CHAPTER 02:

DESCRIPTION OF THE PROPOSED DEVELOPMENT

02

CHAPTER CONTENTS

2.0 DESCRIPTION OF THE PROPOSED DEVELOPMENT 1

2.1 Introduction 1

2.2 Description Of The Existing Development Site 1

2.2.1 Existing Citigroup Building 3

2.2.2 Existing Site Utilities, Infrastructure and Access 4

2.2.3 Protected Structures 6

2.2.4 Proximity to Seveso and COMAH sites 6

2.2.5 Proximity to Industrial Emissions Licenced Facilities 7

2.2.1 Dublin City Development Plan 2022-2028 Land Use Zoning Objectives 8

2.3 Characteristics Of The Proposed Development 9

2.3.1 Proposed Development Overview 9

2.3.2 Proposed Office Space 10

2.3.3 Proposed Retail Space 10

2.3.4 Proposed Community Space 10

2.3.5 Proposed Basement 11

2.3.6 Architectural Rationale 11

2.3.7 Proposed Site Utilities and Infrastructure 11

2.4 Description Of Demolition, Construction And Commissioning 15

2.4.1 Demolition and Construction Duration and Phasing 17

2.4.2 Site Access, Car Parking, and Traffic Management During Demolition and Construction 17

2.4.3 Site Preparation Works and Establishment of Construction Services 17

2.4.4 Demolition and Construction 18

2.4.5 Construction and Demolition Equipment, Techniques and Materials 20

2.4.6 Site Utilities and Infrastructure During Demolition and Construction 21

2.4.7 Construction Staffing and Working Hours 23

2.4.8 Demolition and Construction Equipment, Techniques and Materials 23

2.4.9 Landscaping/Reinstatement 23

2.4.10 Commissioning Phase 24

2.4.11 Construction and Environmental Management 24

2.4.12 Potential Impacts and Mitigation Measures During Construction and Commissioning 26

2.5 Operation Of The Proposed Development 27

2.5.1 Staffing and Building Management 27

2.5.2 Transportation and Accessibility 27

2.5.3 Site Utilities and Infrastructure (Resource Consumption) 28

2.5.4 Waste Generation and Management 30

2.5.5 Sustainability, Energy Efficiency, and Resource Use 30

2.5.6 Potential Impacts During Operation and Mitigation Measures 31

2.6 Changes To The Project 31

2.7 Description Of Other Related Projects 31

2.8 Description Of Potential Cumulative Developments 31

2.8.1 Potential Impacts from Cumulative Development and Mitigation Measures ... 32

2.0 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 the existing office building and the construction of a new 17 storey landmark office development over 2 no. levels of basement with an overall gross floor area of c. 88,994 sq. metres.

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 the 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. 0.9 hectares (8,859 m^2) 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 35,649 m^2).

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 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.

