

- **Metro Enabling Works:** The planned MetroLink, to be delivered independently by Transport Infrastructure Ireland (TII), will have a future station under Site 2. The entire combined basement under Sites 2AB and 2C, and the associated site development works, will be provided to enable delivery of the Metro by TII.
- **Public Realm Works:** The subject Site 2 application includes public realm works to Henry Place, Moore Lane and O'Rahilly Parade, and road opening will be required at Parnell Street to facilitate drainage connection to the existing surface water network.

#### 8.4.2.1 Water Supply

It is proposed to supply water to the subject blocks via new metered connections to the existing watermain network, as indicated on the watermain layout drawings which accompany this submission. Water supply will be provided for each site as follows: -

- **Site 2AB:** It is proposed to provide two new metered water supply connections to serve the development. One connection will be made to the existing 4" (c.100mm) watermain in Moore Lane, to the west of the site. The second connection will be to the existing 125mm HDPE watermain in Henry Place, to the south of the site.
- **Site C:** It is proposed to provide one new metered water supply connection to serve the development, to the existing 4" (c.100mm) watermain in Moore Lane, to the west of the site.
- **No. 61 O'Connell Street Upper:** The proposed refurbishment includes revisions to the internal water supply network within the building. However, no change is proposed to the existing connection to the public network. Water will continue to be supplied to the building via the same connection to the existing 250mm ductile iron main in O'Connell Street Upper.
- 

#### 8.4.2.2 Foul Water Drainage

It is proposed to drain wastewater from the subject development to the existing combined network. Any existing drainage connections at the sites are to be decommissioned, with the existing drain capped from within the site to decommission the pipe. Although the existing drainage infrastructure comprises of combined foul and surface water sewers, private foul and surface water will be drained on completely separate systems throughout the development (refer also to Section 8.4.2.3 below). Foul water will be drained from each site as follows: -

- **Site 2AB:** It is proposed to provide two new 225mm connections to the existing public network, with both connecting to the existing public network in Moore Lane to the west of the site. A new manhole will be constructed at each of the two connection points.
- **Site 2C:** It is proposed to provide one new 225mm connection to the existing public network in Moore Lane to the west of the site. A new manhole will be constructed at the connection point.
- **No. 61 O'Connell Street Upper:** The proposed refurbishment includes revisions to the internal drainage layout within the building. However, no change is proposed to the existing connection to the public network. Foul water will continue to discharge from the site via the same connection to the existing 2,200mm x 760mm foul water sewer in O'Connell Street Upper.

#### 8.4.2.3 Surface Water Drainage

The option to discharge surface water from each site to the public surface water sewers in Henry Street and in Parnell Street were examined. However, given the depths of these existing sewers and given the flat gradients of the surrounding road network, it was determined only to be feasible for Site 2C to discharge to the surface water network. Site 2AB will discharge surface water to the existing combined network.

Under the proposed scheme, surface water discharges will be restricted through the use of flow control devices, and each site will incorporate suitable attenuation for the 1-in-100 year storm. Appropriate Sustainable Drainage System (SuDS) measures are proposed, including the use of green roofs, blue roofs and tree pits. These surface water proposals will significantly reduce the rate of surface water runoff to the existing combined network compared to the current scenario.

Surface water will be drained from each site as follows: -

- Site 2AB: Attenuation is to be provided in two adjacent tanks at the basement level. These will be on-line attenuation tanks, with all surface water discharging to the tanks before outfalling by gravity to the existing combined network in O'Connell Street Upper. The shared outfall from the tanks will be fitted with a Hydrobrake or similar approved flow control device limited to the practical minimum rate of 2l/s.
- Site 2C: New surface water drains will be laid along Moore Lane adjacent to Site 2C, continuing north to Parnell Street and connecting to the existing surface water sewer in Parnell Street. The final outfall manhole from Site 2C will be fitted with a Hydrobrake or similar approved flow control device limited to the practical minimum rate of 2l/s. A high-level overflow to an underground attenuation tank will be provided for flows that exceed this limit. The proposed attenuation tank to serve Site 2C is at the second basement level. From here, attenuated water to be pumped back up to the drainage network. The attenuation tank will typically be empty, only filling up during storm events, and similarly the pumps will only be active during storm events when water enters the tank.
- No. 61 O'Connell Street Upper: The proposed refurbishment includes upgrading existing rainwater goods throughout the property to modern standards. However, no change is proposed to the existing connection to the public network. Surface water will continue to discharge from the site via the same connection to the existing 2,200mm x 760mm foul water sewer in O'Connell Street Upper.

#### 8.4.2.4 Groundwater

The proposed Site 2 development includes construction of basements and below-ground attenuation. The enabling works to facilitate a future Metro Station are included within the scope of the Site 2 development. This involves construction of an approximately 25m deep box.

## 8.5 POTENTIAL IMPACTS

### 8.5.1 Dublin Central Masterplan

#### 8.5.1.1 Water Supply

##### 8.5.1.1.1 Construction Stage

Many of the existing buildings within the Dublin Central Masterplan site are currently occupied and in use. Although there will be some water demand for site offices, commencement of construction will result in a net decrease in the water demand for the site.

There is a risk of contamination to the existing water supply during connection of the individual sites watermains within the Dublin Central Masterplan to the public water supply.

##### 8.5.1.1.2 Operational Stage

During the operational stage of the Dublin Central Masterplan, there will be an increase in demand for water from the public water supply.



### **8.5.1.2 Foul Water Drainage**

#### **8.5.1.2.1 Construction Stage**

During the construction of the new foul sewers there is the potential for surface water to be discharged to the existing public foul sewer system due to pipes and manholes being incomplete during construction.

There is a risk of pollution of groundwater and water courses by accidental spillage of foul effluent during connections being made to live sewers.

#### **8.5.1.2.2 Operational Stage**

There will be a net peak foul water flow of 52.776l/s discharging to the foul water system serving the Dublin Central Masterplan site. Foul and surface water currently flow uncontrolled / unattenuated from the Dublin Central Masterplan site to the existing combined network. The proposal will result in a net reduction in flows to the network.

There is a possibility of some surface water ingress into the foul water drainage system due to poor workmanship. There is also a possibility of leakage from sewers and drains within the Dublin Central Masterplan site and along the route to the outfall sewer. Any foul water leakage would result in local contamination of soil and ground waters in the area.

### **8.5.1.3 Surface Water Drainage**

#### **8.5.1.3.1 Construction Stage**

Foul and surface water currently flow uncontrolled / unattenuated from Dublin Central Masterplan site to the existing combined network. The proposal will result in a net reduction in flows to the combined network.

There is a possibility of some surface water ingress into the combined drainage system due to poor workmanship. There is also a possibility of leakage from sewers and drains within the Dublin Central Masterplan site and along the route to the outfall sewer. Any leakage would result in local contamination of soil and ground waters in the area.

#### **8.5.1.3.2 Operational Stage**

The development of the Dublin Central Masterplan will result in a net reduction in the runoff volume through the introduction of SuDS devices and in a reduction in the runoff rate through the introduction of flow control devices and attenuation storage. However, the Dublin Central Masterplan site currently discharges surface water to the existing combined network, whereas the Dublin Central Masterplan will discharge from Site 2C to the existing separated surface water network. The increase in the runoff to the surface water network could therefore result in downstream flooding.

The runoff from the roads and hardstanding areas will discharge contaminants, including oils and silts, to the surface water system which might result in polluting of the surface water network.

### **8.5.1.4 Groundwater**

#### **8.5.1.4.1 Construction Stage**

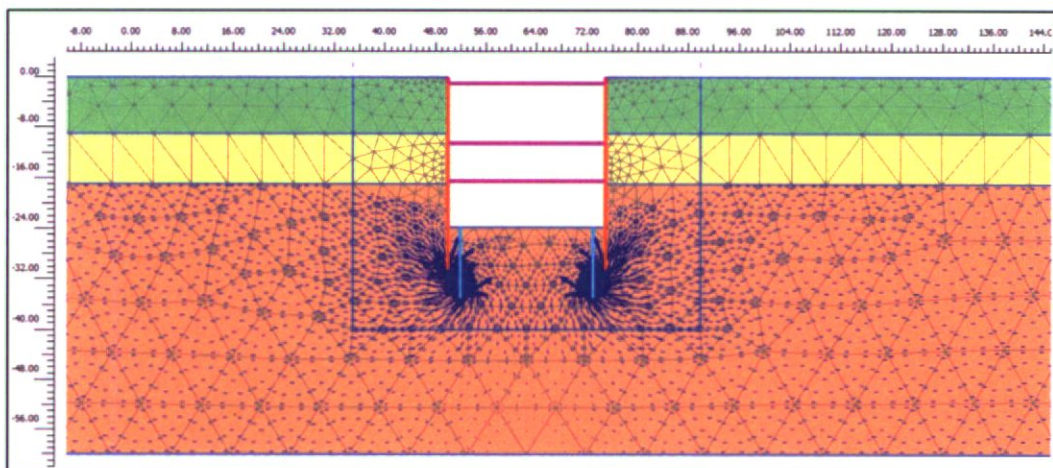
A-squared Studio Engineers Ltd. were appointed by Waterman Structures Ltd. to support the geotechnical and substructure engineering scope relating to the proposed development. Groundwater seepage analysis has been used to simulate the full-scale pumping test carried out at the site. For the sake of simplicity, steady-state conditions were simulated, considering a constant dewatering rate of 7.7m<sup>3</sup>/h and a 20m groundwater drawdown at the well location. The analysis assumes axisymmetric geometry and seepage mechanism.

The key model variables are the rock hydraulic conductivity (permeability -  $k$ ) and the horizontal distance of the model right boundary (where the groundwater head within the limestone rock is unaffected by the pumping) from the model axis. The two have been estimated trying to mimic the observed dewatering rate and a relatively nominal drawdown at distances in the order of 40-50m from the well, as observed in a number of nearby monitoring boreholes during the test.

A model boundary 60m away from the well (model axis) was adopted, in combination with a mass permeability of  $3.8 \times 10^{-6} \text{m/s}$  for the Limestone. In reality, the Limestone permeability is primarily driven by the rock fracturing pattern. However, for the sake of simplicity, the rock was modelled as a homogeneous stratum, with an isotropic permeability.

The findings of the pumping test back-analysis have been validated using closed form solutions for confined aquifers dewatering.

An assessment of the likely dewatering rates during the proposed station box excavation has been carried out using Plaxis 2d. An indicative view of the model is presented in Figure 8.3, below: -



**Figure 8.3:** Groundwater Flow Vectors during Dewatering.

It is assumed that a number of wells will be installed along the box perimeter and will maintain a groundwater table to a level of 1-2m beneath the box formation level.

The assessment indicates that dewatering pumping rates in the order of  $100 \text{m}^3/\text{h}$  will be required for the entire box. It is anticipated that the groundwater extracted via the wells will be pumped back into the deep aquifer using additional recharge wells. Due to the relatively significant anticipated volumes of water, some form of grouting below the base of the excavation may be considered by the design and build contractor, in order to form a lower permeability “plug” and limit the dewatering volumes. It is worth considering that the grouted “plug” would have to extend to a sufficient depth, to prevent uplift stability mechanisms.

Proposed short term dewatering during the construction stage will mitigate the risk of groundwater flooding during excavations and will limit the impact on the groundwater table.

#### 8.5.1.4.2 Operational Stage

The approximately 25m deep box permanent structure, to be constructed as part of the enabling works to facilitate a future Metro Station, will form a cut-off for the superficial groundwater flow and may induce groundwater head variations in the zone surrounding it.

As noted above, A-squared Studio Engineers Ltd. were appointed by Waterman Structures Ltd. to support the geotechnical and substructure engineering scope relating to the proposed development, including a Barrier Effect Study incorporating Ground Modelling and a Groundwater Seepage



Assessment. The Barrier Effect Study is included in full as part of the accompanying Basement Impact Assessment, and the findings are summarised below.

The groundwater seepage study was carried out using the commercial software Plaxis 2d, simulating plane flow conditions across a horizontal cross-section, located within the superficial granular deposits. Two scenarios were analysed, considering the current conditions and the presence of the proposed station box acting as a groundwater barrier. The aim of the analysis is to evaluate the magnitude of groundwater level increase on the "upstream" (north) side of the basement and the groundwater level reduction on the "downstream" (south) side, as a result of the groundwater damming effect.

Based on discussions with Transport and Infrastructure Ireland (TII) and Jacobs IDOM, it is understood that a general groundwater seepage mechanism is present within the superficial granular strata, in a general direction from north-west to south-east. This steady-state seepage mechanism, generally toward the River Liffey, has a groundwater head gradient of approximately 0.003.

An indicative view of the groundwater seepage mechanism in proximity of the proposed box is shown in Figure 8.4, below: -

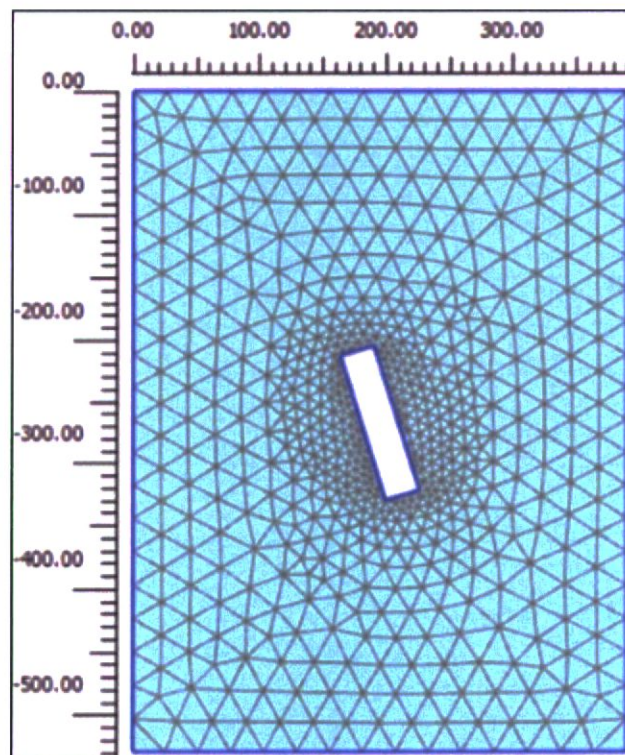


Figure 8.4: View of the Plaxis 2d Model.

