

Figure 15.3.4.1 Strategic Green Network (DCC Development Plan 2016-2022)

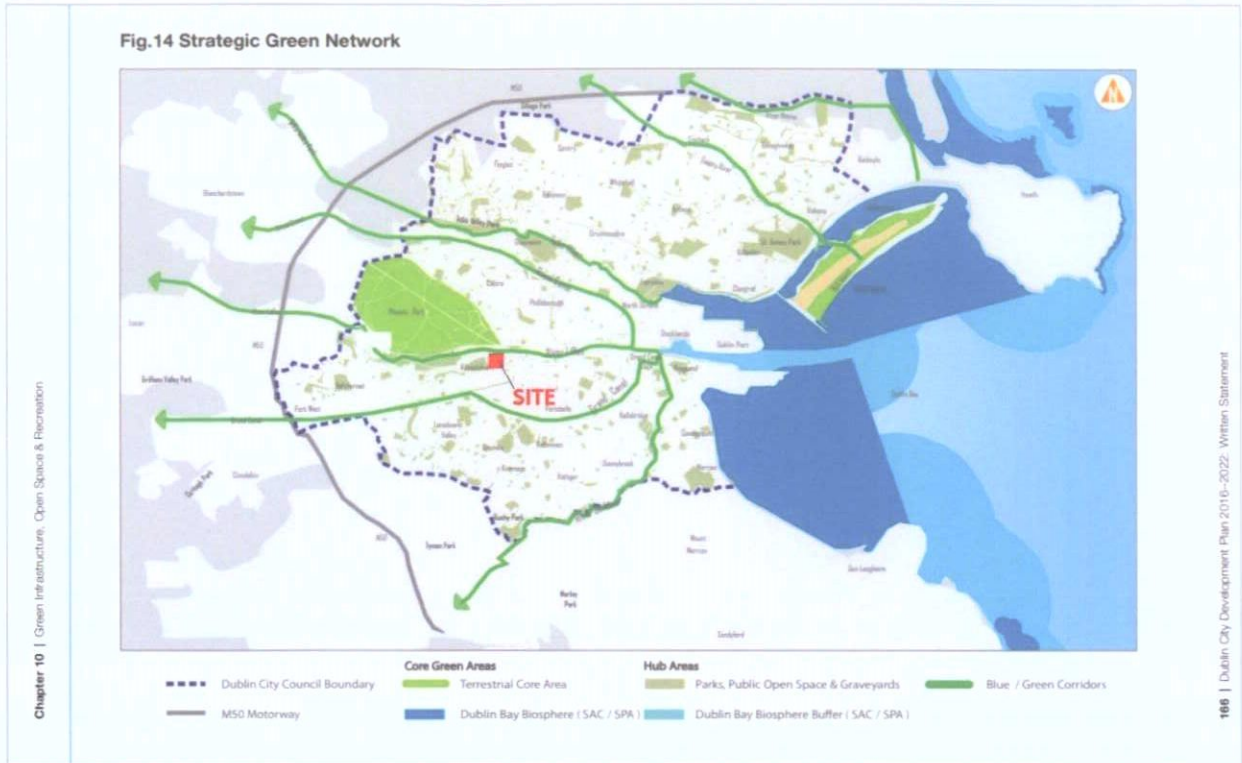
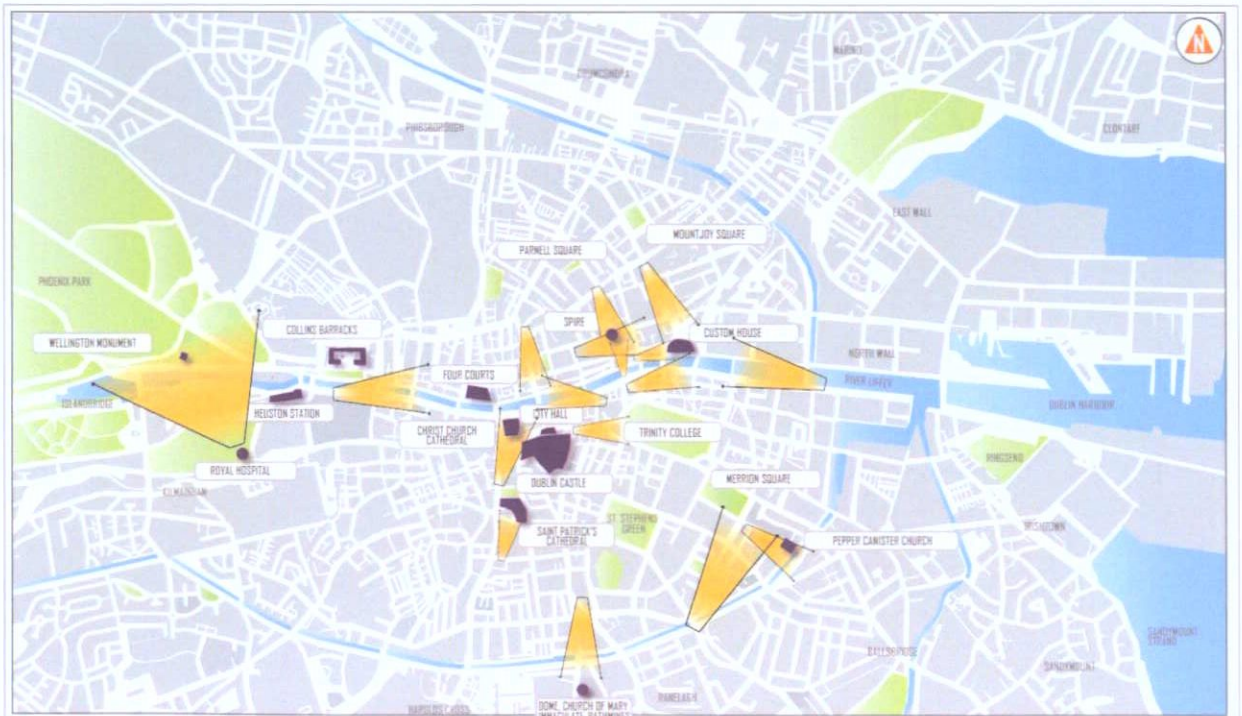


Figure 15.3.4.2 – Protected Views (DCC Development Plan 2016-2022)



15.3.5 Urban Development and Building Heights

In the Guidelines for Planning Authorities, The Dept. of Housing, Planning and Local Government, 2018 refers to the National Planning Framework and policy objectives to provide more compact forms of urban development. It quotes National Planning Objective 13, '*In urban areas, planning, and related standards, including in particular building height and car parking will be based on performance criteria that seek to achieve well-designed high-quality outcomes in order to achieve targeted growth. These standards will be subject to a range of tolerance that enables alternative solutions to be proposed to achieve stated outcomes, provided public safety is not compromised and the environment is suitably protected.*' This development adheres to these guidelines while respecting the environment with regard to the Landscape & Visual Impacts of the Proposed Development.

15.3.6 Site Images

A selection of views of the site area are included to give an indication of the character of the site and its surrounds.

Figure 15.3.6.1 Site Image Locations – 8 Site Views.

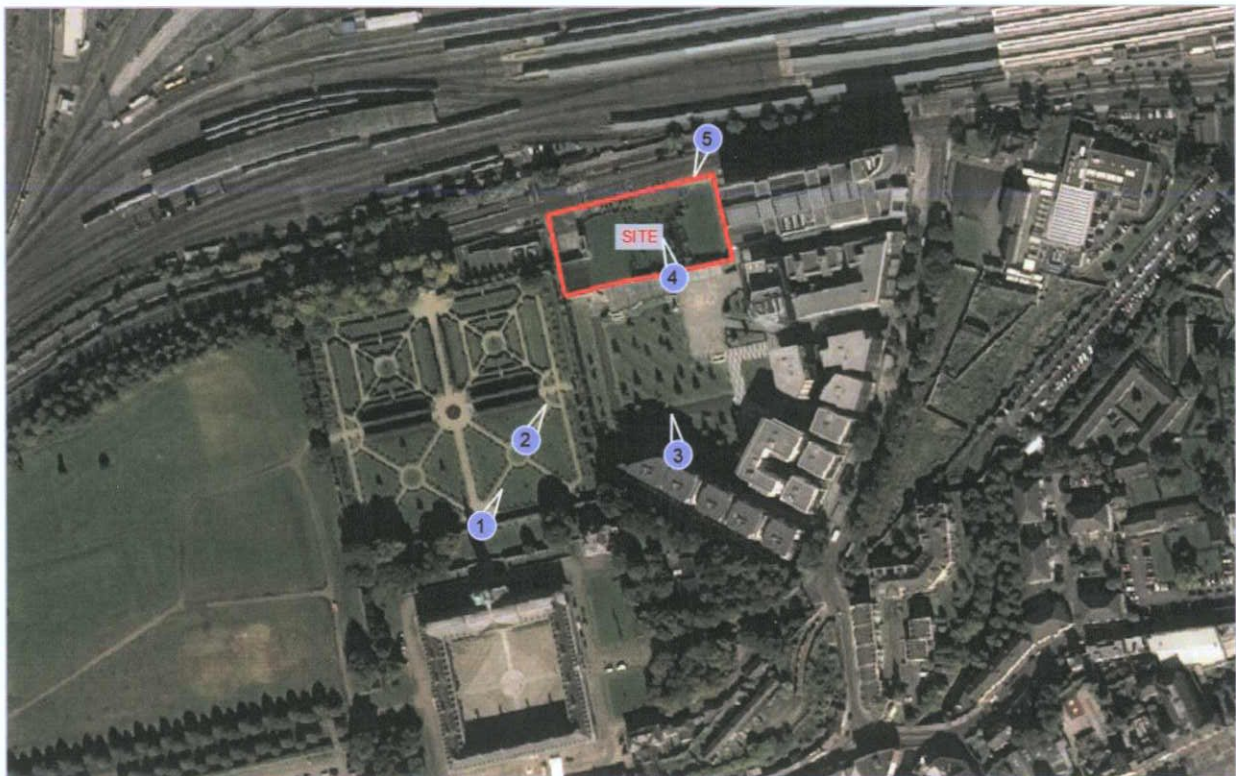


Figure 15.3.6.2 View 1 - northeast from upper terrace of RHK with formal gardens and earlier HSQ buildings.



Figure 15.3.6.3 View 2 – Northeast from formal gardens with earlier HSQ phases in view



Figure 15.3.6.4 View 3 – North from Telford Building, HSQ towards commercial site



Figure 15.3.6.5 View 4 – North from podium level over former development works on commercial site



Figure 15.3.6.8 View 5 – Southwest from St John’s Road West towards site.

15.4 Receptors

In order to predict the effects of the proposed development in terms of landscape effects, i.e., the constituent elements of the landscape, and visual effects, i.e., those affected by changes of views or visual amenity, requires the consideration of the various components of the development at different stages of its life cycle and the receptors that will be affected by them. In this study an area of approximately 1.25Km square around the site was assessed in terms of landscape and visual receptors. This area also includes the majority of photomontage locations as used in this report.

Figure 15.4.1– Landscape & Visual Receptors

15.4.1 Northern Receptors

The area to the north of the site includes the rail yards of Heuston Station, the apartment blocks on Conynham Road, a section of the Phoenix Park including the Wellington Monument, the Criminal Law Courts Building, former Royal Infirmary Building with Gandon's Cupola and the important arterial route into the city of St John's Road. Views of the proposed development from the north will have the backdrop of the existing HSQ and the various prominent buildings to the rear including the under-construction Children's Hospital. Views southwards from the Phoenix Park are generally screened by the existing evergreen trees within the park with only the upper sections of the buildings visible as are the upper levels of the existing HSQ buildings (see photomontages 20 & 21). There would be a minor element of screening by the development proposals of views of the RHK from a small area to the northeast of the site. Views northwards from St John's Road are currently across the unfinished unsightly building works where the commercial development is to be sited. The completion of the commercial block would enhance this section of roadway by the creation of a visually robust contemporary set of buildings and associated public realm improvements.

15.4.2 Eastern Receptors

Receptors to the east include Heuston Station, Guinness Brewery, HSE Headquarters and the proposed new Garda Security Centre building which is under construction. Generally, views from the east are screened by the existing HSQ buildings and therefore there would be little landscape or visual impact on receptors from this sector.

