

Volume 1:
Environmental Impact
Assessment Report

To accompany a planning application for

Office and Hotel Development

At

DCC PLAN NO: 4610/22
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Heuston South Quarter
St. John's Road West, Dublin 8

Submitted on Behalf of

HPREF HSQ Investments Ltd
32 Molesworth Street, Dublin 2

JULY 2022

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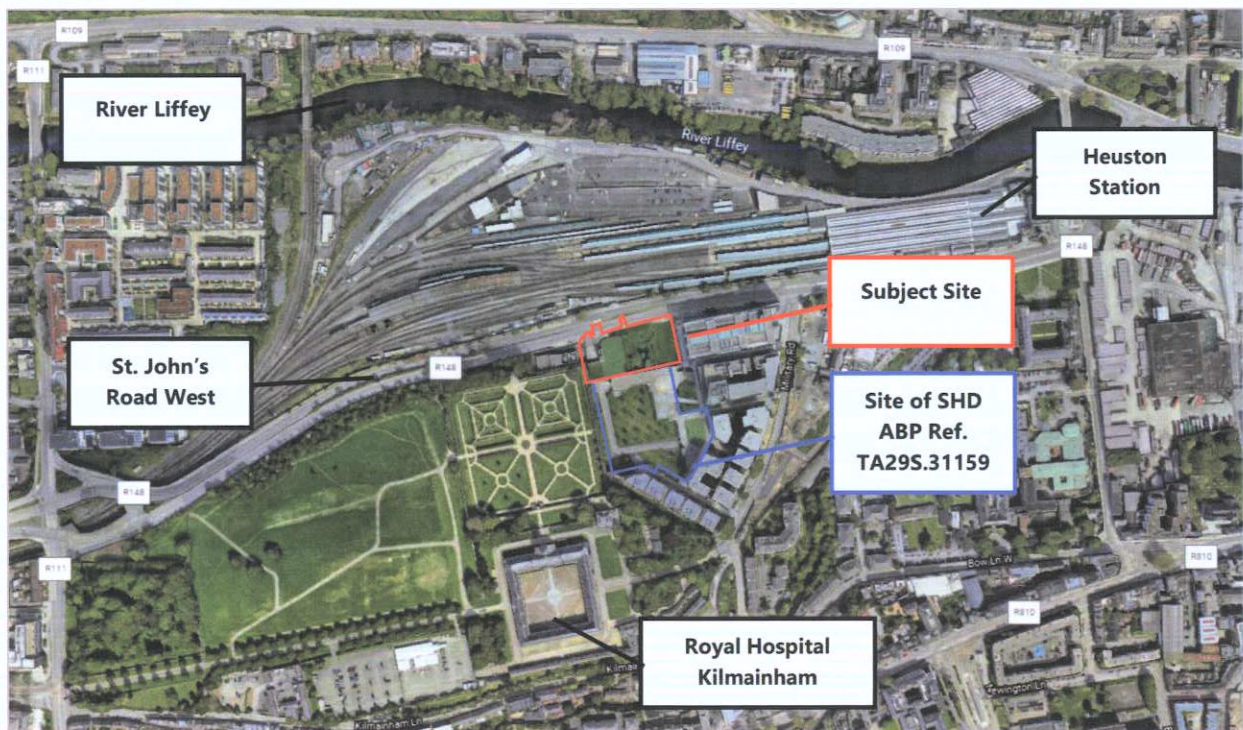
1 INTRODUCTION

This Environmental Impact Assessment Report (EIAR) accompanies a planning application that is submitted on behalf of HPREF HSQ Investments Ltd. for a commercial development, and associated site works and infrastructure provision on part of the larger Heuston South Quarter development site that is bound by St. John's Road West (to the north), Military Road (to the east), and the Royal Hospital Kilmainham (RHK) and its attended grounds to the west.

This proposal comprises demolition and site clearance works and construction of a mixed use commercial development comprising of a hotel (238 no. bedrooms) and an office block providing a cumulative Gross Floor Area (GFA) of 32,602 sqm, inclusive of basement area, landscaped open spaces and supporting utilities and infrastructure (referred to as "the Proposed Development").

This EIAR presents an evaluation of the likely significant environmental impacts and appropriate mitigation and monitoring measures associated with the construction and operation of the proposed development. It is the document which HPREF HSQ Investments Limited is required to submit to the Planning Authority to inform the Authority's Environmental Impact Assessment (EIA) of the Proposed Development. This EIAR has been completed in order to comply with and exceed the requirements of all relevant legislation and guidance.

Figure 1.1 Site Location in Context (source: google maps)



1.1 Nature & Extent of Development Proposals

HPREF HSQ Investments Ltd. is seeking planning permission for a commercial development on a site of 0.62 ha, comprising, in summary:

- Site clearance and localised demolitions to remove part of the podium and Basement Level -1 reinforced concrete slabs at the interface of the proposed hotel and office blocks, together with the incorporation of part of the existing basement level structure extending to approximately 4,228 sq.m (GFA).

- The proposed basement will be integrated within the existing basement levels serving the wider HSQ development and will be accessed from the existing vehicular ramped accesses/egresses onto/off St. John's Road West and Military Road to the north and east, respectively. The proposed basement area is split into two areas to provide a dedicated Hotel Basement area of approximately 2,132 sq.m (GFA) and an Office basement area of 2,096 sq.m (GFA).
- The construction of a 5-storey hotel (over lower ground and basement level). At basement level provision is made for 24 no. car parking spaces; 2 no. motorcycle spaces together with plant and storage rooms. A waste storage area with dedicated loading bay / staging area is provided along with dedicated set-down area for deliveries. A dual-purpose service bay is also provided at basement level with modifications to existing line markings to the basement parking area to accommodate the development. At Lower Ground floor level provision is made for 14 no. Bedrooms; Conference Room; Kitchen and Staff facilities and Changing Rooms / WCs plus ancillary Gym. This floor is arranged around an internal courtyard space. Provision is made at Podium level for 19 no. Bedrooms; Dining Area and Foyer with entrance at the South-Eastern corner of the building onto a new laneway separating the proposed hotel and office building. Provision is made at the south-western corner at podium level for an ESB sub-station / switch room and 15 no Sheffield type bicycle stands are provided for the hotel and the retail / café unit, providing storage space for 30 no. bicycles. A total of 205 no. bedrooms are provided at the upper levels (above podium level). The top floor of the hotel (4th floor) has a splayed setback to provide a west facing roof terrace. An ancillary hotel bar (118 sq.m) opens onto this roof terrace.
- The construction of a 12-storey (over lower ground and basement levels) office building to the east of the proposed hotel building to provide 19,474 sq.m of office floorspace (GFA) from lower ground floor level and above. Provision is made at basement level for 30 no. car parking spaces; 2 motorcycle spaces and 120 no. bicycle storage spaces together with plant and storage rooms. Provision is made for a further 196 no. bicycle storage spaces at Lower Ground floor level plus changing rooms (including showers). At podium level 2 no. ESB sub-stations and switch rooms are proposed. The foyer and entrance is provided at the southern end of the building at Podium level along with a Retail/Café unit of 208 sq.m at the South-Western corner of the building. The building is setback at 4th floor level to provide a west facing roof terrace. Splayed setbacks to the southern and eastern elevations at the 11th floor level forms a roof terrace that wraps around the South-Eastern corner of the building. Plant is provided at rooftop level that is enclosed by curved louvred screens and PV panels.
- Works proposed along the St John's Road West frontage include the omission of the existing left-turn filter lane to the vehicular ramped access to the HSQ development and re-configuration of the pedestrian crossings at the existing junction together with the re-configuration of the existing pedestrian crossing over the westbound lanes of St. John's Road West leading to an existing pedestrian refuge island and re-alignment of the existing footpath along the site frontage onto St John's Road West to tie into the reconfigured junction arrangement.
- Drainage works proposed include the provision of 2 no. below basement surface water attenuation tanks with duty/stand-by arrangement pump sumps and associated valve chambers, and 2 no. below basement foul pump sumps with duty/stand-by arrangement and 24hr emergency storage and associated valve chambers. New foul drainage and stormwater drainage connections are proposed to existing foul and storm sewers in St. John's Road West with

associated site works.

- Hard and soft landscaping works are proposed at lower ground level along St John's Road West and at podium level to provide for the extension and completion of the public plaza to the south of the proposed Office Block and the provision of a new pedestrian laneway connecting St John's Road West with the public plaza at podium level.

A detailed description of the development is included in Chapter 3.

HPREF HSQ Investments Ltd. intends to complete the undeveloped part of the larger Heuston South Quarter (HSQ) development site through the implementation of two separate planning applications. The first application comprises a residential development of 359 no. Build to Rent apartments that was permitted by An Bord Pleanála 31 March 2022 (ABP Ref. TA29S.311591). This current application comprises the second application for the balance of the undeveloped area at HSQ.

While submitted as two separate applications, the proposed and recently permitted developments form part of a single development strategy for the site and are considered cumulatively for purposes of environmental impact assessment. Each application is accompanied by a standalone EIAR that references the other proposed development as cumulative development.

1.2 Need for an Environmental Impact Assessment Report

The subject site, and the adjoining residential site, formed part of the larger HSQ development permitted under ABP Ref. PL29S.206528 (the 'parent permission'). That 'parent permission' application was subject to EIA and was accompanied by an Environmental Impact Statement (EIS) that related to the overall HSQ site that extended to approximately 3.9 ha.

The parent permission was subsequently amended by a permission granted on 26 May 2005, under DCC Planning Ref. 2218/05, which in turn was further amended on an incremental basis. The following development has been completed:

- Block 3/4 is situated at the corner of St. John's Road West and Military Road and is occupied by Eir - formerly Eircom). This development comprises in the region of 25,000 sq.m of Commercial floorspace
- Blocks 7A and 7B to the east of the application site comprise a mixed-use development of Commercial floorspace (approximately 10,750 and Residential (93 Units).
- Blocks 9a to 9h to the east of the application site comprise a mixed-use development of approximately 4,250 sq.m Commercial floorspace and 173 Residential units; and
- Blocks 8 / 10 situated to the south of the application site comprise a mixed-use development of approximately 2,150 sq.m of commercial development (including an existing Childcare facility and 79 residential units).

The completed HSQ development comprises of approximately 80,000 sq.m (GFA) commercial floorspace, and 345 apartments in Block 8 (Telford), Block 10 (Hibernia), Block 7b (Dargan), Block 9d-h (Sancton Wood) and Block 9a-c (Kestrel).

The proposed development represents an extension of a development that comes within the following Classes of development specified in Part 2 of Schedule 5 of the Planning and Development Regulations, 2001 (the 2001 Regulations):

- Class 10(b)(iv): Urban development which would involve an area greater than 2 hectares in the case of a business district.

The proposed site area does not, on its own, exceed the Class 10 thresholds. However, the area of the site and the SHD residential development, combined with the completed development, exceeds the Class 10(b)(iv) area threshold for an '*urban development which would involve an area greater than 2 hectares in the case of a business district*'.

Accordingly, this application is accompanied by an EIAR.

1.3 Scoping of EIAR

HPREF HSQ Investments Limited is committed to ensuring that the Proposed Development is undertaken in an environmentally responsible manner.

The proposed development has been subject of pre-planning meetings with various Departments of Dublin City Council. Informal scoping to identify the issues that are likely to be most important during the Environmental Impact Assessment of the proposed development has been carried out. This approach is consistent with the Environmental Protection Agency's '*Guidelines on the information to be contained in Environmental Impact Assessment Reports*' which provides that formal scoping, as per section 173(2)(a) of the Act, is not mandatory.

Where non-statutory consultation with public bodies and others has taken place, these have been described by the competent experts in chapters 5 to 16.

This EIAR addresses all of the issues listed in Schedule 6 of the Planning and Development Regulations 2001 (SI No. 600 of 2001) (as amended) (the **PDRs**), having regard to the requirements of Article 5(1) and Annex IV of Directive 2011/92/EU as amended by Directive 2014/52/EU (the **EIA Directive**).

- Population & Human Health
- Biodiversity, with particular attention to species and habitats protected under the Habitats Directive and the Birds Directive
- Soil, land, and Geology
- Water
- Air, Dust and Climatic Factors
- Noise and Vibration
- Material Asset: Traffic & Transport
- Material Asset: Water Supply, Drainage & Utilities
- Cultural Heritage: Archaeology Heritage
- Cultural Heritage: Architectural Heritage
- Landscape & Visual Impact Assessment
- The interaction between the factors mentioned above

As referred to in section 1.4.4 below, the evaluation in this EIAR of the effects on the factors listed above shall include the expected effects deriving from the vulnerability of the project to risks of major accidents and/ or disasters that are relevant to the project concerned.

The scoping process undertaken has directed what information should be contained in the EIAR and the most appropriate mechanisms to gather and assess that information to ensure that all potential impacts

are adequately identified and appropriately mitigated where necessary.

In accordance with Section 3.3.4 'Key Scoping Criteria' of EPA Guidelines, the prescribed environmental factors were assessed to identify core constraints and sensitivities. It was decided that no topics or headings of the prescribed environmental factors could be scoped out of the EIAR due to the urban location of the site, the historical context of this area and the planning history of the wider scheme.

1.4 Structure & Content of EIAR

This EIAR complies with the requirements of the following legislation:

- The Planning and Development (Housing) and Residential Tenancies Act 2016 (as amended).
- The EIA Directive.
- European Communities (Environmental Impact Assessment) Regulations, 1989 (S.I. No. 349 of 1989), as amended
- Planning and Development Regulations 2001 (SI No. 600 of 2001), as amended.
- European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018)

The EIAR contains all of the information specified in Schedule 6 of the PDRs as amended. Included under a separate cover is the Non-Technical Summary of this EIAR, which summarises the findings of the EIAR free from technical language and terminology. The preparation of the EIAR has been informed by the Environmental Protection Agency's Guidelines On The Information To Be Contained In Environmental Impact Assessment Reports 2002, and Advice Notes On Current Practice In The Preparation Of Environmental Impact Assessment Reports (September 2003).

The content of this EIAR has had regard to the 'Guidelines on the information to be contained in Environmental Impact Assessment Reports' (May 2022) prepared by the EPA and the Consultation Paper on Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licencing Systems.

The preparation of the EIAR has also been informed by the European Commission's Environmental Impact Assessment of Projects Guidance on the preparation of the Environmental Impact Assessment Report 2017, and the Department of Housing, Planning and Local Government (DoECLG) Guidelines for Planning Authorities & An Bord Pleanála on carrying out Environmental Impact Assessment, August 2018.

The EIAR has been prepared in the 'Grouped Format' structure, which examines each aspect of the environment as a separate section referring to the existing environment, the proposed development, likely impacts, and proposed mitigation measures. The EIAR has been systematically organised to provide the following information:

- Section 2 A description of the existing environment.
- Section 3 A description of the project.
- Section 4 Provides a Consideration of Alternatives
- Sections 5-15

- Identification of likely significant adverse impacts during conduction and operation of the proposed development.
- A description of the measures envisaged to avoid, reduce and, if possible, remedy significant adverse impacts.
- Section 16 An assessment of the interactions and interrelationships of the different environmental factors / impacts that may occur as a result of the proposed development.
- Section 17 A summary of all mitigation measures forming part of the proposed development.