Figure 8.5 shows contours of groundwater head in the zone surrounding the proposed development site. The groundwater boundary conditions adopted in the finite element analysis were selected in order to broadly simulate a north-west to south-east groundwater flow pattern. Note that vector size is proportional to groundwater seepage velocity in the Figure.

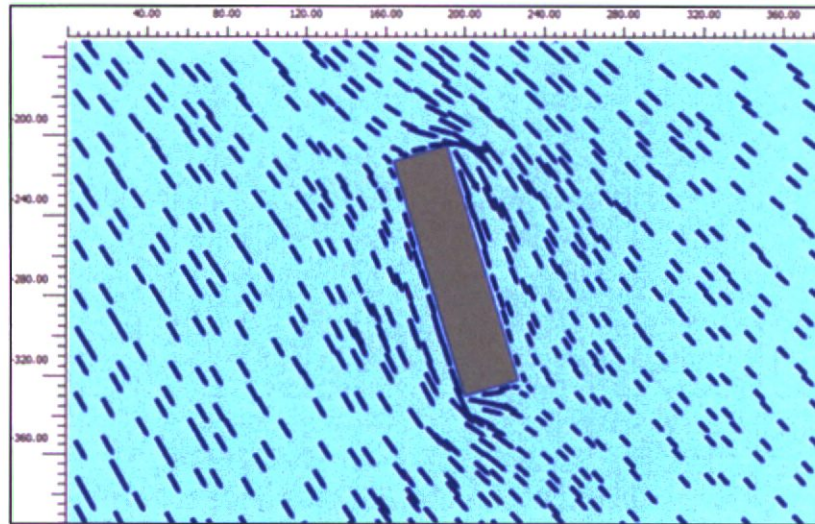


Figure 8.5: Indicative Groundwater Flow Vectors.

Figure 8.6 indicates the groundwater head distribution following the construction of the box:

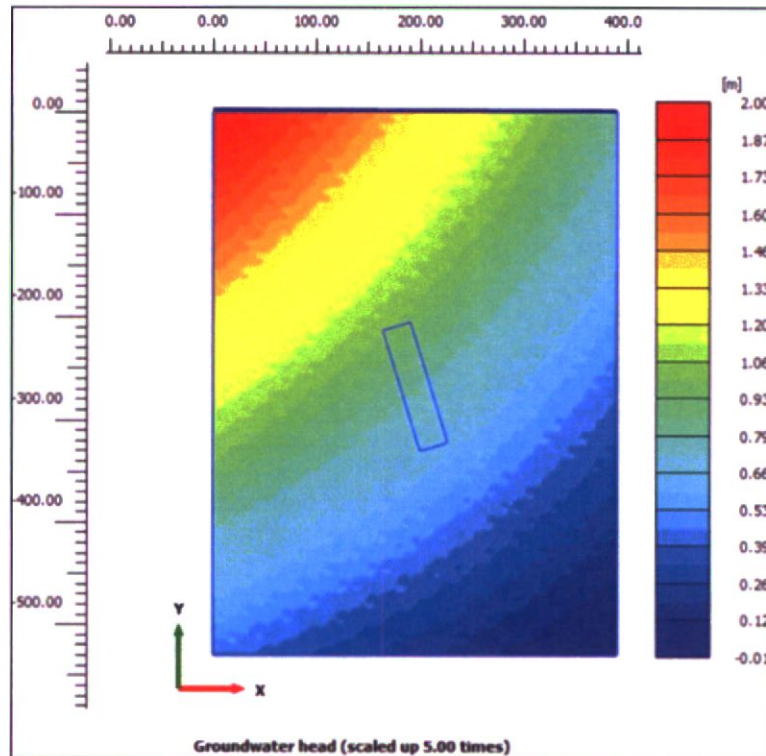


Figure 8.6: Groundwater Head (mOD) Distribution.

Based on the modelling carried out, groundwater head variations (increase “upstream” and reduction “downstream”) of up to 0.05m are predicted, which would indicate negligible impact of the proposed station box construction on the groundwater conditions in the area. Thus, the potential impact to groundwater during the operation stage of the proposed development is considered negligible. Please refer to Appendix 8.2 for the Basement Impact Assessment, which includes the assessments carried out by A-squared Studio Engineers Ltd.

There is a potential for groundwater to enter the basement during operational stage through weak points in the basement construction.



### 8.5.1.5 Do-Nothing Impact

In the do-nothing scenario, surface water will continue to flow from the site uncontrolled and unrestricted to the existing combined network.

## 8.5.2 Proposed Development – Site & No. 61 O'Connell Street Upper

### 8.5.2.1 Water Supply

The potential impacts on water supply of the Proposed Development (Site 2AB, Site 2C and No. 61 O'Connell Street Upper, including associated Metro Enabling Works and Public Realm Works) are the same as the potential impacts of the Dublin Central Masterplan described in Section 8.5.1.1.

### 8.5.2.2 Foul Water Drainage

The potential impacts on foul water drainage of the Proposed Development (Site 2AB, Site 2C and No. 61 O'Connell Street Upper, including associated Metro Enabling Works and Public Realm Works) are the same as the potential impacts of the Dublin Central Masterplan described in Section 8.5.1.2.

### 8.5.2.3 Surface Water Drainage

The potential impacts on surface water drainage of the Proposed Development (Site 2AB, Site 2C and No. 61 O'Connell Street Upper, including associated Metro Enabling Works and Public Realm Works) are the same as the potential impacts of the Dublin Central Masterplan described in Section 8.5.1.3.

### 8.5.2.4 Groundwater

The potential impacts on groundwater at the Proposed Development (Site 2AB, Site 2C and No. 61 O'Connell Street Upper, including associated Metro Enabling Works and Public Realm Works) are the same as the potential impacts of the Dublin Central Masterplan described in Section 8.5.1.4.

### 8.5.2.5 Do-Nothing Impact

The do-noting impact of the Proposed Development (Site 2AB, Site 2C and No. 61 O'Connell Street Upper, including associated Metro Enabling Works and Public Realm Works) is the same as the do noting impact of the Dublin Central Masterplan described in Section 8.5.1.5.

## 8.6 MITIGATION MEASURES (AMELIORATIVE, REMEDIAL OR REDUCTIVE MEASURES)

### 8.6.1 Dublin Central Masterplan

Mitigation measures will be implemented on a site-by-site basis in line with best practice standards. The relevant mitigation measures for Site 2AB, Site 2C and No. 61 O'Connell Street Upper are set out in Section 8.6.2 below. The same standards will be implemented as part of the development of the other sites within the Dublin Central Masterplan area.

### 8.6.2 Proposed Development – Site 2 & No. 61 O'Connell Street Upper

#### 8.6.2.1 Water Supply

##### 8.6.2.1.1 Construction Stage

A method statement setting out in detail the procedures to be used when working in the vicinity of existing watermains will be produced by the contractor for any construction works within the vicinity of watermains and for roads or services crossing watermains.

All watermains will be cleaned and tested in accordance with Irish Water guidelines prior to connection to the public watermain.

All connections to the public watermain will be carried out by, or under the supervision of, Irish Water. Potential negative impacts during construction stage will be short term only.

#### 8.6.2.1.2 Operational Stage

Water meters will be installed at connection points, with locations to be agreed and approved by Irish Water, and these meters will be linked to Irish Water's monitoring system by telemetry. These meters will facilitate the early detection of unusual water usage in the network and identify potential leaks in the system.

All plumbing fixtures and fittings and sanitary wear to be installed within the development should be to the current best practice for water consumption to minimise future water usage.

It is not envisaged that any further remedial or reductive measures will be necessary on completion.

### 8.6.2.2 Foul Water Drainage

#### 8.6.2.2.1 Construction Stage

In order to reduce the risk of defective or leaking foul sewers, the following remedial measures will be implemented: -

- All new foul sewers will be tested by means of an approved air test during the construction stage in accordance with Irish Waters Code of Practice and Standard Details.
- All private drainage will be inspected and signed off by the design Engineer in accordance with the Building Regulations Part H and BCAR requirements.
- Foul sewers will be surveyed by CCTV to identify possible physical defects.
- The connection of the new foul sewers to the public sewer will be carried out under the supervision of Irish Water and will be checked prior to commissioning.
- Prior to commencement of excavations in public areas, all utilities and public services will be identified and checked, to ensure that adequate protection measures are implemented during the construction stage.
- 

#### 8.6.2.2.2 Operational Stage

All foul drains will be tested and surveyed prior to connection to the public sewers to minimise the risk of uncontrolled ground water penetration or leakage of the foul water to ground water on the site.

Otherwise, no remedial or reductive measures are deemed to be necessary after completion of the development of the Dublin Central Masterplan, other than normal maintenance of the foul sewer system.

### 8.6.2.3 Surface Water Drainage

#### 8.6.2.3.1 Construction Stage

The contractor will prepare and implement a Construction Management Plan which will outline the requirements for the storage and handling of fuel, including the refuelling of vehicles in designated refuelling zones to minimise the risk of spillages, and the impact of spillages should they occur.

The Construction Management Plan will also utilise sedimentation controls, including silt traps, tailings ponds and silt fences during the construction period.



All private drainage will be inspected and signed off by the design Engineer in accordance with the Building Regulations Part H and Building Control (Amendment) Regulations (BCAR) requirements. This will reduce the possibility of any cross connections being constructed.

#### 8.6.2.3.2 Operational Stage

Surface water will be attenuated privately within each site of the Dublin Central Masterplan, and will discharge to the public network at a controlled rate limited to 2l/s from each site.

In addition, the SuDS devices outlined in Section 8.4.1.3 will reduce and slow down the rate of surface water runoff from each site within the Dublin Central Masterplan. This will minimise peak flows in the downstream system during major storm events. Gullies and the flow control devices shall be regularly maintained to avoid blockages.

The SuDS treatment train will also treat the surface water discharging to the public network, removing pollutants from the surface water runoff. Maintenance of these SuDS devices will be required to ensure that they continue to treat the surface water as designed.

### 8.6.2.4 Groundwater

#### 8.6.2.4.1 Construction Stage

The Metro Enabling Works (MEW) construction has been considered as a bottom-up construction, where the excavation will be advanced down to the lowest level, with the structure then being constructed from this bottom level. In the permanent condition, the reinforced concrete slabs will act as permanent props between the diaphragm walls to resist lateral pressures. In the temporary condition, horizontal props will be installed successively as excavation progresses downwards.

A number of wells will be installed along the box perimeter and will maintain a groundwater table to a level of 1-2m beneath the box formation level.

The short-term dewatering assessment indicates that dewatering pumping rates in the order of 100m<sup>3</sup>/h will be required for the entire box. It is anticipated that the groundwater extracted via the wells will be pumped back into the deep aquifer using additional recharge wells. Due to the relatively significant anticipated volumes of water, some form of grouting below the base of the excavation may be considered by the design and build contractor, in order to form a lower permeability "plug" and limit the dewatering volumes. It is worth considering that the grouted "plug" would have to extend to a sufficient depth, to prevent uplift stability mechanisms.

Proposed short term dewatering during the construction stage will mitigate the risk of groundwater flooding during excavations and will limit the impact on the groundwater table.

Water pumped during the de-watering shall be discharged to a settlement tank in advance of being discharged back to ground.

Please also refer to the accompanying Subterranean Construction Method Statement, which is included in Appendix 8.3. The Subterranean Construction Method Statement provides further details on the mitigation measures proposed to manage the potential impacts on groundwater during construction.

#### 8.6.2.4.2 Operational Stage

The buildings' design will incorporate suitable damp proof membranes to protect against damp and water ingress from below ground level. To mitigate the risks of groundwater entering the basements they must be adequately waterproofed. Any penetrations through the basement wall or slab must also be appropriately sealed to prevent ingress of groundwater.

It is proposed to install a granular blanket surrounding the basement structures, which will allow groundwater to seep around the basement, maintaining any long-term sub-surface perched water

movement. This will minimise the effect that the proposed basement will have on the local water table, mitigating the risk to surrounding areas including other basements in the vicinity of the site.

A Basement Impact Assessment has been undertaken as part of this proposed development. The Basement Impact Assessment provides further details on the groundwater modelling carried out, and on the mitigation measures proposed to mitigate the impact of the basement and MEW on the groundwater in the vicinity of the site. Please refer to the Basement Impact Assessment which is included in Appendix 8.2 for further details.

## **8.7 RESIDUAL IMPACT**

### **8.7.1 Dublin Central Masterplan**

#### **8.7.1.1 Water Supply**

##### **8.7.1.1.1 Construction Stage**

Due to the proposed remedial measures outlined above no significant adverse impacts are expected to arise during the construction stage of the implementation of the Dublin Central Masterplan on the water supply network.

There may be short term disruption to local water supply when connection are being made to the water supply network.

##### **8.7.1.1.2 Operational Stage**

There will be a water demand for the implementation of the Dublin Central Masterplan of approximately 760m<sup>3</sup> per day. Irish Water will confirm whether the existing network has sufficient capacity, or alternatively will outline any upgrades required to facilitate the development.

#### **8.7.1.2 Foul Water Drainage**

##### **8.7.1.2.1 Construction Stage**

During the construction stage of implementation of the Dublin Central Masterplan some short-term negative impacts as identified above may result. However, if the proposed remedial and reductive measures are implemented, the impact of the implementation of the Dublin Central Masterplan during the construction stage will be minimised and no significant long-term impacts will result from the construction works.

