building at Podium level along with a Retail/Café unit of 208 sq.m at the South-Western corner of the building.

The proposed basement levels beneath the hotel and office buildings will be integrated within the existing basement level 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.

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 realignment 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.

4.1.2 Rationale for Development

The subject site is zoned Objective Z5 (SDRA7) in the Dublin City Development Plan 2016-2022 (DCDP), 'to consolidate and facilitate the development of the central area, and to identify, reinforce, strengthen and protect its civic design character and dignity.' This zoning objective applies to the city centre area. The DCDP identifies that the primary purpose of this use zone is to sustain life within the centre of the city through intensive mixed-use development.

It goes on to identify that the 'strategy is to provide a dynamic mix of uses which interact with each other, help create a sense of community, and which sustain the vitality of the inner city both by day and night.'

Hotel, office and retail uses are permissible in principle under the Z5 zoning objective.

The site is within Strategic Development and Regeneration Area 7. The DCDP states that the designated SDRAs are important brownfield sites with the potential to deliver a significant quantum of mixed-uses and create synergies to regenerate their respective areas. The DCDP prioritises the renewal and regeneration of these areas by a series of guiding principles. Guiding principal No. 5 in respect of SDRA7 seeks to promote the delivery of 'mixed-use in appropriate ratios in order to generate urban intensity and animation. This will require the major uses of residential and office to be complemented by components of culture, retail and service elements.'

It is envisaged that the range of existing residential development will be complimented by the residential development permitted to south of the subject application site (under SHD Application Ref.

TA29S.311591). The character of the northern frontage of the site along St John' Road West is considered to be more suitable for commercial than residential development and provides an opportunity to deliver additional office floorspace that will consolidate and improve the employment floorspace within the mixed-use neighbourhood. The proposed hotel use will further enhance the current mix of uses present and will improve the vitality and vibrancy of the mixed-use precinct. The proposed additional office floorspace and tourist accommodation in the form of a hotel is in accordance with the Z5 zoning objective and guiding principle No. 5 of the SDRA (see below) that encourages the delivery of a mix of uses (in appropriate ratios) that includes a significant quanta of office floorspace and residential development that is complimented by a variety of other complimentary uses, such as hotel and retail uses.

The proposed development provides for the delivery of high-quality office and hotel development on available, serviced and appropriately zoned lands within Dublin City Centre. The Heuston Gateway area is identified as a Strategic Development and Regeneration Area (SDRA 7) in the Dublin City Development Plan, focused on the nation's busiest public transportation interchange. The SDRA area will develop as a Western Cluster and a counterpart to the Docklands at the eastern end of the city.

Development in the Heuston area in which the site is situated is guided by the following nine principles set out in the Development Plan:

- 1. To develop a new urban gateway character area focused on the transport node of Heuston Station with world class public transport interchange facilities, vibrant economic activities, a high-quality destination to live, work and socialise in, a public realm and architectural designs of exceptional high standard and a gateway to major historic, cultural and recreational attractions of Dublin City.
- 2. To incorporate sustainable densities in a quality contemporary architecture and urban form which forges dynamic relationships with the national cultural institutions in the Heuston environs.
- 3. To ensure the application of best practice urban design principles to achieve:
 - A coherent and legible urban structure within major development sites
 - A prioritisation on the provision of public space
 - A successful interconnection between the development site and the adjacent urban structure
- 4. To protect the fabric and setting of the numerous protected structures and national monuments, many of which are major national cultural institutions.
- 5. To incorporate mixed-use in appropriate ratios in order to generate urban intensity and animation. This will require the major uses of residential and office to be complemented by components of culture, retail and service elements.
- 6. To improve pedestrian and cycle linkages throughout the area and through key sites, with a particular focus on seeking the following new linkages/improvements: along St John's Road West; from St John's Road to the Royal Hospital Kilmainham via Heuston South Quarter, subject to agreement with the OPW/RHK, on the nature of the proposed linkage; from Dr Steevens' Hospital to IMMA, with consideration given to a new path along the banks of the river Camac.
- 7. As a western counterpoint to the Docklands, the Heuston gateway potentially merits buildings above 50 m (16-storeys) in height in terms of civic hierarchy. Sites particularly suited for tall buildings include:

- OPW building: corner site on OPW lands adjacent to Dr Steevens' Hospital and Park, and opposite
 the south façade of the station building.
- CIE building: site to the north of the station building on the river relating to the West Terrace and River Terrace. Any new mid or high-rise buildings must provide a coherent skyline and not disrupt key vistas and views.
- 8. The 'Cone of Vision' (COV), as set out in the 2003 Heuston Framework Plan, represents a significant view between, the Royal Hospital Kilmainham and the Phoenix Park extending from the west corner of the north range of the Royal Hospital Kilmainham, and the north-east corner of the Deputy Master's House to the western side of the Magazine Fort and east edge of the main elevation of the Irish Army Headquarters (former Royal Military Infirmary) respectively. Any new developments within this 'cone' shall not adversely affect this view. A visual impact analysis shall be submitted with planning applications to demonstrate this view is not undermined.
- 9. Other important visual connections to be respected include Chesterfield Avenue to Guinness Lands and from key parts of the City Quays to the Phoenix Park (Wellington Monument).

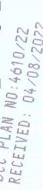
4.2 Consideration of Alternative Locations

The lands on which the application is made are zoned Objective Z5 (SDRA7), 'to consolidate and facilitate the development of the central area, and to identify, reinforce, strengthen and protect its civic design character and dignity' in the DCDP. The site forms part of SDRA 7 'Heuston Station and Environs', which seeks 'to develop a new urban gateway character area focused on the transport node of Heuston Station with world class public transport interchange facilities, vibrant economic activities, a high-quality destination to live, work and socialise in, a public realm and architectural designs of exceptional high standard and a gateway to major historic, cultural and recreational attractions of Dublin City.

The DCDP was the subject of Strategic Environmental Assessment (SEA). The issue of alternatives is a critical function of the Strategic Environmental Assessment (SEA) process and is necessary to evaluate the likely environmental consequences of a range of alternative development strategies for the county within the constraints imposed by environmental conditions. Section 4 of the SEA assessed four growth alternatives for the Plan as follows;

- Alternative 1 Targeted Growth around existing identified growth centres
- Alternative 2 Market Led Growth
- Alternative 3 Selected Concentration of growth targeted on existing SDRAs/KDC/SDZ areas
- 'Do-Nothing' Scenario

The SEA assessment concluded that Alternative 1, the Targeted Growth around existing identified growth centres scenario, is the preferred scenario. This alternative seeks to target and consolidate growth around the Z5 city-centre mixed use zoning area as well as existing identified growth centres such as the Key District Centres (KDCs), the SDRAs, the Strategic Development Zones and areas identified in Local Area Plans. Under this preferred growth scenario, development is preferred in locations such as the subject site as opposed to lands outside of targeted growth areas such as SDRAs.



The subject site forms part of an unfinished development permitted under An Bord Pleanála Ref. PL29S.206528 (DCC Ref. 2656/03). Under DCC Reg. Ref. 2724/13 permission was granted for temporary landscaping works to improve the visual impact of the undeveloped areas of the site, including the current subject site.

It is considered that the use of this site for purposes of commercial development (comprising an office and hotel building) is preferable to the current under-utilised state of the subject site where much of the basement works have already been completed. Undertaking these works at another site would involve unnecessary use of building materials and the disposal to landfill of soils.

Based on the foregoing, it was not considered necessary to appraise any alternative locations for the proposed residential development.

4.3 Alternative Construction

The proposed development is anticipated to be constructed over a period of approximately 36 to 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.

4.3.1 Alternative Construction Methods

A range of construction methods were considered for this design and ultimately the contractor will determine which method suits based on a number of factors including:

- Pre-cast modular: This system involves manufacturing walls, floors etc off site and assembling on site. Co-ordination of all elements would need to be completed before fabrication and delivery to site.
- Traditional In-situ construction: This is a more labour-intensive system and would require a larger workforce but less up-front co-ordination.

Ultimately It will be up to the contractor to choose the most appropriate method that suits them based on the following factors:

- 1. Cost the cost effectiveness of each system
- 2. Speed each system has pros and cons in relation to speed of construction, the speed of precast involves much more co-ordination upfront whereas the traditional method allows for a more agile construction with less co-ordination upfront.
- 3. Market availability the labour market and availability of materials / manufacturing will need to be considered.

From a technical and environmental perspective, no significant difference between these two methods has been identified.

4.4 Alternative Layouts & Designs for Development Site

A number of reasonable alternative layouts for the proposed development were considered over the course of the design process. In addition, the proposals for the development were subject to detailed discussion with the Planning Authority prior to the principles of the proposed layout being finalised.

The initial layouts, and alternatives considered have been based on the guidance in the DCDP and relevant national policy, including the need to respect the setting of the RHK and the cone of vision (COV) that traverses the subject site from the west corner of the north range of the Royal Hospital Kilmainham (RHK) and the north-east corner of the Deputy Master's House, to the western side of the Magazine Fort and east edge of the main elevation of the Office of the Director of Public Prosecutions (former Royal Military Infirmary that is also known as the Gandon building). The interface between the RHK and its gardens informs the urban design, form, massing, height and design quality of the proposed development. Alternative massing / heights, materiality and rhythm were assessed by the Design Team to ensure the development respects the historic significance of this place.

- Granted Parent Permission (Masterplan Scheme) under DCC Reg. Ref. 2656/03, as Amended
- Design Iteration 1: Full Residential Scheme
- Design Iteration 2: Full Commercial Scheme
- Design Iteration 3: Mixed Use Scheme
- **Design Iteration 4:** Commercial Scheme (Hotel and Office)
- **Design Iteration 5:** Commercial Scheme (Hotel and Office)
- Design Iteration 6: Proposed Development

The significant environmental issues and potential effects which informed the proposed layout included architectural heritage, visual impact, population and human health, and transportation. Other factors that were fundamental to informing and directing detailed design included the provisions of the Development Plan in respect of SDRA 7 'Heuston and Environs'.

At the early stages the entire site was included in the design options. For the purposes of this application, the commercial element has been separated from the adjoining residential development which is the subject of a Strategic Housing Development application to ABP under ABP Ref. TA29S.311591.

4.4.1 Previously Granted Parent Permission (Masterplan Scheme) – DCC Planning Reg. Ref. 2656/03, as Amended

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.

The parent permission was subsequently amended by a modification permission granted on the 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 subsequent and pursuant to the Parent Permission within the lifetime of the Parent Permission. All elements of the Parent Permission have been modified in one way or another (Blocks 1 to 10 inclusive). These can be summarised as follows:

Block 1 - Planning Ref. 1501/08;

Block 2 - Planning Ref's 2218/05 and 1055/07;

The Masterplan for the site envisioned a linear office development along St. John's Road that was partially completed in the first phase of development (i.e., Blocks 1 and 2 of the parent permission, as amended above)

Figure 4.4.1.1 Masterplan Scheme Permitted Reg. Ref. 2556/03

Two planning applications were made subsequent to the masterplan but did not proceed to construction stage. One application was for a high-rise hotel building on the site of the current proposed office, and the second application was for a small office building in the currently proposed hotel site.

The hotel application in relation to Building 2 was for a nine-storey building with a set back between ten and fourteen storey level from the northern site frontage (St John's Road West). The development also sought a change of use from previously permitted office element within Block 2 and basement of Block 1 to a commercial hotel use of 22,013 sqm gross floor area. The office application for Building 1 sought to

provide a replacement building of a 4-storey height (including a set back penthouse level accommodating c.260sqm GFA of office space), and providing c.5,158sqm (GFA) of commercial space distributed from ground floor to third floor levels. The proposed development also included the provision of a pedestrian street running north to south between Blocks 1 & 2, along the eastern site boundary.