Impacts arising from the existence of the proposed development, the use of natural resources, the emission of pollutants, the creation of nuisances and the elimination of waste are described as direct, indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative as appropriate.

An assessment of the environmental sensitivity of geographical areas likely to be affected, as set out in Schedule 7 of SI No. 600 of 2001, has also been undertaken. In this regard, particular consideration has been given to the cumulative impact of the development given its proximity to other developments and future works at the wider site. No part of the site is situated in or adjacent to areas which would be defined or designated as wetlands; coastal zones; mountain and forest areas; nature reserves and parks; areas classified or protected under legislation, areas in which the environmental quality standards laid down in the legislation of the EU have already been exceeded; or densely populated areas.

1.4.1 Construction Phase Overview

Construction of the proposed development is expected to take place over 36 to 48 months, commencing in Q4 2023. A detailed construction plan and schedule has been developed to ensure that the construction phasing allows for maximum efficiency while minimising the potential for environmental impact and this plan and schedule is annexed to this EIAR at Appendix 6A. A detailed description of the construction phase of the proposed development is presented in Chapters 5 - 15 of this EIAR.

1.4.2 Operational Phase

During the operational phase of the Proposed Development the scheme will accommodate a working population in the office and hotel, and a temporary resident population in the hotel. The scheme will be maintained and managed by a private management company to ensure the safety and security of the development and those working there and using the hotel facilities, and the wider HSQ development.

1.4.3 Land

'Land' has been introduced as a prescribed environmental factor by Directive 2014/52/EU amending the EIA Directive. Recital 9 of the Directive outlines the reasons for its inclusion and references *'the need to address the unsustainable increase of settlement areas over time ('land take')*. Recital 9 goes on to state that *'public and private projects should therefore consider and limit their impact on land, particularly as regards land take, and on soil, including as regards organic matter, erosion, compaction and sealing: appropriate land use plans and policies at national, regional and local level are also relevant in this regard'*.

The proposed development provides for commercial development and associated works on the site of the former permitted and commenced but non-completed Blocks 1 and 2 that forms part of the wider HSQ mixed-use development precinct. The subject lands are bounded to the north by St. John's Road West – a 4-lane road and to the east and west by the completed Block 3/4 that is situated at the corner of St. John's Road West and Military Road (occupied by Eir - formerly Eircom) and Blocks 7A, 7B and 9A-

H to the south thereof fronting Military Road to the east and comprising a mix of commercial and residential development. Adjoining the site to the south are the completed Blocks 8 / 10 that also comprise mixed use commercial and residential development. Immediately to the west of the site is the formal gardens of the Royal Hospital Kilmainham (RHK).

The subject site is situated at the western end of Dublin's inner city, south-west of Heuston Station and is identified as forming part of a Strategic Development and Regeneration Area (SDRA7), as designated in the Dublin City Development Plan, 2016-2022.

Matters relating to impacts on soil have been considered as relevant in the context of Land, Soil and Geology (Chapter 7) and Water: Hydrogeology and Hydrology (Chapter 8) of this EIAR.

1.4.4 Vulnerability to Risks of Major Accidents and/or Disaster

Annex IV of the Directive 2011/92/EU as amended by Directive 2014/52/EU refers to both a proposal's potential to cause accidents/disasters and to the vulnerability of the proposal to accidents/disasters. These risks can be from both man-made and natural disasters and there is a requirement to build resilience into projects and to invest in risk prevention. Principal risks that have been evaluated include; accidental spillages, ground instability, collapse of existing structures, landslides, flooding, major traffic accidents, and work-place construction accidents.

In respect of man-made accidents and disasters, the site is not located within the consultation distance of any Tier 1 or Tier 2 SEVESO III site. Road traffic information from the Road Safety Authority indicates that between 2005 and 2016 there has been one serious accident and twelve minor accidents in the vicinity of the site on St. John's Road West and Military Road.

Regarding natural disasters, the site is not located within an area prone to earthquakes or volcanic eruptions. The site does not contain any coastal or fluvial flood risk areas, as per the CFRAM flood maps. The water infrastructure serving the development has been designed to accommodate a 1 in 100 flooding event.

The identification and assessment of risks of accidents and/or disasters is provided in the respective Chapters of this Report for each of the relevant impacts/factors the subject matters to these chapters. No other major accidents/disaster risks (other than those which are identified in Chapter 6 - 14) arise.

1.4.5 Climate Change

The European Commission in its 'Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment' document (2013) states that Climate refers to 'average weather', typically calculated over the 30-year period, in respect of mean and variability in aspects such as temperature, precipitation and wind. The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as;

"..a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods".

Annex IV of the EIA Directive refers to Climate Change with respect to Climate Change Mitigation and Climate Change Adaptation.

In respect of Climate Change Mitigation, it is noted that most projects will have an impact on greenhouse gas emissions both directly and indirectly through the construction and operational phases. For commercial developments such as the proposed development direct emissions include those generated

in the production of construction materials or the on-site consumption of fossil fuels for heating and for energy use. Indirect emissions include those related with transportation and travel to and from the site by future users.

Climate adaptation refers to the impacts that climate change may have on the project itself and the adaptations that need to be taking into account to allow the scheme to adapt, for example the impact of the proposed development on increased flooding risk due to climate change and the adaptations made to the scheme to account for flooding and sea level rises.

The impact of the proposed development on Climate Change is specifically assessed in Chapter 9 'Air, Dust and Climate' of this EIAR, which was prepared by TMS Environmental.

1.5 Methodology for Identification of Impacts

The identification and description of significant effects is central to Environmental Impact Assessment and therefore, forms a fundamental part of this EIAR. In each of the Chapters 5 to 15, inclusive, the competent experts have assessed the potential impacts of the proposed development with reference to the baseline scenario, and relevant Guidelines and standards as applicable. Where impacts are identified during the construction phase, operational phase or cumulatively, these are described using the terminology described in the EPA's 'Guidelines on the information to be contained in Environmental Impact Assessment Reports' (May 2022) summarised below in Section 1.5.1. Where significant negative impacts are identified, the competent experts go on to describe mitigation and preventative measures.

Table 1.5.1 Summary Of Table 3.3 of the EPA Guidelines

Type	Description
<p>Quality of Effects</p> <p>It is important to inform the non-specialist reader whether an effect is positive, negative or neutral.</p>	<p>Positive Effects: A change which improves the quality of the environment (for example, by increasing species diversity; or the improving reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).</p> <p>Neutral Effects: No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.</p> <p>Negative/adverse Effects: A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property or by causing nuisance).</p>
<p>Describing the Significance of Effects</p> <p>'Significance' is a concept that can have different meanings for different topics – in the absence of specific definitions for different topics the following definitions</p>	<p>Imperceptible: An effect capable of measurement but without significant consequences.</p> <p>Not significant: An effect which causes noticeable changes in the character of the environment but without significant consequences.</p>

Type	Description
<p>may be useful.</p>	<p>Slight Effects: An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.</p> <p>Moderate Effects: An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.</p> <p>Significant Effects: An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.</p> <p>Very Significant: An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.</p> <p>Profound Effects: An effect which obliterates sensitive characteristics</p>
<p>Describing the Extent and Context of Effects</p> <p>Context can affect the perception of significance. It is important to establish if the effect is unique or, perhaps, commonly or increasingly experienced.</p>	<p>Extent: Describe the size of the area, the number of sites and the proportion of a population affected by an effect.</p> <p>Context: Describe whether the extent, duration or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)</p>
<p>Describing the Probability of Effects</p> <p>Descriptions of effects should establish how likely it is that the predicted effects will occur so that the CA can take a view of the balance of risk over advantage when making a decision.</p>	<p>Likely Effects: The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.</p> <p>Unlikely Effects: The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.</p>
<p>Describing the Duration and Frequency of Effects</p> <p>‘Duration’ is a concept that can have different meanings for different topics – in the absence of specific definitions for different topics the following definitions may be useful.</p>	<p>Momentary Effects: Effects lasting from seconds to minutes</p> <p>Brief Effects: Effects lasting less than a day</p> <p>Temporary Effects: Effects lasting less than a year</p> <p>Short-term Effects: Effects lasting one to seven years.</p> <p>Medium-term Effects: Effects lasting seven to fifteen years.</p> <p>Long-term Effects: Effects lasting fifteen to sixty years.</p> <p>Permanent Effects: Effects lasting over sixty years</p>

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

1.5.1 Cumulative Impacts

The EIA Directive and implementing legislation requires that the EIAR considers 'cumulative impacts'. Section 3.7.3 of the EPA Guidelines (May 2022) states:

'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'.

Cumulative impacts refer to impacts that result from incremental changes caused by other past, present and approved developments, and as far as is practicable from reasonably foreseeable development(s), together with the project.

Appendix 1A of this Report lists existing and permitted development in the immediate vicinity of the subject site.

Unless otherwise stated, the assessment of cumulative impacts in Chapters 5 to 15 of this EIAR assess and identify the impacts of the Proposed Development cumulatively with the permitted SHD residential development to the south of the site, and the permitted and existing development in the wider Heuston South Quarter development listed in Appendix 1A.

The proposed development comprises commercial development within the Heuston Station and Environs Strategic Development and Regeneration Zone (SDRA 7), designated for development within the Dublin City Development Plan 2016–2022. This Plan was the subject of Strategic Environmental Assessment, and the SEA document forms Volume 5 of the Plan. Section 8.3 'Cumulative Impacts' of the SEA states that, in respect of a Development Plan, cumulative effects can occur from combined impacts from policies and proposals on specific areas or sensitive receptors. The SEA identifies two types of cumulative effect:

- Potential intra-plan cumulative effects: these would arise from the interactions between different types of potential environmental effects resulting from a plan or programme etc. The sensitivity mapping as set out in section
- Potential inter-plan cumulative effects, those arising when the effects of the implementation of one plan occur in combination with those of another plan/ programme, etc.

Section 9.2.1 'Mitigation Through Consideration of Alternatives' indicates that the assessment of three growth scenarios, and the choice of the most appropriate growth outcome, mitigated against potential significant impacts. In adopting a growth scenario based on the targeted growth around identified growth centres, including SDRAs such as the subject site, significant impacts including cumulative impacts were mitigated against.

Future development in this locality will be subject to separate planning application(s) and detailed assessment by the Planning Authority of likely impacts on the environment, and consistency with the relevant statutory land use plans in effect at the time of the determination of those applications. The proposed development has been designed to be consistent with the Plan, and relevant ministerial Guidelines. Accordingly, the proposed development is responsive to potential cumulative, future development of the wider area.

1.6 Difficulties in Compiling the Specified Information

No major difficulties were encountered in compiling the specified information as set out in Schedule 6 of SI 600 of 2001, as amended. Any relevant difficulties encountered have been identified in the respective sections of the EIAR, as appropriate.

1.7 Specialist Contributors

The EIAR has been prepared and co-ordinated by Declan Brassil & Co. Specialist Inputs have been provided by the following Consultants:

Table 1.7.1 Specialist Inputs

Specialist Consultants	Aspect of Environment
Reddy Architecture and Urbanism (Project Architects) Mr. Eoghan O' Brien Mr. Rory Murphy	Consideration of Alternatives Description of Development
Biosphere Environmental Services Dr. Brian Madden	Biodiversity
TMS Environment Ltd. Dr. Imelda Shanahan	Air, Dust and Climatic Factors Noise and Vibration
Cronin Sutton Consulting Engineers Mr Robert Fitzmaurice Mr. Gordon Finn Mr. Darren Mullins	Description of Development Material Assets: Traffic and Transport Material Assets: Water Supply, Drainage and Utilities Lands, Soil and Geology Water
Archaeological Projects Ltd. Ms. Claire Walsh	Cultural Heritage: Archaeology
RMA Architects Mr Brendan Money	Cultural Heritage: Architectural Heritage
Rob Goodbody	Cultural Heritage: Architectural Heritage
Doyle & O'Troithigh Mr. Daithi O'Troithigh Mr. Dave O'Sullivan	Landscape and Visual Impact Assessment
Future Analytics Mr. Stephen M. Purcel	Population & Human Health
IN2 Engineering	Description of Development

Mr. James Redmond	Material Assets: Water Supply, Drainage and Utilities
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All experts involved in the preparation of environmental impact assessment reports are qualified and competent in their respective aspect of the environment. Details of qualifications, expertise and experience of each of the contributing specialists has been provided in Table 1.7.2 below.

Table 1.7.2 Competency of Experts

Expert	Company	Aspect of the Environment	Qualifications	Summary of Professional Expertise
Declan Brassil	Declan Brassil & Co.	EIAR Co-Ordination & Compilation Introduction Description of Development Interactions Mitigation Measures	BA (Hons) from NUI Maynooth. (1990) Masters of Regional and Urban Planning from University College Dublin. (1992) Member of the Irish Planning Institute.	Declan Brassil is a Chartered Town Planner with over 20 years' experience and is the Principal in Declan Brassil & Company. During this time, he has worked in the private sector and as an Inspector with An Bord Pleanála. Declan has extensive experience in leading multi-disciplinary teams in the preparation of Environmental Impact Statements, Local Area Plans, Masterplans and planning applications for large-scale mixed-use developments throughout the country. He has also advised on statutory planning processes and policy development and analysis on behalf of state agencies and private clients and acted as planning expert witness at oral hearings
Robert Fitzmaurice	Cronin Sutton Consulting Engineers	Material Assets: Utilities (Water Infrastructure)	BEng (Hons) in Civil & environmental Engineering from University of Bradford (1990) Post Graduate Diploma in Environmental Engineering from Trinity College Dublin (2006) Master's Degree in Industrial Engineering	Robert is a Chartered Engineering with Engineers Ireland and has been practicing as a consulting engineer for over twenty years. Robert holds an undergraduate degree in Civil & Environmental Engineering, a postgraduate Diploma in Environmental Engineering, an advanced Diploma in Planning & Environmental Law and has a master's degree in Industrial Engineering.