##### **8.7.1.2.2 Operational Stage**

By removing surface water flows from the combined network, the implementation of the Dublin Central Masterplan will result in a net decrease in the wastewater flows discharging to the existing combined drainage system and will therefore reduce the inflows arriving at the Ringsend Wastewater Treatment plant.

#### **8.7.1.3 Surface Water Drainage**

##### **8.7.1.3.1 Construction Stage**

During the construction stage of implementation of the Dublin Central Masterplan some short-term negative impacts as identified above may result. However, if the proposed remedial and reductive measures are implemented, the impact of the implementation of the Dublin Central Masterplan during the construction stage will be minimised and no significant long-term impacts will result from the construction works.



### 8.7.1.3.2 Operational Stage

With the implementation of the SuDS treatment train, attenuation and flow control, there will be a net improvement in the quality and a net reduction in the quantity of surface water discharging from the individual site within the Dublin Central Masterplan. The proposal to discharge Site 2C to the existing surface water network, rather than the combined network, will result in a significant decrease in flows to the combined network and a net increase in flows to the surface water network.

No significant adverse impacts are envisaged.

## 8.7.1.4 Groundwater

### 8.7.1.4.1 Construction Stage

During the construction stage of implementation of the Dublin Central Masterplan, groundwater dewatering will be required. By pumping this groundwater back into the deep aquifer using recharge wells, the impact on the groundwater in the vicinity of the site will be mitigated, limiting the impact on the groundwater table. This solution also avoids the need to discharge groundwater to the surface water network, ensuring that the drainage network will not be impacted by groundwater dewatering. No significant long-term impacts will result from the construction works.

### 8.7.1.4.2 Operational Stage

As noted above, the groundwater modelling indicates that groundwater head variations as a result of the development are negligible.

With the buildings' design incorporating suitable damp proof membranes to protect against damp and water ingress from below ground level, and with a proposed granular blanket surrounding the basement structures to allow groundwater to seep around the subterranean structures, the impact that the development will have on the local water table is minimised.

No significant adverse impacts are envisaged.

### 8.7.1.5 Worst Case Impact

In the worst-case scenario, there could be some surface water ingress into the foul water drainage system due to poor workmanship. Leakage from sewers and drains could result in local contamination of soil and ground waters in the area. The runoff from the roads and hardstanding areas will discharge contaminants, including oils and silts, to the surface water system which might result in polluting of the surface water network. There may be groundwater seepage into the basement and below ground parts of the development. However, with the mitigation measures set out above, the likelihood of these impacts will be minimised, and no significant long-term impacts will result from the development.

## 8.7.2 Proposed Development – Site 2 & No. 61 O'Connell Street Upper

### 8.7.2.1 Water Supply

The potential impacts on water supply of the Proposed Development (Site 2AB, Site 2C and No. 61 O'Connell Street Upper, including associated Metro Enabling Works and Public Realm Works) are the same as the potential impacts of the Dublin Central Masterplan described in Section 8.7.1.1.

### 8.7.2.2 Foul Water Drainage

The potential impacts on foul water drainage of the Proposed Development (Site 2AB, Site 2C and No. 61 O'Connell Street Upper, including associated Metro Enabling Works and Public Realm Works) are the same as the potential impacts of the Dublin Central Masterplan described in Section 8.7.1.2.

### 8.7.2.3 Surface Water Drainage

The potential impacts on surface water drainage of the Proposed Development (Site 2AB, Site 2C and No. 61 O'Connell Street Upper, including associated Metro Enabling Works and Public Realm Works) are the same as the potential impacts of the Dublin Central Masterplan described in Section 8.7.1.3.

### 8.7.2.4 Groundwater

The potential impacts on groundwater of the Proposed Development (Site 2AB, Site 2C and No. 61 O'Connell Street Upper, including associated Metro Enabling Works and Public Realm Works) are the same as the potential impacts of the Dublin Central Masterplan described in Section 8.7.1.4.

### 8.7.2.5 Worst Case Impact

The worst-case impact of the Proposed Development (Site 2AB, Site 2C and No. 61 O'Connell Street Upper, including associated Metro Enabling Works and Public Realm Works) is the same as the worst-case impact of the Dublin Central Masterplan described in Section 8.7.1.5.

## 8.8 MONITORING

### 8.8.1 Dublin Central Masterplan

Monitoring will be implemented on a site by site basis in line with best practice standards. The relevant mitigation measures for Site 2AB and Site 2C are set out in Section 8.8.2 below. The same standards will be implemented as part of the development of the other sites within the Dublin Central Masterplan area.

### 8.8.2 Proposed Development – Site 2 & No. 61 O'Connell Street Upper

#### 8.8.2.1 Water Supply

Water usage and potential leakage will be monitored by Irish Water using the water meters which will be installed on the supply pipes so that the development can be monitored in sections. The location of these meters will be agreed with Irish Water and the meters will be linked to Irish Water's monitoring system via telemetry.

#### 8.8.2.2 Foul Water Drainage

Following completion of construction of the Dublin Central Masterplan there are no monitoring requirements envisaged other than normal monitoring and maintenance of the wastewater system by Irish Water.

#### 8.8.2.3 Surface Water Drainage

The surface water network (drains, gullies, manholes, AJs, SuDS devices, attenuation systems) will need to be regularly maintained and where required cleaned out. A suitable maintenance regime of inspecting and cleaning shall be incorporated into the safety file/maintenance manual for the Dublin Central Masterplan.

#### 8.8.2.4 Groundwater

Following completion of construction of the Dublin Central Masterplan there are no monitoring requirements envisaged.



## **8.9 REINSTATEMENT**

### **8.9.1 Dublin Central Masterplan**

Any existing roads and footpaths that are opened to facilitate water supply, foul water drainage and surface water drainage connections will be reinstated.

### **8.9.2 Proposed Development – Site 2 & No. 61 O'Connell Street Upper**

The reinstatement for the Proposed Development (Site 2AB, Site 2C and No. 61 O'Connell Street Upper, including associated Metro Enabling Works and Public Realm Works) is the same as the reinstatement for the Dublin Central Masterplan described in Section 7.9.1.

## **8.10 DIFFICULTIES ENCOUNTERED**

There were no difficulties encountered when undertaking this assessment.

## 12 LANDSCAPE & VISUAL IMPACT ASSESSMENT

### 12.1 INTRODUCTION

This chapter examines the landscape and visual impact of the development proposed on Sites 2AB and C (collectively Site 2) and No. 61 O'Connell Street Upper of the Dublin Central Project as amended in response to Dublin City Council's *Request for Further Information* (dated 13<sup>th</sup> December 2022; DCC Reg. Ref. 5162/22) on the surrounding urban area.

This Chapter was completed by W. H. Hastings B. Arch FRIAI, RIAI Grade 1 accredited Conservation Architect of ARC Architectural Consultants Limited..

### 12.2 ASSESSMENT METHODOLOGY • ASSESSMENT OF VISUAL EFFECTS

The European Landscape Convention defines landscape as follows: -

*"Landscape" means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors;*

Landscape and Visual Impact Assessment (LVIA) discusses how the existence of a Proposed Development might change how a surrounding area might be '*perceived by people*' visually.

The preparation of this landscape and visual impact assessment has had regard to the *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (May 2022)* prepared by the Environmental Protection Agency. It is noted that the EPA Guidelines, in categorising the extent of environmental impact, uses the term 'effects' in place of 'impacts'. This LVIA follows the Guidelines and uses the term 'effects'. Though the terms are interchangeable, the word 'effect' has a less negative connotation than the word 'impact'.

The EPA Guidelines are statutory guidelines prepared under the provisions of the EPA Act 1992 (as amended). The purpose of a visual impact assessment is, taken together with the full range of other documents lodged as part of a planning application, to assist in informing the decision making process.

Assessment of visual effects, has three main parts: -

1. Analysis of the likely extent of visibility of a Proposed Development.
2. Description of the visual sensitivity of the receiving environment and its consequent capacity to absorb development.
3. Assessment of the objective extent of change in the visual character of the receiving environment likely to arise from the existence of the Proposed Development, and of the likely response of observers to that change.

The EPA Guidelines require that visual impact assessment be carried out in a manner that is systematic, impartial, and objective and independent. It is not the purpose of assessment to promote or advocate for the development. It is an important principle of impact analysis that the analysis should be capable of being repeated independently, and that repeated analysis should lead to the same conclusion. To facilitate this, the steps taken in the analysis of impacts should be clearly set out in an assessment report.

#### 12.2.1 Visibility

The first task of a visual impact assessment is to assess the likely extent and nature of visibility of the Proposed Development. This includes determining from what locations the Proposed Development is likely to be visible and from what locations it will not be. It includes determining, where visible, how major or minor an element the Proposed Development will be in any view. The primary determining factors when assessing extent of visual impact are: -

- i. Whether a development will be visible or not.
- ii. where visible how much of any view a development will occupy.



- iii. whether or not a Proposed Development is the focus of a view.

Each of these factors affect the visual prominence of a Proposed Development.

The extent of visibility of a Proposed Development in any view tends to be directly related to the distance of the viewpoint from the development. However, intervening obstacles such as buildings or structures, trees and planting, and topography, can modify the extent of visibility of the Proposed Development. Where streets or urban spaces are aligned towards the site of a Proposed Development, and where the buildings or trees at the end of these alignments are relatively modest in height, there is a potential for taller developments to be visible above any lower intervening buildings or other obstacles. This potential increases with the length of the open foreground but reduces when the viewpoint is closer to any intervening obstacles. It follows, that for taller structures (e.g. taller than the prevailing height of the surrounding built environment or landscape elements) to be openly visible, they must be seen across an open foreground or at the end of a long vista or alignment. From viewpoints within dense urban, or even suburban, environments, very modest buildings in the foreground can conceal even very large or tall structures from view. The Spire in O'Connell Street, which is 120 metres high, is imposing when viewed from O'Connell Street or O'Connell Bridge, or from Talbot Street or Henry Street. Outside these axes, the visibility of the Spire is dramatically reduced, and, despite its great height it is not visible at all from the great majority of the city.

A survey of the potential visibility of Proposed Development on the subject site was initially carried out by ARC Consultants on various dates in 2006 and 2007. In the first instance, mapping analysis was carried out to identify locations from which views of the Proposed Development were likely. In the summer and autumn of 2020, a new survey was carried out of the potential visibility of proposed buildings in the Dublin Central Project, having regard to the location and proposed height of proposed buildings within the Dublin Central site. This survey identified 19 view locations for assessment, locations from which there may be a potential for proposed buildings that form part of the Dublin Central Project to be visible. Photographs looking in the direction of the Dublin Central site were taken from each of these 19 locations. Most of these photographs were taken on several different dates in the summer, autumn and early winter of 2020 and were taken on high resolution digital cameras using lenses equivalent to a 24mm lens on a 35 mm camera. In response to Dublin City Council's *Request for Further Information*, a new set of photomontages has been prepared and includes views for three scenarios for each view location as follows:

- Existing: The existing view shows the scene from the view location as it appeared when the photograph was taken in 2020.
- As submitted in October 2022: The "as submitted" view shows how the development as originally proposed would appear in the existing view.
- As now proposed in response to a *Request for Further Information*: The "as now proposed" shows the development as amended in response to the *Request for Further Information* would appear in the view. Where changes in the built environment have taken place in the intervening period, updated photography was taken in June 2022 and is included in the photomontage document to illustrate the view under this scenario. Specifically, the "as now proposed" view for Views 1 and 10 have been prepared using new photographs having regard to the advancing construction of a 9 storey hotel on Parnell Street. Please note that, in the case of View 10 (taken from Parnell Square West), works were carried out to the road surface at Parnell Square West in the intervening period (e.g. widening of the footpath), which mean that it was not possible to take the view from the exact same location. As a result, there is a minor difference in coverage between the photograph used for the "existing" and "as submitted" views and the "as now proposed" view.

Wide-angle lenses were used to provide sufficient context in the view. Photographs with a narrow field of view may exclude relevant context. Wide-angle views, capable of providing sufficient context are particularly important when the viewpoint is close to Proposed Development. Photographs and photomontages based on wide angle photography are printed at A3 size, so that the angle of vision covered by the print, when held at reading distance, is approximately the same as would be covered



by the same extent of the real scene, when viewed from the camera location. This is an accepted convention where photomontages are used to illustrate assessment of landscape and visual effects.

It should be noted that digital images are now commonly viewed on digital devices, and that these devices have a wide range of screen sizes. The size of screen on which an image is viewed and the extent to which the viewer zooms into or out of the image can affect how the content of the image is perceived. Photomontages used to illustrate assessment of landscape and visual effects are helpful in indicating the extent to which a Proposed Development may be visible from a particular location, and where visible the form and materials of the Proposed Development. It should be noted that in the context of assessment of landscape and visual effects photomontages are intended to be representative of what might be seen from different directions and are not intended to be exhaustive.

### 12.2.2 Characteristics of the Receiving Environment • Sensitivity and Visual Capacity

As has been discussed above, the visibility of Proposed Development is mediated by the physical geometry of the receiving environment, including the pattern and form of the existing built environment. These are among the factors that determine the visual capacity of a receiving environment to absorb development. Among other characteristics are the visual character and uniformity of the receiving environment and its historical or cultural value.

An intact and uniform Georgian square, which is a coherent and integrated visual setting, would usually be regarded as visually sensitive with a consequent low capacity to absorb new development that might dilute the existing visual character. The same might be true of certain suburban environments. On the other hand, a centre city environment or dockland settings where there are structures of a diverse character and a wide range of scales are settings that are usually less sensitive and are likely to have a high visual capacity to absorb development. Locations that have a statutory designation as an architectural conservation area or locations where there are protected structures, usually have an increased visual sensitivity leading to a reduced visual capacity to absorb development. Other designations, such as special amenity area orders, designated views and prospects and designated high amenity zones, may also limit this absorption capacity. Capacity to absorb development, therefore, has a direct bearing on the extent of likely visual effects.