These options were not pursued for technical reasons. The layout and scale of the hotel is not what is required by the current market. Standards for hotel rooms have changed since 2007 and they are inefficient in the layout and scale of the development that make it unviable commercially. The office building was planned when there was little demand for office space and as such its size and layout would no longer be lettable in the market given its prominent location. Refer to Figure 4.4.1.2 below

Figure 4.4.1.2 Amendments to Masterplan Block 1 – Planning Ref.1501/08, Block 2 – Planning Ref 2218/05 and 1055/07

4.4.2 Design Iteration 1: A Mono-Residential Use Scheme

The alternative future development layout in Figure 4.4.2.1 comprises a study that explored the option of utilising the entire site for residential development. The design comprised a series of courtyards formed by the residential blocks varying in height from 3 to 16 floors with a total of 600 residential Units. The envisaged unit mix was for 20% Studio, 50% 1 Bed and 30% 2 Bed residential units.

The layout was cut along its western side to avoid interference with the designated COV.

This option was not pursued given the interface of the lower levels of the residential development with St. John's Road which is a wide and busy urban street with extensive rail infrastructure immediately beyond which would have given rise to potential residential amenity impacts. The orientation of the apartments was also an issue since they were arranged in an East-West direction with north facing apartments,

creating challenges to get adequate light into the apartments.

The design featured a number of enclosed and semi enclosed courtyards with access to the Civic Square to the east. Stepping up from third level at the western most element of the site to 15th floor at the most north easterly part of the site. The diagrams and CGI in the following pages show the design of floor plans and elevations.

Figure 4.4.2.1 Design Iteration 1: Height to Respect the Cone of Vision

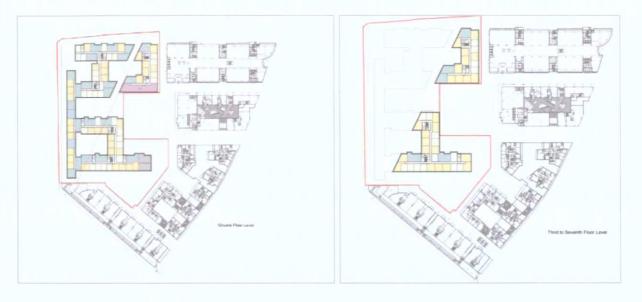


Figure 4.4.2.2 Design Iteration 1: CGI of the scheme from the RHK Gardens



4.4.3 Design Iteration 2: Entirely Commercial Scheme

The alternative future development layout in Figure 4.4.3.1 comprises a study that explored the option of maximising the commercial potential of the site with an entirely commercial scheme. This incorporated commercial office buildings and a hotel. The layout is similar to the first iteration in that the buildings are cut back at an angle to respect the COV. The building heights varied from 3 to 11-storeys with the taller elements towards the centre of the site and on the edge of St. Johns Road. This was discounted for a number of reasons namely:

- There was limited variety in the use of the site with 100% Commercial floorspace and an over concentration of office/retail uses was considered not to be consistent with the mixed-use zoning objective.
- The urban masterplan created no potential for a link or permeability to the RHK gardens.
- The commercial block essentially closed off the site and created a dead end with no connection westwards.

Figure 4.4.3.1 Design Iteration 2: first and Second Floor Level.

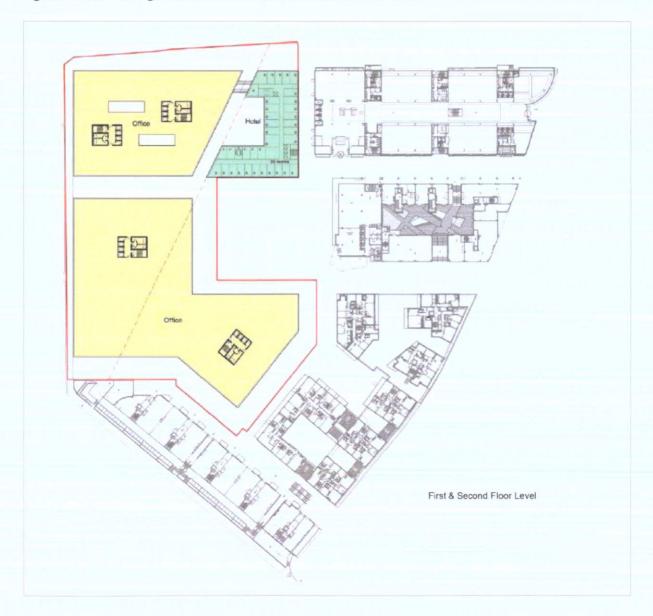
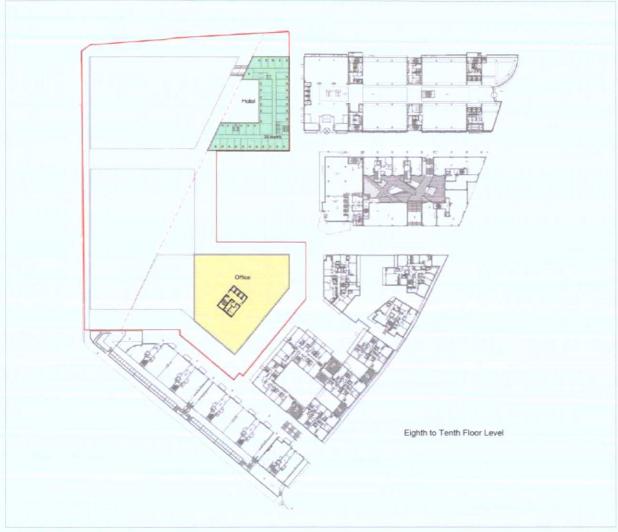


Figure 4.4.3.2 Design Iteration 2: first and Second Floor Level.



Figure 4.4.3.3 Design Iteration 2: Eight to Tenth Floor Level.

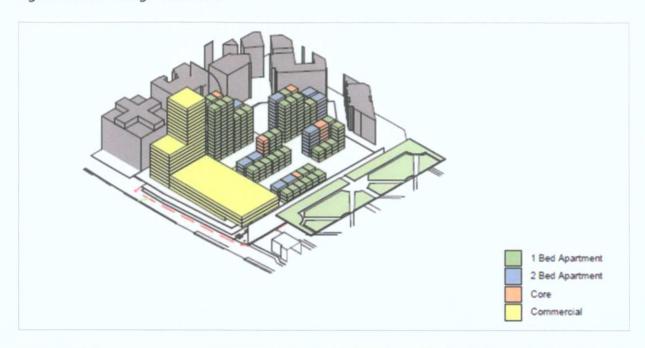


4.4.4 MDS Design Iteration 3: Mixed Use Scheme

The alternative future development layout in Figure 4.4.4.1 comprises a study that explored the option of a mixed-use development that splits the site into residential and commercial components, primarily based on the interface with St. John's Road to the north and the need to create a strong urban edge fronting the road.

The design comprised a hotel and office building on St. John's Road with residential development to the South. This provided a residential scheme of 320 units in a series of separate blocks arranged perpendicular to the main road giving the apartments an East-West orientation. Heights ranged from 3 to 16 floors.

Figure 4.4.4.1 Design Iteration 3





The above plans (Figure 4.4.4.1) show the arrangement of the Blocks in an all-residential proposal. The Blocks are aligned to the north south axis. This allowed the aspect of the apartments to be east/west with dual aspect apartment forming the corners of each residential Block.

This option was discounted for the following reasons:

- The close proximity of the blocks to each other resulted in a sub-standard public realm between blocks and reduced the light available to apartments, giving rise to residential amenity impacts.
- The lack of potential connectivity to the RHK to the west.
- The disjointed nature of the Blocks with a lack of meaningful enclosure.

Figure 4.4.4.2 Excerpt from an Assessment of Site Uses



A further sub-study of this option (Figure 4.4.4.2) explored the possibility of an office tower to St. John's Road or alternatively a hotel tower in the same position on the site. This sub-option was discounted as the size of the hotel was deemed excessive given the location of the site relative to the city centre.

4.4.5 Design Iteration 4: Commercial Scheme (Hotel and Office)

The alternative development layout in Figure 4.4.5.1 shows a mixed-use scheme, comprising of an office building on the eastern part of the site and a hotel building on the western part of the application site.

The buildings proposed hotel building was 6-storey (over basement level) in height and the proposed office building varied in height, up to a maximum of 19-storeys (over basement level), delivering approximately 30,000 sq.m (GFA) Office floorspace and 9,800 sq.m (GFA) Hotel floorspace.

The massing, design and appearance of the proposed office block was informed by a modular approach in an attempt to reduce the perceived bulk and mass of the Office block by four constituent and interlinked blocks that were arranged at various heights and proportions around a central access core. The mass and proportions of these constituent blocks is readily apparent by comparing same to the tallest 18-storey block of the proposed SHD residential scheme to the south, as shown in Figure 4.4.5.1, below.

An angled street was introduced between the proposed Hotel and Office blocks to enable glimpsed views of the Wellington monument in the Phoenix Park to become visible from the Civic Square to the south of the office block.

Pre-application consultation was undertaken with DCC wherein DCC expressed concerns generally over the massing of the scheme and its visual impact. It was accepted by the Design Team that this attempt to break down the overall mass of the block was not particularly successful, as it resulted in disproportionally wide and massive west facing elevation onto the sensitive setting of the RHK whilst resulting in a rather abrupt transition in scale with the adjoining context to the east along St John's Road. The proposed Office building also encroached on the COV. This option was not pursued by reason of its potential significant negative impact on architectural heritage and visual and landscape impact.

Figure 4.4.5.1 Design Iteration 4: Commercial Scheme (Hotel and Office)



4.4.6 Design Iteration 5: Commercial Scheme (Hotel and Office)

Design Iteration 5 sought to address the concerns raised by DCC in respect of Design Iteration 4 (above) by exploring the amalgamation of the previous constituent modular elements into a single taller tower block of slender proportions. The visual impact assessment of this option has identified significant adverse visual impacts on the sensitive setting of the RHK and in particular the COV that traverses the subject site, and the wider streetscape.

This design alternative is shown in Figure 4.4.6.1 below, illustrating a high-rise office building where the verticality was accentuated with vertical stone elements broken with vertical glazed strips. The massing and height of the hotel building remained consistent with previous iterations but the height of the proposed office tower was 22-storeys high over basement level and delivering approximately 26,000 sq.m (GFA) of office floorspace in addition to the proposed c.9,800 sq.m (GFA) of hotel floorspace. In this iteration the office building was more slender and taller than any of the previous considered iterations.

DCC expressed concern regarding the height and massing of the building, and related architectural heritage and landscape impacts, and advised that a lower rise scheme should be considered. Even though the proportions of the building were slender compared to previous iterations, it did not achieve a 3:1 slenderness ratio on all sides. The building also encroached on the COV.





4.4.7 Design Iteration 6: Proposed Development

Following extensive pre-planning consultation with DCC, the massing and design of the alternative selected, the proposed development, is the result of an iterative process informed at each stage of the design process by conservation, visual and landscape impact assessments that included assessment of the impact of the proposed development on the RHK grounds and the designated COV. The proposed development (Design Iteration 6) comprises a low-rise Hotel building to the West and the Office Building to the East with a curved glass form facing North and West, as shown in Figure 4.4.7.1 below.

