ENVIRONMENTAL IMPACT ASSESSMENT REPORT

VOLUME I NON-TECHNICAL SUMMARY

PROPOSED MIXED USE DEVELOPMENT

AT

1-6 City Quay, Dublin 2

Prepared by

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TABLE OF CONTENTS

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GLOSSARY OF TERMS[1]

[1] Selected – From Guidelines on the information to be contained in Environmental Impact Assessment Reports – EPA, May 2022

Alternatives *A description of other options that may have been considered during the conception of a project; these include alternative locations, alternative designs and alternative processes.*

Baseline Scenario *The current state of environmental characteristics – including any evident trends in its status.*

Competent Authority (CA) *The term 'competent authority' means the Minister or public authority to which an EIAR is required to be submitted, i.e. the authority charged with examining an EIAR with a view to issuing a consent to develop or operate.*

Development *A project involving new works [including alteration and/or demolition] or altered patterns of activity.*

'Do-nothing' Scenario *The situation or environment which would exist if a proposed, development, project or process were not carried out. This scenario needs to take account of the continuation or change of current management regimes, as well as the continuation or change of trends currently evident in the environment.*

Effect / Impact *A change resulting from the implementation of a project.*

Environmental Impact Assessment – EIA *The process of examining the anticipated environmental effects of a proposed project – from consideration of environmental aspects at design stage, through consultation and preparation of an Environmental Impact Assessment Report (EIAR), evaluation of the EIAR by a competent authority, and the subsequent decision as to whether the project should be permitted to proceed, encompassing public response to that decision.*

Environmental Impact Assessment Report *– EIAR A report or statement of the effects, if any, that the proposed project, if carried out, would have on the environment. EPA The Environmental Protection Agency.*

Impact / Effect *A change resulting from the implementation of a project*

Impact Avoidance *The modification of project decisions (about site location or design, for example) having regard to predictions about potentially significant environmental effects.*

Infrastructure *The basic structure, framework or system which supports the operation of a project, for example roads and sewers, which are necessary to support development projects.*

Land Use *The human activities which take place within a given area of space.*

Likely Effects (or Likely Impacts) *The effects that are specifically predicted to take place – based on an understanding of the interaction of the proposed project and the receiving environment. (See also Potential Effects and Residual Effects.)*

Methodology *The specific approach or techniques used to analyse impacts or describe environments.*

Mitigation Measures *Measures designed to avoid, prevent or reduce impacts. These measures can mitigate impacts: \ by Avoidance When no impact is caused (often through consideration of alternatives). \ by Prevention When a potential impact is prevented by a measure to avoid the possibility of the impact occurring. \ by Reduction When an impact is lessened.*

Monitoring *The observation, measurement and evaluation of environmental data to follow changes over a period of time, to assess the efficiency of control measures and to record any unforseen effects in order to be able to undertake appropriate remedial action. This is typically a repetitive and continued process carried out during construction, operation or decommissioning of a project.*
Pathway *The route by which an effect is conveyed between a source and a receptor.*

Planning Application Report *Documentation that accompanies the planning application which describes the conformity of the proposal with relevant legislation and planning matters – such as the County, City or Local Area Plans – and sectoral policies, as well as social and economic activity.*

Pollution *Any release to the environment which has a subsequent adverse effect on the environment or man.*

Potential Effect/ Impact *The effect / impact that would occur without mitigation.*

Processes *The activities which take place within a project.*

Project *For the purposes of the Guidelines, the term project is used to encompass all of the various forms of development, works and activity which are subject to EIA requirements, as set out in the relevant legislation and as understood by the Directive.*

Sensitivity *The potential of a receptor to be significantly affected. Significance (of impact) The importance of the outcome of the impact (or the consequence of change) for the receiving environment. Source The activity or place from which an effect originates.*

1.0 INTRODUCTION AND METHODOLOGY

1.1 INTRODUCTION AND TERMS OF REFERENCE

1.1.1 Legislative Requirements

The requirement for EIA for certain types and scales of development is set out in the EIA Directives (2011/92/EU and 2014/52/EU), European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (the bulk of which came into operation in September 2018), the European Communities (Environmental Impact Assessment) Regulations 1989-2006, Planning and Development Act 2000 (as amended) and the Planning and Development Regulations 2001-2019. It should be noted that this EIA Report is prepared in accordance with the 2011 EIA Directive (2011/92/EU), as amended by the 2014 EIA Directive.

The EIA Directives list those projects for which an EIA is mandatory (Annex I) and those projects for which an EIA may be required (Annex II). With regard to Annex II projects, Member States can choose to apply thresholds or use case by case examination or a combination of both to assess where EIA is required. In Ireland, a combination of both has been applied.

The project proposed is not listed under Annex I EIA Directives and it is below the relevant threshold as set out in the Planning and Development Regulations 2001-2018 for Annex II projects. The threshold for "Urban development which would involve an area greater than 2 hectares in the case of a business district" as set out in Part 2 of Schedule 5 (10(b)iv) of the Regulations was considered to be most relevant threshold in the context of the proposed development in the subject location. The proposed development does not exceed this threshold, however in light of proximity to the Customs House and the potential for visual impact the Applicant has decided to voluntarily prepare an EIA Report.

The main objective of an EIA, as set out in Article 3(1) of the 2014 EIA Directive, is to identify, describe and assess the direct and indirect significant impacts of a project on population and human health, biodiversity, land, soils, water, air & climate (including noise), material assets, cultural heritage and the landscape and the interaction between the aforementioned factors. The EIA Report reports on the findings of the EIA process to date and informs the Planning Authority, statutory consultees, other interested parties and the public in general about the likely effects of the project on the environment.

1.1.2 Format and Structure of this EIA Report

This EIA Report has been prepared in accordance with the requirements of EIA Directives (2011/92/EU and 2014/52/EU). It is prepared in the Grouped Format Structure following the guideline structure set down in the Environmental Protection Agency (EPA) "Guidelines on the Information to be Contained in Environmental Impact Assessment Reports" (May 2022).

The *"Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment"* (August 2018) and the European Commission Guidance on the preparation of the Environmental Impact Assessment Report have also been considered in the preparation of the EIA report.
The structure of the EIA Report is set out in Table 1.1 below.

Table 1.1 Structure of this EIA Report

Ch./Vol.		Title	Content
Vol. 1		Non-Technical Summary	Provides a concise non-technical summary of the information contained in the EIA Report.
Vol. 2	Ch. 1	Introduction	Sets out the purpose, methodology and scope of the document.
Vol. 2	2	Project Description	Sets out the description of the site, design and scale of the proposed development.
Vol. 2	3	Alternatives	Considers all relevant phases from construction through to existence and operation together with a description and evaluation of the reasonable alternatives studied by the developer including alternative locations, designs and processes considered; and a justification for the option chosen taking into account the effects of the project on the environment.

Vol. 2	4	Population and Human Health	Describes the demographic and socio-economic profile of the receiving environment and potential impact of the proposed development on population, i.e. human beings, and human health.
Vol. 2	5	Land, Soils, Geology and Hydrogeology	Provides an overview of the baseline position, the potential impact of the proposed development on the site's soil and geology and impacts in relation to land take and recommends mitigation measures.
Vol. 2	6	Water and Hydrology	Provides an overview of the baseline position, the potential impact of the proposed development on water quality and quantity and recommends mitigation measures.
Vol. 2	7	Biodiversity	Describes the existing ecology on site and in the surrounding catchment, and assesses the potential impact of the proposed development and mitigation measures incorporated into the design of the scheme.
Vol. 2	8	Air Quality and Climate	Provides an overview of the baseline air quality and climatic environment, the potential impact of the proposed development, and recommends mitigation measures.
Vol. 2	9	Noise and Vibration	Provides an overview of the baseline noise environment, the potential impact of the proposed development and recommends mitigation measures.
Vol. 2	10	Archaeology and Cultural Heritage	Provides an assessment of the site and considers the potential impact of the proposed development on the local archaeology and cultural heritage; and recommends mitigation measures.
Vol. 2	11	Traffic and Transport	Provides an assessment of the site and considers the potential impact of the proposed development on the local road network; and recommends mitigation measures.
Vol. 2	12	Material Assets - Waste	Describes the existing waste requirements of the proposed development and the likely impact of the proposed development on this material assets.
Vol. 2	13	Material Assets - Utilities	Describes the existing services and infrastructural service requirements of the proposed development and the likely impact of the proposed development on this material assets.
Vol. 2	14	Interactions of the Foregoing	Describes the potential interactions and interrelationships between the various environmental factors.
Vol. 2	15	Principal Mitigation and Monitoring Measures	Sets out the key mitigation and monitoring measures included in the above chapters of the EIAR Document for ease of reference.
Vol. 3		Landscape and Visual Impact	Details the likely effects on the landscape and visual environment of the proposed development with reference to accompanying photomontages.

Using the Grouped Format Structure, the EIA Report examines each environmental aspect in a separate chapter. Each chapter generally covers the following:

- Receiving Environment;
- Characteristics of the Proposed Development;
- Potential Impacts of the Proposed Development;
- Do-Nothing Scenario;
- Remedial and Mitigation Measures;
- Predicted Impacts of the Development; and
- Cumulative Impacts.

A Non-Technical Summary of the findings of the EIA Report is provided as a separate document.

Mitigation measures applicable to each specialism are provided within the relevant chapters of this EIA Report.

A description of projects that have been assessed cumulatively with the proposed development are provided in Section 2.8 of this EIA Report and in supporting planning documentation. Cumulative impacts for each environmental topic are assessed within the relevant specialist chapters of this EIA Report.

Interactions i.e. the interrelationship between each environmental aspect, are also assessed as they occur in each chapter. The final chapter of the EIA Report, Chapter 16 shows where interactions have been identified and how they have been addressed

1.2 CONSULTATION

JSA, the applicant and the proposed development project team have liaised with the relevant departments of DCC in advance of lodgement of this application. Pre-application meetings were held with DCC Planning, Drainage and Transport Departments. Officials from DCC and members of the design and developer team attended. A number of specific issues, concerns and suggestions were raised and further details regarding how they have been implemented into the design are provided in the planning application documents.

In addition, relevant specialist in the proposed development project team have liaised with statutory bodies (including Roads/Transportation, Irish Water and ESB) by correspondence and access to online databases during the course of the EIA Report preparation.

JSA and the other respective EIA contributors/authors have incorporated all relevant advice and comments received from consultees into the relevant chapters of this EIA Report.

1.3 EIA PROJECT TEAM

1.3.1 EIA Project Management

This EIA was project managed, co-ordinated and produced by John Spain Associates in association with a team of specialist environmental consultants, the applicant and overall design team. John Spain Associates' role was to coordinate the EIA process and to liaise between the design team and various environmental specialist consultants. John Spain Associates were also responsible for editing the EIA Report document to ensure that it is cohesive and not a disjointed collection of disparate reports by various environmental specialists. John Spain Associates does not accept responsibility for the input of specialist consultants or the design team.

1.3.2 EIA Environmental Specialists

Environmental specialist consultants were also commissioned for the various technical chapters of the EIA Report document which are mandatorily required as per the EIA Directive and Regulations.

The amended EIA Directive (Directive 2014/52/EU) states the following in relation to the persons responsible for preparing the environmental impact assessment reports:

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

In order to outline compliance with this requirement and in line with emerging best practice the EIA Report states the names of the environmental consultants who have prepared each element of the EIA Report and lists their qualifications and relevant experience; demonstrating that the EIA Report has been prepared by competent experts. This is also in accordance with the 2018 EIA Guidelines for Planning Authorities and An Bord Pleanála.

Each environmental specialist 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.

Each environmental specialist was required to characterise the receiving baseline environment; evaluate its significance and sensitivity; predict how the receiving environment will interact with the proposed development and to work with the EIA project design team to devise measures to mitigate any adverse environmental impacts identified.

The relevant specialist consultants who contributed to the EIA Report and their inputs are set out in Table 1.2 below.

Table 1.2 Relevant Specialist Consultants

Chapter/Volume No.		Chapter Title	Consultant
Volume 1		Non-Technical Summary	John Spain Associates and others
Vol. 2	Chapter 1	Introduction	John Spain Associates – Blaine Cregan
Vol. 2	Chapter 2	Description of the Proposed Development	John Spain Associates – Blaine Cregan
Vol. 2	Chapter 3	Alternatives	John Spain Associates – Blaine Cregan
Vol. 2	Chapter 4	Population and Human Health	John Spain Associates – Blaine Cregan
Vol. 2	Chapter 5	Land, Soils, Geology & Hydrogeology	CS Consulting – Linganand Jewargi and Niall Barrett
Vol. 2	Chapter 6	Biodiversity (Flora and Fauna)	Altemar – Bryan Deegan, Hugh Delaney
Vol. 2	Chapter 7	Water and Hydrology	CS Consulting – Linganand Jewargi and Niall Barrett
Vol. 2	Chapter 8	Air Quality & Climate	Byrne Environmental – Ian Byrne
Vol. 2	Chapter 9	Noise & Vibration	Byrne Environmental – Ian Byrne
Vol. 2	Chapter 10	Archaeological, Architectural and Cultural Heritage	IAC – Faith Bailey
Vol. 2	Chapter 11	Traffic and Transportation Assessment	CS Consulting – Linganand Jewargi and Niall Barrett
Vol. 2	Chapter 12	Material Assets - Waste	Byrne Environmental – Ian Byrne
Vol. 2	Chapter 13	Material Assets - Utilities	CS Consulting – Linganand Jewargi and Niall Barrett
Vol. 2	Chapter 14	Interactions	John Spain Associates – Blaine Cregan
Vol. 2	Chapter 15	Mitigations	John Spain Associates – Blaine Cregan
Volume 3		Landscape and Visual Impact	City Designer– Richard Coleman

The relevant experience and qualifications of the authors are set out within the chapters.

1.4 DESCRIPTION OF IMPACTS IN THE EIA REPORT

The EPA Guidelines on the information to be contained in Environmental Impact Assessment Reports 2022 require that the direct, indirect, cumulative and residual impacts of the proposed development for both the construction and operational stages are described. The identified quality, significance and duration of effects for each aspect are categorised, as set out below. Quality refers to the nature of the impact, significance of effects refers to the degree that these will impact on the site and surrounding area and duration refers to how long the effects are likely to last for. A direct impact is an impact the development will give rise to. An indirect impact is similar to a secondary impact – it may result in consequences not in the immediate vicinity of the site. Cumulative Impacts are impacts that arise in conjunction with other consented developments. Residual impacts are those which remain after mitigation measures have been applied.

The quality, magnitude and duration of potential effects are defined in accordance with the criteria provided in the EPA EIA Report Guidelines 2022 as outlined in Table 1.3.

Table 1.3 Description of Effects as per EPA Guidelines (2022)

Characteristic	Term	Description
Quality of Effects	Positive	A change which improves the quality of the environment
	Neutral	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.

	Negative/Adverse	A change which reduces the quality of the environment
Describing the Significance of Effects[2]	Imperceptible	An effect capable of measurement but without significant consequences
	Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences
	Slight Effects	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities
	Moderate Effects	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends
	Significant Effects	An effect, which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment
	Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
	Profound Effects	An effect which obliterates sensitive characteristics
Describing the Extent and Context of Effects	Extent	Describe the size of the area, the number of sites, and the proportion of a population affected by an effect.
	Context	Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)
Describing the Probability of Effects	Likely Effects	The effects that can reasonably be expected to occur because 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.
Describing the Duration and Frequency 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

[2] 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.

	Permanent Effects	Effects lasting over sixty years
	Reversible Effects	Effects that can be undone, for example through remediation or restoration
	Frequency of Effects	Describe how often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually)
Describing the Type of Effects	Indirect Effects (a.k.a secondary or Off-site effects)	Effects on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway.
	Cumulative Effects	The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects.
	'Do Nothing Effects	The environment as it would be in the future should the subject project not be carried out
	`Worst case' Effects	The effects arising from a project in the case where mitigation measures substantially fail
	Indeterminable Effects	When the full consequences of a change in the environment cannot be described
	Irreversible Effects	When the character, distinctiveness, diversity, or reproductive capacity of an environment is permanently lost
	Residual Effects	The degree of environmental change that will occur after the proposed mitigation measures have taken effect
	Synergistic Effects	Where the resultant effect is of greater significance than the sum of its constituents (e.g. combination of Sox and NOx to produce smog)

1.5 ADDITIONAL ASSESSMENTS REQUIRED

This section addresses the additional approvals and assessments required under other EU Directives and legislation.

- Appropriate Assessment – an Appropriate Assessment Screening Report and a Natura Impact Statement has been completed for the proposed development, as required under the Habitats and Birds Directive (92/43/EEC and 79/409/EEC) and are included with the planning application.
- Flood Risk Assessment - A Stage 3 Flood Risk Assessment has been undertaken for the site and is also included with the planning application.
- Resource Waste Management Plan – A RWMP has been prepared in line with 'A Waste Action Plan for a Circular Economy. Ireland's National Waste Policy. 2020-2025'. DECC, 2020, and 'Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction and Demolition Projects', EPA, 2021. The report is included as part of the planning application.

1.6 FORCASTING METHODS AND DIFFICULTIES IN COMPILING THE SPECIFIED INFORMATION

Forecasting methods and evidence used to identify and assess the significant effects on the environment for each environmental aspect are set out in each chapter.

There were no significant difficulties in compiling the specified information for this EIA Report. Any issues encountered during the assessment of individual factors are noted within the relevant chapters.

1.7 EIA REPORT QUALITY CONTROL

John Spain Associates is committed to consistently monitoring the quality of EIA Report documents prepared both in draft form and before they are finalised, published and submitted to the appropriate competent authority taking into account latest best-practice procedure, legislation and policy.

The Department Housing, Local Government and Heritage published guidelines on Environmental Impact Assessment for Planning Authorities and the Board (published August 2018), and the EPA have published guidelines on the information to be contained in an Environmental Impact Assessment Reports which have been consulted in the preparation of this EIA Report.

1.8 ERRORS

While every effort has been made to ensure that the content of this EIA Report document is error free and consistent there may be instances in this document where typographical errors and/or minor inconsistencies do occur. These typographical errors and/or minor inconsistencies are unlikely to have any material impact on the overall findings and assessment contained in this EIA Report.

