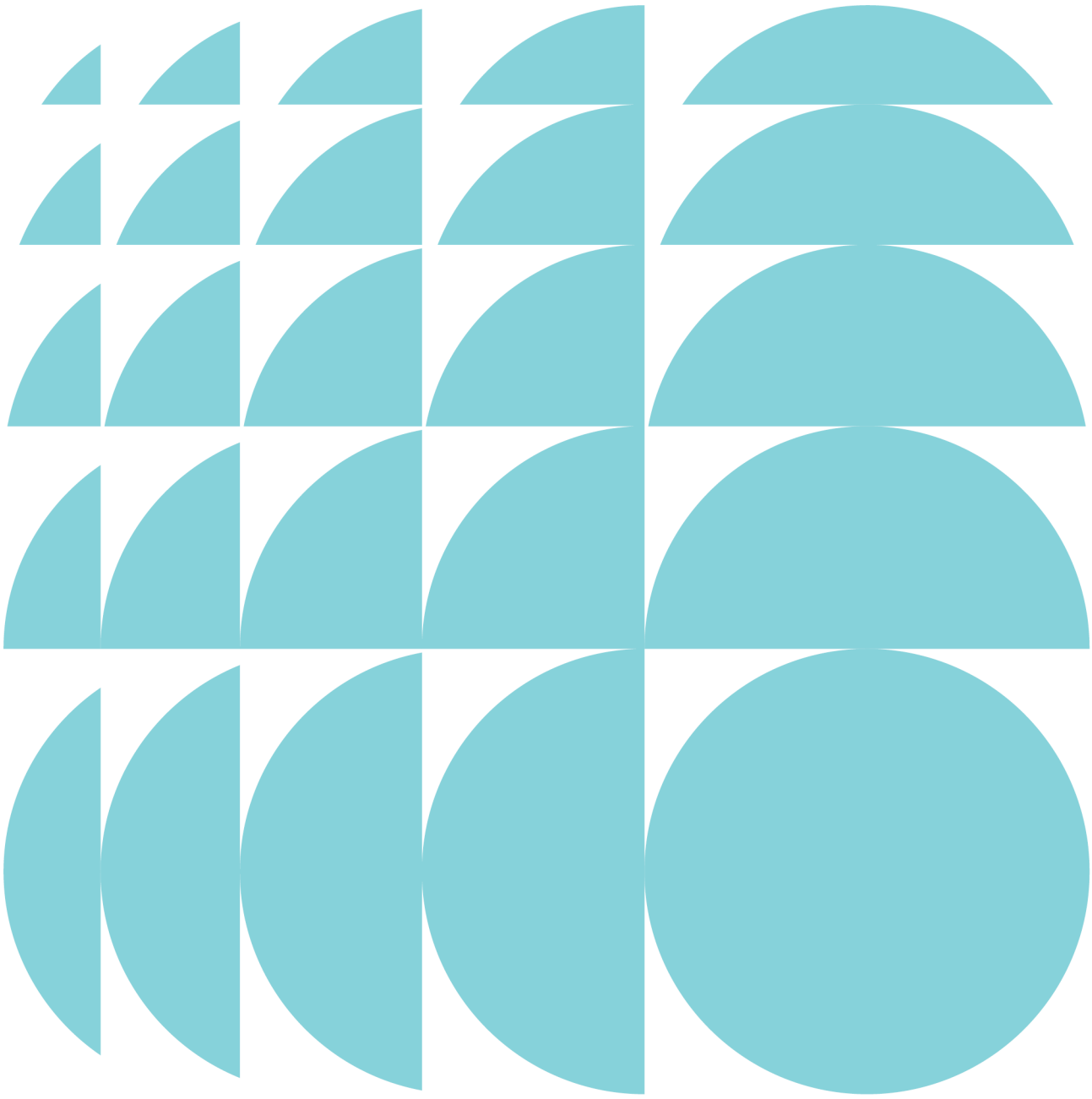
ETHOS URBAN

Environmental Impact Statement

338 Pitt Street, Sydney
Stage 2 State Significant Development Application
SSD 10362

Submitted to City of Sydney Council
On behalf of China Centre Development Pty Ltd

18 June 2020 | 15882



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Development Application Details	
Applicant Name	China Centre Development Pty Ltd
Applicant Address	Level 6, 233 Castlereagh St, Sydney NSW 2000 Australia
Land to be Developed	332-336 and 338-348 Pitt Street, 233, 241-243, 245-247 and 249-253 Castlereagh Street and 126-130 Liverpool Street, Sydney
Proposed Development	As described in Section 5.0 of this Environmental Impact Statement

Prepared By	
Name	Jim Murray
Qualifications	BA MURP
Address	173 Sussex Street, Sydney
In Respect Of	State Significant Development - Development Application

Certification

I certify that I have prepared the content of this EIS and to the best of my knowledge:

- it is in accordance with Schedule 2 of the Environmental Planning and Assessment Regulation 2000;
- all available information that is relevant to the environmental assessment of the development to which the statement relates; and
- the information contained in the statement is neither false nor misleading.

Signature

Name Jim Murray

Date 18/06/2020

Executive Summary

This Environmental Impact Statement (EIS) has been prepared on behalf of China Centre Development Pty Ltd in support of a Stage 2 State Significant Development (SSD) Development Application (DA) made to the City of Sydney (Council) for the construction of a 257m high mixed-use development at the site known collectively as 338 Pitt Street, Sydney (the site).

On 22 October 2019, in accordance with Section 2.4 of the *Environmental Planning & Assessment Act 1979*, the Minister for Planning and Public Spaces and the Secretary of the Department of Planning, Industry and Environment (DPIE) delegated the development application and consent authority functions for SSD DAs on the site to Council. Therefore, this SSD DA has been submitted to Council and will be determined by the Central Sydney Planning Committee (CSPC).

The proposed development will significantly improve the urban context of Pitt Street, Liverpool Street and Castlereagh Streets and contribute to the revitalisation and increased pedestrian permeability of the midtown precinct in the Sydney CBD. The proposed development will make a world-class contribution to the Sydney skyline with the addition of two slender and timeless towers.

In addition to its contribution to the public domain along Pitt, Liverpool and Castlereagh Streets, the proposed development will deliver a significant public benefit through the provision of a new 'urban courtyard' which has an area of approximately 1,050m² and will provide shelter from the intense activity of the Sydney CBD. The urban courtyard will be sleeved with activating retail and hotel uses and has been designed to accommodate extensive landscaping, water features and the installation of public art.

China Centre has been working on the site since 2016 to realise the best outcome for this prominent Pitt Street address. A Stage 1 Concept Proposal (D/2016/1509) was approved by the CSPC in November 2017, which established a building envelope and mix of land uses for the site.

An Invited Architectural Design Competition was held in 2018 in accordance with Council's Competitive Design Policy, with six submissions from international and local firms. The competition jury selected FJMT and partners as the winner, with the design chosen for *"...the permeability of the ground plane, the flexibility of the podium levels and the opportunity that the two tower form presents to reduce the overall visual bulk and overshadowing of the nearby parks and the public domain, as well as providing superior residential amenity.*

This detailed (Stage 2) SSD DA seeks detailed consent for a development that is based on the winning design. The design of the proposed development has been refined having regard to the competition jury comments so that the consent authority can be satisfied the building exhibits design excellence.

The proposed development includes demolition of all existing structures on the site, excavation, site preparation (including any site remediation) and construction of 5 basement levels, construction of mixed-use podium buildings and construction of two 80-storey towers comprising 592 residential apartments and a 158-room boutique hotel. A detailed description of the proposed development is provided in **Section 4.0** of this EIS as well as in the Architectural Design Statement at **Appendix A**.

An assessment of the matters identified in the Secretary's Environmental Assessment Requirements is provided in **Section 5.0** of this EIS. To ensure the detailed SSD DA remains consistent with the Stage 1 Concept Proposal, a concurrent Section 4.55(2) Modification Application has been submitted to amend the Stage 1 Concept Proposal to reflect the changes that have occurred as a result of the competitive design process and subsequent design development.

The proposed development is consistent with the applicable environmental planning instruments and the relevant provisions in the *Sydney Local Environmental Plan 2012* (SLEP 2012). The proposal is consistent with the objectives of the B8 Metropolitan Centre land zone under the SLEP 2012 and achieves the objects of the *Environmental Planning and Assessment Act 1979*. Mitigation measures have been recommended where required to ensure the proposed development will not have any unreasonable environmental, social or economic impacts.

Given the above considerations, supporting technical documentation and assessment within the EIS, the proposed development is recommended for approval.

Figure 1 Photomontage of Proposed Development

Source: FJMT

1.0 Introduction

1.1 Overview

This Environmental Impact Statement (EIS) is submitted to the City of Sydney Council (Council) in support of a Stage 2 State Significant Development (SSD) Development Application (DA) for a mixed-use redevelopment at 332-336 and 338-348 Pitt Street, 233, 241-243, 245-247 and 249-253 Castlereagh Street and 126-130 Liverpool Street, Sydney. These sites are referred to collectively as '338 Pitt Street'.

Specifically, the SSD DA (SSD 10362) seeks approval for:

- Demolition of all existing structures;
- Excavation and site preparation, including any required remediation;
- Construction and use of an 80 storey mixed-use development consisting of two high rise towers with a maximum building height of 257m (277.5 AHD) above podium buildings and public domain:
  - 592 residential apartments, with associated communal amenities and facilities;
  - A boutique hotel, with 158 hotel rooms and associated hotel amenities and facilities;
  - 5,123m² of retail gross floor area
  - A total of 84,717m² of gross floor area
- Vehicular access from Pitt Street, with an off-street porte-cochere drop off and lobby for the hotel;
- Servicing and plant equipment throughout the buildings;
- Five (5) basement levels accommodating residential, retail and hotel car parking, motorcycle parking, bicycle parking, loading dock, hotel bus drop off zone, storage, retail uses, and relevant building services;
- Improvements to the public domain, including landscaping and new pedestrian through site links, and
- Augmentation and extension of utilities and services.

This EIS has been prepared in accordance with Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation), and the Secretary's Environmental Assessment Requirements (SEARs), issued on 19 July 2019 for the preparation of the EIS.

This EIS is based on the Architectural Drawings prepared by FJMT (**Appendix A**) and other supporting material appended to the EIS. It describes the site, its environs and the proposed development, and provides an assessment of the environmental impacts and identifies the steps to be taken to protect or minimise the potential impacts on the environment. This EIS is structured in the following manner:

- Background to the development and planning process.
- Outline of the SEARs and where they are addressed in the EIS.
- Analysis of the site and its context.
- Summary of the consultation process.
- Description of the proposed development.
- Assessment of the planning and environmental matters identified in the SEARs.
- Environmental risk assessment.
- Mitigation measures.
- Conclusion

A separate Section 4.55 (2) modification application to modify the relevant Stage 1 Concept Proposal (D/2016/1509) has been lodged concurrently with Council to reflect design changes that have occurred as a result of the Invited Architectural Design Competition and subsequent design development.

1.2 Instruments of Delegation

The capital investment value (CIV) of the hotel component of the development is $129,943,202. The development is therefore classified as State Significant Development by virtue of Clause 12(2) of Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* (the SRD SEPP) as it comprises tourist and visitor accommodation with a CIV in excess of $100 million. Further, in accordance with Clause 8(2) of the SRD SEPP, all parts of a single development application are also declared SSD for the purposes of the EP&A Act.

On 22 October 2019, in accordance with Section 2.4 of the EP&A Act, the Minister for Planning and Public Spaces and the Secretary of the Department of Planning, Industry and Environment (DPIE) delegated the development application and consent authority functions for SSD DAs on the site to Council. Therefore, this SSD DA has been submitted to Council and will be determined by the Central Sydney Planning Committee (CSPC).

1.3 Project Vision

338 Pitt Street offers a unique opportunity for the holistic redevelopment of a significant city block within the Sydney Central Business District (CBD). This development aims to act as a catalyst project to promote the revitalisation of the 'midtown precinct' of the CBD. The delivery of innovative tower forms and their contribution to the Sydney CBD skyline, will also capitalise on the abundant solar access for potential residential apartments while managing overshadowing impacts on significant public spaces in the vicinity of the site. The project will provide an enhanced pedestrian environment including the removal of existing driveway structures within the building setback and to provide additional pedestrian links and public domain through the site.

1.4 Project Team

This SSD DA is the result of extensive investigations by the project team, who are listed in **Table 1**. The SSD DA is supported by a number of expert technical reports provided at the appendices, which should be read in conjunction with this EIS.

Table 1 Project Team

Discipline	Organisation
Client and Landowner	China Centre Development Pty Ltd
Project Manager	Touchstone Partners
Architect	FJMT, Trias, Polly Harbison Design and Aileen Sage
Building Certifier	BCA Logic
Town Planner	Ethos Urban
Landscape Architect	Martha Schwartz and Partners
Wind and Reflectivity Engineer	CPP
ESD Consultant, Acoustic, Rail Corridor, Utilities	Arup
Parking & Traffic Engineer	GTA Consultants
Accessibility Consultant	Morris Goding
Photomontage View Consultant	Virtual Ideas
Visual Impact Consultant	Ethos Urban
Quantity Surveyor	MBM
Public Art Consultant	FJMT
Waste Consultant	MRA Consulting Group
Geotechnical and Geometrical Engineer	Pells Sullivan Meynink
Environmental Consultant	JBS&G
Site Surveyor	LTS Lockley
Heritage Consultant	Urbis
Indigenous Heritage and Archaeological Consultant	AMAC, SAS
Flooding and Stormwater	TTW
CPTED Consultant	Ethos Urban

1.5 Background to the Proposed Development

1.5.1 Concept Proposal (D/2016/1509)

On 30 November 2017, the Central Sydney Planning Committee (CSPC) approved the Stage 1 Concept Proposal (D/2016/1509) for the redevelopment of 338 Pitt Street, Sydney and development consent was issued on 28 February 2018.

The Stage 1 concept approval grants consent for the following:

> *"Concept proposal for a building envelope with a height of up to 235m (RL 258.161m) or approximately 66 storeys, with indicative future land uses of retail, commercial and hotel uses in a podium and residential uses in a tower above, vehicular access and crossovers via Pitt Street and Castlereagh Street and indicative locations for east-west through site links at the northern end of the site and southern end of the site between Dungate Lane and Pitt Street.*

The development parameters of the Stage 1 concept approval are outlined in **Table 2** and an elevation of the approved envelope is shown at **Figure 2**. It is noted that in accordance with Clause 6.21 of the *Sydney Local Environmental Plan 2012* (the Sydney LEP 2012), the project is pursuing an additional 10% building height which is shown indicatively on **Figure 2**.

Table 2 Stage 1 Concept Proposal Building Envelope

Component	Building Envelope
Maximum Height	Tower • North-Eastern Corner: RL 258.161 (AHD) • South-Eastern Corner: RL 255.92 (AHD) • South-Western Corner: RL 253.28 (AHD) • North-Western Corner: RL 255.87 (AHD) Podium • Castlereagh Street: RL 66.5 (AHD) • Pitt Street: RL 52.0 (AHD) • Pitt Street and Liverpool Street corner: RL 47.0 (AHD)
GFA *(indicative scheme only)*	• Residential: 57,648m² • Hotel: 10,402m² • Retail: 4,319m² • Commercial: 8,977m² **Total: 81,346m²**
FSR *(indicative scheme only)*	13.755:1
Basement *(indicative scheme only)*	4 Levels 445 Car Parking Spaces

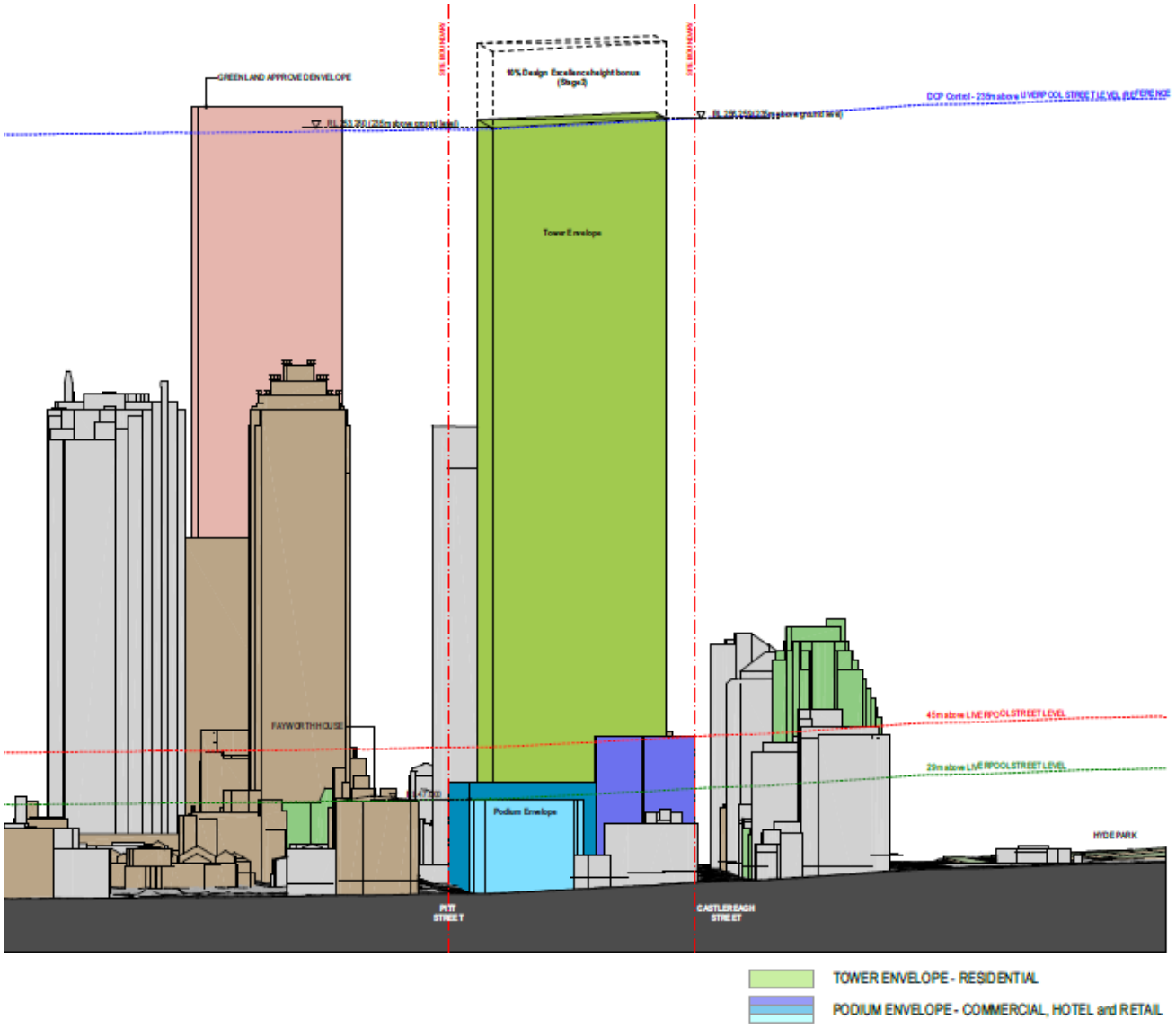


Figure 2 Stage 1 Concept Proposal (Southern Elevation)

Source: FJMT

1.5.2 Invited Architectural Design Competition

In accordance with the requirements of the Design Excellence Strategy endorsed with the Stage 1 Concept Proposal, and the *City of Sydney Competitive Design Policy 2013*, an Invited Architectural Design Competition was undertaken in mid-2018. The purpose of this design competition was to select the highest quality architectural, landscape and urban design solution for the detailed design development.

