

## **2 NON - TECHNICAL SUMMARY**

### **2.1 General**

This Chapter represents a summary of the Environmental Impact Assessment Report (EIAR) in non-technical language as is required by the EU Directive, to ensure the public's awareness of any environmental implications.

This Non-Technical Summary should however be read in conjunction with the remainder of this EIAR.

### **2.2 Introduction**

The EU Directive requires the production of a Non-Technical Summary as part of the production of an EIAR. The Non-Technical Summary ensures that the public is made aware of the environmental implications of any decisions about whether to allow new developments to take place. The Non-Technical Summary is laid out in a similar, but summarised format to the main EIAR, describing the project, existing environment, impacts and mitigation measures.

Assessments have been conducted in an integrated, collaborative and analytical process in accordance with the Guidelines on the environmental topics to be examined. This seeks to identify the potential for significant adverse environmental impacts arising from the proposed project. The overall finding of these studies is that, subject to the specified ameliorative, remedial or reductive measures being implemented, the likely effects of the proposed development on the environment during both the construction and operational stages will not be significant.

### **2.3 A Note on Quotations**

Environmental Impact Assessment Reports by their nature contain statements about the proposed development, some of which are positive and some less than positive. Selective quotation or quotations out of context can give a misleading impression of the findings of the study.

Therefore, the study team urge that quotations should, where reasonably possible, be taken from the conclusions of specialists' section or from the non-technical summary and not selectively.

## **2.4 Context for EIAR**

The EIAR contains an independent assessment of the impact of the proposal and suggests any necessary mitigation measures.

This application is being made in accordance with Section 175 of the Planning and Development Act, 2000 as amended.

The Planning Authority carried out a screening process as is required under the EU Directive. Notwithstanding development being below the standard threshold for an EIAR, it was considered that there could be potential significant environmental effects which would need to be considered. Further detail in relation to the Screening of the project are outlined in summary under Section 2.3.1 and Chapter 1: Introduction.

Therefore, an EIAR is required to accompany the approval for this development as a result.

### **2.4.1 Screening Exercise for EIAR**

At the outset of any significant development project it is worth determining whether or not that project would require an Environmental Impact Assessment Report (EIAR) to be prepared. This is referred to as a Screening Exercise. This is normally done primarily by reference to the thresholds and criteria set down in the relevant legislation governing Environmental Impact Assessment (EIA).

This type of project is not listed in Schedule 5 of the Planning Regulations for development requiring EIA (i.e. it is subthreshold). However, in its screening statement issued to An Bord Pleanála, as part of the scoping request dated 14<sup>th</sup> November 2013, Dublin City Council submitted that due to the character of the proposed development, delivering a new city library and cultural regeneration, in a populated city centre location of significant cultural and architectural heritage, an EIAR would be beneficial.

### **2.4.2 Scoping Exercise for EIAR**

In the preparation of an EIAR, the applicant may wish to take the opportunity to formally request the Competent Authority

(in this case An Bord Pleanála) to set out in detail the required scope of an EIAR.

Such EIAR scoping request was and is not mandatory.

However, for similar reasons set out in the screening exercise above, Dublin City Council made a formal scoping request to An Bord Pleanála in November 2013. The Board reverted with its scoping opinion, dated 4 March 2014.

The possible effects on the environment were identified by the applicant as including, in summary:

- Impact on Historic and Architectural heritage
- Impact of built form and height on historic streetscape and neighbouring Architectural Conservation Area.
- Impact on adjoining residential and commercial property during construction and operational phases.
- Impact on drainage and water infrastructure and other utilities
- Pedestrian and traffic generation and movement, and cumulative impact in the context of other significant public transport proposals in the city centre.
- Adequate provision of social infrastructure for existing and new communities.

In its scoping opinion, the Board recommended that the following environmental topics should be addressed in the EIAR

- Human Beings, in particular effects on health and safety of persons residing, working or visiting the area adjacent to the site.
- Flora and Fauna, in particular in the area of proposed works to the public realm, and in relation to protection of certain protected species such as bats.
- Soil, in particular materials likely to be disturbed or excavated during construction, and management of same to prevent or minimise emissions or importation of invasive species.
- Water, in particular impact of material excavations and ground disturbance on surface and ground waters in the area of the site; the impact of development on the local drainage, hydrological and hydrogeological regime; flood risk management; and adequacy of water supply. Consider also cumulative impacts.

- Air, in particular management of emissions during demolition stage.
- Landscape, in particular visual impact on the surrounding heritage area.
- Material Assets – Architectural and Archaeological Heritage and Cultural Heritage, in particular Georgian heritage and protected structures on site and in adjoining areas, and buildings of architectural merit that may contribute to the character of the area. Best conservation practice to be employed in the adaption of the historic buildings for new public cultural uses. Detailed conservation assessment and methodology to be prepared. Also provision of baseline archaeological data and mitigation measures.
- Traffic, in particular impact on public transport services and pedestrian and cycle linkages, overall movement of traffic, and mitigation measures during construction stage. Consider also cumulative impacts.

In preparing this EIAR to accompany the S175 application to the Board, account has been taken of the original scoping opinion of the Board and of Directive 2014/52/EU. To comply with the EU Directive, regard has been had to the broader scope of mandatory topics to be assessed. We have referred to the draft 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports' (August 2017), and can confirm that the EIAR has due regard to the specific additional topics of:

- Human Health
- Biodiversity
- Climate Change
- Land

## 2.5 EIAR Structure

The preparation of an Environmental Impact Assessment Report necessitates the co-ordination and collation of associated, yet diverse specialised areas of assessment.

The grouped format approach has been adopted in the preparation of this EIAR. This approach involved the individual examination of each environmental topic, describing the existing environment, the subject proposal, its likely impacts

pertaining to that environmental topic and mitigation measures.

The topics examined in this EIAR are:

- Population
- Human Health
- Cultural Heritage – Architectural Heritage
- Cultural Heritage – Archaeology
- Material Assets - Transportation
- Landscape and Visual Impact
- Soils and Geology (‘including land’)
- Water (Drainage, Supply and Flood Risk)
- Air – Noise & Vibration
- Climate & Climate Change – Air Quality
- Climate – Daylight Analysis
- Climate – Sunlight Analysis
- Material Assets – Waste Management

This process has been administered through a schematic structure in order to coherently document the various aspects of the environment considered. The grouped format structure of the EIAR is outlined below with a brief description of each specific stage.

The impact of the project is considered for both the demolition and construction and operational phases of the development.

Under each environmental topic, this EIAR examines the proposed development under the following headings:

- 1) Introduction**
- 2) Methodology**
- 3) Receiving Environment (Baseline)**
- 4) Characteristics of the Proposal**
- 5) Potential Impact of the Proposal**
- 6) Mitigation Measures**
- 7) Predicted Impact of the Proposal**
- 8) Monitoring**
- 9) Difficulties Encountered**

## 2.6 EIAR Study Team

This Environmental Impact Assessment Report has been prepared by a team which has been led by Stephen Little and Associates, Chartered Town Planners & Development Consultants.

Stephen Little and Associates were responsible for the preparation of the 'population' chapter, as well as the overall management and coordination of the EIAR. The EIAR study team otherwise includes:

- AWN Consulting
- Alistair Lindsay Conservation Architects
- IAC Archaeology
- Waterman Moylan
- ARC Consulting
- Scott Cawley

## 2.7 Consultation

### 2.7.1 Site Selection

The selection of the project site has been subject of extensive review and consultation by Dublin City Council, as described in the following reports appended to the planning application report prepared by Stephen Little & Associates:

- Dublin City Library Project - Interim Report on Site Selection, February 2011 document
- Parnell Square Cultural Quarter: A Catalyst for Renewal growth along the Civic Spine, Vision Document, April 2013
- Parnell Square Cultural Quarter: Public Consultation Phase 1, prepared by Green Hat 2013

The Dublin City Development Plan represents the vision and ambitions of the citizens of Dublin City for the development of the City during the life of the Plan. It is a stated objective of the City Plan to locate the new City Library and cultural facility at Parnell Square.

### 2.7.2 Planning Design Team

Meetings took place between the Design Team who prepared the planning design and the EIAR study team, as part of the iterative

EIA process progressed in parallel with the planning design and consultation process.

### **2.7.2.1 Dublin City Council**

The Planning Design Team engaged in pre-planning consultation with various departments of Dublin City Council to ensure a joined up planning design process. A list of such consultations are recorded under Chapter 1, Introduction, of this EIAR.

The EIAR team in turn consulted with the Design Team and have considered how the project meets the stated objectives of the Dublin City Development Plan 2016-2022 for the various environmental factors.

### **2.7.3 Cultural Heritage**

During EIAR scoping and preparation a number of statutory and voluntary bodies were consulted with to gain further insight into the cultural aspects of the receiving environment, as follows:

- Department of Arts, Heritage and the Gaeltacht – the Heritage Service and Policy Unit, National Monuments Section: Record of Monuments and Places; Sites and Monuments Record; Monuments in State Care Database; Preservation Orders and Register of Historic Monuments;
- National Museum of Ireland, Irish Antiquities Division: topographical files of Ireland; and
- Dublin City Council: Planning Department (including the Conservation Officer) and the Dublin City Archaeologist.

#### **2.7.3.1 Irish Water**

Pre-planning consultation occurred between the Planning Design Team and Irish Water as part of a pre-connection enquiry process. Feedback was received by Irish Water. Details of the pre-connection enquiry are contained in the Drainage & Watermains Planning Report, prepared by ARUP Consulting Engineers, which the EIAR team has had regard to.

### **2.7.3.2 Other Consultation meetings**

The Planning Design Team engaged in consultation with prescribed bodies and local stakeholders including neighbouring residents, businesses and cultural facilities. A schedule of this consultation is set out in a Consultation Tracker, prepared by Dublin City Libraries. A copy of this report is appended to the planning application report prepared by Stephen Little & Associates



## 2.8 Description of Proposed Development

The project comprises the proposed development of a **New Dublin City Library**, and all ancillary site development and landscape works at Nos. 23 – 28 Parnell Square (former Colaiste Mhuire school, All Protected Structures) and Nos. 20 – 21 Parnell Square (All Protected Structures), located either side of Hugh Lane Gallery (Protected Structure), Parnell Square, Dublin 1, and otherwise generally bounded by Parnell Square North, East & West, the Garden of Remembrance to the south, Granby Row, Parnell Court, Bethesda Place, Sheridan Place/Court, Frederick Lane North and Frederick Street North to the North.

The Proposed **Parnell Square Cultural Quarter Development**, including the New Dublin City Library and associated public realm works along Parnell Square North, comprising change of use, adaptive re-use of and extension to Nos. 23 - 28 Parnell Square North and the change of use and adaptive reuse of Nos. 20 - 21 Parnell Square North to provide a new library & cultural development, described as follows:

1. The adaptive reuse works to the Protected Structures Nos. 23 – 28 Parnell Square and Nos. 20 - 21 Parnell Square North include:
  - Change of use to all Protected Structures, from Institutional to Library & Cultural use, and including c.344 sq.m restaurant (basement and ground floor level), in Nos. 27 – 28.
  - Alterations to rear façade to facilitate interconnection of the new extension to the rear of Nos. 23 - 27 including new bridge connections.
  - Additional storey (plant room) part to rear of No. 27.
  - Alterations to rear fenestration including provision of fire rated screens.
  - Provision of secondary glazing screens in No. 27.
  - Façade remedial repair works and pointing renewal.
  - Restoration of stone façade entrance to No. 23 including alterations to reinstate entrance with provision of new stepped entrance.
  - Removal of entrance steps to No. 27 and provision of new ramped entrance with new door surround.
  - Removal of existing signage and provision of new signage.

- Reordering of entrance to Nos. 20 & 21 including removal of steps to No.21 and provision of new ramped entrance.
- Relocation of Memorial to Miami Showband.
- Provision of new internal lift to No. 26.
- Removal of 20th Century staircase in No. 26.
- Removal of staircase in No.24 serving third floor level.
- Provision of external platform lift and new stairs serving basement level to Nos. 27 and 28.
- Provision of new stair serving basement to No. 23.
- Removal of existing cement render to the gables of No.20 (west elevation) and No.23 (east elevation) and the repair, repoint and / or renewal of render to existing brick work.
- Roof renewal works to retained roofs of Nos. 20, 21, 23, 24 and 28 and the provision of new roofs to Nos. 25, 26 and 27 including roof terrace to Nos. 25 and 26.
- Provision of new rooflights.
- Reordering of internal layouts including removal of existing 20th Century subdivision and provision of new internal subdivision.
- Formation of new internal openings and alteration of existing openings.
- Alteration to and repair of external railings with provision of new gates and service hoist lift in front of No. 28.
- Structural upgrade strengthening works to floors.
- Acoustic upgrade works to floors.
- Improvement of the fire safety standard of the building incorporating improvement of the fire resistance of the building fabric including walls and floors; improvements to the fire protection of escape routes including upgrading of doors, lighting, services installation, signage, fire detection and alarm systems and life safety systems.
- Provision of new mechanical and electrical service installation including provision of vertical risers and horizontal distribution service ducts.