The proposed development site is located in the administrative area of South Dublin County Council. The lands are situated within the development boundary of Newcastle as defined by the 2022-2028 South Dublin County Council Development Plan. The proposed development site is situated in the townland of Newcastle South.

2.0 DESCRIPTION OF THE PROJECT

2.1 INTRODUCTION

This chapter presents the description of the project comprising information on the site, design, size and other relevant features of the project as set out in the EIA Directive (2011/92/EU) as amended by EIA Directive (2014/52/EU), as well as the relevant guidance documents Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2022) and Draft Advice Notes for Preparing Environmental Impact Statements (EPA, 2015).

This section of the EIA Report has been prepared by John Spain Associates, Planning & Development Consultants, and provides a description of the proposed development. This chapter of the EIA Report was prepared by Blaine Cregan M.Sc. B.Sc. (hons) and B.Eng., Executive Director with John Spain Associates.

The description of the proposed development is one of the two foundations upon which an EIA Report is based (the other being the description of the existing environment described in this chapter and by each of the specialist consultants in the subsequent chapters).

2.2 DESCRIPTION OF THE EXISTING DEVELOPMENT SITE

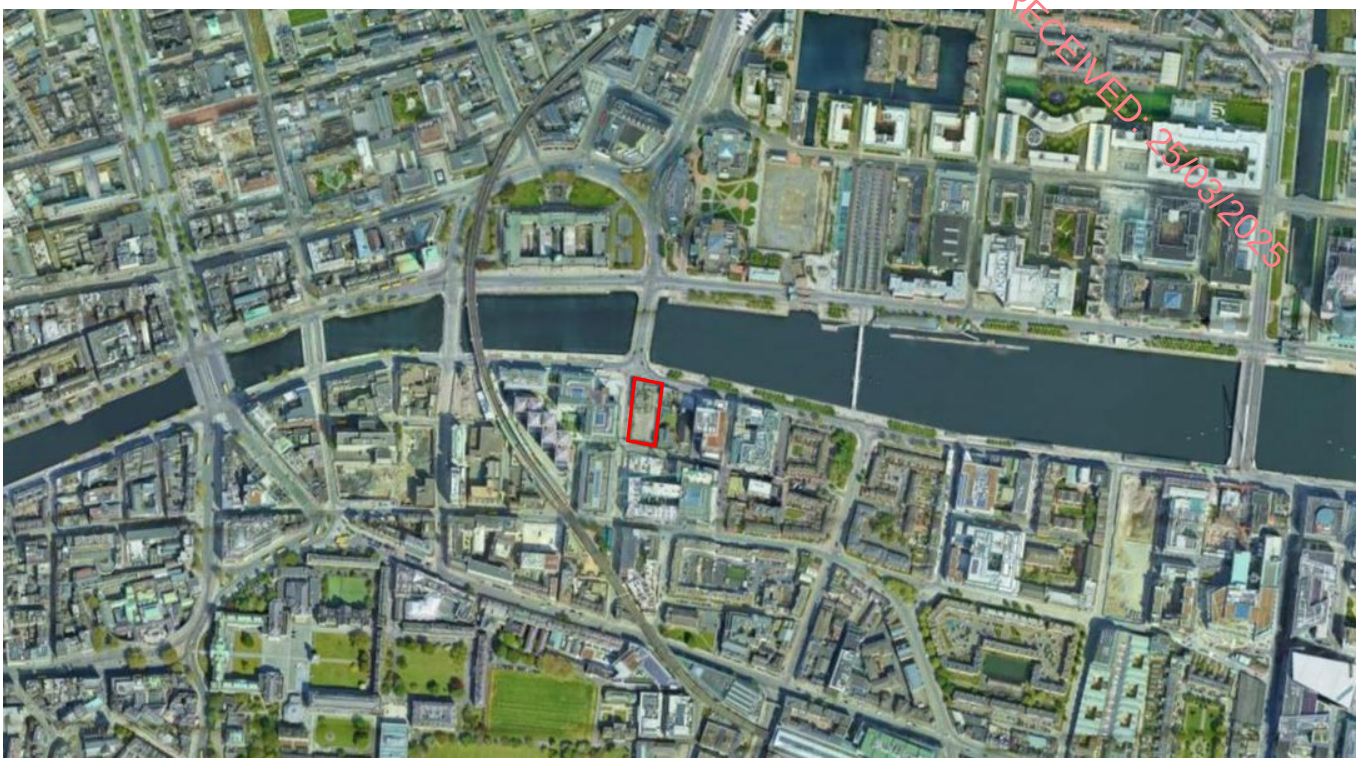
The site of the proposed development extends to c. 0.22 hectares. It is a rectangular plot of land, situated on City Quay on the southern side of the banks of the River Liffey, with the western boundary defined by Moss Street and the southern boundary by Gloucester Street South. City Quay National School is located along the eastern boundary. The Church of the Immaculate Heart of Mary and the associated presbytery are situated to the east of the City Quay National School and the Covid testing centre.

The subject lands are characterised as brownfield, 100% hardscaped developed lands. The north-western corner of the site contains the former City Arts building; an abandoned cluster of three storey, over basement derelict buildings which cover c. one-third of the subject lands. The remainder of the lands are hard paved and currently in use as surface car parking which is accessed via an entrance along the eastern perimeter from City Quay. A small single-storey shed is located within the southern yard along the western perimeter. There is an original Pooley Weighbridge located on the site which will be salvaged and incorporated into the public realm area of the proposed development. The perimeter of the site not delineated by the derelict buildings is lined with a wall formed from steel framework infilled with railway sleepers and corrugated sheeting.

The existing buildings on site are of no particular architectural importance or interest and are not included in the list of Protected Structures in the Dublin City Development Plan 2022-2028.

In the wider environs the subject lands sit opposite the IFSC (International Financial Services Centre), and the Custom House Building situated on the northern quays of the River Liffey. The Georges Quay office development lies to the west, and an aparthotel to the south. The remainder of the surrounding area is characterised by commercial and retail developments along with high density and medium density residential.

Figure 2.1. Aerial View of the Subject Site



Source: Google Map

Figure 2.2. Existing Buildings on Site

2.3 DESCRIPTION OF PHYSICAL CHARACTERISTICS OF THE WHOLE PROPOSED DEVELOPMENT

2.3.1 Description of the Development

The proposed development consists of the demolition of the existing buildings on site and the construction of a new office development, co-working/café space and community/arts/cultural spaces at ground and lower ground floor level. The proposed development comprises:

- Demolition of the existing buildings and structures (it is noted the structures or part thereof may be demolished in compliance with a Dangerous Buildings Notice prior to a decision being made);
- Construction of a mixed use building up to 14 storeys in height (c. 58 metres above ground) over a double basement;
- The offices are proposed from 1st to 13th floor (14th storey) with terraces at 6th, 9th and 12th floor levels;
- A co-working/café space (230 sqm) is proposed at ground floor level along the Moss Street elevation;
- The community/arts/cultural spaces are contained at ground and lower ground floor levels;
- The basement level (B1) provides for 9 no. car parking spaces;
- 330 no bicycle spaces will be provided. 314 no. long stay spaces will be provide at lower ground floor level and 16 no. short stay spaces will be provided at ground floor level on Moss Street.
- The overall gross floor area of the development comprises 28,543 sq.m. including 910 sq.m. community/arts/cultural space and 23,501 sq.m. offices;
- All ancillary and associated works and development including plant, temporary construction works, public realm, landscaping, utilities connections and infrastructure.

Table 2.1. Summary of Key Site Statistics

Key Site Statistic	Detail
Site Area	0.22 ha (Gross)
Land Use Zoning	Z5 ‘City Centre’
Office	23,501 sqm
Arts and Cultural Space	910 sqm
Total floor area	28,543 sqm
Building Heights	Up to 14 storeys
Plot Ratio	11.14
Building footprint	2,117 sqm
Site Coverage	98.5%
Car Parking	9 spaces (incl. 6 no. car share spaces, 2 no. spaces for arts/cultural use and 1 no. accessible space)
Motorcycle Parking	1 no. motorcycle space
Bicycle Parking	330 spaces (incl.314 no. long term and 16 no. short stay spaces)
Vehicular Access	Glouster Street South
Bin Store	99 sqm
Green Roof	576 sqm

2.3.2 Office Development

The office accommodation begins at the first-floor level and extends to the top floor of the building providing a total of 23,501 sqm office floor space. The main lift core containing seven lift shafts is centred in the building. Office users approach the lift core from the shared reception area, up a series of steps (or platform lift) past the roof-lit main office reception desk. The number of lifts reduces as they ascend the building, with four shafts from the 11th to the 13th floor levels. Two of the lift shafts throughout the levels serve as fire-fighting lifts with dual access to the main lift lobby and the fire-fighting core.

A gym (348 sqm) is proposed at Basement Level B1. This gym will be for office staff use only.

A co-working/cafe space (230 sqm) is proposed at ground floor level along Moss Street to create a level of animation along the street. This space will be open to the public as well.

2.3.3 Community/Arts/Cultural Spaces

It is proposed to provide a gallery space at ground floor level and artist studios and multi-purposes space at lower ground floor level. It is considered that the floor level is an appropriate place for the proposed art gallery as it will be a bright space during the day given the amount of glazing proposed on the front elevation and the high floor to ceiling heights. Further, the gallery will provide for passive surveillance and a level of animation along the street. It is intended that this space would also be utilised in the evenings times for art exhibitions which would provide passive surveillance when the offices are closed. The multi- functional space at lower ground floor level could be utilised by a range of arts/cultural groups.

Figure 2.3. Proposed Arts and Cultural Uses

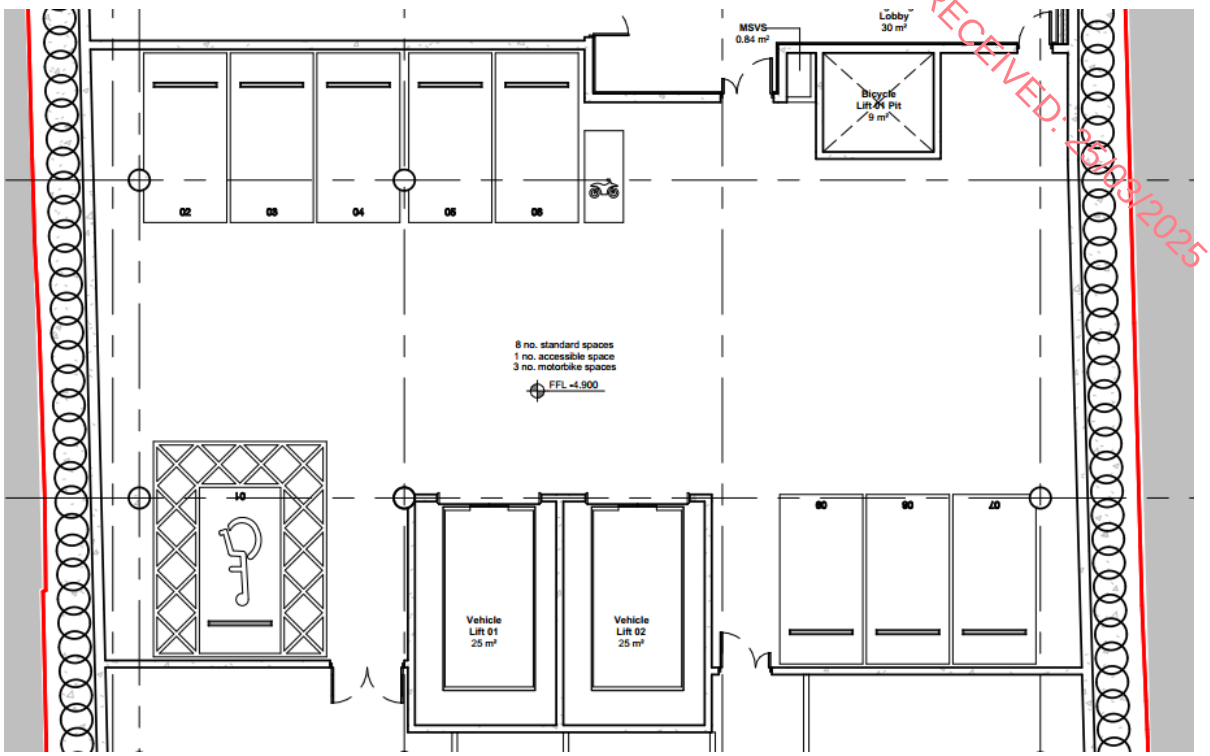
Proposed Ground Floor - Part Plan

Proposed Lower Ground Floor - Part Plan

2.3.4 Parking Provision

The development shall include a total of 9 no. car parking spaces (including 6 no. car share spaces, 2 no. spaces for the arts/cultural use and 1 no. accessible spaces), all located internally at basement level -1. 1 no. motorcycle space is also provided at basement level -1.

Figure 2.4. Vehicle parking provision at basement level -1



The development shall include a total of 330 no. bicycle parking spaces, comprising:

- 314 no. long-term bicycle parking spaces for employees, located in a secure dedicated bicycle store at Lower Ground Level; and
- 16 no. publicly accessible short-stay bicycle parking spaces for visitors, in the form of Sheffield stands at surface level within the public realm along Moss Street.

Figure 2.5. Bicycle parking provision at Lower Ground Floor Level

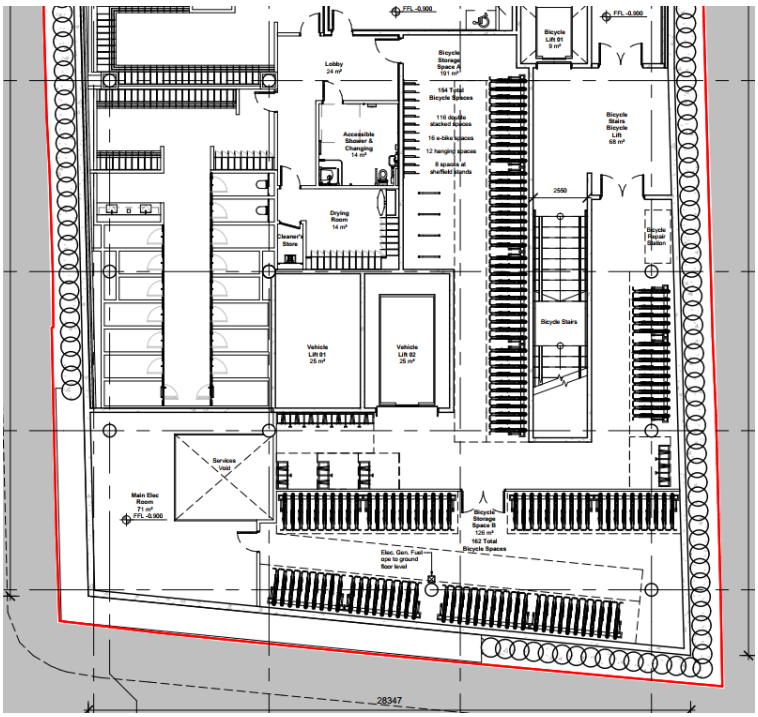
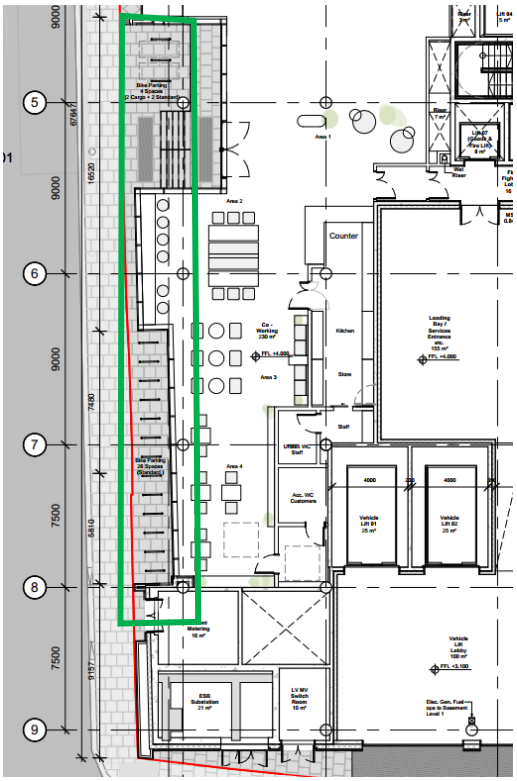


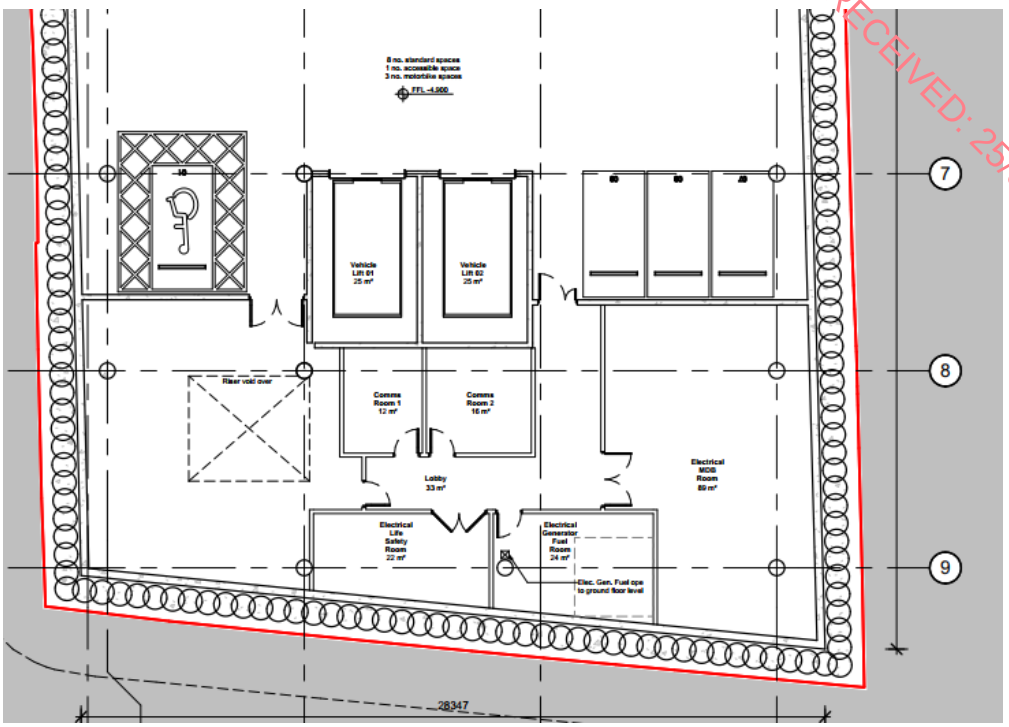
Figure 2.6. Bicycle parking provision at Ground Floor Level



2.3.5 Vehicular Access

As noted above, the proposed car parking spaces are located at basement level B1. This is accessed via 2 no. car lifts, which are accessed at ground floor level from Gloucester Street South, at the sites' southern boundary. Given the development's limited internal car parking provision of 9 no. spaces, the provision of 2 no. car lifts will ensure that all incoming vehicles are able to gain access rapidly, which will reduce the risk of queueing on the public street. The lifts are set back within the building, allowing space for any vehicles waiting for a lift to do so within the site curtilage and to avoid obstructing the footpath or carriageway on Gloucester Street South. At basement level B1, the proposed car parking spaces are arranged perpendicularly to either side of a short access aisle 6.0m in width. The internal layout allows sufficient space for car parking manoeuvres, as well as dwell space for any cars waiting to access a lift for exit.