The competitors invited to participate in the process were selected due to their demonstrated ability to design high-quality and sustainable residential/mixed-use towers and public/retail spaces. The five architectural teams that participated were:

- Zaha Hadid Architects (ZHA), Architectus, MAKE and Right Angle Studio;
- Kohn Pedersen Fox (KPF), Crone and Andrew Burns Architecture;
- Grimshaw, Smart Design, Panovscott and Future City;
- Francis-Jones Morehen Thorp (FJMT), Polly Harbison, Trias and Aileen Sage; and
- Skidmore, Owings & Merrill (SOM), PTW Architects and Stewart Hollenstein.

Following deliberations, the Jury unanimously selected FJMT and partners as the winner of the design competition and authors of the scheme most capable of achieving design excellence (refer to **Figure 3**). The Jury determined that FJMT's scheme demonstrated a superior response, concluding that:

> *"...the permeability of the ground plane, the flexibility of the podium levels and the opportunity that the two tower form presents to reduce the overall visual bulk and overshadowing of the nearby parks and the public domain, as well as providing superior residential amenity. The Jury also commended the collaborative work of the team and authentic diversity achieved for the podium levels by having individual practices work on their particular buildings, while together with the landscape architect collaborating on the overall design of the public realm. It is critical to the outcome this collaboration continues throughout the project."*

The Design Competition Report was formally endorsed by Council on the 12 September 2018 and is provided at **Appendix H**. The Design Competition Report summarises the competitive process, the entries and the Jury's reasoning for their selection of the winning scheme. The Jury noted that the winning design was capable of achieving design excellence subject to the resolution of the matters outlined in **Table 3** below. As outlined in **Table 3**, the proposed development has responded to the comments of the Jury.

Table 3 Resolution of Jury Comments

Jury Comments	Design Response
Refinement of the form and location of the Sky Terraces linking the two towers including the height, the detail of the interface with the tower forms, and the relationship with the location of two vertical components of the towers. This will include consideration of suitable uses for the floors in the south tower, immediately below the Sky Terraces.	The design of the Sky Terrace has been refined and the height has been reviewed regarding structural, servicing, outlook and visual proportions. The geometry has been related back to the tower forms through primary coupling trusses which connect the cores and provide stability to the towers. The Sky Terrace alignments then offset from this geometry and are tangential to the tower facade. The plant spaces have been relocated from the Sky Terrace to the spaces immediately below to create more space on the Sky Terrace for use by visitors, residents and the public. This is discussed in further detail in Section 9 of the Architectural Design Statement (**Appendix B**).
Review of the detailed form and geometry giving the extent of differing expression for lower and upper elements of the towers in conjunction with their vertical location as referred to above.	The tower forms are modulated through the height of the Sky Terraces and the form and height of the upper and lower tower elements. These elements are located at a series of datums which relate to the city scale. Specifically, the Sky Terraces relate to the mid-century tower scale of 110m and the transition in tower form occurs at the more recent city tower scale of 180m. The high-rise components of the tower are a softer, lighter coloured form which differentiates these elements from the city forms and relates them to the sky. This is discussed in further detail in Section 8.1 of the Architectural Design Statement (**Appendix B**).
Review of the lifting strategy for the towers to ensure adequate levels of service for residents.	As part of the design development, vertical transport has been closely analysed and four residential lifts (per tower) now serve all residential floors, providing an appropriate level of service. This is discussed in further detail in the Vertical Transportation Report prepared by Arup (**Appendix Z**).
Review of the location and connection of public roof gardens to ensure effective circulation and safety. This would preferably involve elimination of some bridges over laneways.	The residential communal roof gardens have been consolidated along Pitt Street with direct access from residential lifts and communal facilities on Level 4. The hotel roof gardens have been consolidated along Castlereagh Street with direct access from hotel lifts and garden spa facilities on Level 8, while the retail rooftop garden is located on standalone building along Liverpool Street. This is discussed in further detail in Section 5 of the Architectural Design Statement (**Appendix B**).
Refinement of the landscape design of the urban courtyard in relation to amenity, occupation and activation.	Martha Schwartz and Partners have been engaged to prepare a Public Domain and Landscape Plan, with particularly reference to amenity, occupation and activation. These refinements are discussed in detailed in **Section 4.2** of **Appendix B.**
Design development demonstrates the retention of quality of materials and level of detail within podium buildings, and in particular to ensure the Corner Building and 249 Castlereagh	The podium buildings have undergone significant design development, with the hotel uses relocated to Castlereagh Street and provided with an appropriate deep masonry facade

Jury Comments	Design Response
Street achieve the appropriate depth of authentic masonry expression.	with sandstone and glass reinforced concrete elements to relate to the context of Castlereagh Street. Trias, Polly Harbison and Aileen Sage have been allocated buildings along Pitt Street and Liverpool Street, which when combined with the frontage of the North Tower along Pitt Street, creates genuine variation in the streetscape, with a series of related but unique buildings. It is noted that metal and masonry screens, sandstone, and brick detailing characterise the podium buildings. These refinements are discussed in detailed in Section 7 of **Appendix B.**
The jury also acknowledges that the setback of the south tower from Dungate Lane is inconsistent with the Concept DA and approved building envelope.	Justification for the setback along Dungate Lane was included in FJMT submission in the Architectural Design Competition and acknowledged by the Jury. Following further study of the interface, an improved outcome was identified by moving the South Tower further toward Dungate Lane. This outcome: • Does not adversely impact the microclimate in Dungate Lane. • Does not impact the development potential of 255 Castlereagh Street. • Provides additional publicly accessible space in the new courtyard. • Provides increased tower separation. This outcome is discussed in detailed in Section 10 of **Appendix B** and **Section 5.8** of this EIS.

Figure 3 Render of the winning FJMT Design Competition Entry

Source: FJMT

1.5.3 Post-Competition Design Development

Since the Architectural Design Competition, the scheme prepared by FJMT, Polly Harbison, Trias and Aileen Sage has undergone further design refinement and resolution. This detailed design development has responded to, amongst other factors, the acquisition of 128 & 130 Liverpool Street and a desire to increase building separation to improve solar access to the public domain and residential amenity.

Site Consolidation

The two-storey terrace buildings at 128 & 130 Liverpool Street have been acquired. This has resulted in a total site are of 6,091m².

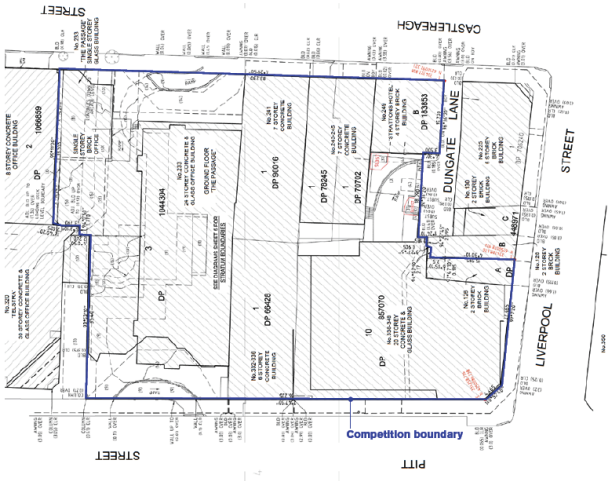


Figure 4 Competition Submission Site Area

Source: FJMT

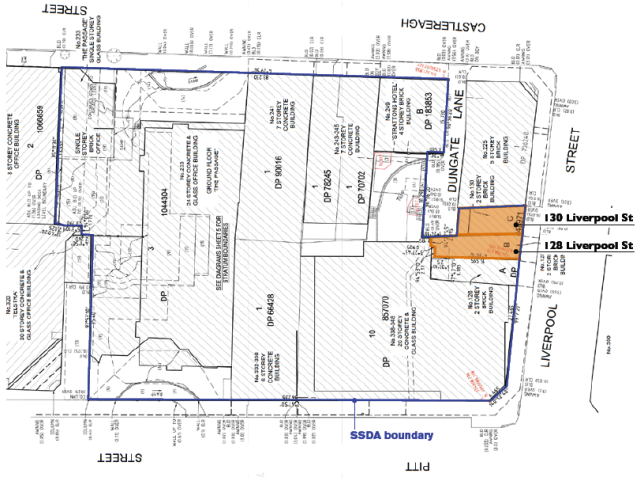


Figure 5 Proposed Design Site Area

Source: FJMT

Vehicle Access

It has been agreed with the owner of 127 Castlereagh Street & 320 Pitt Street to consolidate the existing loading dock within the basement of 338 Pitt Street, within a new shared basement, accessed from Pitt Street. This has reduced the number of vehicle access points.

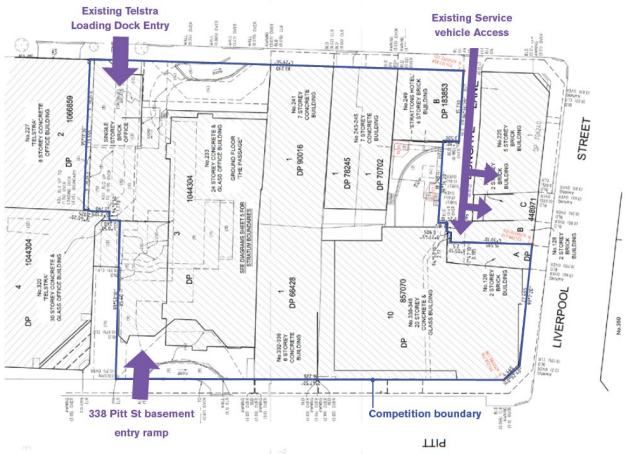


Figure 6 Competition Submission Access

Source: FJMT

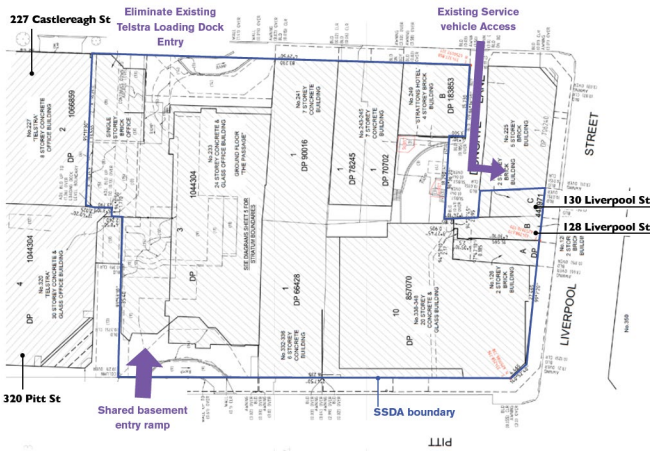


Figure 7 Proposed Design Access

Source: FJMT

Additional Height (South Tower)

The additional GFA capacity under the Sydney LEP 2012 gained through the acquisition of 128 & 130 Liverpool Street has been located at the top of the South Tower, rather than within the podium or existing tower forms. This maintains the slenderness of the tower forms, while also preserving natural light and sky view from the public domain.

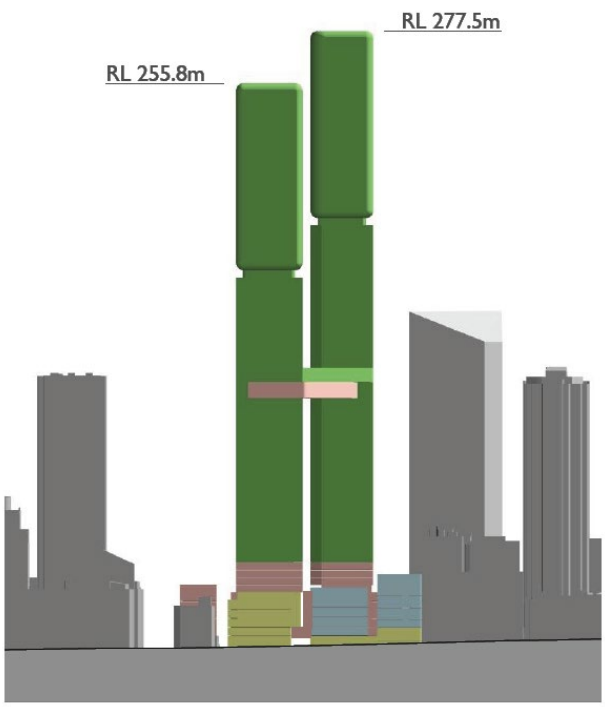


Figure 8 Competition Submission Height

Source: FJMT

Figure 9 Proposed Design Height

Source: FJMT

Building Separation

The corners of the North Tower and South Tower have been amended to simplify the tower form, whilst complying with the visual privacy and building separation in the Apartment Design Guide which supports *State Environmental Planning Policy No 65 — Design Quality of Residential Flat Development*.

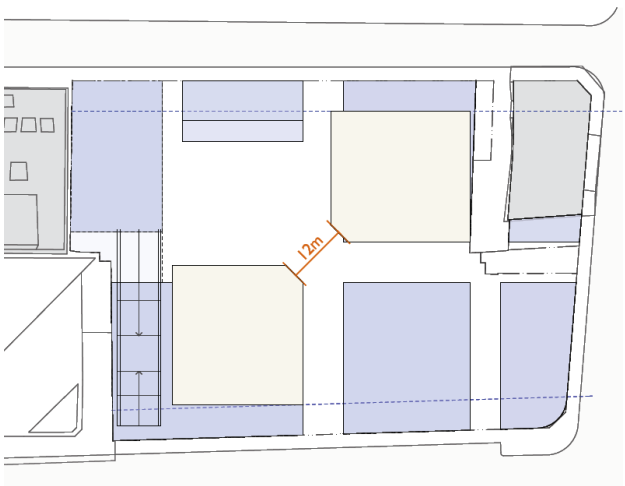


Figure 10 Competition Submission Separation

Source: FJMT

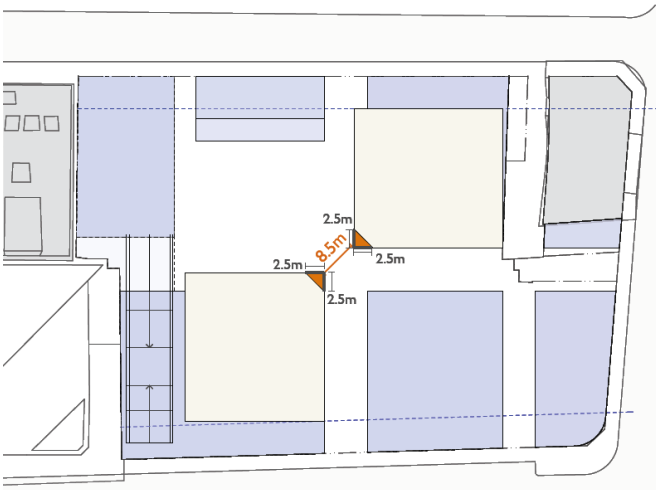


Figure 11 Proposed Design Separation

Source: FJMT

Tower Setbacks

The South Tower has been shifted further to the south, to improve tower separation and provide a larger internal courtyard.