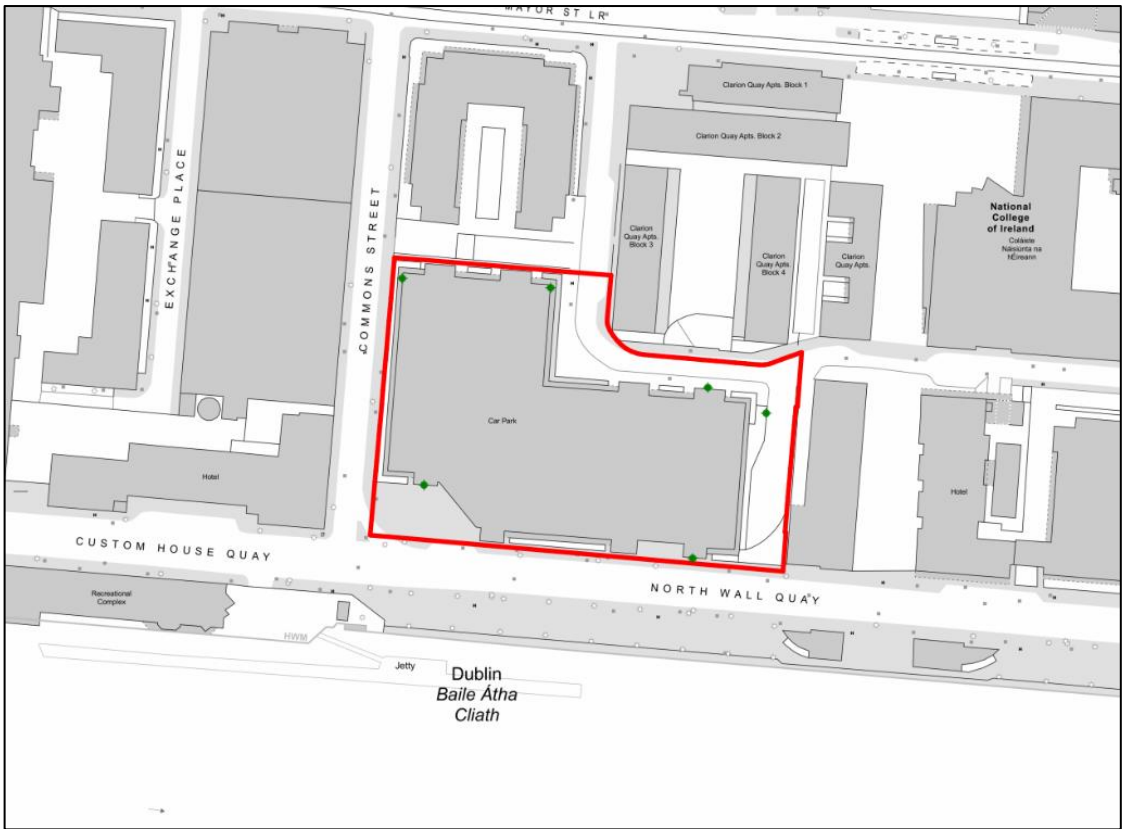

Figure 2-1 *Site Location Plan (Source: 1NWQ-HJL-AX-00-DR-A-0001)*

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 sixth 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 34,506 m^2 and a total Net Internal Area of 21,223 m^2 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 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 (2023) (included with the application documentation), Uisce Éireann Drainage Records indicates an existing 200mm ductile iron and an existing 600mm cast-iron watermains 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 (2023) included with the planning application documentation.

2.2.2.2 Existing Foul Wastewater Drainage Infrastructure

As outlined in the CS Consulting Engineering Services Report (2023) (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) 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 (2023) included with the planning application documentation.

2.2.2.3 Existing Surface Water Drainage Infrastructure

As outlined in the CS Consulting Engineering Services Report (2023) (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) 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.

For further details on the existing stormwater infrastructure see the CS Consulting Engineering Services Report (2023) included with the planning application documentation.

2.2.2.4 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. 130 no. parking spaces are available at basement level of the existing building, accessed via a ramp off Clarion Quay.

2.2.2.5 Existing Telecommunication Infrastructure

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

2.2.2.6 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.

2.2.2.7 Existing Natural Gas Infrastructure

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

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 Seveso and 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, 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.

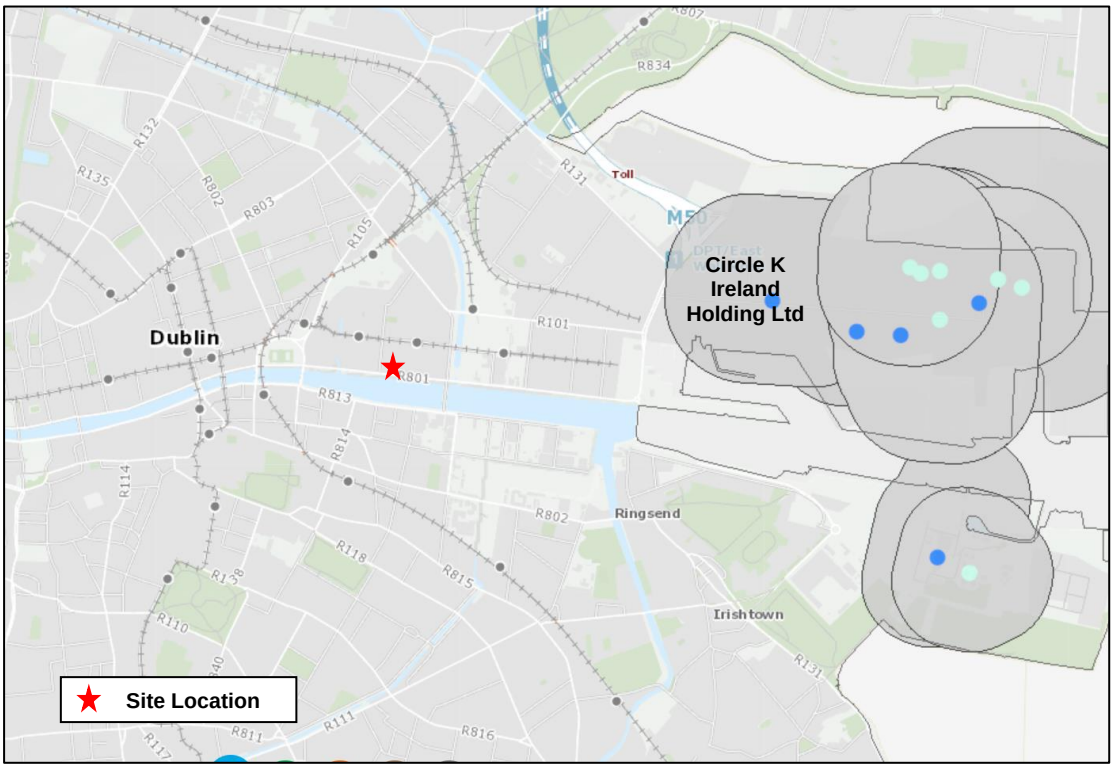

Figure 2.2 *Consultation Distances of Seveso Establishments within the vicinity of the Proposed Development site (indicative as red star)*

2.2.5 Proximity to Industrial Emissions Licenced 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 (2023). 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
P0468-01	Everlac Paint Limited	Industry	IPC	1.8 km
P0054-02	Mater Misericordiae University Hospital	Industry	IEL	1.9 km

2.2.1 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 2.3 below illustrates the zoning of the site as well as the surrounding areas.