Figure 2.7. Location of car lifts



2.3.6 Landscaping Strategy

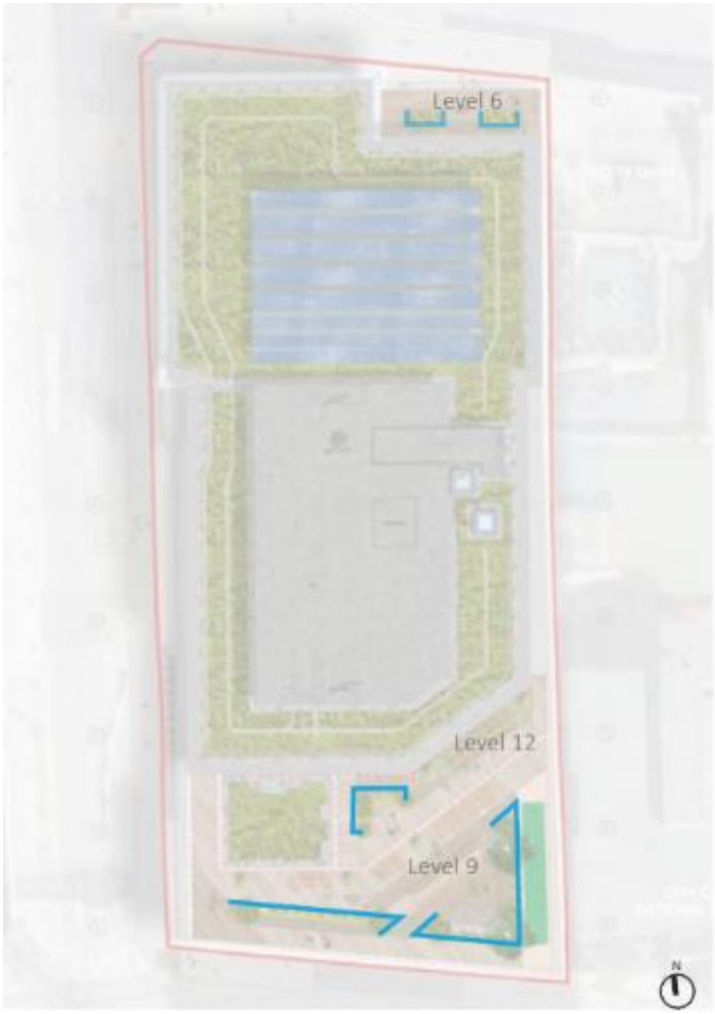
The majority of the proposed landscaping is hardscaped landscaping given the proposed development is not required to provide any public open space on site. New hardscaping will be provided within the site boundary at ground floor level. All access routes have been designed in accordance with Section 1.1.3.3 of TGD M 2010 to provide compliant gentle slopes across the public realm with level landings where required.

3 no. landscaped amenity terraces are proposed to serve the office development at 6th, 9th and 12th floor levels. The general concept of the amenity terraces design has been to capture and boost access to nature in the built environment and invite the people to appreciate outdoor environment provided within the building The key design principles of the amenity terraces are and green roof:

- Maximize usable outdoor space
- Provide flexible, distinctive and attractive outdoor spaces for all users to enjoy.
- Use lightweight materials and plant medium
- Provide ecological enhancements

Figure 2.8. Public realm works along City Quay (subject to agreement with DCC)

Figure 2.9. Proposed amenity terraces



Further details are provided in the landscape drawings and the Landscape Design Report prepared by Cameo and submitted as part of this planning application.

2.3.7 Green Roof

576 sq.m. of green roof is provided at roof level. The green roof is planted with a biodiverse mix of native wildflowers and grasses, chosen for their ability to thrive in rooftop conditions and attract pollinators such as bees and small insects. The river washed stone margin around the perimeter serves multiple purposes: it provides a habitat for ground-nesting insects, aids in drainage, and creates fire break.

2.3.8 Surface Water and Drainage Strategy

All surface water run-off from the proposed development shall be controlled during intense rainfall events by means of green/blue roofs located at roof level, attenuation storage system located at the basement level -2 and associated flow control device which shall limit surface water run-off from the proposed development toa maximum of 2.0l/sec. The surface water from these attenuation systems shall be discharged into the proposed last manhole located within the proposed development extents.

The combination of surface water and foul effluent from the proposed development shall ultimately discharged into the existing 225mm diameter combined sewer along Moss Street.

Please refer to CS Consulting Engineers drawings Nos.V101-CSC-XX-GF-DR-C-0007, V101-CSC-XX-GF-DR-C-0008, V101-CSC-XX-B1-DR-C-0009andV101-CSC-XX-B2-DR-C-0010 for further details regarding the surface water drainage arrangements for the proposed development.

2.3.9 Foul Drainage Arrangement and Outfall

It is proposed to discharge the foul effluent generated by upper floors via gravity to the existing combined sewer along Moss Street to the west of the development site. It is proposed to provide a pumping station with 24-hour storage at the basement level (-2 level) to pump any foul effluent generated at the basement levels. The foul effluent shall pass through a petrol interceptor before being pumped to a standoff manhole at surface level and ultimately discharge into the existing combined sewer on Moss Street.

Please refer to CS Consulting Engineers drawings nos. V101-CSC-XX-GF-DR-C-0007, V101-CSC-XX-GFDR-C-0008, V101-CSC-XX-B1-DR-C-0009 and V101-CSC-XX-B2-DR-C-0010 for further details regarding the foul drainage arrangements for the proposed development.

2.3.10 Proposed Water Supply Arrangements

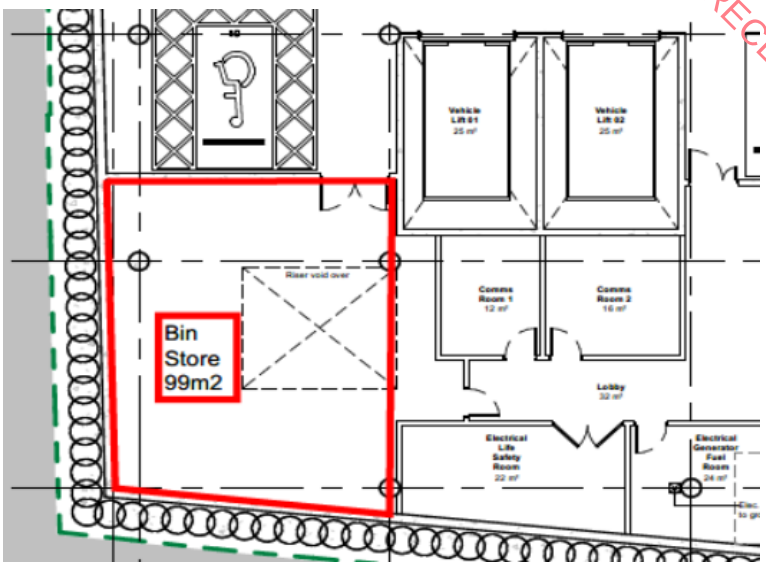
It is proposed to tie into the existing 250mm ductile iron watermain along Moss Street via a new 100mm watermain for the proposed development. Please refer to CS Consulting Engineers drawings nos. V101-CSC-XX-GF-DR-C-0011 for further details regarding the water supply arrangements for the proposed development

2.3.11 Waste Storage

The waste storage area is located at the basement level (level -1) along the south-western corner of the property. The waste storage area has been designed to ensure there is excess capacity for waste storage based on the maximum volume of waste that has been calculated to be generated by the development at full occupancy.

Prior to collection by a licensed waste contractor the bins/bales of segregated waste/recyclables will be conveyed by the waste contractor or facilities management via the car lift to a designated waste staging are at ground level. From ground level the bins will be collected/emptied on Gloucester Street South. Further information is provided in the Operational Waste Management Plan (OWMP) prepared by Byrne Environmental submitted as part of this planning application.

Figure 2.10. Proposed bin store



2.4 DESCRIPTION OF THE MAIN CHARACTERISTICS OF THE DEMOLITION AND CONSTRUCTION PHASES

2.4.1 Introduction

The development of the lands will occur for up to 10 years having regard to the nature of the project and the need for flexibility to respond to market demand. The anticipated duration of construction within the 10 years is envisaged to be approximately 30 months. An Outline Construction Environmental Management Plan (OCEMP) has been prepared by CS Consulting Engineers and is included with this application. The OCEMP will be developed and submitted to Dublin City Council prior to commencement of development and will include the mitigation measures set out in this EIA Report and to comply with any relevant conditions attached to a grant of permission.

This EIA Report presents proposed mitigation measures to ensure that the planned development of the lands does not generate significant adverse impacts for residential and working communities in the vicinity of the site.

In the event that the phases were not developed (due to unforeseen circumstances) the construction period may extend, having regard to the nature of the project and the need for flexibility, contractor pricing etc. It is important to note that the mitigation measures outlined in the EIA Report will ensure that an extension to the construction period will not have a negative impact on the receiving environment.

The proposed development, as described, is detailed on the planning application drawings and particulars which accompany the application.

2.4.2 Demolition Works

The initial phase of the proposed development will comprise the demolition and removal of the buildings in the north-west corner, the shed along the western perimeter, all hard surfaces and underground infrastructure, and the removal, storage and re-use of the Pooley Weighbridge. As noted in the development description above, the structures or part thereof may be demolished in compliance with a Dangerous Buildings Notice prior to a decision being made on this planning application.

The existing buildings are constructed mainly from blockwork and bricks, timber framing and a mixture of slate and flat concrete/asphalt roofing. The shed is constructed mainly from blockwork and roofing sheets. An archaeological assessment of the site and heritage appraisal of the buildings the has been prepared by Irish Archaeology Consultancy (IAC) as part of Chapter 10.

Once the subject lands are cleared of all existing structures the construction phase will proceed, commencing with underground structures (excavation and installation of basement, water, sewerage infrastructure etc.) followed by

above ground works (building, power and telecoms infrastructure, surface water drainage, site profiling, landscape etc.)

Byrne Environmental have also prepared an outline Resource and Waste Management Plan (RWMP) that is included with the application documentation. The plan has been prepared in line with 'Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction & Demolition Projects' published by the EPA in 2021.The plan includes a provision for the management of all construction and demolition waste arising on site, and shall make provision for the recovery or disposal of this waste to authorized facilities by authorised collectors. The primary objective of this outline plan is to achieve more sustainable waste management practices through increased recycling, use of source separation and use of industry code to regulate collection and treatment of waste.

2.4.3 Construction Environmental Management Plan (CEMP)

The Contractor's CEMP will implement the measures contained in this EIAR and the OCEMP (included with the application). A Construction Management Plan prepared by PJ Hegarty has been appended to the OCEMP. The OCEMP presents the approach and application of environmental management and mitigation for the construction phase of the proposed Project. It aims to ensure that adverse effects from the construction phase of the proposed Project, on the environment are avoided or minimised. It broadly replicates the construction stage mitigation included in Chapters 4-14 of this EIAR and as summarised in Chapter 15.

Post planning, the appointed contractor will take ownership of the Outline Construction Environmental Management Plan (OCEMP). Prior to any demolition, excavation or construction, the OCEMP will be updated by the successful contractor. The CEMP will set out the Contractor's overall management and administration of the construction project.

The Contractor's CEMP will:

- Be maintained and the procedures implemented by the contractor for the duration of the construction period.
- Manage all polluting activities likely to occur on site and include emergency response plans for environmental incidents e.g. hydrocarbon spillages.
- Detail measures to be carried out to avoid environmental incidents,
- Detail reporting procedures to be followed if incidents occur including details of responsible person in the construction team.
- Include details of training for all site personnel in the implementation of these procedures as part of the site induction process.
- Dangerous substances, such as oils, fuels etc., will be stored in a bunded zone. Emergency contact numbers for the Local Authority Environment Section, Inland Fisheries Ireland, the Environmental Protection Agency and the National Parks and Wildlife Service will be displayed in a prominent position within the site compound. These agencies will be notified immediately in the event of a pollution incident.

In addition to the EIA Report mitigation measures already included in the OCEMP (and mitigation contained in this EIA Report and the Altemar NIS), the Contractor will be required to include additional details under the following headings:

- Working hours and days;
- Emergency planning - in the event of a fire, chemical spillage, cement spillage, collapse of structures or failure of equipment or road traffic incident within an area of traffic management. The plan must include contact names and telephone numbers for Local Authority (all sections/departments); Ambulance; Gardaí and Fire Services;
- Details of chemical/fuel storage areas (including location and bunding to contain runoff of spillages and leakages);
- Details of construction plant storage, temporary offices and site security arrangements, measures will need to be identified in relation to security of the various sites during construction e.g. controlled access onto site, measures to secure rear gardens, access, etc;
- Truck wheel wash details (including measures to reduce and treat runoff);
- Dust management to prevent nuisance (demolition and construction);

- Site run-off management;
- Noise and vibration management to prevent nuisance (demolition and construction). Work practices, equipment noise control and screening shall be in compliance with BS 5228- 1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 1: Noise, and BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration (together referred to as B.S. 5228);
- Landscape management.

2.4.4 Hoarding

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.

2.4.5 Site Access Routes

Section 4.4 of the PJ Hegarty's Construction Management Plan outlines the proposed traffic management strategy which outlines that access and egress of construction vehicles will take place on the City Quay end of Moss street. Site cabins and welfare facilities will be located to the south of Moss Street. The strategy outlined will keep access and egress points for construction traffic away from Gloucester Street South and therefore away from the school entrance so as not to impact its operation.

2.4.6 Construction Traffic

The Contractor shall establish a Construction Traffic Management Plan (CTMP) for the construction works.

The CTMP shall:

- Address the movement of vehicles, machinery, and pedestrians within the site boundary and on adjacent public roads & footpaths
- Ensure that the safety of construction operatives, public road users and pedestrians is not compromised as a consequence of the works.

This shall be achieved through the effective implementation of traffic mitigation measures. When considering mitigation measures, the Contractor shall pay particular attention to sensitive and vulnerable users (e.g. children, elderly etc) and take account of stakeholders whose activities may be affected by the proposed works (e.g. local schools, residents, businesses etc).

Among the traffic management measures to be included in the CTMP are:

- Securely fencing off the site from adjacent properties, public footpaths and roads during the pre-construction phase.
- Providing signage on the surrounding road network to define the access and egress routes for the development.
- Strictly controlling the traffic generated by the construction phase of the development in order to minimise the impact of this traffic on the surrounding road network.
- Adequately signposting and enclosing all road works to ensure the safety of all road users and construction personnel.
- Accommodating all unavoidable personnel and visitor vehicle parking demands onsite or within designated off-site parking areas.
- Implementing a programme of street cleaning as required.
- Making arrangements to facilitate the delivery of abnormal loads to the site.
- Implementing measures to avoid queuing of construction traffic on the adjoining road network.

The following specific traffic control and marshalling measures are to be included in the CTMP, to minimise the potential for obstruction of surrounding streets:

- At no time will construction associated vehicles be stopped or parked along haulage routes.
- Haulage vehicles will not travel in convoys of greater than two vehicles at any time.
- Haulage vehicles will be spaced by a minimum of 250m at all times.
- At no time will haulage vehicles be parked or stopped at the entrance to the site.
- All loading of excess material will occur within the site boundary.
- All off-loading of deliveries will take place within the site, away from the public road and will access via the construction site access

The Contractor must prepare a Construction Environmental Management Plan in accordance with the Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects (Department of Environment, Heritage and Local Government, 2006). The Contractor must also outline detailed proposals within the Construction Environmental Management Plan to accommodate construction traffic.

2.4.7 Construction Parking

Due to the site's city centre location and constrained nature, no car parking 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.

2.4.8 Excavation

This development will involve excavation and removal of material from site for foundations, and regrading of the site profile. It is not envisaged that rock will be encountered during the excavation works.

The appointed Contractor will engage with the project archaeologist prior to the commencement of excavation on site. Excavation will be carried out under the supervision of the project archaeologist.

The Contractor must prepare a Construction & Environmental Management Plan in accordance with the Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects (Department of Environment, Heritage and Local Government, 2006). The Contractor must also outline detailed proposals within the Construction & Environmental Management Plan to accommodate construction traffic.

2.4.9 Construction Building

Following on from demolition, site clearance and excavations, foundations shall be laid, and the external buildings envelope and roof constructed. The building frames shall most likely consist of load bearing masonry walls with reinforced concrete cores. Floors shall likely be constructed using hollow core precast slabs overlaid with structural screed but with some localised elements of reinforced concrete slabs are also likely for transfer slabs. Works to the façade shall commence following partial completion of the external envelope. Once the buildings are weather sealed, the internal fit out and completion works shall take place. This shall be followed by mechanical and electrical fit-out, general fit-out and then final commissioning.