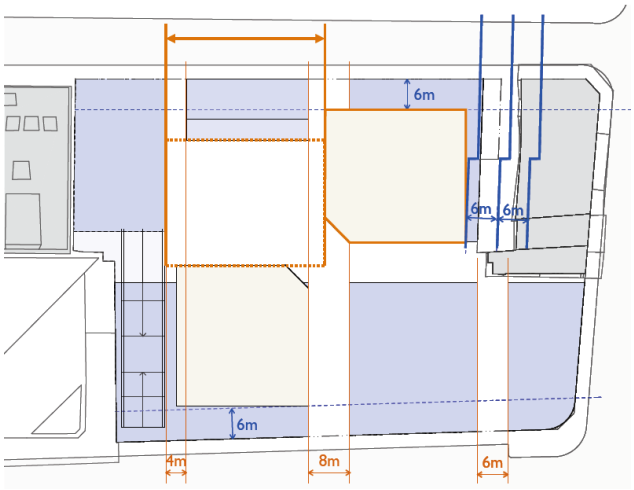


Figure 12 Competition Submission Setbacks

Source: FJMT

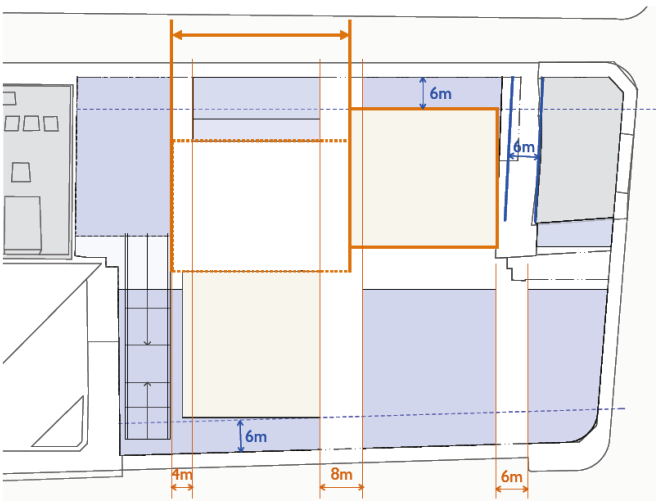


Figure 13 Proposed Design Setbacks

Source: FJMT

Public Domain

The public domain (courtyard) has been expanded beneath the south-western podium building, which will accommodate a mix of retail tenancies configured as a public 'marketplace'.

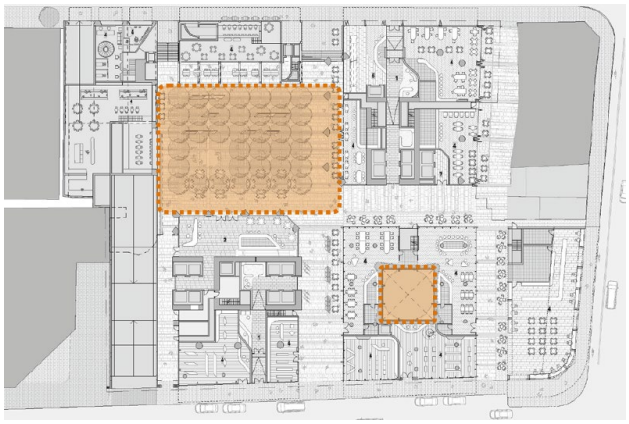


Figure 14 Competition Submission Courtyard

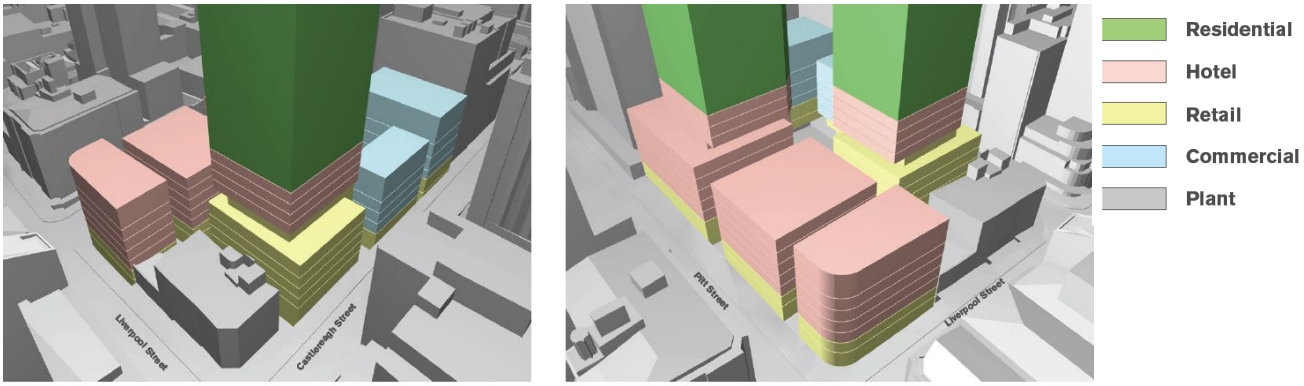
Source: FJMT

Figure 15 Proposed Courtyard

Source: FJMT

Uses

The hotel has been relocated from Pitt Street to Castlereagh Street and hotel uses are now proposed to be located in the lower floors of the South Tower. Retail uses have been concentrated along Ground Floor/Level 1 and on the corner of Pitt Street and Liverpool Street. Commercial uses are no longer proposed in the development, with the GFA previously allocated for commercial uses now redistributed as hotel and retail GFA.

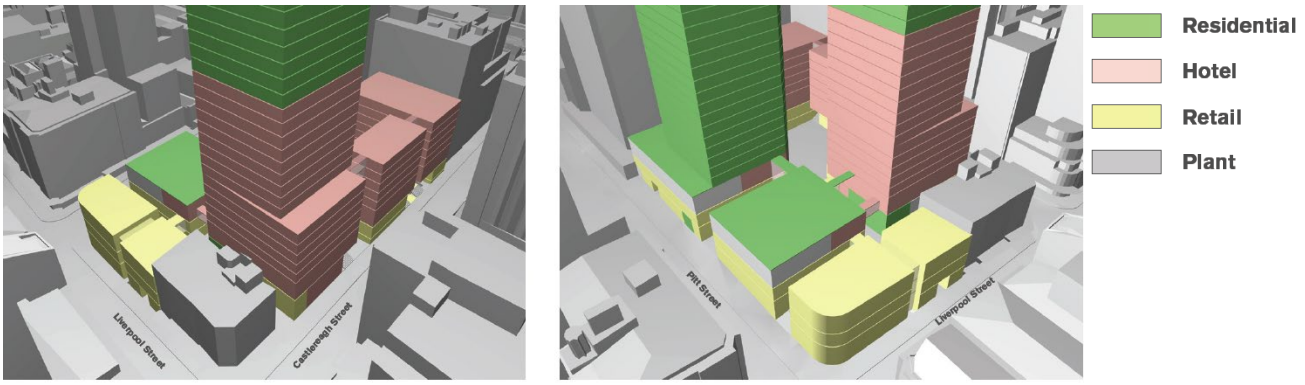


Competition - Use（Castlereagh Street）

Competition - Use（Pitt Street）

Figure 16 Competition Submission Uses

Source: FJMT



SSDA - Use（Castlereagh Street）

SSDA - Use（Pitt Street）

Figure 17 Proposed Uses

Source: FJMT

Building Allocation

The buildings designed by Trias, Polly Harbison Design and Aileen Sage have been reallocated to the corner of Pitt Street and Liverpool Street.

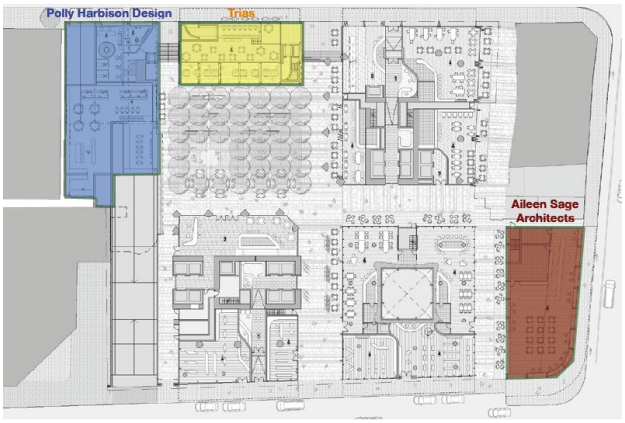


Figure 18 Competition Building Allocation

Source: FJMT

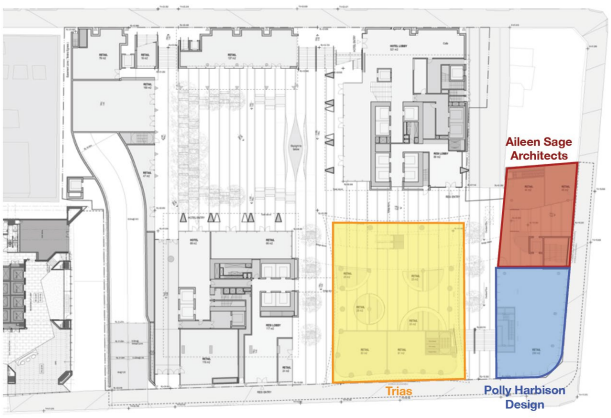


Figure 19 Proposed Building Allocation

Source: FJMT

1.6 Strategic Need for the Proposal

Currently, there are number of issues that inform the strategic need for the proposed development. These include:

- The existing development comprises low-grade commercial stock of varying scales, which is inconsistent with the objectives for the B8 Metropolitan Centre Zone in that does not provide an intensity of land uses commensurate with the global status of Sydney;
- Dungate Lane is dominated by waste services and is an unsafe and uninviting public space, which experiences flooding during periods of rainfall;
- The existing pedestrian ground plane is dominated by vehicle crossovers and parallel ramps, which provide a poor interface with surrounding streets; and
- The shortage of high quality visitor accommodation in the Sydney CBD, as identified in the *Visitor Accommodation Action Plan 2015*.

Given the aforementioned deficiencies, there is an identifiable strategic need for the proposed development which provides an opportunity to:

- Provide an intensity and diversity of land uses consistent with the objectives of the B8 Metropolitan Centre Zone, which serve the workforce, visitors and wider community;
- Capitalise on a large consolidated landholding, constituting nearly one third of a city block, to dramatically enhance the permeability of the Sydney CBD through new pedestrian connections;
- Address the current deficiency in high quality visitor accommodation within the Sydney CBD;
- Rationalise vehicle crossovers, remove detracting basement ramps and substantially improve the interface with surroundings streets, pedestrian safety and amenity; and
- Capitalise on the proximity to existing and future public transport services, including the recently completed CBD and South East Light Rail along George Street and the Sydney Metro City & Southwest.

1.7 Analysis of Alternatives

Throughout the preparation of and assessment of the Stage 1 Concept Proposal an analysis of feasible alternatives to the proposed built form were considered. Through detailed assessment of the proposal the CSPC determined that the proposed Stage 1 building envelope resulted in an appropriate built form for the site and would be capable of delivering a detailed design that mitigated potential environmental impacts and delivered a high quality architectural and urban design outcome.

Following the approval of the Stage 1 Concept Proposal in February 2018, an Invited Architectural Design Competition was undertaken with five highly qualified and reputable architectural teams. Throughout this process several alternative building forms and detailed designs were considered. As outlined in **Section 1.5.2** of this EIS, the Jury determined that the FJMT and partners scheme was most capable of achieving design excellence and recommended that the Architects be retained by the proponent and the scheme is further developed for submission of a Stage 2 detailed DA.

As outlined above, during the preparation of the Stage 1 Concept Proposal, and the Invited Architectural Design Competition Process, the applicant has considered feasible alternatives to the proposed development, however the proposal represents the most sound and balanced proposal achieving the aims of the development, capability of achieving design excellence, and functional requirements of the developer and likely operators.

The proponent has invested considerable resources establishing a consolidated landholding and has worked with Council for a number of years on the Stage 1 Concept Proposal, Invited Architectural Design Competition, and the preparation of the Stage 2 SSD DA. Under a ‘do nothing’ scenario, the time and resources would be effectively wasted.

Moreover, retention of the existing development does not take advantage of the significant opportunities presented by the potential redevelopment, namely the opportunity to address the current deficiency in short-term visitor accommodation, capitalise on a consolidated landholding, and provide an intensity of land uses commensurate with the vision for the Sydney CBD.

1.8 Secretary's Requirements

In accordance with Item 3 of Schedule 2 of the EP&A Regulation, the delegate of the Secretary of the Department of Planning, Industry and Environment (DPIE) issued the requirements for the preparation of the EIS on 19 August 2019. A copy of the Secretary's Environmental Assessment Requirements (SEARs) is included at **Appendix B**.

Table 4 provides a detailed summary of the individual matters listed in the SEARs and identifies where each of these requirements has been addressed in this EIS and the accompanying technical studies.

Table 4 Secretary's Requirements

Requirement	Location in Environmental Assessment	
General		
The Environmental Impact Statement (EIS) must address the *Environmental Planning and Assessment Act 1979* and meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 the Environmental Planning and Assessment Regulation 2000. Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development. Where relevant, the assessment of key issues below, and any other significant issues identified in the risk assessment, must include: • adequate baseline data • consideration of the potential cumulative impacts due to other developments in the vicinity (completed, underway or proposed); • measures to avoid, minimise and if necessary, offset predicted impacts, including detailed contingency plans for managing any significant risks to the environment. The EIS must also be accompanied by a report from a qualified quantity surveyor providing: • a detailed calculation of the capital investment value (CIV) (as defined in clause 3 of the Regulation) of the proposal, including details of all assumptions and components from which the CIV calculation is derived. The report shall be prepared on company letterhead and indicate applicable GST component of the CIV; • an estimate of jobs that will be created during the construction and operational phases of the proposed development; and • certification that the information provided is accurate at the date of preparation.	Environmental Impact Statement	
Key Issues	**Report / EIS**	**Technical Study**
The EIS must address the following specific matters: **1. Statutory and Strategic Context** Address the statutory provisions applying to the development contained in all relevant environmental planning instruments, including: • State Environmental Planning Policy (State and Regional Development) 2011 • State Environmental Planning Policy (Infrastructure) 2007 • State Environmental Planning Policy No 55 – Remediation of Land (and Draft remediation of Land SEPP) • State Environmental Planning Policy No 64 – Advertising and Signage • State Environmental Planning Policy No 65 – Design Quality of Residential Development (including Apartment Design Guideline) • State Environmental Planning Policy (Building Sustainability Index – BASIX) 2004 • Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 • Draft State Environmental Planning Policy (Environment) • Sydney Local Environmental Plan 2012.	**Section 5.4**	

Requirement	Location in Environmental Assessment	
Address the relevant planning provisions, goals and strategic planning objectives in the following: • NSW State Priorities • Greater Sydney Region Plan and supporting District Plan • Better Placed – an integrated design policy for the built environment of NSW • Better Placed – Design Guide for Heritage • Future Transport Strategy 2056 and supporting plans • Guide to Traffic Generating Development (RMS) • EIS Guidelines – Road and Related Facilities (DoPI) • Cycling Aspects of Austroads Guides • NSW Planning Guidelines for Walking and Cycling • Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development • Standards Australia AS2890.3 (Bicycle parking facilities) • Development near Rail Corridors and Busy Roads – Interim Guideline • Sustainable Sydney 2030 • Sydney Development Control Plan 2012. • Sydney's Cycling Future • Sydney's Walking Future • Legible Sydney • City Centre Access Strategy • City of Sydney Interim Floodplain Management Policy • City of Sydney Public Domain Manual • Making Sydney a Sustainable Destination • Sydney Landscape Code • Tourism Action Plan 2013 • Retail Action Plan 2013 • Sydney Landscape Code • City of Sydney Section 61 Contributions Plan 2013 • City of Sydney Guidelines for Waste Management in New Development 2018.	**Section 5.4**	
2. Compliance with the Concept Approval The EIS shall demonstrate how the proposed development is consistent with the Concept Approval D/2016/1509, including the terms, conditions and future assessment requirements contained within the approval.	**Section 5.7**	**Appendix KK**
3. Design Excellence The EIS shall demonstrate that a design competition has been undertaken in accordance with the Concept Approval D/2016/1509. The EIS shall include the design competition brief, jury recommendations report and a design integrity process/strategy, prepared in consultation with the Government Architect and City of Sydney, demonstrating how the proposal will achieve design excellence in accordance with the design competition winning scheme.	**Section 5.8**	**Appendix H**
4. Built Form and Urban Design The EIS shall: • provide an analysis of the proposed built form against the applicable development standards and controls and concept approval D/2016/1509 • include a table identifying the proposed land uses, including a floor by floor breakdown of gross floor area (GFA), total GFA and FSR and site coverage • provide a Visual Impact Assessment of the proposal, including before and after photomontages and perspectives for each elevation, showing:	 **Section 5.7** **-** **Section 5.12**	 **Appendix KK** **Appendix A** **Appendix S** & **T**