- Structural upgrade works to stairs and strengthening work to balustrades.
  - Decoration and finishes renewal and repair.
  - Provision of new stair to No. 27. Removal of 20th Century external balcony to front elevation of Nos. 20 and 21.
  - Upgrade work to windows to be retained and replacement of twentieth century timber sash windows.
  - External render renewal works.
  - Internal plaster renewal works.
  - Repair and renewal of internal joinery.
  - Alteration of floor levels and provision of internal ramps to accommodate changes in level.
  - Repair and renewal of floor finishes.
  - Lowering of basement floors and under pinning.
  - Repairs and refurbishment works to front areas including ironworks & stonework.
  - Conservation works to stone elements.
2. Demolition of: a 3 storey Amharclann (theatre) building and single storey link to the rear of Nos. 23 – 28 Parnell Square, and a two storey return to the rear of No. 23 Parnell Square. The combined floor area of buildings to be demolished on site is c.2,000 sq.m.
  3. A new extension cultural building, 5,720 sq.m gross floor area, 5 storey in height over a single level basement (779 sq.m) to the rear of Nos. 23 – 28 Parnell Square. The new building will accommodate: Library & Cultural Facilities and associated facilities including: 200 seater conference room and performance space, including 8no. staff cycle parking spaces.
  4. The total gross floor area (existing and new building) of the proposed Library & Cultural use amounts to c.11,198 sq.m.
  5. Associated site development and boundary works, plant area, external roof garden and terraces.
  6. Improvements to the public realm including a reconfigured roadway to facilitate a new public realm area, covering c.0.56 Ha of the existing public realm along Parnell Square North from Parnell West to Parnell East and between the Garden of Remembrance (to the south) and the New Dublin City Library, Hugh Lane Gallery (to the north). The public realm area includes for a two lane vehicular road, design including:

widened footpaths, street furniture and the retention of historic paving, public street lighting, the reconfiguration of pedestrian crossing junctions at Parnell East and Parnell West, the relocation of 5no. mobility impaired on street parking spaces, reconfigured set down areas including the removal of 47no. on street car parking spaces, and the relocation of the existing Dublin Bikes Facility and 100no. cycle parking spaces.

7. Reconfiguration and site level changes at Bethesda Place and Frederick Lane North to facilitate fire tender, loading bay and service vehicles access.

The overall site area is c.0.99 hectares.

### **2.8.1 Site Context & Land use**

The Proposed development is located on the north side of Parnell Square, Dublin 1.

The site includes the former Colaiste Mhuire buildings (Nos. 23 - 28) (Protected Structures), annexed 1960's extension (hexagonal Amharclann theatre / hall), the open yard to the rear (north) of the original Georgian houses, and the Georgian houses at Nos. 20 & 21 Parnell Square (or Palace Row).

The Hugh Lane Municipal Art Gallery (Protected Structure), sits between and separates the Colaiste Mhuire houses and grounds from the two houses at Nos. 20-21 (Protected Structure). The Hugh Lane Gallery does not form part of the application site. While there is potential for future links to the gallery, this does not form part of the application proposal.

The application site extends to the public realm area fronting all of the aforementioned buildings, generally to the north side of Parnell Square. It extends partially into the northern ends of Parnell Square East towards Frederick Street North, and Parnell Square West towards Granby Row.

The public realm area associated with this project is otherwise contained by the Garden of Remembrance to the south. The Garden of Remembrance lies within the northern end of Parnell Square. Formerly part of the 18th Century Pleasure Gardens created to fund the construction of the Rotunda lying in hospital, most of the original gardens have been lost to a succession of extensions and car parking associated with the hospital. No new entrances to the Garden of Remembrance are proposed as part of the public realm works, but they do

seek to enhance the existing entrance experience to the Garden and the public realm area immediately adjoining it at Parnell Square North.

The site of the proposed development is located approximately 650m (8 min walking distance) from the Ilac Centre, sited between Parnell Street and Henry Street, where the existing Dublin City Council Central Library is currently located. It is also 630m from the centre of O'Connell street (the spire).

The Land Use zoning objective Z8 applies to the site. The associated land use description is 'Georgian Conservation Areas'. Accordingly, Z8 zoning seeks:

"To protect the existing architectural and civic design character, and to allow only for limited expansion consistent with the conservation objective".

The Development Plan outlines that lands zoned Z8 include the primary conservation areas within the city, primarily the Georgian Squares and streets. The aim of this land use-zoning objective is:

"To protect the architectural character / design and overall setting of such areas."

Cultural / recreational building and use are Permitted in principle uses under the Z8 zoning objective. Restaurant use is open for consideration.

It is also a stated objective of the Development Plan to locate the new City Library and cultural facility at Parnell Square

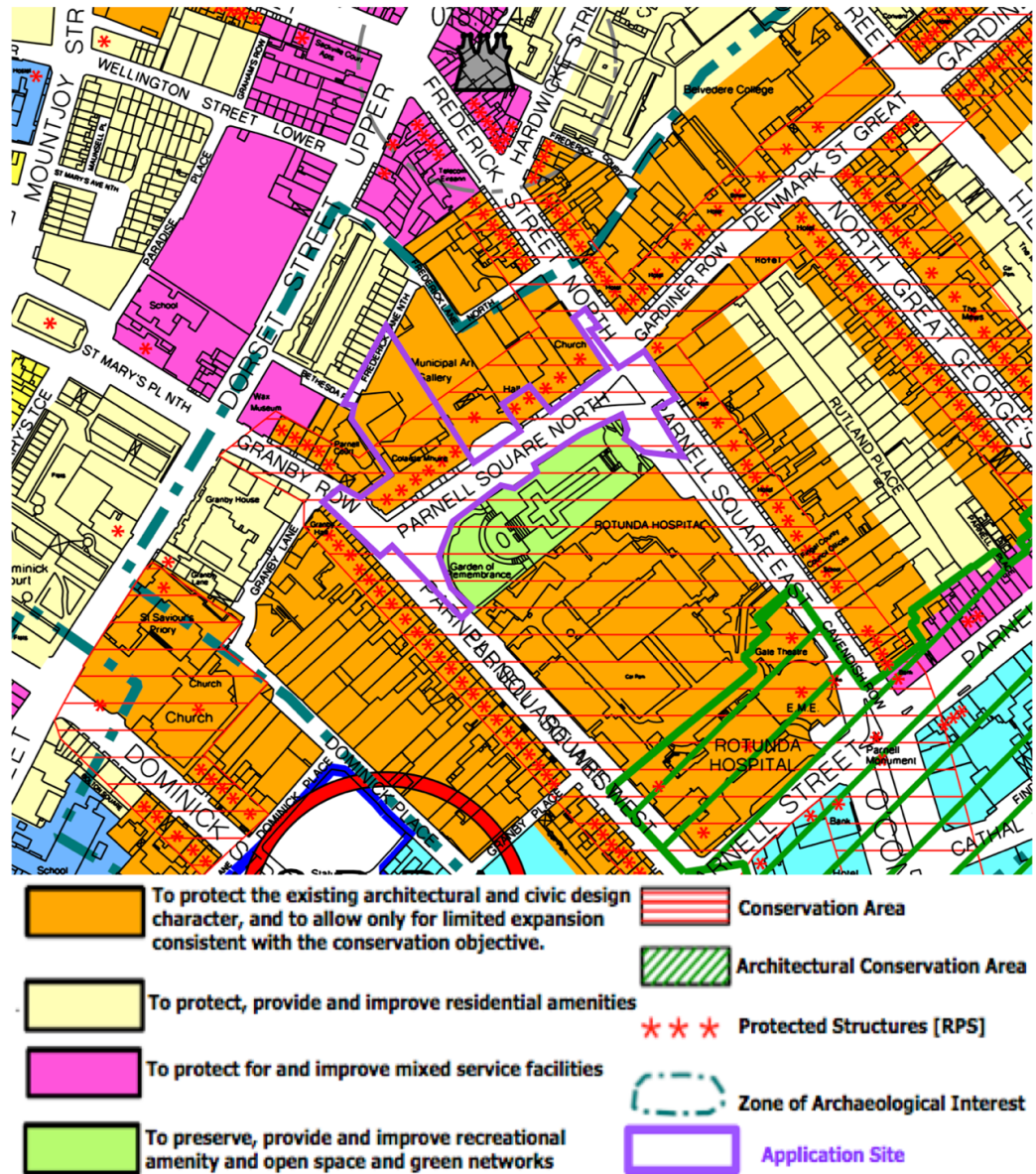


Figure 2.1: Land-use Zoning Objective for the Application site.

### 2.8.2 Construction and Phasing

The sequence of demolition and construction stages is outlined in summary within this Section below. We refer otherwise to the Outline Construction Management and Waste Management Plan, prepared by Arup and can be found under Volume 2, Appendix 3.1, of this EIAR.

The Demolition and Construction Phase of the proposed development is expected to take approximately 2 – 3 years from commencement.

This time period includes the works to the Protected Structures, the new build and the public realm works.

Construction staff on site will be on average, 100 / 125 workers on site for the duration of the construction phase. The number of workers varies, depending on each stage of the sequence with an estimated peak number of workers of 250 – 275.

In summary, the traffic and HGV movements arising from the construction phase varies. The maximum worst case scenario is for a peak of 40 HGVs per day during the excavation works which will take place over approximately a 2 month period.

We refer otherwise to the Traffic Management Plan prepared by Aecom. This document can be found under Volume 2, Appendix 3.2, of this EIAR.

The Construction approach will occur in the following sequence:

#### **2.8.2.1 Phase 1 – Enabling Works**

In summary, this phase of the development includes the establishment of the development site, hoarding, traffic designation areas.

#### **2.8.2.2 Phase 2 – Substructure Works**

In summary, this phase of the development comprises excavation for the new build basement structure and ground floor level slab formation level respectively.

#### **2.8.2.3 Phase 3 – Superstructure and Conservation Works**

Once the above phases are complete, construction of the new build structure and the conservation works to the original houses can commence.

### **2.8.3 Rick of Major Hazardous Accident (Seveso)**

The nearest SEVESO facility to the proposed development is located at Tolka Quay Road, Dublin Port, approximately 3.2 km to the east. The proposed development lies outside the consultation zone for this SEVESO site, as identified in the Sheet E map of the Dublin City Development Plan.

The proposed project does not pose a major hazardous accident risk, nor is it within the consultation distance of a SEVESO site.

### **2.8.4 Flood Risk**

A Flood Risk Assessment has been prepared by Arup Consulting Engineers as part of the Planning Design. The conclusion of the

report finds “no record of historic flooding at the site. The risk of tidal, fluvial, pluvial and groundwater flooding to the site is very low. The site therefore lies in Flood Zone C.”

On this basis the report concludes that: “A justification test for the development is not required.”

## **2.8.5 Outline of Main Alternatives Considered**

### **2.8.5.1 Alternative Locations**

The project site was selected on the basis of a site selection report prepared by the Applicant in 2011, and which informed the other precursor studies and vision documents identified below:

- Dublin City Library Project - Interim Report on Site Selection, February 2011 document
- Parnell Square Cultural Quarter: A Catalyst for Renewal growth along the Civic Spine, Vision Document, April 2013
- Parnell Square Cultural Quarter: Public Consultation Phase 1, prepared by Green Hat 2013

The Dublin City Development Plan 2016-2022 represents the vision and ambitions of the citizens of Dublin City for the development of the City during the life of the Plan. It is a stated objective of the City Plan (**Objective CHC032**):

“To promote and facilitate the development of a mixed-use cultural facility in Parnell Square anchored by a New City Library, stimulating the Regeneration of the north inner city.”

### **2.8.5.2 Alternative Designs – Proposed New Library**

Dublin City Libraries in preparing its brief for the new City Library set out all of the library components necessary to meet the requirements of a 21st Century Library.

The new library would also provide more space for study and learning, be adaptable to new technologies, provide ancillary facilities and perform as a destination of cultural and civic importance befitting a new City Library in the Capital City, expected to accommodate c.3,000 visitors per day.