15.4.3 Southern Receptors

The southern receptors include the existing phase of the HSQ, the now permitted SHD development site, the listed RHK and its associated National Monuments and NIAH listed features, a range of established housing and more recent apartment developments and the James's Hospital and the Children's Hospital which is nearing completion. Views from the south towards the site are generally screened by the existing HSQ apartment buildings, existing buildings, and vegetation. Residents and workers of the existing HSQ buildings will have their views northwards screened by the granted SHD development proposals. However, given that the site is zoned for development and is located in an area where there is significant development works underway and planned there would be an expectation that the site would be developed, and existing views would be altered. The Royal Hospital and its grounds contain a range of historic features and formal gardens which adjoin the proposed development site. Views from the RHK terraces and gardens will be impacted by the proposed development given the proximity of the site to the RHK. While there are clear views of the existing HSQ buildings from the RHK, the proposed commercial development has elements that overlook the RHK grounds. Design of the buildings and landscape treatments have been used to mitigate the visual impacts of the proposals. The Cone of Vision from the RHK will be impacted by the development and this is discussed in more detail further on in this report.

15.4.4 Western Receptors

The western receptors include the RHK Formal gardens and Bully's Acre, The Hilton Hotel, Clancy Quay apartments, apartments on Conynham Road and a section of the Phoenix Park. Views from the west towards the site are generally screened by the mature trees on the western boundary of the RHK. There would be distant views of the development from the upper levels of the hotel and apartment blocks facing east. As stated above, there would also be clear views of the proposed buildings from the RHK formal Gardens and from Bully's Acre, however, there would be existing views of the earlier HSQ phase from these locations. Building design and landscape treatment would help mitigate landscape and visual impacts for these receptors.

15.5 Characteristics of the Development

HPREF HSQ Investments Ltd intends to apply for planning permission for a commercial development at a site at Heuston South Quarter St. John's Road West (to the north), Military Road (to the east), Royal Hospital Kilmainham (Protected Structure) (to the south and west), Kilmainham, Dublin 8.

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

- Site clearance and localised demolitions to remove part of the podium and Basement Level -1 reinforced concrete slabs at the interface of the proposed hotel and office blocks, together with the incorporation of part of the existing basement level structure extending to approximately 4,228 sq.m (GFA).
- The proposed basement will be integrated within the existing basement levels serving the wider HSQ development and will be accessed from the existing vehicular ramped accesses/egresses

onto/off St. John's Road West and Military Road to the north and east, respectively. The proposed basement area is split into two areas to provide a dedicated Hotel Basement area of approximately 2,132 sq.m (GFA) and an Office basement area of 2,096 sq.m (GFA).

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

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

15.5.1 Landscaping Proposals

The landscape design is based on the enhancement of the frontage onto St John's Road, the connecting pathways and ramp from St John's Road to the podium level terrace area linking with the proposed granted SHD layout and with the existing HSQ which links to Military Road. The diagonal pedestrian route from St John's Road between the hotel and the office buildings is an important feature in the layout of the site as it visually links the wider plaza area with St John's Road. The proposal contained in the granted SHD application include a visually strong axis route from Military Road into the RHK (subject to agreement) and this would be connected to St John's Road in this application increasing permeability around the whole HSQ development. Another design element in the layout of the circulation routes was the realignment of the pedestrian access from the plaza to St Johns Road to create a direct physical and visual link to the St Johns Road and the Wellington Monument (Wellington Testimonial) There are also large, landscaped roof gardens areas which will be accessible from the hotel and the office section. Other roof areas will also contain a landscaped finish and those sections of the development adjoining the RHK gardens will have planted terraces to visually link with the gardens softening the impact of the built form on users of the RHK gardens., A range of pollinator friendly planting material was selected for the various planted areas to encourage insect and bird life in the development. (See also Doyle O'Troithigh Public Realm and Landscape Strategy which forms part of the landscape submission for the development)

15.5.2 Design Measures to Reduce Visual Impacts

Consideration of the impact on landscape and visual aspects has been integral in the design and layout of the scheme as the design proceeded. The layout and design of the buildings vis a vis the existing adjoining historical and cultural context of the RHK, the granted SHD proposal to the south and the earlier parts of the HSQ to the east are the main considerations in the design process to minimize negative visual impacts.

The following measures have been included in the design of the scheme to reduce visual impacts:

- Arranging the different blocks to step up from the 6-storey hotel building nearest the RHK formal garden to the highest 12 storey office block adjoining the EIR building with the benefit of the existing ground level of the commercial site set well below the formal gardens level.
- Designing the façade and fenestration of the blocks facing the RHK to complement the style and rhythm of the architecture of the RHK to help blend in the new buildings.
- Creating a feature curved glazed profile to the office building to reduce shading and soften the impact of the adjoining proposed SHD tower when viewed from the west.
- Arranging formal planting on the terrace of the new building to match the granted SHD design and to link with the arrangements of the trees and shrubs in the formal garden.

- The DCC Green Infrastructure Policies and Objectives for development sites close to Green Corridors and adjoining green areas are recognised by maintaining the integrity of the existing landscape elements and the inclusion of significant planting within the scheme and the use of green roofs.
- Encouragement of biodiversity by planting native species, nectar producing plants and 'greening' the buildings with climbing and trailing plants.
- The use of high quality hard and soft landscape materials a significant planting of semi mature trees (See Doyle O'Troithigh Planting Plans in the planning application documentation) befitting of a new scheme and suitable to the existing landscape.
- Integrating the landscape elements of this extensive development into the surrounding built environment and connecting pathways and cycleways.
- Provision of a landscape design compatible with the existing landscape elements and respectful of the adjoining RHK formal gardens

Figure 15.5.2.1 – Landscape Plan Podium Level (Doyle O'Troithigh Landscape Architects)

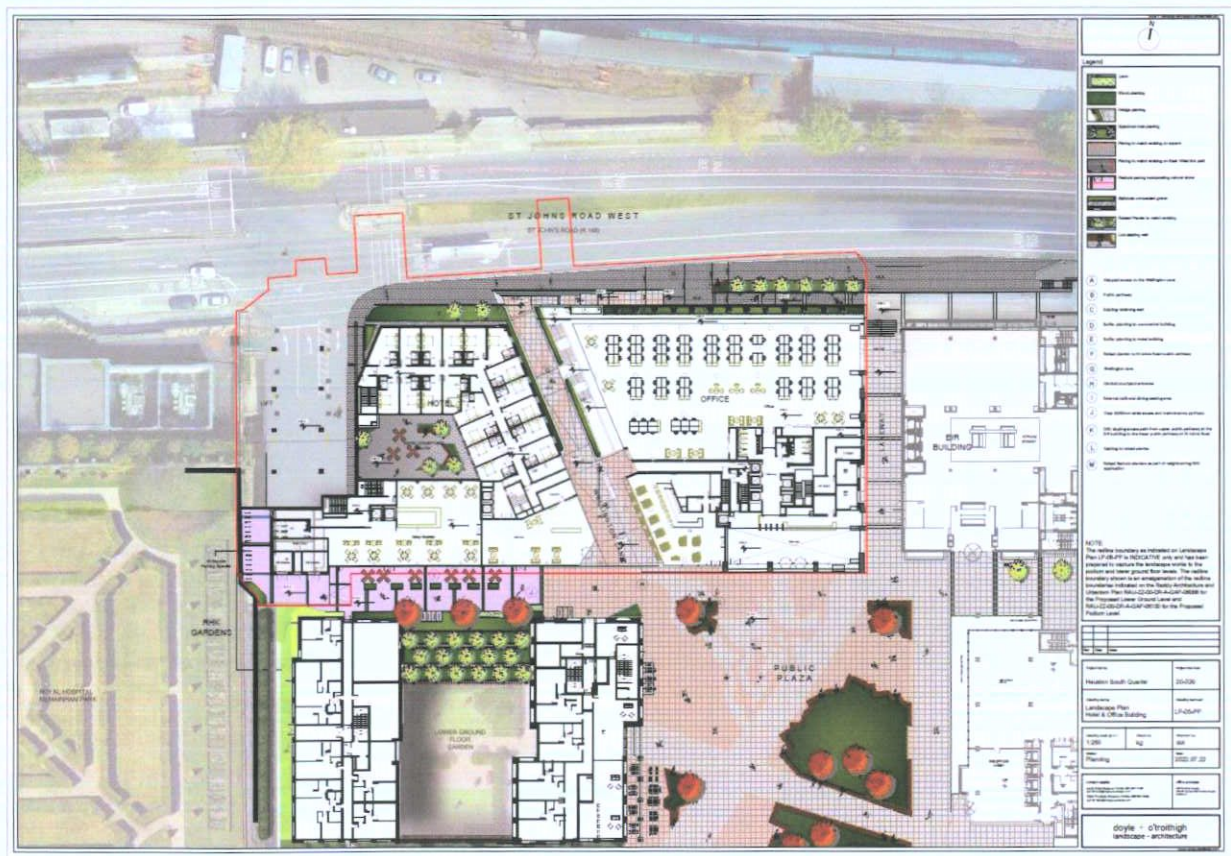
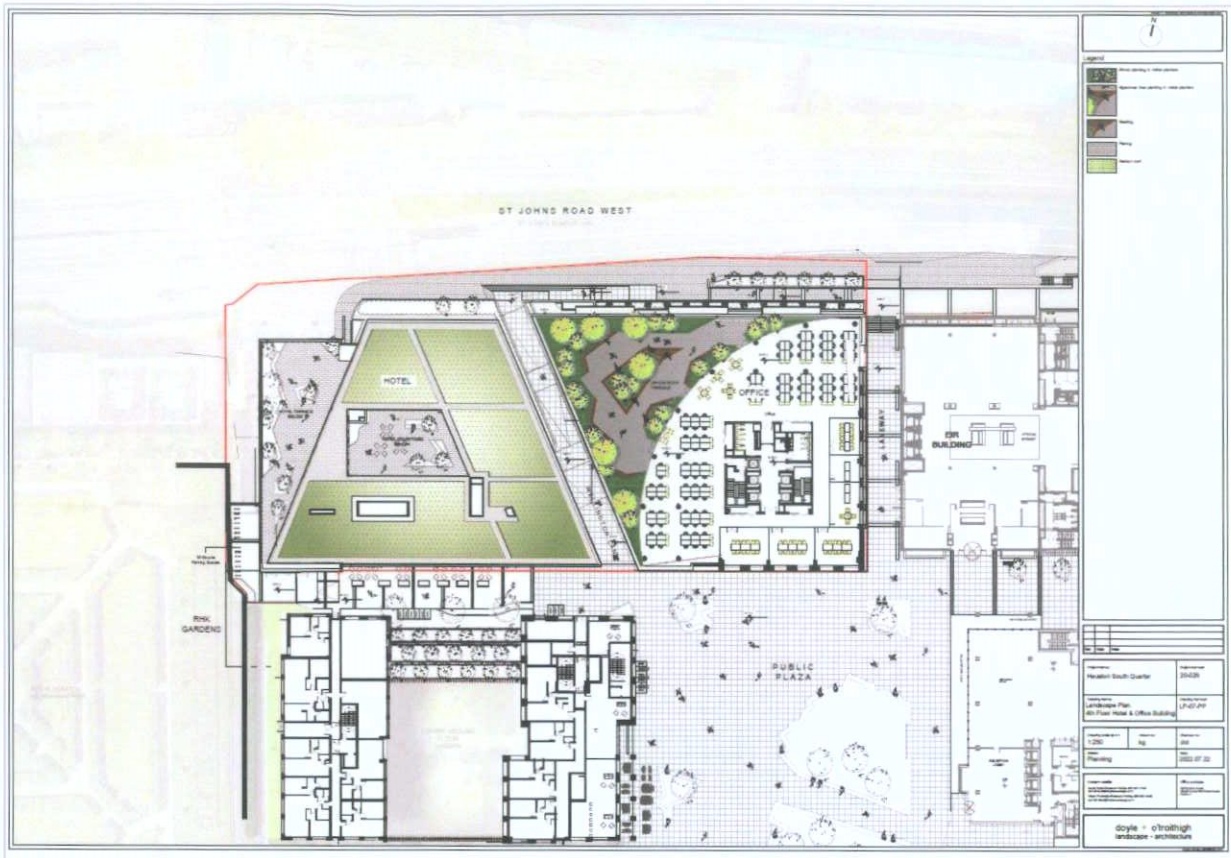


Figure 15.5.2.2 – Landscape Plan Roof Garden Level (Doyle O’Troithigh Landscape Architects)



15.6 Identification of Likely Significant Impacts

The proposed landscape impacts for this site would include the adaption of the existing visually negative stalled construction elements on site and incorporate these into the new development. The small tree planted grass area beside St John’s Road West and the lower-level open grass and scrub area would also require removal due to construction, however, the proposed extensive replacement landscape planting which is part of the design for the commercial development project would more than compensate for the loss of this small area. The commercial development proposals would also remove the unsightly former stalled building features from view which would benefit users of St John’s Road West, residents and office workers frequenting the podium level and overlooking residential and office buildings which would be a positive change to the landscape of the area. The development proposals for the commercial block would screen some angled views towards the RHK buildings from St John’s Road West but the existing stalled construction site currently visible from St John’s Road would be replaced with high quality-built form with associated landscaped elements. The development proposals therefore would remove existing unsightly features from beside the busy St John’s Road and replace them with a set of contemporary buildings with associated public realm landscape treatments. While there would be moderately negative visual impacts during the construction stage on the existing residents and workers of the HSQ and on the visitors to the RHK formal gardens. While there would be moderately negative cumulative visual impacts from some viewpoints there would be no significant negative visual impacts from the proposals.