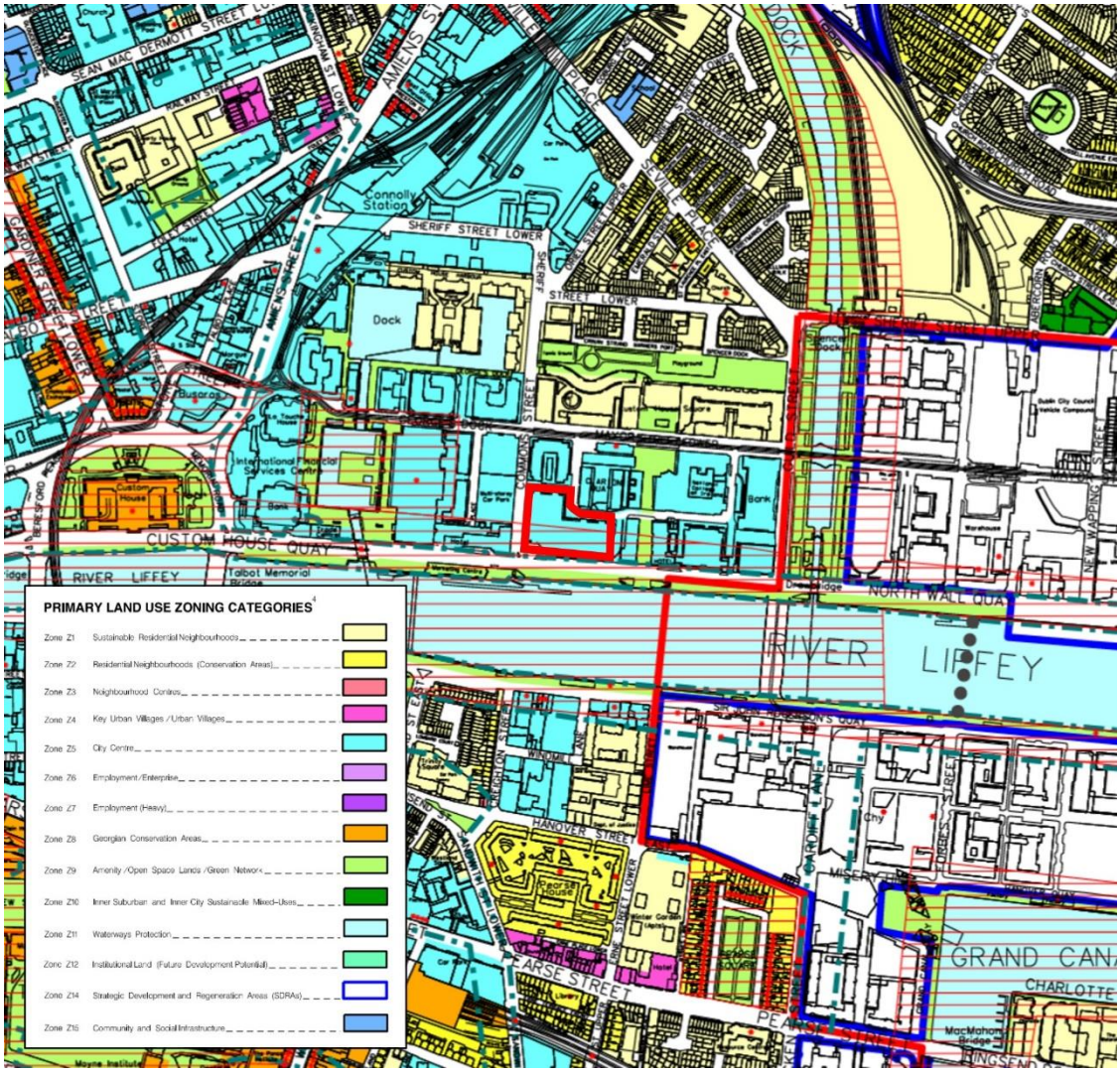

Figure 2.3 *Dublin City Development Plan 2022 – 2028 Zoning (site boundary indicative in red)*

2.3 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

2.3.1 Proposed Development Overview

The proposed development provides for the demolition of the existing building and construction of a new building ranging in height from 9 no. to 17 no. storeys over lower ground floor and double basement comprising of office accommodation, arts/community/cultural uses and a retail/café/restaurant unit. Office accommodation is provided from lower ground floor to 15th floor level, arts/community/cultural uses are provided at lower ground, ground, 1st and 16th floor level with a retail/café/restaurant unit at ground floor level. Landscaped terraces are located at 8th, 9th, 10th, 11th, 15th, 16th floor level with winter terraces located at 4th, 6th 9th floor level. Provision of a new landscaped street to the east of the building to include external arts/community/cultural uses. The double basement comprises 30 no. car parking spaces, 923 no. bicycle parking spaces and 6 no. motorbike spaces as well as shower/changing facilities and plantroom.