This option was presented to DCC and subsequently refined in terms of architectural expression of the façades. The iterative process and collaboration with DCC resulted in the proposed development, of which the following aspects are noted:

- The form and mass of the office block above podium level respects the eastern extent of the COV.
 The curved form of the office block above podium level ensures the bulk of the mass of the building does not encroach on the eastern extent of the COV, significantly reduces the potential for any adverse impact on cultural heritage and landscape, and is preferred to other alternatives for this reason.
- The curved western façade responds positively to sensitive views from the west within the RHK gardens and western approach along St John's Road into the city when compared to alternative rectangular flat-faced forms of development facing westwards, as tested in earlier design options. This curved form allows for varying light reflectance throughout the day which provides a level of complexity to the façade without the need to achieve same by way of architectural intervention of the façade treatment.
- The predominantly 5-storey podium height of the hotel (which falls entirely within the COV) and

that of the office building is responsive to the COV and will not interfere with views of the Gandon building from the RHK and its attendant gardens, and is preferred to other alternatives having regard to potential architectural heritage and landscape effects.

- The proposed diagonal street (referred to as 'Wellington Lane' in the submitted Architectural
 Design Statement) has been aligned to provide a visual link between the Phoenix Park (and the
 Wellington Monument) and the existing public plaza to the south of the proposed office block,
 representing a positive visual and landscape effect.
- The massing and design of the proposed office block is responsive to the human scale and provides and appropriate level of enclosure and frames the public plaza that sits at the heart of the HSQ precinct whilst delivering important north-south physical and visual links with St John's Road to the north and beyond.
- The proportions and fenestration pattern of the podium block at street level continues the established architectural rhythm of the northern façade of the adjoining Nos. 1& 2 HSQ (formerly the eir building).





4.4.8 Comparison of Alternative Designs – Architectural Heritage

The design iterations were assessed by Brendan Money of Robin Mandal Architects with respect to their potential architectural heritage, landscape and visual impact.

All of the iterations have regard to the COV and the proximity of the RHK and its gardens. They also screen the irregularity of the existing HSQ development and present a unified view along the eastern edge of the

garden.

In Iteration 1 and 2 the massing and set back of the taller blocks takes the edge of COV as a design cue with the massing of the higher elements set back to this line at a diagonal. Iteration 1, while presenting a unified architectural language, creates a very strong urban presence and mass. Also, the materials, although indicative, do not complement the natural setting to the west. Iteration 2 has a reduced mass but in this regard does not respond to the gardens or seek to make a physical or visual link to them.

Iteration 3 and variants are a mixed-use scheme, with a commercial proposal for the subject site with the concept of a podium and tower. The towers don't relate well to the setting of the RHK. Iteration 4, where the mass of the tower is broken into elements exacerbates the current irregularity of the HSQ development and does not present a unified edge to the COV.

Iteration 5, owing to the prominence of the office, creates significant impact on the setting of the RHK and, like the iteration above, does not appropriately bookend the COV.

The design development has been significantly informed by architectural heritage, landscape and visual impacts. Iteration 6, the proposed scheme, has a glazed curved façade to the west and this creates a 'soft' edge to the COV. The offset panels reduce the impact of the mass and as the glazing curves the light is reflected in various ways and together this reduces the impact of the office at the edge of the COV. The proposed planting on the roof complements the RHK garden as does the formal rhythm of the façade and the muted tones of the brick. The proposed design for the office and hotel has more closely considered the COV and the relationship with the RHK garden than the previous iterations. This design response reduces the impact of the proposed development.

For these reasons, iteration 6, the proposed development, is the preferred alternative to the other designs having regard to architectural heritage, landscape and visual impacts in particular.

4.5 Alternative Materials

The materiality of the development has been carefully considered from the outset of the design process. As the design evolved different materials were considered and discounted based on factors such as the scale and massing and the address of the building onto the plaza and St. John's Road.

Materials that were considered and discounted were:

- a glazed curtain wall (Figure 4.5.1), the colour mix was not suitable when the massing of the building was revised. The darker glass to contrast with white stone fins was discounted.
- clear glass façade (Figure 4.5.2) which was found to lack texture and grain to the streetscape,
- anodised aluminium fins and a mix of aluminium and stone (Figure 4.5.3), versions of these
 materials are now proposed although brick was introduced for the hotel.

The Project Architects explored these materials within a computerised design rendering model in various formats and combinations and arrived at the current proposal which is a mix of brick, reconstituted stone

and glass. These materials are the preferred alternative having regard to architectural heritage, landscape and visual impacts in particular.

Figure 4.5.1 Examples of Alternative Materials Glass and Aluminium



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Figure 4.5.2 Examples of Alternative Materials Clear







4.6 Alternative Mitigation Measures

The mitigation measures identified in Chapters 5 to 15 of this EIAR, where appropriate, have been developed by competent experts relevant to each aspect of the environment under consideration and represent best practice with a view to avoiding or otherwise minimising potential impacts on the environment.

The mitigation measures proposed by the competent experts are deemed appropriate for the proposed development. The pro-active approach adopted in the design process, as set out in this chapter, has sought to avoid adverse impacts through an iterative design process whereby design and massing studies were subjected at each of the design stages to architectural heritage, landscape and visual assessments and micro-climatic assessments. Therefore, no alternative mitigation measures have been described in this chapter.

4.7 "Do Nothing" Alternative

There are various reasons why a 'do-nothing' alternative option (i.e., the non-development of the subject site) should be avoided. The current under-utilised and unfinished state of the site represents an unsustainable use of a scarce land resource adjoining a major rail station, Luas line and bus corridor, and would fail to make the sustainable use of existing and planned transportation, community and employment infrastructure provision and investment in this part of the city. The site is zoned 'city centre', is serviced, and forms part of a designated Strategic Development and Regeneration Area. The proposed development will make efficient use of existing below ground structures at the site which contributes to

the overall sustainability of the development. In the absence of development, the existing structures and development at the site would remain underutilised.

A 'do-nothing' scenario is considered an inappropriate and unsustainable approach that would result in the inefficient use of a strategically located, serviced and appropriately zoned brownfield site. A 'do nothing' scenario would also preclude the delivery of the strategic planning objectives for the area and the region. As such, the 'do-nothing' scenario is not considered appropriate for the subject site.

4.8 Conclusion

This chapter has assessed reasonable alternatives in the construction, layout and design of this project, in accordance with both the European Commission and EPA Guidelines.

The proposed development provides for a mixed-use commercial development, comprising of an office and hotel development on a partially developed but unfinished brownfield site that is situated within an area designated for development and regeneration in the Dublin City Development Plan 2016-2022. It is therefore considered that the 'do nothing' scenario should not be pursed in the interest of sustainable development and efficient land use.

During the design process, the layout and design of the proposed development evolved in response to historical, architectural, and visual requirements and several iterations of the site layout and alternative designs were considered. Any difficulties from an architectural, landscape or environmental viewpoint were assessed and, where necessary, the design was amended to address the issues encountered in consultation with the Planning Authority. The proposed alternative selected is the preferred alternative having regard to architectural heritage, landscape and visual impacts in particular.

5. POPULATION, LAND, AND HUMAN HEALTH

5.1 Introduction

This chapter examines the potential population and human health effects and mitigation measures of the proposed commercial development, comprising a hotel and office block at Heuston South Quarter (HSQ), Kilmainham, Dublin ("the Proposed Development"). The purpose of this assessment is to identify and assess the potential population, health and wellbeing effects of the proposed project, and to deliver evidence-based recommendations that maximise health benefits and mitigate or remove potentially negative impacts associated with the Proposed Development.

5.2 Characteristics of the Proposed Development

The Proposed Development includes a 5-storey (over lower ground and basement level) hotel providing 238 bedrooms and a 12-storey (over lower ground and basement level) office block of 19,474m² (GFA) but excluding basement level. The development site of 0.62 ha. is situated in the north-west corner of the larger HSQ site, immediately to the north of the permitted SHD development (summarised below), with road frontage along St John's Road West. Ancillary parking for the Proposed Development will be at basement level and will integrate with the existing basement level parking of the larger HSQ development / basement, as well as the basement level parking for the adjoining SHD. Access to the basement level is provided from St John's Road West (northern access point) and Military Road (eastern access point).

On the 8th October 2021 the applicant submitted a SHD application to An Bord Pleanála (ABP) under ABP Ref. TA29S.311591 for the construction of a residential development, comprising 399 no. Build To Rent (BTR) apartments arranged in 5 no. blocks ranging in height from 3- to 18-storeys in height, over double basement level together with associated site works on the site immediately adjoining the application site to the south. 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. The approved residential scheme comprises 359 no. units – a reduction of 40 no. from the 399 no. units applied for in the first instance.

The site on which the Proposed Development is to be constructed is designated as a Strategic Development and Regeneration Area (SDRA7) in the Dublin City Development Plan, 2016-2022 (DCDP), and is zoned Objective 'Z5' to 'consolidate and facilitate the development of the central area, and to identify, reinforce, strengthen and protect its civic design character and dignity'. The site is also located in a designated 'Conservation Area', which dictates that the Proposed Development should not harm the features and visual characteristics of the area, but rather replace, improve, re-instate or develop contemporary architecture and buildings that are in harmony with such other features in the surrounding area, and positively contribute to the improvement of open spaces and the wider public realm.

A full development description is included in Chapter 3 of this EIAR.

5.3 Assessment Methodology

This EIAR has been prepared in accordance with the European Union EIA Directive 85/337/EC (as amended by 97/11/EC, 2003/4/EC, 2011/92/EU), Directive 2014/52/EU, and in accordance with the Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (published in August 2018) and the 2022 EIA Guidelines published by the EPA.

The 2014 Directive's title change to assess the impact on 'Population and Human Health' and the 2022 EIA Guidelines published by the EPA have been adhered to, to ensure that the EIAR includes 'the assessment of impacts on population & human health should refer to the assessments of those factors under which human health effects might occur, as addressed elsewhere in the EIAR e.g. under the environmental factors of air, water, soil etc'.

The assessment of potential impacts of the Proposed Development on the Population and Human Health of residents in the Study Area are based on local population information sourced from the Central Statistics Office (CSO) Census data captured in the previous Censuses of 2011 and 2016. Data sets analysed in this assessment include:

- Population Data
- Household Data
- Economic Activity and Employment Data
- General Human Health Data

Population data reflects on the growth, age and gender distribution, and nationalities of people in the Study Area. Household data reflects on the household composition and predominant family cycles of households in the Study Area. The economic and employment context draws on principle economic status data of persons in the Study Area aged 15 years and older. Census data was also used to reflect on the (self-evaluated) general health status of residents in the Study Area.

The data used analyses the socio-economic and demographic attributes of the Study Area as recorded by the Census at Electoral Division (ED¹) level. Data from the 2011 and 2016 Censuses were used to identify and highlight change in the social fabric of the Study Area over time. All data was sourced directly from the CSO and then modelled and reproduced according to the requirements for the analysis of population and human health characteristics in the Study Area.

To provide further context to the social and demographic assessment, a similar data analysis exercise, but at broader scale, was performed on Dublin Region and the State.