15.6.1 Impact on Landscape Character

15.6.1.1 Construction Phase

The construction stage impact tends to be the greatest at the initial 'site disturbance' or 'breaking ground' stage. The adjoining residential and office developments to the east and south will be the most impacted from the construction activity particularly due to the proposed elevation of the buildings and the proximity of the construction works to the existing built environment. Similarly, users of the formal gardens of the RHK will also experience negative visual impacts from the development proposals, however the existence of the secant wall between the development site and the RHK formal gardens means that the construction activity will initially be screened from the RHK gardens. The development will be phased to work through the site. As one element is completed another will be under construction ensuring that the construction impacts will be lessened.

The development is open on the St John's Road side of the site and while hoarding will screen initial development works the height of the buildings, as they are built, will be visible to views from the north. The closest residents to the north would be apartment blocks on Conynham Road approx. 300m away across the rail lines at Heuston Station. The use of screen netting on the upper levels will help reduce negative visual impacts. Given the proximity and extent of the works there would be negative visual impacts for the residents and workers of the existing HSQ phases particularly at the construction stage. Views from the terraces and formal gardens of the RHK would also be negatively impacted by the construction works particularly when the development rises above the eastern boundary wall of the RHK gardens. Again, screen netting of the building at the construction stage would help reduce the visual impacts during construction. There is a line of trees to the west of Bully's Acre which screens views towards the site from the west but there would be some distant views of the development from the upper levels of the hotel and apartments to the west of the site. The apartment development at Clancy's Quay 300m to the northwest also has views towards the site and there would be a level of negative visual impact at construction stage from the proposals. Overall, the visual analysis suggests that the impact of the construction phase will be slight negative to moderate negative in that the development will alter the character of the environment in a manner that is consistent with existing and emerging trends of the surrounding area.

15.6.1.2 Operational Phase

The proposed development has a number of potential impacts primarily on the visual amenity of the area given its location and scale. The landscape impacts relate to the existing site with its grass and tree planting at street level along with the lower-level grass and scrub area and as shown in Image 15.3.6.5 View 04, above. The proposed landscape design (as described in 15.4.1 of this report) comprises hard and soft planted areas providing connectivity with the granted SHD development and pedestrian access to St John's Road West. The proposed development works would have the positive impact of removing the existing unsightly stalled earlier works from view and replacing them with a contemporary designed buildings with associated landscaped areas with new pedestrian access routes from St John Road.

The existing residential and office accommodation in the HSQ blocks of the earlier phase of the development to the east and south of the site will have their existing views westwards and northwards screened to some extent by the new development and by the granted SHD development. However, given the strategic location and the relatively unfinished nature of the Phase 1 development the site was always

in line for development. The existing landscape of the commercial site area is composed of stalled building elements, rough grass and scrub and a small tree planted grass area.

Views eastwards from the terraces and formal gardens of the RHK will be impacted by the new development however, the existing buildings that form the earlier sections of the HSQ development with their various shapes and forms are clearly visible from the RHK grounds and the new development will screen the original buildings as well as reacting in an architecturally cohesive manner to views from the RHK. The proposed structures range of 6 storey (from a lower level to the gardens) along a section of the RHK boundary will provide a cohesive visual edge to the formal gardens. A 3M high rubble stone wall set on top of a secant wall forms the boundary of the RHK formal gardens with a steep drop into the HSQ site area. The granted SHD application has been conditioned by the Bord for the removal of the top two floors of the SHD development, which means the closest elements of the SHD proposals to the RHK formal gardens will not be visible from the RHK formal gardens. This is reflected in the photomontages.

The 'Cone of Vision' view northwards from the north range of the RHK to the Magazine Fort and the former Royal Military Infirmary as described in the Development Plan will be impacted upon by the proposed development. As stated above, the top two floors of Blocks D and E have been conditioned out of the permitted SHD to protect the architectural heritage of the adjacent Royal Hospital Kilmainham and in the interests of the protection of visual and residential amenities. There is a significant level of tree growth to the rear of the Deputy Master's House which means the cone of vision is already reduced somewhat, as shown in Photomontage 4. Similarly Views of the Magazine Fort are also obscured by trees and by part of the recently constructed Clancy Quay apartment development. Photomontage 5 shows that the proposed buildings will screen views of Gandon's Cupola however, views of the distant Cupola make up only a minor aspect of the overall vista and the visual analysis of the view classifies it as 'Moderate Negative visual impact tending to imperceptible' in the operational phase. A section has been added to the photomontage analysis in 15.5.2 which identifies those views relevant to the 'Cone of Vision'.

Rob Goodbody in association with Brendan Money and Sinead McLoughlin of Robin Mandal Architects have prepared a report (See Chapter 14) on the impacts of the proposed development on the built heritage, historic landscapes and non-designated architectural heritage of the surrounding area. This includes impacts on the Cone of Vision (COV) from the North Range of the RHK. The Report reviews the photomontages with respect to their impacts of the development proposals on the adjoining heritage features. In View 4, from the rear of the Deputy Master's House where the COV could be impacted, is said to be of slight significance in the operational phase and also a slight cumulative impact. In View 5, where the COV could also be impacted, the report states "*While the Cupola of the Royal Infirmary is obscured, the view is taken on the periphery of the COV and lack the axial and majestic sweep of the view on the view of the central axis (of the garden)*". The impact would be a slight negative tending towards neutral long term.

In their section on Cumulative Impacts the report states:

"The COV is understood to not be a static viewpoint but an impression and appreciation of the wider historical setting from the terrace above the RHK garden. The principal view, where one enters the garden, is along the central axis and as per the tables above in View 6 and 7, the COV remains as intended with the cupola of the Royal Infirmary appearing above the treeline. The cupola remains visible as one moves east and is only obscured when one reaches the edge of the COV, towards the eastern side of the Deputy Master's House. Here, the existing view is already compromised by the adjacent presence of phase 1 of

the HSQ. While the proposed development may obscure the cupola from the extreme periphery, regardless of the scale and height of the permitted SHD and commercial development, the impression of the COV is tempered by urban development, (View 4 and 5)"

15.6.1.3 Cumulative Impacts

The granted SHD proposals as conditioned, with the removal of the top two floors of D and E, i.e., the closest blocks to the RHK formal gardens, and the removal of the arch between Blocks A and C have been included in the visual analysis and are part of the cumulative analysis of the commercial site. Other projects in the area under construction, such as the new Garda Security Centre on Military Road and the proposed CIE Signalling Building in Heuston Station and the proposed high-rise development on Parkgate Street some aspects of which have been granted and others in are in the planning phase have been included in the cumulative impact analysis. Taking the wider aspect of the cumulative impact of development locally there has been a considerable amount of development in the study area in the past number of years and the granted SHD application under consideration and the commercial site proposals will add to this. The reason for the level of development is that the area was relatively undeveloped and given that Kilmainham lies close to the city and is well serviced by road and rail transport, development was going to be inevitable. As discussed above, the design and layout of the buildings in this application form the northern side of the HSQ site and sensitively address the important formal gardens of the RHK and the listed buildings on the site.

Overall, the impact of the cumulative impacts of development on the landscape of this area will be slight to moderate negative depending on the viewer's location, i. e. creating an impact which causes noticeable changes in the character of the environment without affecting its sensitivities and an impact that alters the character of the environment in a manner that is consistent with the existing and emerging trends.

15.6.2 Visual Impact Assessment

In this section, the photomontages prepared by Modelworks are assessed to describe the potential impacts arising from the proposed development and the cumulative impacts of future development on the adjoining lands. Please refer to Appendix 14A for the photomontage views for the project.

Figure 15.6.2.1 – 24 No. Photomontage Locations**Table 15.6.1– List of Views and Location Relative to Site**

View	Description	Location
View 01	View Southwest from St John's Road West / Heuston St.	Northeast
View 02	View west from car park Dr. Steevens' Hospital	East
View 03	View northwest from James's Street	Southeast
View 04	View north from rear of Deputy Masters House	Southwest
View 05	View north from rear of Deputy Masters House	Southwest
View 06	View northeast from the central axis of the Royal Hospital	Southwest
View 07	View northeast from in front of Royal Hospital	Southwest
View 08	View northeast from top of RHK garden access steps	Southwest
View 09	View east from the central focal point of the RHK formal gardens	West
View 10	View east from the pavilion in the formal garden RHK	West
View 11	View east from northern end of RHK formal gardens	West
View 12	View east from corner of the formal garden RHK.	West
View 13	View east from western edge of formal gardens	West
View 14	View east from centre of Bully's Acre.	West

View 15	View northeast from Bully's Acre	Southwest
View 16	View northeast from Richmond Tower, South Circular Road	Southwest
View 17	View east from St John's Road West.	West
View 18	View east from St John's Road West.	West
View 19	View southeast from Magazine Fort in the Phoenix Park	Northwest
View 20	View south from Chesterfield Avenue, Phoenix Park	North
View 21	View south from Chesterfield Avenue, Phoenix Park	North
View 22	View south from DPP's Office Infirmarary Road	North
View 23	View southwest from Croppy Acre, Wolf Tone Quay	Northeast
View 24	View southwest from Wolfe Tone Quay	Northeast

Photomontage View 01	View Southwest from St John's Road West / Heuston St.
Existing View	The viewpoint is approximately 500M northeast of the site with the listed Heuston Station building on the right, Dr Steeven's Hospital behind the trees on the left and the Heuston South Quarter (HSQ) buildings in the centre of the image. St John's Road West runs between the station and the Heuston South Quarter buildings. The tower cranes of the new Garda Security Centre buildings are visible above the trees on the left.
Proposed View	The upper floors of the proposed development are partially visible above the earlier section of the HSQ buildings. The cumulative view shows the taller element of the adjoining permitted HSQ SHD development rising above the existing HSQ and to the left of the commercial application's development. The proposed Garda Security Centre Buildings with a 4 to 6 storey height will potentially be visible where the tower cranes are located on the left of the image.
Construction Phase Impacts	Slight negative short term visual impact
Operational Phase Impacts	Imperceptible neutral long term visual impact
Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact	Slight neutral cumulative impact

assessment	
DCC 'Cone of Vision' View	This view does not come within the 'cone of vision'

Photomontage View 02	View west from car park Dr. Steevens' Hospital
Existing View	This viewpoint is approximately 400M to the east of the development site contains a number of listed buildings, Dr Steevens Hospital on the right, the former College of Nursing in the centre and St Patrick's Hospital on the left. The earlier phase of the HSQ buildings are visible beyond the hospital buildings. The view is dominated by the parking areas associated with the hospital.
Proposed View	The proposed new buildings are generally screened by the existing HSQ Phase 1 and therefore there would be minimal visual impact on this view as the proposed buildings visually match the existing from this viewpoint. The cumulative view shows the permitted SHD buildings screened by the earlier HSQ phase. The proposed 4 to 6 storey Garda Security Centre buildings may also be visible in this view when complete.
Construction Phase Impacts	Slight neutral short term visual impact
Operational Phase Impacts	Imperceptible neutral long term visual impact
Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment	Imperceptible neutral cumulative impact
DCC 'Cone of Vision' View	This view does not come within the 'cone of vision'