In areas that are very uniform in character the introduction of larger structures may change the visual character of the area. In established urban areas the introduction of new large structures as part of a process of densification has the potential to give rise to substantial visual effects. The extent of this change will depend on the extent of difference in visual character between the new development and the existing surrounding visual environment. The extent of change is likely to be the main factor in determining the extent of visual effects.

### 12.2.3 Extent and Nature of Visual Effects

The categorising of the extent potential of visual effects in this LVIA utilises the terminology set out in the *Table 3.4: Descriptions of Effects* contained in the *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports* prepared by the Environmental Protection Agency.

The extent of visual effects will depend on the extent to which the existence of a Proposed Development changes the visual character of a receiving environment. The extent of change likely to result from the existence of a Proposed Development is usually a matter of objective fact, related to characteristics such as bulk, height, form, colour materials proportion, etc.

The extent of visual effects also depends on the interplay between the visual sensitivity and uniformity of the receiving environment and the extent to which the design of the Proposed Development responds to the form and pattern of the receiving environment. Responding well to the receiving environment should not imply deference or mimicry. Often a degree of contrast is a more visually appropriate response than adopting the style, form, materials or architectural detail of the receiving built environment, which can sometimes result in pastiche. These matters may be described in objective terms, but they are also susceptible to subjective judgement on the part of observers.



The perceived character of the visual effects: positive, negative or neutral, may depend on how well a development is received by the public, and on the perceived contribution of the development to the built environment. The character of visual effects, and even the duration of visual effects, is very dependent on the attitude of the viewer. If a viewer is opposed to a new building for reasons other than visual, that viewer is likely to see the building in a negative light, no matter how beautiful the building might be.

#### 12.2.4 Definition of Effects on the Visual Environment

The assessment of visual effects on landscape and on the built environment had regard to the Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (May 2022) prepared by the Environmental Protection Agency. The terminology for categorising the significance of visual effects referred to below is taken from Table 3.4: Descriptions of Effects contained in the *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports*. Some commentary is also given below on what these definitions might imply in the case of landscape and visual effects. The definitions from the EPA document are in italics.

- ***Imperceptible:*** *An effect capable of measurement but without significant consequences.* The definition implies that the development would be visible, capable of detection by the eye, but not noticeable to the casual observer. If the development were not visible, there could be no impact.
- ***Not Significant:*** *An effect which causes noticeable changes in the character of the environment but without significant consequences.* The definition implies that the development would be visible, capable of detection and of being noticed by an observer who is actively looking for the development with the purpose of assessing the extent of its visibility and visual effects.
- ***Slight:*** *An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.* For this definition to apply, a development would be both visible and noticeable, and would also bring about a change in the visual character of the environment. However, apart from the development itself, the visual sensitivity of the surrounding environment would remain unchanged.
- ***Moderate:*** *An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.* In this case, a development must bring about a change in the visual character of the environment; and this change must be consistent with a pattern of change that is already occurring, or is likely to occur.
- ***Significant:*** *An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.* The definition implies that the existence of the development would change an important characteristic of the visual environment in a manner that is not 'consistent with existing and emerging baseline trends'. Whether an effect might or might not be significant can depend on the response of individual observers, since what one person might regard as a sensitive aspect of the visual environment, another might not.
- ***Very Significant:*** *An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.* The definition implies that the existence of the development would substantially change most of the visual characteristics of the environment in a manner that is not 'consistent with existing and emerging baseline trends'.
- ***Profound:*** *An effect which obliterates sensitive characteristics.* In visual terms, profound effects are only likely to occur on a development site, in that it is only on the site that all previous visually sensitive characteristics could be obliterated. Outside the site, some visual characteristic of the original environment is likely to remain.

The definitions of effects listed above deal largely with the extent of effects; which is usually proportional to the extent to which that development is visible. The extent of effects will also, in part,



depend on the sensitivity of the spaces from which the development is seen. This proportionality may be modified by the extent to which a development is regarded as culturally or socially acceptable. Though buildings are intended to be permanent, and will be permanently visible, the extent of visual effects associated with a building often diminishes with time as further development in the area takes place.

### 12.2.5 Digital Modelling and Rendering

Models of the Proposed Development were constructed using 3D Studio Max. Models were made both by ARC Consultants and by members of the design team. The models made by ARC Consultants were based on survey information and on design drawings provided by the design team. Surveyed reference points on existing buildings in the city were attached to the 3D models. The model used for photomontages included appropriate detail of the proposed buildings as shown on design drawings. Renderings were made on computer from each camera position using the field of view of each photograph, and with the sun position correct for the date and time that each photograph was taken. The renders were inserted into the relevant view and were scaled and positioned using the field of vision of each photograph and the surveyed reference points in each view. ARC would expect the dimensional accuracy of the scaling and positioning of the image of the Proposed Development within each view to be better than  $\pm 1\%$ .

### 12.2.6 Statutory Provisions

Part of the site of the proposed Dublin Central Project falls within the O'Connell Street Architectural Conservation Area (ACA), which was adopted in July 2001. In the Dublin City Development Plan 2022 – 2028, Section 11.5.2 *Architectural Conservation Areas* states: -

*“The Planning and Development Act, 2000 (as amended), provides the legislative basis for the protection of Architectural Conservation Areas (ACAs). Under the Act, an ACA is defined as a place, area, group of structures or townscape that is of special architectural, historical, archaeological, artistic, cultural, scientific, technical, social interest or value, or contributes to the appreciation of protected structures.*

*ACAs are designated in recognition of their special interest or unique historic and architectural character, and important contribution to the heritage of the city. This character is often derived from the cumulative impact of the area's buildings, their setting, landscape and other locally important features which developed gradually over time. An ACA may consist of groupings of buildings and streetscapes and associated open spaces. Chapter 3 of the Architectural Heritage Protection Guidelines for Planning Authorities (2011) provides more detailed guidance in relation to ACAs and the assessment of development proposals within them.*

*The protected status afforded by inclusion in an ACA only applies to the exterior of structures and features of the streetscape.*

*While the purpose of ACA designation is to protect and enhance the special character of an area, it should not be viewed as a means of preventing new development but rather to help guide and manage change to ensure developments are sympathetic to the special character of the ACA.”*

The policies to ensure the conservation and protection of Architectural Conservation Areas and Conservation Areas are as follows: -

**BHA7: Architectural Conservation Areas: It is the Policy of Dublin City Council: -**

*“(a) To protect the special interest and character of all areas which have been designated as an Architectural Conservation Area (ACA). Development within or affecting an ACA must contribute positively to its character and distinctiveness, and take opportunities to protect and enhance the character and appearance of the area, and its setting, wherever possible. Development shall not harm buildings, spaces, original street patterns, archaeological sites, historic boundaries or features, which contribute positively to the ACA. Please refer to Appendix 6 for a full list of ACAs in Dublin City.*

*(b) Ensure that all development proposals within an ACA contribute positively to the character and distinctiveness of the area and have full regard to the guidance set out in the Character Appraisals and Framework for each ACA.*



- (c) *Ensure that any new development or alteration of a building within an ACA, or immediately adjoining an ACA, is complementary and/or sympathetic to their context, sensitively designed and appropriate in terms of scale, height, mass, density, building lines and materials, and that it protects and enhances the ACA. Contemporary design which is in harmony with the area will be encouraged.*
- (d) *Seek the retention of all features that contribute to the character of an ACA including boundary walls, railings, soft landscaping, traditional paving and street furniture.*
- (e) *Promote sensitive hard and soft landscaping works that contribute to the character and quality of the ACA.*
- (f) *Promote best conservation practice and encourage the use of appropriately qualified professional advisors, tradesmen and craftsmen, with recognised conservation expertise, for works to buildings of historic significance within ACAs.*

*All trees which contribute to the character and appearance of an Architectural Conservation Area, in the public realm, will be safeguarded, except where the tree is a threat to public safety, prevents universal access, or requires removal to protect other specimens from disease."*

**BHA9 Conservation Areas: It is the Policy of Dublin City Council:**

*"To protect the special interest and character of all Dublin's Conservation Areas – identified under Z8 and Z2 zoning objectives and denoted by red line conservation hatching on the zoning maps. Development within or affecting a Conservation Area must contribute positively to its character and distinctiveness and take opportunities to protect and enhance the character and appearance of the area and its setting, wherever possible. Enhancement opportunities may include:*

1. *Replacement or improvement of any building, feature or element which detracts from the character of the area or its setting.*
2. *Re-instatement of missing architectural detail or important features.*
3. *Improvement of open spaces and the wider public realm and reinstatement of historic routes and characteristic plot patterns.*
4. *Contemporary architecture of exceptional design quality, which is in harmony with the Conservation Area.*
5. *The repair and retention of shop and pub fronts of architectural interest.*
6. *Retention of buildings and features that contribute to the overall character and integrity of the Conservation Area.*
7. *The return of buildings to residential use. Changes of use will be acceptable where in compliance with the zoning objectives and where they make a positive contribution to the character, function and appearance of the Conservation Area and its setting.*

*The Council will consider the contribution of existing uses to the special interest of an area when assessing change of use applications, and will promote compatible uses which ensure future long-term viability."*

**BHA10 Demolition in a Conservation Area**

*"There is a presumption against the demolition or substantial loss of a structure that positively contributes to the character of a Conservation Area, except in exceptional circumstances where such loss would also contribute to a significant public benefit."*

It is noted that the Dublin City Development Plan 2022-2028 includes a presumption for the retention of buildings appearing on the Ordnance Survey map of Dublin City of 1847:

**BHA6: Buildings on Historic Maps: It is the policy of Dublin City Council:**

*"That there will be a presumption against the demolition or substantial loss of any building or other structure which appears on historic maps up to and including the Ordnance Survey of Dublin City, 1847. A conservation report shall be submitted with the application and there will be a presumption against the*

*demolition or substantial loss of the building or structure, unless demonstrated in the submitted conservation report this it has little or no special interest or merit having regard to the provisions of the Architectural Heritage Protection Guidelines for Planning Authorities (2011)."*

#### 12.2.6.1 O'Connell Street Architectural Conservation Area

The extent of the O'Connell Street Architectural Conservation Area in the written statement (9<sup>th</sup> July 2001) is defined as follows: -

*"to the north of the river the area is centred on O'Connell Street, extending to Marlborough Street to the east, Moore Street to the west, Parnell Street to the north and the River Liffey to the south. To the south of the river, the area is centred on Westmoreland Street and D'Olier Street, extending to College Street to the south, Hawkins Street to the east and to rear of buildings fronting onto Westmoreland Street to the west."*

In relation to proposed new development the ACA written statement states: -

*"Where new development is proposed, it will be necessary to find and establish a pattern of development that responds in a sensitive manner to the streetscape – a fine grain solution – that contributes to a harmonious whole and maintains the rhythm of the streets. To secure an appropriate solution, new development should comply with the following general guidelines: -*

- *New developments should respect the established scale of the existing built fabric - including height, massing, proportions and plot width. Proposals for large scale or 'mega-structural' developments will not be favourably considered and any such proposals should be broken down into smaller, more comprehensible and human scale developments. This can be achieved in part through the provision of multiple uses and access points at ground floor level.*
- *All new buildings should be designed to the highest standard in a modern architectural idiom. Pastiche will be discouraged and will only be allowed or required in exceptional circumstances.*
- *Materials used should be of a high quality and be durable to avoid long term maintenance problems. They should include stone, brick, render, steel, glass and timber.*
- *An appropriate and balanced mix of uses will be required in all new developments and large scale single use developments will not be permitted. Public oriented uses including shops, cafes, restaurants and bars will be required at ground floor level to create more lively, dynamic and successful places.*
- *The ground floor of all buildings should be clearly articulated to establish a clear identity for each building and use. In general, a higher floor to ceiling dimension should be provided at ground floor level.*
- *The incorporation of new pedestrian routes and public spaces into new developments will be required where appropriate to enhance and reinforce the existing urban framework. A number of sites have been identified where opportunities for such interventions may be explored including site clusters nos. 4 and 7.*
- *Access requirements for people with disabilities, the elderly and the very young should be incorporated into the design of shops, public and other buildings.*
- *Plant and tank rooms should be provided within the roof space or within the envelope of the building and should not break the plane of the roof."*

#### 12.2.6.2 The Height Guidelines

In December 2018, the Department of Housing, Planning and Local Government published the *Urban Development and Building Heights Guidelines for Planning Authorities*, which sets out the following development management criteria:

*"In the event of making a planning application, the applicant shall demonstrate to the satisfaction of the Planning Authority/ An Bord Pleanála, that the Proposed Development satisfies the following criteria:*

*At the scale of the relevant city/town*



- *The site is well served by public transport with high capacity, frequent service and good links to other modes of public transport.*
- *Development proposals incorporating increased building height, including proposals within architecturally sensitive areas, should successfully integrate into/ enhance the character and public realm of the area, having regard to topography, its cultural context, setting of key landmarks, protection of key views. Such development proposals shall undertake a landscape and visual assessment, by a suitably qualified practitioner such as a chartered landscape architect.*
- *On larger urban redevelopment sites, Proposed Developments should make a positive contribution to place-making, incorporating new streets and public spaces, using massing and height to achieve the required densities but with sufficient variety in scale and form to respond to the scale of adjoining developments and create visual interest in the streetscape.*

*At the scale of district/ neighbourhood/ street*

- *The proposal responds to its overall natural and built environment and makes a positive contribution to the urban neighbourhood and streetscape*
- *The proposal is not monolithic and avoids long, uninterrupted walls of building in the form of slab blocks with materials / building fabric well considered.*
- *The proposal enhances the urban design context for public spaces and key thoroughfares and inland waterway/ marine frontage, thereby enabling additional height in development form to be favourably considered in terms of enhancing a sense of scale and enclosure while being in line with the requirements of “The Planning System and Flood Risk Management – Guidelines for Planning Authorities” (2009).*
- *The proposal makes a positive contribution to the improvement of legibility through the site or wider urban area within which the development is situated and integrates in a cohesive manner.*
- *The proposal positively contributes to the mix of uses and/ or building/ dwelling typologies available in the neighbourhood.”*

The *Urban Development and Building Heights Guidelines for Planning Authorities* are referenced here in the interests of completeness. However, in the interests of clarity, it should be noted that neither these guidelines, nor, indeed, any other planning policy guidelines (save those related to environmental impact assessment), were considered when classifying the magnitude and extent of potential visual impacts of the Proposed Development on the built environment.