Expert	Company	Aspect of the Environment	Qualifications	Summary of Professional Expertise
			<p>from UCD (2009)</p> <p>Advance Diploma in Planning & Environmental Law from Kings Inn (2019)</p>	
Gordon Finn	Cronin Sutton Consulting Engineers	Material Assets: Traffic and Transport	<p>BA/BAI and MAI degree in Civil, Structural, and Environmental Engineering from the University of Dublin. (2016)</p> <p>Member of the Institute of Engineers of Ireland</p>	<p>Gordon holds BA/BAI and MAI degrees in Civil, Structural, and Environmental Engineering from the University of Dublin, and is a member of the Institute of Engineers of Ireland. His relevant professional experience includes the preparation of Traffic and Transport Assessments, Travel Plans, and Environmental Impact Assessment Report chapters for a broad range of residential, commercial, and institutional developments.</p>
Rob Goodbody	Rob Goodbody and Robin Mandal Architects	Cultural Heritage: Architectural Heritage	<p>BA(mod) in Historical Geography from University of Dublin, Trinity College (1974)</p> <p>Post Graduate Diploma in Environmental Planning from the Chelmer Institute (1979)</p> <p>Local History MA from Maynooth University.</p>	<p>Rob Goodbody has published widely in the field of history and architectural history. He has over 40 years experience in planning, architectural conservation consultancy and historical research. He has provided conservation consultancy services for numerous residential and commercial developments.</p>

Expert	Company	Aspect of the Environment	Qualifications	Summary of Professional Expertise
			<p>(2002)</p> <p>MA Urban and Building Conservation from University College Dublin (2005)</p> <p>Post-grad Diploma in Applied Building Repair and Conservation from Trinity College Dublin (2007)</p>	
<p>Dr. Brian Madden</p>	<p>Biosphere Environmental Services</p>	<p>Biodiversity AA Screening</p>	<p>BA Mod. (Hons.) in Natural Sciences from University of Dublin. (1984)</p> <p>Ph.D. (ecology) from National University of Ireland. (1990)</p> <p>Member of Chartered Institute of Ecology & Environmental Management.</p>	<p>Dr. Brian Madden, principal ecologist with Biosphere Environmental Services (BES), has over 30 years' experience as a professional ecologist. His Doctorate research was in ecosystem processes in raised bogs, after which he was a Research Fellow in Trinity College, Dublin working on water quality issues in Dublin Bay. Brian has particular expertise in habitats and flora and is also an expert ornithologist. The consultancy BES specialises in energy related projects (wind farms, power lines etc) and has carried out research on the impacts of wind turbines on hen harrier in Ireland. Regular clients include Bord na Móna, Coillte, ESB, the IDA, and the National Parks and Wildlife Service. Brian has acted as expert witness at oral hearings and has been in attendance at various cases in the High Court.</p>

Expert	Company	Aspect of the Environment	Qualifications	Summary of Professional Expertise
Mr. Darren Mullins	Cronin Sutton Consulting Engineers	Land, Soils, and Geology	<p>BSc in Structural Engineering with Architecture from UCD (2013)</p> <p>ME in Structural Engineering with Architecture from UCD (2015)</p> <p>Chartered Engineer with Institute of Engineers of Ireland</p>	<p>Darren holds Bachelor of Science and Masters of Engineering degrees in Structural Engineering with Architecture from University College Dublin (UCD) and is a Chartered member of the Institute of Engineers of Ireland. Darren has 7 years' experience as a Consulting Engineer, working primarily in the design of commercial and residential developments. His experience includes the design of low-, mid- and high-rise concrete frame and steel frame structures, and the design of deep basements on varying foundation systems.</p>
Rory Murphy	RAU	Project Architect Consideration of Alternatives	<p>BA Architecture from the Dublin Institute of Technology (1988)</p> <p>Fellow RIAI</p>	<p>Over a 30-year career, Rory Murphy has worked in the construction industry both in Ireland and around the world. He has been involved in a wide range of projects in the retail, commercial, residential and hospitality sectors as well as completing numerous private commissions.</p> <p>Rory graduated from the School of Architecture in Dublin Institute of Technology in 1988. In his early career he worked with Denys Lasdun in London and Jean Nouvel in Paris before returning to Ireland.</p> <p>He is a fellow of the RIAI since 2016 and is an accredited Conservation Architect. Rory has also been a Studio Lecturer in Architecture at the School of Architecture at DIT Bolton Street.</p>

Expert	Company	Aspect of the Environment	Qualifications	Summary of Professional Expertise
Brendan Money	Robin Mandal Architects	Cultural Heritage: Architectural Heritage	<p>BA (mod) English Literature from University of Dublin, Trinity College (2000).</p> <p>M. Arch from University College Dublin (2007)</p> <p>MRIAI ProDip University College Dublin (2011)</p> <p>RIAI Grade 3 Conservation Accredited (2017)</p>	Brendan Money has worked with Robin Mandal Architects, a practice specialising in conservation consultancy for 15 years and is currently director. He has written or co-written numerous architectural heritage impact assessments in relation to commercial and residential developments as well as overseeing works to protected structures.
Stephen M. Purcell	KPMG Future Analytics	Population and Human Health Assessment	<p>BSc. (Hons) Spatial Information Science/ Geomatics, TU Dublin. (2005)</p> <p>Master of Regional and Urban Planning, UCD. (2008)</p> <p>Master of International Business, TU Dublin. (2019)</p> <p>Member of the Irish Planning Institute</p> <p>Fellow of the Royal</p>	<p>Stephen is a Chartered Surveyor and Town Planner with 16 years post-qualification experience. He is Co-Head of KPMG Future Analytics following the acquisition of his business, Future Analytics Consulting Ltd., by KPMG Ireland in 2020.</p> <p>Stephen has extensive experience spanning strategic planning and coordinating the consenting process for a range of projects, including Environmental Impact Assessment coordination for Strategic Housing, Strategic Infrastructure and Mixed-Development Schemes, together with Substitute Consents processes. Stephen has successfully advised Local, Regional and Central Government, major private sector clients and State Agencies on strategy, consenting coordination and evidence-based studies. He has strong experience in strategic infrastructure, residential, commercial, retail, healthcare and</p>

Expert	Company	Aspect of the Environment	Qualifications	Summary of Professional Expertise
			<p>Institute of Chartered Surveyors</p> <p>Fellow of the Society of Chartered Surveyors Ireland</p>	<p>community development projects. A significant component of Stephen's project portfolio includes the application of population projection modelling, population impact analysis and socio-economic profile data to inform forward planning and scheme composition. Assessing the likely impacts of development proposals (residential, mixed-use development or infrastructure projects), Stephen considers matters such as traffic & transportation, air quality & climate, noise & vibration, landscape/townscape & visual, material assets – utilities, and the risk of major accidents and/or disasters within projects at varying scales. While such aspects are considered within their own dedicated chapter, from a Human Health perspective it is appropriate to consider these under the Population and Human Health chapter.</p>
Sinéad O'Connor	Declan Brassil & Co.	<p>EIAR Co-Ordination Compilation Introduction Site Location, Context and Planning History Description of Development</p>	<p>BA Mod. Hons. (Environmental Science) from Trinity College Dublin (2008).</p> <p>Masters of Regional and Urban Planning from University College Dublin (2011).</p> <p>Member of the Irish Planning Institute</p>	<p>Sinead O'Connor of Declan Brassil and Company Ltd. hold a B.A. Mod. Hons. in Environmental Science from Trinity College Dublin, and a Masters in Regional and Urban Planning (MRUP) from University College Dublin. Sinead has over 10 years of experience in Town Planning and the preparation of Environmental Reports, having worked as part of multi-disciplinary teams on residential, commercial and quarry schemes.</p>

Expert	Company	Aspect of the Environment	Qualifications	Summary of Professional Expertise
		Interactions Mitigation Measures		
Dave O’Sullivan	Doyle and O’Troithigh	Landscape and Visual Impact Assessment	B.Ag. Sc. (HORT) from University College Dublin (1976) M.Ag. Sc. (HORT) from University College Dublin (1984) Master of Landscape Architecture from University College Dublin (1999) Member of the Irish Landscape Institute.	David O’Sullivan is a Member of the Irish Landscape Institute with 25 years’ experience in providing landscape architecture services for a wide range of projects involving residential, road, rail and air infrastructure, water and renewable energy. David has also delivered landscape and visual reports for a variety of successful residential and renewable energy developments.
Daithi O’Troithigh	Doyle and O’Troithigh	Landscape and Visual Impact Assessment	Dip ArchTech. Cork Institute of Technology (1997). BA Landscape Architecture Kingston University London (1999) Post Graduate Diploma	Daithi O’Troithigh is a Landscape Architect, Urban Designer and a founding director of Doyle + O’Troithigh Landscape Architecture Ltd with over 20 years’ experience. Daithi has worked on a range of project sizes and complexities (Residential, Commercial, Educational and Tourism, for both public and private clients) in a variety of roles from sub consultant to lead consultant on multi-disciplinary teams in

Expert	Company	Aspect of the Environment	Qualifications	Summary of Professional Expertise
			<p>Landscape Architecture Kingston University London, (2021).</p> <p>Msc Urban Design University College Dublin (2007).</p> <p>Member of the Irish Landscape Institute</p>	Ireland and the UK.
James Redmond	IN2 Engineering	Material Assets: Utilities	<p>B.Eng. Hons. (Mechanical Engineering) from University of Glasgow (1998).</p> <p>Chartered Member of Engineers Ireland</p>	<p>James Redmond is a Chartered Mechanical Engineer and a Director in IN2 Engineering.</p> <p>James has over 20 years' experience as a consultant mechanical engineer delivering large commercial, residential and healthcare projects.</p>
Dr. Imelda Shanahan	TMS Environment Ltd	Air, Dust and Climatic Factors Noise and Vibration	<p>BSc (Chemistry) from University College Dublin (1980)</p> <p>PhD (Physical Chemistry) from University College Dublin (1984)</p> <p>Chartered Chemist Fellow</p>	<p>Imelda Shanahan has over 30 years' experience in environmental monitoring and consultancy. She is a Chartered Chemist and a Fellow of the Institute of Chemistry of Ireland and a Fellow of the Royal Society of Chemistry.</p> <p>Imelda specialises in Noise and Vibration and Air Quality Impact Assessment and also works in Compliance Assessment, Environmental Risk Assessment and Waste Management.</p>

Expert	Company	Aspect of the Environment	Qualifications	Summary of Professional Expertise
			of the Royal Society of Chemistry	Imelda provides consultancy services to both public and private sector clients and has provided expert witness evidence at oral hearings, court hearings and planning appeals.
Claire Walsh	Archaeological Projects Ltd.	Cultural Heritage: Archaeological Heritage	BSoc Archaeology and Sociology from University College Dublin (1982)	Claire Walsh is a partner in Archaeological Projects Ltd and has worked for over 35 years primarily in development archaeology.

2. SITE LOCATION AND CONTEXT

2.1 Site Location

The application site forms part of a larger development site known as Heuston South Quarter (HSQ). The HSQ site is bounded principally by St. John’s Road West (to the north), Military Road (to the east), and by the formal gardens of the Royal Hospital Kilmainham (RHK) to the west.

The HSQ site is in close proximity to Heuston Rail Station, the LUAS Red Line service and the City Centre. HSQ adjoins and is immediately accessible to major national and international tourist and cultural attractions including the Royal Hospital Kilmainham, IMMA, the Guinness Brewery and Collin’s Barracks.

The St. John’s Road West frontage is characterised as an urban road with the approach to Heuston station on the opposite side of the road. This transportation corridor is the main road and rail artery to the west of the country. The HSQ site is located at the transition from the functional urban transportation character to the north to the high amenity grounds of the RHK and its formal gardens to the west.

Figure 2.1.1 Site Location: Excerpt from drawing No. MPL-0001 prepared by Reddy Architecture and Urbanism.



The character of the HSQ site is defined by the established cluster of mixed-use buildings in office use, residential use, cultural use and with retail at street level. The buildings are diverse in terms of built forms, façade treatments and material. The existing buildings address a network of open spaces areas, including urban hard landscaped areas and pedestrian routes and open space areas (local residential squares) and a Civic Plaza.

Vehicular access to the site is from St John's Road and Military Road, which lead to an existing communal basement level car park. The St. John's Road access is fully constructed and is serviced by a junction and traffic lights. Traffic approaching from the west can turn right at this junction and traffic from the City (east) can turn left as there is a slip lane designed to accommodate traffic onto St John's Road. The basement access ramp at St John's Road has been designed to accommodate incoming and outgoing traffic in a 4-lane design.

2.2 Site Description and Context

Approximately 60% of the larger HSQ site has been developed. These existing buildings are situated along the eastern parts of the site, addressing St. John's Road, Military Road and the RHK.

The subject site (c. 0.62 ha) comprises part of an undeveloped area, which has been landscaped as an interim measure to improve the aesthetics of the site pending its complete redevelopment. The subject site is situated immediately to the west of Nos. 1 and 2 HSQ (former Eir building) and adjoins the formal gardens of the Royal Hospital Kilmainham (RHK) to the west.

Adjoining the site to the south is an undeveloped site that is also controlled by the applicant. This site was granted planning permission on 31 March 2022 under ABP Ref. TA29S.311591 for a residential scheme of 359 no. Built to Rent units across 5 no. buildings, ranging in height from 3 to 18 storeys.

2.3 Relevant Planning History of the Wider HSQ Site

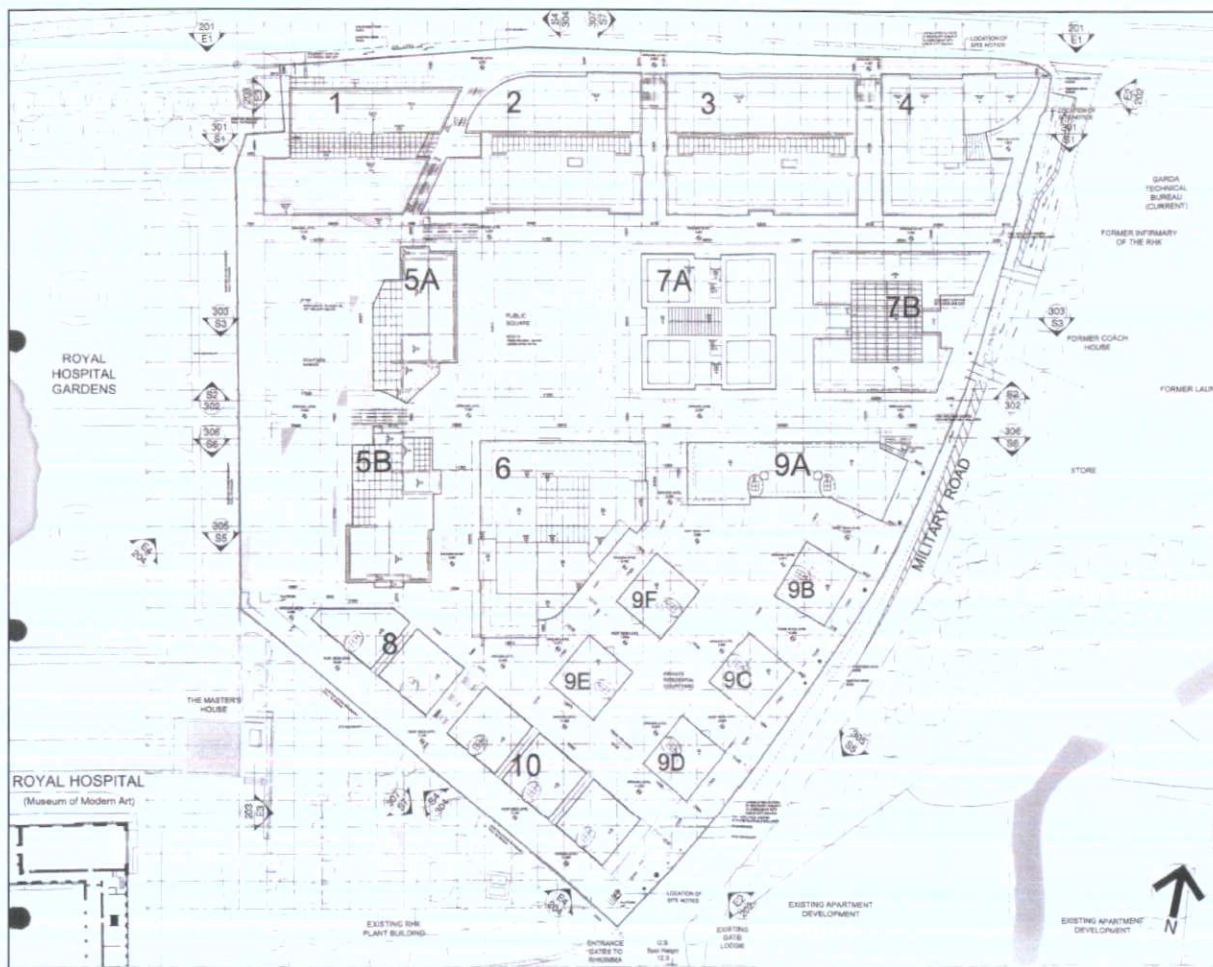
The planning history for the wider HSQ site dates from September 2004 when the 'Parent Permission' was granted under An Bord Pleanála Ref. PL29S.206528 (DCC Ref. 2656/03). After this grant of permission, a number of permissions for modifications of the parent permission and other planning permissions were granted, as summarised below.

