to be neutral, imperceptible and long-term along the existing road network. The impact from building services and plant is predicted to be neutral, not significant and long term.

4.8.2.6 Traffic and Transportation

The assessment of the additional traffic movements associated with the Proposed Development during the operational phase is presented in Chapter 13 (Traffic and Transportation). With the implementation of

these additional mitigation measures, the overall residual operational-phase effect of the Proposed Development on the operation of the surrounding road network shall be negative in nature, long-term in duration, but not significant.

4.8.2.7 Major Accident Hazards and/or Natural Disasters

There are no significant potential impacts on Human Health from Major Accident Hazards and/or Natural Disasters; therefore, there are no residual impacts.

4.9 Cumulative Impacts of the Proposed Development

The potential for cumulative impact of the Proposed Development with any/all relevant other planned or permitted developments as outlined in Chapter 2 (Description of the Proposed Development) are discussed in Sections 4.9.1 and 4.9.2 below for construction and operational phases.

The likely cumulative impact of the Proposed Development in conjunction with these cumulative developments upon health in relation to noise, dust generation, construction traffic, visual impacts, etc., associated with the works; have been assessed in the respective EIA Report Chapters.

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.

4.9.1 Construction Phase

In a worst-case scenario, multiple developments in the area could be developed concurrently or overlap in the construction phase and contribute to additional impacts in terms of traffic, dust, and noise.

The implementation of mitigation measures within each chapter and detailed in Section 4.6.1; as well as the compliance of adjacent development with their respective planning permissions, will ensure there will be minimal cumulative potential for change in soil quality or the natural groundwater regime during the construction phase of the Proposed Development.

Contractors for the Proposed Development will be contractually required to operate in compliance with a project-specific CEMP and Construction Traffic Management Plan which will include the mitigation measures outlined in this EIA Report. The construction phase for the overall development of the applicant owned lands would be restricted by the same binding limits for noise, dust, and emissions to water.

According to the IAQM guidance (2014) should the construction phase of the Proposed Development coincide with the construction phase of any other development within 350 m then there is the potential for cumulative construction dust impacts. However, best practice dust mitigation measures will be implemented across the site which will avoid significant dust emissions. Provided these mitigation measures are in place for the duration of the construction phase of the Proposed Development significant cumulative dust impacts are not predicted.

As noted in Chapter 10 (Noise and Vibration), if construction activities at nearby sites are taking place concurrently with the construction of the Proposed Development, there is potential for cumulative noise impacts to occur. Due to the nature of construction works associated with the Proposed Development, noise levels from this site will dominate the noise environment when occurring in proximity to the noise sensitive locations along its immediate boundary. The noise contribution from other construction sites would need to be equal to those associated with the Proposed Development to result in any cumulative effect.

4.9.2 Operational Phase

The potential cumulative impacts of the Proposed Development during the operational phase in terms of Air Emissions, Noise generation and Traffic generation in the context of the Permitted Development have been considered in Chapter 8 Air Quality, Chapter 10 Noise and Vibration and Chapter 12 Material Assets (Traffic and Transportation). The assessments indicate that the Proposed Development is not likely to result in significant adverse impacts on Human Health either alone or in combination with any likely future projects.

As stated in Chapter 8 – Air Quality, the impact to air quality during the operational phase of the Proposed Development will be direct, long-term, negative and imperceptible. Therefore, there is no potential for significant cumulative impacts with other development and the impact is predicted to be direct, long-term, negative and imperceptible.

The noise limits set for off-site noise sensitive locations are designed to avoid any significant increase in the prevailing background noise environment. Operational noise limits included in Chapter 10 (Noise and Vibration) 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 limits at off-site noise sensitive locations are not exceeded.

As outlined in Chapter 12 – Material Assets (Traffic and Transportation), planning permission is in place for a number of committed developments close to the subject site, some of which are currently under construction. All of these committed developments are on brownfield sites and are not expected to result in significant increases in the vehicular traffic flows near the subject development site. In terms of traffic and transportation, it is therefore considered that cumulative effects shall not differ from the Proposed Development's residual effects.

4.10 References

- ▶ Central Statistics Office. Statbank Databases (Accessed January 2024, <https://www.cso.ie/en/databases/>)
- ▶ Central Statistics Office. Census of Population, 2016 and 2022. (Accessed January 2024, <https://www.cso.ie/en/census/>)
- ▶ Central Statistics Office. Labour Force Survey, 2020 (Accessed January 2024, www.cso.ie/en/statistics/labourmarket/labourforcesurveylfs)
- ▶ Dublin City Council. Dublin City Development Plan 2022 – 2028.
- ▶ Environment Protection Agency, Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2022)
- ▶ European Commission (EC), Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report (EC, 2017).
- ▶ Pobal HP Deprivation Index (Accessed January 2024, <https://data.gov.ie/dataset/pobal-hp-deprivation-index>)
- ▶ Seveso Directive (Directive 82/501/EEC, Directive 96/82/EC, Directive 2012/18/EU)

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