Requirement	Location in Environmental Assessment	
– elements and views of the proposal from key locations, vistas and view corridors from the public domain and residential buildings that may be impacted; and – an assessment of the view impacts and design considerations to mitigate any impacts.		
• include public domain details, including: – clear definition of any private use of the public domain – pedestrian movement patterns – street trees, associated landscaping, hardworks, street furniture, lighting, materials and surface finishes alignment levels and stormwater design – identify linkages with and between other public domain spaces, other streets and lane;	**Section 4.6**	**Appendix B**
• consider opportunities to provide green roof, cool roof and/or green walls into the building design.	-	-
5. Amenity The shall EIS include: • a detailed assessment of amenity impacts for future occupants of the residential component of the development and any amenity impacts of the proposal on surrounding development and the public domain • a detailed analysis of overshadowing impacts of the development on key public spaces, including Harmony Park and Hyde Park, and existing residential dwellings in the vicinity • a Wind Impact Assessment, including wind tunnel testing of any wind impacts of the proposal on the public domain and all landscape areas on upper levels (using the assessment criteria for sitting) • an integrated landscape design for the hotel and residential towers, with consideration of green roofs, walls and facades • detailed design for a residential common open space, being a minimum 25% of the total site area and 6 metres wide • detail on the amenity and solar access in accordance with the Sydney DCP 2012 and Apartment Design Guide • measures to minimise potential overshadowing, noise, reflectivity, visual privacy, wind, daylight and view impacts.	**Section 5.11**	**Appendix B**
6. Heritage The EIS shall include: • a Statement of Heritage Impact (SOHI), prepared by a suitably qualified heritage consultant in accordance with the guidelines in the NSW Heritage Manual. The SOHI is to address the impacts of the proposal on the heritage significance of the site and adjacent areas and is to: – identify all heritage items (state and local) within and near the site, including built heritage, landscapes and archaeology, include detailed mapping of these items, and an assessment of why the items and site(s) are of heritage significance – assess the proposal's impact on the heritage significance of heritage items or potential heritage items on, and near the development site – address the proposal's compliance with policies of relevant Conservation Management Plans for the affected sites – include a detailed visual impact assessment along with photomontages – provide detailed mitigation measures and strategies to avoid and mitigate any adverse impacts on heritage values of the affected sites. • a historical archaeological assessment (if the SOHI identifies a potential impact on historical archaeology) by a suitably qualified archaeologist in accordance with the Heritage Guidelines 'Archaeological Assessment' 1996 and 'Assessing Significance for Historical Archaeological Sites and Relics' 2009. This assessment should identify what relics, if any, are likely to be present, assess	**Section 5.13**	**Appendix DD**

Requirement	Location in Environmental Assessment	
their significance and consider the impacts from the proposal on this potential archaeological resource. Where harm is likely to occur, it is recommended that the significance of the relics be considered in determining an appropriate mitigation strategy. If harm cannot be avoided in whole or part, an appropriate Research Design and Excavation Methodology should also be prepared to guide any proposed excavations or salvage programme • a strategy for any archaeological finds during the excavation and demolition to be interpreted and where possible displayed in the new building • an investigation and analysis of the quality of sandstone to be removed during the excavation, including consideration of contamination and an assessment of the suitability of the rock for removal by cutting into quarry blocks for use as high-quality building construction material.		
7. Aboriginal Cultural Heritage The EIS shall: • identify and describe Aboriginal cultural heritage values that exist across the whole area that will be affected by the development and document these in an Aboriginal Cultural Heritage Assessment Report (ACHAR). The identification of cultural heritage values must be conducted in accordance with the Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW (OEH 2010) and the Guide to investigating, assessing and reporting on Aboriginal Cultural heritage in NSW (DECCW 2011) • ensure consultation has taken place with Aboriginal people and is documented in accordance with the Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW) • assess impacts on Aboriginal cultural heritage values and be documented in the ACHAR. This must demonstrate attempts to avoid impacts, identify any conservation outcomes and measures to mitigate impacts.	**Section 5.13**	**Appendix DD & II**
8. Operation The EIS shall include details of the proposed use and operation of the development, including but not limited to: • any uses ancillary and/or not ancillary to the hotel use • hours of operation • patron capacity • signage • the relationship between the proposed uses of the building • a Plan of Management.	**Section 4.8**	**Appendix LL & MM**
9. Traffic, Transport Parking and Access (Construction and Operation) The EIS shall include a Traffic and Transport Impact Assessment that includes, but is not limited to, the following: • details of the current and likely estimated future daily and peak hour vehicle, public transport network, point to point transport, taxis, pedestrian and bicycle movements to/from the site • an assessment of the operation of existing and future transport networks including the rail, bus, Sydney Light Rail and Sydney Metro City and Southwest, pedestrian and bicycle networks and point-to-point transport and coach facilities and their ability to accommodate the forecast number of trips to and from the development • an assessment of the: – impact of the proposal on existing traffic and transport performance and safety at key intersections in the area, including but not limited to Pitt St/Liverpool Street/Bathurst Street, Castlereagh Street/Bathurst Street and Castlereagh Street/Liverpool Street. This must include specific reference to the impact of taxi trips to the performance of nearby intersections – likely impact of the proposal on bus operations (stops, routes and parking) – point to point parking in the surrounding streets	**Section 5.16**	**Appendix W**

Requirement	Location in Environmental Assessment	
– proposed temporary or permanent changes to transport and access on surrounding streets. • details of existing and proposed vehicular access, including for hotel drop off and pick up, coach and servicing, and an assessment of any potential impacts, such as potential pedestrian, cyclist and bus conflict. This must include how the access impacts on the pedestrian and bicycle amenity of the area given that the site is in an area with high numbers of pedestrians • details of any road/intersection upgrades required as a result of the development, supported by appropriate modelling and analysis, and any other measures to mitigate impacts of the development • details of the proposed vehicle, motorcycle, taxi, bus and coach parking, including compliance with parking requirements and justification for the level of parking on the site • details of the location of bicycle parking facilities (and end of trip facilities) as these need to be in secure, convenient, accessible areas close to main entries incorporating lighting and passive surveillance • details of emergency vehicle access arrangements • road and pedestrian safety adjacent to the proposed development and details of required road safety measures • proposals to encourage employees, guests and residents to make sustainable travel choices, such as walking, cycling, public transport and car sharing and how these will be implemented • assessment of loading and servicing demand and details of the existing and proposed loading and servicing facilities, including safe and efficient access to loading, deliveries and servicing of the development. • a draft Construction Pedestrian and Traffic Management Plan that includes, but is not limited to, the following: – assessment of cumulative impacts associated with other construction activities including the construction of the Sydney Light Rail project and the Sydney Metro City and Southwest – assessment of road safety at key intersections and locations subject to heavy vehicle movements and high pedestrian activity – details of construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process – details of anticipated number of peak hour and daily truck movements to and from the site, vehicle routes, hours of operation, access arrangements and traffic control measures for all demolition/construction activities – details of access arrangements for workers to/from the site, emergency vehicles and service vehicle movements – details of temporary cycling and pedestrian access during construction – details of proposed construction vehicle access arrangements at all stages of construction – details of mitigation measures for traffic, pedestrian, cyclists, parking and public transport impacts to demonstrate the proposed management of the impact.		
10. Construction Management The EIS shall include a draft construction management plan that includes: • an assessment of potential impacts of the construction on surrounding buildings and the public domain, including noise and vibration, air quality and odour impacts, dust emissions, water quality, stormwater runoff, groundwater seepage, soil pollution and construction waste, and details of measures to mitigate any impact • provide a Demolition and Construction Noise Vibration Management Plan in accordance with Condition 30 of the Stage 1 consent.	**Section 5.24**	**Appendix Q**
11. Water, Drainage and Stormwater The EIS shall include:	**Section 5.20**	**Appendix BB**

Requirement	Location in Environmental Assessment	
• a detail assessment of flooding hazard in accordance with City of Sydney Interim Floodplain Management Policy and the Environment, Energy and Science (EES) Group flooding comments • information on the required water and waste water services and any augmentation to Sydney Water infrastructure that may be required for the proposed development • a stormwater management plan through the City's MUSIC link model.		
12. Rail Corridor The EIS shall detail the likely effect of the proposal on the Sydney Metro Corridor and Pitt Street North Station consistent with the Sydney Metro Underground Corridor Protection Technical Guidelines (available from www.sydneymetro.info).	**Section 5.17**	**Appendix M**
13. Ecologically Sustainable Development (ESD) The EIS shall: • identify how the development will incorporate ESD principles (as defined in Clause 7(4) of Schedule 2 of the Regulation) in the design, construction and ongoing operation phases of the development, and include innovative and best practice proposals for environmental building performance • include a framework for how the future development will be designed to consider and reflect national best practice sustainable building principles to improve environmental performance and reduce ecological impact. This should be based on a materiality assessment and include waste reduction design measures, future proofing, use of sustainable and low-carbon materials, energy and water efficient design (including water sensitive urban design) and technology and use of renewable energy • include certification that the residential component of the development achieves the BASIX scores set out in the Concept Approval D/2016/1509 • investigate the use of third party ESD certification to achieve targets beyond those required under the concept approval and NCC • outline any sustainability initiatives that will minimise/ reduce the demand for drinking water, including alternative water supply and end uses of drinking and non-drinking water that may be proposed, demonstrate water sensitive urban design principles are used, and any water conservation measures that are likely to be proposed.	**Section 5.14**	**Appendix R**
14. Utilities The EIS shall: • address the existing capacity of the site to service the proposed development and any augmentation requirements for utilities, including arrangements for electrical network requirements, drinking water, waste water and recycled water • identify the existing infrastructure on-site and any possible impacts of the construction and operation of the proposal on this infrastructure. The existing capacity and any augmentation requirements of the development for the provision of utilities, including staging of infrastructure and additional licence/approval requirements in consultation with relevant agencies • provide details on the location, construction and servicing of the waste/recycling collection facilities for the building.	**Section 5.22**	**Appendix L & E**
15. Biodiversity The EIS shall: • provide an assessment of the proposal's biodiversity impacts in accordance with Section 7.9 of the Biodiversity Conservation Act 2017, the Biodiversity Assessment Method and documented in a Biodiversity Development Assessment Report where required under the Act • include landscape plans that improve and accommodate biodiversity (see Section 3.5.1 of the Sydney Development Control Plan 2012). Landscaping is to give preference to using local native provenance species from the native vegetation community that once occurred in the locality, where appropriate.	-	**Appendix V**

Requirement	Location in Environmental Assessment	
16. Contributions and/or Voluntary Planning Agreement The EIS shall address the provision of public benefit, services, infrastructure and any relevant contribution requirements.	**Section 5.29**	
Plans and Documents		
The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Regulation. Provide these as part of the EIS rather than as separate documents. In addition, the EIS must include the following:	**Environmental Impact Statement**	
• high quality files of maps and figures of the subject site and proposal		
• architectural drawings (to a useable scale at A3) showing key dimensions, RLs, scale bar and north point, plans, sections and elevations of the proposal (including 1:20 scale detail plans where works affect heritage fabric) and illustrated materials schedule including physical or digital samples board	**Appendix A**	
• site title diagrams and survey plan, showing existing levels, location and heights of existing and adjacent structures/ building	**Appendix E**	
• locality/context plan drawn, including significant local features such as heritage items	**Environmental Impact Statement**	
• urban design report	**Appendix B**	
• heritage impact statement	**Appendix DD**	
• historical archaeological impact assessment	**Appendix II**	
• access impact statement	**Appendix U**	
• visual impact assessment	**Appendix T**	
• solar access analysis report and diagrams	**Appendix B**	
• public domain design statement and plans	**Appendix B**	
• landscape design report and landscape design package, including plans, details and levels for hotel and residential components	**Appendix B**	
• green roof plans and details	**Appendix B**	
• biodiversity development assessment report (or waiver)	**Appendix V**	
• ESD statement (incorporating a sustainability framework) and BASIX Certificate	**Appendix R**	
• geotechnical report	**Appendix J**	
• Building Code of Australia statement	**Appendix U & AA**	
• consultation summary report	**Appendix EE**	
• noise impact assessment	**Appendix Y**	
• wind impact report, including wind tunnel testing for public domain areas and all landscaped terraces on upper levels	**Appendix CC**	
• reflectivity report	**Appendix FF**	
• flood study and stormwater concept plan	**Appendix BB**	
• Public Art Proposal in accordance with the adopted Public Art Strategy	**Appendix B**	
• signage strategy, including commercial signage / building name signage (if proposed)	**Appendix B**	
• traffic and transport impact assessment, including parking, access, loading dock	**Appendix W**	

Requirement	Location in Environmental Assessment	
• strategy / management plan and a construction traffic management plan • a report demonstrating compliance with the Sydney Metro Underground Corridor Protection Guidelines	**Appendix Q**	
• construction impacts and management plan, including a construction noise and vibration management plan, construction waste and recycling management plan and cumulative impact of construction activities on other nearby sites, including any impact to Rail services nearby	**Appendix Q**	
• utilities and services statement	**Appendix L**	
• Detailed Environmental Site Investigation	**Appendix I.**	
• Acoustic reports regarding: – Demolition and Construction Noise Vibration Management Plan in accordance with Condition 30 of the Stage 1 consent – Noise impact assessment considering City's Acoustic Amenity requirements under DCP 2012 4.2.3.11 for residential apartments & NSW EPA Noise Policy for Industry and NSW Department of Planning *Planning for Entertainment Guidelines 2009* for commercial plant and entertainment related noise associated with the proposed development	**Appendix Y**	
• Acid Sulphate Soils report	**Appendix J**	
• Crime Prevention through Environmental Design report	**Appendix O**	
• Physical and 3D CAD model as per Council requirements.	-	
Consultation		
During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. In particular you must consult with: • City of Sydney Council • Government Architect of NSW • Transport for NSW (Roads and Maritime Services) • Heritage Council of NSW • Sydney Coordination Office within Transport for NSW • Sydney Trains • Sydney Metro • Sydney Airport/CASA The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.	**Section 3.0**	**Appendix EE**

2.0 Site Analysis

2.1 Site Location and Context

338 Pitt Street, Sydney is located on the north-eastern corner of Pitt Street and Liverpool Street in the Sydney CBD, in the heart of Global Sydney. The area is characterised by high rise commercial and residential development. The location of the site within this part of the CBD ensures that it is accessible to a wide range of commercial, retail, entertainment and cultural destinations. Council has recently identified the locality as the 'midtown precinct', with a diverse employment profile, good accessibility and more affordable commercial office floor space in comparison to other parts of the CBD.

The mid-town precinct is currently in transition, with older style shopfronts, heritage buildings, and modern residential and commercial development. There have been large development approvals recently granted in the vicinity of the site, with the precinct becoming a truly mixed-use neighbourhood.

Elizabeth Street and Castlereagh Street are important north/south CBD bus routes, with Castlereagh and Pitt Street being key pedestrian north/south connections. Liverpool Street is one of the primary east-west links in the southern CBD, connecting Oxford Street and Surry Hills, through the CBD, to Darling Harbour and the Sydney International Convention Centre, Exhibition Centre and Entertainment Centre precinct. The site is walking distance to Town Hall Station and Museum Station, the light rail, and the future Pitt Street South CBD Metro Station.

The site's locational context is shown at **Figure 20**.