Photomontage View 03	View northwest from James's Street
Existing View	The view is from the busy junction of Bow Lane and James's Street approx. approximately 500M southeast of the site. The area is designated as a Conservation Area in the Dublin City Development Plan. The trees visible in the middle distance are in the grounds of St Patrick's Hospital.
Proposed View	The proposed development is screened by intervening vegetation and buildings even in the winter view, therefore

	there would be no visual impact arising from the proposals on this viewpoint. The cumulative view is screened by the existing buildings.
Construction Phase Impacts	Imperceptible neutral short term visual impact
Operational Phase Impacts	Imperceptible neutral long term visual impact
Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment	Imperceptible neutral cumulative impact
DCC 'Cone of Vision' View	This view does not come within the 'cone of vision'

DCC PLAN NO: 4610/22
RECEIVED: 04/08/2022

Photomontage View 04	View north from rear of Deputy Masters House
Existing View	The summer view shows the screening trees and fence on the right-hand side, the apartment buildings on Conynham Road, the Wellington Monument, and the Garden Pavilion with pieces of sculpture in the foreground. The winter view shows a little more of the buildings on Conynham Road and Gandon's Cupola on the former Royal Infirmary building is screened by intervening vegetation.
Proposed View	The summer view of the Proposed Development shows the lower western edge of the development with the higher elements partially screened by the trees. The top level of the buildings is in line with the trees and buildings on the horizon to the rear. The planting on the roof level softens the building's visual impact and links with the vegetation of the gardens. In the winter view the taller elements of the development are partially visible behind the trees. The cumulative view shows only a small section of the proposed commercial element as they are screened by the permitted SHD buildings. A proposed 5 storey Irish Rail building under section 5 Planning is under construction to the rear of Heuston Station and there may be potential views of this building from this viewpoint.
Construction Phase Impacts	Moderate negative short term visual impact
Operational Phase Impacts	Slight negative visual impact long term
Buildings and permitted and	Moderate neutral cumulative impact

<p>proposed developments within the scope of the cumulative landscape and visual impact assessment</p>	
<p>DCC 'Cone of Vision' View</p>	<p>This view, from the rear of the RHK's Deputy Master's House is within the 'Cone of Vision' as described in the Dublin City County Development Plan (2016-2022). The winter view shows that Gandon's Cupola on the former Royal Infirmary and the Magazine Fort in the Phoenix Park are not visible as they are obscured by intervening vegetation.</p>

<p>Photomontage View 05</p>	<p>View north from rear of Deputy Masters House</p>
<p>Existing View</p>	<p>This view northwards from the rear of the Deputy Master's House on the intermediate terrace level is across the formal gardens with part of the Central Criminal Courts building on the right, Gandon's cupola on the former Royal Infirmary, the apartment blocks on Conynham Road, the Wellington Monument in the Phoenix Park and the upper section of the RHK Garden pavilion. Various lighting gantries, masts and construction cranes are visible above the tree lined horizon.</p>
<p>Proposed View</p>	<p>The proposed new commercial buildings adjoining the formal gardens screen out some of the rail infrastructure, apartment buildings and the distant Gandon's cupola. The new building's recessed window reveals, and articulations match the formality of the gardens. The roof terrace and parapet planting soften the sharp profile of the proposed commercial buildings linking to the vegetation in the gardens. The cumulative view shows that the permitted SHD buildings obscure most of the proposed commercial development with only the upper level of the proposed commercial building close to the gardens visible.</p>
<p>Construction Phase Impacts</p>	<p>Moderate negative short term visual impact</p>
<p>Operational Phase Impacts</p>	<p>Moderate negative tending towards imperceptible neutral long term</p>
<p>Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment</p>	<p>Moderate neutral cumulative impact. The proposed Irish Rail signalling building in Heuston Station may also be visible in this view when complete.</p>

<p>DCC 'Cone of Vision' View</p> <p>This view from the terrace below the rear of the Deputy Masters House is within the 'Cone of Vision' and the winter view shows that Gandon's Cupola is visible approx. 700m in the distance to the north. The proposed commercial development obscures views of the Cupola in this photomontage.</p>	
<p>Photomontage View 06</p> <p>View northeast from the central axis of the Royal Hospital</p>	
<p>Existing View</p> <p>The view is across the formal gardens from the centre of the top terrace in front of the north range of the RHK. A small section of the Central Criminal Courts building is visible on the right and the former Royal Infirmary cupola is visible on the right background with the apartment buildings and rail infrastructure also centre background. The buses parked in the Conynham Road depot are also visible. The Wellington Monument in the Phoenix Park is partially screened by trees.</p>	<p>Proposed View</p> <p>The proposed new commercial buildings adjoining the formal gardens screen out some of the rail infrastructure and apartment buildings while retaining the view of Gandon's cupola on the former Royal Infirmary in the background. The roof level of the proposed commercial buildings is sympathetic to the tree lined horizon. The new buildings recessed window reveals and articulations balance the formality of the gardens. The cumulative view including the granted SHD development appear as a low-level extension to the proposed development. The proposed Irish Rail signalling building may also be visible in this view when complete.</p>
<p>Construction Phase Impacts</p> <p>Moderate negative short term visual impact</p>	<p>Operational Phase Impacts</p> <p>Moderate neutral long term visual impact</p>
<p>Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment</p>	<p>DCC 'Cone of Vision' View</p> <p>This view from the formal garden access steps at the centre of the main axis is within the 'Cone of Vision' and the winter view shows that Gandon's Cupola is visible on the right of the image. The proposed low level element development is visible to the right of the image addressing the formal gardens and screening</p>

	out views of the Conyngham Road bus garage. The proposed cumulative development retains views of the Cupola and further provides an edge to the formal gardens and screens out discordant views to the rear.
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Photomontage View 07	View northeast from in front of Royal Hospital
Existing View	The view includes a side view of the Deputy Masters House, and the trees close to this building. The rear of the Eircom office building and the Central Criminal Courts and bus depot are visible to the rear of the commercial development site. Gandon's cupola and the former Royal Infirmary building are centre left with the apartment blocks on Conynham Road on the left.
Proposed View	This view shows the proposed low-level buildings commercial buildings closest to the formal gardens with the taller elements stepping up in height to the rear of the development. The top of the Central Criminal Courts building is visible to the rear as is Gandon's cupola on the former Royal Infirmary. The roof garden of the commercial lower-level buildings provides visual linkage with the formal gardens of the RHK. The proposed curved glazed higher office element references the curve of the Courts Building. The taller permitted SHD block of the cumulative view partially screen the taller element of the proposed commercial building.
Construction Phase Impacts	Moderate negative short term visual impact
Operational Phase Impacts	Moderate negative tending towards imperceptible neutral long term
Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment.	Slight to moderate neutral cumulative impact. The proposed Irish Rail signalling building and part of the proposed new Garda Security Centre 4 to 6 storey buildings may also be visible when complete.
DCC 'Cone of Vision' View	This angled view from the terrace in front of the RHK's North Range Tower and is within the 'Cone of Vision'. The views show that Gandon's Cupola is visible on the left of the image. The proposed low-level element of the development addresses the formal gardens and forms a formal edge to the gardens. The proposed cumulative development retains views of the Cupola and further provides a low-level formal edge to the RHK

	gardens and screens out discordant views to the rear.
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Photomontage View 08	View northeast from top of RHK garden access steps
Existing View	This view over the formal gardens has the existing range of buildings styles of the earlier HSQ development on the right with the central Criminal Courts building in the centre background with the former Royal Infirmary and Gandon's cupola centre left. The apartment blocks on Conynham Road are visible on the left of the picture.
Proposed View	The proposed commercial buildings screen out a section of the original HSQ phase EIR building with the top of the Courts building and Gandon's cupola visible centre left. The taller glazed element of the proposed building stands above the lower west arm of the proposed commercial development which adjoin the RHK gardens with the upper-level set back behind the roof garden. The cumulative view shows the permitted SHD development screening most of the commercial development but the lower western sections forming a formal building response to the gardens.
Construction Phase Impacts	Moderate negative short term visual impact
Operational Phase Impacts	Moderate neutral tending towards imperceptible long term
Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment	Slight to moderate neutral cumulative impact. The proposed Irish Rail signalling building may also be visible in this view
DCC 'Cone of Vision' View	This angled view from the lower terrace in front of the RHK's North Range Tower and is within the 'Cone of Vision'. The winter view shows that Gandon's Cupola is visible on the left of the image. The proposed low-level element of the development addresses the formal gardens and forms a formal edge to the gardens. The proposed cumulative development retains views of the Cupola and further provides an edge to the formal gardens and screens out discordant views to the rear.

Photomontage View 09	View east from the central focal point of the RHK formal gardens
Existing View	The view eastwards from the centre of the formal gardens shows the avenue of pleached limes framing the view of the original HSQ buildings with a visible gap between the curved Brunel Building and Kestrel Building. A blank limestone rubble wall, where the former gateway, existed, closes the view at the focal point at the edge of the formal gardens. The tower cranes visible in the view are in the proposed Garda Security Centre site under construction on Military Road.
Proposed View	The proposed winter view shows the blue outline of the taller elements of the proposed commercial scheme with the lower-level western section partially visible behind the trees. The cumulative view shows the granted SHD proposal with parts of the original HSQ visible behind. The proposed new Garda Security Centre will be partially visible in this view between the buildings.
Construction Phase Impacts	Slight negative short term visual impact
Operational Phase Impacts	Slight neutral tending towards imperceptible long term
Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment	Slight neutral cumulative impact
DCC 'Cone of Vision' View	This view is not relevant to the 'Cone of Vision'

Photomontage View 10	View east from the pavilion in the formal garden RHK
Existing View	The view is taken from in front of the RHK Pearce's Garden pavilion approx. 70M west of the site and shows the earlier phase of the HSQ development with the tower cranes from the new Garda Security Centre buildings in the background on Military Road.
Proposed View	The proposed development screens the original HSQ EIR building and the lower western arm of the development adjoining the RHK garden is partially visible behind the boundary wall. The proposed set back upper storey and roof garden planting softens the visual impact of the buildings

	providing a visual linkage with the gardens. The cumulative view shows the granted SHD buildings screening the original HSQ development and creating a formal edge to the gardens.
Construction Phase Impacts	Moderate negative short-term visual impact
Operational Phase Impacts	Moderate negative tending towards neutral long term
Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment	Moderate neutral cumulative impact
DCC 'Cone of Vision' View	This view is not relevant to the 'Cone of Vision'

Photomontage View 11	View east from northern end of RHK formal gardens
Existing View	The RHK's formal gardens are characterized by clipped hedging and radial pathways bordered by lawn areas. This view is approx. 120M west of the site and the earlier phase of the HSQ development with the white rendered Eir building on the left and the other buildings stepping down to the right of the image towards the Deputy Master's House on the right.
Proposed View	The proposed view shows the taller curved glazed element of the commercial proposal partially screening the earlier EIR HSQ buildings and matching the height of the sail-like feature of the HSQ Phase1 Brunel Building. The lower western arm of the proposed commercial section is partially visible on the left. The cumulative shows the granted SHD buildings stepping down towards the Deputy Master's House.
Construction Phase Impacts	Moderate negative short-term visual impact
Operational Phase Impacts	Moderate negative tending towards neutral long term
Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment	Moderate neutral cumulative impact
DCC 'Cone of Vision' View	This view is not relevant to the 'Cone of Vision'

Photomontage View 12	View east from corner of the formal garden RHK.
Existing View	The view 150M from the site on the western side of the formal gardens shows the Deputy Masters House with the RHK north range and tower on the right with the earlier phase HSQ buildings in the distance. The tower cranes are in the new Garda Security Centre under construction on Military Road.
Proposed View	The proposed commercial buildings are only partially visible in this view and their height matches that of the original HSQ phase with the buildings stepping down in height to the Deputy Master's House. The cumulative view shows the granted SHD buildings screen most of the original HSQ development.
Construction Phase Impacts	Moderate negative short-term visual impact
Operational Phase Impacts	Slight neutral visual impact tending towards imperceptible long term
Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment	Moderate neutral cumulative visual impact
DCC 'Cone of Vision' View	This view is not relevant to the 'Cone of Vision'