Furthermore, an assessment of the current provision of social infrastructure was conducted through desktop spatial analysis, while planning permission data informed the evaluation of the impacts of other current and consented development and land use activity in the Study Area in relation to the Proposed

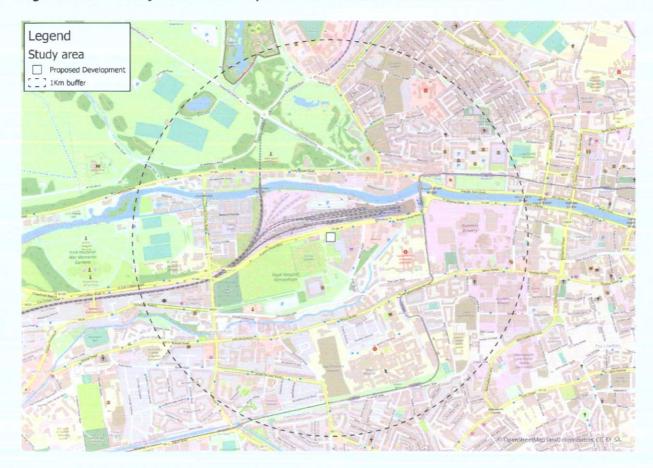
¹ EDs are the smallest legally defined administrative areas in the State for which Small Area Population Statistics (SAPS) are published from the Census

Development. This chapter has been prepared having regard to the following guidelines:

- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (Environmental Protection Agency, May 2022);
- Guidelines on the Information to be contained in Environmental Impact Statements (EPA, 2002);
 and
- Advice Notes on Current Practice in the Preparation of Environmental Impact Statements (EPA, 2002).
- Dublin City Development Plan (2016-2022)

5.3.1 The Study Area

Figure 5.3.1 Study Area for the Population and Human Health Assessment



A Study Area has been defined for this assessment, as depicted in the figure below. To analyse the effects of the Proposed Development on Population and Human Health within the area surrounding the site, the Study Area was delineated as 98 Small Areas (SA) in proximity to where the site is located. This selection of the Study Area provides a good representation of the socio-economic and demographic characteristics of the immediate populated area potentially impacted by the Proposed Development. The Study Area therefore captures an area of the Kilmainham, The Liberties (Dublin 8), and Stoneybatter (Dublin 7) neighbourhoods on the western side of central Dublin within an approximate 1km radius of the Proposed Development.

The Proposed Development site is situated approximately 2.5km from the Dublin City Centre, and forms part of the larger Heuston South Quarter (HSQ) development. The HSQ is located on the corner of St John's Road West (Chapelizod Bypass) and Military Road, with vehicular and pedestrian access from both roads. The HSQ is south of the Heuston Train and Bus Station, with the Irish Museum of Modern Art and Royal Hospital Kilmainham Gardens and public park on the western boundary. The surrounding area is characterised by a mix of high density residential and high street retail, with other notable activities in the area including the St Patrick's University Hospital, St James' Hospital, Guinness Brewery (incl. Guinness Storehouse and Open Gate Brewery), Roe & Co. Whiskey Distillery, Pearse Lyons Whiskey Distillery, Kilmainham Gaol, Croppies Acre Memorial Park, and the Irish War Memorial Park and Gardens.

5.3.2 Data Sources

This assessment draws primarily on the following range of publicly available information sources and data bases:

- Primary data sources (e.g. Small Area Population Statistics (SAPS) data from Census 2011 and 2016 produced by the Central Statistics Office);
- · Maps of the surrounding area
- Relevant social infrastructure characteristics considered during the Environmental Impact Assessment (EIA) (including education, medical, recreational, and transport facilities);
- A review of secondary sources including research by the CSO and the Department of Education and Skills;
- Dublin Region and State level data for comparative analysis
- Túsla Register of Early Years Services, supplemented by telephone and online surveys
- Department of Education and Skills Data

In the case of publicly available data, the most recent and up-to-date data source has been used. Data of this nature represents a snapshot in time and cannot capture more recent population and human health changes (including the impact of Coronavirus/COVID-19), but nevertheless represents the most robust basis for assessment.

This assessment is also informed directly by information included in this planning application and EIAR. This assessment will consider the interaction of population and human health impacts and other environmental impacts identified through topic assessments in the wider EIAR, including air, dust and climate, and noise and vibration assessments.

5.4 Receiving Environment

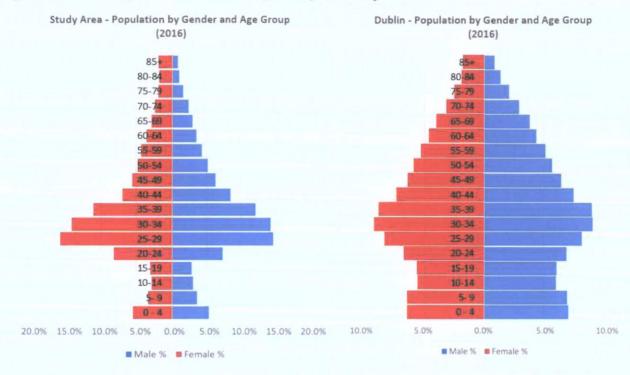
This section provides a description of the analysis performed on the assessment themes to develop an understanding of the current state of the environment where the Proposed Development will be located.

This analysis informs the professional conclusions reached as to the nature, duration, and significance of potential impacts.

5.4.1 Population Characteristics

Data analysis on the Study Area and Dublin Region show differing trends in the distribution of the population in various age cohorts, with the Study Area having a noticeably larger portion of its population in the 25-29 years age cohort, and a smaller portion between the ages of 45 to 59, compared to Dublin Region figures.

Figure 5.4.1.1 Study Area and Dublin Region Population Pyramids



The CSO Census results (Census 2016) indicate that there were 21,948 residents in the Study Area, which increased by 1% from 21,772 as recorded in the 2011 Census. Although the largest portion of the population of the Study Area is between the ages of 25 and 34, there was a 11.5% decrease in the 20-29 years age group, and considerable growth in the older age groups (between 40 and 79 years). The Study Area recorded significant growth of 12% in the 35-64 age group (amounting to 879 people). Although the percentage growth in the 65+ age group is high at 8%, the numerical value of the increase is only 154 people in the intercensal period.

Table 5.4.1.1 Study Area, Dublin Region, and State Population by Age Group (Summary)

Age	Study Area		Dublin Region	State		
	2011 No.	2016 No.	% Change	% 2016	% 2016	% 2016
0-4	1,195	1,175	-2%	5%	7%	7%
5-18	1,813	1,901	5%	9%	17%	18%
19- 34	9,264	8,339	-10%	38%	26%	21%
35- 64	7,476	8,355	12%	38%	38%	40%
65+	2,024	2,178	8%	10%	12%	13%
Total	21,772	21,948	1%		1,347,359	4,761,865

While the Dublin Region and Study Area have a majority in Irish nationals (83% and 71% respectively), there is a notable presence of other nationalities as seen in Figure 5.3.

Figure 5.4.1.2 Study Area Nationalities



At Study Area level in 2016, 'Other EU' nationals and people from the 'Rest of the World made up 19% of the total population (majority share of 'Other EU' nationals). In addition to the previously mentioned nationalities, 2016 data suggest a 3% portion of nationals from Poland, with the sum of all recorded foreign nationals contributing 25% (5,263) to overall population in the Study Area. The number of foreign nationals in the Study Area, however, decreased from 2011 to 2016 by 6%, with the largest decreases in foreign nationals from Poland (-29%) and the 'Rest of the World' (-19%). Foreign nationals in the Dublin Region make up 15% of the population, compared to 11% foreign nationals in the State.

5.4.2 Household Characteristics

Trends in household data from the intercensal period for the Study Area are summarised in the table below.

Table 5.4.2.1 Study Area Household Composition

	Study A	rea			Dublin Region	State
Composition of Households	2011	2016	Change	2016%	2016%	2016%
Single person	3293	2877	-13%	32%	23%	23%
Married couple	850	839	-1%	9%	13%	15%
Cohabiting couple	1063	984	-7%	11%	5%	4%
Married couple and children	1022	1010	-1%	11%	27%	31%
Cohabiting couple and children	169	256	51%	3%	4%	4%
Father and children	97	73	-25%	1%	1%	1%
Mother and children	777	736	-5%	8%	9%	9%
Couple and others	210	255	21.4%	3%	2%	1%
Couple children and others	97	107	10%	1%	2.0%	2.0%
Father children and others	15	14	-7%	0.2%	0%	0%
Mother children and others	89	104	17%	1%	1%	1%
Two or more family units	84	66	-21%	1%	2%	1%
Non-family						
households and relations	383	359	-6%	4%	3%	2%
Two or more non- related persons	1205	1433	19%	16%	7%	4%
Total	9354	9113	-3%	0%		

A distinct difference in household composition is noted Dublin Region (and the State) and the Study Area household profiles where the majority of households at Dublin Region and State levels are composed of 'married couple and children' (Dublin Region 27%; State 31%), as opposed to the Study Area's majority of 'single person' (32%) households. Other notable household composition in the Study Area is 'two or more

non-related persons' at 16% (increase of 19% from 2011), and 'cohabiting couple', at 11% of the total households despite the decline of 7% in 'cohabiting couples'. Distribution is relatively evenly split across other compositions. The composition with the largest numerical change from 2011-2016 was 'single person' (-416; -13%). The State and Dublin Region, in comparison, have a higher percentage of 'married couple' households and a higher rate of households with children. As identified in the population and households' statistics, the Study Area characteristics highlight a majority of young adult population, with a tendency to live in single person or co-living households. A shift in demographics is however noticed with an increase in the number of older adult population is however (40-65+ years). This trend is also seen in the change in family cycles, with an increase in early school, pre-adolescent, and empty nest families in the intercensal period, and a subsequent 5% increase in average household size from 2.11 (2011) to 2.22 (2016).

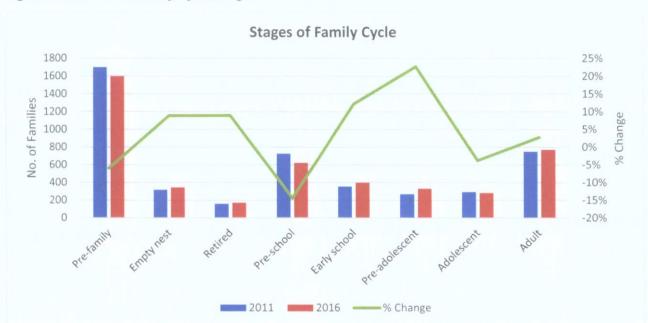
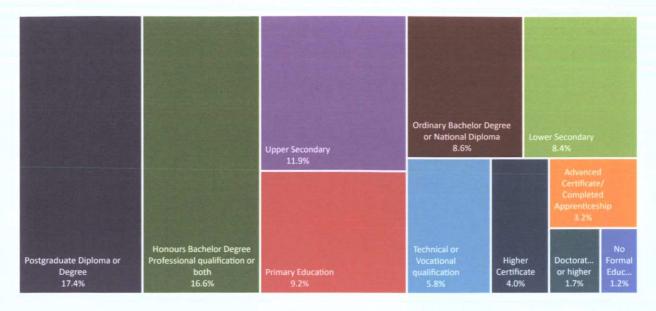


Figure 5.4.2.2 Area Family Cycle Stages

5.4.3 Education

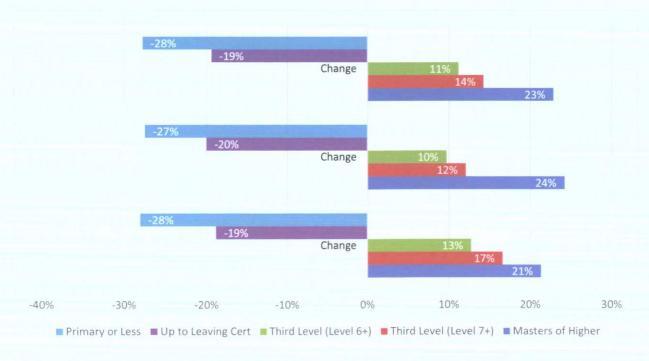
Among residents of the study area aged 15 and over, 48% of residents hold some form of Third Level qualification (Level 6 or above), slightly higher than the national average of 42%.