## 12.3 RECEIVING ENVIRONMENT

The site of the proposed Dublin Central development is bounded by O'Connell Street to the east, Henry Street to the south, Moore Street to the west and Parnell Street and Square to the north. O'Connell Street is traditionally regarded as the main street of Ireland, and Nelson's Pillar, which stood at the midpoint of the street, was seen as the centre of Dublin. Though the site of the Proposed Development may be at the core of the city, it lies in an area that has seen dramatic changes over the years, and which is the subject of much new development, recently completed, under construction, approved or lodged for approval.

### 12.3.1 O'Connell Street

The first paragraph in the introduction to the O'Connell Street Integrated Area Plan 1998 reads as follows: -

*"For most Irish people, O'Connell Street is the heart of Dublin City. Its scale, symmetry, history, elements of architectural grandeur, and central location endow it with a sense of place and civic importance, which has embedded itself deeply in the psyche of the people. Being a wide, north-south street, it has excellent orientation and is always full of light. If one were to travel inwards from the outer limits of the city and experience the layers of the city built up over time, on reaching O'Connell Street one would have to declare, "This is it! This is the centre."*

O'Connell Street was begun in the 1740's and completed in 1800. Luke Gardiner, the eighteenth-century entrepreneur, was involved in the development of Sackville Street, named after Lionel Cranfield Sackville, first Duke of Dorset and Lord Lieutenant of Ireland, and Gardiner's Mall. Gardiner also developed Rutland Square, now Parnell Square, in the 1740s and 1750s. An engraving by the Dublin artist Oliver Grace shows of Sackville Street in 1749. The caption to the engraving gives the dimensions of the street as: -

*In length 1050 feet, in Breadth 150, in the midst is the Mall in length 800 feet in Breadth 50..."*

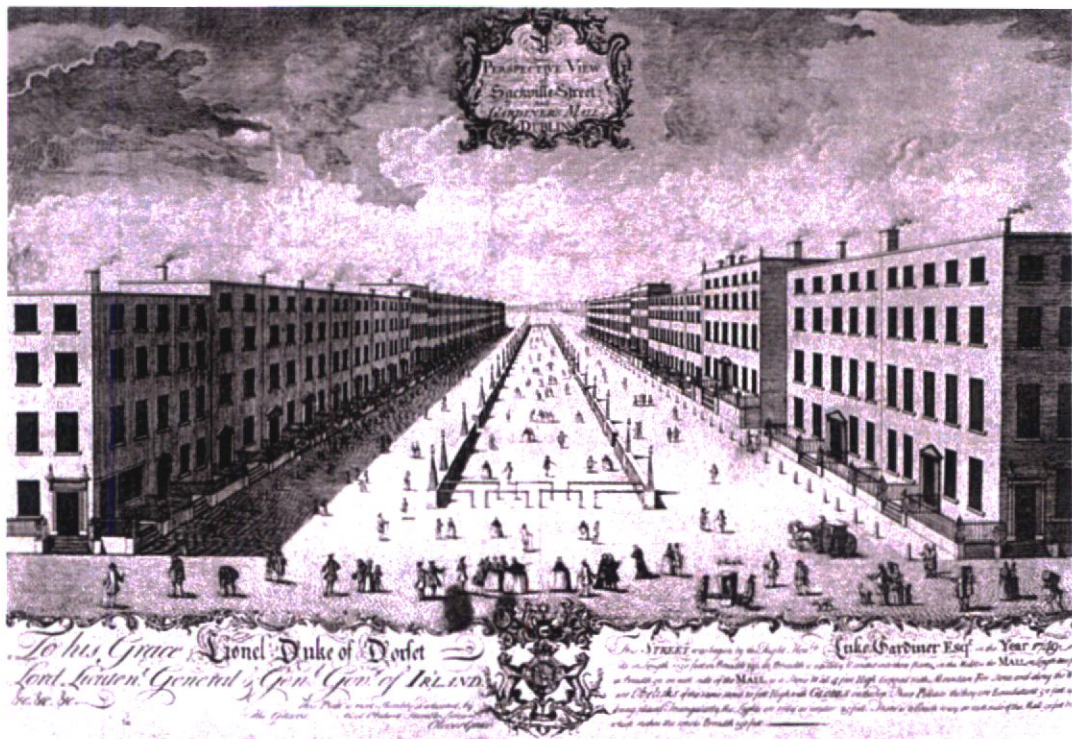


Figure 12.1: Grace's View of Sackville Street and Gardiners' Mall, 1749.



The Mall got its name from the game of Pall Mall, a ball game popular at the time, and the purpose of the mall was for playing Pall Mall. Before Sackville Street was set out, there had been an earlier narrower street, Drogheda Street, that ran along the east side of what is now O'Connell Street. Neither Drogheda Street, nor the original Sackville Street reached to the River Liffey. Sackville Street was finally extended to its current length, and brought to the river in 1800, by the efforts of the Wide Streets Commissioners. Nelson's Pillar was built in 1808, and the General Post Office was completed in 1818. Upper and Lower Sackville Street were officially renamed as Upper and Lower O'Connell Street in 1924, not long after the foundation of the Irish State.



Figure 12.2: John Rocque's Map of 1756. Sackville Street and Gardiners' Mall are well separated from the River.

John Rocque's Map of 1756, above, shows the narrow Drogheda Street, aligned with the east side of the present O'Connell Street, running south from Henry Street to Great Abbey Street. Even Drogheda Street didn't reach the river. Henry Street, Moore Street and Drogheda Street were named after Henry Moore, Earl of Drogheda, whose house was the large house on the east side of Sackville Street shown on Grace's illustration. It was the larger house shown on the corner of Sackville Street and Stable Lane on Rocque's map above. A large part of the site of the Dublin Central Project is shown on the map as a brick field.



The fact that the General Post Office was built on Sackville Street was more by accident than design. Warburton Whitelaw and Walsh's *History of the City of Dublin*, published in 1818, the same year as the GPO was completed. This book contains, as well as historical accounts of the City lengthy descriptions of the present state of Dublin as it was in 1818. The account of the development of the GPO is as follows: -

*"The total revenues of the Post office for the year 1800 were £85,000. The gross receipts for the year 1816 were £250,000., from which deducting £150,000. for expenses, left a net profit of £100,000. in favour of the establishment. The great increase of business requiring a great increase of room, the Post-office has been removed at different times to more convenient situations. It was originally established on the north side of Dame-street, near Anglesea-street, which, after its removal, was still called the "Post-office yard." From thence it was transferred to the south side of College-green, where sundry efforts were made to enlarge the too narrow limits of the increasing office, without removing it from the convenience of a central situation. At length finding it impracticable to transact the business there much longer, a more spacious site, and one no less convenient was chosen whereupon to erect a new post-office. It was an open space of ground on the west side of Sackville-street. A long litigation had prevented it from being built on before, and an arrear of 20 years rent had accumulated. This was purchased by the Post-masters-General, and the first stone of the new edifice laid by his Excellency Lord Whitworth on the 12th August 1815. This extensive and magnificent building has proceeded with a degree of rapidity unexampled in this country. It is 223 feet in front, 150 feet in depth, and its height is 50 feet to the top of the cornice, consisting of 3 stories from the surface. In the centre is a very grand portico 80 feet in length, consisting of a pediment supported by six pillars of the Ionic order 4 feet 4 inches in diameter, which is considerably larger than that of any other in the metropolis. The pediment is surmounted by three beautiful statues executed by the younger Smith. That in the centre represents Hibernia, resting on her spear and harped shield; on the right is Mercury, a nude figure with his caduceus and purse; that on the left is emblematic of Fidelity, with her finger on her lips and a key in the other hand. The tympanum of the pediment is ornamented with the Royal arms in high relief; an handsome balustrade surmounts the cornice all round the top, and gives an elegant finish to the whole. The bold and superb portico projects from the body of the building so as to range with the street, and to admit the flagged foot-way under it. The portico itself is of Portland stone, but the main structure is of mountain granite. The expense of this grand and useful edifice will not, it is said, amount to more than £50,000., to be defrayed from the net revenue of the post-office."*



Figure 12.3: View of Sackville Street with the GOP and Nelson's Pillar by Brocas c. 1820.

Nelson's Pillar was completed in 1808, ten years before the GPO. For generations of Dubliners the 'Pillar' was the centre of the city. When horse drawn trams began operating in Dublin in the 1870s the city centre terminus was the 'Pillar'. Later the 'Pillar' was the terminus indicated on CIE busses.



But if the account of Nelson's Pillar in Warburton Whitelaw and Walsh's History of the City of Dublin is anything to go by, the 'Pillar' was not popular when first erected: -

*"The testimonials of national gratitude and admiration to the memory of this favourite naval hero are already numerous in the British dominions. That erected by public subscription in Dublin is perhaps the greatest of any of them. It is situated in the centre of Sackville-street, opposite Mary-street and Earl-street, and is composed of a pedestal, column, and capital of the Tuscan order, on the summit of which a colossal statue of Lord Nelson stands*

*The design of this triumphal column was given by William Wilkins, Esq. architect, fellow of Caius College, Cambridge. It is of most ponderous proportions, which is not relieved by the least decoration. Its vast unsightly pedestal is nothing better than a quarry of cut stone, and the clumsy shaft is divested of either base, or what can properly be called a capital. Yet with all this baldness and deformity, it might have had a good effect when viewed at a distance, or placed anywhere else'; but it not only obtrudes its blemishes on every passenger, but actually spoils and blocks up our finest street, and literally darkens the two other streets opposite to it, which, though spacious enough, look like lanes. These were objections to its site at first, but they are now become still stronger, since the building of the new Post-office close to it, for, by contrast, it in a great measure destroys the effect of one of the largest and finest porticos in Europe."*

Nelson's Pillar was blown up in the middle of the night in 1966. In following years there were numerous proposals for a replacement and eventually there was a competition. The winning design was a stainless-steel needle 120 metres high. Now accepted, it stands there almost unnoticed. Like the Pillar before it, the Spire was not universally accepted. Christine Casey writing in 2005 in her book: *The Buildings of Ireland: Dublin*, describes the Spire as follows: -

*"At the Henry Street junction stands the SPIRE, a stainless-steel needle 120 metres (393 ft) high, of 2001-3 by Ian Ritchie, with clearly visible joints and nasty mirror-patterned base."*

After the construction of Nelson's Pillar and the General Post Office, it might have been expected the Sackville Street would have remained a street of Georgian houses with these two iconic structures at its centre. But this was not to be. Arthur Gibney, writing in the Environmental Impact Statement for the Spire says the following of the development of O'Connell Street in the 19<sup>th</sup> Century: -

*"By the end of the century many of its original houses were replaced by Victorian hotels such as Gresham's, the Metropole and the Imperial, commercial institutions such as the Standard Life Insurance Company and the Scottish Provincial Insurance Company and large retail outlets such as Findlater's, Clery's and Gilbey's, the wine merchants. The pressure to expand commercially during the Victorian and Edwardian era resulted in a considerable disruption of the continuous eighteenth-century skyline....The former Dublin Bread Company premises, built in 1901, had a steel structure, which supported a turreted tower and roof, which exceeded 8 storeys in height."*



Figure 12.4: View of Sackville Street from the O'Connell Bridge c. 1905.





**Figure 12.5:** View of Sackville Street from the Carlisle Bridge. The lack of tram tracks suggests that this image dates from the 1860s. The imperial Hotel is seen opposite the GPO and the Metropole Hotel is seen just south of the GPO. The Metropole was heavily remodelled later in the 19<sup>th</sup> century.



**Figure 12.6:** View of Sackville Street from the O'Connell Bridge c1910. The huge form of the Dublin Bread Company dominates the street.





Figure 12.7: View of the north end of Sackville Street c. 1900. The Gresham Hotel is seen to the left.