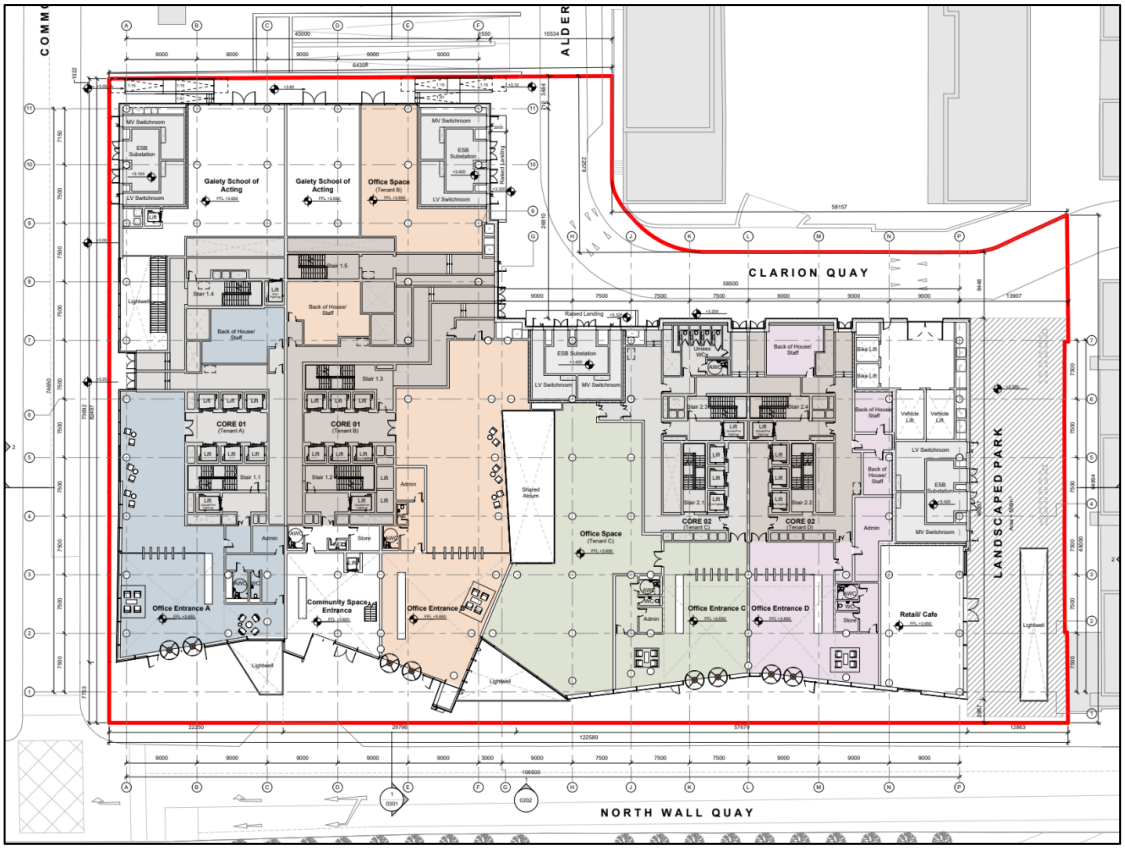

Figure 2-3 *Proposed Development Ground Floor Plan (Source: 1NWQ-HJL-AX-00-DR-A-0100)*

2.3.2 Proposed Office Space

All levels of the Proposed Development, aside from Basement -1, Basement -2 and Level 16 have space dedicated for office use. This space equates to a total gross internal area (GIA) of 69,258 m^2 and a net internal area (NIA) of 47,225 m^2 of office space. The proposed office space can accommodate a total staff population of c. 4,723 persons.

2.3.3 Proposed Retail Space

There is a proposed 196 m^2 GIA of retail space at Level 00.

2.3.4 Proposed Community Space

Levels Lower Ground, 00, 01 and 16 contain space dedicate to community use.

The breakdown per level is as follows:

- Lower Ground: 384 m^2 GIA;
- Level 00 557 m^2 GIA,
- Level 01 244 m^2 GIA,
- Level 16 630 m^2 GIA.

2.3.5 Proposed Basement

There are two levels of basement proposed, Basement -1, Basement -2, that are 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 30 no. car parking spaces, 980 no. bicycle parking spaces and 6 no. motorbike spaces, waste storage area, as well as shower/changing facilities and plantroom. Basement -2 is solely plantrooms and ancillary areas.

Vehicular access to the basement car park shall be via car lift, accessed from Clarion Quay to the east of the development site.

The overall gross internal area of basement space is 14,420 m^2.

2.3.6 Architectural Rationale

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

The development proposal of a contemporary, mixed-use 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 civic spaces over 4 levels including the penthouse floor.

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 it's 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 Section 6.0 Tall Building Statement in Volume 3 of the EIAR (Heritage Townscape, Landscape and Visual Impact Assessment) and the Architecture Design Statement prepared by Henry J Lyons and included with the planning application documentation.