The DCC Libraries brief is proposed to be delivered generally through the adaptive conservation and reuse of the original Georgian Houses and a new extension to the rear of the houses. The design evolution is described in further detail in the Design Statement and the Protected Structures Impact Statement (PSIS) prepared by the project architects. This is also summarised in Chapter 3: Description of the Proposed Development of this EIAR.

A conservation design strategy and design options have been identified, which relate to the proposed interventions to the original houses. Design options are identified in order to ensure that the best balance between conservation and adaptive reuse as the City Library and cultural use is achieved. While the design strategy and options have been identified, the final determination of which design option to take in some cases will not be possible in advance of commencement of further site investigation and conservation works on site in consultation with the relevant conservation expert.

All of the floor area and library use requirements cannot be accommodated within the Georgian buildings, and must be accommodated in a new extension to the rear of the existing buildings (House Nos.23-28). Due to the specific characteristics of the open rear area to the rear of Nos. 23-28, the alternative design and layout options are limited. There is no surviving rear curtilage at Nos. 20 & 21.

#### **2.8.5.2.1 Strategy for Protected Structures**

The Georgian buildings have already been subject to change of use and design modification over time. Their last use was as a school. The proposed development would see a further layering of institutional use as a City Library, through conservation and adaptation.

The brief of the Dublin City Libraries has influenced the scope of the proposed conservation and design alterations to the Protected Structures, in order to deliver a functional modern library and a safe, attractive, public building.

The design approach and intent behind the proposed changes to the Protected Structures are outlined in the accompanying PSIS, prepared by Shaffery Conservation Architects.

The principal driving force behind the development is guided by the conservation and adaptive re-use of the existing protected structures on site.

The proposals submitted are based on extensive considerations of the works necessary to deliver the requirements of the new City Library functions in line with the design and conservation strategies.

We refer to the PSIS prepared by Shaffrey Conservation Architects for further details.

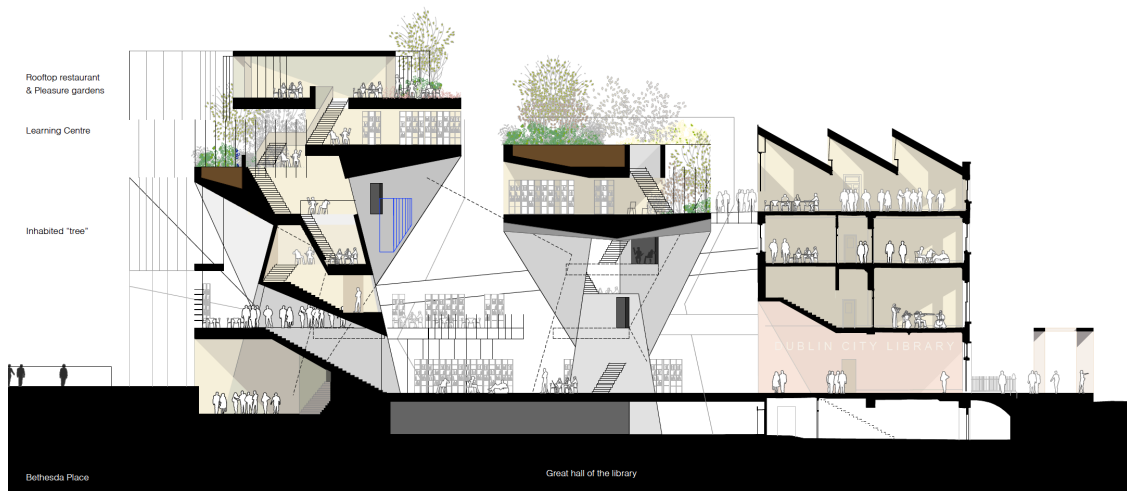
### 2.8.5.2.2 New Build Design Approach

The project architects, working with Dublin City Libraries, carried out an iterative series of design studies for a connected new build extension to the rear of House Nos. 23-28. A shortlist of three development options is provided for the purposes of identifying design alternatives considered. These are discussed in turn below.

#### Option 1 - Building Design & Layout

Option includes for the preservation of the protected structures by extending to the rear in 'tree like' structure that allow for the creation of space at ground level and outdoor landscaped terraces at roof level.

This design option involved the incorporation of the Project brief to the selected site



**Figure 2.2:** Option 1 - cross section through the site.

#### Advantages

- Interventions to the Protected Structures reduced with respect to: loading, fire, accessibility, servicing etc.

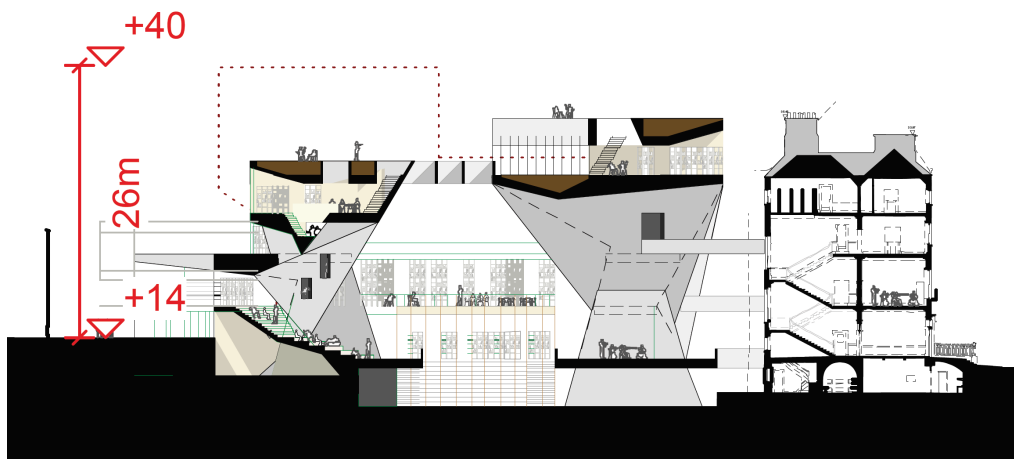
- Unique library setting and design and panoramic views across the Dublin City and Mountains.
- The new building would be enclosed within a glass façade.

### Disadvantages

- The layouts present a less efficient use of space.
- The development incorporates significant amounts of glazing around the building.
- The required floorspace would be entirely contained within the new build, creating a large scale development to the rear of the site.
- Building height and scale towards the rear of the site – away from the Protected Structures, but in close proximity to residential uses.
- No detailed design plan for site services (fire, deliveries and access along the rear of the site)

### Option 2 – Building Design & Layout

Following on from Stage 1 above, the Design Team sought to maintain the advantages and re-examine the disadvantages of this design approach, in the context of the design brief.



**Figure 2.3:** Stage 2 – Cross Section through the site.

### Advantages

- Massing to the rear reduced. A dotted line shown on Figure 4.3 illustrates the previous extent of the building.

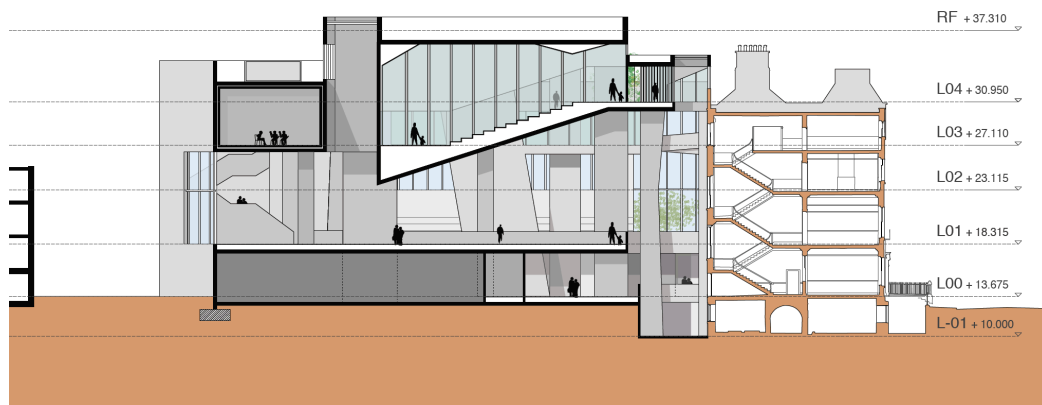
- More interaction with and linkages to the Protected Structures.

### Disadvantages

- The massing in proximity to the protected structures to the south.

### Option 3 – Building Design & Layout

Following on from Stage 1 above, the Design Team sought to maintain the advantages and re-examine the disadvantages of this design approach, in the context of the design brief.



**Figure 2.4:** Stage 3 – Cross Section through the site.

### Advantages

- Building height re-organised into the centre of the site. A dotted line shown on Figure 4.4 illustrates the previous extent of the building.
- More interaction with and linkages to the Protected Structures.

### Disadvantages

- The proposed height adjacent to Protected Structure.
- The proposed elevations and interactions with the surrounding uses to be further explored.

The chosen scheme amalgamated the advantages of the different study outcomes. This was then refined and developed to reflect the best design option for the New City Library, in the context of site constraints.

The preferred new build design option has due regard to the following immediate potentially long term environmental impact considerations associated with same: **Cultural Heritage (architectural heritage and archaeology), Land, Visual Impact, Sunlight & Daylight.**

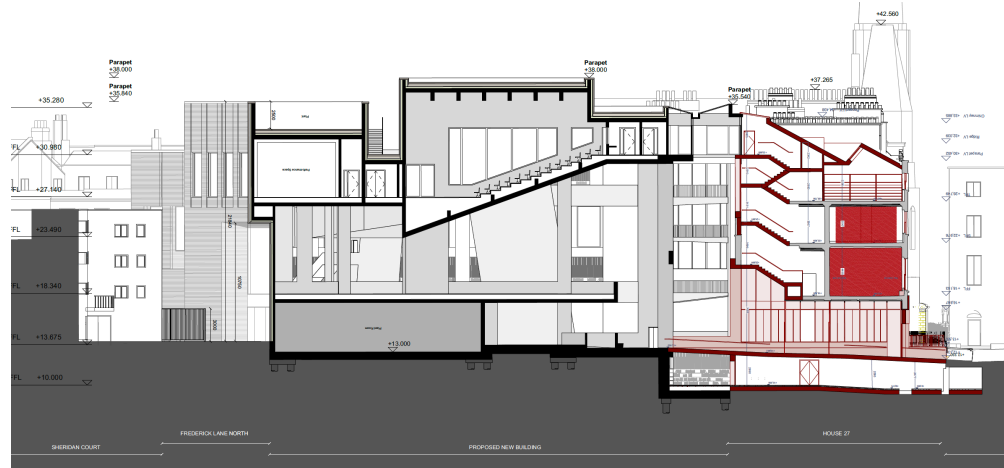
Having reviewed the pros and cons of the multiple design alternatives considered, the principal reasons for choosing the preferred new build design option include:

- The floorplates have been carefully designed to accommodate the functional requirements of the library and its use as a public space.
- The development engages with the Protected Structures in a manner that seeks to minimise interventions in the historic character and fabric of the original houses, while also seeking to minimise the bulk of the new building to the rear.
- Room function, window placement (including window level relative to internal finished floor level) and window treatments within the new extension have been carefully considered to prevent any significant opportunity for overlooking of neighbouring properties (particularly residential accommodation) to the north, east and west.
- Brick finish elevations tie in appropriately to the character of the surrounding environment.

Further design information is provided in Chapter 3 of the EIAR and in the accompanying Design Statement, prepared by Grafton and Shaffrey Architects.

### **2.8.5.3 The Chosen Scheme – Principal Reasons for Choice**

The proposed development is a refinement of the preferred design option as represented in the section drawing shown in Figure 2.2.



**Figure 2.5:** Chosen Scheme – Initial Draft June 2018

The preferred option was chosen on the basis of arriving through an iterative process at an optimal design solution, at a constrained site. Particular attention is paid to achieving appropriate architectural heritage conservation, visual impact (massing), accessibility, space (including open space) and library functions. Conservation impact was of paramount concern throughout the design process.

Ultimately, the proposed development provides a unique opportunity for free public enjoyment of the Georgian buildings and the proposed new space, as a library and cultural facility. This would not be replicated in the reuse of historic buildings as private homes, offices or hotel accommodation.

Further detailed design is set out under the accompanying Architectural Design Statement, prepared by Grafton / Shaffrey Architects.

#### **2.8.5.4 Alternative Designs – Public Realm Works**

As this is an existing linear urban road, there is no proposed alternative location for the public realm improvement works.