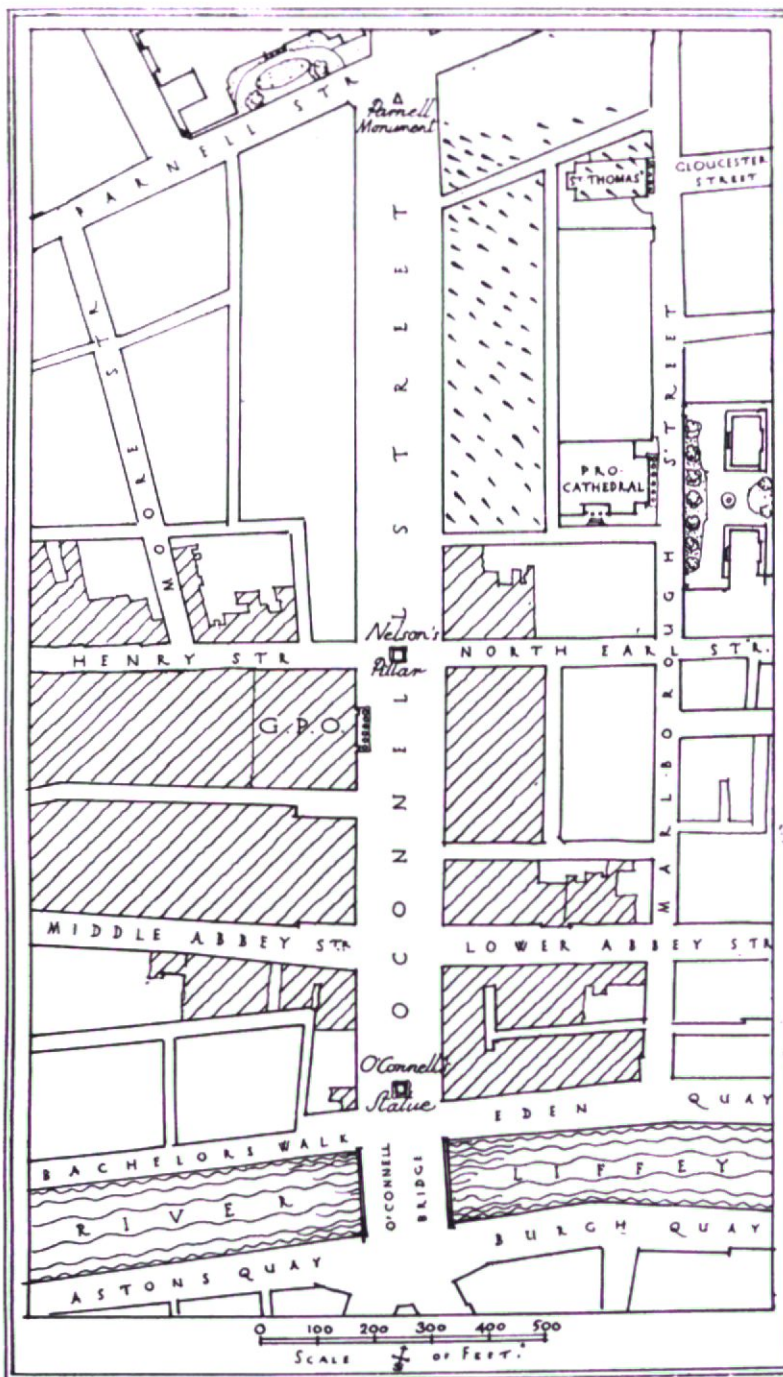
Figure 12.8: Post Card view of the centre of Sackville Street c. 1900. The GPO has long glazed rooflights above the cornice and balustrade. The Royal Coat of Arms is seen in the tympanum.

During the insurrection of Easter 1916 the central area of Dublin around the GPO was shelled by a British Gunboat, the Helga. The shelling started fires which were left to burn unchecked, since firefighters could not enter the city while fighting continued. Much of the south end of O'Connell

Street and of surrounding streets was destroyed. The smouldering carcass of the GPO remained standing.

In December 1916, the *Dublin Reconstruction (Emergency Provisions) Act 1916* was passed by the British Parliament and rebuilding began, particularly around the south end of O'Connell Street. Reconstruction was largely funded by the British Government. However, the War of Independence and the Civil War intervened and the Civil War in particular resulted in extensive further destruction in the Dublin. At one point the two sides fired on each other from within buildings on Upper O'Connell Street, with Republican forces on the eastern side. Shelling of the eastern side of the street and subsequent fires reduced most of the area between Cathedral Street and Parnell Street to ruins. Cathal Brugha was wounded in the fighting and died of his wounds.





*The damaged areas in the neighbourhood of O'Connell Street. The hatched portions were destroyed in 1916 and the dotted portions in 1922. The destruction of St. Thomas' Church and the frontage in O'Connell Street will allow Gloucester Street, to be carried through.*

**Figure 12.9:** Diagram from the Abercrombie plan of Dublin 1922 showing the pattern of destruction in 1916 and 1922. Gloucester Street was carried through as the present Cathal Brugha Street.





**Figure 12.10:** Irish Army Air Corps photograph published in the Dublin Civic Survey 1925 showing an area on the east side of Upper O'Connell Street from Cathedral Street to Findlater Place entirely cleared of buildings. Some reconstruction can be seen around the south end of O'Connell Street, but the GPO is still an empty shell.

On the 10<sup>th</sup> of July 1924 the Oireachtas of Saorstát Éireann passed the *Dublin Reconstruction (Emergency Provisions) Act 1924*. The Act gave compulsory purchase powers to the Corporation so that overly narrow sites could be combined and 'for the purpose of street improvements'. The Act also gave considerable powers to the City Architect, who at the time was Horace T. O'Rourke, to direct the style, character and materials to be used in new or restored façades. Section 3(2) of the Act states: -

*"(2) If it appears to the city architect, having regard to the nature and situation of the site of the proposed new building, or of the building proposed to be restored or altered, or the external design of any buildings erected or in the course of erection in the neighbourhood of that site, that the character of the proposed new building, restoration, or alteration is such as would be injurious to the amenity of the street which the front of the proposed new building or the building proposed to be restored or altered faces, whether on account of the proposed external design, the proposed line of frontage, or the materials proposed to be used in the external walls facing that street or in any portion of the building which will be visible from that street, he may require such reasonable alterations to be made as respects the design, line of frontage, and materials as he thinks proper, and may require the plans, sections and elevations to be amended accordingly. The front of a building at the corner of two streets shall be deemed to face each street for the purposes of this section."*

Section 3(3) of the Act adds: -

*"(3) A requirement of the city architect under this section shall not have effect unless notice thereof in writing is delivered or sent by post to the building owner within one month after the day on which the plans, sections, and elevations are delivered as aforesaid, or within fourteen days after the day on which the further particulars (if any) are furnished as aforesaid, whichever period expires later."*

The clear intention was that O'Connell Street and the surrounding streets would be restored, and restored quickly. The application of the 1916 and 1924 Reconstruction Acts resulted in a far more uniform appearance than had been the case before the destruction of 1916.



Christine Casey comments: -

*"Rebuilding was rapid and diverse in expression, unified only by restrictions on height, a prescribed cornice level and by a predominantly classical vocabulary. Reconstruction was carried out for the most part in reinforced concrete, use of which was by then well established in Ireland."*

The GPO was restored, but not as it had been before. It grew, both in height and in extent. Francis Johnston's classical façade and portico survived the destruction of 1916, but the rest is, in effect a utilitarian office building. The Shell Guide to Ireland, 1962 says of the GPO: -

*"Destroyed by gunfire, it was rebuilt in 1929 by uninspired architects of the Office of Public Works."*

The image of the GPO below from the 1950 shows a roof much higher than the original. Warburton Whitelaw and Walsh writing in the year the GPO was completed said it was 3 storeys in height and: '223 feet in front, 150 feet in depth'. That is 68 metres facing onto O'Connell Street and 46 metres going back down Henry Street and Princes Street. Apart from the first two bays, the GPO buildings on Henry Street are 5 storeys in height including the mansard and they extend 100 metres along Henry Street and 115 metres down Princes Street. Historic maps confirm that the original plot size of the GPO was about half what it is at present.



Figure 12.11: O'Connell Street early 1950s.

After its restoration, the O'Connell Street again became the hub of the city, filled with new shops, hotels and cinemas. The cinemas included the Ambassador - in the 18<sup>th</sup> century Rotundo Assembly Rooms, the Savoy, the Carlton, the Metropole, and the Capitol, at the side of the Metropole. 'The Pillar' now became the terminus for busses not trams; the destination being an actual place and not a nebulous nowhere named 'An Lár'. The street bustled with activity. Buses and taxis huddled about the base of the Pillar. Moving neon signs glowed high on buildings. The flash bulbs of the many street photographers popped as they snapped passers by, hurriedly handing out a ticket in the hope of an order.

The new landscaping and paving of O'Connell Street arising from the O'Connell Street Integrated Area Plan 1998, has brought about some revitalisation of the street, but also changed its character considerably, creating a quite different sense of spatial enclosure. The 18<sup>th</sup> century Sackville Street was very different from the Victorian street. After most of that was destroyed, the new street of the 20<sup>th</sup> Century was different again. The recent reworking of the space within the street is yet one more reinvention.



### 12.3.2 Parnell Square



Figure 12.12: The Lying-in Hospital and the Assembly Rooms. Frontispiece from Volume 2 of Warburton Whitelaw and Walsh's *History of the City of Dublin* 1818.



Figure 12.13: A contemporary illustration of patrons in the Rotundo Gardens, and an advertisement for the Assembly Rooms listing events for the 1791 season and the very considerable charges for entry.

Christine Casey in: *The Buildings of Ireland: Dublin*, describes the establishment of Rutland Square (now Parnell Square) and of the Rotunda Hospital, the Assembly Rooms and the Rotundo Gardens in the centre of the Square as follows: -

*"Remove from the mind's eye the ungainly cluster of C20 buildings and gardens that occupy its centre and replace them with a large central bowling green, lantern-lined walks, obelisks, a coffee room, and terracing rising towards a loggia and orchestra in the centre of the N side. The New Gardens were the brain-child of the young Dr Bartholomew Mosse, whose life's ambition was the construction of a lying-in hospital for the poor of Dublin. In 1748 Mosse leased a four-acre rectangle, its S end facing Great Britain Street (now Parnell Street), its S E angle adjoining the N W corner of Sackville Street.... The New Gardens, designed by Robert Stevenson, were first illuminated in 1749. Subscriptions and entrance fees were used to fund the construction of a large Palladian hospital building across the S edge of the site. The success of the gardens resulted in the development of the surrounding lands. In 1753 Luke Gardiner began to set out plots on the E side, then known as Cavendish Street, later as Cavendish Row, Dr Mosse lived at No. 9."*

The gardens were eventually closed as a result of a campaign by the Society for the Discountenancing of Vice.





**Figure 12.14:** Extract from an Ordnance map of 1891. The Lying-in Hospital and the Rotundo Gardens are shown at the top of the map. Towards the bottom left-hand side of the map a densely packed area of markets is shown, bounded by Moore Street, Henry Street, Denmark Street and Great Britain Street (now Parnell St). The dark coloured striped areas on the map represent areas that are outdoor but covered.



### 12.3.3 Parnell Street, Moore Street and the Markets

The 18<sup>th</sup> and 19<sup>th</sup> century maps of Parnell Street, formerly Great Britain Street, show the street lined with small buildings. Back gardens shown on Rocque's map are gone on the 1847 Ordnance map. On Rocque's map, Moore Street is shown as incomplete, with only a few buildings on its east side. By 1847, it is lined with small buildings and is at the centre of a cramped and crowded urban network. The 1847 map, and the later 1891 edition illustrated above, both show a dense network of streets, lanes and back courts, occupying the area south from Parnell Street to Henry Street and west of Moore Street as far as Denmark Street, containing probably hundreds of buildings. There was Coles Lane, Samson's Lane, McCann's Lane, Horseman's Row, Taaffe's Row and Riddle's Row; Rotundo Market, Anglesea Market, Mason's Market and Norfolk Market, Moore Street Market (which was off Moore Street); and many more. By the mid 20<sup>th</sup> century, this area had been almost entirely cleared, and what was left was an open area of untended ground on which there was an ad hoc open air market, a shanty town of sheds and huts, selling second hand clothes, shoes, furniture and household goods. This dishevelled market should not be confused with street trading along Moore Street, which was a separate and far more thriving enterprise. In the 1970s, the ILAC Centre was built over the site of the market and of the complex urban fabric that was there before; one building where well more than 100 had stood.



**Figure 12.15:** Two views near the north end of Moore Street taken from the same place and with the same lens. The view on the left is from October 1969, that on the right from October 2012. (Images Bill Hastings)

Warburton Whitelaw and Walsh describe the markets area west of Moore Street as they were in 1818: -

*“Rotunda market, or as it is now more generally called Norfolk market, from a bust of the Duke of Norfolk erected at one entrance, was originally a few mean and dirty stalls in Cole’s-lane. As it was situated, however, in the extensive and opulent parishes of Mary’s, Thomas, and George, and was the only market to supply the whole north-east side of the Liffey, it soon increased in size and consequence. It now has extended from Cole’s-lane to Denmark-street on one side, and to Moore-street and Great Britain-street, through which it is approached on the other, and become the rival of Ormond market, to which, however, it is yet much inferior. It is not flagged, the passages are confined and dirty, and though equal in extent, is by no means so in variety. The number of stalls occupied is 79.”*





**Figure 12.16:** Two images of Moore Street Market taken in October 1969. The view on the left looks north towards Moore Street. The modern building seen at the end of this view is No 22 Moore Street, which is still there and is included in Site 4. (Images Bill Hastings)



**Figure 12.17:** Extract from an Ordnance map of 1891 showing part of the markets area west of Moore Street. The two photographs above were taken in a narrow market alley called Moore Street market which is circled in red on the map above.



### 12.3.4 Henry Street

Henry Street is probably Ireland's busiest shopping street. Though it was largely spared the cavalry charges and shelling of 1916, it was not unscathed. The section between Moore Street and O'Connell Street was almost entirely destroyed. The changes in Henry Street have been more the result of commerce than national emergence. Rocque's map of 1756 shows Henry Street lined with small houses, each with its own back garden. The 1847 Ordnance map of the area also shows these many small houses, though most have lost their gardens. That map identifies 23 separate buildings on the south side of Henry Street between Moore Street and Liffey Street, and 20 on the north side. Henry Street is now the home of large department stores and shopping complexes; and the domestic scale it enjoyed in the 18th and 19th centuries is long gone.