2.4.10 Superstructure

The construction of the superstructure shall involve a coordinated sequencing of activities, and various construction methodologies could be adopted to deliver the Contract. As noted, the construction methodology and therefore the programme of the construction activities will be dictated by the Contractor. The following outlines a general construction sequence for the superstructure.

Buildings Structure:

- Installation of any temporary works which needs to be verified as part of detail design.
- Demolition of existing building and hardstanding area.

- Site clearance including install/removal of below-ground services.
- Excavation/fill and construction of the foundations, to support the new vertical structure.
- Stripping old finishes.
- Construction of the new ground-floor slabs.
- Construction of walls, columns, beams and floors slab for the new build extensions at the end of each block. This will be constructed in a sequential manner with the proper integration with the existing adjacent structure.
- Construction of the steel frames and slabs of the additional floors on top of the existing structure and the extensions.
- Building the balcony and walkway frames and slabs on new foundations and tying them to existing columns and walls.

Envelop/Cladding:

- Commencement of envelope works to ground floor when structure has progressed to approximately Level 2/3, with suitable temporary openings in the façade left for ease of transport of construction material.
- Advancing of external leaf two or three levels behind the structure.

Mechanical & Electrical fit-out

- First fix will commence at each level behind structure.
- This will be followed by the second fix and the final connections.

General fit-out:

- Initial installation of stud work when cladding is complete, and floor is weather tight. • Installation of equipment and associated connection to services.

Commissioning:

- The final commissioning period will commence during fit-out.

The above is an indicative construction sequence. The final sequence will be dictated by the Contractor. The Contractor must issue a detailed construction programme outlining the various stages prior to commencement of works.

2.4.11 Construction Programme and Phasing

Subject to a successful grant of planning, it is intended for the works to commence in Q1 or Q2 of 2026. The proposed development is anticipated to be constructed over a 30-month period approximately.

The development is proposed to be constructed in accordance with the following indicative sequence of works:

- Reduced level excavation
- Foundation construction
- Site services installations (drainage, power, water)
- Building frame and envelope construction
- Interior and exterior landscaping

2.5 DESCRIPTION OF THE MAIN CHARACTERISTICS OF THE OPERATION OF THE PROJECT

2.5.1 Site Utilities and Infrastructure

Energy During the Operational Phase

Once in operation, electricity will be provided to the site via the national grid tying in with existing infrastructure in neighbouring areas.

The building will be served by two electricity sub-stations accessed from Gloucester Street South. This will be carried out in accordance with the requirements of the various service providers.

There is no gas supply connection required for the proposed development due to the use of renewable technologies as the primary energy source.

Telecommunications During the Operational Phase

There are telecommunication lines in existence for telephone and broadband services in the area. A fibre optic cable distribution network will be installed with a separate incoming fibre infrastructure and provided to the proposed building via underground fibre ducts. There are existing underground carrier ducts adjacent to the site that will be utilised for the development.

2.5.2 Sustainability Energy Efficiency and Resources Use

An Utility and Energy Sustainability Report has been prepared by Penston MEP Consulting and are submitted as part of this application. The report focuses on the performance targets required by the Building Regulations Part L – Conservation of Fuel and Energy and what energy measures are needed to ensure compliance. Furthermore, a Building Energy Rating of A2 will be pursued throughout as the targets set out in the RIAI 2030 Climate Challenge are being used as a benchmark in the design.

2.5.3 Waste Management

An Operational Waste Management Plan (OWMP) has been preprepared by Byrne Environmental consulting and is submitted as part of this planning application. The OWMP outlines the principles and measures by which the waste generated during the operational phase of the proposed development will be managed and disposed of in compliance with the provisions of the Waste Management Acts 1996 to 2013 and the Eastern Midlands Region (EMR) Waste Management Plan 2015-2021. It describes the measures by which optimum levels of waste reduction, re-use and recycling shall be achieved.

2.5.4 Microclimate/Wind Assessment

A Wind Microclimate assessment report has been prepared by BPC to accompany this planning application. This report demonstrates that the wind conditions surrounding the proposed development will generally be suitable for pedestrians. The majority of the areas at ground level (adjacent public footpaths and streets) experience wind conditions that meet the Lawson ‘Strolling’ criteria or better. There are some areas at ground level that meet the Lawson ‘Business Walking’ criteria, however these are mainly confined to the road and as such shouldn’t impact pedestrians significantly.

2.5.5 Daylight/Sunlight Access

A daylight/ sunlight assessment was prepared by 3D Design Bureau to accompany this application which concluded that there will be a minor reduction to the daylight availability to the directly adjacent buildings however this is broadly in line with the possible reduction of a building similar in massing to the surrounding buildings.

The level of effect to all residential properties within the area have all been categorised as ‘negligible’ and ‘minor adverse’. While the levels of effect to the commercial premises vary, these have been clearly identified and rationalised within the daylight/ sunlight assessment.

2.5.6 Aviation Considerations

An Aeronautical Assessment Report has been prepared by O’Dwyer & Jones Design Partnerships and is submitted as part of this planning application. The report considers that the proposed development complies fully with all aviation and aeronautical considerations and requirements affecting the site.

2.6 DESCRIPTION OF OTHER RELATED/CUMULATIVE PROJECTS

2.6.1 Related Development

It is stated in the Guidelines on the information to be contained in Environmental Impact Assessment Reports, EPA May 2022 that related development includes *"other projects (sometimes by other developers and sometimes off site) or individual project components which occur as a direct result of the main project, such as a power line, a substation or a road junction upgrade which may result in significant effects."* *(section 3.5.7, page 40)*

There are no proposed related developments (either offsite or secondary[3]) associated with the proposed development. Any future application on these development 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.

2.6.2 Cumulative Development

The Guidelines on the information to be contained in Environmental Impact Assessment Reports, EPA May 2022 states that cumulative effects are *"the addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects.*

While a single activity may itself result in a minor impact, it may, when combined with other impacts (minor or insignificant), result in a cumulative impact that is collectively significant. For example, effects on traffic due to an individual industrial project may be acceptable; however, it may be necessary to assess the cumulative effects taking account of traffic generated by other permitted or planned projects. It can also be prudent to have regard to the likely future environmental loadings arising from the development of zoned lands in the immediate environs of the proposed project." (section 3.7.3 page 57)

The impact of all existing developments within the zone of influence of the proposed development, including the activities currently permitted within the lands of the proposed development are already present within the environment and are described by the *existing* environmental baseline conditions.

The current baseline conditions are established primarily through a review of current desktop sources, augmented where necessary via independent surveys. Any statements contained within this report as to the likely impact of the proposed development upon the environment are by default also a statement as to the likely accumulation of impacts arising from the proposed development with those impacts already in existence.

As part of the assessment of the impact of the proposed development, account has also been taken of cumulative projects in this EIAR, i.e. developments that are currently permitted or under construction within the surrounding area, but whose environmental impact are not yet fully realised within the existing environmental baseline. The potential for cumulative impacts arising from these other cumulative projects has been addressed within each specialist chapter of this EIA Report.

The subject lands and surrounding lands provide good potential for delivering high density office and residential uses. The proposed development represents one of many opportunities that have been and are being constructed to realise this potential.

[3] Section 3.5.7 of The Guidelines on the information to be contained in Environmental Impact Assessment Reports, EPA May 2022 states that the description of other related projects can loosely be grouped under two headings: Off-site and Secondary Projects.

3.0 ALTERNATIVES

3.1 INTRODUCTION

The Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (2018) – states:

"*The Directive requires that information provided by the developer in an EIAR shall include a description of the reasonable alternatives studied by the developer. These are reasonable alternatives which are relevant to the project and its specific characteristics. The developer must also indicate the main reasons for the option chosen taking into account the effects of the project on the environment."*

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 section provides an outline of the main 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.

This section 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 technology of the proposed development. This section provides a full justification for the proposed development and provides a comparison of the environmental effects of each alternative option.

This section of the EIA Report has been prepared by John Spain Associates, Planning & Development Consultants, and provides details of the evolution of the scheme design through the reasonable alternatives examined. This chapter of the EIA Report was prepared by Blaine Cregan M.Sc. B.Sc (hons) and BEng., Executive Director with John Spain Associates.

Blaine has acted as lead planning consultant on a range of high-quality complex planning applications across the country over an extended period. Blaine has wide-ranging experience in the management and review of Environmental Impact Assessment (EIA) Reports for major commercial and mixed-use development and redevelopment projects. Inputs to this chapter have also been provided by Henry J Lyons, CS Consulting Engineers, Byrne Environmental Consulting and PMEP Consulting Engineers.

It is a requirement of the EIA Directive (as amended) to present "*a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment*."

3.2 ALTERNATIVES EXAMINED

The EIA Directive (2014/52/EU) requires that Environmental Impact Assessment Reports include:

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

Article 94 and Schedule 6, paragraph 1(d) of the Planning and Development Regulations 2001, as amended, requires the following information to be furnished in relation to alternatives:

"(d) 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."

The presentation and consideration of various alternatives investigated by the project design team is an important requirement of the EIA process. This section of the EIAR document provides:

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

This serves to indicate the main reasons for choosing the development proposed, taking into account and providing a comparison the environmental effects. Alternatives may be described at three levels:

- Alternative Locations.
- Alternative Designs.
- Alternative Processes.

The DHPLG 2018 EIA Guidelines state:

"Reasonable alternatives may relate to matters such as project design, technology, location, size and scale. The type of alternatives will depend on the nature of the project proposed and the characteristics of the receiving environment. For example, some projects may be site specific so the consideration of alternative sites may not be relevant. It is generally sufficient for the developer to provide a broad description of each main alternative studied and the key environmental issues associated with each. **A 'mini- EIA' is not required for each alternative studied."** (Emphasis added).

This approach above is reflected in section 3.4.1 of the EPA EIAR Guidelines 2022 which state:

"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."[4]

Pursuant to Section 3.4.1 of the EPA EIAR Guidelines 2022, the consideration of alternatives also needs to be cognisant of the fact that *"Clearly, in some instances some of the alternatives described below will not be applicable – e.g. there may be no relevant 'alternative location' …"*

The EPA EIAR Guidelines 2022 are also instructive in stating:

"Analysis of high-level or sectoral strategic alternatives should not be expected within a project level EIAR… It should be borne in mind that the amended Directive refers to 'reasonable alternatives… which are relevant to the proposed project and its specific characteristics".

The consideration of the main alternatives in respect of the development of the subject lands was undertaken by the Design Team and has occurred throughout an extensive and coordinated decision-making process, over a considerable period of time. The main alternatives considered are identified below.

3.2.1 Alternative Locations

The application site is zoned for a mix of uses under the Dublin City Development Plan 2022-2028 (Z5 Zoning Objective – City Centre), and the proposed uses are permitted in principle with the land use zoning objectives pertaining to the project site.

The 2018 DHPLG Guidance on the preparation of EIARs notes specifically that the consideration of some types of alternatives, such as alternative locations, may not be appropriate in all cases. EIA is concerned with projects and the Environmental Protection Agency's guidelines (2022) state that, in some instances, neither the applicant nor the competent authority can realistically be expected to examine options that have already been previously determined by a higher authority, such as a national plan or regional programme for infrastructure which are examined by means of a Strategic Environmental Assessment (SEA), the higher tier form of environmental assessment. As the subject site has been identified to accommodate the uses proposed, it is not considered appropriate to evaluate alternative locations in the EIAR.

A "do-nothing" scenario was considered to represent an inappropriate, unsustainable, and inefficient use of these zoned lands; particularly having regard to the close proximity to a number of high quality transport links in the city centre site. The suitability of the lands for development has been confirmed as it is located within an area identified

[4] Ref CJEU Case 461/17

for development under (Strategic Development Regeneration Area (SDRA) 6 – Docklands) under the Dublin City Development Plan 2022-2028.

As noted in Section 4.13 of the 2018 Guidelines *"some projects may be site specific so the consideration of alternative sites may not be relevant."*

We also refer to the Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA 2020), which states that in some instances alternative locations may not be applicable or available for a specific project which is identified for a specific location.

In the first instance, the proposed development is in accordance with the zoning and other relevant policies and objectives of the Dublin City Development Plan 2022-2028). The site is zoned as 'Zone Z5' – "*to consolidate and facilitate the development of the central area, and to identify, reinforce, strengthen and protect its civic design character and dignity".* The most recent use of the subject lands for car parking is included as a permissible use for Z5, however, the proposed development provides a more diverse mix of uses including office and arts and cultural spaces. Therefore, the proposed development represents a significant improvement in the alignment with the zoning objective of Z5 - City Centre.

The location of the proposed development was also chosen to complement the associated proximal developments as mentioned in Section 2.8 and other existing residential, commercial and amenity developments within the City Centre, the remainder of the Georges Quay area and the Dublin Docklands.

Furthermore, as identified in Chapter 11 of this EIA Report the current location for the proposed development is one is highly accessible in terms of provision of public transportation. It is an ideal location for the consolidation of employment opportunities for those residing within Dublin City centre and those living further afield enabling a significant switch to more sustainable modes of transportation.

Given the current zoning of the site, the surrounding land uses, the proximity to similar associated developments, the public transport connections, and the availability of necessary services and infrastructure, the current location of the proposed development is determined to be the most appropriate.

3.2.2 Alternative Uses

The subject site is zoned for a mix of uses which are compatible with the city centre location of the site. The subject site will provide new office accommodation and arts and cultural spaces. In addition to these uses there are other land uses which are permitted in principle on these lands such as residential and retail etc. See Table 3.1 below for full list of permissible uses under Z5 zoning objective.

Table 3.1. Z5 - Permissible Uses

Amusement/ leisure complex, Beauty/grooming services, Bed and breakfast, Buildings for the health, safety and welfare of the public, Café/tearoom, Childcare facility, Civic offices, Community facility, Conference centre, Craft centre/craft shop, Creative artistic, recreational building and uses, Cultural, Delicatessen, Education, Embassy office, Enterprise centre, Financial institution, Funeral home, Guesthouse, Home-based economic activity, Hostel (Tourist), Hotel, Industry (Light), Internet café/call centre, Live-work units, Media-associated uses, Media and related consultants, Mobility hub, Nightclub, Office, Off-license, Off-license (part), Open space, Place of public worship, Primary health care centre, Public house, Public service installation, Recycling facility, Residential , Restaurant, Science and technology-based industry, Shop (District), Shop (Local), Shop (Major comparison), Shop (Neighbourhood), Sport facility and recreation uses, Student accommodation, Take-away, Training centre, Veterinary surgery, Warehousing (Retail/non-food/retail park)

It is not considered that an alternative use would result in the best use of these lands, particularly having regard to the requirement for office development in this area proximate a major transport hub and future interchange. The environs of the subject site comprise a mix of uses, with residential, offices, schools, place of worship and other local services. The provision of residential development would result in an underutilisation of the site, due to the narrow configuration of the site, as such uses would require additional stair cores and set backs from boundaries to allow for private amenity space. A mix of uses is provided in the scheme in line with the Z5 zoning objective which seeks a mix of uses both horizontally and vertically through a scheme. The public transport accessibility of the site warrants

development of a higher density in line with compact settlement principles and therefore low density uses would not represent and efficient use of land resources or public transport utilities.

3.2.2.1 Description of Alternative Processes

The relevance of alternative processes and technologies is limited in the case of this EIAR having regard to the nature of the proposed development, which is primarily for a commercial development. The Climate Action Energy Statement prepared by BPC Engineers identifies the energy standards with which the proposed development will have to comply and also sets out the overall strategy that will be adopted to achieve these energy efficiency targets.

The building fabric has been selected to meet the requirements of Part L Building Regulations. The incorporation of these elements and technologies into the scheme will ensure higher performance and improved building sustainability when compared to alternative out-dated, less energy efficient materials and technologies.

The proposed development will comply with non-residential Part L 2021 (Buildings other than dwellings) and target a BER of at least A2. The optimised approach is based on the Energy Hierarchy Plan – Be Mean, Be Lean, Be Green

- Be Mean: The façade performance specification has been optimised to limit heat loss in the winter, heat gain in the summer, improve airtightness and thermal transmittance, and maximise natural daylight.
- Be Lean: High efficiency plants will be specified to take advantage of the optimised façade design measures. Allow energy lighting design will be utilised to further reduce energy consumption and increase occupant thermal comfort. A building Management System (BMS) will ensure on-going efficiency in the operation of plant and prioritisation of energy reduction measures into the future.
- Be Green: Renewable energy technologies such as Air Source Heat Pumps (ASHP), mechanical heat recovery (MHVR), and Solar PV Panels are utilised. A number of sustainable design features have been considered within the design to achieve the sustainability targets of the proposed development. These include the proximity of the development to public transportation networks, water efficiency measures such as low consumption sanitary fittings, utilisation of captured rainwater for irrigation and greywater, and improved indoor environmental quality.

3.2.2.2 Alternative Design and Layouts

It must be noted that the subject lands are located in an urban/city centre context which poses tight limitations on layout options in comparison to a potential suburban or rural context on a significantly larger parcel of land.

The existing use of a vacant building and surface level car park is an under-utilisation of the land resource and the development of the site represents an opportunity to address this.

The subject lands form a key corner of the South Quays within the Custom House Setting. In light of existing, current and previously permitted development in the area the subject lands provide an opportunity to create a formal composition in response to the Custom House Setting.

In the interests of providing a strong urban design response, the building lines utilise the majority of the site, with localised increased in footpath widths at street level provided where appropriate. Providing further setbacks of building lines would not provide a satisfactory design response to the site.

George's Quay Local Area Plan

Figure 3.1 below showing Figure 30 and 31 of the now expired Georges Quay Local Area Plan (GQLAP) set out, what was in 2012 a desired plan for the subject lands to comprise active street frontage, a commercial or residential use and a maximum of 6 storeys (with provision for one setback storey) north of a line delineated by the Immaculate Heart of Mary Church, and a maximum of 9/10 storeys south of that line. There has been a significant change in National guidance on city planning policy since 2012 when the GQLAP was published, where a policy for greater height and density is now required for highly serviced urban locations. This policy has been accepted by Dublin City Council, as sites such as Tara Street and those developments contained within the Hawkins St./Tara St./Townsend St./Poolbeg St. block which have been granted permission for height and density in excess of the LAP guidance. Such a building form was not considered to be the most sustainable approach to developing the lands.