Figure 5.4.3.1 Study Area Educational Attainment



As seen in the following figure, the general level of education (of people aged 15 and older) in the study area has increased, with a decline in people having less than primary or up to leaving certification qualifications, and an increase in the number of people with third level or higher qualifications. Particularly, the number of females with masters or higher degrees increased significantly (24%), while 17% more males attained a third level (level 7+) qualification.

Figure 5.4.3.2 Change in highest level of education of people in the Study Area



5.4.3.1 Childcare Facilities in the Study Area

The seven childcare facilities within the study area, provide both all-day and sessional childcare. Capacity figures for these childcare facilities have been sourced using Túsla registration reports. However, these

represent the maximum capacity of children allowed at each facility and does not represent the current enrolment figures. Due to the Coronavirus/COVID-19 pandemic, these facilities have been closed, and as a result it was not possible to obtain more recent enrolment information from all facilities. Information on childcare facilities is shown in the following table.

Table 5.4.3.1 Childcare Facilities within the Study Area

		Survey and Túsla Records ²					
Official Name	Service Type	Capacity	Enrolment	Age Profile			
Children's Centre Rialto	N/A	N/A*	N/A*	N/A*			
Wee Tots Creche	Full day, sessional	44	26	0-6 years			
Naionra Bogha Baisti	Sessional	22**	N/A*	3-6 years			
Safari Childcare (Kilmainham)	Full day, part time, sessional	32	32	2-6 years			
Safari Childcare (HSQ)	Full day, part time, sessional	120	120	1-6 years			
Fatima Groups United Children's Day Care Centre	Full day, part time	50	78 (50 in morning session, 28 in afternoon session	1-5 years			
Mayfield Montessori	Sessional	22	20	2-6 years			
All Childcare Facilities		c. 290	c. 276				

5.4.4 General Human Health

The Census records self-evaluated general health status of its respondents and provides appropriate categories in terms of health status, ranging from 'Very good' to 'Very bad'. In terms of general health and wellbeing, disparate changes were recorded throughout the spectrum as seen in the table below.

² Source: Túsla Register of Early Years Services by County. Available at: https://www.tusla.ie/services/preschool-services/list-of-pre-school-services/lis

Table 5.4.4.1 Study Area Population by General Health and Gender

		Male		Female			Total			
General Health	2011	2016	% Change	2011	2016	% Change	2011	2016	% Change	2016%
Very good	5,845	5,889	1%	5,926	5,774	-3%	11,771	11,663	-1%	53.1%
Good	3,133	3,035	-3%	3,028	2,968	-2%	6,161	6,003	-3%	27.4%
Fair	1,072	964	-10%	1,016	940	-7%	2,088	1,904	-9%	8.7%
Bad	239	268	12%	247	224	-9%	486	492	1%	2.2%
Very bad	83	46	-45%	87	62	-29%	170	108	-36%	0.5%
Not stated	580	959	65%	516	819	59%	1,096	1,778	62%	8.1%
Total	10,952	11,161	2%	10,820	10,787	0%	21,772	21,948	1%	

From the table it is noted that varied percentage changes in health status were recorded throughout the Study Area. Disparate changes included a 9% decrease in females with 'bad' health compared to a 12% increase in males in 'bad' health. Despite the 53% of the Study Area population being in 'very good' health, a general decline in health is noted as the number of people in 'very good', 'good', and 'fair' health declined in the intercensal period.

A social infrastructure analysis conducted in the study area and surrounding area identified healthcare facilities, as shown in Figure 5.8. These healthcare facilities include hospitals and health centres (3), General Practitioners (GP) (6), pharmacies (5), dental practices (2) and a nursing home and care centre (1). As seen in on the map, healthcare facilities are generally centred toward the more central parts of Dublin City Centre.

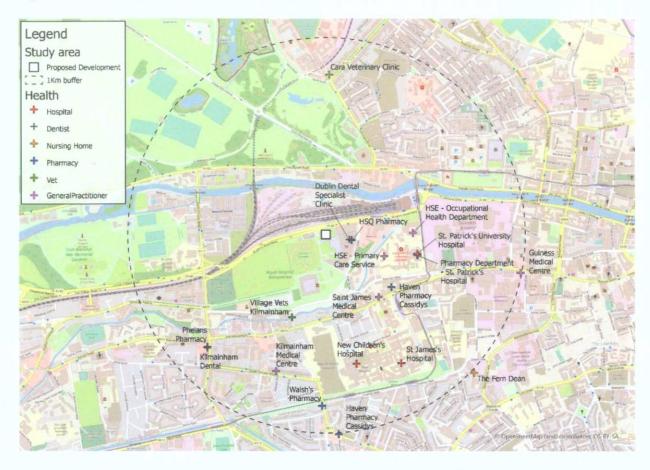


Figure 5.4.4.1 Healthcare Facilities in and near the Study Area

5.4.5 Economic Activity and Employment

The principal economic status as captured by the CSO, provides a breakdown of the number of people aged 15 years and older in the labour force that are economically active and inactive, unemployed, or those looking for their first job. Persons or groups over 15 years of age not participating in the labour force are typically students, home makers, retirees, and persons unable to work due to illness or disability and they are considered to not be economically active.

The following table provides an overview of the labour force in the Study Area.

Table 5.4.5.1 Population Aged 15 years and Over by Principal Economic Status

		Stud	Dublin Region	State		
Principal Economic Status	2011	2016	Change	2016%	2016%	2016%
At work	10,660	11,931	11.92%	62%	57%	53%
Looking for first regular job	204	238	16.67%	1%	1%	1%
Unemployed having lost or given up previous job	2,355	1,587	-32.61%	8%	7%	7%

		Stud	Dublin Region	State		
Principal Economic Status	2011	2016	Change	2016%	2016%	2016%
Student	2,195	1,714	-21.91%	9%	12%	11%
Looking after home/family	941	781	-17.00%	4%	7%	8%
Retired	1,827	2,025	10.84%	10%	13%	15%
Unable to work due to permanent sickness or disability	1,062	913	-14.03%	5%	4%	4%
Other	65	178	173.85%	0.9%	0.4%	0.4%
Total	19,309	19,367				

With a steady decline of 32.6% in unemployment, employment in the Study Area increased by 11.9% from 2011 to 2016, which equates to 62% of the 15 years and older population that are at work. The decrease in the number of students coincided with the decrease in the population aged 10-19 (-1%) and 20-29 (-11.5%). The decrease in people 'looking after family/home' and 'unable to work due to permanent sickness and disability' and subsequent increases in employment resulted in a 4% increase in the economically active labour force. By comparison, employment rates in Dublin Region and the State are below the Study Area at 57% and 53% of the working age population, for the same periods, respectively.

5.4.6 Social Infrastructure and Amenities

Social Infrastructure (SI) is defined by the European Association of Long-Term Investors3 as a sub-category of infrastructure that are seen as physical assets in the social sector that provide personal (individual/household) benefits and community benefits to increase social cohesion. The figures below provide an overview of the social infrastructure available within proximity to the Proposed Development.

As seen in the Figures below, a variety of different SI and amenity facilities are within close proximity to the Proposed Development. The number of SI facilities within one kilometre from the site are listed in the table below.

³ Fransen, L., del Bufalo, G., Reviglio, E. (2018). Boosting Investment in Social Infrastructure in Europe, Report of the High-Level Task Force on Investing in Social Infrastructure in Europe 2018. [PDF File]. Retrieved from: https://ec.europa.eu/info/sites/info/files/economy-finance/dp074_en.pdf

Heuston South Quarter, Dublin 8

Figure 5.4.6.1 Social Infrastructure and Amenities (Map 1)

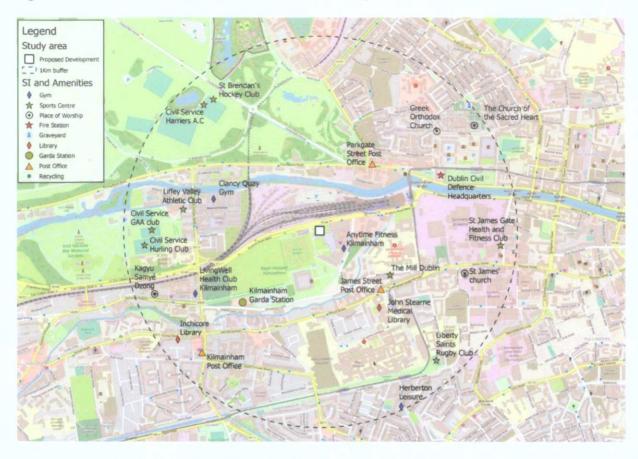
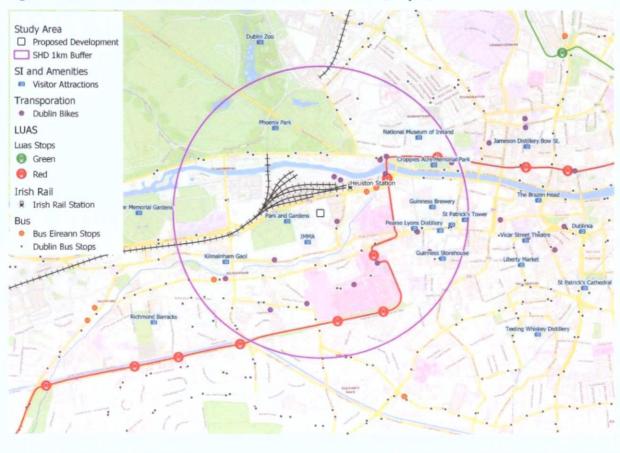


Figure 5.4.6.2 Social Infrastructure and Visitor Attractions (Map 2)



Heuston South Quarter, Dublin 8

Table 5.4.6.1 Social Infrastructure and Amenities Within 1km from Proposed Development

Creche	7
Primary School	3
Secondary School	1
Pharmacy	5
Hospital and Health Centre	3
Dental Practice	2
GP	6
Nursing Home	1
Fire Station	0
Garda Station	1
Place of Worship	5
Post Office	4
Library	1
Bring Bank (Recycling Centre)	2
Sport Club	7
Gymnasium	4
Dublin Bikes	14
Dublin Bus Stop	58
Bus Eireann Stop	3
LUAS Stop (Red Line)	5
Irish Rail Stop	1

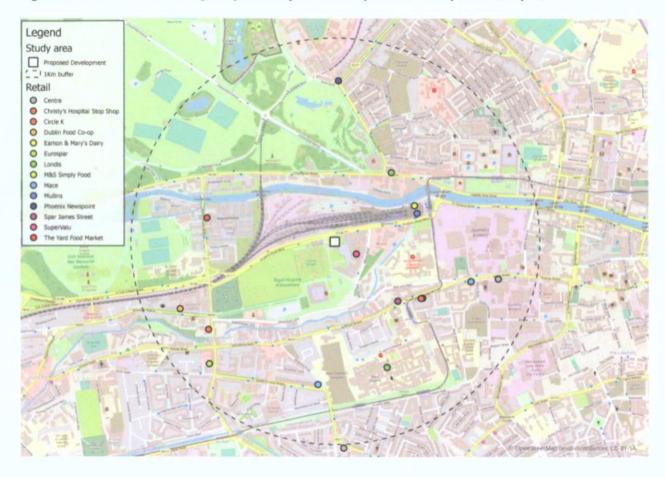
A variety of healthcare facilities are accessible in the 1km buffer zone, including 7 sports clubs and 4 gyms. In addition, the area is well served by visitor attractions including Kilmainham Gaol, Irish Museum of Modern Art (IMMA), Guinness Storehouse, Pearse Lyons Distillery, National Museum of Ireland and Croppies Acre Memorial Park.