The 'Parent Permission' was granted on 16 September 2004 under An Bord Pleanála Ref. PL29S.206528 (DCC Ref. 2656/03). This permission provided for the development of the site for office, residential, retail, cultural and ancillary uses in 9 blocks. These blocks are identified on Figure 2.3.1 below.

The parent permission was subsequently amended by a modification permission granted on 26 May 2005 under DCC Planning Ref. 2218/05, which in turn was amended further on an incremental basis. A significant number of other modifications have been made to the Parent Permission. All elements of the Parent Permission have been modified in some way (Blocks 1 to 10 inclusive), summarised as follows:

- Block 1 – Planning Ref. 1501/08;
- Block 2 – Planning Ref's 2218/05 and 1055/07;
- Blocks 5 and 6 – Planning Ref. 2821/06;
- Blocks 7a and 7b – Planning Refs. 1918/06, 3261/09, 2384/10; 2891/11; 3794/13; 2493/13; 3095/13; 2179/16; 3868/15; 2467/15 and 2378/16
- Blocks 8 and 10 – Planning Ref. 6434/05, 2264/07; 3465/11 and 2363/15
- Blocks 9 – Planning Refs. 4006/06, 5390/08; 2347/10; 2551/15 and 2366/18
- Front Boundary – Planning Ref. 2263/07.

Figure 2.3.1 Site Layout Excerpt from the Non-Technical Summary Submitted in Support of Reg. Ref. DCC 2656/03, ABP Ref. PL29S.206528.



2.3.1 Summary of Completed Development to Date (outside of application redline area)

- Block 3/4 is situated at the corner of St. John's Road West and Military Road and is occupied by AIB).
- Blocks 7A and 7B to the east of the application site comprise a mixed use development of Office, Retail and Residential development;
- Blocks 9a to 9h to the east of the application site comprise a mixed use development of Office, Retail and Residential development; and
- Blocks 8 / 10 that is situated to the south of the application site comprise a mixed use development of Office, Retail and Residential development.

2.3.2 Regularisation of 'As Built' Development – DCC Ref. 3494/13

DCC granted permission on 25 February 2014, under Planning Ref. 3794/13 for the retention of amendments to the permitted parent permission for a mixed use development at Heuston South Quarter (HSQ) under planning Ref. PL29S.206528 (Dublin City Council Ref. 2656/03, as subsequently amended planning permission Ref. 1918/06 in respect of Blocks 7Aa and 7B; planning permission Refs. 6434/05 and 2264/07 in respect of Block 8/10 and planning permission Ref. 4006/06 in respect of Block 9A to 9H. The principal amendments for which retention permission was granted under this permission

relate to the following:

- External Alterations that affect the external appearance of the permitted blocks.
- Internal Alterations generally comprising of relatively minor internal reconfigurations that do not have a material impact in terms of increasing or decreasing previously permitted usable floorspace.
- Changes to the Configuration and Layout of Retail Units.
- Amendments to the Configuration, Layout and Sizes of Apartments.
- Changes of Use of permitted floorspace.
- Omission of a high level walkway along the Military Road elevation of the permitted buildings and on the return to St. John's Road.
- Alterations to the layout and configuration of circulation and common areas.

2.3.3 Adjoining SHD Residential Scheme (ABP SHD Ref. TA29S.311591)

On the 8 October 2021 an application was submitted to ABP by the applicant for the demolition of part of the podium and Basement Level -1 reinforced concrete slabs at the interface of the proposed Blocks A and B and the construction of a residential development of 399 no. 'Build To Rent' residential units, a retail unit of 120 m², together with ancillary site works, on a site that extends to approximately 1.08 hectares.

The proposed blocks are arranged in a grid pattern established by a central east-west pedestrian and visual axis that provides connectivity between the RHK Gardens and Military Road to the east, as follows:

- Block A is a rectangular shaped block that occupies the north-eastern corner of the application site. This block rises in height to 18-storeys above podium level and includes a lower ground floor level to provide a total of 154 no. apartments (comprising 12 no. studios; 108 no. 1 beds and 34 no. 2 beds). Block A has a Gross Floor Area (GFA) of 11,814 sq.m.
- Block B is a rectangular shaped block that occupies the south-eastern corner of the application site. This block is part 8- and part 12-storeys in height above podium level and includes a lower ground floor level to provide a total of 81 no. apartments (comprising 9 no. studios; 60 no. 1 beds and 12 no. 2 beds). Block B has a Gross Floor Area (GFA) of 5,446 sq.m, which includes a retail unit at the northern end of the block at podium level of approximately 120 sq.m (GFA).
- Block C is situated between Block B to the east and Block D to the west. Block C varies in height up to a maximum of 12-storeys above podium level and includes a lower ground floor level to provide a total of 86 no. apartments (comprising 19 no. studios; 45 no. 1 beds and 22 no. 2 beds). Block C has a Gross Floor Area (GFA) of 6,024 sq.m,
- Block D is a 5-storey over basement level rectangular block that occupies the south-western corner of the application site. It accommodates a total of 35 no. apartments (comprising 1 no. studio; 16 no. 1 beds and 18 no. 2 beds). This block has a Gross Floor Area (GFA) of 2,786 sq.m.
- Block E is a part 3-, part 5-storey over basement level rectangular block that occupies the north-western corner of the application site to the west of Block A. It accommodates a total of 43 no. apartments (comprising 5 no. studios; 21 no. 1 beds and 17 no. 2 beds). This block has a Gross Floor Area (GFA) of 3,321 sq.m.

On the 31 March 2022, ABP decided to grant planning permission subject to 31 no. conditions. Condition 3(a) to (c) attached to the ABP Order requires a number of amendments to the proposed scheme which influence the massing and height of the two western most blocks (Blocks D and E) closest to the RHK gardens and the proposed 'arch' feature that sought to link Blocks A and C at 9th to 11th floor levels spanning north-south across the central east-west pedestrian spine route to frame the entrance to and from the RHK gardens to the west.

Condition 3(a) to (c) attached by ABP requires as follows:

'Prior to commencement of any works on site, revised details shall be submitted to and agreed in writing with the planning authority with regard to the following:

- (a) The height of Blocks D and E shall be reduced by two floors (L03 and L04 omitted) to a maximum of three storeys over lower ground floor level.*
- (b) Omission of proposed arch between Blocks A and C.*
- (c) Further details of proposed residential tenant amenity facilities to include the provision of increased workstations, working from home hubs and laundry facilities. In this regard, the proposed Unit E-1-01 (Lower Ground Floor of Block E) shall not be utilised as a residential unit. It shall instead be utilised as additional residential tenant amenity facilities.'*

The above amendments required pursuant to Condition 3 to the proposed scheme will result in an approved quantum of 359 no. BTR units – a reduction of 40 no. from the 399 no. units applied for in the first instance.

2.4 Planning History of the Subject Site

2.4.1 Interim Landscaping of Undeveloped Part of Site - DCC Planning Ref. 2724/13

DCC granted planning permission under Planning Ref. 2724/13 on the 19 November 2013 for temporary landscaping works in respect of the non-completed development areas of the site associated with Blocks 1, 2, 5 and 6.

The permitted works have been completed. The works provide for an interim landscaping strategy to mitigate the visual impact of unfinished building works, to enhance the aesthetic of the site and its relationship with the Royal Hospital Kilmainham Gardens, and to make temporary spaces that function within the context of the scheme. The development comprises of temporary landscaping works at Basement, Podium and Ground levels over an area of approximately 1.47 ha. These works include the treatment of ground and vertical surfaces, alterations to existing levels, provision of 4 no. temporary stair cores serving Basement -2; basement -1 and Podium Level; lighting, way finding signage, and boundary treatments including new boundary treatment to St John's Road West. The development also provides for the partial demolition of the partially constructed stair and lift core at the north-west corner of the site (adjacent to St Johns Road West) and the provision of low level HSQ branding signage and way finding feature on three sides (over an area of 176 sq.m approx.) on the retained element.

3. DESCRIPTION OF DEVELOPMENT

3.1 Introduction

HPREF HSQ Investments Ltd. is applying to Dublin City Council for a permission to provide a mixed-use development comprising an Office and Hotel on an urban brownfield site of 0.62 ha. This Chapter provides the following information required by of Schedule 6 to the Planning and Development Regulations 2001:

- (a) a description of the physical characteristics of the whole proposed development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases
- (b) a description of the main characteristics of the operational phase of the proposed development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used, and
- (c) an estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation) and quantities and types of waste produced during the construction and operation phases.

The following consultants have been involved in the preparation of this chapter:

- Reddy Architecture and Urbanism (RAU) – Project Architects;
- Cronin and Sutton Consulting (CS) – Lead Engineers;
- IN2 Engineers (IN2) – M&E Engineers;
- Doyle + O'Troithigh (DOT)– Landscape Architects.

3.1.1 Overview of the Proposed Development

The proposed development will provide a mixed-use commercial development comprising of a hotel (238 no. bedrooms) and an office block providing a cumulative Gross Floor Area (GFA) of 32,602, inclusive of basement area. The proposed development consists of:

Site clearance and localised demolitions to remove part of the podium and Basement Level -1 reinforced concrete slabs at the interface of the proposed hotel and office blocks, together with the incorporation of part of the existing basement level structure extending to approximately 4,228 sq.m (GFA).

The proposed basement will be integrated within the existing basement levels serving the wider HSQ development and will be accessed from the existing vehicular ramped accesses/egresses onto/off St. John's Road West and Military Road to the north and east, respectively. The proposed basement area is split into two areas to provide a dedicated Hotel Basement area of approximately 2,132 sq.m (GFA) and an Office basement area of 2,096 sq.m (GFA).

The construction of a 5-storey hotel (over lower ground and basement level). At basement level provision is made for 24 no. car parking spaces; 2 no. motorcycle spaces together with plant and storage rooms. A waste storage area with dedicated loading bay / staging area is provided along with dedicated set-down area for deliveries. A service bay for the dual purpose of waste storage collection and bus drop-off to serve the hotel is also provided at basement level with modifications to existing line markings to the basement parking area to accommodate the development. At Lower Ground floor level provision is made

for 14 no. Bedrooms; Bar; Kitchen and Staff facilities and Changing Rooms / WCs plus ancillary Gym. This floor is arranged around an internal courtyard space. Provision is made at Podium level for 19 no. Bedrooms; Dining Area and Foyer with entrance at the South-Eastern corner of the building onto the new laneway separating the hotel and office building. Provision is made at the south-western corner at podium level for an ESB sub-station / switch room and 15 no Sheffield type bicycle stands are provided for the hotel and the retail / café unit, providing storage space for 30 no. bicycles. A total of 205 no. bedrooms are provided at the upper levels (above podium level). The top floor of the hotel (4th floor) has a splayed setback to provide a west facing roof terrace. An ancillary hotel bar (118 sq.m) opens onto this roof terrace.

The construction of a 12-storey (over lower ground and basement levels) office building to the east of the hotel building to provide 19,474 sq.m of office floorspace (GFA) from lower ground floor level and above. Provision is made at basement level for 30 no. car parking spaces; 2 motorcycle spaces and 120 no. bicycle storage spaces together with plant and storage rooms. Provision is made for a further 196 no. bicycle storage spaces at Lower Ground floor level plus changing rooms. At podium level 2 no. ESB sub-stations and switch rooms are proposed. The foyer and entrance are provided at the southern end of the building at Podium level along with a Retail/Café unit of 208 sq.m at the South-Western corner of the building. The building is setback at 4th floor level to provide a west facing roof terrace. Splayed setbacks to the southern and eastern elevations at the 11th floor level forms a roof terrace that wraps around the South-Eastern corner of the building. Plant is provided at rooftop level that is enclosed by curved louvred screens and PV panels.

Works proposed along the St John's Road West frontage include the omission of the existing left-turn filter lane to the vehicular ramped access to the HSQ development and re-configuration of the pedestrian crossings at the existing junction together with the re-configuration of the existing pedestrian crossing over the westbound lanes of St. John's Road West leading to an existing pedestrian refuge island and re-alignment of the existing footpath along the site frontage onto St John's Road West to tie into the reconfigured junction arrangement.

Drainage works proposed include the provision of 2 no. below basement surface water attenuation tanks with duty/stand-by arrangement pump sumps and associated valve chambers, and 2 no. below basement foul pump sumps with duty/stand-by arrangement and emergency storage and associated valve chambers. New foul drainage and stormwater drainage connections are proposed to existing foul and storm sewers in St. John's Road West with associated site works.

Hard and soft landscaping works are proposed at lower ground level along St John's Road West and at podium level to provide for the extension and completion of the public plaza to the south of the proposed Office Block and the provision of two new pedestrian laneways connecting St John's Road West with the public plaza at podium level.

Figure 3.1.1 Proposed Site Layout



Table 3.1.1 Key Site Statistics

Site Statistics	Area
Total Site Area	0.62 ha (6,245 sq.m)
Total Basement Floor Area	4,228 sq.m
Total Hotel Floorspace (GFA) (Excluding basement)	8,900 sq.m
Total Office Floorspace (GFA) (Excluding basement)	19,266 sq.m (excluding 208 sq.m of retail / café floorspace at podium level)
Total Retail / Café Floorspace (GFA)	208
Total Commercial Floorspace (GFA) (Excluding basement)	28,374 sq.m
Plot Ratio	4.54
Site Coverage	50% ¹

¹ Based on a Building Footprint (excluding hotel courtyard) of 3,068 sq.m (measured to external wall faces)

3.2 Characteristics of the Proposed Development

This Section has been laid out to describe the development under the following headings:

- Demolition Works (3.2.1)
- Hotel and Office Development (Section 3.2.2)
- Service Infrastructure (Section 3.2.3)
- Open Spaces and Lighting (3.2.4)

3.2.1 Demolition and Excavation Works

It is estimated that approximately 2,400m² of existing reinforced concrete structure will be removed from the subject site during preparatory/demolition works. This shall be carried out using non-percussive techniques, such as small scale Brokk Concrete Munchers (or similar). Smaller quantities of bituminous hardstanding material and soil/stones will also be removed, with some limited excavation required to achieve a reduced level locally. It is estimated that between 3,000m³ and 5,000m³ of waste material will be generated by these preparatory works. This material shall be segregated and disposed of at appropriately licenced facilities. Please refer to the Outline Construction & Demolition Waste Management Plan for further detail (see attached in Appendix 3A).