## 12.4 CHARACTERISTICS OF PROPOSED DEVELOPMENT

### 12.4.1 Dublin Central Masterplan

The Dublin Central Project is a large mixed use project on a site comprises circa 2.17 Ha (c. 5.36 acres) and is bounded by Parnell Street, O'Rahilly Parade, O'Connell Street Upper, Henry Street, Moore Street, Henry Place and Moore Lane in Dublin 1. There have been previous planning applications and grants of permission for the subject site. A permission granted under DCC Reg. Ref. 2479/08, ABP Ref. PL29N.232347, for a mixed use retail, commemorative centre & residential development was extended under DCC Reg. Ref. 2479/08x1 until the 6 May 2022.

There is extensive ongoing development in the area of Dublin surrounding the subject site, and in addition to the extant permission on the Dublin Central Project site, there are a number of recent permissions that are of particular relevance to the emerging character of the area. There have been a number of large developments along Parnell Street in recent years and the south side of Parnell Street west of Moore Lane reads as a continuous wall of 6/7 storey development. The most recent addition to this wall is a proposed 9 storey hotel now under construction on the corner of the west side of Moore Lane and the south side of Parnell Street DCC Reg. Ref. 4352/18; ABP Ref. 303553-19 as amended by DCC Reg. Ref. 3393/19; ABP Ref. 305470-19. The parapet of this building is at 34.850 metres OD and the overall height is at 36.700 metres OD.

Other schemes approved but not yet under construction include the Parnell Square Cultural Quarter, a large and striking public building behind a terrace of restored Georgian houses on the north side of Parnell Square, the parapet of the public building being at 38.000 metres OD. On Middle Abbey Street / Williams Lane there is approval for the elevated Arnotts car park to be replaced with an hotel with an upper roof level of 33.750 metres OD. A little along the street a very large mixed use commercial and residential development above the Jervis Centre has recently been approved, with a parapet level of 45.900 metres OD and the top of the plant at 47.800 metres OD. Approved developments at Clery's and a hotel on Earl Place behind Clery's rise to 32.250 metres OD and 35.3 metres OD respectively.

A masterplan has been prepared for the entirety of the Dublin Central Project. This masterplan envisages that the project will be divided into 6 separate sites, with 4 separate firms of architects each preparing designs for one or more of the 6 sites. Site 1 is the most northerly site and has frontage on Parnell Street, Upper O'Connell Street and Moore Lane. Sites 2AB and 2C (collectively Site 2) are located between Upper O'Connell Street and Moore Lane with site 2AB being the most southerly and Site 2C the most northerly. No.61 O'Connell Street Upper is located immediately south east of Site 2, with frontage to O'Connell Street and connected to Henry Place to the rear (west). Site 3 is located on the east corner of Henry Street and Moore Street, and runs north and east as far as Henry Place. Site 4 is located between Moore Street and Moore Lane and is divided into two parts with one part located each side of the National Monument. Site 5 is has frontage on Moore Street, O'Rahilly Parade and Moore Lane.

The masterplan envisages the upgrading of Moore Lane and Henry Place and the creation of new public streets / lanes and new public spaces, so as to provide increased permeability from O'Connell Street to Moore Street and via a new lane directly from Henry Street north to Moore Lane. Mixed use developments are envisaged on all 6 sites with retail, cultural or café / restaurant uses at ground floor level. A mixture of uses is envisaged for the upper levels on Site 1, including an hotel. Office use is



envisaged for most of the upper levels on Site 2 and No.61 O'Connell Street Upper. The principal uses envisaged for the upper levels on Site 3 are residential and an hotel. Development on Site 4 rises only to 3 storeys and the envisaged upper floor use are mainly residential. The upper floor use envisaged for Site 5 is office.

The masterplan envisages and number of taller buildings. The masterplan indicates 3 buildings rising to above 30.000 metres OD and one building rising to over 40.000 metres OD. The three building proposed in the masterplan at over 30.000 metres OD are an office building at Site 2AB, an hotel at the back of Site 3 and an office building at Site 5. The building proposed at over 40.000 metres OD is an office building at Site 2C.

Sites 1, 2AB, and 2C are all on the eastern side of the overall masterplan site, between O'Connell Street and Moore Lane. An underground station for Metrolink is proposed by Transport Infrastructure Ireland (TII) to be located beneath these sites. Discussions between the Applicant and TII in relation to the provision of an underground station box are ongoing, and nearing completion.

The current planning applications relates to Sites 2AB and 2C (collectively Site 2) and No.61 O'Connell Street Upper, on the O'Connell Street eastern side of the overall Dublin Central masterplan site. This assessment of landscape and visual effects covers the Proposed Developments on Site 2(2AB and 2C) and No.61 O'Connell Street Upper.

Planning applications for the Proposed Development on Sites 3, 4 and 5 were lodged at the end of May 2021, Register References 2861/21, 2862/21 and 2863/21 respectively. Dublin City Council issued its notifications of decisions to grant permission for the Proposed Development at Site 3, Site 4 and Site 5, subject to conditions. These decisions are currently subject of appeals to An Bord Pleanála.

A full assessment of the landscape and visual effects of development proposed on Site 1, will accompany the planning application for that Site. It will not be possible to undertake this assessment on Site 1 until the design of the buildings proposed on this site is finalised. However, this chapter does include a preliminary overview of the potential landscape and visual effects likely to be associated with Proposed Development on Site 1.

There is ongoing refinement of the masterplan in response to discussions with the planning authority in relation to all 6 sites that fall within the masterplan area. The masterplan is not part of the current application. Therefore, although this assessment has had regard to the masterplan as a useful and informative background document, this assessment does not include a full assessment of the landscape and visual effects of the masterplan itself. The masterplan envisages a new high quality public realm including the development of new streets, lanes and public spaces and the upgrading of Moore Lane and Henry Place. Parts of the proposed new public realm fall within the sites being assessed in this chapter – Sites 2AB and 2C. So does the upgrading of one side of Moore Lane and Henry place.

It is not really meaningful to carry out a landscape and visual assessment of half a public space. It would be like digging half a hole and not a whole hole. So this chapter includes a preliminary overview of the potential landscape and visual effects likely to be associated with the masterplan, and of the ambition of the masterplan in relation to public realm and permeability in particular.

#### **12.4.2 Proposed Development – Site 2 & No. 61 O'Connell Street Upper**

Sites 2AB and 2C (collectively Site 2) and No. 61 O'Connell Street Upper lie between O'Connell Street and Moore Lane. Both sites have frontages on O'Connell Street. Site 2 and No. 61 O'Connell Street Upper are bounded: to the east by O'Connell Street Upper, to the south by Henry Place and No. 62 O'Connell Street Upper, to the west by Moore Lane, and to the north by No. 42 O'Connell Street Upper. The existing buildings at Nos. 59 – 60 O'Connell Street are excluded from the masterplan and the application sites.

The façades of Sites 2AB and 2C run continuously along the west side of Upper O'Connell Street from No 43 to No 58. As noted, No. 59 – 60 is not part of the development, but lands at the rear of that property at the junction of Henry Place and Moore Lane are included as part of Site 2AB. No 61. is



located immediately to the south east of Site 2AB. The 'front façades' of Nos 43, 44, 57, 58, and 61 Upper O'Connell Street and the 'upper floor façade' of Nos. 52-54 Upper O'Connell Street are listed in the Record of Protected Structures.

The proposed buildings on Sites 2AB and 2C range in height from 2 to 7 storeys. No.61 is an existing 4 storey over basement building. These buildings are proposed to have a mixture of uses on the ground floor. These uses include 6 café / restaurant units, 8 retail units of various sizes, lobby areas providing access to upper floors, service areas, and areas providing access to or otherwise connected with a future Metrolink station that is to be constructed beneath Sites 2AB and 2C. Almost all of the upper floors of Sites 2AB and 2C are proposed as office use. The upper floors of No.61 O'Connell Street Upper are proposed for residential reuse.

A new street is proposed to traverse between Site 2AB and 2C, running east west from O'Connell Street to Moore Lane, and connecting at its west end to a new Public Plaza that forms part of Sites 4 and 5 and lies between Moore Lane and Moore Street. A smaller Public Plaza is proposed at the south west corner of Site 2AB, at the junction of Moore Lane and Henry Place. It is proposed to refurbish the former 'Reading Room', which stands at the centre of this smaller plaza. It is also proposed to refurbish No 61 Upper O'Connell Street and to provide a controlled New Pedestrian Link through part of the ground floor of No 61, connecting O'Connell Street Upper and Henry Place.

The proposed main building on Site 2AB rises to 6 floors plus a plant level. The building steps back progressively from the existing parapet level on O'Connell Street with terraces at 4<sup>th</sup> and 5<sup>th</sup> floor levels. The main parapet level of the building is at 30.525 metres OD with the parapet of the plant level at 33.325. This compares to the parapet of the existing Carlton Façade which is at some 21.900 OD. The main building on Site 2AB has a large atrium at the south side of the building with a full height south facing glazed wall. There is a second atrium proposed in the northern section of the building. The proposed building includes a two storey café / restaurant space at first and second floor level behind the upper glazed part of the Carlton Façade. There was a restaurant at this location when the Carlton Cinema was in full operation.

The proposed building on Site 2C rises to 8 stories plus a plant level. The building steps well back from O'Connell Street in a series of terraces. Some of these terraces are green roofs with maintenance only access, while others, like those at 4<sup>th</sup> and 6<sup>th</sup> floor levels, are proposed as accessible to users of the building. The tallest element of the building is at its north west corner, and it is this element that has the largest plant area at roof level. This element of the building is set back some 27.8 metres from O'Connell Street, but is not set back from Moore Lane. The parapet of this tallest element is at 42.450 metres OD, which compares to a parapet height of some 22.3 metres OD directly in front of this tallest part of the building.

A full project description is provided in Chapter 3: Description of Proposed Development.

## 12.5 POTENTIAL IMPACTS & VISUAL EFFECTS

### 12.5.1 Dublin Central Masterplan

Certain aspects of the masterplan will be refined on foot of the notification of grant of permission issued by Dublin City Council in relation development at Sites 3, 4 and 5 in the event that the Board upholds these decisions. Site 1 remains subject of the masterplan and is not part of the current application. Therefore, although this assessment has had regard to the masterplan as a useful and informative background document, this assessment does not include a full assessment of the landscape and visual effects of the masterplan.

The Proposed Development is intended, as indicated by the masterplan for the Dublin Central Project, to provide a range of publicly accessible facilities including new public streets and spaces. The Masterplan includes proposals to provide for improvements along Moore Lane and part of Henry Place, a new street from O'Connell Street to Moore Lane, a pedestrian link through the ground floor at No.61 O'Connell Street Upper, and the creation of two new public spaces, with the larger public space at the west end of the new street and the smaller space at the junction of Moore Lane and Henry Place. The north-south section of Henry Place and O'Rahilly Parade are proposed as remaining as service lanes.



There is a clear intention to provide a new and vibrant public realm. At present, Moore Lane, O'Rahilly Parade and Henry Place are underutilised and hostile to pedestrians and cyclists due to lack of active street frontage, public paths and car dominance. The creation of new safe public thoroughfares and public spaces will be welcomed by most observers, the safety and amenity of these spaces being perhaps the most important factors influencing people's perception. A positive reaction by the public to what is being provided will tend to influence positively public reaction to the landscape and visual character of the development.

It is further noted that the existing Moore Lane, O'Rahilly Parade and Henry Place form a poor quality setting for the many buildings of historic and heritage importance located on and near these lanes. Accommodating a hodge podge of historic buildings interspersed with modern low quality industrial buildings and high walls topped with barbed wire, Moore Lane and Henry Place run along the boundary to the O'Connell Street Architectural Conservation Area. The creation of new, high quality public spaces will afford an opportunity to both improve outlook from heritage buildings and appreciation of those buildings by members of the public.

The site of the Dublin Central Project has been underutilised and semi derelict for some years, and there is a considerable potential for the Dublin Central Project to bring new life to the area. The ambition of the masterplan to provide a new high quality public realm including the development of new streets, lanes and public spaces and the upgrading of Moore Lane and Henry Place will be widely welcomed and are likely to give rise to very positive landscape and visual effects. The development of a future Metrolink station, by others, below the eastern side of the Dublin Central Project will also bring new life and intensity to the area. Although the new station entrances are not likely to have a major visual presence, their existence and the pedestrian traffic associated with them will have an important positive impact on the landscape and visual character of the surrounding urban area.

Some members of the public are likely to regard landscape and visual effects associated with the Dublin Central Project as significantly positive, others significantly negative. The strong character of what is proposed is unlikely to evoke neutral response. Because of the extent of new public facilities and space proposed and because of the quality and innovative nature of the design, it is thought that the public reaction to the visual character of what is proposed is likely to be positive, on balance. The visual effects of the proposed new development will be permanent, but the extent of these visual effects is likely to reduce over time, and as other developments in the surrounding area are built.

## **12.5.2 Proposed Development – Site 2 & No. 61 O'Connell Street Upper**

### **12.5.2.1 Potential Visibility of the Proposed Development**

ARC Consultants have carried out an analysis of the potential visibility from the surrounding urban area of Proposed Development on Site 2 and at No.61 O'Connell Street Upper. As part of this analysis, ARC carried out modelling analysis of the potential visibility of buildings on these sites from 19 view locations in the surrounding area.

From 4 of the locations analysed ARC found that there was no potential for buildings on Sites 2AB and 2C to be visible. No.61 is an existing building, proposed to be refurbished for reuse, and is similarly not visible. These included view locations at Moore Street, Henry Street, Parnell Street West and North Earl Street.

Site 2 and No.61 are on Upper O'Connell Street and also face onto Moore Lane and Henry Place. Proposed development on these sites will, therefore, be openly visible along the O'Connell Street axis, with visibility reducing with distance. Development on Site 2C will be visible from parts of the Cathal Brugha Street / Sean MC Dermot Street axis. Development on Sites 2AB and 2C will be visible from Parnell Square West and North West. No.61 is an existing building, proposed to be refurbished for reuse, and its visibility does not change.