The Proposed Development has a high degree of access to public transport through a variety of public transport modes. Access to the modes include 58 Dublin Bus stops, predominantly along major arterial routes (such as James Street, Thomas Street, Victoria Quay, and St. John's Road West) and other connector roads. There are also three Bus Eireann stops within the 1km buffer zone from the Proposed Development. Rail transport access includes five LUAS Red Line stops (predominantly east-west line towards the city centre (east) and Tallaght (west)) and the Irish Rail Dublin Heuston Train Station providing services to

destinations such as Dundalk, Galway, Limerick, Tralee, Cork, and Waterford. Non-motorised public transport is provided through 14 Dublin Bikes (bicycle sharing) stands that provide transport to various locations in the city.

A variety of retail offerings of different size and diversity are available in the Study Area. As seen in the Figure below, there are multiple food/grocery retail offerings close to the Proposed Development, with a Supervalu on site and multiple other stores in close proximity along Thomas Street. Taking a closer look, there are various restaurant and fast-food options within easy walking distance to the Proposed Development, as indicated in Figure 5.4.6.4.

Figure 5.4.6.3 Retail Offerings in proximity to the Proposed Development (Map 1)



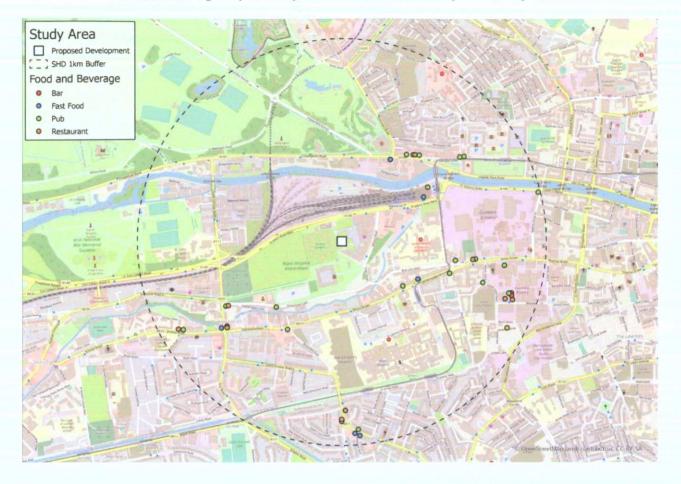


Figure 5.4.6.4 Retail Offerings in proximity to the Proposed Development (Map 2)

The temporary increases in daytime populations generated by the proposed office block development will have a permanent and positive effect on the local retail, grocery, food and beverage day trade in the Study Area. The retail facilities established in the HSQ and those situated in Heuston Train Station provide a broad range of food and beverage options for people occupying the proposed office and hotel space during daytime and evening trade. The transport options nearby the proposed development are beneficial for both the office and hotel occupants, with access to Dublin Bikes, rail (Irish rail and LUAS), Dublin Bus, and Bus Eireann providing transport within the city and to other areas of Ireland. The increase in visitor population generated by the proposed hotel development is also well served by the large number of visitor attractions in proximity to the Proposed Development. There are 12 visitor attractions within the Study Area (1km buffer area) with several more within a 2km radius from the Proposed Development. These are also very accessible by the range of transport modes provided close to the Proposed Development.

5.5 Existing Hotel Provision in the Area

A review of existing hotel provision in the area was carried out in order to appropriately assess how the hotel component of the proposed development will impact its receiving environment.

Given the vast amount of social infrastructure and visitor attractions in the area (as highlighted in Figure 5.9 and Figure 5.10 above), it can be concluded that the area attracts a large number of visitors annually. Specifically, the Guinness Storehouse, the Irish Museum of Modern Art (IMMA) and Kilmainham Gaol are

very popular with tourists and attract thousands of visitors each year.

The review below highlighted that there is currently a shortfall in terms of hotel provision in the area (3no. in total, with a combined 362no. bedrooms). Not only will the proposals provide additional hotel provision in the area, the location of the subject site and its close proximity to Heuston Station will also provide easily accessible accommodation to tourists at a location which is within walking distance to some of the most popular visitor attractions in Dublin city centre.

Table 5.5.1 Existing Hotels within the Study Area

Name	Address	No. Rooms	No. Bedspaces	Rating
Phoenix Park Hotel	38-39 Parkgate St., Stoneybatter, Dublin 8	16	30	3
Hilton Dublin Kilmainham	South Circular Road, Kilmainham, Dublin 8	120	250	4
Ashling Hotel Dublin	10-13 Parkgate Street, Stoneybatter, Dublin 8	226	446	4
TOTAL		362	726	

Figure 5.5.1 Location of Existing Hotels within the Study Area



5.5 Recent Development and Planning Applications

The review of relevant commercial and hospitality planning applications⁴ highlighted that numerous developments are being considered in the area surrounding the Proposed Development. Figure 5.5.1 and table 5.5.1 below provide more detail on recent Commercial activity in the area.

Figure 5.5.1 Commercial and Hospitality Development Planning Applications in Proximity to the Proposed Development

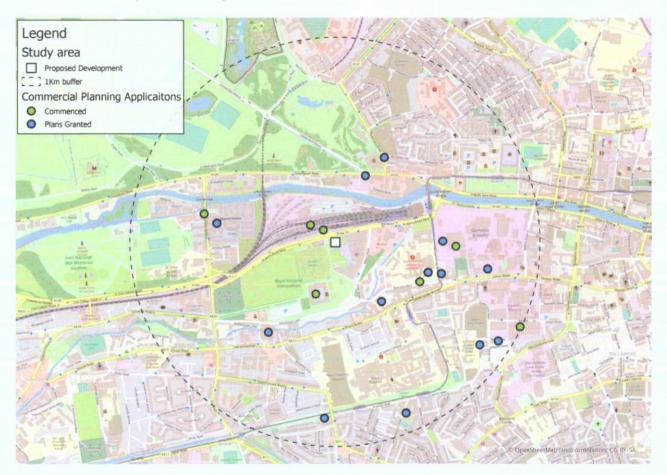


Table 5.5.1 Commercial and Hospitality Development Planning Applications in Proximity to the Proposed Development

Ref	Address	Development Description	Decision	Decision date
3033/21	Garrison House (Block K2), Clancy Quay former Clancy Barracks - which includes Protected Structures), South Circular Road, Islandbridge, Dublin 8	change of use of existing vacant commercial/retail area (c. 613.7 sqm) to management suite (c. 344.8 sqm) and internal residential amenity area (c. 268.9 sqm) at ground floor, with associated internal reconfiguration of the ground floor plan.	Plans Granted	19/8/2021

⁴ Sourced Construction Information Services Ireland. Available from: https://www.cisireland.com/

Ref	Address	Development Description	Decision	Decision date
2881/21	Former An Post Building, 109 James's Street, Dublin 8, ,	Modification and reuse of the existing building to provide staff canteen, welfare facilities and associated services. Demolition of an existing non-original single storey rear extension comprising toilets, WC and lobby and erection of a new single storey flat roof rear extension with rendered finish and painted mural, to provide new kitchen, stores and toilet facilities.	Plans Granted	28/7/2021
2571/20	5-9 Newport Street	The development involves the demolition of the existing single storey bar at ground and basement level and to construct a new part two storey to part four storey over basement building of c. 587 sq. m for use as a hotel.	Plans Granted	31/08/2020
2527/20	Block K1 (Chamber House) and Block K2 (Garrison House), at Clancy Quay (former Clancy Barracks - which includes Protected Structures), South Circular Road, Islandbridge, Dublin 8	The proposed development comprises a change of use of:-3 no. existing vacant commercial/retail units (c.402.8 sq.m), 1 no. existing security office (c.18.2 sq.m), and 1 no. existing management office (c.140.3 sq.m) with ground floor access (c.5.9 sq.m), to 7 no. residential units, 1 no. retail unit (c.30.8 sq.m) and 1 no. security office (c.36.5 sq.m), with associated localised reconfiguration of internal floor plan, external elevation and curtilage details, at ground and 1st floor levels of Block K1.	Commenced	29/10/2020
2410/20	134 James's Street	Redevelopment, conservation, refurbishment and change of use of no. 134 James's Street, Dublin 8, d08 v6h (protected structure) to provide a 20-bedroom hotel.	Plans Granted	16/12/2020
4358/19	Site centrally located within the St. James's Gate brewery, Dublin 8	The development will consist of works to an existing industrial building accommodating kegging activities at the brewery comprising: a)Demolition of a single-storey cabin and panel cladding in the south-east corner of the site.b)Relocation of internal storage and welfare rooms at ground floor and internal office floorspace at first floor to a new location within the building on the southern elevation comprising office, workshops, storage, utilities, locker and changing facilities, lobbies and circulation space over ground and first floor.c)A new centrally located control and server room.d)Renovation and re-cladding of parts of the eastern, southern and western elevations	Plans Granted	12/19/2019
2859/19	141-143, James Street, Dublin 8,	The development will consist of: (a) the retention of alterations to the front and rear elevations, the change of use to a respite care facility at 1st, 2nd and 3rd floor and the associated alterations to the internal layout. (b) permission for the change of use of the ground floor retail unit to ancillary office accommodation serving the respite care facility above to include alterations to the rear elevation and internal layout.	Commenced	21/7/2019

Ref	Address	Development Description	Decision	Decision date
2730/19	3 & 4 Conyngham Road, Phoenix Park, Dublin 8, ,	Permission is sought for works to Nos. 3 and 4 Conyngham Road, Phoenix Park, Dublin 8, Protected Structures (RPS no. 2035 and 2036), to consist of the following: Change of use of no. 4 from residential (other) to office use (318m2); Demolition of single storey rear extension to no. 3 (12m2), demolition of external boiler house to No. 4 (2m2) and removal of existing external steel stair at the rear of No. 4; Construction of separate single storey extensions to the rear of both No. 3 (11m2) and No. 4 (50m2) and construction of a new three storey mews building (172m2) to rear lane (Eaves Height 7.1m from external ground level), consisting of two-storey office accommodation over car parking (four spaces including one disabled space), on the footprint of the original mews building.	Plans Granted	09/11/2019
2313/19	Guinness Enterprise Centre, Taylor's Lane, Dublin 8, ,	Planning permission for a 2 storey extension over the existing 3 storey Guinness Enterprise Centre, consisting of 3,735m2 of incubator and co- working space, including the provision of an external stairs and passenger lift and all ancillary site works for the Guinness Enterprise Centre, Taylor's Lane, Dublin 8.	Commenced	13/5/2019
3532/19	568, South Circular Road, Rialto, Dublin 8,	Change of use from retail to cafe / restaurant use at ground floor to include a) extraction vent to rear	Plans Granted	09/11/2019
2618/19	17, 18 & 19 Newport Street, at Corner Of Newport Street and Pim Street, ,	Demolition of existing house and commercial sheds and construction of a mixed-use building ranging from 4 to 5 stories with: 12x2 bedroom apartments with 16 private balconies and 1 shared roof garden;	Plans Granted	22/5/2019
3223/18	No. 29,Old Kilmainham, Kilmainham,Dublin 8	Change of Use to Café	Plans Granted	20/8/2018
3250/18	41 Saint Anthony's Road, Rialto, Dublin 8	Change of Use to Community Service Office	Plans Granted	08/07/2018
0264/18	Heuston Station, Dublin 8, , ,	The National Train Control Centre is a new 5 storey	Commenced	08/01/2018
2797/12/X1	32,Infirmary Road, Dublin 7	Retail/Office Extension	Plans Granted	14/3/2018
4653/17	Garda Security and Crime Operations	The construction of a new 10,060 sq.m six and four storey office building with a green roof and central atrium, over two floors of 9,275 sq.m basement car	Commenced	13/3/2018

Ref	Address	Development Description	Decision	Decision date
	Centre, Military Road, Dublin 8	parking with ancillary accommodation, on a site of circa 0.86 ha.		
2950/17	180, 182, 183 and 184 James Street	Construction of a new aparthotel building to range in height between three and seven-storeys above two lower ground levels (along the southern part of site) to provide a total gross floor area of 6,346.8 sq.m, including ancillary staff and guest facilities, plant, storage and waste/refuse storage areas and a minimum of 15 bicycle parking spaces.	Plans Granted	04/10/2017

5.6 Identification of Likely Significant Impacts

This section provides a description of the specific, direct, and indirect impacts that the Proposed Development may have during both the construction and operational phases of the Proposed Development. Mitigation measures required to alleviate any such effects are discussed further in Chapter 17 of this EIAR (Summary of Mitigation Measures). Potential impacts are assessed under the following headings: Economic Activity and Employment; Childcare/Creche facilities; Landscape and Visual Impact; Water; Noise; Air Quality and Climate; Risk of Major Accidents or Disasters.