Figure 3.1. Extract from Geroge's Quay Local Area Plan

Fig 30: City Quay Site Design Framework

Fig 31: Conceptual Sketch of City Quay Site

Reg. Ref. 4674/22; ABP-315053-22 – 24 no. storey development

A planning application was submitted to Dublin City Council in August 2022 for a 24 no. storey building on the subject lands. The proposals comprised office accommodation from 1st – 23rd floor, and an arts centre, auditorium and café at ground floor and lower ground floor levels. The application was refused by Dublin City Council in October 2022 due to concerns regarding visual impact on the Customs House and the inappropriate scale and height of the proposed building. The decision was appealed to An Bord Pleanála who refused planning permission and did not accept the Inspector's recommendation to grant permission. This decision is currently subject to legal challenge.

While it remains the opinion of the client/applicant, that there is significant merit to the layout and form proposed **Reg. Ref. 4674/22; ABP-315053-22**, the subject application provides an opportunity to consider an alternative building layout and form, i.e. in lieu of a tall slender building, shouldered by buildings of a height consistent with the surrounding area thus creating a local landmark. The current alternative endeavours to reflect the views of the planning authority

Figure 3.2. CGI of Previous Development

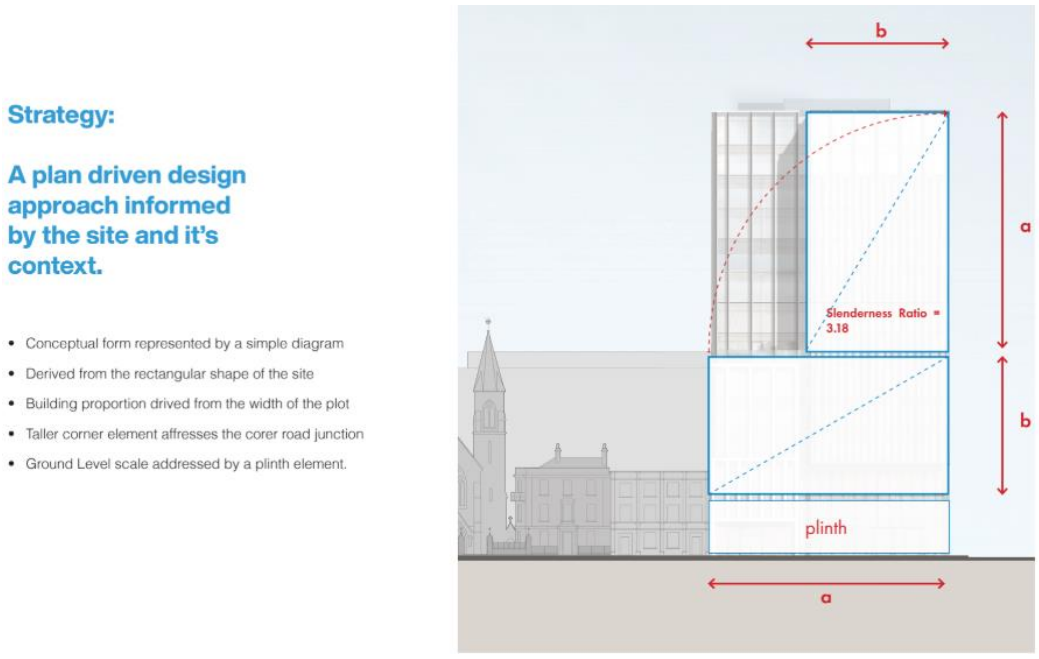
Proposed Development – 14 no. storey development

The height of the subject proposal has been designed to align with the specific objective for a locally higher building on the site; notwithstanding the provisions to make the case for a landmark building in the Development Plan.

Figure 3.3. CGI of Proposed Development (Visual Lab)

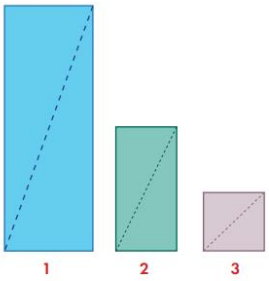
The massing of the building is broken down by the articulation of the façades into a series of appropriately proportioned volumes defined by the different levels and setbacks. The carefully considered balancing of the building volumes informs the height and the overall massing of the building. This has been considered from each of the primary vistas.
The reduced height of the current proposal may be more readily absorbed into the visual landscape.

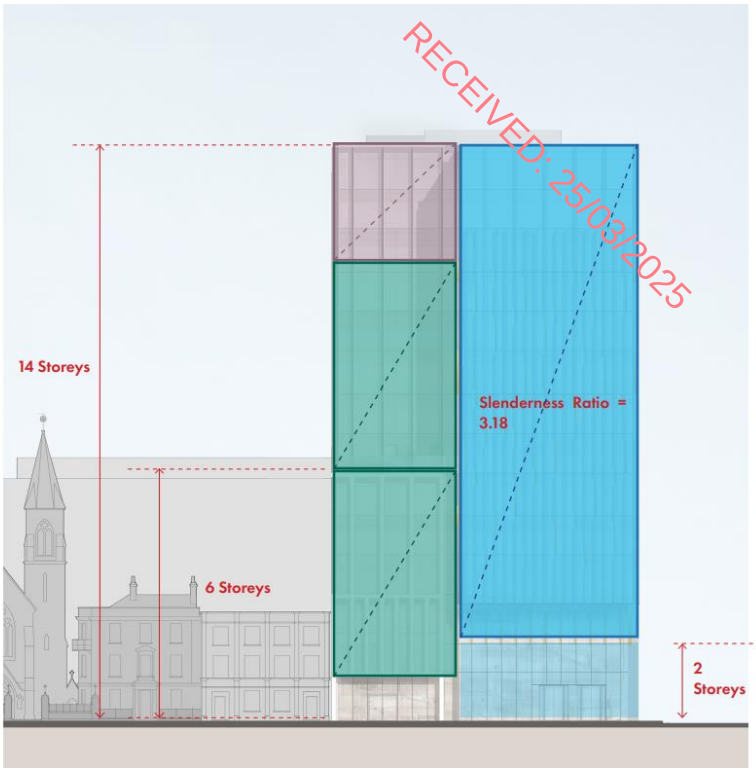
Figure 3.4. Extracts from Design Statement showing the overall design strategy



Composition:

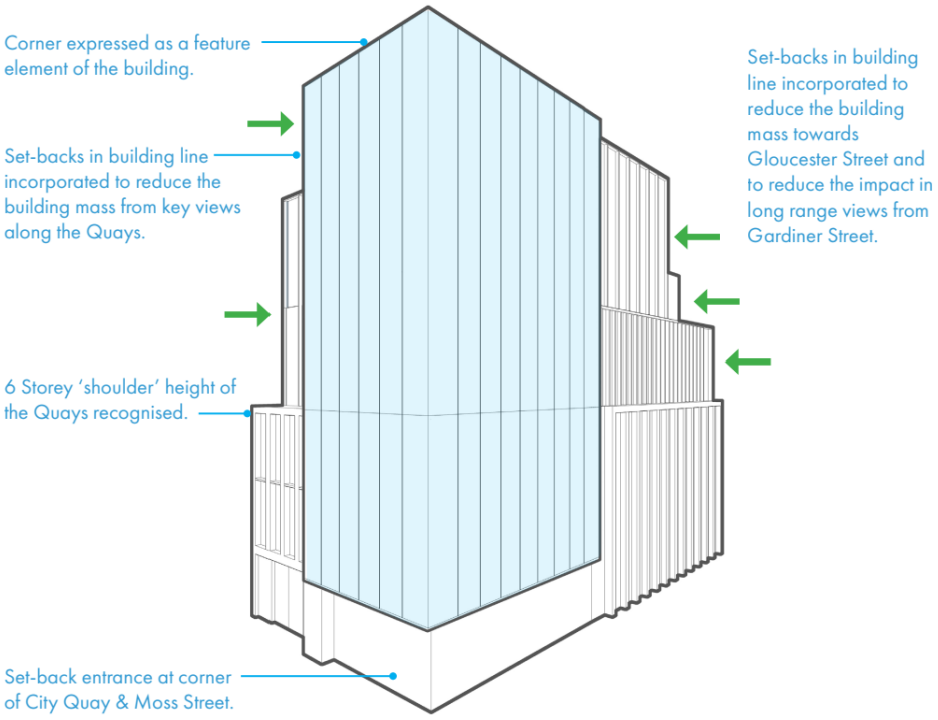
A composition of elegant individual geometric elements.





Form & Mass:

Sculpting the form & mass.



3.2.2.3 Alternative Mitigation

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 are set out in each of the EIA Report Chapters 4-13 and Volume 3.

3.2.2.4 Conclusion on Alternatives

The proposed development was carefully designed, taking into consideration the site context, previous decisions by An Bord Pleanála and Dublin City Council, and the existing neighboring commercial, residential and educational properties and the local environmental conditions including air quality, noise and vibration, and visual impact.

The proposal will allow the development potential of the site to be maximised within the George's Quay area while improving visual impact and amenity through responsive architectural design, provision of public cultural space and mitigation measures to reduce the impact upon City Quay National School and the Immaculate Heart of Mary Church.

4.0 NON-TECHNICAL SUMMARY OF EIAR CHAPTERS AND HTVIA ASSESSMENT

4.1 HUMAN HEALTH AND POPULATION

Introduction

The 2014 EIA Directive (2014/52/EU) updated the list of topics in an Environmental Impact Assessment Report (EIAR), replacing the term “Human Beings” with “Population and Human Health.” This chapter addresses the requirement to assess human health, as outlined in Schedule 6 of the Planning and Development Regulations 2001 (as amended). It includes inputs from various supporting reports, including waste management and environmental management plans.

This section of the EIA Report has been prepared by John Spain Associates, Planning & Development Consultants, and provides a description of the proposed development. This chapter of the EIA Report was prepared by Blaine Cregan M.Sc. B.Sc. (hons) and B.Eng., Executive Director with John Spain Associates.

Blaine has acted as lead planning consultant on a range of high-quality complex planning applications across the country over an extended period. Blaine has wide-ranging experience in the management and review of Environmental Impact Assessment (EIA) Reports for major commercial and mixed-use development and redevelopment projects.

Study Methodology

The evaluation of potential human health impacts is carried out according to the Environmental Protection Agency (EPA) guidelines, with a focus on direct and indirect effects through environmental factors (e.g., air, water, soil) that might affect human health. This includes considerations of toxic substances, noise, and health risks related to the project.

From a statistical point of view, the subject site falls within the Electoral Division (ED) Mansion House A; However, the area selected for assessment of human health encompass a broader scope including EDs Mansion House A (02117), North city (02075), North Dock, C (02078), South Dock (02147), Mansion House, B (02118), Royal Exchange, B (02145), and Royal Exchange A (02144). In the context of this EIAR, this broader area is referred to as the Assessment Area.

Existing Receiving Environment (Baseline Scenario)

Employment & Economic Activity

Ireland’s employment landscape has grown by 2.7% as of Q2 2024, with a notable shift towards knowledge-based sectors like Professional, Scientific, and Technical Activities. However, some sectors, such as Wholesale & Retail, have seen declines. Dublin’s workforce continues to expand, with high levels of inward migration contributing to the labour market. Despite some economic uncertainties, employment growth remains robust, especially in Dublin’s urban core.

Socio-Economic Patterns

Population

Ireland’s population increased by 8.1% between 2016 and 2022, driven largely by net migration. The Dublin area saw consistent population growth, with Fingal recording the highest increase at 11.6%. The Assessment Area saw a 19.9% increase in population, particularly in South Dock and Royal Exchange A. However, Mansion House A experienced a population decrease of 10.4%, indicating shifting residential patterns.

Age Profile

The majority of the population in the Assessment Area (47.6%) is within the 25-44 age group, reflecting a young, working-age demographic. Other age groups show variation, with notable concentrations of families and young adults in some areas. The area has a relatively low proportion of older residents, suggesting its appeal as a dynamic, employment-oriented district.
Principal Economic Status & Social Class

The workforce has seen increases in professional, managerial, and semi-skilled roles, with a notable decline in skilled and unskilled manual jobs. The socio-economic profile reflects Dublin's status as a hub for higher-skilled and professional employment, with the Assessment Area following similar trends of growth in professional and service-oriented jobs.

Educational Attainment

The population of the Assessment Area is becoming more educated, with a significant increase in residents achieving upper secondary education and higher qualifications. The number of residents with no formal education nearly doubled, while there were declines in lower-level qualifications, indicating a trend toward more educated residents.

Human Health

Ireland's population has grown significantly, and life expectancy is high by EU standards. However, the population is aging, with a rising proportion of people aged 65 and over. The general health of the Assessment Area's residents is largely positive, with most reporting "Very Good" or "Good" health. However, there has been a noticeable increase in the number of residents with disabilities, indicating a growing need for accessible infrastructure.

Social Infrastructure

The site is surrounded by essential services, including businesses, schools, healthcare facilities, and emergency services. Notably, City Quay National School and Trinity College Dublin are located nearby, contributing to the area's educational and cultural fabric. Healthcare facilities like St. James's Hospital and various fitness centres are also within close proximity.

JSA have carried out a Community & Social Infrastructure Audit under a separate cover enclosed with the application pack, which we refer to for full details.

Land Use & Settlement Patterns

The subject site is zoned "Z5 – City Centre" in the Dublin City Development Plan 2022-2028, allowing for commercial, cultural, and office uses. It is part of the Docklands Strategic Development Regeneration Area (SDRA 6 – Docklands), which is designated for urban regeneration and compact growth. The surrounding area is undergoing significant transformation, and the site's redevelopment will contribute to the overall revitalisation of the urban core.

<u>Potential Impact of The Proposed Development</u>

Construction Phase

Short-term impacts from dust, noise, and vibration during construction are expected. Mitigation measures, including dust control and noise monitoring, will minimise health risks.

Construction will provide temporary employment for about 300 workers, stimulating local businesses and services.

Temporary visual impacts and minor disruptions to local amenities are expected. No major disruptions to services are anticipated.

Operational Phase

The development will introduce positive changes, such as better air quality and low-impact noise levels. The impact on local health will be minimal once operational.

The new commercial and cultural spaces will provide long-term economic benefits, attracting businesses, office workers, and tourists.

The addition of cultural spaces, such as an arts centre, will enhance local amenities, supporting Dublin's cultural and economic landscape.

Potential Cumulative Impact

The development and surrounding projects will increase commercial activity and employment opportunities, contributing positively to the local population dynamics and supporting planning policies.

The construction phase, including demolition, is not expected to significantly affect population trends. However, noise, traffic, and general construction activity may temporarily impact human health, mitigated by noise and traffic management measures.

The operational phase will bring a sustained increase in population and foot traffic, particularly in the commercial sector, positively impacting the area's economy and reinforcing its role as a modern commercial hub.

In terms of cumulative impact, key nearby projects include: 12-storey, 58-unit "Built-to-Rent" development at Apollo House currently under construction (Reg. Ref. 3684/21, amended under Reg. Ref. 4170/19 (ABP-306335-20)), 9-storey office building over a double basement at Townsend Street currently under construction (Reg. Ref. 3091/21), 9-storey mixed-use development over single-storey basement at Brunswick Villas (Reg. Ref. 2877/21, amended under Reg. Ref. 4778/19), and 12- to 16-storey office development at Dublin Arch, approved permission (Reg. Ref. 3054/22).

With respect to the above, cumulative impact during construction includes increased pressure on road infrastructure due to additional HGV traffic, economic benefits for local businesses and suppliers, and potential negative effects from dust and noise. Residual impact includes demolition, and construction impacts on air quality, noise, and vibration have been assessed and found to be non-significant, and other cumulative impacts on visual aesthetics, material assets, and traffic are also deemed non-significant. Impacts on air quality, noise, visual impact, and traffic during the operational phase are expected to be long-term, neutral, and non-significant.

"Do-Nothing" Impact

In a "do-nothing" scenario, the site would remain vacant and under-utilised, missing the opportunity for urban regeneration, economic growth, and visual enhancement in this strategic area within Dublin's Docklands. The absence of the proposed development would also forgo the creation of commercial space, job opportunities, and economic benefits for local businesses, particularly in construction and services. Environmentally, the site would remain as-is, with decaying buildings detracting from the area's visual quality and potentially inviting anti-social behaviour. Additionally, without development, the regeneration objectives of the City Development Plan would not be fulfilled, and the site would remain disconnected from the evolving urban landscape. The proposed development, in contrast, would contribute to the area's transformation into a vibrant, sustainable part of the city, enhancing population dynamics, employment, and community resources.

Avoidance, Remedial & Mitigation Measures

Construction Phase

A range of construction-related mitigation and remedial measures are outlined in the EIAR to address potential environmental impacts during the construction phase, particularly concerning population and human health. These measures are designed to prevent significant adverse effects. A Construction Environmental Management Plan (CEMP) will be implemented, based on the mitigation strategies in the EIAR, to manage environmental controls and emergency procedures. Additionally, a Resource Waste Management Plan will ensure compliance with waste management regulations throughout the construction and operational phases. Demolition works will follow established guidelines and require approval from the Local Authority for pollution prevention and emergency procedures. Site controls include road cleanliness, security measures, traffic management, and surface water management, incorporating Sustainable Drainage Systems (SuDS) practices. Dust, noise, and vibration impacts will be controlled through specific plans and monitoring, adhering to relevant standards. These comprehensive measures aim to manage environmental, safety, and operational impacts effectively during construction.