From Parnell Square North there is only very limited potential for the development to be visible. Part of the Proposed Development on Sites 2AB and 2C will be visible looking into O'Rahilly Parade from Moore Street, but otherwise visibility from Moore Street will be very limited. The rear of No. 61, including the new ground floor pedestrian link will be visible from Moore Lane and Henry Place.



### 12.5.2.2 Sensitivity and Visual Capacity of the Surrounding Urban Environment

As has been noted above, the character of the surrounding urban area has changed repeatedly in the past, and is subject to continuous ongoing change. More than two thirds of the buildings then standing on O'Connell Street were lost as a result of the insurrection in 1916 and the later Civil War. A significant number of the buildings on the O'Connell Street frontage of the site of the Dublin Central Project date from the late 1920s onwards and some date from much later in the 20<sup>th</sup> century.

As also noted above, some recent approved development in the area is very large in scale, including developments on O'Connell Street, Parnell Square, Parnell Street, Henry Street and Abbey Street. The scale and height of the approved development at the Jervis Centre, some 230 metres from the Dublin Central site, is much greater and much taller than anything proposed as part of the Dublin Central Project. The developments along Parnell Street West, taken together, are far greater in extent than the whole of the Dublin Central Project.

The existence of very large and extensive developments and approvals in the area indicates that the area has a high capacity to absorb development.

O'Connell Street is both a Conservation Area and an Architectural Conservation Area. There is a National Monument at Nos. 14 to 17 Moore Street. Both O'Connell Street and Moore Street are historically significant, which suggests high visual sensitivity. But this historical significance has not prevented large scale development on these streets.

O'Connell Street was a battlefield both during the insurrection of 1916 and during the Civil War, the centre of the cauldron from which the Irish Nation began to emerge. That having been said, few observers are likely to regard O'Connell Street, Henry Street or Moore Street as a museum dedicated to past struggles, and it is the current uses and facilities that these streets provide that is, and is likely to remain into the future, the main focus of public interest.

In the imagination of Dubliners, Moore Street is a market, and market activity is the overwhelming visual experience of the street. If you were to ask Dubliners to describe the buildings that make the walls of the street and so contain the market, most could not. It is the activity in the space that matters, not the space itself. Given this context, the visual sensitivity of Moore Street to changes in the buildings that line its east side is much less than might be the case for other streets in the centre of our Capital City.

Four houses in the centre of the east side of Moore Street are listed, since 2007 as a National Monument and, as it says in the official Scope Note:

*'Numbers 14 -17 Moore Street are subject to a preservation order made under the National Monuments Acts 1930 to 2014 (PO no. 1/2007)'*

The existence of an National Monument in their midst probably doesn't register much in the day-to-day visual consciousness of the Moore Street stall holders or their customers. But the Monument does have a visual presence. The Scope Note says:

*'The buildings at nos. 14 -17 Moore Street date from the mid-eighteenth century. The façades of all four buildings were rebuilt in the 19th century and they survive as a distinct and recognisable group in the streetscape.'*

Any development, therefore, that might change the setting of Numbers 14 to 17 Moore Street has the potential to give rise to landscape and visual effects as might be perceived by some observers, but not by all.

### 12.5.2.3 Potential Landscape and Visual Effects of the Proposed Development

The extent of potential landscape and visual effects of the Proposed Development on Site 2 and No.61 O'Connell Street Upper, as perceived from locations in the surrounding area, is tabled below. The development is unlikely to be visible at all from large sections of the city. The locations tabled below are representative of location from which mapping analysis suggested that the development might be visible. This table of the extent of potential landscape and visual effects does not address the issue of the character of effects, whether positive, negative or neutral. As is noted above, for each observer



the character of effects is likely to depend, in large measure, on the extent to which they regard the development as socially or culturally acceptable.

Since development on Site 2 and No.61 O'Connell Street Upper has been found by modelling analysis not to be visible from 4 of the representative locations tabled below, these locations being at Parnell Street West, Henry Street West, North Earl Street and locations in the centre of Moore Street near the National Monument, the potential landscape and visual effects at these locations arising from the existence of Proposed Development on Site 2 and No.61 O'Connell Street Upper is none.

From Parnell Square the potential landscape and visual effects are likely to range from 'slight' to 'moderate'. Along the O'Connell Street axis the potential landscape and visual effects arising from Proposed Development on Site 2 and No.61 O'Connell Street Upper are likely to range from 'slight' to 'significant', becoming 'slight' to 'moderate' at locations south of the GPO. From the Cathal Brugha Street – Sean Mc Dermott Street axis potential landscape and visual effects are likely to range from 'slight' to 'significant', depending on distance.

The greatest changes likely to arise from the existence of Proposed Developments on Site 2 and No.61 O'Connell Street Upper, and consequently the greatest potential for landscape and visual effects, will be on O'Connell Street between Parnell Street and Henry Street - North Earl Street.

On O'Connell Street it is proposed that the protected façades of Nos 43, 44, 57, and 58 Upper O'Connell Street will be retained and restored. The protected façade of No. 61 Upper O'Connell Street will be restored and altered to facilitate the creation of a pedestrian link through the ground floor, linking O'Connell Street to Henry Place. It is proposed to retain and refurbish the protected 'upper floor façade' of Nos. 52-54, the façade of the former Carlton Cinema. The stone façade of No 45, which is not protected, will also be retained and restored. New façades are proposed where there are currently empty sites or to replace existing late 20<sup>th</sup> century façades. This occurs either side of the Carlton Façade and between No 45 and the proposed new east west street. The height of the proposed new O'Connell Street façades are proposed as being close to those of the retained façades. The retention and refurbishment of existing façades and the introduction of new façades are likely to be seen by most observers as having a positive impact on the character of O'Connell Street. The refurbishment of upper floors of existing No.61 O'Connell Street Upper, for residential use, is similarly likely to be seen as a positive impact.

Above the existing O'Connell Street parapet line, the higher elements of development proposed on Site 2 are proposed as stepping back from the O'Connell Street façade in terraces. The upper parapet of development on Site 2AB is proposed at 33.325 metres OD, which is some 11.4 metres higher than the parapet of the existing Carlton Façade which is at some 21.900 OD. On Site 2C upper parapet of highest part of the main building is proposed at 42.450 metres OD, which is some 20.1 metres higher than the parapet of the existing façade of No 43 which is at some 22.320 OD.

The proposed changes in scale, colour and material brought about on O'Connell Street by the existence of the Proposed Development on Sites 2AB and 2C are likely to give rise to 'moderate to significant' landscape and visual effects as perceived by observers; that is if those observers take the time to look up from the bustle of the street.

On Moore Lane, fewer set back terraces are proposed and most sections of the façades of the development on Sites 2AB and 2C rise to their full height directly along the east side of the Lane. In the case of development on Site 2AB, the parapet along the lane rises to 30.525 metres OD, some 25.5 metres over the lane level of 5.015 metres OD. The parapet development on Site 2C, rises above the east side of Moore Lane to 42.450 metres OD, some 37.2 metres over the lane level of 5.290 metres OD.

Overall the landscape and visual effects likely to arise from the existence of the development proposed on Sites 2AB and 2C are assessed as being 'moderate' to 'significant', reducing to 'slight' in extent at locations that are at some distance for the Proposed Development. There are many locations in the centre of Dublin, even locations quite close to Sites 2AB and 2C, from which development on these sites will not be visible at all, and, therefore, no landscape and visual effects will arise.

No additional height is proposed at No.61 O'Connell Street Upper. The evident change will be the creation of a pedestrian link through the ground floor, linking O'Connell Street to Henry Place.



#### 12.5.2.4 Sites 1, 3, 4 and 5

Planning applications for the Proposed Development on Sites 3, 4 and 5 were lodged at the end of May 2021, Register References 2861/21, 2862/21 and 2863/21 respectively. A full assessment of the landscape and visual impacts of developments proposed on Sites 3, 4 and 5 was included in Chapter 12 of the Environmental Impact Assessment Report that accompanied the planning applications for these three sites. Dublin City Council issued its notifications of decisions to grant permission for the Proposed Development at Site 3, Site 4 and Site 5, subject to conditions. These decisions are currently subject of appeals to An Bord Pleanála.

A full assessment of the landscape and visual effects of development proposed on Site 1, will accompany the planning application for that Site. It will not be possible to undertake this assessment on Site 1 until the design of the buildings proposed on this site is finalised.

Site 1 is bounded by Upper O'Connell Street to the east, by Parnell Street to the North, by Moore Lane to the west and by Site 2C to the south. It is expected that development on Site 1 will be visible from the north end of O'Connell Street, from Cathal Brugha Street and to a lesser extent from Sean McDermott Street, from Parnell Street, from Parnell Square West and perhaps from Parnell Square North, and from Moore Lane. There is likely to be some visibility of development on Site 1 from other nearby locations. If the extent of the development finally proposed on Site 1 is no greater than that suggested in the masterplan, then the extent of potential landscape and visual effects likely to arise from the existence of that development would range from 'slight' to 'moderate'. There is the potential for the extent of landscape and visual effects to be considered 'significant' by some observers when viewed from locations very close to Site 1.

#### 12.5.2.5 Construction Stage

The extent of visual impact of the development on Site 2 and No. 61 O'Connell Street during the construction phase is likely to be similar to that for the operational phase, as tabled below. The character of visual impacts during the construction phase is likely to be wholly negative at first, becoming neutral to positive as work proceeds and the new buildings and structures become apparent.

#### 12.5.2.6 Operational Stage

This table of landscape and visual effects below refers to the operational phase of the development on Site 2 and No. 61 O'Connell Street Upper, when construction is complete and the buildings are in use.

Viewpoint	Distance	Extent of Effects
1. Parnell Square North West	270m	Moderate
2. Parnell Square North	280m	Imperceptible to Slight
3. O'Connell Street at the Parnell Monument	100m	Moderate to Significant
4. O'Connell Street at Cathal Brugha Street	40m	Moderate to Significant
4a. O'Connell Street at the Carlton	40m	Moderate to Significant
5. Cathal Brugha Street near O'Connell Street	60m	Moderate to Significant
5a. Cathal Brugha Street	150m	Moderate to Significant
6. O'Connell Street at the GPO	120m	Moderate
7. O'Connell Street at Abbey Street	200m	Slight to Moderate
8. O'Connell Bridge	360m	Moderate
9. Cavendish Row	120m	Moderate
10. Parnell Square West	95m	Moderate



11. Moore Street looking into O'Rahilly Parade	80m	Moderate
12. Moore St looking towards the National Monument	65m	None
12a. Moore St looking into Henry Place	65m	Slight
13. Henry Street at Liffey Street	245m	None
14. Parnell Street at Dominick Street	195m	None
15. Sean McDermott Street at Gardiner Street	400m	Slight to Moderate
16. Marlborough Street at North Earl Street	240m	None

It should be noted in relation to the table above that contextual development on Sites 4 and 5 (per separate planning application proposals) is unlikely to be visible from O'Connell Street or locations to the east of O'Connell Street. Therefore, landscape and visual effects from these locations, as tabled above, relate to the contextual existence of development at Site 3 alone.

### 12.5.2.7 View by View Description of Potential Landscape and Visual Effects

In the views described below, when the Proposed Development is concealed behind intervening obstacles the hidden location of the development is represented by a red line.

**View 1. Parnell Square North West:** This view looks south from the west end of Parness Square North. Parts of the top two floors and plant level of the Proposed Developments on Site 2C are visible in the middle distance in the centre of the view, seen behind trees and buildings of the Rotunda Hospital, and behind the 9 storey hotel now under construction on the corner of the west side of Moore Lane and the south side of Parnell Street - DCC Reg. Ref. 4352/18; ABP Ref. 303553-19 as amended by DCC Reg. Ref. 3393/19; ABP Ref. 305470-19. Construction of the additional floors is advanced, and, if completed as approved, this hotel will be fully two storeys taller than Jury's Inn. This new hotel will, therefore, be relatively prominent in the view. The visible parts of the Proposed Development on Site 2C are a comparatively small element in the view. The potential landscape and visual effects likely to arise at this view location from the existence of Proposed Development on Site 2C is assessed as 'moderate'. Telecoms equipment will be just discernible in this view above buildings on Site 2C but will not give rise to any change in the extent of assessed landscape and visual effects.

**View 2. Parnell Square North:** This view looks south from near the east end of Parnell Square North. A small part of the plant level of the Proposed Developments on Site 2C can be seen through trees in the Garden of Remembrance and above and behind a building that is part of the Rotunda Hospital. The remainder of the Proposed Development on Sites 2AB, 2C and No.61 O'Connell Street Upper are not visible from this location. The potential landscape and visual effects likely to arise at this view location from the existence of Proposed Developments on Sites 2AB, 2C and No.61 O'Connell Street Upper are assessed as 'Imperceptible' to 'slight'.

**View 3. O'Connell Street at the Parnell Monument:** This view looks south west from the eastern pavement at the junction of O'Connell Street and Cavendish Row. The Parnell Monument is in the centre foreground of the view. Upper parts of the Proposed Developments on Sites 2AB and 2C are visible in the centre of the view seen above and behind buildings and trees on the west side of O'Connell Street. The existence of development on Sites 2AB and 2C will result in a significant change in the visual character of O'Connell Street when observed from this view location. However, given the considerable extent of new development in the area, existing, under construction and approved, some observers may regard the Proposed Development as being consistent with existing and emerging trends. The potential landscape and visual effects likely to arise at this view location from the existence of Proposed Developments on Sites 2AB and 2C are assessed as 'moderate' to 'significant'. No.61 O'Connell Street Upper is not visible in this view.

At No.61 O'Connell Street Upper, the evident change will be the creation of a pedestrian link through the ground floor, linking O'Connell Street to Henry Place.