3.2.2 Hotel and Office Development

3.2.2.1 Hotel Development

The proposal is for the construction of a 6-storey hotel (over basement level) with an address to the new public plaza and rear elevation to St. Johns Road.

At basement level, provision is made for 24 no. car parking spaces; 2 no. motorcycle spaces together with plant and storage rooms. A waste storage area with dedicated loading bay / staging area is provided along with dedicated set-down area for deliveries. Modifications to existing line markings in existing basement parking area to accommodate the development.

At Lower Ground floor level, it is proposed to provide: 14 no. Bedrooms; Bar; Kitchen and Staff facilities and Changing Rooms / WCs plus ancillary Gym. This floor is arranged around an internal courtyard space.

A Podium level it is proposed to provide: 19 no. Bedrooms; Hotel Dining Area, Bar and Foyer with entrance at the South-Eastern corner of the building onto the new laneway separating the hotel and office building. Provision is made at the south-western corner at podium level for an ESB sub-station / switch room and 15 no Sheffield type bicycle stands are provided for the hotel providing storage space for 30 no. bicycles.

A total of 205 no. bedrooms are proposed at the upper levels (hotel floors 01-04). The top floor of the hotel (4th floor) has a splayed setback to provide a west facing roof terrace (321sqm). An ancillary hotel bar (118 sq.m GFA) opens onto this roof terrace.

The main entrance to the hotel building is from the new public plaza at ground level or at lower ground floor from the basement car park (accessed from St. Johns Road).

Figure 3.2.2.1.1 Ground Floor Plan Showing Block Layout



Figure 3.2.2.1.2 Typical Upper Floor of Proposed Hotel



3.2.2.2 Office Development

The proposal is for the construction of a 12-storey (over lower ground and basement levels) office building to the east of the hotel building. The proposed office building accommodates 15,718 sqm Net Internal Floor Area of office floorspace. A typical floor plan is provided below in Figure 3.2.2.1.

The foyer and entrance are provided at the southern end of the building at Podium level along with a Retail/Café unit of 208sq.m at the South-Western corner of the building, this unit is proposed to be fitted out by a tenant and will be built as a 'grey box' under this application. The building is setback at 4th floor level to provide a west facing roof terrace of (487 sqm). Splayed setbacks to the southern and eastern elevations at the 11th floor level forms a roof terrace of 78 sqm that wraps around the South-Eastern corner of the building.

At basement level it is proposed to provide: 30 no. car parking spaces; 2 motorcycle spaces and 120 no. bicycle storage spaces together with plant and storage rooms. At Lower Ground Floor level, it is proposed to provide 196 no. bicycle storage spaces. Provision is made for a further at Lower Ground floor level plus changing rooms. At podium level 2 no. ESB sub-stations and switch rooms are proposed. A screened plant area of 942 sqm is provided at rooftop level that is enclosed by curved louvred screens. It is also proposed to provide 380 PV panels.

Figure 3.2.2.1 Typical Office Floor Plan Showing Block Layout

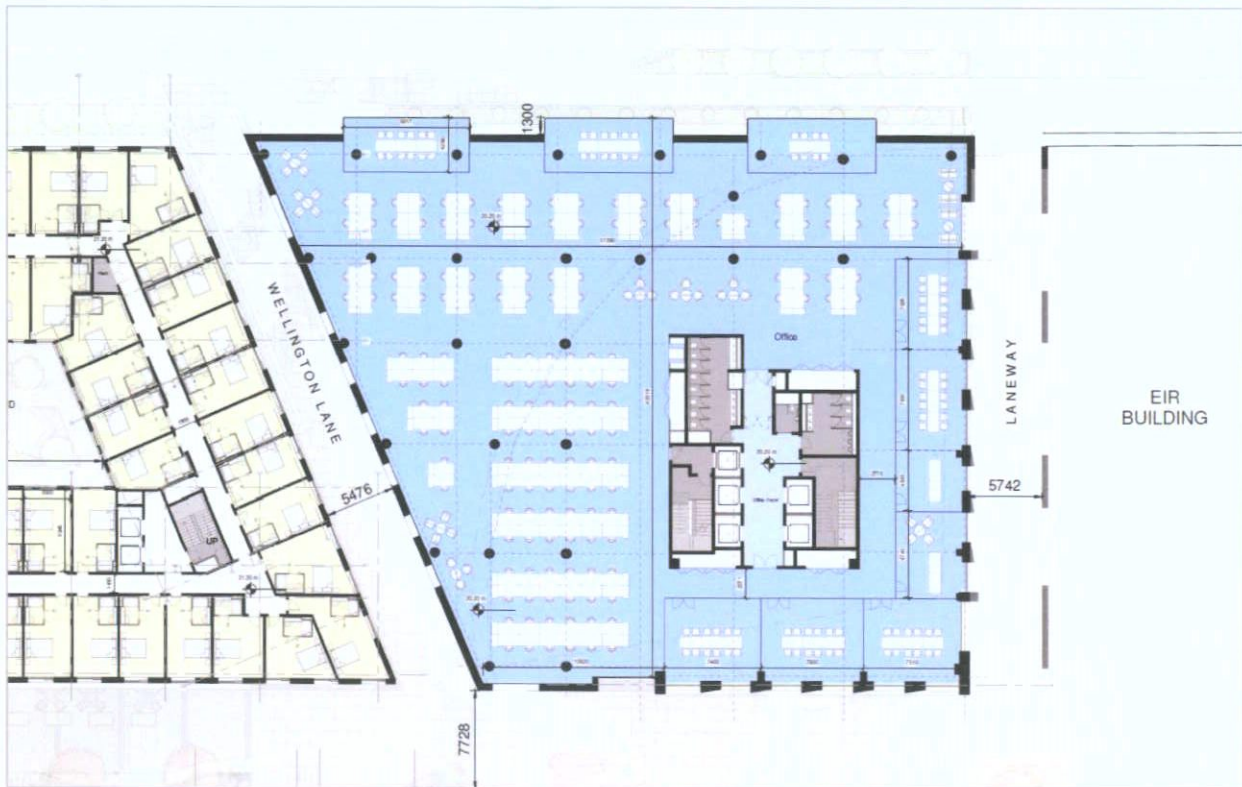
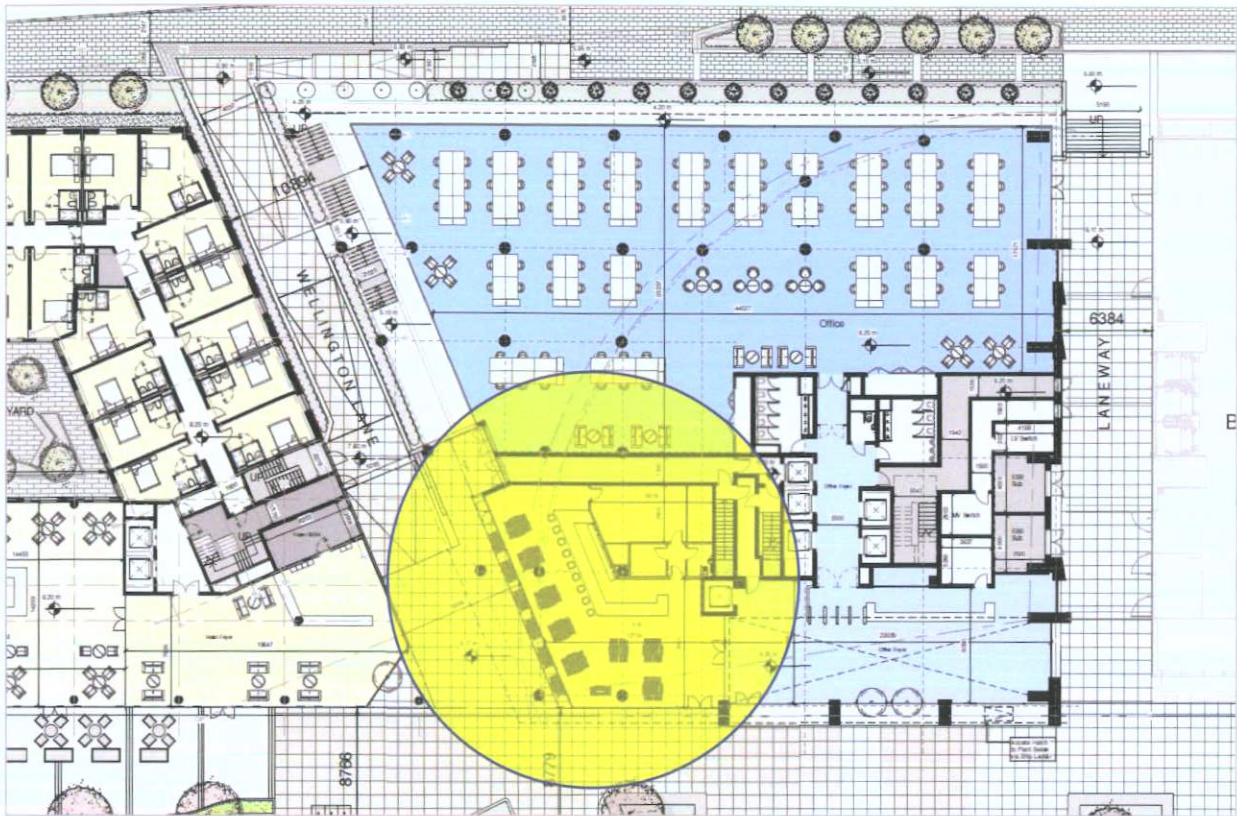


Figure 3.2.2.2 Location of Proposed Retail Unit



3.2.2.3 Design to Reduce Climate Impacts

The scheme has been designed to minimise the climate impacts of the scheme. Tables 3.2.2.3.1 to 3.2.2.3.5 list the design features of the scheme that are intended to reduce climate impacts through energy efficiency, reduction of waste and carbon emissions.

Table 3.2.2.3.1 Design measures to Reduce Energy Used for Lighting

Measure	Description	Benefit
Maximisation of natural daylighting	Hotel rooms are designed with large windows to maximise daylight.	More daylight into the rooms
Energy Efficient External Lighting	External lighting will comply with the latest standards and achieve: <ul style="list-style-type: none"> • Low-level lighting • Utilise low voltage LED lamps • Minimum upward light spill Each light fitting is to be controlled via an individual Photoelectric Control Unit (PECU). The operation of the lighting shall be on a dusk-down profile.	Lighting will be designed to achieve the required standards, provide a safe environment for pedestrians, cyclists, and vehicular traffic, provide surveillance and limit the impact on the artificial lighting on surrounding existing flora and fauna.

Table 3.2.2.3.2 Materials Chosen to Minimise Climate Impacts

Measure	Description	Benefit
Material selection.	Brick, Stone, Glass	Materials picked to be durable and to require less maintenance.
Green Roofs. Proposed	Sedum Roof	Allows for more insulation to roof, used to filter rain water
No Gas Fire Plant proposed	Heat Pumps provided in lieu of gas fired plant.	No local emissions of combustion gases. Improved local air quality

Table 3.2.2.3.3 Design Measures for Thermal Energy Efficiency

Measure	Description	Benefit
Nearly Zero Energy Building specifications (nZEB)	The development will achieve nZEB standards for energy consumption as defined within the Part L building regulations	Reduced energy consumption correlates with reduced carbon emissions
BER targets	A Building Energy Rating (BER) certificate will be provided for both the Hotel and Office buildings. This will provide detail of the energy performance of each building. This is calculated through energy use for space and hot water heating, ventilation, and lighting and occupancy. It is proposed to target A-ratings for each building.	A BER rating demonstrates a reduction in energy consumption and running costs
Highly insulated building fabric	Proposed U-Values will be in line with the requirements set out by the current & proposed Part L including Nearly Zero Energy Buildings targets. "Conservation of Fuel and Energy Buildings other than Dwellings".	Lower U-values will be achieved to reduce the amount of heat loss throughout the building fabric, lowering the consumption of energy and therefore carbon emissions.
Thermal bridging	Thermal bridging at junctions between construction elements and at other locations to be minimised in accordance Paragraphs 1.2.4.2 and 1.2.4.3 within the Technical Guidance Documents Part L. See Table 1 of Part L, Building Regulations (Appendix C).	Thermal bridging reduces the amount of heat loss throughout the building fabric, lowering the consumption of energy and therefore carbon emissions.
Airtightness	The building will achieve an airtightness result of 5m ³ /m ² @ 50Pa.	Improved airtightness will be achieved to reduce the amount of heat loss throughout the building fabric, and lower the consumption of energy and therefore carbon emissions
Heat Recovery Ventilation (MHRV)	All of the mechanical ventilation to the Hotel and Offices will be provided with a facility for heat recovery using either plate heat exchangers or thermal wheels.	Improved air quality and reduced energy and costs in providing alternative heating etc.

	All Air Handling will be full fresh air with no re-circulation of extracted air.	
Air Source Heat Pumps	The heating, cooling and hot water production will all be provided by Air Source Heat Pumps.	Improved efficiency and lower energy consumption and associated carbon emissions.
Lighting	Shall be designed and specified in accordance with the BER requirements in each unit and in the landlord areas in accordance with Part L.	Lower consumption of energy and therefore lower carbon emissions.

Table 3.2.2.3.4 Design Measures to Reduce Waste During Operational Phase

Measure	Description	Benefit
Storage of Non-Recyclable Waste and Recyclable Household Waste	The inclusion of a centralised waste area 1) Grey, Brown and Green bin distinction reduce the risk of littering within the scheme and reduces potential waste charges. 2) Regular tendering for waste management collection	Reduces potential waste charges.
Composting and glass bins	Addition of organic waste bins to be provided	Helps to reduce waste charges and the amount of waste going to landfill.

Table 3.2.2.3.5 Design Measures to Reduce Emissions from Transportation

Measure	Description	Benefit
Access to Public Transport	The Heuston and James's stops on the Luas Red Line are within 10 minutes' walk, as is Heuston railway station. A bus stop on St. John's Road West, adjacent to the site, is served by 3no. Dublin Bus routes. A further 39no. bus routes serve stops within a 10-minute walk.	This demonstrates the excellent connectivity of the site to a range of transport modes serving the city and country.
Use of E-Car	8no. charging points for electric vehicles are proposed within the development's car parks.	This will allow development occupants to charge cars on site.
Bike Friendly Scheme	A total of 346no. bicycle parking spaces is provided in the scheme. 316no. of these spaces are provided for the office at carpark level (120no.) and at lower ground floor level (196no.), as secure bicycle parking. 30no. publicly accessible bicycle spaces are provided at podium level by way of 15no. Sheffield bicycle stands, for use by both the café unit and hotel.	This benefits active and sustainable travel, and adds to the connectivity of the site.