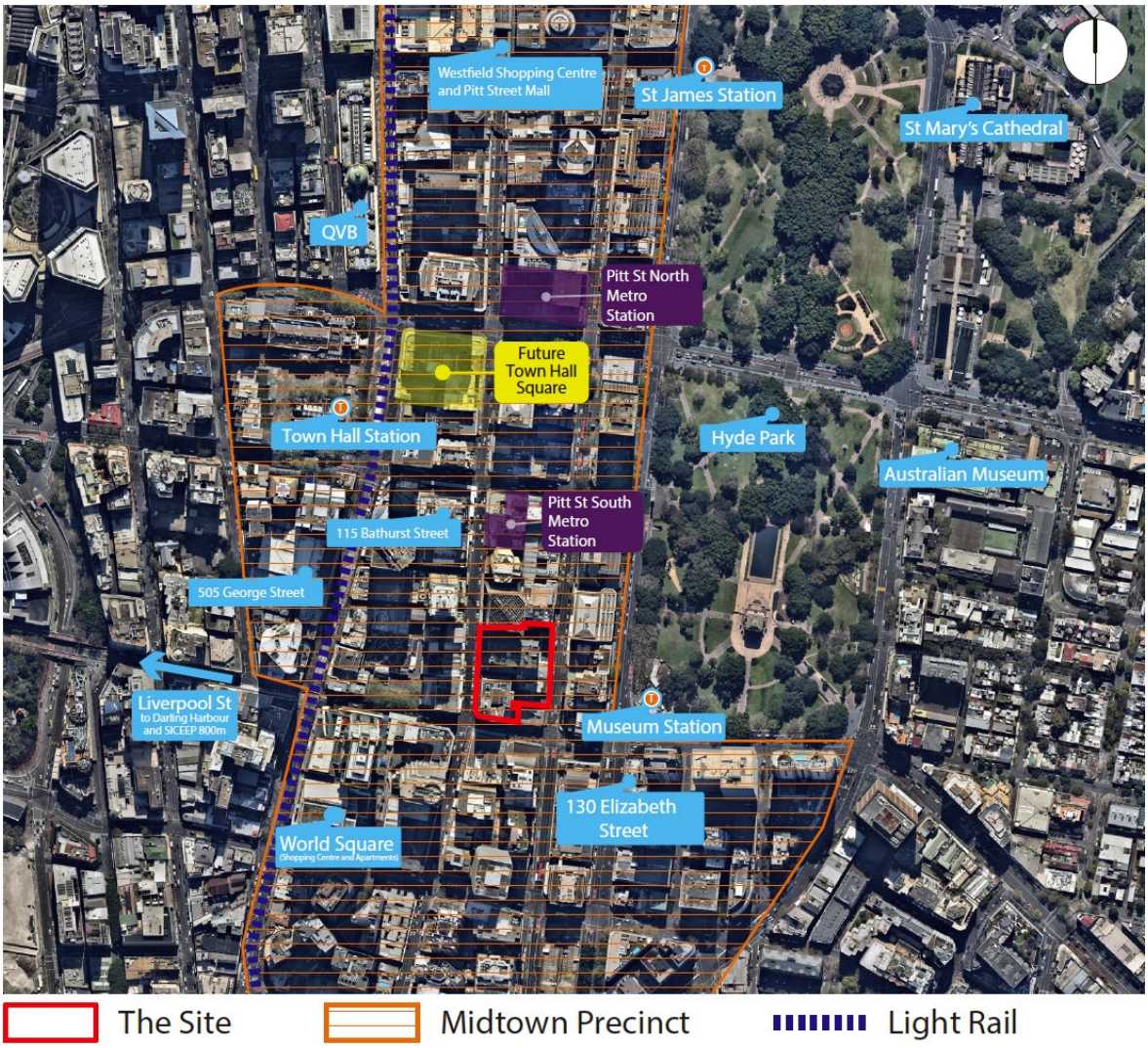


Figure 20 Locational Context

Source: Ethos Urban

2.2 Site Description

The site includes several allotments as listed at **Table 5** and constitutes nearly one third of the city block between Bathurst Street, Pitt Street and Liverpool Street. The site is an irregular shape and has a combined area of approximately 6,091m². The site has street frontages to Pitt Street (90m), Liverpool Street (39m), Castlereagh Street (84m) and Dungate Lane (23m) and has a gentle fall from the north-eastern corner to the south west. An aerial image of the site is provided at **Figure 21**.

Table 5 Legal Description of the Site

Street Address	Lot/Deposited Plan
338-348 Pitt Street	10/857070
332-336 Pitt Street	1/66428
324-330 Pitt Street / 233 Castlereagh Street	3/1044304
241-243 Castlereagh Street	1/90016
245-247 Castlereagh Street	1/78245
245-247 Castlereagh Street	1/70702
249-253 Castlereagh Street	B/183853
126 Liverpool Street	A/448971
128 Liverpool Street	B/448971
130 Liverpool Street	C/448971

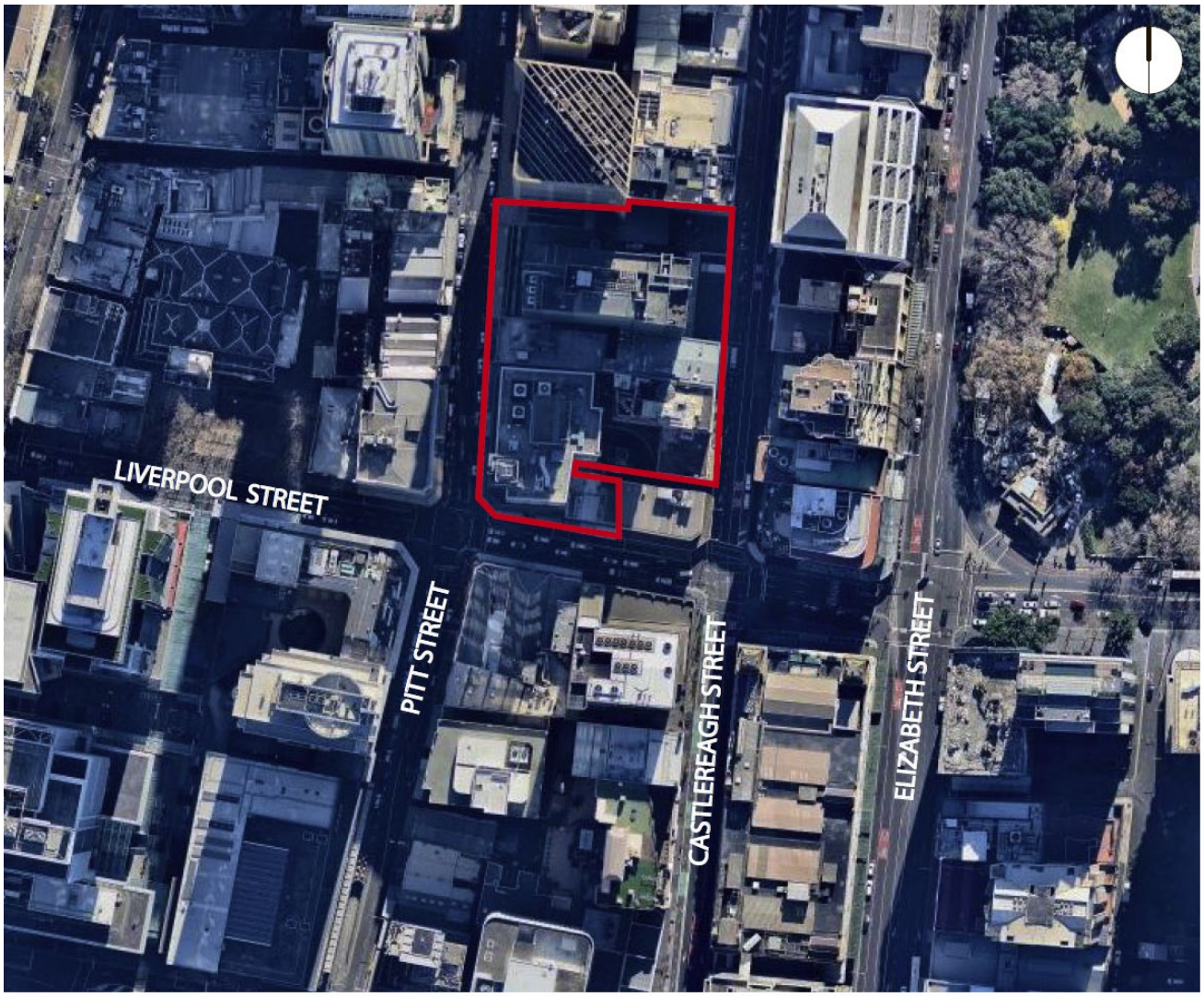


Figure 21 Aerial Photograph

Source: Nearmap and Ethos Urban

2.2.1 Easements

There a number of easements affecting the site as shown on the Survey Plan at **Appendix E**. As detailed in the Easement Report prepared by Touchstone Partners (**Appendix G**), these easements and covenants will be resolved by negotiation with the relevant parties prior to the commencement of construction. It is not expected that these will impact on the ability of the site to be redeveloped. It is the intention of the applicant to retain a public access way through the site.

2.3 Existing Development and Site Conditions

2.3.1 Existing Development

The site currently accommodates a number of existing buildings (as shown in **Figure 22**), being:

- A high-rise commercial tower at 338 Pitt Street (**Figure 23**).
- Three, two-storey terrace-style buildings at 126, 128 and 130 Liverpool Street (**Figure 25**).
- A high-rise commercial tower at 324 Pitt Street and 233 Castlereagh Street (**Figure 24 & Figure 26**).
- A six-storey commercial building at 326 Pitt Street (**Figure 27**).
- Three multi-storey commercial buildings at 245-247 Castlereagh Street and 249-253 Castlereagh Street (**Figure 24**).

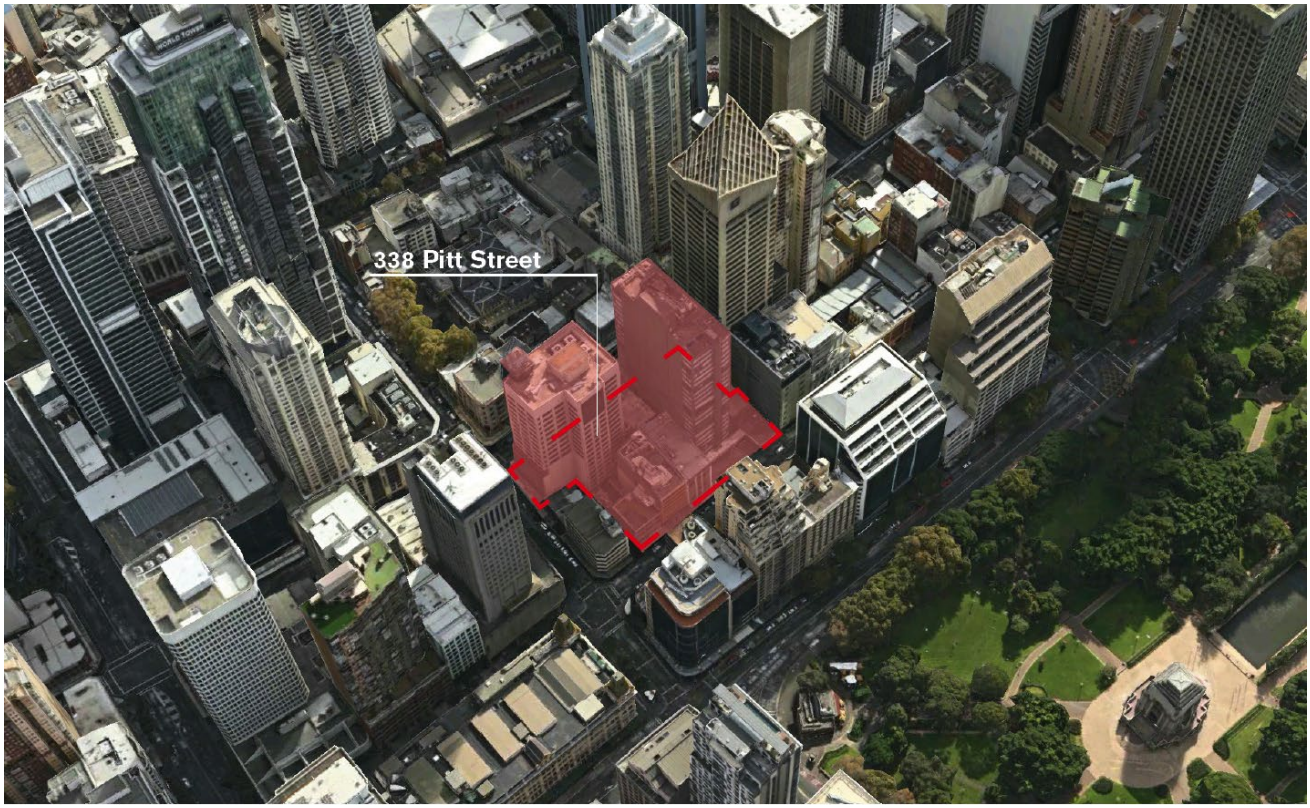


Figure 22 Birds Eye Aerial Photograph

Source: FJMT

Figure 23 Existing Building at 338 Pitt Street

Source: Ethos Urban

Figure 24 233 Castlereagh Street and Commercial Building at 245-247 Castlereagh Street and 249-253 Castlereagh Street

Source: Ethos Urban

Figure 25 Terraces at 126-130 Liverpool Street

Source: Ethos Urban

Figure 26 324 Pitt Street and Vehicle Entry

Source: Ethos Urban

Figure 27 Existing Commercial Building at 326 Pitt Street

Source: Ethos Urban

Figure 28 Existing building at 233 Castlereagh Street

Source: Ethos Urban

Figure 29 Pedestrian Through-Site Link between 324 Pitt Street and Telstra Plaza

Source: Ethos Urban

Figure 30 Basement access via Dungate Lane

Source: Ethos Urban

Figure 31 338 Pitt Street, as viewed from the corner of Castlereagh Street and Liverpool Street

Source: Ethos Urban

Figure 32 Dungate Lane Waste Storage Area

Source: Ethos Urban

2.3.2 Site Ground Conditions

Topography

The site is located on a slope, with a moderate change in level between Pitt Street and Castlereagh Street. The site falls gently from the north-east corner to the south-west corner, with the lowest portion of the site being the corner of Liverpool Street and Pitt Street. Further detail is provided in the Survey Plans at **Appendix E.**

Flooding

The site is located within the Darling Harbour Catchment, which has an area of 307 hectares and drains into Sydney Harbour via Sydney Water's trunk drainage system. The site is affected by both the 1% AEF and PMF. Overland flow from upstream areas flows along Elizabeth Street, Castlereagh Street and Pitt Street, converging on Liverpool Street and continuing to flow towards Darling Harbour. Due to the location of the site in the upper area of the catchment, flooding on the site occurs during major rainfall events. The resultant flood levels and depths vary across the site due to the topography. A detailed assessment of existing flooding conditions is included at **Appendix BB**.

Contamination

A Preliminary Site Investigation (PSI) prepared by JBS&G (**Appendix I**) has concluded that:

> *It is considered unlikely that activities at the site will have contaminated the land to a degree that would prevent the redevelopment of the site for mixed commercial and residential land-use.*

The report includes a review of several site investigations and concluded that:

- There are no contaminating industries identified or confirmed in the history of the site;
- The surface soils/fill material may be potentially contaminated given:

- Unidentified sources of fill material potentially imported to establish current site levels and/or backfill service trenches;
- Historical demolition of previous structures that potentially contained hazardous materials, which may have impacted underlying soils;
- Potential for an underground storage take to have been abandoned in-site and now covered by pavement.

- Further site investigations will be required prior to the commencement of excavation to determine if contamination is present. This intrusive investigation should target potential fill materials in Dungate Lane, and within existing building footprints, apart from areas occupied by basement carparks.
- If contamination is identified at the site, it is anticipated that the site can be made suitable for the proposed land uses.

Rail Infrastructure

The site is close to the following future rail infrastructure:

- The first reserve of the CBD Rail Link Tunnel under Pitt Street, which encroaches under the western corner of the site;
- The CBD Metro Tunnel is located under Castlereagh Street; and
- The Cross Passage Tunnel between the CBD Rail Link and the CBD Metro Tunnel, which is located beneath Liverpool Street.

These tunnels are located at a depth of approximately 21m. A Geometrical Report is provided at **Appendix P**, which provides a preliminary (qualitative) assessment of interaction with:

- Sydney Metro City & South West Tunnels in accordance with TfNSW's standard *Sydney Metro Underground Corridor Protection* (the Sydney Metro Standard) and;
- Existing City Circle Rail Tunnels in accordance with TfNSW's standard *Development Near Rail Tunnels* (the TfNSW Standard).

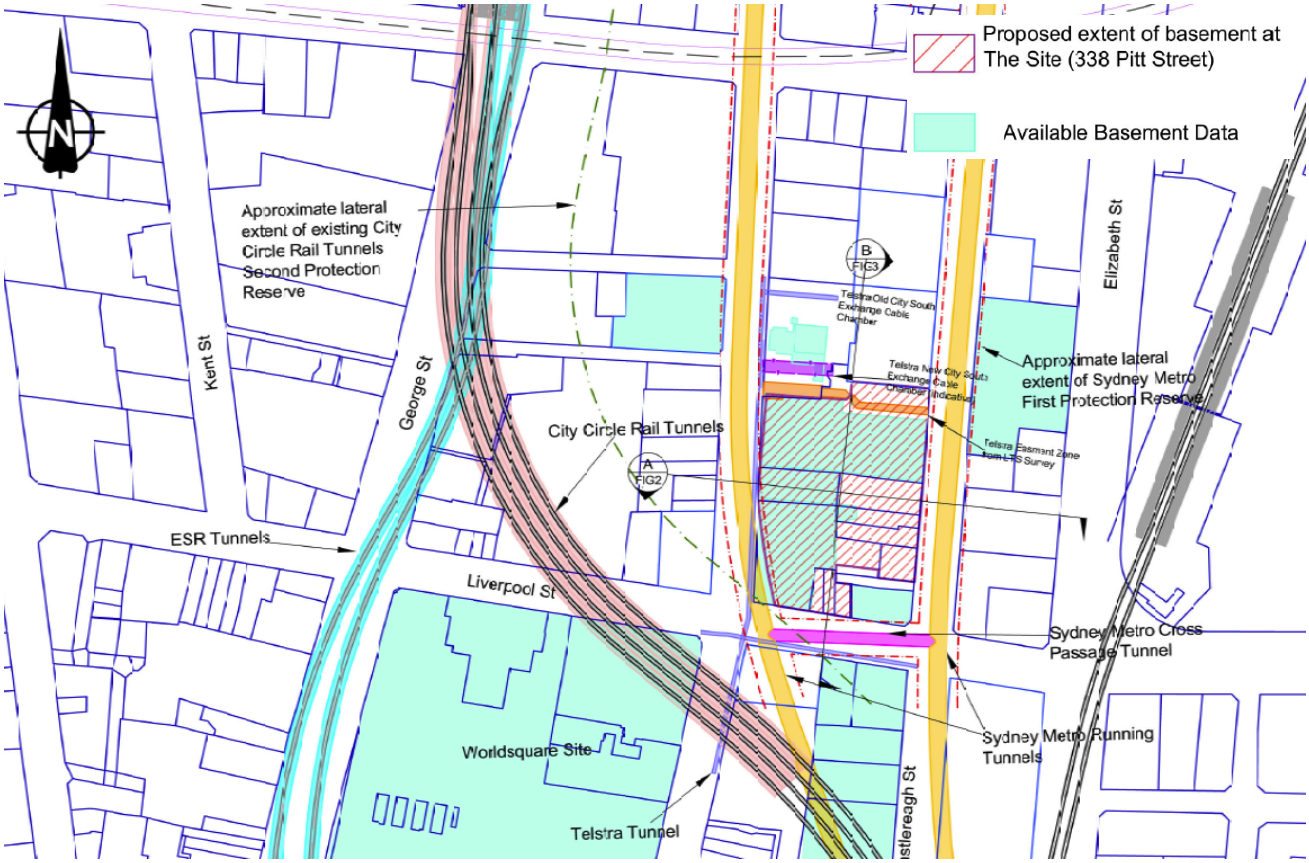


Figure 33 City Circle and Sydney Metro Tunnels Site Plan

Source: Pellis Sullivan Meynink

Soil, Geotechnical and Groundwater Conditions

Soil Conditions

The Sydney 1:1,000,000 Geological Map indicates that site is underlain by a relatively thin layer of Ashfield Shale, belonging to the Wianamatta Group, overlying Hawkesbury Sandstone. It is anticipated that soils extend between 2m and 3m below the surface, with variable rock mass (including a combination of sandstone, shale, and siltstone) extending a further 7m. Beneath this is expected to comprise mainly Class 1 and 2 Sandstone. The site's geotechnical conditions are detailed further in the Geotechnical Assessment prepared by PSM (**Appendix K**).