In terms of design and layout, an options report was prepared by AECOM. This accompanies the planning application. Six design options were identified and the final agreed design is outlined below:



**Figure 2.6:** Illustration of Option 2A, extract from the AECOM Roads Option Report

The conclusion of the report recommends Option 2A. (i.e Two 3m-wide traffic lanes, One lane for Public Transport and One for all traffic). This is the design of the proposed public realm area. The materials and finishes for the public realm area design are outlined in the accompanying Public Realm & Landscape Design Report and drawings, prepared by Bernard Seymour Landscape Architects.

### 2.8.5.5 Alternative Mitigation Measures

The proposed mitigation measures contained within this EIAR, are summarised under Chapter 6: Summary of Mitigation Measures.

Mitigation measures have been identified, where appropriate, for the potential environmental impacts identified under the relevant environmental topics. The proposed mitigation measures represent best practice principals at the time of preparing this EIAR and will be adhered to by the developer.

No alternative mitigation measures for demolition and construction or operational phase have been proposed at this point.

### 2.8.5.6 Alternative Processes

The proposed construction works comprise relatively standard building construction processes for the new build element, and in the context of its relationship with the protected structures.

Conservation works to the protected structures represent an additional challenge to the project. However, these are not unusual for a project of this nature, involving the adaptive reuse of Georgian buildings. Design methodology and options

have been identified and best conservation practice determined on site in the case of the works identified by Shaffrey Grade 1 Conservation Architects. Where necessary it is expected that the Developer will be allowed to engage in further consultation with the appropriate authority (Dublin City Council) and its Planning and Conservation Officers, on certain matters of detailed conservation design, specification, methodologies in advance of their implementation.

No specific alternative construction processes are identified for this EIAR.

### 2.8.5.7 Conclusion

It is submitted that an appropriate site has been identified for this project, through careful site selection and subject of consultation.

The existing site characteristics have informed the design response to the conservation, adaptive reuse and extension of a new building at this site and associated public realm enhancements.

The layout and design of the proposed development represents the optimal solution for this site, in terms of achieving the vision for a 21st Century City Library. This requires carefully balancing the design brief, conservation best practice, public accessibility and the achievement of the policies and objectives of the Dublin City Development Plan 2016 – 2022 which, inter alia, seek:

**“To promote and facilitate the development of a mixed-use cultural facility in Parnell Square anchored by a New City Library, stimulating the Regeneration of the north inner city.”**

The proposed development will provide a world class City Library and cultural facilities and improved public realm at an underutilised urban site, in an area of architectural heritage significance, close to the site of the existing central library at the Ilac Centre, and to public transportation and other city centre amenities.

It will also serve to anchor the Parnell Square Cultural Quarter area, at the northern end of the ‘Civic Spine’ identified by the Council along O’Connell Street, as part of the realization of the Council’s ‘Parnell Square Cultural Quarter: A Catalyst for Renewal growth along the Civic Spine, Vision Document, April 2013’.



## **2.9 Aspects of the Environment Considered (Chapter 5 onwards)**

### **2.9.1 Population**

This section of the EIAR investigates the likely impact on the profile of the resident, working and visiting population at city and in particular at local level area, arising from the proposed development.

In preparing this section of the EIAR, reference was had to the Census of Population 2011 and 2016. In addition, publicly available documents, live register figures, and the Dublin City Development Plan 2016 - 2022.

There are no specific mitigation measures proposed in relation to population profile. However, all other chapters relate to environmental topics that have potential to impact on human beings.

Cross reference to the following Chapters clarifies recommended mitigation measures for other environmental impacts likely to directly affect the local population: (Chapter 5.2) Human Health, (Chapters 5.3, 5.4 & 5.7) Cultural and Natural Heritage, (Chapter 5.5) Transportation, (Chapters 5.6) Visual Impact, (Chapters 5.8 to 5.14): Soil, Water, Air, Climate and Waste. The interactions between these topics are also discussed under Chapter 8: Interactions.

#### **2.9.1.1 Resident Population**

During the demolition and construction phase of the proposed development, there may be impacts for the profile of the local resident population as construction workers seek temporary accommodation in the area. This is unlikely to give rise to any significant adverse impact on the demographic of the resident population at City or Local Area level during the temporary construction phase.

There is the potential for adverse direct and indirect impacts of short term duration to the resident population arising from potential typical nuisance factors associated with the demolition and construction phase. In particular for those residents at Granby Row to the west and Sheridan Court neighbouring to the east of the site.

The likely environmental effects of noise, vibration, dust, traffic, visual impact are addressed in other chapters of this

EIAR. (See Chapters 5.10: Noise & Vibration, 5.11 Climate & Climate Change - Air Quality; 5.5 Transportation and 5.6 Landscape and Visual Impact for further discussion.)

At operational phase, there is no potential for a direct negative impact on the profile of the resident population at City level during the operational phase of the library.

There is a potential significant negative impact from the loss of the Central Library from its current location at the Ilac Shopping Centre. However, in compensation there is potential for significant positive long term impact for the resident population by developing the City Library and its cultural facilities and improved public realm, within a short walking distance to the north at Parnell Square, where it will complement other buildings and spaces of architectural heritage and cultural significance.

The existing Central Library at the Ilac Centre has limited floor space amounting to c.2,276 sq m, to cater for existing users and to improve facilities to attract new users. It is also somewhat hidden within the internal environment of the shopping centre.

A short distance away (c.600m to the north), the proposed new City Library would have an internal floor area amounting to c.11,198 sqm (old and new buildings). This would have capacity to accommodate approximately 3,000 visitors per day, and offer a more expansive and enhanced range of services commensurate with the function of a City Library. The City Library is an important democratic and free public space, offering potential for further education and cultural development by providing all citizens with a wide and varied source of information, learning, rest and recreation.

Compared to the central library at the Ilac Centre, the proposed City Library at Parnell Square north will be similarly accessible and proximate to the neighbouring residential areas and educational facilities, and to the primary retail area of the north inner city. It will complement the cluster of cultural facilities at Parnell Square, including the Hugh Lane Gallery, the Irish Writer's Museum, Abbey Presbyterian (Findlaters) Church, the Garden of Remembrance, Poetry Ireland and the Gate Theatre. It is likely to be more visible to the wider population at this proposed location, and is accessible by a range of public transport facilities serving O'Connell Street and Parnell Square.

There is potential for positive impact arising from the freeing up of existing floor space currently occupied by the Central Library, within the Ilac shopping centre complex, for use by other local retail services that meet the demands of the City's resident population.

### **2.9.1.2 Working Population**

There is potential that the construction phase will have indirect positive economic impacts upon the construction sector at City level. For example, by providing employment opportunities within building service industry, and spin off trade for local retail and services in the local area.

It is envisaged that on average there is expected to be 100 construction workers engaged on-site, with a maximum of 275 during the construction phase. The construction workers may be drawn from the local labour pool. There is also likely to be a positive impact for local businesses, such as cafes, shops and services providers. This is potential for significant short term positive impact for the working population due to direct and indirect employment opportunities at City and local level.

There may be potential for direct temporary significant adverse impact on access to employment or business providers at Parnell Square North. This would be due to the diversion of pedestrian, cycle or vehicular movement away from Parnell Square North during the public realm works. Site management issues and recommended mitigation measures are addressed in the Outline Construction Management Plan Volume 2, Appendix 3.1 and in Chapter 5.5: Material Assets: Transportation of this EIAR.

In a similar manner to the resident population, there is the potential for adverse direct and indirect impacts of short term duration to the working population arising from potential typical nuisance factors associated with the construction phase of this project. In particular for businesses and attractions on Parnell Square North.

The likely environmental effects of noise, vibration, dust, traffic, visual impacts are addressed in other chapters of this EIAR. (See Chapters 5.10: Noise & Vibration, 5.11 Climate & Climate Change - Air Quality; 5.5 Transportation and 5.6 Landscape and Visual Impact for further discussion.)

During the operational phase, there is no potential for a direct negative impact on the working population at local level and in the wider City arising from the operational phase of the project. The buildings at Parnell Square are currently vacant. With the exception of site security, no existing employment would be lost here.

There is likely to be a long term positive impact for the working population in the form of redeployment of staff and new employment opportunities within the library itself (library staff, security, cleaning contractors, caterers, deliveries, etc.). It is anticipated that, when operational, the library will account for approximately 70no. jobs, representing an increase of approximately 40no. jobs compared to that offered by the existing facility at the Ilac Centre.

Compensating for the deployment of library jobs away from the Ilac Centre to the proposed new facility at Parnell Square, there is potential for new retail services to occupy the freed up space and offer new local employment opportunities within the Ilac shopping centre.

There may be further spin off for local businesses in the Parnell Square area, arising from the reuse of a long time vacant property and cultural regeneration at the edge of primary retail areas of the city centre. In its own right, and as part of a cluster of buildings of architectural and cultural significance, set within a civic space, the proposed new City Library has potential to attract visitors to the area. This in turn can result in potential for further employment opportunities arising from passing trade for local businesses, such as cafes, shops and services providers.

There is therefore potential for direct and indirect positive impacts for the working population arising from proposed development.

### **2.9.1.3 Visiting Population**

During the construction phase of the proposed development, visitors to local facilities, amenities or visitor attractions in the streets adjoining the proposed development will be acutely aware of the development taking place during this phase.

Some minor, indirect negative impacts may occur relating to the carrying out of construction works to the north of Parnell

Square and the anticipated closure of parts of the street during the course of the public realm works.

There may be potential for direct adverse impact on access to the Hugh Lane Gallery, Chapter One restaurant, the Irish Writers Museum and the Abbey Presbyterian Church (Findlater's Church), all fronting Parnell Square North, during construction works associated with the public realm enhancements. The phasing of these works is set out in a Construction Traffic Management Plan, Volume 2, Appendix 3.2.

Please refer to the Outline Construction Management Plan Volume 2, Appendix 3.1, Construction Traffic Management Plan, Volume 2, Appendix 3.2 and Chapter 5.5: Material Assets – Transportation, for further information regarding the design and management of the proposed development, and recommended mitigation measures associated with the potential impacts identified in the paragraphs above.

In a similar manner to the local resident and working populations, there is the potential for adverse indirect impacts of short term duration to the visiting population arising from potential typical nuisance factors associated with the demolition and construction phase of this project. In particular for visitors to those aforementioned attractions fronting Parnell Square North and to the Garden of Remembrance to the south.

The likely environmental effects of noise, vibration, dust, traffic, visual impact are addressed in other chapters of this EIAR. (See Chapters 5.10 Noise & Vibration, 5.11 Climate & Climate Change - Air Quality; 5.5 Transportation and 5.6 Landscape and Visual Impact for further discussion.)

At operational phase, there is potential for a direct negative impact on the visiting population if they perceive a negative visual impact arising from the change in the landscape that detracts from their visiting experience. We consider this highly unlikely, but refer to Chapter 5.6 Landscape and Visual Impact Assessment for further discussion on visual impact at the operational phase of the project.

Otherwise at operational phase we do not predict potential for a significant negative impact on the visiting population at a local or wider City level.

The proposed development will result in a long term positive impact in respect of delivering further free public attractions and amenities for the local and wider visiting populations, befitting a capital city. The new city library is expected to attract c.3,000 visitors per day per annum. The attraction of an increased number of visitors to the area is likely to improve the perception of the area as an animated and attractive local area within the City.

It will also serve to anchor the Parnell Square Cultural Quarter area, at the northern end of the 'Civic Spine' identified by the Council along O'Connell Street, as part of the realization of the Council's 'Parnell Square Cultural Quarter: A Catalyst for Renewal growth along the Civic Spine, Vision Document, April 2013'. As a platform for literature, learning, music, information sharing and appreciation of cultural and architectural heritage, the proposed development at this site, and in the context of the neighbouring cultural attractions and architectural heritage at Parnell Square North, further justifies the successful bid to designate Dublin as a UNESCO City of Literature. The project is therefore likely to have a positive long term impact on the identity of the City and the attraction of visitors.

## **2.9.2 Human Health**

This chapter evaluates the impacts, of the proposed development on human health of the population surrounding the Parnell Square Area of North Inner-City Dublin. According to the 2016 census results there are 21,344 people living within the study area. National health trends were consulted to give an overall indication of the general wellbeing of the population. In the 5 surrounding District Electoral Divisions (DED) the percentage of people who stated their health was "bad or very bad" based on questioning in the 2016 census was between 2.6% in Inns Quay A and 0.9% in the North City DED. Studies have shown that developments such as the one proposed (Library and cultural facilities) have an overall positive effect on the overall mental and physical health of the local population.