3.2.2.4 Access & Parking

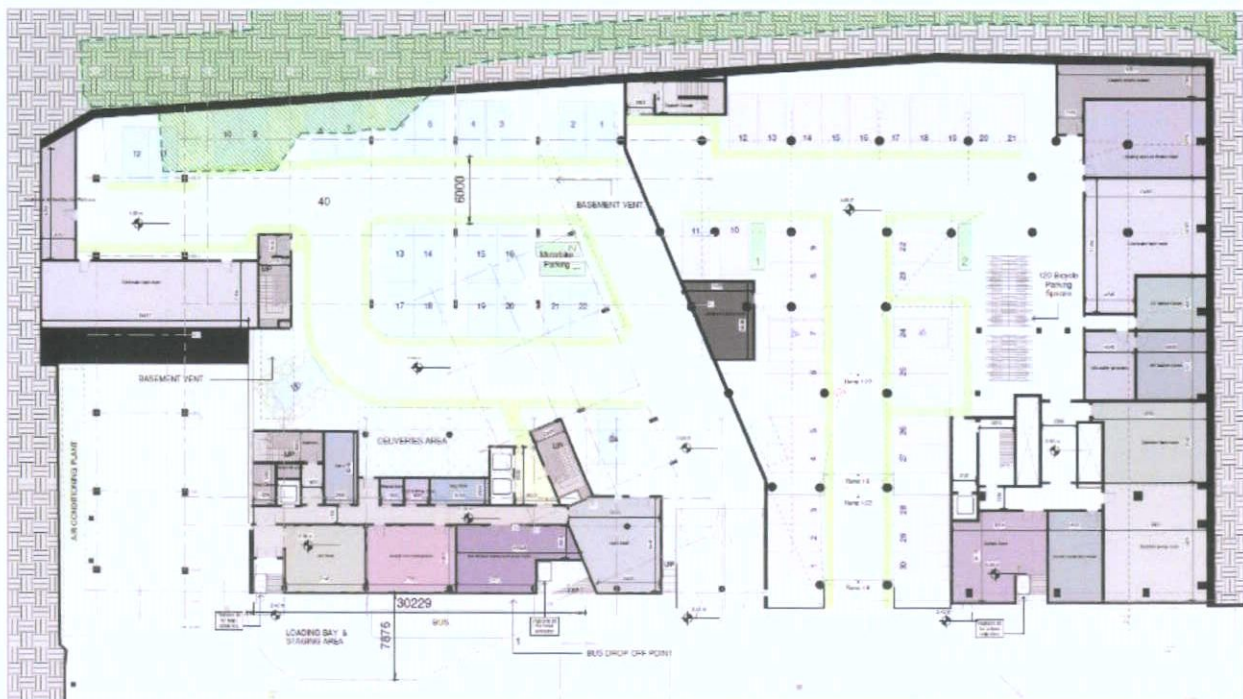
Vehicular access to the development site is via the 2no. existing access junctions of the HSQ complex, on Military Road and on St. John's Road West (R148). Existing ramps from both access junctions bring vehicular traffic down from street level to basement level.

- The internal road layout of the proposed development is located entirely at basement level and principally consists of two separate car parking areas:
- an eastern car park, comprising 30no. car spaces and 2no. motorcycle spaces (as well as storage for 120no. bicycles), serving the development's office element; and
- a western car park, comprising 24no. car spaces and 2no. motorcycle spaces, serving the proposed hotel.

Access to the parking facilities to serve the proposed office is provided via internal stair cores and lifts. Bicycle access to basement level is also possible via the existing bicycle access ramp at the HSQ complex's eastern access junction on Military Road. An additional 196no. secure bicycle parking spaces for the office element are provided internally at lower ground floor level; these are accessed via a ramp from podium level. 30no. publicly accessible bicycle spaces are provided at podium level for use by both the café unit and the hotel.

The provision of good permeability for pedestrians and cyclists is a key objective of the proposed development. Easy pedestrian and cyclist access to podium level is facilitated at multiple points via the existing HSQ complex, as well as by the provision of new accesses from St. John's Road West, at the site's northern boundary. Pedestrian and cyclist permeability through the proposed development itself is ensured by the provision of clear and safe podium-level pedestrian and cyclist routes along the east/west and north/south axes.

Figure 3.2.2.4.1 Proposed Basement Plan



3.2.2.5 Description of Materials

The core design principles of Legibility, Variety and Proportion have been utilised to select appropriate materials for this sensitive site. The proposed office and hotel buildings have different materials as follows;

- The Office building has a clearly legible base middle and top approach. The base is comprised of glass curtain wall (lower ground floor and podium level). The middle section is made from precast concrete (floors 01-03) and the top section is made from a combination of precast panels and glazing with aluminium fins (floors 04-11). At the South side, the precast concrete is brought to ground level to frame the proposed entrance.
- The hotel facades will be constructed of double order brick splayed panels with large sections of glass and aluminium. The proposed brick will be a buff brick, Ivanhoe cream by Ibstock or similar.

Each material will be agreed with the local authority on site prior to any construction taking place and a mock-up of the facades will be built to test and agree the materials. Examples of the proposed materials are shown in Figures 3.2.2.5.3, 3.2.2.5.4 and 3.2.2.5.5 below.

Figure 3.2.2.5.1 Proposed North Elevation (St. Johns Road)

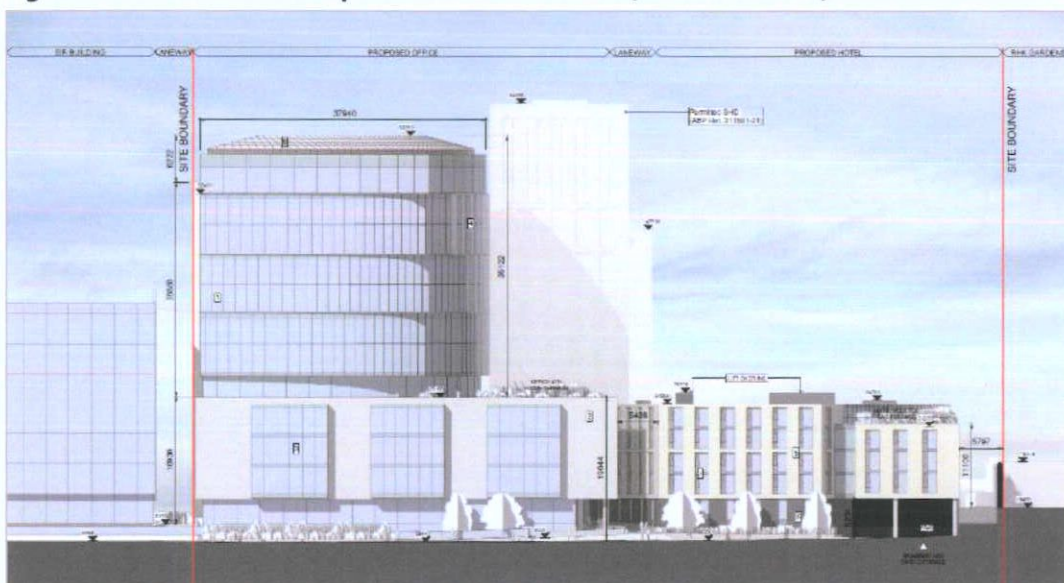


Figure 3.2.2.5.2 Proposed South Elevation (to Plaza).



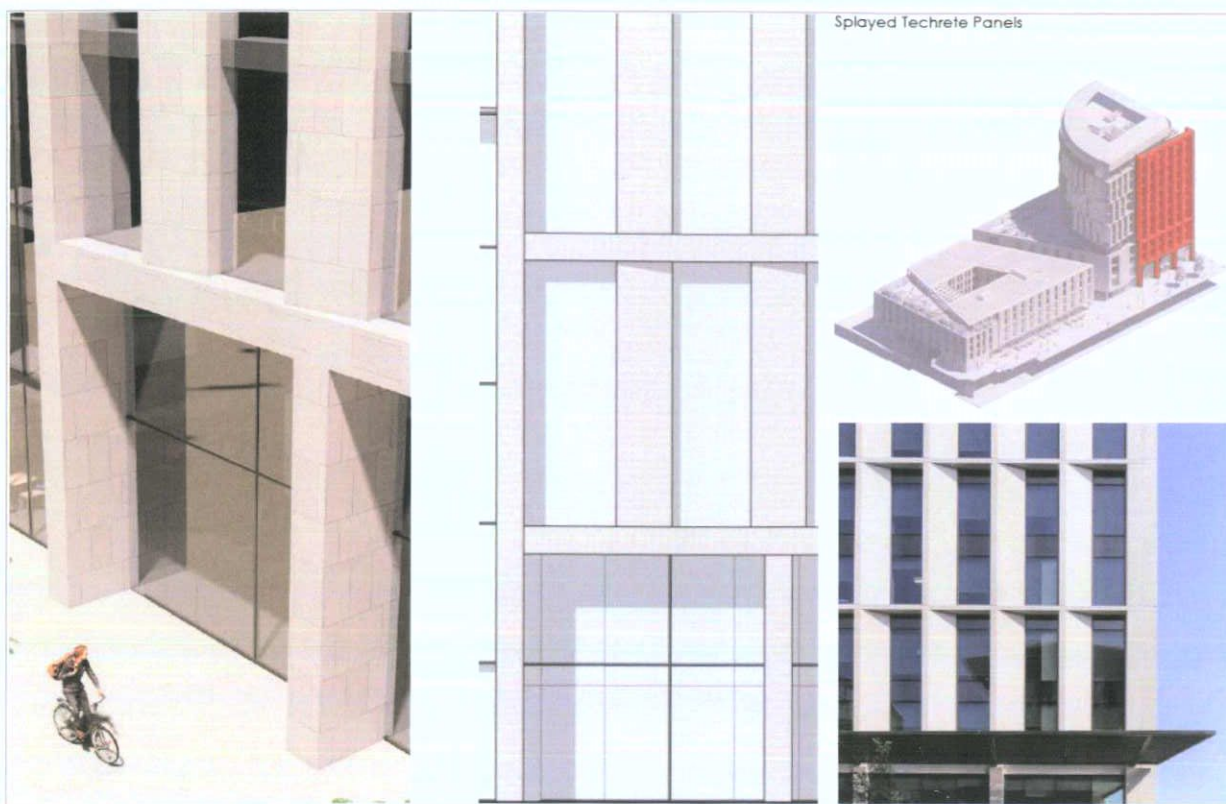
Figure 3.2.2.5.3 **Examples of Proposed Materials Anodised | Aluminium Panels**



Figure 3.2.2.5.4 **Examples of Proposed Materials Clear | Glazing**



Figure 3.2.2.5.5 Examples of Proposed Materials | Techrete



3.2.3 Service Infrastructure

3.2.3.1 Potable Watermain Network

There is a 450mm diameter public watermain in place in Military Road, along the eastern boundary of the wider HSQ complex. There is an existing connection from this watermain into the HSQ complex. It is proposed to supply the subject development via an extension to this existing water connection. In accordance with statutory requirements, a Pre-Connection Enquiry has been submitted to Irish Water, to allow an assessment of its local and regional infrastructure’s capacity to accommodate the proposed development. A Confirmation of Feasibility has been issued by Irish Water in response, indicating that the potable water demand of the proposed development can be met by the existing Irish Water infrastructure in the area, without upgrade works

Table 3.2.3.1.1 Proposed Potable Water Network

Potable Water Supply Schedule		
Pipe Diameter	Length	Materials Used
150mm	41.4m	Polyethylene (PE)

3.2.3.2 Foul Network

There is a dedicated public foul sewer in St. John’s Road West, running from west to east parallel to the subject site’s northern boundary. This sewer varies in cross-section and construction along the extent of

the site boundary, transitioning from a 300mm diameter vitrified clay pipe to a 1020mm by 630mm brick sewer. There is an existing connection from the overall HSQ complex to this public foul sewer.

All foul effluent generated by the proposed development at upper ground (podium) level and above shall be collected in pipes 225mm in diameter and flow under gravity to the existing public foul sewer in St. John's Road West. Foul effluent generated at basement and lower ground floor levels shall drain to 2no. pumping chambers beneath basement level, from which it shall be pumped to a standoff manhole at street level and discharge by gravity to the existing public foul sewer in St. John's Road West.

In accordance with statutory requirements, a Pre-Connection Enquiry has been submitted to Irish Water, to allow an assessment of its local and regional infrastructure's capacity to accommodate the proposed development. A Confirmation of Feasibility has been issued by Irish Water in response, indicating that the foul water generation of the proposed development can be accommodated by the existing Irish Water infrastructure in the area, without upgrade works.

Table 3.2.3.2.1 Proposed Foul Drainage Network

Foul Drainage Schedule		
Pipe Diameter	Length	Materials Used
225mm	29.4m	Concrete / Thermoplastic SN8
150mm	193.7m	Thermoplastic SN8
80mm	14.9m	Thermoplastic SN8

3.2.3.3 Surface Water Drainage Network and SuDS Facilities

There is a dedicated concrete public storm sewer in place beneath the footpath along the southern side of St. John's Road West, running from west to east along the subject site's northern boundary. This varies in diameter along the extent of the site boundary, increasing from 225mm to 375mm. The sewer connects into the culvert of the River Camac. Attenuation is provided within the site (described below), and the proposed surface water discharge is limited as per the Greater Dublin Regional Code of Practice for Drainage Works (Version 6). The attenuated flow will discharge to an existing private manhole, before flowing via gravity to the dedicated public surface water sewer in St. John's Road West.

The proposed scheme will have a separate, attenuated storm water drainage system designed in accordance with the Greater Dublin Strategic Drainage Study and the Regional Code of Practice for Drainage Works. Both documents are used within the jurisdiction of Dublin City Council. The first aspect is to reduce any post development run-off to pre-development discharge rates. The second aspect is the policy of the Local Authority to include Sustainable Drainage Systems (SuDS) for all new applications. These requirements are achieved using a range of SuDS devices for the scheme. These are listed below:

- Water butts for local water rainwater reuse;
- Use of green roof technology, in the form of a sedum blanket atop the proposed hotel building, to provide initial interception storage and treatment;
- Low water usage appliances, to restrict potable water demand; and

- Attenuation tanks with flow control devices, located beneath the existing basement level and sized to contain a 1-in-100-year storm event (increased by 20% for predicted climate change effects), to limit discharge from the site during extreme rainfall events.

The storm water flows from the development are released via a flow control device limited to 2.27 l/sec, as per Dublin City council requirements.