Acid Sulfate Soils

JBS&G (**Appendix I**) confirm that the site is identified as being within an area of low probability for acid sulfate soils, based on the acid sulfate soil map from Australian Soil Resource Information System (ASRIS6). In addition, the Section 10.7 Certificate provided by Council indicated the site is not situated within a location that has been mapped as containing Class 1 or Class 2 acid sulfate soils.

Groundwater

JBS&G (**Appendix I**) have reviewed information obtained from the Office of Water database, which indicated that there are more than ten (10) registered groundwater bores within a 500m radius of the site. Using the information obtained by the groundwater bores, JBS&G anticipate that shallow groundwater will occur at approximately 2.9-4.7m and regional groundwater will occur within the sandstone/shale bedrock.

2.3.3 Existing Site Access and Public Transport

Vehicular Access and Parking

Vehicular access to the site is currently via Pitt Street, Castlereagh Street and Dungate Lane, which provide a number of basement access ramps. The ramps crossover the existing footpath and occupy a substantial portion of the front setback of both 233 Castlereagh Street and 324 Pitt Street (refer to **Figure 24**). This portion of the site is identified as an 'opportunity site' under the SLEP 2012, with the desire to relocate existing driveways and ramps, infill the setback area and reconfigure pedestrian access. The majority of the buildings on the site adjoin Dungate Lane, which is used as a loading area and for waste storage (refer to **Figure 32**).

Pedestrians

Pedestrian access is provided from Pitt Street, Castlereagh Street and Liverpool Street. There is a retail arcade on the site which provides a pedestrian connection between Pitt Street and Castlereagh Street (refer to **Figure 29**). There is currently no pedestrian access through to Pitt Street from Dungate Lane.

Cyclist

The site benefits from proximity to the Liverpool Street Cycleway, which runs along the northern side of Liverpool Street, connecting to the broader cycleway network of Sydney. The Liverpool Street Cycleway is two-lane and separated from the road, providing an east-west cycling route through the CBD.

Figure 34 Existing and Future Cycleways

Source: Sydney Morning Herald

Public Transport

The site is close to existing and future public transport connections, including:

- Town Hall and Central Railway Station;
- The future Pitt Street Metro Station;
- The CBD and South East Light Rail along George Street; and
- High frequency bus routes within the CBD.

2.3.4 Utilities and Services

A Utility Services Report has been prepared by Arup (**Appendix L**), detailing the existing utilities and services in the vicinity of the site. These utilities are also illustrated in the Survey (**Appendix E**), where relevant. The utilities and infrastructure identified below have been found to have existing connections, or traverse, the site:

- Electricity Supply:
  - Triplex Chamber (Ausgrid)
- Communication Services
  - Fibre Services (Telstra, Optus, AAPT / Powertel, AARNet, Nextgen, Pipe Networks, Vocus and Verizon Business, NBN)
  - Copper Services (Telstra)

- Water:
  - Sewer (Sydney Water)
  - Potable Water (Sydney Water)
  - Stormwater and On-Site Detention (Sydney Water)
- Gas Supply
  - Natural Gas Supply (Jemena)

Telstra Tunnel

There is an existing 100-Year Telstra Tunnel located along Pitt Street, directly adjacent the site. The existing Telstra Tunnels is heritage listed, with care required to be undertaken during excavation adjacent the tunnel. **Figure 35** details the location of Telstra Tunnels in the areas adjacent the development.

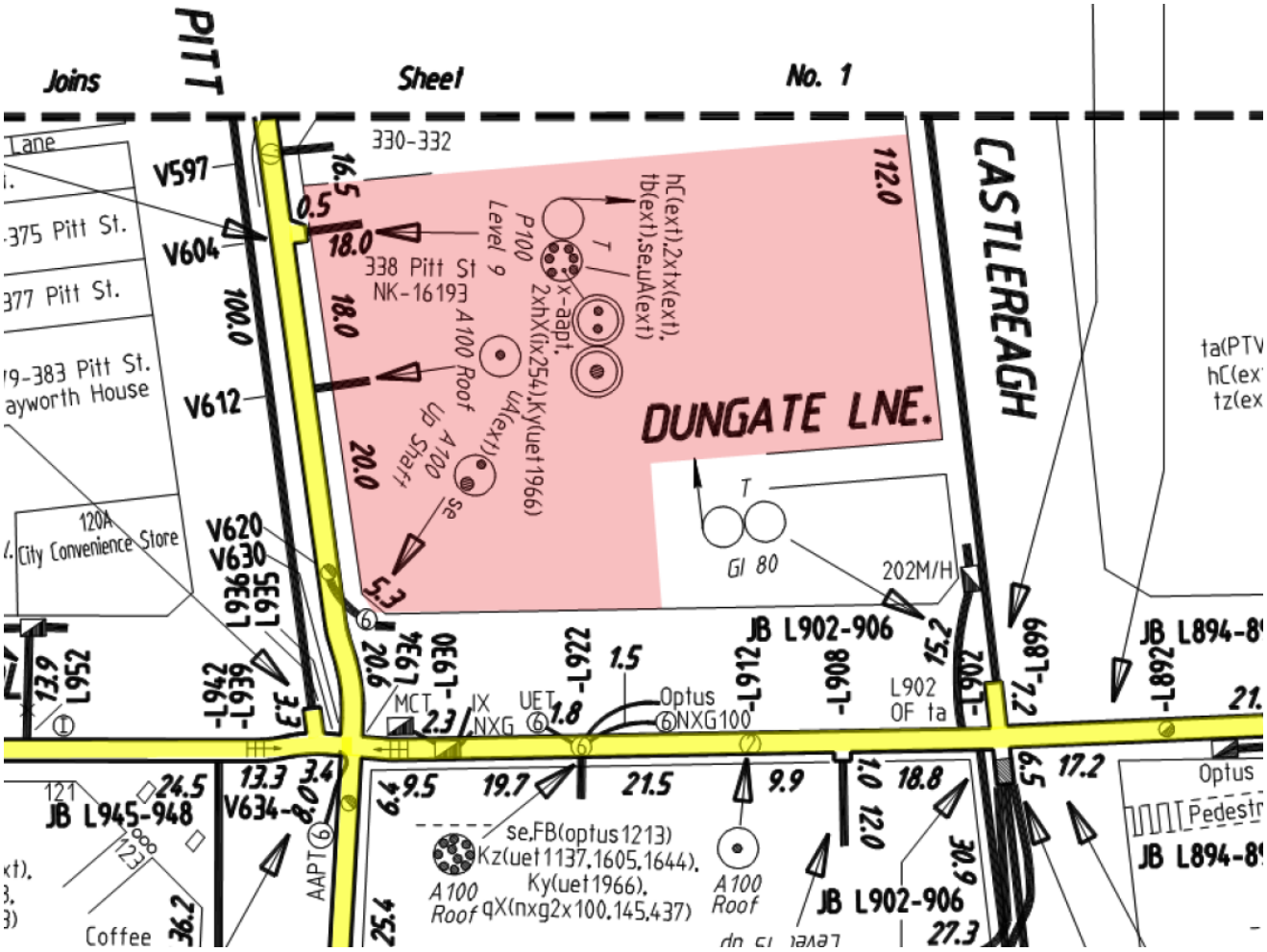


Figure 35 Location of Telstra Tunnel (Tunnel in Yellow)

Source: Arup

2.4 Surrounding Development

Surrounding the site is a range of commercial, residential, retail, entertainment and tourist accommodation uses of varying ages and architectural styles. A number of developments, both approved, recently completed and underway, signify the area is transitioning to include a higher proportion of residential uses.

Immediately surrounding the site are the following developments:

- **North:** Immediately to the north is a high-rise commercial building at 320 Pitt Street and the locally heritage listed former City South Telephone Exchange (known as the Telstra Exchange) (refer to **Figure 36**).
- **East:** Buildings to the east on Castlereagh Street and Elizabeth Street are of a smaller scale and various ages, limited in height by the Hyde Park Sun Access Plane (refer to **Figure 42**).
- **South:** On the southern side of Dungate Lane is a five-storey commercial building, orientated to Liverpool Street (refer to **Figure 39**).

  Across Liverpool Street is the State-listed heritage building, 'Mark Foy's Emporium', known as the Downing Centre Court, a high-rise commercial building accommodating Commonwealth Bank at podium level, the locally-listed heritage building 'Snow's Emporium' and World Square Shopping Centre (refer to **Figure 40**).
- **West:** Across Pitt Street is the locally listed heritage item 'Fayworth House' and small-scale commercial buildings accommodating food and beverage outlets and retail tenancies (refer to **Figure 37** and **Figure 38**).

Figure 36 320 Pitt Street

Source: Ethos Urban

Figure 37 Fayworth House at 379-383 Pitt Street

Source: Ethos Urban

Figure 38 Retail Tenancies across Pitt Street

Source: Ethos Urban

Figure 39 127-131 Liverpool Street and 133-141 Liverpool Street

Source: Ethos Urban

Figure 40 Mark Foy's Emporium (Downing Centre)

Source: Ethos Urban

Figure 41 Entrance to World Square Shopping Centre

Source: Ethos Urban

Figure 42 Development opposite Castlereagh Street

Source: Ethos Urban

2.5 Heritage

The site is not a heritage item, nor is it located within a heritage conservation area or a Special Character Area under the Sydney Development Control Plan 2012 (Sydney DCP 2012). There are a number of heritage items in proximity to the site listed in the Sydney LEP 2012 (refer to **Figure 43):**

- Item 1853: Former 'Snow's Emporium' (local)
- Item 1943: Former 'Snow's Emporium' (local)
- Item 1944: 'Fayworth House' (local)
- Item 1852: Brickfield Place (local)
- Item 1707: Central Local Courthouse and Holding Cells (state)
- Item 1942: Former Lismore Hotel façade (local)
- Item 1704: Former City South Telephone Exchange (local)
- Item 1703: Metropolitan Fire Brigade (local)
- Item 1854: Former 'Mark Foy's Emporium' (State)

The Heritage Impact Statement submitted at **Appendix DD** provides a statement of heritage value for these items.

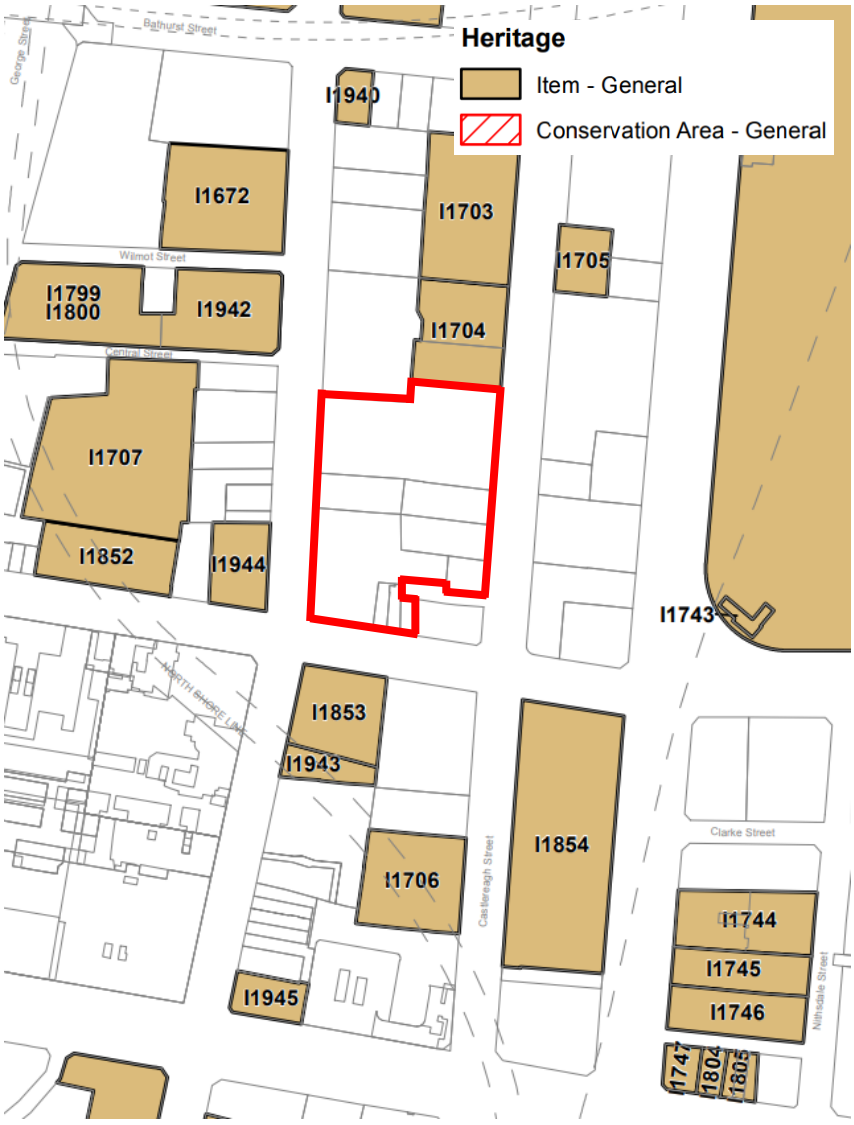


Figure 43 Extract of Heritage Map (Site Outlined in Red)

Source: Sydney LEP 2012

3.0 Consultation

In accordance with the SEARs, consultation has occurred with relevant public authorities, the community and Council. The consultation process to date is detailed in the Consultation Outcomes Report prepared by Ethos Urban (**Appendix EE**). Additionally, the proposed development will be placed on public exhibition for 30 days in accordance with Clause 83 of the EP&A Regulation. During the public exhibition period, State agencies and the public will have an opportunity to make submissions on the project.

3.1 Agency Stakeholder Engagement

As detailed in the Consultation Outcomes Report (**Appendix EE**) consultation with all agencies referenced in the SEARs has occurred, including:

- City of Sydney Council;
- Government Architect of NSW;
- Transport for NSW (Roads and Maritime Services);
- Heritage Council NSW;
- Sydney Coordination Office within TfNSW;
- Sydney Trains;
- Sydney Metro; and
- Sydney Airport/CASA.

3.2 Community Engagement

Drop-In Community Information Session

A community information session was held within the subject site at 241 Castlereagh Street, on Wednesday, 27 November 2019. In total, 15 community members attended the session, engaging with the project team and the project display boards.

It is noted that most people came to find out more about the project, without raising any concerns. The majority of feedback received was positive, with notable enthusiasm for the activation of the public domain and the transformative impact of the development on the surrounding area. A small number of concerns were raised relating to pedestrian and vehicle traffic congestion; and overshadowing.

A variety of engagement tools and activities were utilised as part of the consultation exercises, including:

- Letterbox drop to 13,800 local properties providing an overview of the proposed development and inviting them to attend a community information session.
- Letters to local landowners in potentially impacted properties.
- A project email and phone number contact were included in key communications collateral.
- A community drop-in session was held for members of the community, residents and businesses.
- Meetings with community stakeholders as requested.

Community Stakeholder Meeting

Following invitations to all affected landowners, a meeting was requested by the Chair of the Strata Committee of Fayworth House, 379-383 Pitt Street. The meeting was held on Tuesday, 3 November 2019, with members of the project team in attendance.