Photomontage View 13	View east from western edge of RHK formal gardens
Existing View	In this view along the formal pleached screen avenue of RHK formal gardens the view terminates at the limestone boundary wall of the gardens with the dramatic curved Brunel Building, part of the original phase of the HSQ, creating a strong visual statement at the end of the avenue. The rear of the Eircom building is partially visible on the left of the image. The Deputy Master's House is screened behind evergreen trees on the right.
Proposed View	The proposed commercial development curved glass side contrasts with the formal lower western arm of the proposals adjoining the RHK gardens. The EIR building is screened by the commercial proposal. In the cumulative view, the granted SHD buildings visually link to the commercial proposals. The proposed tower associated with the Parkgate St. development is visible to the left of the commercial buildings matching the

	SHD tall block in the image.
Construction Phase Impacts	Moderate neutral short term visual impact
Operational Phase Impacts	Slight neutral long term visual impact
Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment	Moderate neutral cumulative impact. The proposed new Garda Security Centre will be partially visible in this view.
DCC 'Cone of Vision' View	This view is not relevant to the 'Cone of Vision'

Photomontage View 14	View east from centre of Bully's Acre.
Existing View	The viewpoint in Bully's Acre is over 300M to the west of the site with the wall of the formal garden in the mid distance. Parts of the north and west range of the RHK are visible on the right with the earlier HSQ phase visible in the distance. The RHK trees provide a visual break between the RHK buildings and the HSQ.
Proposed View	The proposed curved glass building of the commercial development bookends the original HSQ development with the lower western arm partially visible between the trees. The cumulative development view shows the stepping of height from the original HSQ Telford Building up to the highest SHD element. The commercial and SHD buildings appear as a group separated from the RHK buildings. The proposed tower of the Parkgate St development is visible behind the trees on the left complimenting the form of the granted SHD building.
Construction Phase Impacts	Slight negative short term visual impact
Operational Phase Impacts	Slight negative tending towards neutral long term
Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment	Moderate neutral cumulative impact. The proposed new Garda Security Centre will be partially visible in this view.
DCC 'Cone of Vision' View	This view is not relevant to the 'Cone of Vision'

Photomontage View 15	View northeast from Bully's Acre
Existing View	The viewpoint across open grassland is over 400m to the west of the site and shows the trees lining the RHK's western approach Avenue, part of the west range of the RHK and the tower on the north range. Trees screen the southern part of the earlier HSQ development, and the top of the Brunel building is visible with the Eir building centre of image
Proposed View	The view shows the curved glass element of the new commercial development screening the EIR building of the original Phase 1 HSQ. In the cumulative view most of the rest of the original HSQ phase is screened by the proposed commercial and granted SHD development. The top of the proposed tower development at Parkgate Street is also visible over the proposed commercial development. In this cumulative view the all the proposed buildings appear as a grouping visually separated from the RHK.
Construction Phase Impacts	Slight negative short term visual impact
Operational Phase Impacts	Slight neutral tending towards imperceptible long term
Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment	Moderate neutral cumulative impact. The proposed 29 storey building at Parkgate Street will also be visible in this view.
DCC 'Cone of Vision' View	While this view is not within the 'Cone of Vision' the development proposals do not impact on the view of Gandon's Cupola as it is partially visible above the trees on the left.

Photomontage View 16	View northeast from Richmond Tower, South Circular Road
Existing View	The view is taken from beside Kilmainham Court House towards the RHK with the castellated Richmond Gate in the centre of the view with the tree lined RHK's western avenue stretching away in the distance. The proposed site is approx. 600M northeast of this viewpoint
Proposed View	The proposed view shows the outline of the development screened by the boundary walls of the RHK and the trees of the Bully's Acre lands. The winter views screen both the proposed

	and cumulative building forms.
Construction Phase Impacts	Imperceptible neutral short term visual impact
Operational Phase Impacts	Imperceptible neutral long term visual impact
Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment	Imperceptible neutral cumulative visual impact
DCC 'Cone of Vision' View	This view is not relevant to the 'Cone of Vision'

Photomontage View 17	View east from St John's Road West.
Existing View	This location, on a major road artery into the city, offers clear views of the RHK buildings and part of Bully's Acre with a dense line of trees along the northern boundary of the RHK lands screening views towards the site. The upper level of the Central Criminal Courts building is partially visible behind the wall on the left.
Proposed View	The proposed upper level of the commercial block is partially visible above the trees with the rest of the development screened by the trees. In the cumulative view both the granted SHD and proposed commercial block are partly visible above the tree line. Winter views are not available, but even in winter views, the dense nature of the trees in this location would provide a high level of screening for the development. The proposed Parkgate St development is clearly visible on the left of the image visually linking with the scale of the commercial and SHD proposals.
Construction Phase Impacts	Slight negative short term visual impact
Operational Phase Impacts	Imperceptible neutral long term visual impact.
Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment	Slight neutral cumulative visual impact. The proposed residential tower building on Parkgate Street is also visible in this view. A positive impact would arise from the creation of landmark buildings as one enters the city from the west.
DCC 'Cone of Vision' View	This view is not relevant to the 'Cone of Vision'

Photomontage View 18	View east from St John's Road West.
Existing View	This view from the railway overbridge shows part of the Clancy Quay residential development on the left with the tower cranes of the new Garda Security Centre under construction on Military Road visible over the trees on the northern boundary of the RHK. Part of the north range of the RHK is visible between the trees.
Proposed View	A small section of the upper levels of the proposed commercial block is visible above the trees. Winter views, while not available in this study, would provide some more filtered views of the upper parts of the development, but the dense tree trunks in this location would effectively screen views of the majority of the development. Both the commercial and granted SHD blocks are partly visible above the trees in the cumulative view. The upper levels of the proposed tower element of the Parkgate St development are also visible on the left.
Construction Phase Impacts	Slight negative short term visual impact
Operational Phase Impacts	Imperceptible neutral long term visual impact.
Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment	Slight neutral cumulative visual impact. The proposed development on Parkgate Street is visible in this view. A positive impact would arise from the creation of landmark buildings as one enters the city from the west.
DCC 'Cone of Vision' View	This view is not relevant to the 'Cone of Vision'

Photomontage View 19	View southeast from Magazine Fort in the Phoenix Park
Existing View	The listed Magazine Fort is on the left with the top of the Wellington Monument visible over the trees in the distance. The earlier phase of the HSQ is visible on the horizon in the centre of the image approx. 1.3Kms to the southeast and the Clancy Quay Development to the right of the RHK buildings with the tower on the north range visible on the skyline. The construction cranes to the right of the image are associated with the Children's Hospital which is under construction in St. James's Hospital.

Proposed View	This proposed view shows the distinctive curved glazed block of the commercial building adjoining the original HSQ phase and partly screening some of the earlier HSQ buildings. In the cumulative view the granted SHD buildings screen the original HSQ phase. The buildings step down towards the RHK. In general, the new buildings are consistent with the development trend visible from this viewpoint. Distance from the site and adjoining modern developments minimise the negative visual impact on this viewpoint
Construction Phase Impacts	Imperceptible neutral short term visual impact
Operational Phase Impacts	Imperceptible neutral visual impact long term
Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment	Slight neutral cumulative visual impact. The proposed Parkgate St. development in the planning phase is screened from view by intervening vegetation.
DCC 'Cone of Vision' View	This view taken from beside the Magazine Fort in the Phoenix Park is at the western edge of the 'Cone of Vision' and it is noticeable that the North Tower and roof of the RHK is only partially visible in this winter view with buildings and vegetation screening views between the RHK and Magazine Fort.

Photomontage View 20	View south from Chesterfield Avenue, Phoenix Park
Existing View	This view shows the parkland setting of the Wellington Monument with the Dublin Mountains partially visible above the trees. The early phase of the HSQ development is just visible above the tree line on the left approx. 600m to the south. The cranes of the Children's Hospital are visible between the trees in the distance.
Proposed View	The proposed glazed block of the commercial development buildings is partially visible above the Phoenix Park trees. Winter views are no different as the intervening trees are evergreen Oaks. In the cumulative view the taller element of the granted SHD appears beside the proposed commercial block. The number of cranes visible adjoining the HSQ site indicate emerging trends of taller buildings in the area.
Construction Phase Impacts	Slight negative short term visual impact

Operational Phase Impacts	Imperceptible neutral visual impact long term
Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment	Slight neutral cumulative visual impact
DCC 'Cone of Vision' View	This view is not relevant to the 'Cone of Vision' as it is screened by intervening vegetation.

Photomontage View 21	View south from Chesterfield Avenue, Phoenix Park
Existing View	This view down Chesterfield Avenue shows view over the city on the left with the earlier HSQ phase visible over the intervening trees of the Phoenix Park. The view is referenced in the SDRA guiding principles with respect to views from the City Quays and the Wellington Monument. The listed chimneys and other brewery features associated with James's Gate are visible at the city end of Chesterfield Avenue.
Proposed View	The upper level of the glazed element of the proposed commercial block is visible over the Park's evergreen oak trees partially screening the earlier HSQ phase. In the cumulative view a section of the granted SHD building is visible. The granted Parkgate Street development is visible at the end of Chesterfield Ave. partly screening James's Gate brewery.
Construction Phase Impacts	Slight negative short term visual impact
Operational Phase Impacts	Imperceptible neutral visual impact long term
Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment	Moderate neutral cumulative visual impact
DCC 'Cone of Vision' View	This view is not relevant to the 'Cone of Vision' as it is screened by intervening vegetation.

Photomontage View 22	View south from DPP's Office Infirmary Road
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Existing View	This slightly elevated winter view only from the Office of the Director of Public Prosecutions building is approx. 500m north of the proposed site. Part of the Central Criminal Courts building is visible on the left of the image and trees and vegetation are to the rear of the car parking area screen views southwards.
Proposed View	The proposed development is shown in blue outline and is not visible from this viewpoint. In the cumulative view there is a filtered view of part of the granted SHD development buildings through the intervening vegetation.
Construction Phase Impacts	Imperceptible neutral short term visual impact
Operational Phase Impacts	Imperceptible neutral visual impact long term
Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment	Imperceptible neutral cumulative cumulative impact
DCC 'Cone of Vision' View	This view is not relevant to the 'Cone of Vision' as it is screened by intervening vegetation.

Photomontage View 23	View southwest from Croppy Acre, Wolf Tone Quay
Existing View	The small park is located approx. 600M to the southwest of the site. The park is located at a busy junction beside the Liffey Quays and Luas Line with the listed Heuston Station in the centre of the image and the early phase of the HSQ partly visible to the rear of the listed station complex.
Proposed View	The proposed commercial development is partly visible behind the EIR building but appears as an extension of the original HSQ buildings. There is little screening effect of vegetation on views. The cumulative view shows a small section of the granted SHD building to the left of the proposed commercial block. The granted Parkgate St. development is visible behind the trees on the right. The lower level of the proposed tower element of the Parkgate St development is partially screened by the trees.
Construction Phase Impacts	Slight negative short term visual impact
Operational Phase Impacts	Imperceptible neutral long term visual impact

Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment	Moderate neutral cumulative impact. The proposed 29 storey building on Parkgate Street will also be visible in this view.
DCC 'Cone of Vision' View	This view is not relevant to the 'Cone of Vision'

Photomontage View 24	View Southwest from Wolfe Tone Quay
Existing View	The view is taken from the junction of Wolfe Tone Quay and Temple Street West beside the headquarters of the Dublin Civil Defence. The HSE Headquarters are partially visible on the left with the cranes from the new Garda Security Centre to the left of the listed Heuston Station building in the centre of the image. A small section of the existing HSQ building is visible above the station building.
Proposed View	The proposed commercial building is substantially screened by the station's buildings although tower cranes would be visible at the construction stage. The cumulative view shows that the granted SHD building would be screened by the station building. The granted Parkgate building presents a strong landmark form across the river from the station.
Construction Phase Impacts	Imperceptible neutral short term visual impact
Operational Phase Impacts	Imperceptible neutral long term visual impact
Buildings and permitted and proposed developments within the scope of the cumulative landscape and visual impact assessment.	Moderate neutral cumulative visual impact. The proposed tower building on Parkgate Street is visible on the right of this view.
DCC 'Cone of Vision' View	This view is not relevant to the 'Cone of Vision'

15.7 Mitigation Measures (Ameliorative, Remedial or Reductive Measures)

There are a number of mitigation measures which will be implemented by the Developer to prevent and reduce significant impacts during the construction and operational phases.