Issues examined as part of the possible impact on human health from the proposed development including Air Quality, Noise and Vibration, Traffic, Visual and Health and Safety. These chapters should be consulted in relation to specific impacts and mitigation measures.

In relation to air quality the impact of construction of the proposed development is likely to be short-term and imperceptible with respect to human health. The use of dust monitoring should be conducted during the construction phase as this will ensure the efficiency of the dust mitigation measures and also highlight when more measures may need to be implemented. Construction phase impacts on human health due to construction phase vehicles are predicted to be imperceptible as volumes fall below the scoping levels for impact, as discussed in Chapter 5.11 Air Quality & Climate. Traffic modelling indicates that low number of additional traffic will be generated due to the proposed development. Using the air quality screening criteria, no road links can be classed as 'affected' by the proposed development and no significant short or long term human health impacts are predicted due to the proposed development.

As detailed in Chapter 5.10 Air – Noise & Vibration it is believed noise and vibration impact of the construction phase of the proposed development is likely to be negative, moderate and short-term for receptors 20m-80m away from construction works. No predicted significant adverse impact arising from vibration during construction, provided works are carried out so as to fall under the relevant vibration criteria.

Due to the type of proposed development (cultural quarter and library) the predicted increase in noise level at the nearest noise sensitive locations conclude that the associated impact is neutral, long term and imperceptible during operation. The proposed development will not generate any perceptible levels of vibration during operation and therefore there will be no impact from vibrations on human health.

The impact of traffic generated by the proposed development on human health during both the construction and demolition phases of the proposed development dealt with in Sections 5.2.5.2 & 5.2.5.3 of the Human Health Chapter and Chapters 5.10 – Air Noise & Vibration & 5.11: Climate & Climate Change – Air Quality of this EIAR. There will be moderate negative townscape impacts during the construction stage of the proposed development, however these will be short term in duration. Once operational the new cultural quarter will contribute positively to the form and function of Parnell Square and will strengthen this area as a cultural centre of the city. The WHO has undertaken research that show urban environments which are aesthetically pleasing and landscaped encourage people to explore and access their local community by foot or bicycle when compared to the same urban space prior to

renovations (WHO, 2016) leading to improvements in individual physical and mental health.

The proposed development has the potential for an impact on the health and safety of workers employed on the site, particularly during the construction phase. The activities of contractors during the construction phase will be carried out in accordance with the Safety, Health and Welfare at Work (Construction) Regulations 2013 (S.I. No. 291 of 2013) to minimize the likelihood of any impacts on worker's health and safety.

During the operational phase of the development, the operator will implement an Environmental Safety and Health (EH&S) Management System and associated procedures at the facility. Full training in the EH&S Management System and relevant procedures will be provided to all employees.

### **2.9.3 Cultural Heritage – Architectural Heritage**

The Chapter describes the extent of the project with particular reference to:

- the Protected Structures set either side of Charlemont House,
- the Municipal Gallery,
- the Conservation Area and environs, and
- the potential impact of the proposed new building.

Nos. 20 and 21 Parnell Square North lie to the east and Nos. 23 to 28 lie to the west of Charlemont House. The site is to the North of the Garden of Remembrance.

The chapter sets out the methodology that was used in assessing the impacts, describing the various statutory, regulatory and advisory matters considered and the various international charters and conventions that are relevant. It examines the historical context provided, inspections and physical assessments undertaken and describes the communications with the Design Team and resultant clarifications and reviews.

Having established the receiving environment, it assesses the various impacts on the setting of the buildings, the impacts on the external fabric and the impacts on the external fabric both during and after the works.

In terms of the setting, it found that the cultural heritage (architectural) impacts are generally positive, but that there are certain negative impacts. A similar finding results from the impacts



on the external fabric. The major negative impacts relate to the provision of the ramps required for Universal Access, and particularly that of No. 27, including the proposed entrance doorcase for this feature. Similar positive and negative impacts arise from the works to the internal fabric, the ramps again being one of the major negative impacts.

It finds that there are some concerns about there being insufficient detailed information relating to the historic fabric at this time, and this results in a number of inconclusive matters. There are areas where the impact assessment could not be as thorough as would have been desired, such as in respect of assessing the design details of services strategy and the Fire Safety Design Strategy. This is not uncommon in dealing with historic buildings such as these where the detailed design has to take account of matters revealed as the fabric is opened up.

The chapter finds that there is a need for continuing monitoring and assessment during and after the works.

#### **2.9.4 Cultural Heritage – Archaeology**

An archaeological assessment was undertaken at No. 23-28 Parnell Square North, Dublin 1. The proposed development area is currently occupied by the former Colaiste Mhuire, which consists of Nos 23-28 (protected structures) and a number of associated modern structures to the rear (former gymnasium etc). The assessment aimed to ascertain any potential impact that the proposed development may have had on the existing archaeological resource. The proposed development area is located within the zone of archaeological potential for Dublin City (DU018-020) although there are no sub-constraints recorded within its immediate proximity.

It is clear that the site has been impacted upon by development dating from the 1760s, with the construction of houses fronting onto Parnell Square North and associated features such as basements and mews structures. During the later part of the 20th century the rear of Nos 23-28 was further impacted by the removal of garden plots, returns and outbuildings, when a school was established at the site. The excavation of test trenches and site investigation test pits within the plot to the north of Nos 23-28 has revealed archaeological deposits within the southern side of the site. These include post medieval basements and a redeposit of early medieval human remains and a possible pit.

The deposit of human remains will be directly impacted upon by the excavation of material for the insertion of the basement level. The impact is considered to be negative and very significant.

The post medieval remains identified outside of the proposed basement area will be impacted upon by ground disturbances (ground reduction and the insertion of piles and excavation of pile caps) that are associated with the construction of the proposed development. The impacts are considered to be negative and moderate.

The potential remains of a post medieval midden or cess deposit has been identified within the centre of the site, whilst the possible backfilled remains of mews structures have been identified in the northern part of the site. These areas will be impacted upon by ground disturbances (ground reduction and the insertion of piles and excavation of pile caps) that are associated with the construction of the proposed development. The impacts are considered to be negative and moderate.

It is possible that ground disturbances outside of the footprint of the test trenches may have a direct impact on previously unrecorded archaeological deposits that have the potential to survive beneath the current ground level with no surface expression. This includes the area beneath the modern gymnasium structure that is located to the rear of Nos 23-28, along with any excavations associated with establishment of the public realm infrastructure, the potential impacts are considered to be negative and have the potential to range from moderate to profound significance.

While it is acknowledged that preservation in-situ of archaeological remains is the preferable option wherever possible, the archaeological remains identified within the proposed development area will be impacted upon by the construction of a new basement and associated extensive ground disturbances. As such preservation by record of all archaeological remains will be carried out.

The recommended mitigation measures may be further informed by a programme of additional archaeological testing that will be carried out within the proposed development area as part of an advance archaeological works contract. Testing would follow the demolition of the existing amharclann (theatre) building on site, as a separate works package, prior to the mobilisation of the main construction contractor.

All mitigation measures will be carried out in full consultation with the National Monuments Service of the DoCHG and the Dublin City Archaeologist.

The archaeological remains within Trenches 1 and 2, including the post medieval basements and the redeposit of human remains, will be excavated (preserved by record) within an open area measuring 250m<sup>2</sup> prior to the commencement of construction works. Post excavation analysis of the remains will include the isotopic analysis of suitable dental remains in order to analyse the geographical origin of the human remains.

The archaeological remains within Trench 3 and Test Pit 105 including the post medieval basement remains, will be excavated (preserved by record) within an open area measuring 195m<sup>2</sup> prior to the commencement of construction works.

The archaeological remains within Test Pit 104, which includes the post medieval cess deposit, will be excavated (preserved by record) within an open area measuring 95m<sup>2</sup> prior to the commencement of construction works.

A section at the rear of the proposed development area will be opened and graded down with a mechanical excavator in order to assess the nature and extent of the potential backfilled mews structures. This section may be accompanied by excavation from the floor level in this part of the site (estimated area 150m<sup>2</sup> including exposed section). However, due regard will need to be given to the entrance to the site in order to allow continued vehicular access.

Overburden within these areas will be removed by a mechanical excavator under strict archaeological supervision. Mechanical excavation shall cease following the identification of archaeological levels. Recording of the archaeological features will then be carried out by hand by a team of archaeologists under the direction of a licence eligible archaeologist and in consultation with the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht and the Dublin City Archaeologist.

If required the open excavation areas may be increased in size and all archaeological deposits will be recorded to the depth of the natural subsoils.

Full provision will be made available within the construction programme to allow for the resolution of all archaeological features on site.

A minimum of four additional test trenches will be excavated within the site, following the demolition of the gymnasium, in order to assess the nature and extent of any additional archaeological remains that may survive within the proposed development area. This will be carried out as part of the advance archaeological works contract and will be undertaken by a licence eligible archaeologist.

Dependant on the results of the testing exercise, further archaeological mitigation may be required, such as preservation by record and/or archaeological monitoring. As such, full provision within the construction programme will be made available in order to ensure works are completed prior to construction commencing.

## **2.9.5 Material Assets - Transportation**

### **2.9.5.1 Existing**

The subject proposal comprises the redevelopment of 20 – 21 Parnell Square and the former Colaiste Mhuire premises at 23 – 28 Parnell Square North into the Parnell Square Cultural Quarter (PSCQ).

Parnell Square is located within the 30 km/h zone at the northern end of O'Connell Street on the Inner Orbital Route in Dublin 1. Three of the junctions on the Inner Orbital Route are located in Parnell Square.

Traffic circulates around Parnell Square in a clockwise direction with signalised traffic controls located at three of the four corners, the exception being Parnell Square West and Parnell Square North which is a free flowing diverge with a large inner radius.

A bus lane for southbound traffic is provided on Parnell Square East.

Buses provide a very significant proportion of the existing traffic movements (18%) in Parnell Square while HGV and truck movements are insignificant due to location and the city centre ban on HGV between 07h00 and 19h00.

Southbound access to Parnell Square East is restricted to public service vehicles, motorcycles and cycles at the following junctions:

- Dorset Street to North Frederick Street.
- Parnell Square East to O'Connell Street Upper.

There are no cycle lanes on Parnell Square.

The Luas Green Line is located on Parnell Street to the south.

### **2.9.5.2 Public Transport**

Parnell Square is a hub for scheduled bus services serving the Greater Dublin area. The existing public transport in the area of Parnell Square comprises LUAS Green Line and a series of bus services including scheduled stage services, tourist sightseeing services, interurban coach services and coach services.

Future transportation improvements for the area include the combination of Bus Connects, Swiftway BRT, Strategic Green Route, GDA Cycle Network, Strategic Pedestrian Route etc. on Parnell Square East.

### **2.9.5.3 Proposed Development**

The proposals for the PSCQ include for the development of a new public plaza on Parnell Square North by the removal of all existing car parking and the reduction of the roadway to two 3.0 metres wide traffic lanes. Access for visitors will be a street level.

The new buildings will have a staff of 70 persons and cater for up to 3,000 visitors per day. Staff and visitors will generate up to 6,140 person trips per day with 3,090 trips on foot, 376 trips by cycle, 202 trips by car and the remaining 2,472 trips by public transport.

Secure cycle parking with 4 stands for 8 cycles will be provided for staff within the PSCQ and 100 cycle parking spaces for visitors in three locations on Parnell Square North.

Bus stop, loading area and set down will be provided in the northern traffic lane in the area of the existing bus stop.

Facilities for service deliveries and waste collection will be provided at the rear of the PSCQ. No provision for off-street car parking is being provided for the PSCQ.

New controlled pedestrian crossings will be provided on Parnell Square East and Parnell Square North with an upgraded pedestrian crossing on Parnell Square West.

Other than the pavement buildouts for the new pedestrian crossings, no footpath improvements are proposed on Parnell Square East or on Parnell Square West.

### **2.9.5.4 Mitigation**

#### **Demolition & Construction Phase**

The primary mitigation measure during the construction phase will be the implementation of the Construction Traffic Management Plan and the Construction Management & Waste Management Plan.

These will require all deliveries to and collection from the subject site to comply with the DCC requirements for HGV movements including the use of the Designated HGV Routes.

Two construction routes to the site have been identified. One will be to Parnell Square North from Parnell Square West and the second from Frederick Street North along Frederick Lane with departure along Bethesda Place to Dorset Street Upper.

A site compound with offices, material storage areas and drive through route for construction related vehicles will be provided on Parnell Square North in front of Nos 23- 28. The southeast corner of the compound has been splayed to provide a minimum of two traffic lanes at this location during the construction stage of the buildings.