3.3 Outcomes from Consultation

To date, community feedback has been largely inquisitive in nature, with a common understanding that the project will become a landmark feature of the Sydney CBD and contribute to the evolving landscape of the ‘midtown’ precinct.

In summary:

- The community were attracted by the architectural features of the proposed development, including the courtyard, laneways and Sky Terrace.
- Generally, members of the community described the existing public domain and streetscape in the area as uninviting and were enthused by the potential of the development to contribute to the revitalisation of the area through an improved public domain and new retail and dining options.
- Questions were raised by several members of the community in relation to the timing of the project delivery and the land uses and built form.
- Concerns were raised by some members of the community in relation to the overshadowing impacts and traffic congestion.

4.0 Description of the State Significant Development

4.1 Overview

This EIS is submitted to Council in support of a SSD DA for mixed-use development at 338 Pitt Street, Sydney. The SSD DA seeks approval for the following:

- Demolition of all existing structures;
- Excavation and site preparation, including any required remediation;
- Construction and use of an 80 storey mixed-use development consisting of two high rise towers with a maximum building height of 257m (277.5 AHD) above podium buildings and public domain:
  - 592 residential apartments, with associated communal amenities and facilities;
  - A boutique hotel, with 158 hotel rooms and associated hotel amenities and facilities;
  - 5,123m² of retail gross floor area
  - A total of 84,717m² of gross floor area
- Vehicular access from Pitt Street, with an off-street porte-cochere drop off and lobby for the hotel;
- Servicing and plant equipment throughout the buildings;
- Five (5) basement levels accommodating residential, retail and hotel car parking, motorcycle parking, bicycle parking, loading dock, hotel bus drop off zone, storage, retail uses, and relevant building services;
- Improvements to the public domain, including landscaping and new pedestrian through site links, and
- Augmentation and extension of utilities and services.

Each element of the proposed development is described in further detail in the following subsections. Architectural Plans prepared by FJMT are provided at **Appendix A** and an Architectural Design Statement is provided at **Appendix B**, providing a further overview of the proposed development. A photomontage of the proposed development is shown at **Figure 44.**

Figure 44 View of Proposed Development from Hyde Park

Source: FJMT

4.2 Development Principles

The Design Principles for the redevelopment of 338 Pitt Street, Sydney were established by FJMT during the Invited Architectural Design Competition. The key Design Principles underpinning the proposed development relate to the themes of 'City Making, Fine Grain Urbanism and Richness'. FJMT's design approach is summarised below:

> *"Our approach is driven by the vision and aspirations of the City. It is as much a project of urban design as architecture; a project of city making. We propose a fine grain urbanism with a primacy on a truly public domain of pedestrian streets, laneways, arcades and courtyard gardens;*
>
> - *a respect for the city grid and deference to our great public park and memorial;*
> - *a diversity of architecture, human scale and material richness in the definition of our streets and open spaces;*
> - *a vertical extension of public space and connections to activated landscaped rooftops and terraces;*
> - *a diversity of use and architectural infrastructure to support innovation, productivity and culture; sustainable environments, micro-climate and greening;*

And perhaps most significantly, in support of this fine grain and permeable network two super-slim carefully proportioned towers, to allow sun-light and skylight to our streets and public spaces, and bring greater amenity, identity and sense of community to the occupants.

FJMT's Architectural Plans (**Appendix A**) and Architectural Design Statement (**Appendix B**) illustrate how the proposed development realises their design vision.

4.3 Numerical Overview

The key numeric development information concerning the proposed development is summarised in **Table 6**.

Table 6 Key Development Information

Component	Proposal
Site Area	6,091m²
Gross Floor Area • Residential • Hotel • Retail • **Total**	 • 61,961m² (excludes wind affected balconies) • 17,633m² • 5,123m² • **84,717m²**
Floor Space Ratio	13.91:1
Apartment Mix • 1 Bedroom • 2 Bedroom • 3 Bedroom & +3 Bedroom **Total**	 • 169 (29%) • 321 (54%) • 102 (17%) • **592** (61 Adaptable Apartments)
Hotel Rooms	158
Building Height	• 257m (277.5 AHD)
Communal Areas • Level 04 • Level 36 • **Total**	 • 880m² • 427m² • **1,307m²**
Parking • Residential • Hotel • Retail • Car Share • Bicycle	 • 377 • 35 • 39 • 9 • 736
Setbacks	**Podium Setbacks** • 0m to Castlereagh Street, Pitt Street and Liverpool Street. **Tower Setbacks** • East and West (Castlereagh Street and Pitt Street): – Minimum 5.4m (6m to the main building wall) • North (320 Pitt Street and 233 Castlereagh Street): – Minimum 11.4 (12m to the main building wall) • Dungate Lane (South): – 0-6m

4.4 The Towers

It is proposed to construct two slender tower forms, coupled mid-way by a 'Sky Terrace'. The two towers have been designed to provide a fine grain skyline, create greater visual interest and connections, and optimise solar access to surrounding public domain, public open space and residential dwellings.

The towers have been designed with distinctive modulation between the low, medium and high-rise components. The low and medium rise of the towers are visually separated by the Sky Terrace, while the high rise is visually separated by a recessed level and distinguished by a softer, lighter coloured form.

The slender and simplistic form also allows for a flexible planning configuration that provides superior residential amenity, by allowing for the optimisation of views, natural ventilation and solar access. The height of the towers above ground is 257m (277.5 AHD).

4.4.1 Sky Bridge / Terrace

The two tower forms are 'coupled' by the Sky Terrace. The Sky Terrace modulates the tower forms and is located at a height that relates to the mid-century scale of surrounding towers. As detailed in the Architectural Design Statement (**Appendix B**) the Sky Terrace has been positioned to optimise the lateral stability of each tower, enabling simple continuous core boxes.

The centralised location of the Sky Terrace also allows for a more efficient sharing of services between the towers, including conditioning, recycled water, hot water and fire services. The Sky Terrace deflects some of the accumulated downdraft form the tower forms, providing shielding to the public domain and open spaces on the podium rooftops.

4.4.2 Façade Design

The design of the tower façade is detailed in Section 7 of the FJMT's Architectural Design Statement (**Appendix B**). The façade has been designed to include weather protected ventilation slots that enable natural ventilation, while addressing the relevant noise level requirements. This is discussed in further detail in the Noise and Vibration Assessment at **Appendix Y**.

Given the height of the building and the exposure to high wind speeds, the balconies have been designed in accordance with Clause 4.5A of the Sydney LEP 2012 and Section 4.2.3.12 of the Sydney DCP 2012. The proposed design includes naturally ventilated spaces with a glass windshield. The wintergarden balconies will appear similar to the typical apartment façade.

External Materials and Finishes

The façade has been designed to provide articulation to the tower form and maximise external views, while minimising thermal heat transfer. The façade consists of a lightly tinted bronze glazing, articulated by three horizontal bands. These horizontal bands include a pair of 'fins' along the glass line and a cladding element around the slab edge (refer to **Figure 45**), with a depth of approximately 600mm.

The fins and the cladding are both made of bronze anodised aluminium, which relates to the tinted glazing and creates a warm, textured tower form. Functionally, these horizontal bands provide shading, rain cover for balconies, and direct daylight into the floor plate. The fins and the cladding become more curvilinear and lighter in colour as the towers rise, contributing to the modulation between the lower and upper components of the North Tower and South Tower (**Figure 46**).

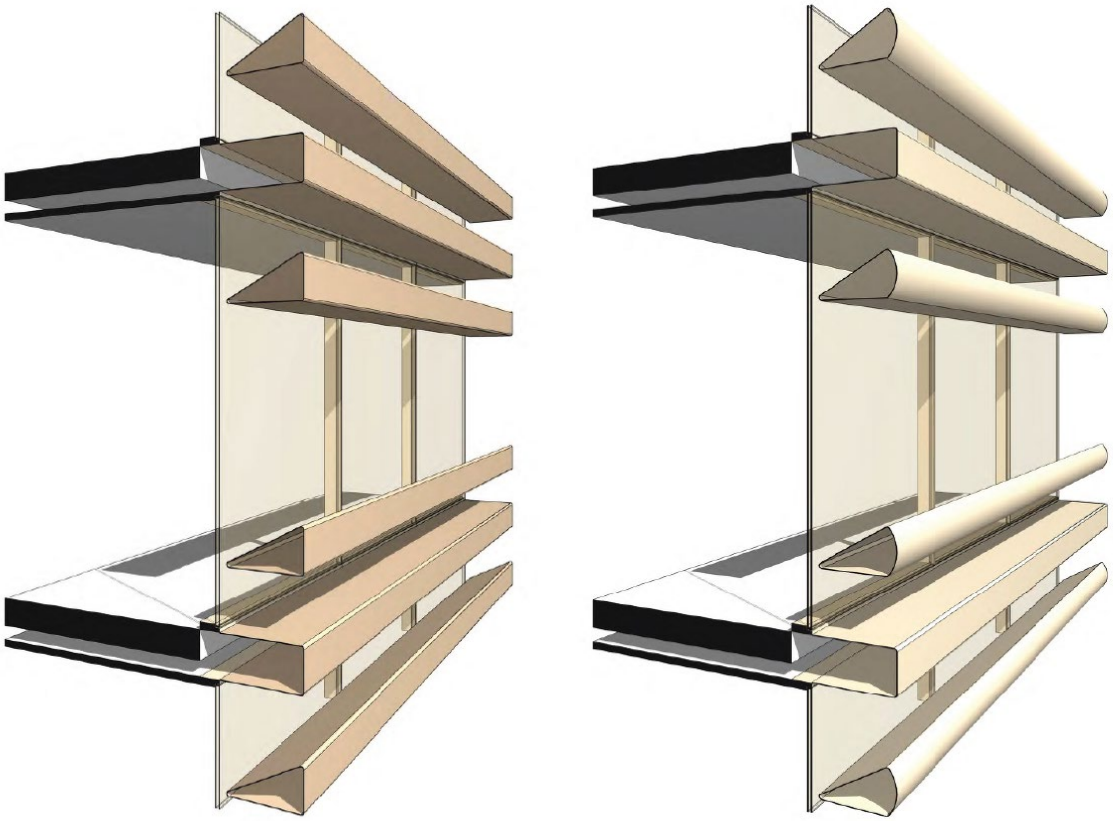


Figure 45 Typical Low Rise (Left Image) and High Rise Façade Design

Source: FJMT

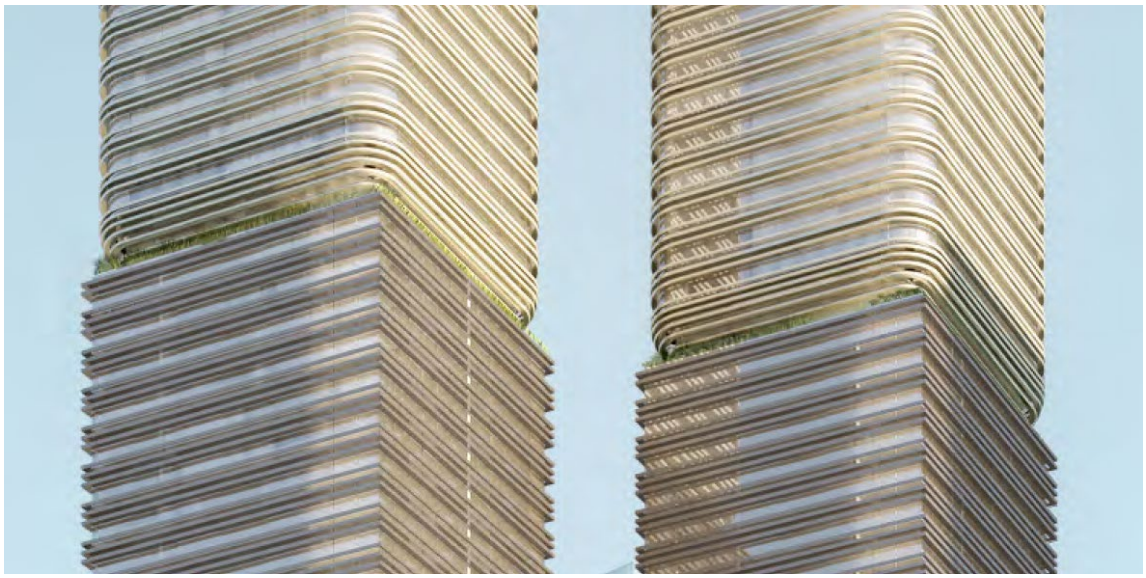


Figure 46 Materiality of Lower and Upper Components of the Tower Form

Source: FJMT

4.4.3 Vertical Transport

Arup have prepared a Vertical Transport Assessment (**Appendix Z**), which details the proposed vertical transport arrangement for servicing the basements, podium and towers.

4.5 The Podium Buildings

The podium buildings have been designed to provide a human scale, remaining low to admit additional natural light to the public domain. The podium buildings create a highly permeable ground plane, aligning with and enhancing the traditional grid of the Sydney CBD. This is achieved through the provision of new pedestrian connections and expanded laneway frontages.

The podium buildings provide a unique interface to each street frontage. This uniqueness has been driven through collaboration between FJMT and emerging architects; Trias, Polly Harbison Design and Aileen Sage. The emerging practices have each designed a podium building, with their schemes lending authentic architectural diversity to the internal and external public domain through design detail and high-quality materiality. This diversity in architectural form and expression would be difficult to achieve if designed by a single architectural practice. Each building is described below.

4.5.1 The Pitt Street and Liverpool Street Podium Buildings

As shown in **Figure 47**, the buildings designed by Trias, Polly Harbison Design and Aileen Sage are clustered in the south-west portion of the site. This means that along Pitt Street and Liverpool Street, four podium buildings have been designed by four distinct architectural practices. The individual approaches of Trias, Polly Harbison Design, Aileen Sage and FJMT are explored further in the Architectural Design Statement at **Appendix B**.

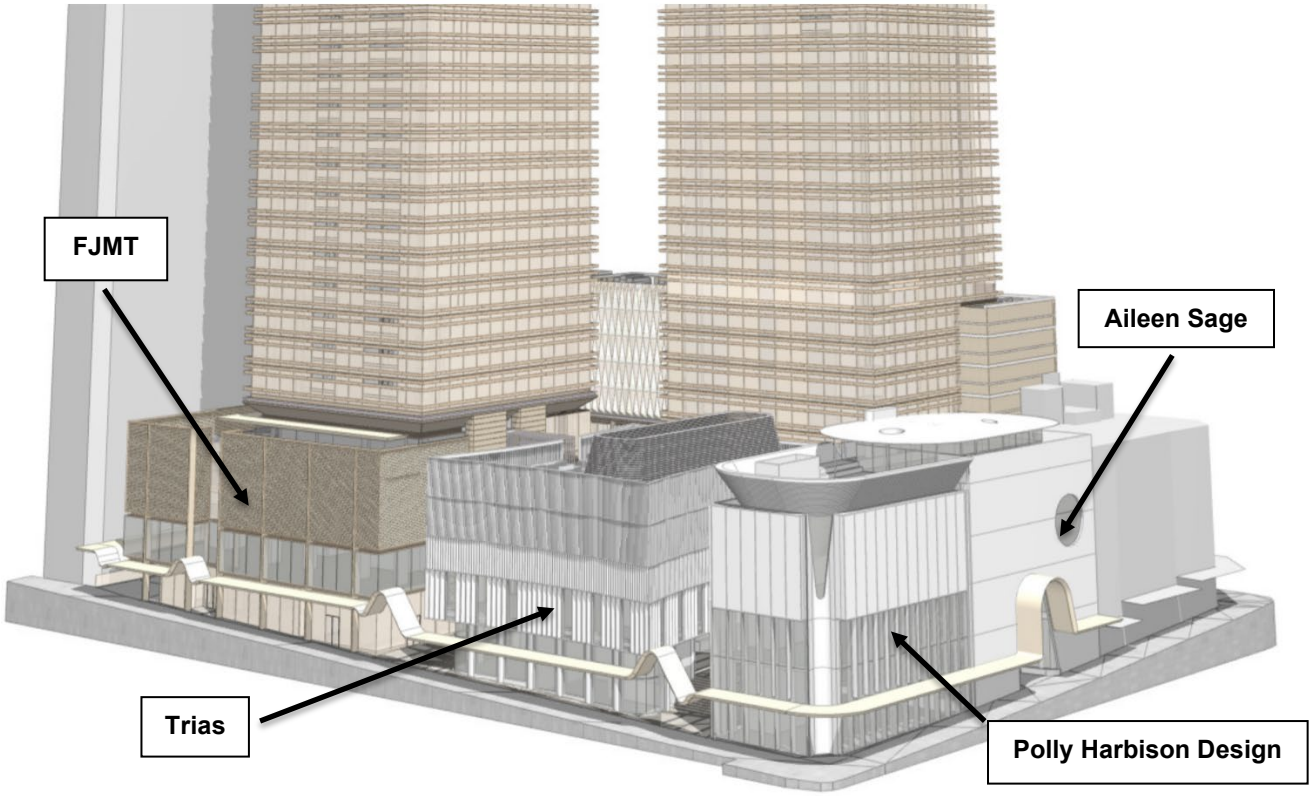


Figure 47 Pitt Street and Liverpool Street Frontage (FJMT, Trias, Aileen Sage and Polly Harbison Design Buildings)

Source: FJMT

Trias

The podium building designed by Trias adopts a gentle arced form, designed to soften the building edges and draw people into the precinct. This curve also contrasts existing facades along Pitt Street, while providing a place for pedestrians to stop along the footpath. On the ground floor, the building is conceived as an array of colonnades, designed to define different features (e.g. retail shopfronts). The façade above the ground floor consists of a combination of folded and perforated metal panels, which define the curvature of the building.