2.3.7 Proposed Site Utilities and Infrastructure

2.3.7.1 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) (Uisce Éireann Ref: CDS23006147).

The development's proposed water supply connection has been designed in accordance with the Uisce Éireann Code of Practice for Water Infrastructure.

A Pre-Connection Enquiry (CDS23006147) was submitted to Uisce Éireann in 2023 on the basis of an office development with a design population of 4,923 people on the subject site. A Confirmation of Feasibility was received in response, stating that a potable water connection to the public system was 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.

2.3.7.2 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, as recommended by Uisce Éireann in its Confirmation of Feasibility (CDS23006147).

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 2 no. internal pumping chambers at the lower basement level (-2 level). From these, it shall be pumped via 2 no. rising mains 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 proposed foul 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), the Greater Dublin Strategic Drainage Study (GDSDS), Uisce Éireann Code of Practice for Wastewater Infrastructure and the Regional Code of Practice Drainage Works.

A Pre-Connection Enquiry (CDS23006147) was submitted to Uisce Éireann in 2023 on the basis of an office development with a design population of 4,923 people on the subject site. A Confirmation of Feasibility was received in response, stating that a wastewater connection to the public system was feasible subject to upgrades.

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 TARA-CSC-ZZ-ZZ-DR-C-2001, TARA-CSC-ZZ-ZZ-DR-C-2002, and TARA-CSC-ZZ-ZZ-DR-C-2003 included with this application for the proposed foul drainage network layout.

2.3.7.3 Proposed Surface Water Drainage Infrastructure

The existing office building on the development site has surface water drainage connections to the stormwater sewers in Clarion Quay and Commons Street. It is proposed to retain these and use them for the Proposed Development; these comprise 3no. connections to the stormwater sewer in Clarion Quay and 3 no. connections to the stormwater sewer in Commons Street.

Please refer to CS Consulting drawing no. 1NWQ-CSC-ZZ-00-DR-C-0104 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 (GDSDS). 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 compromise the construction of a number of Sustainable Drainage Systems (SuDS) measures, in accordance with the requirements of Dublin City Council.

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. The Green and Blue roof measures shall limit stormwater water run-off from the Proposed Development to the greenfield run off rate (maximum of 2.0 l/sec/ha).

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 maximum possible green roof coverage in this instance has 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 30% for the predicted effects of climate change.

The Proposed Development shall be provided with Blue Roofs at levels 9, 10, 11, 15, and 16, as shown on CS Consulting drawing no. 1NWQ-CSC-ZZ-00-DR-C-0107. These provide a total Blue Roof area of 1,389m^2, equating to an attenuation storage volume of approx. 139m^3.

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

The relevant Q-Bar value (greenfield run-off rate) for the subject development site has been established as 2.0 l/sec/ha. As the development site proper has an area of c. 0.9ha, the resultant maximum greenfield stormwater runoff for all rainfall events is 1.8 l/sec.

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 12 (Material Assets) address the potential impacts of the Proposed Development on storm water network.

2.3.7.4 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: 30 no. car parking spaces located internally at basement level -1, and 2 no. spaces at surface level on Clarion Quay. 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 2,164m^2 office space GFA, whereas the existing office building has a car parking ratio of 1 no. space per 129m^2 GFA. The development includes 6no. motorcycle parking spaces, located at basement level -1.

Battery Electric Vehicle charging points shall be provided from the outset at 15no. car parking spaces within the Proposed Development basement level -1, representing 47% 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 car lift, accessed from Clarion Quay to the east of the development site.

The Dublin City Development Plan 2022–2028 does not permit the provision of car parking spaces within new developments in Parking Zone 1, with the exception of car-share parking and accessible car parking. All car parking spaces shall be allocated to shared vehicle use. The total number Bicycle Parking is no. 980 spaces (1 space per 71 m^2 office GFA).

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, 2023) included with the planning documentation.

2.3.7.5 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. 5.5 MW which works out to be approximately 80 W/m^2. 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.

2.3.7.6 Proposed Telecommunications Infrastructure

There 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.