At the rear of the PSCQ, ramp works to connect Frederick Lane to Bethesda Place will be carried out at the commencement of the construction phase so as to facilitate construction related deliveries to the rear of the proposed development.

Traffic and other movements on Parnell Square North during the construction phase of the public realm will be managed by carrying out the works in a number of stages to a sequence to be prepared in conjunction with Dublin City Council and implemented by the main contractor.

### **Operational Phase**

The primary mitigation measure during the operational phase will be the implementation of the *Travel Plan* which will implement the management of travel demand.

## **2.9.5.5 Impacts**

### **Demolition & Construction Phase**

Traffic and other movements during the construction phase are likely to be slight negative, short term impact depending on the sequence of phasing adopted by the Contractor.

### **Operational Phase**

As the capacity provided in the public transport services in the area of the proposed development will greatly exceed the predicted demand from the PSCQ, the predicted impact of the PSCQ on the public transport services is likely to be imperceptible.

Similarly, the permanent delineation of a two lane carriageway on Parnell Square North is likely to result in a positive long term

moderate impact on traffic flows and speeds on Parnell Square West and Parnell Square North.

## **2.9.6 Landscape & Visual Impact**

A survey of the potential visibility of the proposed development was carried out in April 2018. In the first instance, mapping analysis was carried out to identify locations from which views of the proposed development were likely. Mapping analysis identified some 20 no. representative locations where there was a potential for the proposed development to be visible. At each of representative locations, photographs were taken looking towards the proposed development. These photographs were taken in April 2018 at a time before trees in the views were in leaf, and when the potential visibility, and, therefore, the potential visual impact of the proposed development would be at its greatest.

Photomontages were prepared for each of the 20 no. view locations. In order to prepare the photomontages, digital models were constructed, these models being based on three dimensional models, design drawings and survey information provided by the design team.

The assessment of visual impacts on the surrounding urban environment had regard to the Guidelines on the Information to be Contained in Environmental Impact Statements prepared by the Environmental Protection Agency (2002) , and to Directive 2011/92/EU (as amended by Directive 2014/52/EU) on the assessment of the effects of certain public and private projects on the environment. The definition of visual impacts used in the assessment is taken from Section 5: Glossary of Impacts contained in the Guidelines on the Information to be Contained in Environmental Impact Statements prepared by the Environmental Protection Agency. This provides for five degrees of impact ranging upward in severity: Imperceptible, Slight, Moderate, Significant and Profound.

The assessment of visual impacts considered the likely impacts during the construction and operational phases of the development.

### **2.9.6.1 Visual Impact during the Construction Phase**

The proposed development has three main elements:

1. The demolition of existing modern structures and the construction of a large new structure on lands behind the houses at Nos 23 to 28 Parnell Square;

2. Comprehensive public realm works at Parnell Square North extending to Parnell Square West and East; and
3. Repair and reinstatement works to the facades of Nos 21 to 28 Parnell Square North, as well as local alterations to these facades and to steps and railings.

Each of these elements will give rise to visual impacts during the construction phase. It is considered that the potential impact of the proposed development during the construction phase will be "moderate" in extent.

While the visual impact of construction phase of the works is likely to be regarded as negative for a time, the anticipation of the completion of a major new public institution is likely to result in a positive public response

#### **2.9.6.2 Visual Impact during the Operational Phase**

The likely visual impact of the existence of the proposed development during the operational phase was based on the assessment of the likely impact from 20 representative locations.

It was found that the visibility of the proposed new structure at the rear of Nos 23 to 28 Parnell Square North will be limited, and that, where visible, only a small extent of the new structure will be visible.

It was also found that the visibility of the proposed new public realm works and of repair, and reinstatement works to the existing historic houses at Nos 21 to 28 Parnell Square North, will be limited to areas in close proximity to the north side of Parnell Square.

Of the 20 representative locations studied, it was found that there would be no visibility of the proposed development, and consequently no visual impact, from 11 locations.

At the other 9 locations: The likely visual impact from one location was assessed as ranging from none to "moderate". From 3 locations the impact was assessed as ranging from "slight" to "moderate". From the remaining 5 locations, all close to the site of the proposed development, the likely visual impact was assessed as "moderate"

#### **2.9.7 Biodiversity**

The assessment considered the potential direct, indirect and cumulative impacts on biodiversity within the study area (zone of



influence) of the proposed development. The assessment was undertaken in line with guidance documents including the Guidelines for Ecological Impact Assessment in the UK and Ireland Terrestrial, Freshwater and Coastal (CIEEM, 2016).

Habitat surveys and bat surveys were undertaken at the proposed development site. Only two habitats, as defined by Fossitt 2000 (Guide to Habitats in Ireland), were identified within the proposed development site, i.e. buildings and artificial surfaces and recolonising bare ground. No non-native invasive species listed on the Third Schedule of the Birds and Habitats Regulations were recorded within the proposed development site.

The closest European site to the proposed development site is South Dublin Bay and River Tolka Estuary SPA [004024], which is c. 2.3km to the north-west of the proposed development site. The closest pNHA is the Royal Canal (SY002103) which is c. 860m north-east of the proposed development. Following evaluation and a detailed analysis, no European or national sites are deemed to be at risk of likely significant effects from construction or operation of the proposed development.

During the bat surveys, no bats were recorded entering and/or exiting any of the buildings located within the proposed development site. No bats were recorded during the 2018 dusk survey, while only two bats were recorded during the 2015 dusk and dawn surveys (i.e. a common pipistrelle recorded flying across the site in a westerly direction). No evidence of bats was encountered within any of the buildings that were accessible during the external and internal inspections undertaken in 2015; however, some suitable features for bats to roost in were identified. In order to mitigate any potential impact on local bat populations, it is recommended that if bats are encountered during works undertaken within the buildings, the relevant activity will be suspended until the advice of a suitably qualified and licenced bat ecologist is sought. A derogation licence may need to be sought from NPWS in order to permit removal of bats and mitigate for the loss of any roosts on the site.

Herring Gulls *Larus argentatus* and Feral Pigeons *Columba livia domestica* were noted nesting on the roofs of buildings 28 to 23 on Parnell Square North. There is limited suitable habitat for breeding birds within the proposed development site. If refurbishment works to the upper sections of the Georgian buildings and the attic spaces are carried out during the breeding bird season (i.e. from the 1st March to the 31st August), there is the potential for significant negative impacts to local breeding bird populations. Noise, vibration

and increased human presence associated with the construction and refurbishment works associated with the proposed development is likely to result in a temporary disturbance impact to local breeding birds. However, given that the nature of the site and the surrounding environment, this impact is not anticipated to be significant. To limit the potential impact of construction on breeding birds, the refurbishment and associated works of the attic spaces and rooftops should take place in the non-breeding season (September to February, inclusive), where possible.

Following implementation of mitigation measures, no significant residual impacts are anticipated either during the construction or operational phase of the proposed development.

## **2.9.8 Soils and Geology**

### **2.9.8.1 Introduction**

This chapter presents the soils and geology assessment for the construction and operational phases of the proposed development.

### **2.9.8.2 Methodology**

The methodology used included a review of the draft planning stage documentation provided by the project design team, identification of the existing soil and geology environment and assessment of the proposals for the PSCQ and their impacts on soils and geology.

### **2.9.8.3 Receiving Environment (Baseline)**

#### Subsoil - Existing

Geotechnical site investigations carried out in 2014 and 2018 at the rear of 23 – 28 Parnell Square North identified the subsoil strata under the PSCQ to be:-

- Made ground to a depth of up to 1.9 metres below ground level
- Brown boulder clay with a thickness of 1.0 – 9.5 metres.
- Black boulder clay with a thickness of 3.5 – 13.0 metres.
- Sands and gravels with a thickness of 12.0 – 21.0 metres.

Laboratory tests on samples of the subsoil showed that:-

- a) The Total Organic Carbon organic content at 3.1% was

marginally above the inert limits of 3.0% at 0.5m below ground level in Trial Pit 101.

- b) Asbestos was detected in samples from depths between 0.5 and 3.0 metres below ground level in three of the trial pits.
- c) The subsoil was found to be mildly selenium- toxic at a relatively low concentration.

No site investigation was carried out at 20 – 21 Parnell Square North or in the area of the proposed plaza on Parnell Square North as there are no groundworks in these areas that could potentially affect the existing soil and geology environment.

#### Geology - Existing

The existing geology in the area of the PSCQ comprises predominantly Carboniferous Limestone typical of the Lucan Formation or Calp Limestone.

#### Groundwater - Existing

Groundwater at the subject site is some 12 – 13 metres below ground level.

### **2.9.8.4 Proposed Development**

#### Description

The subject proposal comprises the redevelopment of 20 – 21 Parnell Square and the former Colaiste Mhuire premises at 23 – 28 Parnell Square North into the Parnell Square Cultural Quarter (PSCQ).

The proposal includes for the development of a new public plaza on Parnell Square North extending into the northern ends of Parnell Square East and Parnell Square West respectively.

#### Subsoil – Proposed

The redevelopment of Colaiste Mhuire will require ground works at basement and ground level as part of the building sub-structure.

Within the public realm, the redevelopment of Parnell Square North will require excavation works in connection with repaving, landscaping and the installation of underground services.

These works will create a surplus of excavated material which will need to be disposed off-site.

### Geology

No works are proposed which would impact on the geology at the PSCQ.

#### **2.9.8.5 Disposal of Excavated Material**

Some of the subsoil at the PSCQ has been found to contain marginally elevated levels of Selenium, Asbestos and Total Organic Carbon organic content.

These materials will be disposed of off-site as described in Chapter 5.14: Material Assets - Waste Management of this EIAR.

### Groundwater

The existing groundwater level is 8.9 some metres below the lowest proposed excavation level and will not be affected by any of the excavation works.

However, piling for the PSCQ is expected to extend down to – 7.0 mOD under cores and down to 0.00 mOD elsewhere. The lowest pile toe is expected to extend up to 7.0 metres into the groundwater layer. These levels will be reviewed at the detailed design stage following a post planning site investigation to prove rock level.

#### **2.9.8.6 Mitigation Measures**

##### Demolition & Construction Phase

The primary mitigation measure during the construction phase will be the implementation of the Construction Management and Waste Management Plan including the management by the Contractor of the excavation works and disposal of subsoil.

A number of options have been considered to avoid the transfer of contaminated subsoil from the upper made ground layers into the groundwater layer during the construction of the substructures.

The installation of underpinning and temporary retaining walls together with the removal of contaminated subsoil prior to the commencement of piling will ensure piling through uncontaminated ground and avoid contamination of the underlying groundwater.

##### Operational Phase

No mitigation measures for soil or geology will be required at the operational phase.

### **2.9.8.7 Impacts**

#### Demolition & Construction Phase

Excavation works for substructures, groundworks, services and the public realm will create a surplus of material, some contaminated, which will be disposed of in accordance with Chapter 5.14: Material Assets – Waste Management, of this EIAR.

Any impact will be short-term and moderate.

The removal of contaminated soil prior to the commencement of piling, will ensure piling through uncontaminated ground and avoid contamination of the underlying groundwater.

The impact will not be significant.

#### Operational Phase

No impact on soil or geology is expected in the operational phase.

## **2.9.9 Water (Drainage, Supply and Flood Risk and Groundwater)**

### **2.9.9.1 Introduction**

This chapter presents the water assessment for the construction and operational phases of the proposed development. It was prepared by Waterman Moylan.

### **2.9.9.2 Methodology**

The methodology used included a review the existing and proposed water environment from the planning stage reports and drawings received from the project design team and an assessment of impacts on the water environment.

### **2.9.9.3 Receiving Environment (Baseline)**

#### Foul Drainage - Existing

The existing foul drainage systems within 20 – 21 Parnell Square and the former Colaiste Mhuire at 23 – 28 Parnell Square discharge by gravity to three external combined public sewers located on Parnell Square North, Bethseda Place and on Frederick Lane North.

#### Surface Water Drainage - Existing

The existing surface water systems within 20 – 21 Parnell Square North and the former Colaiste Mhuire at 23 – 28 Parnell Square

North discharge by gravity to three external combined public sewers located on Parnell Square North, Bethseda Place and Frederick Lane North.

#### Water Supply - Existing

The water supply to 20 – 21 Parnell Square and the former Colaiste Mhuire at 23 – 28 Parnell Square is from the existing public mains on Parnell Square North and Frederick Lane North.

Existing fire hydrants are located on Parnell Square North and Frederick Lane North

#### Public Realm - Existing

Surface water from the public realm on Parnell Square North is discharged by gravity to the existing combined public sewer on Parnell Square North.