Table 3.2.3.3.1 Proposed Surface Water Drainage Network

Surface Drainage Schedule		
Pipe Diameter	Length	Materials Used
225mm	3.7m	Concrete / Thermoplastic SN8
80mm	15.3m	Thermoplastic SN8

3.2.4 Open Spaces and Lighting

The layout of the open spaces to the development are proposed over four levels, with the ground level public open space, the lower ground level internal courtyard to the Hotel block, a level 3 roof terrace to the Hotel with a level 4 and 11 roof terrace to the Commercial block. The internal courtyard at lower ground level to the Hotel block and the roof terraces at levels 5 and 11 for the Hotel and Commercial blocks will deliver passive amenity to the Hotel residents and Office staff.

To all external areas the layout of the lighting as prepared by IN2 has been designed with the landscape to deliver the LUX levels required in a manner which is visually appealing to the overall aesthetic of the public and communal open space areas of the Hotel and Commercial blocks.

3.2.4.1 Landscaping of Amenity Areas

The internal courtyard to the Hotel block will provide a communal area of 193.5 Sq./m for the residents to which is included 22.7 Sq./m of ornamental planting, situated in raised planters. The remaining 170.8 Sq./m will be finished with a paved surface allowing a flexibility of uses including outdoor dining. The raised planters have been arranged to subdivide the courtyard and provide a buffer of planting between the central courtyard area and the surrounding bedrooms.

The planting for the courtyard planters has been selected to work within this shaded area and includes light canopy trees (Betula jacquemontii, Magnolia Galaxy, Sorbus aucuparia) ornamental shrub and hedge plants (prunus otto luyken, Rudbeckia goldstrum, Saracococca confuse, Helleborus orientalis, Hydrangea limelight, viburnum davidii, carpinus betulus) and bulb planting (Narcissus thalia, and Tulip 'Triumphator').

The ground level open spaces can be separated into three distinct areas.

- Area 1 is the public pathway between the existing St John Road roadway and the Hotel and Commercial block building north facing building line.

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- Area 2 is the continuation of the existing central plaza along the southern building line of the Commercial Block and the primary Hotel entrance with the extension of the materials used in the existing plaza for the length of the access lane between the central plaza and St Johns Road.
- Area 3 is the area to the south of the Hotel block which has been set out to cater for external dining while knitting seamlessly with the permitted residential development (ABP Ref. TA29S.311591) and the east – west route provided therein.

The design of Area 1 has been proposed and set out to deliver access for all from the existing split level public pathway on St John Road east of the proposed development, to the proposed public lane linking St Johns Road to the central plaza (now referred to as Wellington Lane). Travelling west towards the development on St Johns Road the upper-level pathway is currently discontinued at the corner of the existing Eir office building. Under the proposed development this pathway will continue as a sloping pathway connecting the existing upper-level public footpath to the lower road level public footpath. To the left and right of the sloping pathway linear raised planters will be planted with columnar tree and suitable ornamental shrubs to help to buffer the noise of road traffic from the Commercial block while providing visual amenity to the public realm on St Johns Road. At the connection point between the sloping pathway and the lower-level pathway the raised planter will include a seating area allowing for the development of a social space at this junction point. Travelling west from this junction point on the St Johns Road public pathway pedestrians can access Wellington Laneway via a series of steps or a sloping pathway or continue west along the St Johns Road public pathway past the Hotel block. The sloping pathway and steps providing access from St Johns Road into Wellington Lane and onward to the central plaza have been designed to maximise ease of access for all. Designed as a gently sloping pathway as you approach Wellington Lane from the east a series of steps merge into the sloping pathway as you approach Wellington Lane from the West. Except for the sloping pathway leading into Wellington Lane, the proposed materials to the public realm will match those currently on the public pathway to St Johns Road. To the west of the access to Wellington Lane the public pathway includes a raised planter between the pathway and the building line of the Hotel block, like those proposed to the building line of the Commercial block the planter will contain both columnar trees and ornamental shrub planting to provide visual amenity to the public realm and to help absorb the traffic noise from St Johns Road. Continuing west on the St Johns Road pathway at the north-western corner of the Hotel block the pathway turns left providing pedestrian access to the basement carpark. The volume of Area 1 is 787 Sq./m of which 225 Sq./m are planted areas and the remaining 562 Sq./m are a mix of public realm pathways and steps.

Area 2, Wellington Lane has been designed to provide a direct physical link to St John Road from the central plaza via a gently sloping pathway and a direct visual connection from the central plaza to the Wellington Monument (Wellington Testimonial). The laneway has an area of 364 Sq./m. This includes 61 Sq./m of raised planters which are situated to the left and right of the laneway where the laneway borders the office use of the Commercial block and bedrooms of the Hotel block. The surface finish to Wellington Laneway is a continuation of the materials used in the as-built central plaza. Under the permitted SHD, the materials currently used in the as built plaza have been extended close to the building line of the Commercial block and Office block under this application these materials will continue to the building line of the Commercial Block and the Hotel block and continue down the Wellington Lane to meet with the public realm of St Johns Road. The objective behind the use of these existing materials as part of Wellington Lane is to provide a continuation from the existing plaza to the public realm at St Johns Road to help increase permeability and legibility between both areas.

Area 3 of the proposed ground level landscape open space is to the south and west of the Hotel Block

with an area of 202 Sq./m the design of this area and the materials proposed are a continuation of the permitted residential development, allowing for a seamless connection between the Hotel block and block A and E of the SHD, the area includes 15 Nr. Bike parking stands providing 30 Nr. bike parking spaces. At the junction with the boundary wall of the Royal Hospital Kilmainham the planting permitted as part of the residential scheme will continue, thereby providing a consistency of treatment to the western boundary of the development the area of planting is 7.5 Sq./m with the, the base of the wall being planted with shade tolerant Parthenocissus species including henryana, quinquefolia, tri veitchii with Trachleospernum jasminoides these climbers will establish to provide a 'green' façade to the boundary wall, the base of the wall is also planted with a Prunus Lusitanica. Angustifolia hedge.

The planting to areas 2 and 3 like that of the Hotel courtyard have been selected to deliver year-round interest, and includes species currently found within the gardens of the Royal Hospital Kilmainham and works within the post construction site environment. The tree species selected include Tilia eur 'Pallida', Fagus Syl Dawyck Gold, Acer campestre and, Betula pubescens, the ornamental shrub and grasses include Calamagrostis Karl Forester, Syringia vulgaris, Choisya ternate sundance. Allium, Tulip and Daffodils are also spread across the planted areas to provided burst of colour in spring and summer.

Both the Hotel and Commercial blocks have accessible **roof terraces at level 3 for the Hotel and Level 4 for the Commercial Block**. To the Hotel block the roof terrace has an area of 330 Sq./m. The roof terrace has been arranged to deliver a series of social spaces through the provision of raised planters and seating areas. The raised planters provide a total area of 86.2 Sq. m and will be planted with a mix of species suitable for a roof terrae environment. The Commercial block level 4 roof terrace has been arranged in a similar manner to the that of the Hotel block with a total area of 630 Sq./m. The raised planters which surround the roof terrace to the north and western boundaries have been developed with a series of folds creating seating points and the development of small-scale passive amenity area around a central planted island. The raised planters provide 289.5Sq/m of planting and visual amenity while the remaining 340.5 Sq./m will be paved, allowing for areas which can accommodate outdoor seating and dining areas. The arrangement of the plants and planters on the roof terraces also allows for views north towards the Phoenix Park and west toward the gardens of the Royal Hospital Kilmainham while providing shelter from the prevailing winds.

Level 11 of the Commercial block has a roof terrace at its south-eastern corner which is accessible from the office floor. The terrace has an area of 70.1 Sq./m which includes 9 Sq./m of raised planters with the remainder of the terrace being provided as a paved area with views to the courtyard below and south and east over Dublin.

3.2.4.2 Lighting

The proposed public lighting within the development has been designed by IN2 Engineering in accordance with the requirements of the following standards:

- BS 8300:2018 Design of an accessible and inclusive built environment
- Institution of Lighting Professionals – Guidance Notes for the Reduction of Obtrusive Light GN01:2011
- DCC Public Lighting General Specification 2020

3.3 Construction of Scheme

3.3.1 Construction Programme

3.2.1 Construction Programme and Phasing

Subject to a successful grant of planning, it is intended for construction of the proposed development to commence in Q4 2023. The proposed development is anticipated to be constructed over a period of between 36 and 48 months.

The current indicative phasing suggests that the proposed development is to be constructed sequentially from east to west: the proposed office building to proceed first, followed by the hotel in the western part of the site. The final phasing and associated Construction Traffic Management Plan shall be determined by the appointed main contractor and submitted to DCC for approval prior to commencement.

The Contractor will be required to prepare a detailed Construction Management Plan on foot of these proposals. The Construction Management Plan will ultimately include details on the following:

- Daily and weekly working hours;
- Agreed haul routes for incoming materials;
- Licensed hauliers to be used;
- Disposal sites;
- Travel arrangements for construction personnel;
- Appropriate on-site parking arrangements for construction personnel to prevent overspill parking on the local road network;
- Temporary construction entrances to be provided;
- Wheel wash facilities if required;
- Road cleaning and sweeping measures to be put in place if required;
- Temporary construction signage to be put in place and maintained;
- Any proposed traffic management measures such as temporary traffic lights and signage on any public roads.

A Traffic Management Plan (TMP) will be prepared for the works in accordance with the principles outlined below and shall comply at all times with the requirements of:

- Department of Transport Traffic Signs Manual 2010 – Chapter 8 Temporary Traffic Measures and Signs for Roadworks
- Department of Transport Guidance for the Control and Management of Traffic at Road Works (2010)
- Any additional requirements detailed in the Design Manual for Roads and Bridges (DMRB) & Design Manual for Urban Roads & Streets (DMURS)

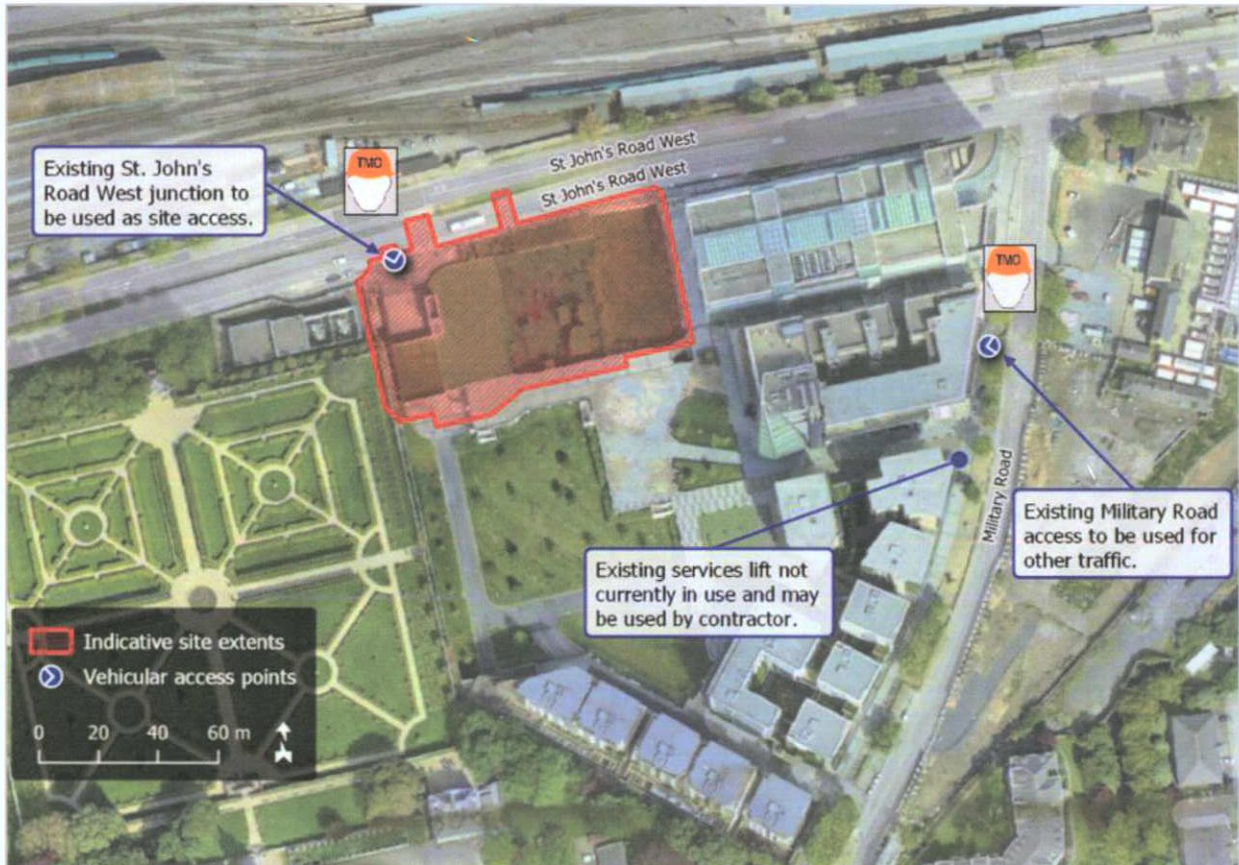
3.3.1.1 Vehicular Access to Site

The site is currently accessed directly from St. John's Road West. It is anticipated that for the duration of the construction works, all construction access and egress for deliveries will be via St. John's Road West, which provides access to the M50.

During the construction works, access to the existing basement areas of the wider Heuston South Quarter

(HSQ) complex will be maintained, with light vehicles (e.g., cars) encouraged to utilise the existing Military Road access point. An agreed traffic management strategy for the existing basement carpark will be provided to all HSQ residents and staff currently utilising the basement. Access for large servicing and delivery vehicles to the retail units, and delivery areas at basement level, shall also be maintained from St. John's Road West. The shared access will necessitate full time Traffic Management Operatives at the St. John's Road West and Military Road access points for the duration of the works.

Figure 3.3.1.1 Construction-Stage Vehicular Access Provisions



3.3.1.2 Land Use

The exact location of the construction compound is to be confirmed in advance of commencement of the works (and agreed with Dublin City Council). The location of the construction compound is likely to be relocated during the course of the works, in line with the phasing of the development.

- The construction compound will include adequate welfare facilities such as washrooms, drying rooms, canteen and first aid room as well as foul drainage and potable water supply.
- Foul drainage discharge from the construction compound will be tankered off site to a licensed facility until a connection to the public foul drainage network has been established.
- The construction compound's potable water supply shall be protected from contamination by any construction activities or materials.
- The construction compound will be enclosed by a security fence.
- Access to the compound will be security controlled and all site visitors will be required to sign in on arrival and sign out on departure.
- A permeable hardstand area will be provided for staff car parking.

- A separate permeable hardstand area will be provided for construction machinery and plant.
- The construction compound will include a designated construction material recycling area.
- A series of way finding signage will be provided to direct staff, visitors and deliveries as required.
- All construction materials, debris, temporary hardstands etc. in the vicinity of the site compound will be removed off-site on completion of the works.