15.7.1 Construction Phase

Appropriate measures will be taken to mitigate any potentially adverse construction-related effects on immediately adjoining neighbours, particularly on the residents of the existing apartments overlooking the site and users of the RHK buildings and grounds. Operation of a well-managed organised and planned construction site, with adequate control of construction traffic and working activity, is key to avoiding or minimising impact. A Construction and Environmental Plan (CEMP) has been submitted with the planning application, which details all of the mitigation measures which will be implemented by the Developer during the construction phase.

Table 15.7.2.1 Construction Phase Mitigation Measures

Character of potential impact	Mitigation measure
Construction Phase	
Protecting of existing street trees	Provision of secure hoarding / tree protection measures for existing retained trees.
Materials falling from a height	Use of screening and webbing to prevent materials falling from a height endangering local residents / office staff / visitors.
Site lighting	Directing site lighting away from existing residents / office / retail / creche.
Building phasing	Phasing of development in order that the buildings and surrounding landscape works are completed as soon as possible.
Landscape Contractor selection	Landscape Architect to ensure a competent experienced landscape contractor is appointed to undertake the work
Landscape tender implementation	Landscape Architect to oversee soil preparation, planting and hardworks commissioning to be as specified in the in the Landscape Drawings and Landscape Hardworks and Softwoks specifications.

15.7.2 Operational Phase

Consistent and effective maintenance of hard and soft landscape areas, (in particular entrance areas, open space area and walkways) together with quality site and building management are key to avoiding or minimising negative landscape and visual impacts arising from the operation of the proposed development given the sensitivity of the site location and the various indoor and outdoor cultural activities associated with the RHK.

The design and layout of the proposed open space is considered appropriate in terms of its character, zoning and context. The proposed scheme (Refer to Figure 15.2) includes for a series of measures that will ensure a long-term positive impact, as follows: -

Table 15.7.2 Operational Phase Mitigation Measures

Character of potential impact	Mitigation measure
Operational Phase	
Landscape Maintenance	Given the location of the development and proposed connection into the RHK grounds a comprehensive landscape maintenance scheme is proposed
Landscape Review	Site administration to organise reviews of the hardworks, and softworks and update / repair / replant as required to mitigate against public liability issues which may arise.

15.8 Residual Impacts

The predicted impacts as displayed in the photomontages as described above include proposed mitigation as formulated during the design process, such as layout, planting, render colour etc. Slight to moderate negative visual impacts will arise in the construction phase with hoarding, cranes and scaffolding being the most obvious negative visual features during the construction phase and these will increase in magnitude as the buildings rise out of the ground, but these will be short-term temporary visual impacts which will be eliminated as the buildings and the landscape works are completed.

The residual slight to moderate negative visual impacts arise mainly in relation to views from the adjoining RHK terraces and formal gardens and in the fact that the view of Gandon's Cupola in the former Royal Infirmary as listed in the Dublin City County Development Plan will not be available from a small section of the terrace to the rear of the Deputy Master's House. However, given that the relatively unfinished aspects of the Phase 1 development will be screened by a cohesive building arrangement that addresses the formal gardens and respects the height of the RHK buildings by stepping up in height away from the listed buildings it is predicted that the new buildings will become part of the accepted landscape of the area.

The slight to moderate neutral cumulative visual impacts arise in the western part of the RHK formal gardens and grounds where the greatest quantum of the proposed next phase is visible. Sympathetic fenestration design and spacing, building render and planted terraces all provide a certain level of mitigation for the impacts as predicted in the visual analysis.

Table 15.8.1 Matrix of Visual Impacts – Operational and Cumulative

View	Location	Operational stage visual impacts	Cumulative Visual Impacts	View within COV
01	View Southwest from St John's Road West / Heuston St.	Imperceptible neutral long term visual impact	Slight neutral cumulative visual impact	No
02	View west from car park Dr. Steevens' Hospital	Imperceptible neutral long term visual impact	Imperceptible neutral cumulative visual impact	No

03	View northwest from James's Street	Imperceptible neutral long term visual impact	Imperceptible neutral cumulative visual impact	No
04	View north from rear of Deputy Masters House	Slight negative visual impact long term	Moderate neutral cumulative visual impact	Yes
05	View north from rear of Deputy Masters House	Moderate negative visual impact tending towards imperceptible neutral long term	Moderate neutral cumulative visual impact	Yes
06	View northeast from the central axis of the Royal Hospital	Moderate neutral long term visual impact	Imperceptible neutral cumulative visual impact	Yes
07	View northeast from in front of Royal Hospital	Moderate negative visual impact tending towards imperceptible neutral long term	Slight to moderate neutral visual cumulative impact.	Yes
08	View northeast from top of RHK garden access steps	Moderate neutral visual impact tending towards imperceptible long term	Slight to moderate neutral visual cumulative impact.	Yes
09	View east from the central focal point of the RHK formal gardens	Slight neutral visual impact tending towards neutral long term	Slight neutral cumulative visual impact	No
10	View east from the pavilion in the formal garden RHK	Moderate negative visual impact tending towards imperceptible long term	Moderate neutral cumulative visual impact	No
11	View east from northern end of RHK formal gardens	Moderate negative visual impact tending towards neutral long term	Moderate neutral cumulative visual impact	No
12	View east from corner of the formal garden RHK.	Slight neutral visual impact tending towards imperceptible long term	Moderate neutral cumulative visual impact	No
13	View east from western edge of formal gardens	Slight neutral long term visual impact	Moderate neutral cumulative visual impact.	No
14	View east from centre of Bully's Acre.	Slight negative visual impact tending towards neutral long term	Moderate neutral cumulative visual impact.	No
15	View northeast from Bully's Acre	Slight neutral visual impact tending towards imperceptible long term	Moderate neutral cumulative visual impact.	No
16	View northeast from Richmond Tower, South Circular Road	Imperceptible neutral long term visual impact	Imperceptible neutral cumulative visual impact	No
17	View east from St John's Road West.	Imperceptible neutral long term visual impact.	Slight neutral cumulative visual impact.	No
18	View east from St John's Road West.	Imperceptible neutral long term visual impact.	Slight neutral cumulative visual impact.	No
19	View southeast from Magazine Fort in the Phoenix Park	Imperceptible neutral visual impact long term	Slight neutral cumulative visual impact.	No

20	View south from Chesterfield Avenue, Phoenix Park	Imperceptible neutral visual impact long term	Slight neutral cumulative visual impact	No
21	View south from Chesterfield Avenue, Phoenix Park	Imperceptible neutral visual impact long term	Moderate neutral cumulative visual impact	No
22	View south from DPP's Office Infirmary Road	Imperceptible neutral visual impact long term	Imperceptible neutral cumulative visual impact	No
23	View southwest from Croppy Acre, Wolf Tone Quay	Imperceptible neutral long term visual impact	Moderate neutral cumulative visual impact.	No
24	View southwest from Wolfe Tone Quay	Imperceptible neutral long term visual impact	Moderate neutral cumulative visual impact.	No

15.8.1 Construction Phase

The residual slight to moderate short term negative visual impacts arising during the construction phase will relate primarily to the rising buildings and associated hoarding, scaffolding and cranes when viewed from the surrounding area. As these are short term the completed buildings and associated hard and soft landscape elements will tie the development into its surrounds. It is not envisaged that there would be any residual impacts from the construction phase other than the usual developing and establishing planting and other normal minor landscape maintenance and replacement issues.

15.8.2 Operational Phase

The residual impacts in the operational stage range from moderate negative to moderate neutral when viewed from the RHK terraces and formal gardens and relate to the viewer's position and experiences pre and post construction. The photomontages taken from the east show that the proposed development is screened by the Phase 1 buildings and the visual impacts are imperceptible. Views from the south and west, mainly from the grounds of the RHK are classified as moderate negative tending to imperceptible neutral as the landscape matures. More distant views from the northwest, north and northeast are classified as imperceptible.

15.8.3 Cumulative Residual Impacts

The photomontage analysis shows the granted SHD development on the site adjoining the proposed commercial development and the cumulative negative visual impacts are mainly experienced from viewpoints to the west. The existing HSQ phases generally screen cumulative views from the east and south. The cumulative impacts from views from the RHK grounds range from slight neutral to moderate neutral given that the full extent of the commercial and granted SHD proposals are visible from this direction with minimal intervening screening. The study area, as defined by the photomontage location map, in the vicinity of the site is experiencing a range of building projects with the Section 5 granted 5 storey National Train Control Centre 340M to the west of Heuston within the viewshed of views from the north range of the RHK. The former Hickeys Fabric site at Parkgate St. / Sean Heuston Bridge where a tall 29 storey tower has been granted and when built would be visible from a wide area. The new Garda

Security Centre is a 4 to 6 storey development, on the eastern side of Military Road and the Children's Hospital in James's Street are large developments which will be visible from a wide area. The development at Clancy Quay is almost complete. Given the nature of the property in the general area of Kilmainham it is likely that there would be some level of redevelopment ongoing should this project be given planning approval. However, other than the proposed adjoining next phase of development there are no obvious projects proposed that would lead to a further cumulative visual impact from this development.

15.9 Do Nothing Impact

The site is located in zoned lands and are part of a larger development that stalled due to the economic situation in the early 2000's. Given that the lands are part of a SDRA and are zoned for development and they are located in an area where residential development is ongoing and close to existing transport infrastructure and shopping / restaurants / schools and open space it is likely that the lands would not remain undeveloped for very long.

Any residential development similar to this proposed scheme is likely to result in a similar level of impact on the surrounding landscape and visual environment.

15.10 Monitoring

Soft landscape works will be monitored to check establishment during the first 12 months post-planting. Plant failure during this defects liability period shall be replaced within the following planting season (i.e. November to March) as necessary.

Aftercare to a high standard of both hard and soft landscape elements throughout the scheme will form part of the annual management/maintenance programme which shall be adopted as part of the scheme.

Regular monitoring of existing trees on site shall be carried out as necessary to ensure the tree stand is largely maintained. The ongoing monitoring shall identify trees which will require surgery works/potential removal which will be essential for the ongoing duty of care associated with the site. Paving will also require ongoing maintenance with the high level of through pedestrian traffic linking the various parts of the site

15.11 Reinstatement

Post construction, all soft landscape areas shall be top-soiled (to the required depths), cultivated and seeded or planted in line with the landscape proposals. Should any plants fail during the first 12 months post construction, replacement planting shall be carried out within the following planting season (i.e. November to March) as necessary.

15.12 Interactions

The pertinent environmental interactions for landscape and visual are with Human Beings, Biodiversity and Cultural Heritage. In this regard, landscape proposals for the scheme have been developed in consultation with the Project Ecologists and the Cultural Heritage Consultants. Given the existing nature of the site, i.e., having been cleared and excavated in the past there are no existing mature flora and fauna issues related to the site other than the existing ornamental trees, lawn grass and scrub area. The LVIA study also interacted with the Cultural Heritage Consultants with respect to the impact of the proposed development on Gandon's Cupola and the Cone of Vision and this is discussed in Section 15.5.1.2 Operational Phase Impacts.

With respect to interactions with human receptors, Chapter 5 outlines the impacts on population & human health. The main receptors visually impacted by the proposed development would be those living and working close to the development site, primarily those residents and office workers in the first phase of the HSQ development and the adjoining Eircom building. The construction stage would be the most visually disruptive with the operational stage being tending towards imperceptible. The positive aspects to these residents and workers would be the completion of a long-delayed development and the increased amenity associated with the development and new access routes offered by the proposals. Another group of visually impacted receptors would be the users of the RHK particularly, the formal gardens which adjoin the site area. Again, the construction stage would be the most visually negative with the operational stage visual analysis ranging from imperceptible to moderate negative. The architectural treatment of the buildings overlooking the gardens and the proposed planting would help integrate the development with the existing formal gardens.