2.3.7.7 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 will provide office, 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	The existing 6 no. storey building over single-storey basement (Gross Internal Area of 34,506.2m^2) is to be demolished as part of the Proposed Development. The works will include: • Demolition of 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 grubbed out to make-way for new foundations for the proposed vertical structure. Completion of Pre-Demolition Surveys including an asbestos survey and bat survey prior to works commencing; Stripping of hazardous materials; Removal of existing fixtures and fittings such as floors, doors, partitions, ceilings, windows, mechanical equipment and non-buried pipping and electrical services; Removal of all roof coverings and building envelope finishes. Support and then cut remaining roof structures before lowering to ground level for dismantling; Demolish internal walls and columns; Remove ground floor slab; Separation of demolition debris into different waste streams; Removal of all waste from site. Details of the demolition methodology are set out in the Demolition Method Statement prepared by CS Consulting (2023)
Site clearance, basement excavation earthworks, foundations	As the site is entirely covered by the existing building, site investigation works will take place following demolition of the existing building. A secant pile wall will be installed around the perimeter of the development site. This is socketed into unbroken bedrock and provides a barrier to lateral groundwater ingress. Following this, excavation to install temporary supports and installation of temporary supports will be undertaken, followed by full excavation required to facilitate the Proposed Development The proposed depth of the excavations is anticipated to be c. 15 m below surrounding ground level across entire basement footprint. This will require a bulk excavation (120,000 m^3) and removal from the site. This phase will include any additional site clearance, excavations and levelling of the Site to the necessary base level for construction. All services on site shall be disconnected, diverted or removed as agreed with service providers. Install granular fill for roads and footpaths. This will be followed by the construction of internal piles, piled foundations and basement slab and associated works.
Structural and Building envelope works	After the foundations are in place, the structural steel and building construction can begin. This 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 warrantied 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 various buildings. 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: • Plant equipment; • Pipework; • Electrical works and IT equipment; and • Associated and ancillary works.
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 6 months, and the construction phase including basement excavations, structural works and fit out duration is approximately 36 months for construction

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 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.

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.

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. Construction personnel will be encouraged to walk, cycle, or use public transport, and information on local transport services will be published on site.

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.

Due to the constrained nature of the site, the construction compound may be located offsite for certain phases of the development in rented office space located nearby. If the construction compound is located on site, it 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.

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

Demolition of the existing buildings on the site is required to facilitate the Proposed Development. Demolition drawings can be seen below.