3.3.2 Proposed Construction Works

3.3.2.1 Hoarding, Site Security, and Access Control

The site area will be enclosed with hoardings and lockable gates with screened fencing at the entry and exit points, details of which are to be agreed with Dublin City Council. All hoarding positions shall respect the existing vehicular routes at podium level for servicing and emergency vehicles. Hoarding and fencing will be maintained to an acceptable condition to prevent unwanted access to working areas and provide appropriate noise attenuation, screening, and site security where required.

Site security will be the responsibility of the contractor who will provide adequate security to prevent unauthorised entry to or exit from any working areas. The following measures may be used to prevent unauthorised access:

- Install CCTV and alarm systems where required (CCTV and security systems to be sited and directed so that they do not intrude into occupied residential properties);
- Provide adequate security guards and patrols;
- When there is no site activity, close and lock site gates and set appropriate site security provisions in motion;
- Consult with neighbouring properties and local crime prevention officers including Dublin City Council and An Garda Síochána on site security matters as required; and
- Prevent access to restricted areas and neighbouring properties by securing equipment on site such as scaffolding and ladders.

Access to site will be controlled by means of an electronic access control system and camera remote monitoring system for out of hours use. During working hours, a gateman will control traffic movements and deliveries. The Contractor will pay particular attention to pedestrian traffic and safety at the entrances. All vehicles will enter and exit the site in a forward direction.

Pedestrians will have right of way. If required, alternate pedestrian routes around the site will be created and clearly signed. Depending on the progress of the works and temporary constraints imposed by the construction methodology, the location(s) of pedestrian access and exit points to the site may vary.

3.3.2.2 Removal of Services

Prior to site clearance, a utility survey will be carried out by the contractor to identify existing services. All services on site will be disconnected, diverted or removed as agreed with service providers.

3.3.2.3 Site Clearance

The existing land previously underwent construction works and the site may contain existing services and hazards.

The following is a high-level method statement for the demolition/break up of existing reinforced concrete

and hardstanding:

- Establish a site set-up and welfare facilities.
- Prior to commencement of any earthworks, an invasive species inspection shall be carried out in accordance with the guidance outlined in the Wildlife Act 1976 and 2000 and further regulated through the European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011). Should the survey identify any areas of Japanese Knotweed infestation, a Treatment Plan shall be developed in accordance with published guidelines (namely, *The Environment Agency, Managing Knotweed on Development Sites, Knotweed Code of Practice, 2013*). This survey will be undertaken to supplement the surveys undertaken to inform Chapter 6 of this EIAR, which did not record any invasive species.
- Carry out a detailed services survey of the site to identify all buried services, determine what services are live, redundant and potentially serve neighbouring properties. To be performed before any ground break up is performed on site.
- Carry out any necessary services diversions and decommissioning works.

Breaking ground will only take place following a full survey. Any materials identified as being hazardous will be removed and disposed of in strict accordance with the applicable legislation. All services will be disconnected and removed. Any existing slabs or hardstanding and concrete foundations will be broken by excavators. All reinforced concrete will be partially processed on site to separate the steel from the concrete. All materials will either be fully separated on site and disposed of to the applicable landfills / processing facility or failing that material will be sent to a processing facility for separation. Relevant certification and documentation confirming the final separation and most environmentally friendly disposal will be available.

3.3.2.4 Demolition and Excavation

The current landscaped area to the centre of the site was formed in 2013/2014. Inert material to a depth of approximately 3m was imported to form the landscaping. The excavated site below this imported material consists of virgin black boulder clay, typical of this area of the city. In addition, a perimeter secant pile wall was constructed around the proposed site in 2004/2005, with additional works carried out in 2013/2014. Therefore, it will not be necessary to construct any further perimeter piled walls.

It is estimated that approximately 2,400m² of existing reinforced concrete structure will be removed from the subject site during preparatory/demolition works. This shall be carried out using non-percussive techniques, such as small scale Brokk Concrete Munchers (or similar). Smaller quantities of bituminous hardstanding material and soil/stones will also be removed, with some limited excavation required to achieve a reduced level locally. It is estimated that between 3,000m³ and 5,000m³ of waste material will be generated by these preparatory works.

Before foundation works commence, site flooding mitigation measures must be put in place and appropriate method statements submitted to the design team.

The Contractor must prepare a Construction Waste 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) and ensure that all material is disposed of at an appropriately licensed land fill site. The Contractor must also outline detailed proposals within the Construction Management Plan to accommodate construction traffic.

3.3.2.5 Foundation Works

It is likely that a combination of Continuous Flight Auger (CFA) piling and traditional strips will be required for the substructure of the proposed buildings. The excavation and preparation of the foundation works will generate spoil that must be disposed of at an appropriate licensed land fill site. The concrete operations associated with the foundation will require concrete deliveries to site.

3.3.2.6 Superstructure

The construction of the superstructure will involve complex 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.

Potential options for the superstructure design are:

- RC Column & Flat Slab
- RC/Masonry Cross Wall & Precast Slab
- Precast Concrete Twin Wall & Precast Slab

The following is an indicative outline of the construction programme:

1. Building Structure

- Demolition of the existing basement and podium structure where required.
- Construction of the foundations/substructure.
- Construction of rising elements to 1st floor and 1st floor slabs.
- Similar sequence of construction of rising elements and floor slabs.
- Note allowance for service construction concurrently or before superstructure.

2. Envelope / Cladding

- Envelope works will follow in a sequential manner.

3. 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.

4. Fit-out

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

5. 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.

3.3.2.7 Erection and operation of cranes

It is envisaged that three to four tower cranes will be temporarily erected to accommodate the construction works for the distribution of reinforcing steel, concrete skips, concrete formwork elements, and general building materials. The contractor will need to obtain all necessary licences from the Local Authority. A "mast climber" may be installed at some local areas to facilitate façade features. The mast climber is essentially a climbing platform that allows the user to safely access any level without the requirement for a full scaffold tower.

3.3.3 Site Working Hours

Subject to the agreement of the Planning Authority, the proposed site operation hours shall be 07:00 to 19:00 Monday to Friday (excluding public holidays) and 08:00 to 14:00 on Saturdays. No working will be allowed on Sundays or on public holidays. It may be necessary for some specific construction activities to take place outside of these times and in those case, a specific derogation will be sought from the Planning Authority.

Deliveries to site will be arranged to arrive within normal working hours as set out above. There may be specific deliveries which need to arrive outside of these hours, for example where large loads are limited to road usage outside peak times. In all such cases the applicant will again liaise and agree any necessary derogations with the Planning Authority.

3.3.4 Emissions & Nuisances

No significant impacts will arise in terms of emissions and nuisances during the construction and operational period of the development. A detailed assessment of the potential impacts on air quality and noise and vibration are provided in Chapters 9 and 10 respectively.

3.3.5 Health and Safety

The risk of accidents arising as a result of the development at both the construction and operational phase will be minimised through detailed design considerations and health and safety management.

Safety, health and environmental issues on the development are a primary consideration in the construction methods adopted. The construction team will develop detailed health and safety plans, specific environmental, fire and accident procedures to suit the construction sequence of the development.

As required by the Safety, Health and Welfare at Work (Construction) Regulations 2013 (as amended), a Health and Safety Plan will be prepared by the Contractor which will address health and safety issues from the design stages through to the completion of the construction and maintenance phases. This Plan will be reviewed as the proposed development progresses. The contents of the Health and Safety Plan will comply with the requirements of the Regulations.

All personnel working on site will be required to have a valid Safe Pass card.

3.4 Operation of Scheme

As demonstrated in the later chapters of this EIAR, post-construction, the operation of this development is not likely to give rise to any significant additional impacts in terms of activities, materials or natural resources used or effects, residues or emissions which are likely to have a significant impact on population and human health, biodiversity, soils, water, air, climate, landscape.

It is stated in Section 3.2.3.3 above and in Chapter 8 that during the operational phase, storm water run-off will be limited to 2.27 litres per second. It is stated in Chapter 12 of this EIAR that approximately 197,500 litres per day (197.5m³/day, or an average flow of 2.286 l/sec) of foul water will be produced during the operational phase of this development.

During the operational phase no waste soils will be produced by the proposed development

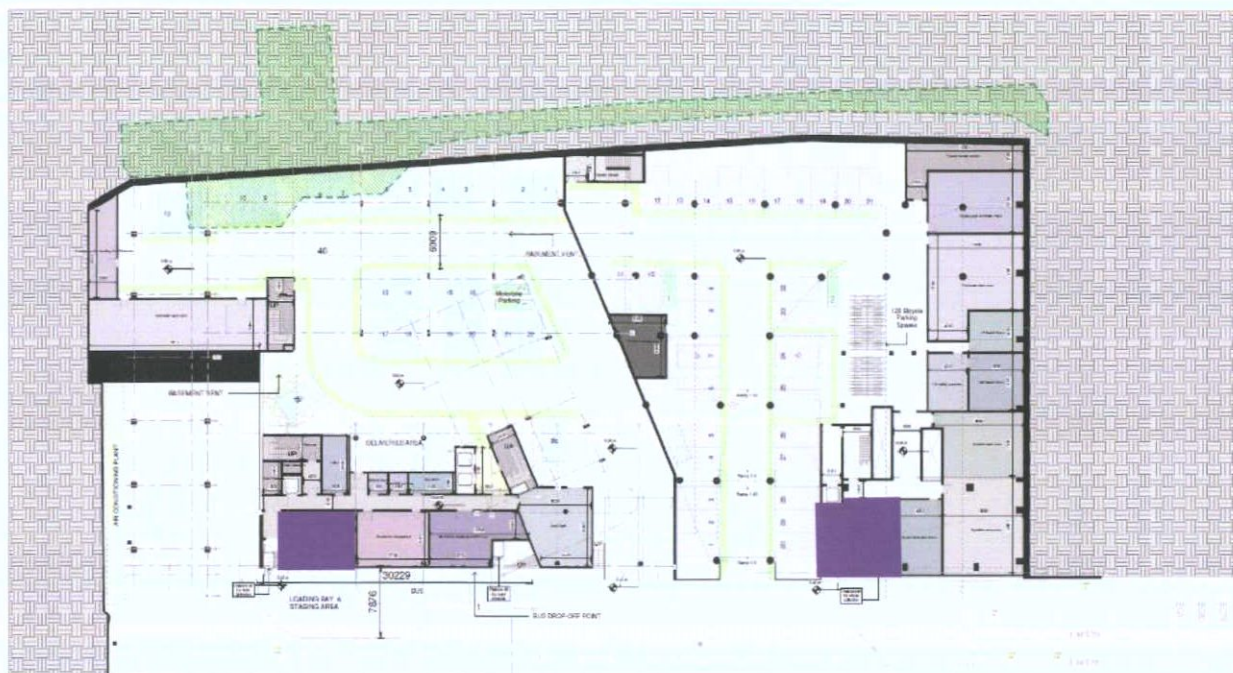
It is stated in Chapter 9 of this EIAR that emissions to air during the operational phase arise from heating and traffic. The proposed development will be heated using Air Source Heat Pumps (ASHP's) in conjunction with Variable Refrigerant Flow (VRF) air conditioning. In this way, the proposed development will be free from onsite fossil fuel usage and therefore minimising local anthropogenic gas emissions. The assessment in chapter 9 found that the operation of the proposed development would have an imperceptible impact on local air quality.

3.4.1 Waste Management During Operational Phase

The Waste Storage Areas (WSAs) for both the hotel and office are located at carpark -1 level and are accessible from the St. Johns Road entrance. On collection day, all waste from WSAs will be gathered at the designated collection point. The waste management company can collect and transport the waste away safely, accessing the site via the entrance / exit at St. John's Road West.

The retail tenant will be responsible for transferring their own bins to/from their individual WSA to the street for collection from the Public Plaza.

Figure 3.4.1.1 Waste Collection areas in purple.



3.5 References & Definitions

Dublin City Development Plan 2016–2022, 'Strategic Environmental Assessment' (2016)

4. CONSIDERATION OF ALTERNATIVES

This Chapter provides ‘a description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the person or persons who prepared the EIAR, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects’ as required by Schedule 6 of the Planning and Development Regulations, 2001-2022.

The preparation of this Chapter has had regard to the EPA’s ‘Guidelines on the information to be contained in Environmental Impact Assessment Reports’ May 2022. Regard has also been had to the previous EPA Guidance, to the European Commission Impact Assessment Guidelines, 2017, and EIA Directive 2014/52/EU, which states that information for the Environmental Impact Assessment Report should include:

‘a description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer.’

The European Commission Guidelines summarise that the Developer needs to provide:

- A description of the reasonable alternatives studied; and
- An indication of the main reasons for selecting the chosen option with regard to their environmental impacts.

The principal rationale for the development proposal is set out below to provide context for the proposed development and the selection of the proposed development site. The chapter goes on to identify the reasonable alternatives considered in terms of size and scale, and the environmental factors considered in respect of each alternative and the main reasons for select the option chosen. The identification of reasonable alternatives has been carried out in the context of the nature and scale of the development proposed being predominantly commercial, together with the established regulatory context.

This chapter is structured as follows:

- Alternative locations (Section 4.2)
- Alternative construction (Section 4.3)
- Alternative layouts and designs (Section 4.4)
- Alternative materials (Section 4.5)
- Alternative mitigation measures (Section 4.6)
- "Do Nothing" Alternative (Section 4.7)

4.1 Introduction

4.1.1 Description of Development

The application site forms the northern part of a larger development site known as Heuston South Quarter (HSQ). The application site is bound principally by St. John’s Road West (to the north), Nos 1 & 2 HSQ

(formerly the Eir Building) to the east with Military Road beyond. To the west is the formal gardens of the Royal Hospital Kilmainham (RHK) and to the south is the site of a recently permitted residential development (ABP Ref. TA29S.311591), which is also under the control of the applicant.

Figure 4.1 Site Location in Context (source: google maps)



The proposed development will provide a mixed-use commercial development comprising of a hotel (238 no. bedrooms) and an office block providing a cumulative Gross Floor Area (GFA) of 32,602 sqm, inclusive of basement area.

The proposed development includes site clearance and localised demolitions to remove part of the podium and Basement Level -1 reinforced concrete slabs at the interface of the proposed hotel and office blocks, together with the incorporation of part of the existing basement level structure extending to approximately 4,228 sq.m (GFA).

The proposed hotel building occupies the western part of the site and comprises a 5-storey hotel (over lower ground and basement level). At basement level provision is made for 24 no. car parking spaces; 2 no. motorcycle spaces together with plant and storage rooms. A waste storage area with dedicated loading bay / staging area and coach set down area is provided along with dedicated set-down area for deliveries.

The proposed office block occupies the eastern part of the site and is separated from the proposed hotel to the west thereof by a pedestrian lane. The proposed office rises to 12-storeys (over lower ground and basement levels) to provide 19,474 sq.m of office floorspace (GFA) from lower ground floor level and above. Provision is made at basement level for 30 no. car parking spaces; 2 motorcycle spaces and 120 no. bicycle storage spaces together with plant and storage rooms. Provision is made for a further 196 no. bicycle storage spaces at Lower Ground floor level plus changing rooms. At podium level 2 no. ESB sub-stations and switch rooms are proposed. The foyer and entrance are provided at the southern end of the