15.13 Difficulties Encountered

There were no specific difficulties encountered during the preparation of the landscape and visual impact assessment. The proposed new Garda Security Centre and the Irish Rail signalling centre did not go through the normal public planning process and little information on the massing of the buildings and associated antennae is available. The LVIA study was guided by the recent decision to grant the SHD development with the conditions to remove some floors in Blocks D & E and proposed linking archway in Blocks A & C.

15.14 References

Environmental Protection Agency (EPA) publication 'Guidelines on the Information to be contained in Environmental Impact Statements (2022)

Advice Notes on Current Practice in the Preparation of Environmental Impact Statements (2017) ;

'Guidelines for Landscape and Visual Assessment', 3rd Ed., The Landscape Institute and Institute of Environmental Management and Assessment, 2013.

Urban Development & Building Heights, Dept. of Housing Planning & Local Government 2018

16. INTERACTIONS OF THE FOREGOING

16.1 Introduction

All environmental factors are inter-related to some extent. Article 3(1) of the EIA Directive states the following;

1. The environmental impact assessment shall identify, describe and assess in an appropriate manner, in the light of each individual case, the direct and indirect significant effects of a project on the following factors:

a) population and human health;

b) biodiversity, with particular attention to species and

habitats protected under Directive 92/43/EEC and Directive

2009/147/EC;

c) land, soil, water, air and climate;

d) material assets, cultural heritage and the landscape;

e) the interaction between the factors referred to in points (a) to (d). (Emphasis added)

Accordingly, this EIAR seeks to identify all potential impacts of the subject scheme, and this chapter has been compiled to list in one location all of the interactions identified already in Chapters 5 to 15.

This chapter has been prepared by Sinéad O'Connor in Declan Brassil & Company limited. Sinéad holds a degree in Natural Science, specialising in Environmental Science, from Trinity College Dublin, and a Masters in Regional and Urban Planning from University College Dublin. Sinéad has over 10 years' experience in the preparation of EIAR for residential and commercial projects.

16.1.1 Description of Development

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

- Site clearance and localised demolitions to remove part of the podium and Basement Level -1 reinforced concrete slabs at the interface of the proposed hotel and office blocks, together with the incorporation of part of the existing basement level structure extending to approximately 4,228 sq.m (GFA).
- The proposed basement will be integrated within the existing basement levels serving the wider HSQ development and will be accessed from the existing vehicular ramped accesses/egresses onto/off St. John's Road West and Military Road to the north and east, respectively. The proposed basement area is split into two areas to provide a dedicated Hotel Basement area of approximately 2,132 sq.m (GFA) and an Office basement area of 2,096 sq.m (GFA).

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

John's Road West with the public plaza at podium level.

16.1.2 Methodology

This chapter has been compiled from the interactions assessments undertaken in chapters 5 to 15 of this report. This information has been used to complete the matrix of interactions in Figure 16.1.2.1 below. A meeting was held 29 March 2022 with all EIAR consultants to identify, assess and describe all likely significant interactions that may arise.

Impact interactions and inter-relationships have been considered throughout the Report in the preparation of the individual, topic specific chapters so that it can take into account the broader picture of how the proposed scheme may affect the various environmental media. All environmental topics are interlinked to a degree such that interrelationships exist on numerous levels. A summary matrix has been provided below in Figure 16.1 to identify key interactions that exist with respect to this scheme. This matrix has been prepared having regard to Figure 3.5 of the EPA's 'Guidelines on the information to be contained in Environmental Impact Assessment Reports', May 2022.

Figure 16.1 Matrix of Interactions

Interaction		Population & human Health	Biodiversity	Land, Soil & Geology	Water:	Air, Dust & Climatic Factors	Noise & Vibration	M.A. Traffic & Transport	M.A. Water Supply, Drainage and Utilities	Cultural Heritage : Archaeology	Architectural Heritage	Landscape & V.I.A.
Con: Construction Phase O.P.: Operational Phase												
Population & Human Health	Con.		X	✓	✓	✓	✓	✓	✓	X	X	✓
	Op.		X	X	X	✓	✓	✓	✓	X	X	✓ ¹
Biodiversity	Con.			✓	✓	✓	✓	X	X	X	X	✓
	Op.			X	✓	X	✓	X	X	X	X	✓
Land, Soil & Geology	Con.				✓	✓	✓	X	X	X	X	X
	Op.				X	X	X	X	X	X	X	X
Water	Con.					X	X	X	X	X	X	X
	Op.					X	X	X	X	X	X	X
Air, Dust & Climatic Factors	Con.						X	✓	X	X	X	X
	Op.						X	✓	X	X	X	X
Noise & Vibration	Con.							✓	X	X	✓	X
	Op.							✓	X	X	X	X
M.A. Traffic & Transport	Con.								X	X	X	X
	Op.								X	X	X	X
M.A. Water Supply, Drainage & Utilities	Con.									X	X	X
	Op.									X	X	X
Cultural Heritage: Archaeology	Con.										X	X
	Op.										X	X
Architectural Heritage	Con.											✓
	Op.											✓
Landscape & V.I.A.	Con.											
	Op.											
Key		Definition										
Con.		Construction Phase										
Op.		Operational Phase										
✓		Interaction ² (✓ weak interaction. ✓ some interaction. ✓ Strong interaction.)										
X		No Interaction										

¹ This impact is stated to range from imperceptible to Moderate, and therefore the stronger interaction is shown in the matrix.

² For the purposes of this assessment: a 'weak' interaction is where an interaction is stated to be neutral or imperceptible, 'some interaction' is where the interaction is not significant or slight, and a 'Strong' interaction is where the interaction is moderate or significant.

16.2 Description of Interactions and Interrelationships

The consideration of impact interactions has been addressed during the preparation of this EIAR in each of the individual impact chapters. The following section provides a series of tables to show the reader which chapter each interaction is described and assessed.

16.2.1 Population and Human Health

The following table Lists the receptor interactions and interrelationships with **Population and Human Health**.

Table 16.2.1 Population and Human Health - Key Impact Interactions and Interrelationships

Interaction	Description of Key Impact Interactions and Interrelationships
Biodiversity	No interaction identified.
Land, Soil & Geology	These interactions have been considered in Chapter 7 'Land, Soil & Geology'.
Water	These interactions have been considered in Chapter 8 'Water'.
Air, Dust & Climatic Factors	These interactions have been considered in Chapter 9 'Air, Dust and Climatic Factors'.
Noise and Vibration	These interactions have been considered in Chapter 10 'Noise and Vibration'.
Material Assets: Traffic & Transport	These interactions have been considered in Chapter 11 'Material Assets: Traffic & Transport'.
Material Assets: Water Supply, Drainage & Utilities.	These interactions have been considered in Chapter 12 'Material Assets: Water Supply, Drainage and Utilities'.
Cultural Heritage Archaeology	No interaction identified.
Architectural Heritage	No interaction identified.
Landscape & Visual Amenity	These interactions have been considered in Chapter 15 'Landscape and Visual Impact Assessment'.

16.2.2 Biodiversity

The following table Lists the receptor interactions and interrelationships with **biodiversity**.

Table 16.2.2 Biodiversity - Key Impact Interactions and Interrelationships

Interaction	Description of Key Impact Interactions and Interrelationships
Population & Human Health	See Table 16.2.1 above
Land, Soil & Geology	These interactions have been considered in Chapter 6 'Biodiversity'.
Water	These interactions have been considered in Chapter 6 'Biodiversity'.
Air, Dust & Climatic	These interactions have been considered in Chapter 6 'Biodiversity'.
Noise and Vibration	These interactions have been considered in Chapter 6 'Biodiversity'.
Material Assets: Traffic & Transport	No interaction identified.
Material Assets: Water Supply, Drainage & Utilities.	No interaction identified.
Cultural Heritage Archaeology	No interaction identified.
Architectural Heritage	No interaction identified.
Landscape & Visual Amenity	These interactions have been considered in Chapter 6 'Biodiversity'.

16.2.3 Land, Soil and Geology

The following table Lists the receptor interactions and interrelationships with **Land, Soil and Geology**.

Table 16.2.3 Land, Soil and Geology - Key Impact Interactions and Interrelationships

Interaction	Description of Key Impact Interactions and Interrelationships
Population & Human Health	See Table 16.2.1 above.
Biodiversity	See Table 16.2.2 above.
Water	These interactions have been considered in Chapter 7 'Land, Soil & Geology'.
Air, Dust & Climatic Factors	These interactions have been considered in Chapter 9 'Air, Dust & Climate'.
Noise and Vibration	These interactions have been considered in Chapter 7 'Land, Soil & Geology'.
Material Assets: Traffic & Transport	No interaction identified
Material Assets: Water Supply, Drainage & Utilities.	No interaction identified
Cultural Heritage Archaeology	No interaction identified
Architectural Heritage	No interaction identified
Landscape & Visual Amenity	No interaction identified

DCC PLAN NO: 4610/22
RECEIVED: 04/08/2022

16.2.4 Water

The following table Lists the receptor interactions and interrelationships with **Water**.

Table 16.2.4 Water- Key Impact Interactions and Interrelationships

Interaction	Description of Key Impact Interactions and Interrelationships
Population & Human Health	See Table 16.2.1 above.
Biodiversity	See Table 16.2.2 above.
Land, Soil & Geology	See Table 16.2.3 above
Air, Dust & Climatic Factors	No interaction identified
Noise and Vibration	No interaction identified
Material Assets: Traffic & Transport	No interaction identified
Material Assets: Water Supply, Drainage & Utilities.	No interaction identified
Cultural Heritage Archaeology	No interaction identified
Architectural Heritage	No interaction identified
Landscape & Visual Amenity	No interaction identified

16.2.5 Air, Dust and Climatic Factors

The following table Lists the receptor interactions and interrelationships with **Air, Dust and Climatic Factors**.

Table 16.2.5 Air, Dust and Climatic Factors - Key Impact Interactions and Interrelationships

Interaction	Description of Key Impact Interactions and Interrelationships
Population & Human Health	See Table 16.2.1 above.
Biodiversity	See Table 16.2.2 above.
Land, Soil & Geology	See Table 16.2.3 above
Water	See Table 16.2.4 above
Noise and Vibration	No interaction identified
Material Assets: Traffic & Transport	These interactions have been considered in Chapter 9 'Air, Dust & Climate'.
Material Assets: Water Supply, Drainage & Utilities.	No interaction identified
Cultural Heritage Archaeology	No interaction identified
Architectural Heritage	No interaction identified
Landscape & Visual Amenity	No interaction identified

16.2.6 Noise and Vibration

The following table Lists the receptor interactions and interrelationships with **Noise and Vibration**.

Table 16.2.6 Noise and Vibration - Key Impact Interactions and Interrelationships

Interaction	Description of Key Impact Interactions and Interrelationships
Population & Human Health	See Table 16.2.1 above.
Biodiversity	See Table 16.2.2 above.
Land, Soil & Geology	See Table 16.2.3 above
Water	See Table 16.2.4 above
Air, Dust & Climatic Factors	See Table 16.2.5 above
Material Assets: Traffic & Transport	These interactions have been considered in Chapter 11 'Material Assets: Traffic & Transport'.
Material Assets: Water Supply, Drainage & Utilities.	No interaction identified
Cultural Heritage Archaeology	No interaction identified
Architectural Heritage	These interactions have been considered in Chapter 14 'Cultural Heritage: Architectural Heritage'.
Landscape & Visual Amenity	No interaction identified

16.2.7 Material Assets: Traffic and Transport

The following table Lists the receptor interactions and interrelationships with **Material Assets: Traffic and Transport**

Table 16.2.7 Material Assets: Traffic and Transport - Key Impact Interactions and Interrelationships

Interaction	Description of Key Impact Interactions and Interrelationships
Population & Human Health	See Table 16.2.1 above.
Biodiversity	See Table 16.2.2 above.
Land, Soil & Geology	See Table 16.2.3 above
Water	See Table 16.2.4 above
Air, Dust & Climatic Factors	See Table 16.2.5 above
Noise and Vibration	See Table 16.2.6 above
Material Assets: Water Supply, Drainage & Utilities.	No interaction identified
Cultural Heritage Archaeology	No interaction identified
Architectural Heritage	No interaction identified
Landscape & Visual Amenity	No interaction identified

16.2.8 Material Assets: Water Supply, Drainage and Utilities

The following table Lists the receptor interactions and interrelationships with **Material Assets: Water Supply, Drainage and Utilities**.