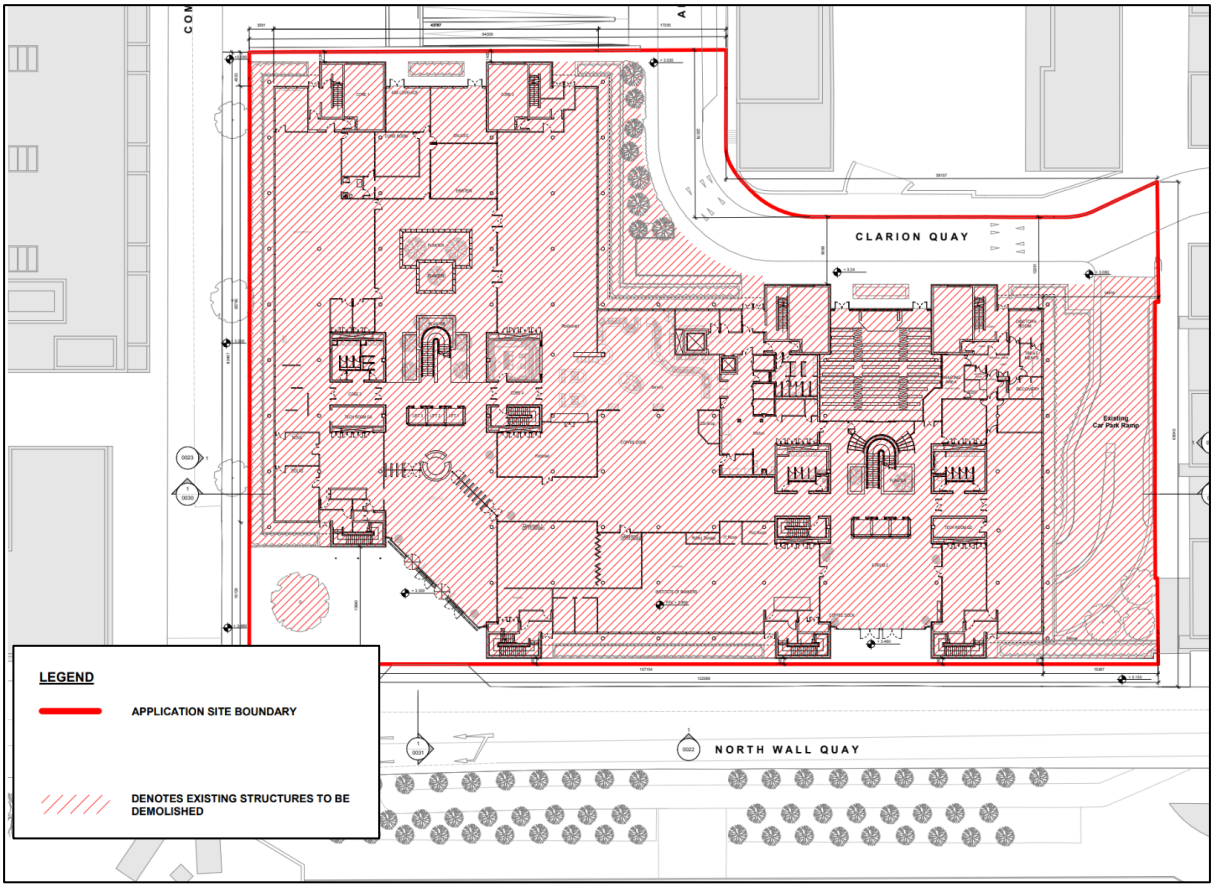

Figure 2-4 Ground Floor Demolition Plans

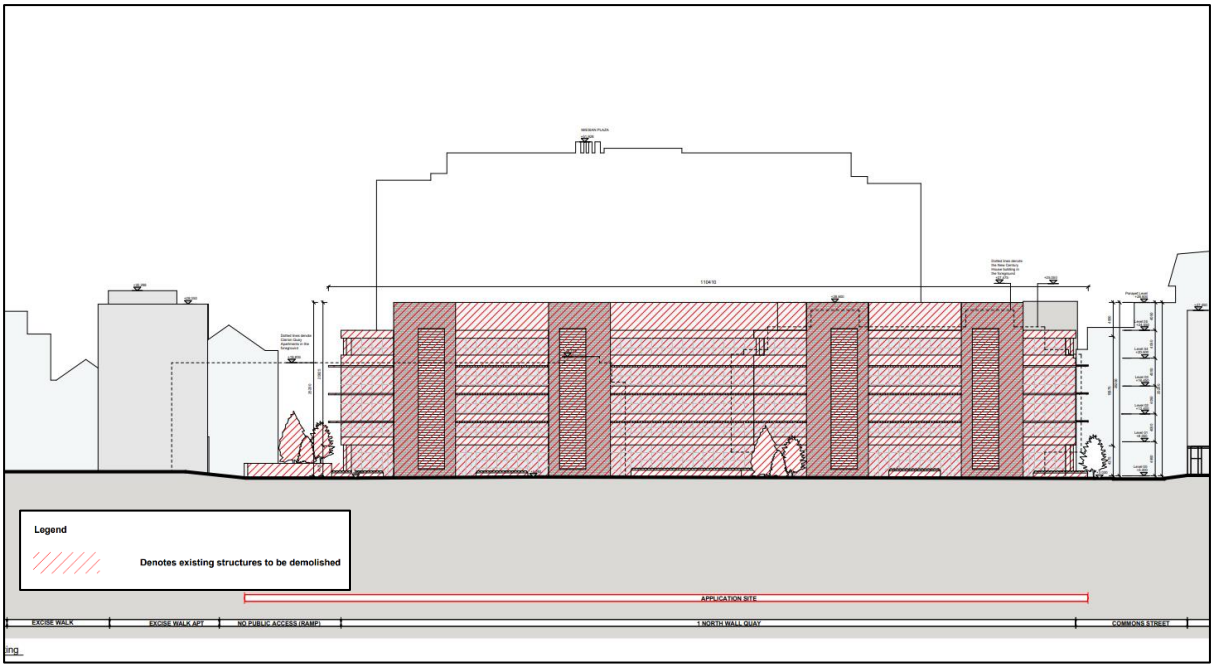

Figure 2-5 Northen Elevation Demolition Plans

It is anticipated that 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.

Following this the demolition of the existing building will be followed by the demolition of existing roof-top plant rooms and lift rooms.

The existing structure is constructed of reinforced concrete flat slabs supported on reinforced concrete columns and core walls. The superstructure sits atop a single level basement constructed in reinforced concrete. The foundations for the building are typically shallow pad footings below basement level. The penthouse/set back floor is constructed in structural steelwork. Further steelwork is utilised in the feature atrium roof light glazing.

An outline Demolition Method Statement for the proposed development has been prepared by CS Consulting 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 Contractor must develop a Construction Environmental Management Plan 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.

In addition, a Heritage Significance and Adaptive Capacity Assessment, has been prepared by Henry J Lyons (2024) to provide support for the planning application for the redevelopment of the subject lands.

The existing single storey basement is constructed in reinforced concrete box to the site perimeter. The proposed 2-storey basement (plus lower ground floor) will be required to occupy the same footprint of the site.

To construct the new pile wall to facilitate the proposed 3no. floors below ground level, it is anticipated that the existing basement will be backfilled with demolition material to work as a piling mat. It is anticipated that the existing concrete structure will be piled through with rotary cored piles and back filled with stone or lean-mix concrete. These cores filled with stone or lean-mix concrete are then available to be piled through for new piles for new development.

Linesight Quantity Surveyors have estimated that 120,000 m^3 of subsoils, stones, and bedrock (if encountered) will be excavated to facilitate the Proposed Development. Excavated material requiring removal from site will be regularly removed to ensure there is minimal need for stockpiling.

In addition to excavated material, the primary waste streams that will be generated during the demolition phase include glass, concrete/bricks/tiles/ceramic, plasterboard, asphalts, metals and timber.

The basement construction sequence will consist of the following outline;

- Site clearance/Demolition.
- Installation of Piling Matt.
- Installation of secant pile wall from existing ground level.
- Excavate locally for the installation of temporary supports to secant pile wall.
- Installation of temporary supports.
- Excavation of basement to formation level (c. 15 m below ground level).
- Construction of internal piles, piled foundations and basement slab.
- Construction of internal reinforced concrete linear wall from basement to underside of ground floor slab.
- Construction of ground floor slab.
- Removal of temporary support to the secant pile wall.