Operational Phase

During the operational phase, no significant residual impacts on air quality or human health are anticipated, as air quality standards will be met without additional mitigation. Noise and vibration levels, after applying design and

mitigation measures, will comply with noise standards, ensuring no adverse effects on nearby sensitive receptors. Health and safety protocols are robust, ensuring continued protection for all users and the surrounding community. The operational phase is expected to have a positive, long-term residual impact on local economic activity, businesses, and employment, enhancing the area's vibrancy. It will also significantly benefit local amenities and tourism by adding cultural and commercial spaces, improving the area's attractiveness to visitors and supporting community services. There will be no significant impact on material assets or services, as existing infrastructure has the capacity to meet the increased demand. Traffic from the development is not expected to disrupt road conditions or human health. There will be a slight, long-term negative impact on daylight levels in some classrooms at the nearby City Quay National School, but it will remain within acceptable limits. Wind conditions around the development will be suitable for pedestrian activities throughout the year, with no adverse residual impact on comfort.

4.2 LAND, SOILS. GEOLOGY AND HYDROGEOLOGY

Introduction

This chapter of the EIAR evaluates the potential effects on the land, soil, geological and hydrogeological aspects of the site and surrounding area.

Assessment Methodology

The assessment of the development's impact has been informed by the following guidance documents and data sources:

- Environmental Protection Agency (EPA) guidelines
- Institute of Geologists of Ireland (IGI) guidelines
- Geological Survey of Ireland (GSI) records
- Teagasc soil and subsoil database
- Environmental Agency (EPA) records
- Site specific environmental and geotechnical investigations

Baseline Scenario (Existing Conditions)

The subject development site is brownfield. Several derelict structures are present in the northern part of the site; the remainder comprises hardstanding that is currently in use as a commercial car park, accessed from City Quay.
The topography of the proposed development site is generally flat with the elevation of the site ranging from 2.97m AOD to 3.01m AOD. Review of the soil maps from the EPA online map tool indicate that the soil type in the vicinity of the subject development site is predominantly made ground. The GSI bedrock map indicates that the site and surrounding area are underlain by Dark Limestone and Shale associated with the Lucan Formation. The subsoil is primarily made ground.

Site investigations carried out in 2020 and 2022 encountered the following ground types, in approximate stratigraphic order:

- Surfacing – present to a maximum depth of 0.15m BGL.
- Made Ground (sand and clay with brick and concrete fragments) – present to a depth of between 2.8 and 3.8m BGL generally.
- Granular Deposits (clayey sand and gravel), varying in depth around the site.
- Cohesive Deposits (sandy gravelly clay) – generally stiff from a depth of 3.8m BGL.
- Bedrock (limestone and mudstone) – depth to rock varying from 8.3m BGL to a maximum of 9.8m BGL.

Soil samples collected during 2020 ground investigations included some material classified as hazardous: elevated levels of lead and zinc, and a trace sample of white asbestos.

Groundwater levels recorded during ground investigations across the site varied between 3.0m BGL and 3.78m BGL. There is no apparent tidal influence on the groundwater levels at the site. In general, groundwater samples collected were found to be within the permissible parameters for the presence of metals and volatile organic compounds, though high concentrations of chloride, sodium, and sulphate were found at some locations. GSI records show that the closest groundwater well to the development site is at a distance of 850m.

The major bedrock aquifer underlying the site has been classified by the GSI as a Locally Important Gravel Aquifer of low vulnerability, which is moderately productive in local zones only. No groundwater source protection zones are identified by the GSI under the site or in the immediate vicinity, and there are no karst features in the area.

Do-Nothing Scenario

Should the proposed development not take place, the land, soils, geology, and hydrogeology of the development site will remain in their current state.

Potential Impacts of the Proposed Development

During excavation and infilling of the site, there is the potential for excavated and stripped soil to be disturbed and eroded by site vehicles, and for non-vegetated/uncovered areas to be eroded by rainfall and wind. There is also the potential for hazardous materials to be encountered during excavation.

During basement construction, there is the potential for slight temporary effects on the local water table as a result of any dewatering works required, and horizontal groundwater movements being diverted by the installation of a pile wall. Basement construction works also have the potential to cause minor ground movements inside the excavated area as a result of changes in vertical load on the ground.

Accidental spills and leaks of oils or fuels during construction works represent a risk of pollution if mitigation measures are not put into place on site.

In the proposed development's operational phase, there will be no direct discharge to the water or soil environment. Any accidental emissions during storage, transfer, or delivery or leakage in the car parks could cause localised contamination if the emissions enter the soil and groundwater environment without adequate mitigation.

Mitigation and Monitoring Measures

The main potential impacts identified are associated with the construction phase of the proposed development. Construction works will be carried out in accordance with a Construction and Environmental Management Plan (CEMP) to be prepared and maintained by the appointed contractor. This will specify prevention and mitigation measures to avoid or minimise adverse impacts on the surrounding environment during construction. These will address:

- Secure soil movement and storage.
- Identification, recovery, and treatment of hazardous materials.
- Prevention of harmful material spills (oils/fuels, cementitious materials, silt/debris, etc.).
- Monitoring of ground movement and vibration.
- Management of rainwater/stormwater on site.

In its operational phase, the development has very little potential to induce adverse effects on the surrounding environment, and no specific mitigation or monitoring measures are required beyond those integrated into the development design (e.g. oil separators within the foul drainage network).

Residual Impacts of the Proposed Development

The appropriate mitigation measures described above reduce the potential for any impact of accidental discharges to ground during the construction phase. Overall, the construction phase is considered to have a short term, imperceptible significance, with a neutral impact on quality.

In its operational phase, the development's predicted impact on the surrounding land, soils, geology, and hydrological environment is considered to be long term, neutral in terms of quality and of an imperceptible significance.

4.3 WATER AND HYDROLOGY

This chapter of the EIAR provides an evaluation of the current environmental conditions and the potential impacts of the proposed development on the hydrology of the site and its surrounding area. Additionally, this chapter assesses the existing hydrological conditions and the likely impacts of the proposed development on the local hydrology.

Assessment Methodology

The assessment of the development's impact has been informed by the following guidance documents:

- Environmental Protection Agency (EPA) guidelines
- Eastern River Basin District (ERBD) Management Plan
- The Planning System and Flood Risk Management, Guidelines for Planning Authorities (Department of the Environment, Heritage and Local Government [DoEHLG] and the Office of Public Works [OPW])
- Requirement for the Protection of Fisheries Habitat During Construction and Development Works at River Sites (Eastern Regional Fisheries Board)
- Greater Dublin Strategic Drainage Study (DCC)
- Greater Dublin Regional Code of Practice for Drainage Works
- Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors (CIRIA)

Background information on the local drainage network and water supply was obtained from documents from local authorities and Uisce Éireann.

Baseline Scenario (Existing Conditions)

The subject development site is brownfield. Several derelict structures are present in the northern part of the site; the remainder comprises hardstanding that is currently in use as a commercial car park, accessed from City Quay. The topography of the proposed development site is generally flat with the elevation of the site ranging from 2.97m AOD to 3.01m AOD.

The proposed development is situated within Hydrometric Area No. 09, which covers the Liffey and Dublin Bay area of the Irish River Network. Specifically, the site lies within the Dodder Sub-Catchment (Dodder_SC_010), part of the larger River Liffey catchment. The River Liffey originates between Kippure and Tonduff in the Wicklow Mountains, flowing approximately 129km through counties Wicklow, Kildare, and Dublin before emptying into the Irish Sea at Dublin Bay. The River Liffey catchment spans an area of about 1,369km².

The closest established waterbody to the site is the River Liffey (IE_EA_090_0400, 09_2111), located roughly 0.02km to the north of the proposed development. The river then discharges into Dublin Bay Natura Site, approximately 1.54km east of the development site. The River Liffey and Liffey Estuary Upper are classified as 'Moderate' and 'Good' in terms of water quality, respectively.

Uisce Éireann records indicate that two potable water supply connections currently serve the site, from an existing public watermain Moss Street. Uisce Éireann records also show existing watermains in City Quay and in Gloucester Street.

Uisce Éireann records indicate that the existing wastewater network surrounding the proposed development site is a combined system, handling both stormwater and foul water discharges. Aerial images and survey data indicate that the current surface water drainage flows freely into the combined public sewer system without any restriction.

The eastern portion of the subject site is located within Flood Zones A and B, and the remainder within Flood Zone C. The development of a commercial complex is classified as a less vulnerable development under the Flood Risk Management Guidelines.

Do-Nothing Scenario

Should the proposed development not take place, there will be no effect on the hydrological condition of the subject site.

Potential Impacts of the Proposed Development

During construction, the proposed development has the potential to impact negatively on the surrounding drainage network and on the River Liffey, should any harmful materials be washed into these from the development site.

In its operational phase, the estimated post-development peak water demand for the proposed development is calculated as 6.586 l/s, and its estimated peak foul effluent generation is 4.742 l/s. Without consultation with Uisce Éireann, these have the potential for very slight adverse impacts on the capacities of the public water supply system and water treatment system.

In both construction and operational phases, inadequate management of stormwater runoff from the development site would have the potential to increase the risk of pluvial flooding on adjacent sites, or to contribute to overwhelming the combined public drainage network. In addition, a failure to account for existing flood risk on the development site itself could result in flooding of the development in its operational phase.

Mitigation and Monitoring Measures

Construction works will be carried out in accordance with a Construction and Environmental Management Plan (CEMP) to be prepared and maintained by the appointed contractor. This will specify prevention and mitigation measures specifically to avoid harmful materials and other contaminants being washed into the surrounding drainage network or the River Liffey from the development site. The CEMP will address:

- Secure soil movement and storage.
- Identification, recovery, and treatment of hazardous materials.
- Prevention of harmful material spills (oils/fuels, cementitious materials, silt/debris, etc.).
- Monitoring of ground movement and vibration.
- Management of rainwater/stormwater on site.

In its operational phase, the development has very little potential to induce adverse effects on surrounding drainage network or the River Liffey, and no specific mitigation or monitoring measures are required beyond those integrated into the development design (e.g. oil separators within the foul drainage network).

To ensure that the proposed development does not place an excessive burden on either the public water supply system or the public wastewater treatment system, a Pre-Connection Enquiry has been lodged with Uisce Éireann. This will be followed by a design acceptance process and finally a connection agreement, at each stage of which Uisce Éireann may insist of any design changes necessary to ensure that its infrastructure can meet the development's demands.

To minimise the risk of the completed development flooding as a result of high river water levels during extreme storm events, the entrances to the ground floor of the proposed building will be approximately 0.8m higher than the surrounding ground level. The proposed development follows a precautionary approach to setting finished floor levels, as outlined in Section 5.16 of the Flood Risk Management (FRM) Guidelines. It is designed to be resilient to breach, overtopping, and climate change scenarios. The commercial development will be situated above the 0.5% Annual Exceedance Probability (AEP) coastal flood level, with allowances for climate change and freeboard, set at 3.92m AOD.

To minimise the risk of the completed development contributing either to overloading of the combined public drainage network or to pluvial flooding on adjacent sites, stormwater discharge from the development in its operational phase will be restricted and held in on-site attenuation storage before being released at a controlled rate. The proposed development also includes Sustainable Drainage Systems (SuDS) measures that reduce the total runoff from the development.

Residual Impacts of the Proposed Development

During construction, after applying the specified mitigation measures, the impact on water quality is expected to be short-term and imperceptible, with a neutral effect on water quality. This means any measurable impacts will have no significant consequences. This conclusion is based on assessments showing that there will be no significant increase in runoff from the site, and the quality of any runoff will be effectively mitigated if necessary.

The operational phase of the proposed development has been carefully assessed for its potential effects on the hydrological environment. It is concluded that the development will not negatively impact any surface water bodies during operation, nor will it increase flood risk. With the implementation of the specified mitigation measures, no adverse effects are anticipated. Therefore, the operational phase is expected to have a long-term, imperceptible effect with a neutral impact on water quality, meaning any measurable changes will not have significant consequences.

4.4 BIODIVERSITY

Introduction

This Biodiversity section of the EIAR was carried out by Altemar Ltd. It assesses the biodiversity value of the proposed development area and the potential impacts of the development on the ecology of the surrounding area and within the potential zone of influence (ZOI).

The programme of work in relation to biodiversity aspects of the EIAR has been designed to identify and describe the existing ecology of the proposed development site and outline the habitats or species of conservation interest that may be present on site. It also assesses the significance of the likely impacts of the scheme on the biodiversity elements including designated conservation sites and designs mitigation measures to alleviate identified impacts. Mitigation measures and the phasing of the project are contained in the accompanying Outline Construction Management Plan (oCMP), which has been prepared by Cronin & Sutton Consulting Engineers.

Methodology

A pre-survey biodiversity data search was carried out in May 2021 and updated in June 2022 and September 2024. This included examining records and data from the National Parks and Wildlife Service (NPWS), National Biological Data Centre (NBDC) and the Environmental Protection Agency (EPA), in addition to aerial, 6 inch maps and satellite imagery.

Habitat, flora, bat and wintering bird surveys were undertaken within the appropriate seasonal timeframes and incompliance with relevant guidelines. Field surveys were carried out as outlined in Table 7.1. All surveys were carried out in the appropriate seasons. A mammal/fauna survey was also carried out.

Table 4.1 Field Surveys

Survey Type	Surveyors	Survey Dates
Field Survey (habitat, floral)	Bryan Deegan & Jack Doyle (Altemar)	9th & 21st September 2021, 10th August 2022, 26th September 2023 and 30th September 2024
Bat Survey	Bryan Deegan & Jack Doyle (Altemar)	9th & 21st September 2021, 10th August 2022, 26th September 2023 and 30th September 2024
Wintering Bird and Flightline Assessment	Hugh Delaney (ornithologist) Frank Spellman (Altemar)	14th and 27th December2021 6th and 11th November 2024

Baseline Environment

The potential ZOI of the project in the absence of mitigation was deemed to be; within the site outline, and nearby sensitive receptors including the River Liffey and designated sites downstream of the proposed works. Given the extend of the demolition and site clearance works, and the proximity of the River Liffey to the subject site (15m), in the absence of mitigation there is the potential for dust and surface water runoff to enter the proximate watercourse. As a result, out of an abundance of caution, the ZOI of the proposed works site is extended to the River Liffey and downstream designated conservation sites located within Dublin Bay.

Foul wastewater and surface water drainage will also be discharged to the combined sewer. As a result, there is an indirect hydrological pathway from the proposed development to designated conservation sites located within the marine environment at Dublin Bay. In the case of the proposed development, the potential ZOI extends beyond the site, with the potential for downstream impacts to extend beyond the proposed development area via the proposed construction works and the surface water/foul water networks during construction and operation.

Designated Sites

The proposed development site is not within a designated site. There are four Natura 2000 sites within 5km (South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA and North Bull Island SPA), five National conservation sites (pNHA's) within 5 km (Royal Canal, Grand Canal, North Dublin Bay, South Dublin Bay and Dolphins, Dublin Docks) , and two Ramsar sites within 15km (Sandymount Strand / Tolka Estuary and North Bull Island) of the proposed development site.

Habitats & Species Data

It should be noted that no species of conservation importance were noted on site, based on NPWS and NBDC records at fine resolution.

Evaluation of Habitats

The proposed development site is on built land. No habitats of conservation significance were noted within the site outline.

Plant Species

No rare or plant species of conservation value were noted during the field assessment. Records of rare and threatened species from NBDC and NPWS were examined. No rare or threatened plant species were recorded in the vicinity of the proposed site. No invasive plant species that could hinder removal of soil from the site during groundworks, such as Japanese knotweed, giant rhubarb, Himalayan balsam or giant hogweed were noted on site.

Fauna

No rare or threatened faunal species were recorded within the proposed development site based on NBDC records. No badgers or badger activity was noted on site. No hedgehogs were seen during the site visit. The common frog (Rana temporaria) was not observed on site. The common lizard (*Zootoca vivipara*) or smooth newt (*Lissotriton vulgaris*) were not recorded on site. There are no features within the site boundary that could be important to Amphibians/Reptiles. No rare or bird species of conservation value were noted during the field assessment. There is no evidence of a current or past bat roost in the structures on site, therefore no significant negative impacts on the roosting of these animals are expected to result from the proposed development. Foraging activity was not present. Herring gull were noted flying and were not nesting on site. The site is not seen as an important wintering bird site due it consisting entirely of built land. Results also suggest that the site is not a regular flightline path for such species like Brent Geese or other species of significant interest, from the observers experience of regular commuting through this part of the city centre these species are not frequently encountered passing through this area.

Potential Impacts of the Proposed Project

Demolition and Construction Phase

In the absence of mitigation measures the overall development of the site is likely to have direct negative impacts upon the existing habitats, fauna and flora within the site. Direct negative effects will be manifested in terms of the removal of the site's internal and perimeter habitats. The removal of these habitats will result in a loss of species of low biodiversity importance. The area is not deemed to be an important foraging area for terrestrial mammals or birds. It should be noted that the proposed development site is located 15m from the River Liffey and the nearest Natura 2000 site is South Dublin Bay and Tolka Estuary SPA, located 1.9 km downstream of the proposed demolition and construction site. The nearest pNHA is Royal Canal pNHA (located 0.7 km from the subject site) and the nearest Ramsar site is Sandymount Strand/Tolka Estuary (located 2.9 km downstream). Given the nature of the demolition and construction works and the subject site's proximity to the River Liffey (15m), out of an abundance of caution it is considered that there is a direct hydrological pathway to designated conservation sites located within Dublin Bay, downstream of the River Liffey, namely, South Dublin Bay (SAC & pNHA), South Dublin Bay and River Tolka Estuary SPA, is Sandymount Strand/Tolka Estuary Ramsar site, North Dublin Bay (SAC & pNHA), North Bull Island SPA and North-West Irish Sea SPA.

In the absence of mitigation measures surface water runoff and dust during site demolition and clearance works could potentially impact on the River Liffey and downstream conservation sites, with water quality or downstream/upstream impacts, due to the tidal nature of the River Liffey proximate to the site.

The impact of the development during construction phase will be a loss of existing habitats and species on site. It would be expected that the flora and fauna associated with these habitats would also be displaced. In the absence of any mitigation on site, due to the proximity of the estuarine element of the River Liffey and the potential for dust during demolition, surface water runoff during the removal of material off site into road drainage and pumping of unmitigated surface/ground water from excavations to the watercourse, there is potential for downstream/upstream impacts on biodiversity from contaminated runoff, silt, dust and petrochemicals. No birds of conservation importance were nesting on site. Herring gull were not nesting on site but there is potential that herring gull could potentially nest on site.