#### Flooding

There is no record of historic flooding in the area of the site for the proposed development which is located in Flood Zone C where the risk of flooding is very low.

### **2.9.9.4 Proposed Development**

#### Description

The subject proposal comprises the redevelopment of 20 – 21 Parnell Square and the former Colaiste Mhuire premises at 23 – 28 Parnell Square North into the Parnell Square Cultural Quarter (PSCQ).

The proposal includes for the development of a new public plaza on Parnell Square North including services and landscaping, extending into the northern ends of Parnell Square East and Parnell Square West respectively.

#### Water Supply

Water supply to the PSCQ will be through new metred connections from the existing public main on Parnell Square North which has sufficient spare capacity to supply the development.

#### Foul Drainage

Foul drainage from the development will be pumped to the existing combined public sewer on Bethseda Place which has sufficient spare capacity to accommodate the foul water discharges from the development.

#### Surface Water Drainage

Surface water from buildings within the development will be managed through the use of sustainable surface water measures (SuDS). This will be achieved through the use of greenroofs, rainwater butts and other SuDS measures.

Surface water from the public realm on Parnell Square North will also be managed through the use of sustainable surface water measures (SuDS). This will be achieved through the use of bio-retention tree pits, permeable paving and other SuDS measures.

Following silt removal, any excess surface water remaining after attenuation will be piped to the existing combined sewer

The final details of the surface water drainage system will be agreed by the design team with the Environment and Transportation Department, Dublin City Council prior to the commencement of construction.

#### Flooding

No works are proposed as part of the PSCQ which would increase the very low flood risk at 20 – 21 or at 23 – 28 Parnell Square North.

### **2.9.9.5 Mitigation**

#### Construction Phase

The primary mitigation measure during the construction phase will be the implementation of the Construction Management and Waste Management Plan including the management by the Contractor of temporary local networks for water supply and drainage.

#### Operational Phase

The primary mitigation measures during the operational phase will be the ongoing operation of the low rate fittings, SuDs measures, attenuation measures and the ongoing maintenance of the water supply and drainage systems.

### **2.9.9.6 Impacts**

#### Construction Phase

Water supply and wastewater facilities for construction activities, staff and sub-contractors during the construction phase will increase demand on the public watermains and sewers.

Some disruption to the collection and disposal of surface water on Parnell Square North can be expected during the development works for the public plaza.

The impacts of the increased water demands on the existing networks during the construction phase are expected to be short term, slight and within the capacity of the existing public networks.

#### Operational Phase

Following the completion of the PSCQ, there will be

- (a) An increase in demand for potable water from the public mains.
- (b) An increased discharge of foul water from the PSCQ to the public sewers.
- (c) A reduction in the rate of surface water discharge from the site of the PSCQ.

The likely predicted impact of the increased water demands on the existing networks during the operational phase are expected to be long-term, slight, within the capacity of the existing public water networks. The impacts will not be significant and will have a neutral effect

### **2.9.9.7 Residual Impacts**

#### Construction Phase

There are no residual impacts expected to arise from the construction phase of the PSCQ.

#### Operational Phase

The primary residual impacts from the PSCQ will be increased demand for potable water and drainage services.

### **2.9.10 Air – Noise & Vibration**

AWN Consulting Limited has been commissioned to conduct an assessment into the likely noise and vibration impacts associated with the proposed cultural centre at Parnell Square North, Dublin.

The existing noise climate has been surveyed over the course of the day and night-time periods and has been found to be typical of a city centre location dominated by road traffic along the surrounding roads in the vicinity. Additional sources included pedestrian traffic.



When considering a development of this nature, the potential noise and vibration impact on the surroundings must be considered for each of two distinct stages: the short term impact of the construction phase and the longer term impact of the operational phase.

During the construction phase of the project vibration impact of the works on adjacent buildings is not expected to pose any significance in terms of potential for cosmetic or structural damage. Noise levels will be increased during different phases of the works occurring at the development site. It is expected that construction works will generate high levels of noise and there is potential for significant short term adverse impact on nearby sensitive receivers, particularly within 10m of certain construction works during the construction period. As works move beyond the 10m range around the site noise levels will reduce during the construction phase. Mitigation measures have been proposed to minimise significant noise or vibration impact on sensitive receivers.

Once operational, the proposed building will run mechanical plant items. No vibration impacts are predicted to occur from this or other sources. In respect of noise, mechanical plant items will be designed and located such that any noise emissions will be within the relevant noise criteria, and thus no significant adverse impact is predicted.

The impact of the change in traffic volumes along surrounding roads as a result of the development has been assessed. Travel to and from the proposed development will for the most part be by public transport, bicycle and walking. As such no significant noise and vibration impact from additional traffic associated with the development is expected.

### **2.9.11 Climate & Climate Change – Air Quality**

AWN Consulting Limited has been commissioned to conduct an assessment of the likely impact on the Air Quality and Climate associated with the proposed development project, Parnell Square Cultural Quarter, located in Dublin 1.

In terms of the existing air quality environment, baseline data and data available from similar environments indicates that levels of nitrogen dioxide, carbon monoxide, particulate matter less than 10 microns and less than 2.5 microns and benzene are generally well below the National and European Union (EU) ambient air quality standards.

The operational impact of the developments will be assessed for the pollutants nitrogen dioxide, particulate matter less than 10 microns, particulate matter less than 2.5 microns, carbon monoxide and benzene using the UK Design Manual for Roads and Bridges screening model which is a recommended screening model for assessing the impact of traffic on air quality. The inputs to the air dispersion model consist of information on road layouts, receptor locations, annual average daily traffic movement's, annual average traffic speeds and background concentrations. The GHG regional impact of the proposed development on emissions of CO<sub>2</sub> was assessed using the Design Manual for Roads and Bridges screening model.

Modelling a scenario whereby the development does not progress for both the opening and design years will indicate if concentrations are within the EU ambient air quality standards under all scenarios and all five pollutants assessed. However due to the low impacts on traffic that modelling was screened out in accordance with guidelines. In addition, the background concentrations at the proposed development compared to the respective EU limit values for the pollutants was reviewed. Based on the traffic impacts falling below the screening levels for the UK Design Manual for Roads and Bridges modelling results, the impact of the developments in terms of ambient levels of, nitrogen dioxide, particulate matter less than 10 microns, particulate matter less than 2.5 microns, carbon monoxide and benzene are predicted to be negligible with respect to the operational phase local air quality assessment for the long and short term. Mitigation measures in relation to traffic-derived pollutants have focused on improvements in both engine technology and fuel quality with vehicles over recent years significantly cleaner than those prior to this period.

The greatest potential impact on air quality during the construction phase is predicted to be from construction dust emissions, particulate matter less than 10 microns emissions, particulate matter less than 2.5 microns emissions and the potential for nuisance dust. In order to minimise dust emissions during construction, a series of mitigation measures will be prepared in the form of a Dust Minimisation Plan. When the dust minimisation set out in the Plan are implemented, fugitive emissions of dust from the site will be insignificant and pose no nuisance at nearby receptors.

### **2.9.12 Climate - Sunlight Analysis**

A three dimensional digital model of the proposed development and, of existing buildings in the area was constructed by ARC

Consultants based on drawings and three dimensional models supplied by the Design Team; on drawings and information available from the Dublin City Council online planning register; and with reference to on-site, satellite and aerial photography.

Using the digital model, shadows were cast by ARC at several times of the day at the equinox and presented on shadow study diagrams submitted with this Environmental Impact Statement Assessment Report. ARC also analysed the three digital models of the proposed development and of the existing buildings surrounding the development site using proprietary sunlight analysis software in order to quantify the likely impact of the proposed development on windows with a reasonable expectation of sunlight. All impacts described below will be permanent. Impacts described as "imperceptible" are considered to be neutral in character.

Any reduction in sunlight access resulting in a "slight", "moderate" and "significant" impact would usually be considered to be negative in character, unless otherwise indicated. Any increase in sunlight access resulting in a "slight", "moderate" and "significant" impact would usually be considered to be positive in character, unless otherwise indicated.

ARC's analysis indicated that the potential of the proposed development to result in overshadowing of lands outside the application site is largely limited to neighbouring lands at Parnell Square, Granby Row (Parnell Court), Bethesda Place, Sheridan Place and Frederick Lane North.

The proposed development is likely to result in "significant" additional overshadowing of lands to the north (i.e. the rear façade of the three storey residential development at Sheridan Place) during the mornings and early afternoons throughout the year, although this impact may be considered to be consistent with emerging trends for development of similar scale in the area.

ARC's analysis further indicates that the proposed development has the potential to result in "imperceptible" to "moderate" additional overshadowing of Charlemont House, as extended to accommodate the Hugh Lane Gallery, during the afternoons and evenings throughout the year.

The potential for shadows cast by the proposed development to result in negative impacts on the amenity value of rooms within the gallery or on the function of the gallery is strictly limited by the fact that rear-facing windows within Charlemont House do not have a reasonable expectation of sunlight (given that the rear façade faces within 90 degrees of due north) and given that there are few windows serving the modern elements of the gallery.

Shadows cast by the proposed development are also likely to result in "imperceptible" to "moderate" reduction in sunlight access to Granby Row (including Parnell Court) as far as Dorset Street Upper for a short time during the very early mornings of spring, summer and autumn months and an "imperceptible" to "slight" impact on lands to the north to the rear of Parnell Square North and Frederick Lane North for a short time during the late afternoons of the winter months.

### **2.9.13 Climate – Daylight Analysis**

In order to assess the likely impact of the proposed development on daylight access, ARC undertook analysis of the construction of the proposed development within a series of representative sample rooms in existing buildings surrounding the application site. All impacts described below will be permanent. Impacts described as "imperceptible" are considered to be neutral in character.

Any reduction in daylight access resulting in a "slight", "moderate" and "significant" impact would usually be considered to be negative in character, unless otherwise indicated. Any increase in daylight access resulting in a "slight", "moderate" and "significant" impact would usually be considered to be positive in character, unless otherwise indicated.

The impact of the proposed development on daylight access within existing buildings is likely to be most significant in the case of existing buildings at close proximity with windows directly opposing the application site. Specifically, the proposed development is likely to result in a "moderate" to "significant" reduction in daylight access to a small number of southwest-facing rooms at Sheridan Place, although, given statutory planning policy for densification for the urban area, the impact of the proposed development on these rooms could be considered to be consistent with an emerging pattern of very high density development on backland or infill sites in Dublin City Centre.

The impact of the proposed development on daylight access within buildings at very close proximity to the site (e.g. Parnell Court and within Charlemont House to the east) are likely to range from "imperceptible" to "moderate". The impact on daylight access on other nearby buildings at Granby Row and Frederick Lane North is likely to range from "imperceptible" to "slight". Given that the potential for development to result in impacts on daylight access diminishes with distance, it is the finding of ARC's analysis that the

impacts outlined above represent a worst-case scenario and the proposed development is unlikely to result in any undue adverse effects on daylight access within buildings in the wider surrounding area.

### **2.9.14 Material Assets – Waste Management**

AWN Consulting Ltd. carried out an assessment of the potential impacts associated with resource consumption and waste management during the construction and operational phases of the proposed development. The receiving environment is largely defined by Dublin City Council as the local authority responsible for setting and administering waste management activities in the area through regional and development zone-specific policies and regulations.

During the demolition and construction phases, typical construction and demolition (C&D) waste materials will be generated which will be source segregated on-site into appropriate skips/containers and removed from site by suitably permitted waste contractors to authorised waste facilities.

Where possible, materials will be reused on-site to minimise raw material consumption.

Source segregation of waste materials will improve the re-use opportunities of recyclable materials off-site.

Construction of foundations and services will require the excavation of c. 9,000m<sup>3</sup> made ground & subsoil. It is anticipated that there will be limited or no opportunities for reuse of this material onsite and it will require removal for offsite reuse, recovery, recycling and/or disposal.

A number of avoidance, remedial and reduction measures will be employed during the demolition and construction phase of the proposed development. A Construction and Demolition Waste Management Plan (C&D WMP) has been developed and adherence to this will ensure effective waste management including minimisation, reuse, recycling, recovery and disposal of waste material. Additionally, an Outline Construction and Waste Management Plan has been prepared by ARUP.

The following specific mitigation measures will be implemented:

- Building materials will be chosen with an aim to 'design out waste'.