For a more detailed assessment of potential impacts associated with other environmental factors, please refer to the specific chapters of the EIAR.

The analysis comprises a study of the key assessment themes as well as consideration of the construction phase, with a conclusion reached in relation to the Proposed Development on the baseline characteristics as described above. The characteristics of this impact assessment are defined below, as per the EPA Guidelines on the Information to be Contained in Environmental Impact Assessment Reports:

Туре	Description
Quality of Effects It is important to inform the non-specialist reader whether an effect is positive, negative or neutral.	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).
	Neutral Effects: No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
	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

Туре	Description
	causing nuisance).
Describing the Significance of Effects 'Significance' 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.	Imperceptible: An effect capable of measurement but without significant consequences. Not significant: An effect which causes noticeable2 changes in the character of the environment but without significant consequences. Slight Effects: An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
	Moderate Effects: An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
	Significant Effects: An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
	Very Significant: An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
	Profound Effects: An effect which obliterates sensitive characteristics
Describing the Extent and Context of Effects	Extent: Describe the size of the area, the number of sites and the proportion of a population affected by an effect.
Context can affect the perception of significance. It is important to establish if the effect is unique or, perhaps, commonly or increasingly experienced.	Context: Describe whether the extent, duration or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)
Describing the Probability of Effects Descriptions of effects should establish how likely it is that the predicted effects	Likely Effects: The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
will occur so that the CA can take a view of the balance of risk over advantage when making a decision.	Unlikely Effects: The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.
Describing the Duration and	Momentary Effects: Effects lasting from seconds to

Туре	Description
Frequency of Effects	minutes
'Duration' is a concept that can have	Brief Effects: Effects lasting less than a day
different meanings for different topics – in the absence of specific definitions for	Temporary Effects: Effects lasting less than a year
different topics the following definitions may be useful.	Short-term Effects: Effects lasting one to seven years.
	Medium-term Effects: Effects lasting seven to fifteen years.
	Long-term Effects: Effects lasting fifteen to sixty years.
	Permanent Effects: Effects lasting over sixty years
	Reversible Effects: Effects that can be undone, for example through remediation or restoration
	Frequency of Effects : Describe how often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually)
Describing the Types of Effects	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.
	Cumulative Effects: The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects.
	'Do-Nothing Effects': The environment as it would be in the future should the subject project not be carried out.
	'Worst case' Effects: The effects arising from a project in the case where mitigation measures substantially fail.
	Indeterminable Effects : When the full consequences of a change in the environment cannot be described.
	Irreversible Effects: When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.
	Residual Effects: The degree of environmental change that will occur after the proposed mitigation measures

Туре	Description
	have taken effect.
	Synergistic Effects: Where the resultant effect is of greater significance than the sum of its constituents, (e.g., combination of SOx and NOx to produce smog).

5.6.1 Impact on Population and Human Health

5.6.1.1 Construction Phase

The construction phase of the Proposed Development may give rise to temporary impacts to the locality such as, construction traffic and surface contaminants, dust, exhaust emissions, noise, and littering. Other impacts may include increased traffic due to hauling of building materials to and from the Proposed Development site which are likely to affect adjacent population, and the usage of existing retail facilities and other SI within Heuston South Quarter. The expected impacts associated with the construction phase are fully assessed in the relevant topic assessments in the applicable chapters of this EIAR, including Chapter 9 'Air, Dust & Climatic Factors' and Chapter 10 'Noise & Vibration', from which the subsequent impact on human health has been considered..

Probability	Quality	Significance	Duration
Likely	Negative	Moderate	Temporary

5.6.1.2 Operational Phase

The operational stage of the development is unlikely to cause any adverse impacts on the existing and future residents of the locality in terms of human health. The design of the development has been formulated to provide for a safe environment for the future visitors and workers alike. The public realm and permeability has been designed in accordance with the best practice and applicable guidelines. In addition, all open areas have been designed to be inviting, safe and conveniently located.

Probability	Quality	Significance	Duration	
Likely	Likely	Not Significant	Permanent	

5.6.2 Impact on Economic Activity and Employment

5.6.2.1 Construction Phase

The construction of the Proposed Development is likely to have a positive effect on the local economic activity and employment. The development in the short term will provide for increased construction related employment. During the construction phase, businesses directly involved in the sector and those

indirectly involved in the supply chain would generate economic benefits that would provide for a positive net impact on the economy. The construction phase will also provide for indirect positive impacts on ancillary support services around the site, such as retail services, together with wider benefits in the construction sector, building materials supply services and professional and technical professions. These beneficial impacts on economic activity will be largely temporary but will contribute to the overall future viability of the construction sector and related services and professions over the phased construction period.

Probability	Quality	Significance	Duration
Likely	Positive	Moderate	Temporary

5.6.2.2 Operational Phase

The operational phase of the Proposed Development will result in the provision of a 238 no. bedroom hotel and an office block with a gross floor area of 19,474sq.m GFA / 15,474 NIFA (excluding basement level).

In order to demonstrate the number of jobs which could be created from the proposed development, the UK Employment Densities Guide⁵ has been used to estimate the full-time equivalent (FTE) employment positions that could be created on full occupancy of both the hotel and office space.

The guidelines recommended that a 'General Office (Professional Services)' should provide 10sq.m per Full Time Employee (FTE). Given the gross floor area of the proposed office block, it is estimated that the proposals may provide employment for up to 1,570 full-time employees. Similarly, the Guidelines also recommend 1 employee per 3 beds for 'Hotels (Mid-scale)'. When using this calculation on the proposed development, it is estimated that the hotel element may provide full – time employment for up to 96 hotel staff, based on an average of 1.2 beds per hotel room.

As demonstrated above, the proposed development has the potential to offer full-time employment for up to 1,666 people.

In the long term, the additional footfall and enhanced spending power associated with the Proposed Development is likely to provide additional spend in the local shops and restaurants, providing a positive impact. The increased number of visitors and workers in the area will also create additional demand for ancillary services such as barbers/salons, dry cleaners, etc., which would strengthen the local retail mix also.

Probability	Quality	Significance	Duration
Likely	Positive	Significant	Permanent

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⁵ Home & Communities Agency (2015) Employment Density Guide. Available at: https://www.kirklees.gov.uk/beta/planning-policy/pdf/examination/national-evidence/NE48 employment density guide 3rd edition.pdf Accessed on 25/02/2022

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5.6.5 Impact on Landscape and Visual Elements

5.6.5.1 Construction Phase

The Proposed Development seeks the construction of a hotel and office blocks on land that is currently an undeveloped portion of the HSQ. Accordingly, there will undoubtedly be a change in the landscape character of the site as the proposed multi-storey development will form part of the existing cluster of mixed-use (office, residential, cultural, and retail) offerings in the HSQ, which is characterised by prominent architectural features in the building designs, materials used and façade treatments. The Proposed Development will also add to the existing network of pedestrianised public open space and landscaped areas.

However, the most negative impact on landscape character will be temporary during the construction phases of development. These impacts will be short term until such a time as construction is finished and the proposed high-quality landscaping matures. In any event the impacts are not considered to be significant on population and human health.

Probability	Quality	Significance	Duration	
Unlikely	Negative	Not significant	Temporary	

5.6.5.2 Operational Phase

The landscape and visual impacts likely to arise from the Proposed Development will be positive over the long term as it will add to the character and aesthetics of the HSQ. Moreover, the layout of the Proposed Development serves to mitigate any impacts through sensitive urban and landscape design.

The implementation of hard and soft landscaping towards St. John's Road and provision of two new pedestrian laneways will serve to improve and add to the visual character and identity of the surrounding area and, as such, the impact is considered to be positive.

Please refer to Chapter 15 'Landscape and Visual' of this EIAR for a more detailed assessment.

Probability	Quality	Significance	Duration
Likely	Positive	Significant	Long-term

5.6.6 Impact on Water

5.6.6.1 Construction Phase

The impact on water during the construction of the Proposed Development, with applicable mitigation measures, are assessed and outlined in Chapter 8 'Water' and Chapter 12 'Material Asset: Water Supply, Drainage & Utilities' of the EIAR. These mitigation measures will serve to minimise potential adverse impacts of the construction phase to the water environment, thereby avoiding any associated risk to human health from water contamination.

Probability	Quality	Significance	Duration
Likely	Negative	Not significant	Temporary

5.6.6.2 Operational Phase

The original masterplan for the entire HSQ development (granted in 2003 – DCC Reg. Ref. 2656/03) required that infrastructure be put in place to serve the entire development from the outset. This included new foul and surface water sewers along St. John's Road West and Military Road. In addition, a new watermain was extended down Military Road from an existing line at Bowe Lane West.

Following on from the above, a pre-connection enquiry to Irish Water was submitted in relation to this application and a favourable response was received. It is therefore considered that the proposed development would not have any adverse negative impact on water during its operational phase. In addition, the implementation of mitigation measures as outlined in Chapter 8 'Water' and Chapter 12 'Material Asset: Water Supply, Drainage & Utilities' will minimise any potential impacts associated with water.

Probability	Quality	Significance	Duration
Likely	Neutral	Slight	Long-term

5.6.7 Noise Impacts

5.6.7.1 Construction Phase

During the construction phase there is some potential for temporary impacts on nearby receptors as a result of construction activities on Site. Chapter 10 'Noise and Vibration' of the EIAR outlines a range of mitigation measures and the inclusion of a noise monitoring programme to minimise impacts on sensitive receptors in the receiving environment as far as is practicable. Enacting these mitigation measures will ensure that there will be no significant impact on population and human health.

Probability	Quality	Significance	Duration
Likely	Negative	Moderate	Temporary

5.6.7.2 Operational Phase

The potential noise impacts from the Proposed Development during the operational phase is most likely to be derived through an increase in vehicular trips, pedestrian, and public activity to and from and in the surrounding area of the subject site. However, in the context of the existing noise environment, the increase in vehicular movements is considered to have an imperceptible impact on nearby receptors. Moreover, the Proposed Development will have acceptable internal noise levels in the context of the design measures that will be implemented as discussed in Chapter 10 'Noise and Vibration' of this EIAR. It is therefore considered that there will be no significant impact on population or human health during the operational phase of the development.