Table 16.2.8 Material Assets: Water Supply, Drainage and Utilities - Key Impact Interactions and Interrelationships

Interaction	Description of Key Impact Interactions and Interrelationships
Population & Human Health	See Table 16.2.1 above.
Biodiversity	See Table 16.2.2 above.
Land, Soil & Geology	See Table 16.2.3 above
Water	See Table 16.2.4 above
Air, Dust & Climatic Factors	See Table 16.2.5 above
Noise and Vibration	See Table 16.2.6 above
Material Assets: Traffic & Transport	See Table 16.2.7 above
Cultural Heritage Archaeology	No interaction identified
Architectural Heritage	No interaction identified
Landscape & Visual Amenity	No interaction identified

16.2.9 Cultural Heritage: Archaeology

The following table Lists the receptor interactions and interrelationships with **Cultural Heritage: Archaeology**.

Table 16.2.9 Cultural Heritage and Archaeology - Key Impact Interactions and Interrelationships

Interaction	Description of Key Impact Interactions and Interrelationships
Population & Human Health	See Table 16.2.1 above.
Biodiversity	See Table 16.2.2 above.
Land, Soil & Geology	See Table 16.2.3 above
Water	See Table 16.2.4 above
Air, Dust & Climatic Factors	See Table 16.2.5 above
Noise and Vibration	See Table 16.2.6 above
Material Assets: Traffic & Transport	See Table 16.2.7 above
Material Assets: Water Supply, Drainage & Utilities.	See Table 16.2.8 above
Architectural Heritage	No interaction identified
Landscape & Visual Amenity	No interaction identified

16.2.10 Cultural Heritage: Architectural Heritage

The following table Lists the receptor interactions and interrelationships with **Cultural Heritage: Architectural Heritage**.

Table 16.2.10 Cultural Heritage and Archaeology - Key Impact Interactions and Interrelationships

Interaction	Description of Key Impact Interactions and Interrelationships
Population & Human Health	See Table 16.2.1 above.
Biodiversity	See Table 16.2.2 above.
Land, Soil & Geology	See Table 16.2.3 above
Water	See Table 16.2.4 above
Air, Dust & Climatic Factors	See Table 16.2.5 above
Noise and Vibration	See Table 16.2.6 above
Material Assets: Traffic & Transport	See Table 16.2.7 above
Material Assets: Water Supply, Drainage & Utilities.	See Table 16.2.8 above
Cultural Heritage & Archaeology	See Table 16.2.9 above
Landscape & Visual Amenity	These interactions have been considered in Chapter 14 'Cultural Heritage: Architectural Heritage'.

16.2.11 Landscape and Visual Assessment

Tables 16.2.1 to 16.2.10 above provide an overview of the reception interactions and inter-relationships with Landscape and Visual Assessment.

17. MITIGATION MEASURES

For ease of reference and clarity, all mitigation measures contained in this EIAR have been compiled below. All measures included below form part of the proposed development and will be implemented in full.

17.1 Population and Human Health

Character of potential impact	Mitigation measure
Construction Phase	
	None proposed.
Operational Phase	
	None proposed.

17.2 Biodiversity

Character of potential impact	Mitigation measure
Construction Phase	
Disturbance of nesting birds	Remove trees and grassland outside of the restricted nesting season (March-August)
Protection of water quality	Implementation of Outline Construction Management Plan including the following provisions: <ul style="list-style-type: none"> • Management of suspended solids in run-off • Control of concrete run-off • Management of accidental spills and leaks
Operational Phase	
Bird collision with glass	Implementation of a bird friendly glazing strategy
Disturbance to foraging bats from light	Use of directional lighting to prevent overspill to neighbouring Royal Hospital.
Protection of water	Surface water drainage design in accordance with principles of SuDS is to

quality be implemented as proposed.

17.3 Land, Soil and Geology

Character of potential impact	Mitigation measure
Construction Phase	
Contaminated Soil	The excavated material will be monitored and assessed to determine the most suitable disposal outlet. Material will be categorised according to the Landfill Directive and will be sent to appropriately licensed facilities for treatment/disposal. This will entail carrying out soil analysis to determine the appropriate waste facility for disposal. Where applicable, material on site will be segregated and divided into material re-use, material re-cycling and waste material streams in accordance with current guidelines and best practice.
Demolition Material	The material generated from the demolition shall be segregated and divided into material re-use, material re-cycling and waste material streams in accordance with current guidelines and best practice.
Dust	Dust suppression measures will be implemented to minimise dust generation during extended dry periods. Dust monitoring will be conducted through the excavation period. The provision of vehicle wheel wash facilities at site exits and implementation of a road sweeping programme will reduce effect on surrounding road network. Vehicles delivering material with dust potential (soil, aggregates) will be enclosed or covered with tarpaulin at all times to restrict the escape of dust. In addition, water-based dust suppression systems (such as Dust Boss) shall also be used to greatly reduce the extent of dust and windborne particulates.
Noise, Vibration,	During the demolition and excavating phase of the works monitoring will be ongoing for noise, vibration, gas & water levels as well as ground contamination as described in the section below on Monitoring. Noise monitoring shall be in accordance with Safety, Health and Welfare at Work (General Application) Regulations 2007, Part 5 Noise and Vibration. Vibration monitoring shall comply with BS 5228-1:2009+A1:2014 & BS 5228-2:2009+A1:2014. Gas and water levels shall be monitored via installed Piezometers on site.
Disposal of Ground Water	The disposal of groundwater shall be in accordance with the licensed requirements of Dublin City Council and will be on a short-term basis. All conditions of this licencing agreement will be complied with.
Site Compound	The site compound will be temporary in nature and will be constructed on

	hardstanding, which will be removed upon completion of construction and disposed of to a licenced facility
Operational Phase	
	None proposed.

17.4 Water

Character of potential impact	Mitigation measure
Construction Phase	
Environmental Management	Prior to construction the Contractor will be required to develop an Environmental Management Plan which will incorporate mitigation measures such as containment procedures, audit and review schedules and an Emergency Response Plan in the event of spills, flooding or other incidents that may contribute to pollution to water during construction.
Surface Water Run off	All batching and mixing activities will be located in areas away from watercourses and drains.
Surface Water Run off	Protection measures will be put in place to ensure that all potentially hazardous materials used during the construction & demolition phase are appropriately handled, stored and disposed of in accordance with recognized standards and manufacturer’s guidance. These measures will include: <ul style="list-style-type: none"> - Refuelling of machinery at a designated bunded refuelling area. - Treatment and disposal of wastewater from general clean-up of tools and equipment. - The provision of spills control and cleanup kits. - Silt trapping and oil interception.
Surface Water Run off	The batching and mixing plant will be isolated from the surrounding surface water drainage, and washout from the plant will be collected in a designated, contained impermeable area from which it shall be removed offsite for treatment.
Surface Water Run off	Spills of concrete, cement, grout or similar materials will not be hosed into drains.
Surface Water Run off	Rainwater that accumulates on site will be discharged to the DCC sewer system, under an appropriate discharge licence.
Site Management	The Contractor will comply with the following guidance documents: <ul style="list-style-type: none"> - CIRIA – Guideline Document C532 Control of Water Pollution from Construction Sites (CIRIA, 2001) - CIRIA – Guideline Document C624 Development and Flood Risk - guidance for the construction industry (CIRIA, 2004).

Surface Water Discharges	Dewatering and surface water discharges on the site, during construction and prior to completion will be controlled. The lead construction contractor will ensure that all necessary facilities are incorporated, such as settlement ponds/tanks, oil/grit interceptors with shut down valves, bunded oil storage tanks adjacent to a petrol interceptor for storage of any recovered oil. A monitoring programme including sampling for water quality before discharge to the Council sewer during construction will be carried out to ensure that only clean surface water is discharged to the receiving systems.
Operational Phase	
Surface Water run off (site flooding)	The provision of flow control with storm-water attenuation will ensure the rate of discharge of surface water is limited to greenfield run-off rates of 2 litres/second/hectare with a total allowable surface water discharge of 5.0 litres/second in line with the recommendations of the Greater Dublin Regional Code of Practice for Drainage Works and the Greater Dublin Strategic Drainage Study.
Surface Water run off (unattenuated flow)	The provision of flow control with storm-water attenuation will ensure the rate of discharge of surface water is limited to greenfield run-off rates of 5.05 litres/second/hectare with a total allowable surface water discharge of 2.27 litres/second in line with the recommendations of the Greater Dublin Regional Code of Practice for Drainage Works and the Greater Dublin Strategic Drainage Study.
Surface Water (River Liffey & Camac)	Incidental surface run-off from underground basement car parks, compactor units and waste / service yard areas will be discharged into the foul drainage system.

17.5 Air, Dust & Climatic Factors

Character of potential impact	Mitigation measure
Construction Phase	
Dust	A designated Site Agent will be assigned overall responsibility for Dust Management;
Dust	Implementation of the Construction Management Plan.
Dust	The design of the site and Construction programme considers dust impact management and chooses design approaches to minimise dust emissions;
Dust, general air quality	An effective training programme for site personnel will be implemented for the duration of the Construction Programme;
Dust, general air quality	A strategy for ensuring effective communication with the local community will be developed and implemented;

Dust	A programme of dust minimisation and control measures will be implemented and regularly reviewed;
Dust	A monitoring programme will be implemented.
Dust	Activities with potential for significant emissions will wherever possible be located at a position as far as possible removed from the nearest residential and commercial receptors;
Dust	The areas on site which vehicles will be travelling on will generally be hard-surfaced or compressed ground thus significantly reducing the potential for dust emissions from the vehicles;
Dust	The construction compound area will have hard standing areas to minimize dust generation from windblow.
Dust	In order to minimise the potential for wind-generated emissions from material storage bays, these bays will be oriented away from the dominant wind direction to minimise the effects of wind on release of dust and particulate.
Dust	Fixed and mobile water sprays will be used to control dust emissions from material stockpiles and road and yard surfaces as necessary in dry and/or windy weather.
Dust	A daily inspection programme will be formulated and implemented in order to ensure that dust control measures are inspected to verify effective operation and management.
Dust	A dust deposition monitoring programme will be implemented at the site boundaries for the duration of the construction phase in order to verify the continued compliance with relevant standards and limits.
Aspergillus Risks	The National Guidelines will be followed with regard to the effective management of Aspergillus risks.
Operational Phase	
Climatic Factors	The scheme shall only contain thermally efficient buildings. All buildings shall contain thermally enhanced glazing and window and door frames.

17.6 Noise and Vibration

Character of potential impact	Mitigation measure
Construction Phase	
Traffic and plant noise	Avoid unnecessary revving of engines and switch off equipment when not required;
Traffic noise	Keep internal haul routes well maintained and avoid steep gradients;
Impact noise	Use rubber linings in chutes and dumpers to reduce impact noise;
Impact noise	Minimise drop height of materials;
Traffic and plant noise	Start-up plant and vehicles sequentially rather than all together;
Traffic and plant noise	In accordance with best practicable means, plant and activities to be employed on site will be reviewed to ensure that they are the quietest available for the required purpose;
Traffic and plant noise	Where required, improved sound reduction methods, e.g. enclosures should be used;
Plant noise	Site equipment should be located away from noise sensitive areas, as much as is feasible;
Traffic and plant noise	Regular and effective maintenance by trained personnel should be carried out to reduce noise and/or vibration from plant and machinery;
Traffic and plant noise	Limit noisy construction works to 8am to 6pm weekdays with Saturday working from 8am to 1pm unless otherwise agreed with the local authority. Relatively quiet construction activities could be carried out outside these hours, subject to controls in place;
General site noise	Maintain ongoing contact with local residents to ensure any complaints relating to construction phase noise for the project from local residents can be addressed. Also, prior to any particularly noisy activities, local residents should be contacted in order to minimise the perceived noise impact;
Traffic and plant noise	The contractor shall erect construction site hoarding along noise sensitive boundaries, particularly where no existing screening such as boundary walls are in place at the nearest NSRs.
General site noise	The contractor should appoint a community relations officer who will deal on a one-to-one basis with local stakeholders and will notify them before the commencement of any works forecast to generate appreciable levels of