Construction techniques will include back propping and mini pulverisers, mechanical excavation, construction of reinforced concrete foundations, reinforced concrete slabs and structural steel frame building, mass concrete rising walls, steel roof beams, and unitised/stick build façade 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

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.

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.

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

Surface water discharge from the site will be managed and controlled for the duration of the construction works until the permanent surface water drainage system of the proposed site is complete. During construction, run-off from excavations/earthworks cannot be prevented entirely and is largely a function of prevailing weather conditions and underlying groundwater table.

The lead contractor will be required to secure a Discharge / Trade Effluent Licence from Uisce Éireann, permitting the discharge of pumped groundwater (required for basement excavation and general site water management) to the public drainage network.

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 (CMP) has been developed by CS Consulting and is included with this application. The CMP 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 Outline CMP will be implemented and adhered to by the construction Contractor(s). See Chapter 6 (Hydrology) for a full description of mitigation measures proposed. The Outline CMP 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. The facilities will need to have the foul water collected by a licensed waste sewerage contractor. Wastewater will be 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 7pm 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 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 Demolition and Construction Equipment, Techniques and Materials

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

Key materials will include steel, concrete, glass, composite cladding, piping, electrical cabling, process equipment and architectural finishes. A ‘Just In Time’ delivery system will operate to minimise storage of materials on site.

Aggregate materials such as sands and gravels will be stored in clearly marked receptacles within a secure compound area to prevent contamination. Liquid materials will be stored within temporary bunded areas, doubled skinned tanks or bunded containers (all bunds will conform to standard bunding specifications - BS8007-1987) to prevent spillage.

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.

Construction materials will be brought to site by road. Construction materials will be transported in clean vehicles. 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.

As detailed in the Climate Action Energy Statement (BPC Engineers, 2023), as part of the overall embodied carbon reduction strategy, the design is targeting that at least 20% of the cement will be replaced by Ground Granulated Blast Furnace Slag. The project will also target 90% recycled steel.

2.4.9 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.

2.4.10 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.

2.4.11 Construction and Environmental Management

Outline Construction Management Plan

CS Consulting and the project team have prepared Outline Construction Management Plan (2023) 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 CMP 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)
- Department of the Environment, Heritage and Local Government – Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects – June 2006
- Local Government Water Pollution Act 1977
- Environmental Protection Agency (EPA) – Draft Best Practice Guidelines for the Preparation of Resource Management Plans for Construction & Demolition Projects – April 2021
- 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 CMP 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 CMP 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 CMP 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.

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 EIA Report. 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.

2.4.12 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, the CEMP will be implemented and adhered to by the construction contractor and will be overseen and updated as required if site conditions change by the Project Manager, Environmental Manager, 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 17-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 10m^2 NIFA

This gives a projected total office population of 4,723 people, at full occupancy. A total of 20no. 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 4,411 people.

2.5.2 Transportation and Accessibility

All vehicular traffic accessing the development's basement car parking shall do so via its access 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, 30 no. spaces located internally at basement level -1 and 2 no. spaces located at surface level on Clarion Quay. 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.

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). The Luas light rail network consists of two principal lines with an interchange at Abbey Street/Marlborough Street/O'Connell Street in Dublin city centre

Bus stops within a 5-minute walk of the site are served by a total of 42no. NTA-licenced 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 promote and enhance travel via more sustainable modes of transport.
- To serve to identify travel demand strategies that reduce single occupancy private car travel, which in turn reduces traffic congestion, noise pollution and environmental impacts.
- To provide information on existing alternatives to the private car and are give the required advice, support, and encouragement to travel in a sustainable way.

The development shall include a total of 980 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 Section 12.2.8 above and 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 30% 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.

The relevant Q-Bar value (greenfield run-off rate) for the subject development site has been established as 2.0 l/sec/ha. As the development site proper has an area of c. 0.9 ha, the resultant maximum greenfield stormwater runoff for all rainfall events is 1.8 l/sec. The Proposed Development will restrict outflow from the onsite surface network to the greenfield runoff rate.

The existing office building on the development site has surface water drainage connections to the stormwater sewers in Clarion Quay and Commons Street. It is proposed to retain these and use them for the Proposed Development; these comprise 3no. connections to the stormwater sewer in Clarion Quay and 3no. connections to the stormwater sewer in Commons Street.

Please refer to CS Consulting drawing no. 1NWQ-CSC-ZZ-00-DR-C-0104 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 4,723 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 2.553 l/s and the corresponding peak effluent flow (Design Flow) has been calculated to be 11.489 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 4,723 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 2.553 l/s with a peak water demand of 12.765 l/s (CS Consulting, 2023).

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 / arts and retail space. Two 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 areas have been allocated to ensure a convenient and efficient management strategy with source segregation a priority. . Bins/bales will be transported from the waste storage areas at basement level -1 to ground floor level using a designated bin lift. There will be no staging area provided and bins/bales will be bought 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 Portal[1]
- An Bord Pleanála Map Search[2]
- My Plan National Planning Application Map Viewer[3]
- Dublin City Council Planning Map Viewer[4]

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.

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

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.