- On-site segregation of waste materials will be carried out to increase opportunities for off-site reuse, recycling and recovery.
- Left over materials (e.g. timber off-cuts, broken concrete blocks/bricks) and any suitable construction materials shall be re-used on-site, where possible.
- All waste materials will be stored in skips or other suitable receptacles in designated areas of the site.
- Any hazardous wastes generated (such as chemicals, solvents, glues, fuels, oils) will also be segregated and will be stored in appropriate receptacles (in suitably bunded areas, where required).
- A waste manager will be appointed by the main contractor(s) to ensure effective management of waste during the excavation and construction works.
- All construction staff will be provided with training regarding the waste management procedures.
- All waste leaving site will be reused, recycled or recovered where possible to avoid material designated for disposal.
- All waste leaving the site will be transported by suitable permitted contractors and taken to suitably registered, permitted or licenced facilities.
- All waste leaving the site will be recorded and copies of relevant documentation maintained.

The above mitigation measures will ensure the impact to the environment during the construction phase of the proposed development will be a likely, short-term, neutral effect which is imperceptible.

Dedicated areas have been allocated for storage of waste materials generated during the operational phase of the development. This waste generated will comprise of typical commercial waste types. The waste storage areas have been allocated to ensure a convenient and efficient management strategy with source segregation a priority.

Waste will be collected from the designated waste collection areas by permitted waste contractors and removed off-site for re-use, recycling, recovery or disposal.

A number of avoidance, remedial and reduction measures will be employed during the operational phase of the proposed development. An Operational Waste Management Plan (QWMP) has

been prepared and included as Volume 2, Appendix 5.14.2. All waste materials during operational phase will be segregated into appropriate categories and will be stored in appropriate bins or other suitable receptacles in a designated, easily accessible areas of the site in accordance with the Dublin City Development Plan 2016 – 2022.

The following specific mitigation measure will be implemented;

- On-site segregation of all waste materials into appropriate categories.
- All waste materials will be stored in colour coded bins or other suitable receptacles in designated, easily accessible locations. Bins will be clearly identified with the approved waste type to ensure there is no cross contamination of waste materials.
- All waste collected from the development will be reused, recycled or recovered where possible, with the exception of those waste streams where appropriate facilities are currently not available.
- All waste leaving the site will be transported by suitable permitted contractors and taken to suitably registered, permitted or licensed facilities.
- All waste leaving the site will be recorded and copies of relevant documentation maintained.

The above mitigation measures will ensure the impact to the environment during the construction phase of the proposed development will be a likely, long-term, neutral effect which is imperceptible.

## 2.10 Mitigation Measures

Mitigation Measures proposed as part of this EIAR. Mitigation Measures are envisaged to avoid, prevent, reduce or, if possible, offset and identified significant adverse effects on the environment.

These mitigation measures are proposed at Demolition and Construction and Operational Phase. This Section refers in summary to these measures as follows:

### 2.10.1 Demolition and Construction Phase

- The proposed development to be carried out in accordance with the Outline Construction & Demolition Waste Management Plan.
- The Proposed development to be carried out in accordance with the Construction Traffic Management Plan.
- Liaising with the Local Authority, Dublin City Council, and their Planning Department and Conservation Officer.
- Controlled Modification of the internal environment of the Existing Protected Structures during the demolition & construction phase by the introduction of heat and / or air conditioning.
- Further Test Trenching and recording to be carried out as part of advance archaeology contract, carried out in full consultation with the National Monuments Service of the DoCHG and the Dublin City Archaeologist.
- New disable car parking spaces on Granby Row and Frederick Street north before the existing disable spaces on Parnell Square North are occupied by the site compound.
- Works to the existing buildings will be monitored for bats. If bats are found construction is to be suspended, the advice of a suitably qualified and licenced bat ecologist should be sought. A derogation licence may need to be sought from NPWS in order to permit removal of bats and mitigate for the loss of any roosts on the site.
- Refurbishment and associated works of the attic spaces and rooftops should take place in the non-breeding season (September to February, inclusive), where possible.
- If required, a licence from the NPWS is needed to permit the destruction of nest sites and disturbance to birds during their breeding season (i.e 1st March to the 31st August)
- Removal of excavated material to be disposed of in accordance with the Construction & Demolition Waste Management Plan.



- The Contractor should compile a Noise and Vibration Management Plan in dealing with reducing significant noise and vibration impacts.
- During Demolition and Construction Phase, if the construction noise and vibration risk assessment identify the need for monitoring, Noise and Vibration Terminals and stations are to be erected. In addition, it is recommended that spot check noise & vibration measurements are conducted on a monthly basis.
- During Demolition and Construction Phase a dust minimisation plan should be prepared.
  - Dust monitoring (Bergerhoff) should be conducted during the demolition and construction phase to ensure efficiency of the dust mitigation measures.
  - Dust Deposition Monitoring is proposed using a number of Bergerhoff Gauges.

### **2.10.2 Operational Phase**

- Monitor and control the wear and tear to internal fabric during the operational phase of the development and a control system to ensure room function remain within the usage types they were intended.
- A Travel Plan for the proposed development and in particular the Action Plan section of the Travel Plan which will implement the management of travel demand.
- Operational Phase water mitigation comprises the operation of: low rate fittings, SuDs, ongoing attenuation of surface for surface water runoff, the ongoing maintenance of the water supply and drainage systems.
- To ensure no increase to the background noise levels from plant noise emissions, a range of limits are to be adhered to:

Each Environmental Topic examined under Chapter 5.1 – 5.14 of this EIAR sets out associated proposed mitigation measures. These have been further extracted and compiled, for ease of reference, in Chapter 6: Summary of Mitigation Measures, of this EIAR.

## **2.11 Residual Impacts**

The Residual Impacts are the final or intended effects which occur after the proposed mitigation measures have been implemented.

These effects occur during the construction and demolition phase and the operational phase of the proposed development.

Each Environmental Topic from Chapter 5.1 – 5.14 of this EIAR sets out specific residual impacts (otherwise known as ‘predicted impacts’) after mitigation. These are compiled under Chapter 7: Summary of Residual Impacts, of this EIAR.

The non-technical language of these residual impacts are outlined under Section 2.9 of this Chapter.

## **2.12 Interactions and Cumulative Impact**

Chapter 8 of the EIAR deals with likely significant interactions between predicted environmental effects of the proposed development, as identified in the EIAR Chapters.

The principal interactions between each of the environmental topics assessed are illustrated, under Table 2.1. Further detail is provided in the Sections that follow within this Chapter.

**Table 2.1:** Matrix of Interactions between Environmental Factors (During Demolition and Construction, and Operational Phase)

	Population & Human Health	Cultural Heritage – Architectural Heritage	Cultural Heritage – Archaeology	Material Assets – Transportation	Landscape & Visual Impact	Biodiversity	Soil & Geology (including 'land')	Water	Air - Noise & Vibration	Climate & Climate Change – Air Quality	Daylight Analysis	Sunlight Analysis	Material Assets – Waste Management
Population & Human Health		✓	x	✓	✓	x	✓	x	✓	✓	✓	✓	✓
Cultural Heritage – Architectural Heritage	✓		x	✓	✓	x	x	x	✓	x	x	x	✓
Cultural Heritage – Archaeology	x	x		x	x	x	✓	x	x	x	x	x	x
Material Assets – Transportation	✓	✓	x		✓	x	✓	x	✓	✓	x	x	✓
Landscape & Visual Impact	✓	✓	x	✓		x	x	x	x	x	x	✓	x
Biodiversity	x	x	x	x	x		✓	✓	✓	x	x	x	x
Soil & Geology (including 'land')	✓	x	✓	✓	x	✓		✓	✓	x	x	x	✓
Water	x	x	x	x	x	✓	✓		x	x	x	x	x
Air - Noise & Vibration	✓	✓	x	✓	x	✓	✓	x		x	x	x	x
Climate & Climate Change – Air Quality	✓	x	x	✓	x	x	x	x	x		x	x	✓
Daylight Analysis	✓	x	x	x	x	x	x	x	x	x		x	x
Sunlight Analysis	✓	x	x	x	✓	x	x	x	x	x	x		x
Material Assets – Waste Management	✓	✓	x	✓	x	x	✓	x	x	✓	x	x	

Where there is an Interaction = ✓

No interaction = x

Cumulative effects may arise from:

- The interaction between the various impacts within a single project.
- The interaction between all of the different existing and/or approved projects in the same area as the proposed project.

The interactions between the environmental topics examined have been outlined in detail above under Table 2.1.

## **2.12.1 Future Plans**

### **2.12.1.1 Parnell Square Cultural Quarter: A Catalyst for Renewal and Growth along the Civic Spin, Vision Document 2013**

The PSCQ Vision document, identifies a range of proposals for Parnell Square, including:

1. A cornerstone of the vision document is an exemplar city library to be built within the former Colaiste Mhuire buildings (Nos.23 - 28 Parnell Square North) and includes a design centre and inter-cultural hub to facilitate learning, creativity and participation.
2. Ancillary workshop spaces, rehearsal rooms and study areas in Nos.20/21 Parnell Square North.
3. Fully or partially pedestrianized plaza environment to Parnell Square North, to improve the public realm and to provide opportunities for cultural events and activities.
4. New landscaping/public realm works at the eastern and western sides of Parnell Square, with widened paths and new trees, to improve the pedestrian access and safety while maintaining traffic flow.

The vision document has formed the framework for the proposed development, as further detailed in Chapter 3: Description of Proposed Development.

The range of proposals outlined above have been proposed and assessed as far as practically possible, based on the site conditions pertaining to and the information available during the planning design and EIAR stages.

It is likely that the proposed development will facilitate regeneration in the area of the project site, giving rise to new development and uses. These should be generally compliant land use and development objectives for the area as set down in the Dublin City Development Plan. There is therefore the potential for knock on development and uses in the area arising from the proposed development. However, the extent of such development is

unknown and beyond the scope of the Design Team or EIAR team to determine.

### **2.12.1.2 Transportation Plans**

As detailed under Chapter 5.5: Material Assets – Transportation, there are currently a number of transportation improvements in the area of Parnell Square which include:

- New Metro Link from Estuary to Cherrywood with an underground stop on O’Connell Street North.
- Dublin City Council Strategic Green Route along Parnell Square East as an extended part of the Civic Spine.
- GDA Cycle Network Route No. 3 along Parnell Square East.
- Dublin City Council Strategic Pedestrian Route on Parnell Square.
- Dublin Bus network redesign.

This Chapter notes that in the absence of detailed proposals for the various transportation initiatives and management measures to be applied to Parnell Square East in the future, such as Bus Connects, Swiftway, BRT, Strategic Green Route, GDA Cycle Network, Strategic Pedestrian Route which are outside the control of the PSCQ project, it has not been possible to determine their cumulative effect on the operation of the public transport services in the Parnell Square area.

## **2.13 Difficulties Encountered in Compiling and Specified Information**

Given the nature of the site and the current condition of the Protected Structures and curtilage, assessment of archaeology and architectural heritage impacts is based on best available information at the time of writing. As is the case with projects of this nature, certain design options will not become clear until further on site investigative works can be carried out on foot of a grant of permission. This may require further details to be worked out by the relevant experts and consultation with the appropriate authorities.

Otherwise, no particular difficulties, such as technical deficiencies or lack of knowledge or sources of information, were encountered in compiling any of the specified information contained in this Environmental Impact Assessment Report.

Where appropriate, published sources of information are acknowledged and specifically commissioned surveys and studies undertaken especially for the

purposes of assessing the proposed development project, have been referred to as are the relevant sub-consultants who prepared specialist reports.

A list of all consultants involved in the compilation of information for this EIAR is provided in Chapter 1: 'Introduction'.

It is considered that given the parameters, timeframe, and availability of data; the study represents a robust consideration of potential and possible significant impacts on the local environment arising from the subject proposal. In addition, all expert consultants have endeavoured to present reasonable and effective mitigation measures where appropriate.

This Environmental Impact Assessment Report (EIAR) for the New City Library and public realm works has been prepared on behalf of Dublin City Council & PSCQ Developments Ltd (Joint Applicants) by an expert multi-disciplinary EIA team. This EIAR accompanies a planning application made directly to An Bord Pleanála (ABP) under the provisions of Section 175 of the Planning and Development Act 2000, as amended (The Act).

## **2.14 Forecasting Methods**

The methods employed to forecast the effects on the various aspects of the environment are standard techniques used by each of the particular individual disciplines. The general format followed was to identify the receiving environment, to add to that a projection of the loading placed on the various aspects of the environment by the development, to put forward amelioration measures, to lessen or remove an impact and thereby arrive at a net predicted impact.

## **2.15 Bibliography**

This Chapter of the EIAR sets out a complete list of the Bibliography used in the preparation of the EIAR.

For ease of reference, this Chapter is structured according to each environmental topic examined.