Probability	Quality	Significance	Duration
Unlikely	Neutral	Imperceptible	Permanent

5.6.8 Impact on Air Quality and Climate

5.6.8.1 Construction Phase

During the construction phase of the Proposed Development the potential impact on population and human health will primarily be from construction related dust emissions, machinery emissions, and nuisance. Such construction related dust emissions have the potential to impact the population and human health. Due to the extent of works on the site the increase in exhaust emissions will be a short-term effect and will not have any significant detrimental impacts to the air quality. The potential of an increase in exhaust emissions and dust release into the atmosphere will be managed through an Outline Construction Management Plan and Outline Construction & Demolition Waste Management Plan. Any impacts to the existing population and health will be adequately addressed and mitigated through the implementation of the dust mitigation measures detailed in Chapter 9 'Air, Dust, and Climatic Factors' of this EIAR are implemented, fugitive emissions of dust from the site will be insignificant and pose no nuisance at nearby receptors.

Probability	Quality	Significance	Duration
Likely	Negative	Moderate	Temporary

5.6.8.2 Operational Phase

During the operational phase, the main potential cause of air pollution will be from increased vehicular traffic movements in the vicinity of the Proposed Development. The operational air quality effects of traffic movements have been assessed in Chapter 9 'Air, Dust, and Climatic Factors' of this EIAR and are determined to be negligible. In summary, effects on human health from air pollution during the operational phase of development are anticipated to be imperceptible.

Probability	Quality	Significance	Duration
Likely	Neutral	Imperceptible	Permanent

5.6.9 Impact on Local Attractions and Tourism Activities

5.6.9.1 Construction Phase

It is expected that the construction of the Proposed Development will likely have a slight negative impact on the local/tourist attractions closest to the development site, with dust, emissions, noise, and visual disturbances being the main concerns. The attractions likely to be impacted directly include the Royal

Hospital Kilmainham, the IMMA, and the Gardens at the Royal Hospital, which are immediately adjacent to the development. The implementation of mitigating measures detailed in Chapter 9 'Air, Dust, and Climatic Factors' and Chapter 10 'Noise and Vibration' of this EIAR will limit these disturbances.

Probability	Quality	Significance	Duration
Likely	Negative	Moderate	Temporary

5.6.9.2 Operational Phase

The local/tourist attraction impacts likely to arise from the Proposed Development will be positive and permanent over the long term. The attractions in proximity to the Proposed Development will enjoy increased exposure through the higher volume of visitor numbers to the area (generated by the proposed hotel). The increased spending power from additional people working in the area will likely spill over into the local tourism and related supplementary services (transport, food and beverage services, tour operators, etc.), with the potential to create a range of additional employment opportunities also.

Probability	Quality	Significance	Duration
Likely	Positive	Significant	Long-term

5.6.10 Risk of Major Accidents or Disasters

5.6.10.1 Construction Phase

It is considered that the Proposed Development will not give rise to any impacts related to a major accident or disasters during the construction phase. Throughout the construction phase, standard and regulated construction practices will be employed. The Outline Construction Management Plan outlines measures that will ensure adopted constructions practices will limit the risk of accidents during the construction phase. It will also detail the storage measures for hazardous materials used during construction ensuring they do not give rise to a risk of pollution.

Probability	Quality	Significance	Duration
Unlikely	Negative	Significant	Temporary

5.6.10.2 Operational Phase

The Proposed Development is not considered to be vulnerable to major accidents or disasters, and therefore the anticipated impacts are considered to be negligible. The site access from adjacent roads and the pedestrian network of the Proposed Development has been designed to ensure risk of a major accident is avoided.

Probability	Quality	Significance	Duration
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Unlikely	Negative	Imperceptible	Permanent	

5.7 Do Nothing Scenario

This section considers the potential impacts should the Proposed Development not take place. In a 'Do Nothing' scenario, the subject site would remain as a partly developed but unfinished brownfield site. In its current state, the site detracts from the appearance of the area and is at odds with surrounding development. In relation to the proposed development, the area would not benefit from improved visual impacts in a 'Do-Nothing' scenario.

The environmental receptors discussed throughout this EIAR would in all likelihood remain unchanged, while the potential for any likely significant adverse environmental impacts arising from the Proposed Development would not arise.

Consequently, in a 'Do Nothing' scenario, the potential for any significant positive impacts from the construction and operation of the Proposed Development would also not arise.

Moreover, a 'do nothing' scenario would involve the subject site, which is a Strategic Development and Regeneration Area (SDRA 7 – Heuston Station and Environs Area), remaining in its current state, and remaining underutilised as a mixed-use area, and not fulfilling local, regional and national planning policy objectives.

5.8 Mitigation Measures

5.8.1 Construction Phase

A range of construction related remedial and mitigation measures are proposed throughout this EIAR document with reference to the various environmental topics examined and the inter-relationships between each topic. Through the provision of these remedial and mitigation measures, any negative impacts on population and human health during the construction phase shall be appropriately mitigated. Chapter 17 of this EIAR provides a summary of all mitigation measures proposed.

5.8.2 Operational Phase

The Proposed Development has been designed to avoid negative impacts on population and human health through the design and provision of physical infrastructure as described in Chapter 3 'Description of Development' of this EIAR. Mitigation measures are proposed throughout the various chapters of this EIAR to avoid any adverse impacts from the proposed scheme and accordingly no further mitigation measures are considered necessary. As stated above, Chapter 17 of this EIAR provides a summary of all proposed mitigation measures.

5.9 Residual Impacts

5.9.1 Construction Phase

Any adverse likely and significant environmental impacts will be avoided by the implementation of the remedial and mitigation measures proposed throughout this EIAR. Positive impacts are likely to arise due to an increase in employment and economic activity associated with the construction of the proposed development. The overall predicted likely and significant impact of the construction phase will be short-term, temporary and neutral.

5.9.2 Operational Phase

The proposed development will contribute to further growth and expansion of the neighbourhood through additional footfall created from resident workers and tourists. Specifically, the office component of the development will bring a daytime population to the area which local retail and services will benefit from. The predicted impacts of the Operational Phase are considered to be long term and positive to population and human health.

5.10 Potential Cumulative Impacts

The potential cumulative impacts are assessed for the combined development site containing both the permitted SHD and the proposed Hotel and Office Block development, as well as other notable developments in the area listed in Appendix 1A of this report.

In relation to existing and permitted development within close proximity to the subject site, the most notable are the Irish Museum of Modern Art (IMMA), Royal Hospital Kilmainham, Kilmainham Garda Station and Kilmainham Gaol. It is not considered that the proposed development create any negative on these developments, either individually or cumulatively. Overall, the cumulative impacts of the proposed development on the population and human health are envisaged to be positive. The new working and visiting population will contribute to the economic viability of the area, increase local spending power, and the development of a range of new services, facilities, and open spaces will add to the viability and vibrancy of the area. The existing services and facilities will tap into the expanding population and invest more. Local businesses and transport etc. will benefit from the increase in population from the SHD development, while the increase in visitor population (through hotel and office occupancy) will deliver a further economic injection into the area.

The predominant mix of residential, office, retail and hotel development on site will add to the already established facilities in the HSQ, and create further gravity to the HSQ as local 'hub' for service delivery, supported by landscaping and place making within the Quarter to support public interaction and wellness. The provision of an office building and hotel building as part of this development will provide employment, tourist accommodation and socialising space in the area that will support the existing and future populations. The SHD will provide much needed residential capacity, in a location that provides easy access to multiple public transport links, retail, social infrastructure and amenity offerings to residents and visitors alike.

5.11 Interactions Arising

There are numerous inter-related environmental topics described in detail throughout this EIAR which are of relevance to population and human health. The main high-level interactions between Population and Human Health and other environmental factors include, Land, Soil and Geology (Chapter 7), Water (Chapter 8), Air, Dust, and Climatic Factors (Chapter 9), Noise and Vibration (Chapter 10), Material Assets: Traffic and Transport (Chapter 11), Material Assets: Water Supply, Drainage and Utilities (Chapter 12) and Landscape and Visual (Chapter 15). Please refer to the specific chapters of this EIAR where detailed assessments relating to these environmental topics are provided.

5.12 Monitoring

In relation to the impact of the development on population and human health, it is considered that the monitoring measures outlined in the chapters of this EIAR which address other environmental matters such as water, air quality and climatic factors, landscape and visual impact and noise sufficiently address monitoring requirements.

There are no reinstatement works proposed specifically with respect to population and human health.

5.13 References

List of sources drawn upon in preparing this chapter:

- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (Environmental Protection Agency, May 2022);
- Guidelines on the Information to be contained in Environmental Impact Statements (EPA, 2002);
- Advice Notes on Current Practice in the Preparation of Environmental Impact Statements (EPA, 2002);
- Central Statistics Office Census Data www.cso.ie
- Tusla Data https://www.tusla.ie
- Department of Education and Skills https://www.education.ie/en/
- An Bord Pleanála http://www.pleanala.ie/

BIODIVERSITY

6.1 Introduction

This Chapter has been prepared to assess potential impacts that may arise from the proposed development on biodiversity within the receiving environment.

This Chapter has been prepared by Dr Brian Madden (BA. Mod. Hons., Ph.D., MCIEEM) of Biosphere Environmental Services. It is based on a site visit, review of various technical reports which accompany the planning application, and a comprehensive literature review.

The present ecological assessment has been undertaken with due consideration to the following legislation:

- The Wildlife Act 1976 (as amended)
- The Habitats Directive 92/43/EEC (as amended);
- The Birds Directive 2009/147/EC (as amended);
- European Communities (Birds and Natural Habitats) Regulations 2011 S.I. 477 of 2011 (as amended).
- The EIA Directive 2011/92/EU as amended by Directive 2014/52/EU;
- European Communities (Environmental Impact Assessment) (Agriculture) Regulations 2011 [S.I. No. 456/2011];
- European Union (Environmental Impact Assessment and Habitats) Regulations 2011 [S.I. No. 473/2011];
- European Union (Environmental Impact Assessment and Habitats) Regulations 2012 [S.I. No. 246/2012];
- European Union (EU) (Environmental Impact Assessment and Habitats) (No. 2) Regulations 2015. [S.I. No. 320/2015]; and
- Flora (Protection) Order, 2015 S.I. 356.

In considering the ecological impacts of the proposed development, regard was made to the following guidance and information documents:

- CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial,
 Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management,
 Winchester.
- NRA (2009). Guidelines for Assessment of Ecological Impacts of National Road Schemes.
- Smith et al. (2011). Best Practice Guidance for Habitat Survey and Mapping in Ireland.

 EPA Guidelines on the Information to be contained in Environmental Impact Assessment reports (May 2022).

6.2 Characteristics 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 levels) to provide 238 no. bedrooms. 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 leftturn 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.

6.3 Assessment Methodology

6.3.1 Desk study

In addition to standard ecological reference material (as listed in reference and bibliography section 6.11) other key resources included:

- The Ordnance Survey website for recent and historic mapping (scales of 1:10,560 & 1:2,500) and various aerial images since the year 1995 (www.osi.ie/mapviewer).
- BING aerial imagery for high quality aerial photographs (www.bing.com/maps)
- Data on protected species and sites of conservation importance held online by National Parks and Wildlife Service (www.npws.ie.) and National Biodiversity Data Centre: (www.biodiversityireland.org) (both accessed 25th August 2020)
- Irish Wetlands Birds Survey (I-WeBS) database of sites in Ireland that support wintering wetland birds (www.birdwatchireland.ie)

6.3.2 Site survey

A site survey was carried out on 3rd September 2020. This comprised a walk-over survey of the site area and immediate surroundings. Survey was over a period of 3 hours commencing at 10.30 am. Weather was fine at the time.