Operational Phase

Once constructed, the site would be seen as a stable ecological environment. However, in the absence of mitigation, appropriate measures should be taken to prevent surface water run-off into adjacent habitats and in particular the River Liffey and downstream designated sites in the absence of standard mitigation measures. No significant operational impacts are foreseen on terrestrial flora and fauna. In relation to birds the results of the flightline assessment suggest that the site is not a regular flightline path for such species like Brent Geese or other species of significant interest, and that these species are not frequently encountered passing through this area. In addition, *Mitigation measures to address potential risk of bird strikes will involve the installation of ceramic fritted glass on the corner windows of the twelfth and thirteenth floors at the quay-side of the building.*

Predicted Impacts (post-mitigation)

Construction/ Demolition Phase

No significant environmental impacts are likely in relation to the construction of the proposed development.

Effects: Slight effects / site / Negative effect / Not significant /short term/likely. Standard mitigation will be in place on site.

Operational Phase

No significant environmental impacts are likely in relation to the operation of the proposed development.

Effects: Slight effects / site / Negative effect / Not significant / long term/likely. Standard mitigation will be in place on site.

4.5 AIR QUALITY AND CLIMATE

Introduction

Byrne Environmental Consulting Ltd have completed a comprehensive air quality and climate assessment to identify and assess the potential air quality and climate impacts associated with the proposed development during both the construction and operational phases.

The assessment includes a comprehensive description of the existing air quality in the vicinity of the subject site; a description and assessment of how construction activities and the operation of the proposed development may impact existing air quality and climate; the mitigation measures that will be implemented to control and minimise the impact that the development may have on local ambient air quality and climate; and finally, to demonstrate how the proposed development shall be constructed and operated in an environmentally sustainable manner.

Methodology

The general methodology for the assessment of the potential impact of the proposed development on air quality and climate has been conducted in accordance with:

- *Guidance on the Assessment of Dust from Demolition and Construction (Institute of Air Quality Management 2024)*
- *Air Quality Regulations 2022*
- *Air Quality Framework Directive 96/62/EC*
- *Council Directive 2008/50/EC*
- *CAFÉ Directive EU 2008/50/EC*
- *Government of Ireland Clean Air Strategy for Ireland, April 2023*
- *Climate Action and Low Carbon Development (Amendment) Act 2021 (the 2021 Climate Act) (No. 32 of 2021) (Government of Ireland, 2021);*
- *Climate Action Plan 2024 (Government of Ireland, 2023);*
- *Dublin City Climate Action Plan 2024-2029 (Feb 2024).*
- *Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment (European Commission, 2013);*
- *2030 Climate and Energy Policy Framework (European Commission, 2014);*

Baseline Environment

The existing ambient air quality in the vicinity of the subject development site has been characterised from published air quality information contained in the EPA's Air Quality in Ireland 2023 (EPA 2004). Air Quality in the local Dublin City area has been assessed to be in compliance with the limit values contained in the *Air Quality Standards Regulations 2011.*

The Environmental Protection Agency (EPA) (2024) Ireland's Final Greenhouse Gas Emissions, 2023 details the total national emissions of Greenhouse Gasses (GHG).

In 2023, Ireland's GHG emissions are estimated to be 55.01 million tonnes carbon dioxide equivalent (Mt CO2eq), which is 6.8% lower (or 4.00 Mt CO2 eq) than emissions in 2022 (59.00 Mt CO2 eq) and follows a 2.0% decrease in emissions reported for 2022. Emissions are 1.2% below the historical 1990 baseline for the first time in 33 years.

Potential Impacts of the Proposed Project

Demolition and Construction Phase

Various elements of the construction phase of the proposed development have the potential to impact on the receiving environment, local ambient air quality and on human health. Dust emissions are the principal factor which may impact air quality during the demolition and construction phase.

NO_2 and CO_2 will be released into the atmosphere as a result of the movement of construction vehicles and the use of construction plant, vehicles and generators.
The CO_2 emissions associated with the production of concrete are referred to as embodied carbon and will result in a net increase in CO_2 emissions over the baseline scenario of the undeveloped site.

Operational Phase

The design of the proposed development will see the operation of sustainable and thermally efficiency A rated Nearly Zero Energy Buildings (NZEB) which will comply with Part L of the Building Regulations (Government of Ireland 2021) thus reducing the extent of particulate and carbon emissions.
The proposed development has been designed to reduce the impact to climate where possible. A number of sustainable features have been incorporated into the design to ensure the operational phase emissions are minimised.

Predicted Impacts (post-mitigation)

Various elements associated with the construction phase of the proposed development have the potential to impact local ambient air quality, human health and climate. However, the residual construction phase impacts shall be mitigated using best practice methods to ensure there is no adverse impact on ambient air quality for the duration of all construction phase works. It is predicted that the construction phase of the development will not generate air

emissions that would have an adverse impact on local ambient air quality or on local human health or have an unacceptable impact on Climate.

Table 4.2 Summary of Construction Phase Likely Significant Effects with Mitigation

Likely Significant Effect	Quality	Significance	Duration	Type
Construction Phase Air Quality	Negative	Not-Significant	Short-Term	Residual
Construction Phase Climate	Negative	Imperceptible	Short-Term	Residual

Operational Phase

The operational phase of the development will have an imperceptible impact local ambient air quality or on local human health or on climate.

Table 4.3 Summary of Operational Phase Likely Significant Effects with Mitigation

Likely Significant Effect	Quality	Significance	Duration	Type
Operational Phase Air Quality	Negative	Not -significant	Long-Term	Residual
Operational Phase Climate	Negative	Imperceptible	Long-Term	Residual

4.6 NOISE AND VIBRATION

Introduction

Byrne Environmental Consulting Ltd have completed a comprehensive noise and vibration impact assessment for the demolition, construction and operational phases of the proposed development which includes a comprehensive description of the receiving ambient noise climate in the vicinity of the subject site; a description of how the construction and operational phases may impact the existing ambient noise climate, the mitigation measures that shall be implemented to control and minimise the impact that the development may have on ambient noise levels and local noise sensitive receptors.

Methodology

The impact of the proposed development has been determined through prediction of future noise and vibration levels associated with the scheme using established calculation techniques.

Construction noise and vibration impacts have been assessed in accordance with Transport Infrastructure Irelands (TII) guidance document Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes (March 2014). Indicative construction noise calculations have been undertaken using the methodology set out in *BS 5228 Code of Practice for noise and vibration control of construction and open sites - Part 1: Noise 2009+A1 2014 and Part 2:Vibration 2009+A1 2014.*

The operational phase of the development has been assessed with regard to *BS 4142: 2014: Methods for Rating and Assessing Industrial and Commercial Sound.*

Baseline Environment

The baseline noise environment at the proposed development site has been defined by field surveys conducted during September 2024 at the closest adjacent receptors to the site, namely City Quay National School. St. Mary's Pre-School, Staycity Apart Hotel and Georges Quay Office building. Road and Rail traffic noise were observed to be the dominant noise sources in the area in the vicinity of the subject site during the daytime and nighttime periods.

Potential Impacts of the Proposed Project

Demolition and Construction Phase

During the demolition and construction phase there will be extensive site works, involving construction machinery, construction activities on site, and construction traffic, which will all generate noise. The construction noise levels will be of relatively short-term duration and will only occur during daytime hours which will serve to minimise the noise impacts at local existing receptors.

There is potential that the construction phases shall result in a negative, moderate and short-term noise impact in the immediate area around the site.

The predicted construction noise levels that will be experienced at the nearest existing residential receptors as a result of construction activities have been calculated using the activity LAeq method outlined in *BS 5228 1:2009+A1 2014 – Code of Practice for noise and vibration control on construction and open sites – Part 1 Noise.*

Depending on the methods of construction, there is the possibility that construction related ground vibrations will be generated.

Operational Phase

Commercial Plant Noise

Potential commercial noise impacts relate to operational plant including Heat Pumps and Air Handling Units serving the operational building.

Predicted Impacts (post-mitigation)

Construction Phase

The construction phase noise and vibration impacts shall be controlled and mitigated using best practice method specified in *BS 5228-1:2009+A1 2014. Part 1 – Noise and Part 2 Vibration* and with regard to the *Dublin City Council's Air Quality Monitoring & Noise Control Units Good Practice Guide for Construction and Demolition* to ensure there are no adverse unacceptable noise or vibrational impacts on local receptors or on human heath.

Table 4.4 Summary of Construction Phase Likely Significant Effects with Mitigation

Likely Significant Effect	Quality	Significance	Duration	Type
Construction Phase Noise	Negative	Slight	Short-Term	Residual
Construction Phase Vibration	Negative	Not-Significant	Short-Term	Residual

Operational Phase – External Noise & Vibration Impact

The operational phase of the development will not generate noise that would have an adverse impact on the receiving environment including the proposed residential units.

Table 4.5 Summary of Operational Phase Likely Significant Effects with Mitigation

Likely Significant Effect	Quality	Significance	Duration	Type
Operational Phase Noise	Neutral	Imperceptible	Long-Term	Residual
Operational Phase Vibration	Neutral	Imperceptible	Long-Term	Residual

4.7 ARCHAEOLOGICAL AND CULTURAL HERITAGE

Introduction

IAC Archaeology (IAC) has prepared this chapter 10 to assess the effect, if any, on the archaeological, architectural and cultural heritage resource of a proposed development at 1-4 City Quay, 23-25 Moss Street and 5 City Quay, Dublin 2.

Baseline Environment

The site is located within the Zone of Archaeological Potential for Dublin City (RMP DU018-020) and as such is afforded Statutory Protection under the National Monuments Act. While there are no specific recorded monuments within the proposed development area there are eight in the Study Area (i.e. 250m). The nearest of these is the City Quay/Sir John Rogerson's Quay (DU018-020479), which runs east-west c. 20m to the north of the site.

There are no protected structures or NIAH structures within the proposed development area; however, there are 26 individual or groups of Protected structures and 30 NIAH sites within the Study Area. The Dublin City Industrial Heritage Record (DCIHR) notes the presence of a former coal yard within the southern half of the proposed development Area. This was evident on the historic maps in the latter half of the 19th century and the coal yard occupies the site of an earlier brewery, which is no longer extant.

The northern part of the proposed development area is located within a Conservation Area, as designated within the Dublin City Development Plan (2022-2028). The site is not located within an ACA, with the closest ACA is located c. 360m to the west, which is associated with O'Connell Street and Bridge.

Potential Impacts of the Proposed Project

While this site was located within the tidal estuary until reclamation in the 17th century there is potential for artefacts or features of archaeological significance to survive in the original estuarine deposits (c. 2.8m+ BCGL). These remains may relate to prehistoric or medieval activity on the river, such as fish traps or early revetments. In the absence of mitigation, there may be a direct very significant negative impact on surviving archaeological remains caused by ground works associated with the proposed double-basement level construction.

It is clear that the proposed development area has been subject to continuous redevelopment following reclamation in the 17th century. The degree to which this has impacted on the footprint of the earliest building remains is unknown at present; however, it is likely that some structural elements survive below the current ground level; especially within the southern half of site. In the absence of mitigation, there may be a direct significant negative impact on surviving early structural remains caused by ground works associated with the proposed double-basement level construction.

The proposed development area contains upstanding buildings that are in derelict condition within the northern half of site. These buildings dates to the 1920s and include a later 20th century extension along Moss Street. It is proposed to demolish these buildings and clear the site in advance of construction. In the absence of mitigation, this will have a direct moderate negative impact on the architectural heritage of the site.

Construction Phase

Elements of industrial heritage, associated with the former brewery and coal yard (such as cranes) may survive beneath the areas of hardstanding to the rear of site. Ground disturbances and other site preparation works, associated with the proposed development may, in the absence of mitigation, have a direct negative moderate impact on any such surviving remains.

A programme of archaeological test trenching will be carried out across the site to investigate the potential for earlier structural remains to survive beneath the current ground level. This may occur in two phases, within the open yard to the south, and following demolition in the north. The results of this investigation will inform the pre-development archaeological mitigation strategy for the site, which may include preservation by record (excavation), preservation in-situ and/or archaeological monitoring. Any further mitigation will require approval from the National Monuments Service of the DoHLGH and in consultation with the Dublin City Archaeologists.

A full photographic and detailed built heritage survey will be carried out of the existing buildings and walls that are of historical interest prior to the commencement of demolition works. This will be carried out by a suitably qualified historic buildings expert.

The proposed development will comprise the construction of a landmark multi-storey structure. With the exception of the protected structures to the east, the remaining immediate development fronting onto City Quay is modern in nature. As such, during the operation of the development there may be an indirect negative impact upon City Quay (RMP DU018-020458), which would be slight in significance.

Predicted Impacts (post-mitigation)

Following the completion of the above mitigation measures there would be no significant residual impacts on the archaeological heritage resource resulting from the proposed development

The negative impacts caused by the removal of historic derelict buildings is mitigated down to a slight negative residual affect due to the creation of a detailed record of the buildings before their demolition.

4.8 TRAFFIC AND TRANSPORTATION

Introduction

This chapter of EIAR evaluates the traffic implications of the proposed development, focusing on its integration with the existing traffic in the area. This chapter also aims to determine and quantify the number of trips generated by the development during both the construction and operational phases, and to assess any potential impacts on the local road network.

Assessment Methodology

The assessment of the development's impact has been informed by the following guidance documents:

- Greater Dublin Area Cycle Network Plan
- The Institute of Highways and Transportation: Guidelines for Traffic Impact Assessments
- Trip Rate Information Computer System (TRICS)
- CSO 2022 Census Data
- CSO 2016 Census Data
- National Transport Authority (NTA) BusConnects
- Greater Dublin Area Cycle Network Plan
- TII Traffic and Transport Guidelines (PE-POV-02045)

Baseline Scenario (Existing Conditions)

The subject development site is brownfield. Several derelict structures are present in the northern part of the site; the remainder comprises hardstanding that is currently in use as a commercial car park, accessed from City Quay.

The proposed development is well-connected to public transport, with George's Dock Luas Stop on the Red Line about 500m northeast and the Trinity Luas Stop on the Green Line approximately 500m southwest. Pearse Street railway station, situated about 400m southeast, provides access to the DART and national rail network. Several bus stops are also in close proximity on Moss Street and Townsend Street, served by multiple bus routes. Pedestrian access to these bus stops is facilitated by footways on both sides of Moss Street and Townsend Street, along with pedestrian crossings across City Quay, Moss Street, and Gloucester Street South.

The area surrounding the subject site is well served by commercial car-share services and by the DublinBikes, and Bleeper Bikes bicycle sharing schemes:

- 5no. DublinBikes stations are located within 5-minutes walk of the subject site. A further 8no. DublinBikes stations are located within 10-minutes walk.

- 2no. bases for the GoCar commercial car-sharing service are located within 10-minutes walk of the development site. A further 13no. GaCar bases are located within 15-minutes walk.
- 19no. bases for the Yuko commercial car-sharing service are located within 15-minutes walk of the development site.

The development site is also situated within the geofenced operating zones for the Bleeper Bikes commercial bicycle sharing schemes. Within these areas, these bicycles may be collected from or returned to any public bicycle parking stand.

Do-Nothing Scenario

Should the proposed development not take place, the subject site will remain in its current state and use. Vehicular traffic to and from the site will therefore remain unchanged.

Potential Impacts of the Proposed Development

Construction activities will temporarily increase traffic on the surrounding road network for an estimated period of 24-36 months, with work expected to commence in 2025. The primary access points for construction traffic and materials handling are anticipated to be via City Quay or Moss Street. It is estimated that between 50 and 100 people will be employed on-site at any given time during construction, with working hours expected to be from 7:00am to 7:00pm. It is estimated that a total of 27 arrivals and departures per day, with 54 arrivals between 7:00am and 8:00am and the same number of departures between 4:00pm and 5:00pm. Although no car parking will be provided on-site, bicycle/scooter parking facilities will be available.

During the operational phase the volumes of vehicular traffic associated with the development will reduce and consist only of Car Share spaces, art and cultural facilities trips, and services and delivery trips. The proposed development comprises of 9no. car parking spaces, of these, 2no. car parking spaces shall be allocated to the community centre element of the development, 6no. car parking spaces shall be allocated as car share spaces, and 1no. spaces shall be disabled accessible spaces and shall be allocated for the use of Disabled Person's Parking Permit holders. The proposed development's car parking is 56no. car parking spaces less than what is currently present on site.

It has been assumed that, in a worst-case scenario, all the car share clubs drivers, disabled accessible spaces driver, and community facility car drivers shall arrive and depart the development site within the AM and PM peak hour periods. Therefore, a total of 18no. trips (including arrivals and departures) shall be generated by the occupants and visitors of the overall development during either peak hour periods.

Mitigation and Monitoring Measures

Based on the traffic study carried out in this chapter, it can be concluded that the impact of the development on the local road network during both the demolition/construction and operational phases will be minimal.

However, a Construction Management Plan will be developed in consultation with Dublin City Council to ensure effective traffic management during construction. Additionally, key stakeholder engagement will be carried out to communicate site activities and programme expectations.

Residual Impacts of the Proposed Development

The proposed development includes intrinsic traffic generation mitigation measures as part of its design. These include a reduced car parking provision and significant high-quality bicycle parking. Additional construction phase and operational phase mitigation measures shall be implemented under the development's Travel Plan, Development Servicing Management Plan, and Construction Traffic Management Plan, as previously described.

Residual Construction Phase Impacts

- **Negative** in nature
- **Short-term** in duration
- Not significant

Residual Operational Phase Impacts

- **Negative** in nature
- **Long-term** in duration

- Not significant

4.9 MATERIAL ASSESTS - WASTE

Introduction

Byrne Environmental Consulting Ltd. have assessed the potential impacts that construction and operational wastes associated which the proposed development may have on the receiving environment, and how wastes generated shall be managed in accordance with the *National Waste Management Plan for a Circular Economy 2024-2030 (NWMPCE).*

A site-specific Resource and Waste Management Plan (RWMP) to manage waste generated during the demolition and construction phases of the proposed development has been prepared by Byrne Environmental Consulting Ltd in accordance with the Environmental Protection Agency's (EPA) document *Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction & Demolition Projects* (2021) and with regard to the construction and demolition waste Policies contained in the Dublin City Development Plan 2022-2028. A site-specific Operational Waste Management Plan (OWMP) has been prepared by Byrne Environmental Consulting Ltd and with regard to the construction and demolition waste Policies and technical guidance for commercial waste contained in the Dublin City Development Plan 2022-2028.

Methodology

The construction and operational waste management impact assessment has been prepared with regard to the following relevant legislative instruments, policies and best practice guidelines:

- Waste Management Acts 1996-2011
- European Union (Waste Directive) Regulations 2020 (SI No. 323/2020)
- The European Union Waste Framework Directive EU WFD (2008/98/EC)
- National Waste Management Plan for a Circular Economy 2024-2030Waste Management (Collection Permit) (Amendment) (No.2) Regulations 2023 (SI No. 104 of 2023)
- EPA (2022). Guidelines on the Information to be Contained in Environmental Impact Assessment Reports
- EPA (2020). A guide to by-products and submitting a notification under Article of the European Communities (Waste Directive) Regulations 2011 (S.I. No 126 of 2011)(Draft)
- EPA (2019). Guidance on Soil and Stone By-products in the context of article 27 of the European Communities (Waste Directive) Regulations 2011
- EPA (2021). Best Practice Guidelines for the preparation of resource and management plans for construction and demolition projects
- Dublin City Development Plan 2022-2028

Baseline Environment

The baseline environment is characterised by the nature of the existing site and the local and regional waste management infrastructure that serves the Dublin City area in which the site is located. The Zone of Influence (ZOI) associated with waste generated by the construction and operational phases of the development relate to the impact that the site will have on Regional licenced and permitted facilities that will accept waste for recycling, re-use and disposal. With regard to the locations of these facilities which are located within the greater Dublin Area and with regard to the various recycling facilities in the Dublin area, the Indaver Waste Incinerator in Ringsend and the hazardous waste acceptance facility (Integrated Waste Materials) in the Naul, Co. Dublin, the ZOI extends to approximately 30km.

Soils at the existing site have been analysed and were found to contain hazardous substances thus the soils shall be removed to an appropriately licenced waste facility.

There are a number of commercial waste management providers operating in the Dublin City area who will collect recyclable, non-recyclable, organic, batteries and lights, metals, WEEE from the proposed operational development.

Potential Impacts of the Proposed Project

Construction Phase

Construction wastes if not managed and segregated on-site will have the potential to be difficult to separate into different waste streams to allow for further processing, recovery, re-use or to be recycled in contravention to the principals of the Waste Hierarchy and the Circular Economy.

If the storage, removal and correct disposal of construction and demolition wastes are not managed, controlled and documented during the construction phase, this could result in unauthorised fly-tipping and littering which could impact on the receiving environment in terms of groundwaters, surface waters, ecology and human health. Furthermore, it would also prevent the implementation of the principals of the Waste Hierarchy and the Circular Economy which looks to recycle, re-use and re-purpose materials instead of disposing of them.

Operational Phase

If waste infrastructure and appropriate waste management systems are not integrated into the design and the operation of the proposed development, commercial waste will not be segregated at source or appropriately managed on-site and the operation of the development will not function in accordance with the waste management policies of Dublin City Council or comply with the waste reduction and recycling and re-use targets defined in the National Waste Management Plan for a Circular Economy 2024-2030.

Predicted Impacts (post-mitigation)

Construction Phase

The calculated construction waste tonnage has been calculated from the *Building Research Establishment Environmental Assessment Method (BREEAM)* and there will be 2122 tonnes of construction waste generated which shall be segregated on-site to maximise recycling, re-use and recovery options and thus minimise the volume for disposal

Operational Phase

The development shall be designed to provide sufficient and appropriate waste infrastructure and storage areas for the entire building. This will promote the appropriate segregation at source of commercial generated waste and thus reduce the potential for the generation of residual unrecyclable mixed waste streams.

Table 4.6 Summary of Likely Significant Effects with Mitigation

Likely Significant Effect	Quality	Significance	Duration	Type
Construction Phase Waste	Negative	Not-Significant	Short-Term	Residual
Operational Phase Waste	Negative	Not-Significant	Long-Term	Residual

4.10 MATERIAL ASSESTS - UTILITIES

Introduction

This chapter of the EIAR describes the existing surface water drainage, foul drainage, and water supply infrastructure serving the development site area, and provides an assessment of the proposed development's likely impact on these services during the project's construction and operational phases.

Assessment Methodology

Alongside the legislation, policy, and guidance outlined in Chapter 1, the following relevant legislation, policy, and guidance has informed the preparation of this Chapter:

- Environmental Protection Agency (EPA) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2022)
- Uisce Éireann (Irish Water) Code of Practice for Water Infrastructure (2020)
- Uisce Éireann (Irish Water) Code of Practice for Wastewater Infrastructure (2020)

The preparation of this chapter has also been informed by desktop studies of relevant data sources including:

- Uisce Éireann drainage and water supply records
- Greater Dublin Strategic Drainage Study (GDSDS) 2005

Baseline Scenario (Existing Conditions)

Uisce Éireann records indicate that two potable water supply connections currently serve the site, from an existing public watermain Moss Street. Uisce Éireann records also show existing watermains in City Quay and in Gloucester Street.

Uisce Éireann records indicate that the existing wastewater network surrounding the proposed development site is a combined system, handling both stormwater and foul water discharges. Aerial images and survey data indicate that the current surface water drainage flows freely into the combined public sewer system without any restriction.

Do-Nothing Scenario

Should the proposed development not take place, the subject site would remain in its existing condition and would not give cause for any changes to the surrounding infrastructure. While changes to infrastructure and to the demands placed on it will take place as a result of other external factors, these fall outside the scope of this assessment.

Potential Impacts of the Proposed Development

During construction, the proposed development has the potential to impact negatively on the surrounding drainage network, should any harmful materials be washed into this from the development site.

In its operational phase, the estimated post-development peak water demand for the proposed development is calculated as 6.586 l/s, and its estimated peak foul effluent generation is 4.742 l/s. Without consultation with Uisce Éireann, these have the potential for very slight adverse impacts on the capacities of the public water supply system and water treatment system.

In both construction and operational phases, inadequate management of stormwater runoff from the development site would have the potential to contribute to overloading the combined public drainage network.

Mitigation and Monitoring Measures

Construction works will be carried out in accordance with a Construction and Environmental Management Plan (CEMP) to be prepared and maintained by the appointed contractor. This will specify prevention and mitigation measures specifically to avoid harmful materials and other contaminants being washed into the surrounding drainage network from the development site. The CEMP will address:

- Secure soil movement and storage.
- Identification, recovery, and treatment of hazardous materials.
- Prevention of harmful material spills (oils/fuels, cementitious materials, silt/debris, etc.).

- Monitoring of ground movement and vibration.
- Management of rainwater/stormwater on site.

The appointed contractor will be required to secure a Trade Effluent Licence from Uisce Éireann, permitting the discharge of pumped groundwater to the public drainage network. The contractor will also be required to adhere to all conditions outlined in the discharge license to regulate the quality and flow rate of discharges.

In its operational phase, the development has very little potential to induce adverse effects on the surrounding drainage network, and no specific mitigation or monitoring measures are required beyond those integrated into the development design (e.g. oil separators within the foul drainage network).

To ensure that the proposed development does not place an excessive burden on either the public water supply system or the public wastewater treatment system, a Pre-Connection Enquiry has been lodged with Uisce Éireann. This will be followed by a design acceptance process and finally a connection agreement, at each stage of which Uisce Éireann may insist of any design changes necessary to ensure that its infrastructure can meet the development's demands.

To minimise the risk of the completed development contributing to overloading of the combined public drainage network during extreme rainfall events, stormwater discharge from the development in its operational phase will be restricted and held in on-site attenuation storage before being released at a controlled rate. The proposed development also includes Sustainable Drainage Systems (SuDS) measures that reduce the total runoff from the development.

The proposed development includes intrinsic design elements that will reduce its demand for potable water. These include low water usage sanitary appliances and the collection of rainwater for landscaping and maintenance purposes. Water meters shall be fitted to Uisce Éireann specifications, to permit monitoring of potable water consumption.

The use of low-water-usage sanitary appliances, as previously described, will reduce the volume of foul effluent generated during the operational phase of the development. To enhance the quality of the effluent discharged into the public foul drainage system, incidental runoff from underground basement car park areas, internal waste storage areas, and compactor units will be routed through grit/oil separators before being discharged from the development.

Residual Impacts of the Proposed Development

The implementation of the specified mitigation measures will ensure that the development's construction-phase residual impacts on surrounding infrastructure will be neutral in nature, short-term in duration, and imperceptible.
The implementation of the specified mitigation measures will ensure that the development's operational-phase residual impacts on surrounding infrastructure will be neutral in nature, long-term in duration, and imperceptible.

4.11 HERITAGE, TOWNSCAPE, LANDSCAPE AND VISUAL IMPACT ASSESSMENT

Introduction

This Heritage, Townscape, Landscape, and Visual Impact Assessment (HTLVIA) report provides a thorough study of the history, current townscape and landscape condition of the development site and its context. It identifies the heritage, townscape, landscape, and visual receptors potentially affected by the proposed development, and assesses their significance and the effects likely to arise on that significance in each case.

Assessment Methodology

In Chapter 6.0 (Vo.3), the quality of the design is assessed to be very high. In summary, it is likely to complement and enhance the character, legibility and connectivity of the City Quay area. It would do no harm to the settings of nearby heritage receptors likely to be affected, or to formal or incidental views. It is well proportioned and sensitively designed. The mix of uses, with community spaces combined with offices at the lower levels, and the proposed landscaping ensure an active and improved public realm. The proposed development would add interest to City and George's Quays' regenerated waterfront.

The assessments in Chapter 7.0 (Vol. 3) consider the effects of the proposed development during construction. These effects are found to be quite normal for the urban location and size of the proposal. On balance, these were found to range from very slight to substantial in quantum and to be adverse in nature, owing to the disturbance caused by cranes, scaffolding, the view of the incomplete buildings, site-deliveries, lighting, and service connections. These effects, however, would be temporary in nature.

Potential Impacts of the Proposed Development

Residual effects on townscape and landscape receptors are assessed in Chapter 8.0 (Vol 3.). The proposed development would have positive effects on townscape receptors, providing a high quality of public realm through active frontages. The positive effects would vary in significance from slight to substantial. There would be no negative effects on townscape receptors. The proposed development would be in accordance with policy for the area in that it would bring design of high quality and would respond to the local character, improving the riverside frontage along City and George's Quay. As a locally higher building in a site allocated by the Development Plan, it would meet the criteria set by policy, as described in Chapter 6.0 (Vol. 3).

Effects on built heritage receptors are assessed in Chapter 9.0 (Vol. 3). The proposed development is located partly within the Development Plan's Conservation Area. The improvements to the public realm and high quality of the architecture would enhance the significance of the Conservation Area at this point of the quays by providing a more appropriate scale and larger public spaces. The proposed development would form part of the wider setting of O'Connell Street Architectural Conservation Area (ACA), from where the ACA meets the River Liffey at the O'Connell Bridge, without dominating it. The proposed development would be visible at a distance from the southwest corner of Mountjoy Square ACA and not from any other positions in the ACA. It would not adversely affect views from both the ACAs.

The proposed development would not give rise to any harm to the significance of nearby protected structures. The setting of the Immaculate Heart of Mary Church and its Presbytery would be affected by the proposed development which while of contrasting scale is of high design quality. The character and special interest of the Custom House is preserved though the proximity of the development in its wider setting. The appreciation of the special interest and character remains visible and can be appreciated. The proposed development, when visible from protected structures, would form part of their existing wider setting of similar scaled buildings and create positive effects in combination with them. It would not diminish the significance of the protected structures.

The effect of the proposed development in townscape views is illustrated in Chapter 10.0 of the HTLVIA. They show that, when visible, it would give rise to an addition of quality and urban legibility. The form of the proposed development has been carefully tested in views in an iterative design process to ensure that it would not impact adversely on the local and wider environment.

The 26 views, with 2 nighttime variations, presented in Chapter 10.0 (Vol. 3) are the principal tool with which to illustrate how the proposed development would perform in its context and in views, in addition to the architects' drawings. The verified views projected from 26 viewpoints enable detailed assessment of the proposal and each includes a commentary on the effects and how people's perceptions of the view are likely to be affected. The

assessments conclude that the design would be of high quality, incorporating appropriate mitigation/enhancement through design, would be appropriate for the development site, and that its effects on the visual environment would be either neutral or positive. Of the views assessed in Chapter 10.0 (vol. 3), the proposed development would have substantial and positive effects in 4 views; moderate and positive effects in 12 views; slight and positive effects in 6 views; very slight and positive effect in 1 view; slight and neutral effects in 3 views and imperceptible effects in 2 views. There are no negative effects. The contribution of the proposed development to cumulative effects with the committed and emerging developments listed at Chapter 5.0 (Vol. 3) do not result in any negative effects.

Relevant planning policy and guidance, both national and local, is considered in relation to the proposed amended development. This covers matters concerning design, heritage, height and views. The proposals have been assessed against the policy and guidance requirements of the 2018 National Planning Framework, the 2018 Urban Development and Buildings Heights Guidelines, the DCC Development Plan 2022-2028, and the 2011 'Architectural Heritage Protection, Guidelines for Planning Authorities' prepared by the Department of Arts, Heritage and the Gaeltacht.

The assessments undertaken in this document indicate that the proposed development would provide townscape, landscape and visual benefits. It would not harm views, nor heritage receptors and their settings. It would contribute a high level of architectural design to the city's built fabric.

The tables in Chapter 11.0 (Vol. 3) summarise the residual effects of the proposed development during construction (Table 11.1); on townscape and landscape receptors (Table 11.2); on built heritage receptors Conservation Areas and Architectural Conservation Areas (Table 11.3); on built heritage receptors Protected Structures and NIAH (Table 11.4); and on visual receptors (Table 11.5). The overall significance ratings should not be converted into statistics, because it is crucial that the qualitative written assessment of each effect is taken into account by decision makers.

5.0 CUMULATIVE IMPACTS

The EIAR where relevant the EIAR also takes account of other development within the area. These impacts have been addressed in the relevant chapters of the EIAR.

To determine traffic impacts in Chapter 11 the traffic generated by the proposed development is combined with the baseline traffic generated by the traffic on the road network in the area. The potential traffic impacts from other developments were also considered in the assessment.

For the noise impact assessment in Chapter 9 the potential noise emissions arising from the proposed development during construction and operation are combined were assessed.

Each of the relevant specialists has considered the potential for cumulative impact in preparing their assessments. While there is the potential for negative impacts to occur during the construction stage of the scheme, with the implementation of the appropriate mitigation outlined in the EIAR, the residual cumulative impact is not considered to be significant.

There will be some short-term impacts during the construction phase as the pipes are laid, particularly in respect of traffic management with regards to sensitive receptors. This may cause local short-term inconvenience and disturbance to residents and business in the vicinity of the works. However, the works would normally be undertaken in sections on a phased/rolling programme so that the number of persons experiencing local inconveniences at any one time is kept to a minimum.

6.0 INTERACTIONS BETWEEN ENVIRONMENTAL FACTORS

Chapter 14 of the EIAR (Volume II) provides detail on the interaction and interdependencies in the existing environment. John Spain Associates in preparing and co-ordinating this EIAR ensured that each of the specialist consultants liaised with each other and dealt with the likely interactions between effects predicted as a result of the proposed development during the preparation of the proposals for the subject site and this ensures that mitigation measures are incorporated into the design process. This approach is considered to meet with the requirements of Part X of the Planning and Development Act 2000, as amended, and Part 10, and schedules 5, 6 and 7 of the Planning and Development Regulations 2001-2018. The detail in relation to interactions between environmental factors is covered in each chapter of the EIAR.

In addition to the individual assessments of impacts on human beings, fauna and flora, soil, water, air, climate factors, the landscape and material assets, including archaeological and cultural heritage, the inter-relationships between these factors were also taken into account as part of the EIAR scoping and impact assessment. Where the potential exists for interaction between two or more environmental topics, the relevant specialists have taken these potential interactions into account when making their assessment and, where possible, complementary mitigation measures have been proposed. These are set out in Chapter 14 of the EIAR (Volume II).

The relevant consultants liaised with each other and the project architects, engineers and landscape architects where necessary to review the proposed scheme and incorporate suitable mitigation measures where necessary. As demonstrated throughout this EIAR, most inter-relationships are neutral in impact when the mitigation measures proposed are incorporated into the design, construction or operation of the proposed development.

Table 6.1 – Matrix of Summary of interactions between the environmental factors

Interaction	Population & Human Health	Land and Soils	Water and Hydrology	Biodiversity	Air Quality and Climate	Noise and Vibration	Archaeology and Cultural Heritage	Traffic	MA- Waste	MA-Utilities	Landscape
Population & Human Health		×	×	×	✓	✓	×	✓	✓	×	✓
Land, Soils, Geology and Hydrogeology	×		✓	✓	×	×	✓	×	✓	✓	×
Water and Hydrology	×	✓		✓	×	×	×	×	✓	✓	×
Biodiversity	×	✓	✓		✓	✓	×	×	×	×	×
Air Quality and Climate	✓	×	×	✓		×	×	✓	×	×	×
Noise and Vibration	✓	×	×	✓	×		×	✓	×	×	×
Archaeology and Cultural Heritage	×	✓	×	×	×	×		×	×	×	✓
Traffic	✓	×	×	×	✓	✓	×		×	×	×
MA- Waste	✓	✓	✓	×	×	×	×	✓		×	×
MA-Utilities	×	✓	✓	×	×	×	×	×	×		×
Landscape	✓	×	×	×	×	×	✓	×	×	×	

✓ Interaction × No Interactions

7.0 SUMMARY OF EIA MITIGATION AND MONITORING MEASURES

Chapter 15 of the EIAR (Volume II) provides a summary of all the mitigation and monitoring measures proposed throughout the EIAR document for ease of reference for Dublin City Council and all other interested parties.