This ‘veil’ also addresses the technical requirements of the façade, which is required to ventilate two (2) storeys of mechanical plant. The building is proposed to accommodate retail tenancies on the Ground Floor and Level 01, as well as the rooftop residential garden.

Polly Harbison Design

The podium building designed by Polly Harbison Design is located on the corner of Liverpool Street and Pitt Street, forming a southern ‘gateway’. The façade of the building consists of a varied combination of glazing and sandstone, while the top of the building is defined by a sweeping sandstone bowl that accommodates a rooftop garden and connects to the neighbouring building designed by Aileen Sage.

Aileen Sage

The building design by Aileen Sage is located along Liverpool Street and it forms both an edge and an entry to the internal public domain. The design of the building is characterised by a series of arched forms, with retail tenancies off a vertical and horizontal circulation spine. The façade consists of a combination of distinctive masonry patterning and forms, which is crowned by a spherical metallic roof.

FJMT

The frontage along Pitt Street, designed by FJMT, has incorporated the materiality and modulations that is characteristic of surrounding heritage buildings. The podium building accommodates the residential lobby for the North Tower, an entrance to the hotel, and retail uses on the Ground Floor and Level 01. The fine grain design of the façade effectively screens mechanical plant located in the podium, while allowing views for occupants and views in for the retail uses.

4.5.2 Castlereagh Street

The Castlereagh Street podium buildings are designed by FJMT and will function as the main address for the hotel, with the hotel lobby fronting Castlereagh Street. The hotel rooms are located on the upper levels of the podium building, in a series of independently articulated buildings, which are joined by transparent bridges. The podium buildings have been designed to a human scale, creating a ‘boutique’ character while providing a strong connection with the surrounding public domain.

The Castlereagh Street frontage has been designed with a fine masonry facade character to respond to the adjacent heritage item at 219-227 Castlereagh Street and the predominant historic department store typology of this area of the Sydney CBD. In this regard, the design of the façade seeks to provide strong visual depth, a high degree of architectural modelling and articulation, a complex hierarchy of vertical and horizontal proportions and changes to the architectural treatments at different heights and levels.

Figure 48 Castlereagh Frontage

Source: FJMT

4.6 The Urban Courtyard

The public domain of the proposed development is anchored by a sizeable 'urban courtyard', the design of which has been developed by Martha Schwartz and Partners and is detailed in the Landscape Plans provided at **Appendix B**. The courtyard, which has an area of approximately 1,050m², will provide shelter from the intense activity of the Sydney CBD. It will be sleeved with activating retail and hotel uses. It has also been designed to accommodate extensive landscaping, water features and the installation of public art.

Figure 49 Proposed Urban Courtyard

Source: FJMT, Martha Schwartz and Partners

4.7 Basement

There is a total of five (5) subterranean levels proposed, including the car parking and hotel drop-off and lobby on the Lower Ground Floor.

4.8 Proposed Uses

4.8.1 Hotel

The hotel has been designed with a boutique character, which stems from the unique opportunity to locate hotel rooms and facilities across a series of connected podium buildings. As shown in **Figure 50**, Level 9 to Level 17 of the South Tower are also occupied by hotel rooms, including the Presidential Suite overlooking Castlereagh Street. In total, the hotel will contain 158 hotel rooms. There is a spa on Level 8 and hotel guests will have access to the Sky Terrace, which provides the following facilities:

- Level 32: bar and restaurant.
- Level 34: gym, pool and spa.

The main pedestrian entry to the hotel is from Castlereagh Street. There is also a secondary pedestrian entry from Pitt Street. A porte-cochere, accessed from Pitt Street, on the Lower Ground Level provides a generous space for hotel set-down/pick-up activity. The porte-cochere is located adjacent the hotel lobby and lift cores, ensuring efficiency and ease of access for users.

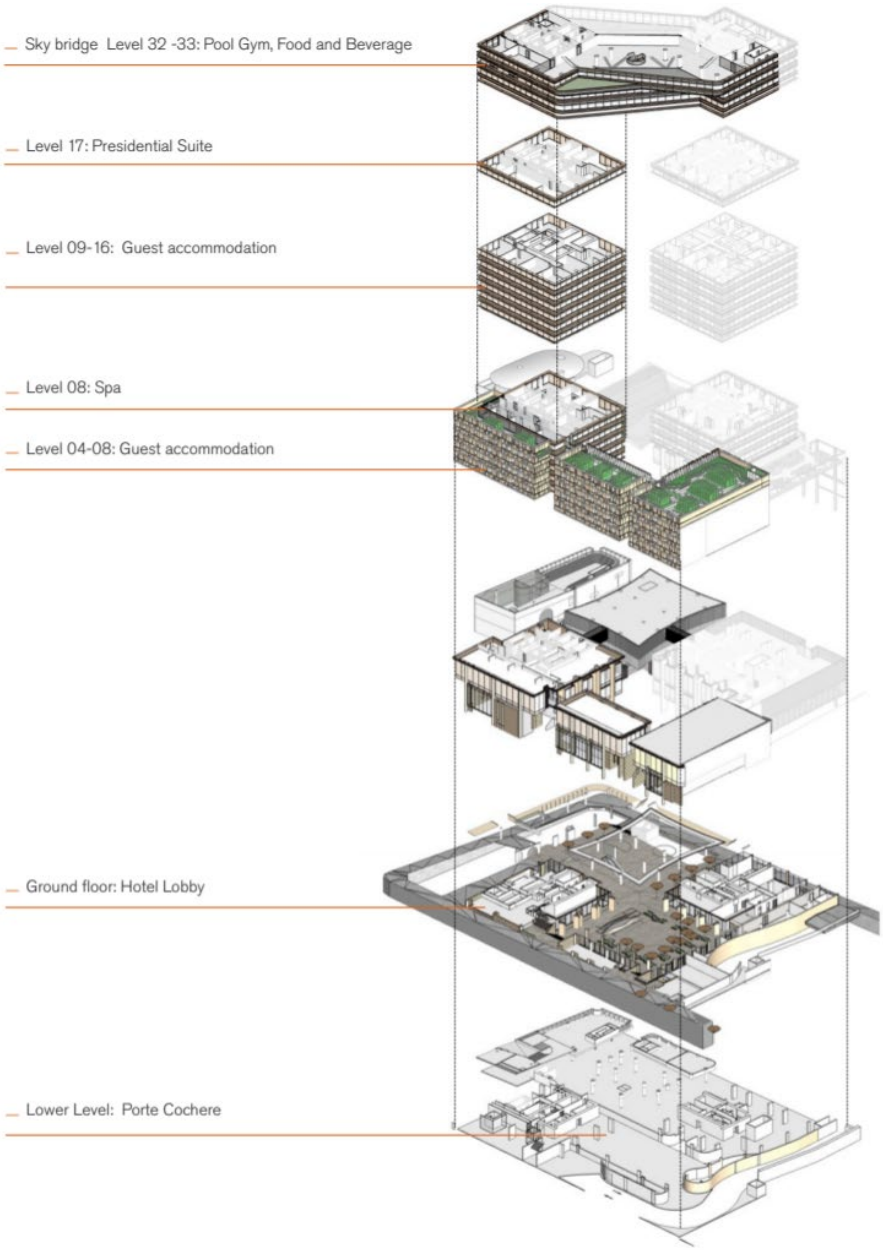


Figure 50 Proposed Hotel Uses (looking south-west from Castlereagh Street)

Source: FJMT

4.8.2 Residential

The North Tower and South Tower contain a combined 592 residential apartments. Apartments begin from Level 6 in the North Tower and Level 18 in the South Tower. Other residential uses across the proposed development include:

- Level 04 Pitt Street Podium: communal rooftop garden (880m^2), kitchen facilities, entertainment room and meeting rooms;
- Level 35 North and South Towers: residential pool and gym (596m^2); and
- Level 36 North and South Towers: communal rooftop garden (427m^2).

The residential uses within the proposed development are illustrated in **Figure 51.** The North Tower is accessed from a residential lobby directly from Pitt Street. The South Tower is accessed from a residential lobby from the pedestrian plaza.

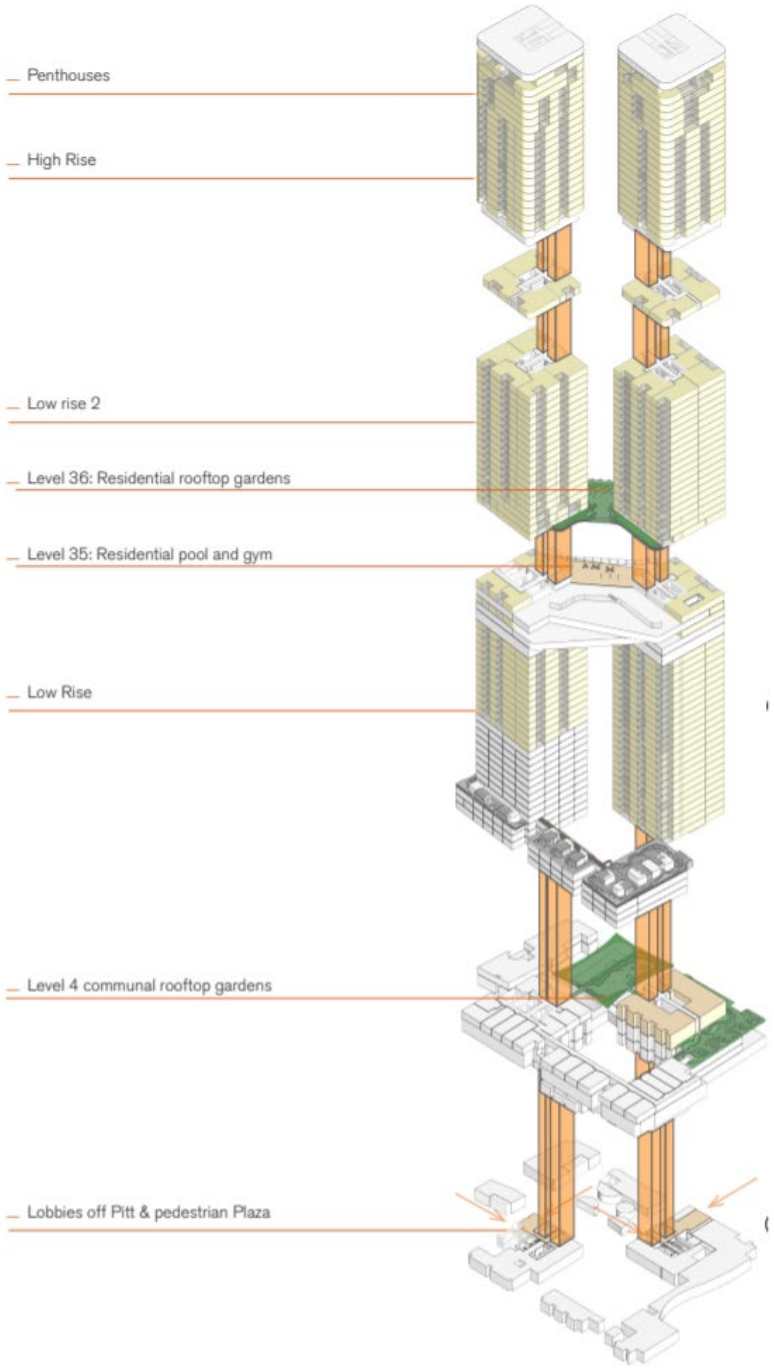


Figure 51 Residential Uses (looking south-west from Castlereagh Street)

Source: FJMT

4.8.3 Retail

The proposed development aims to deliver a world-class retail destination in the Sydney CBD, with 5,123m² of retail GFA proposed throughout the development. The proposed retail uses are generally as follows:

- Lower Ground Level: Bar.
- Ground Floor and Podium Buildings: Retail, Food & Beverage.
- Level 32: Restaurant/Bar within the Sky Terrace.

The final retail mix will be determined at a future stage.

4.9 Hours of Operation

The following hours of operation are proposed for the various uses throughout the development:

- Residential: Monday – Sunday 24-hour concierge
- Hotel: Monday – Sunday 24-hour concierge
- Retail: Monday – Sunday 6am – midnight

4.10 Pedestrian Access

The proposed development is highly permeable and is accessible from Pitt Street, Liverpool Street and Castlereagh Street. It provides three east-west through-site pedestrian connections, as well a connection from Liverpool Street (shown in **Figure 52**). In addition, by removing a number of vehicle crossovers on Castlereagh Street and parallel ramps on Castlereagh Street and Pitt Street, the proposed development will significantly improve the interface with surroundings streets, and pedestrian safety and amenity.

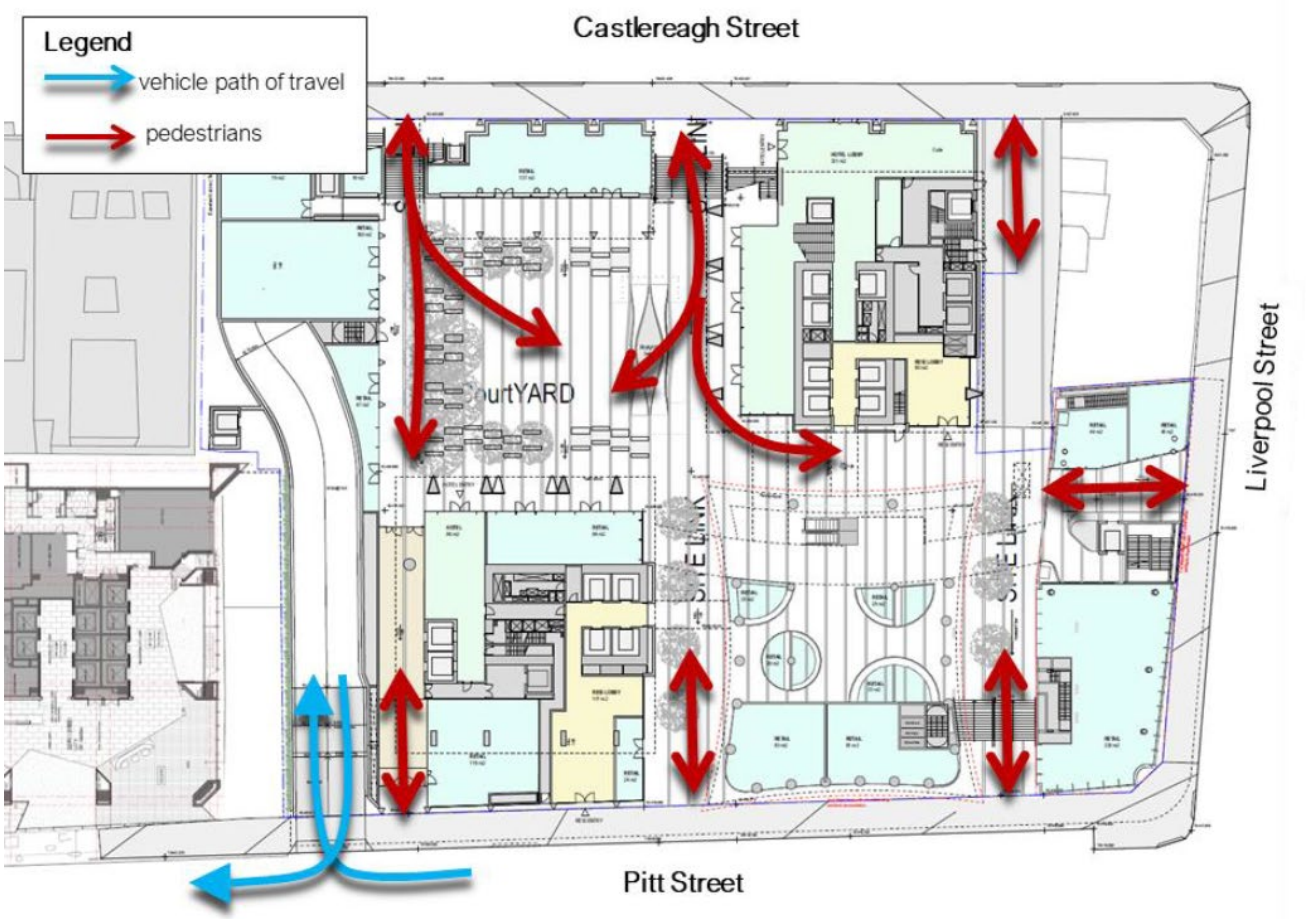


Figure 52 Proposed Vehicle and Pedestrian Access

Source: GTA Consultants

4.11 Transport, Access and Parking

Vehicle Access and Parking

Access

The proposed development will consolidate the numerous existing vehicular access points into a single two-way vehicular access from Pitt Street, located along the northern boundary. A ramp leads down from Pitt Street to the drop-off on the Lower Ground Level and Level B1-B4.

There is a porte-cochere on the Lower Ground Level, which provides generous space for set-down/pick-up and minibus activity. The porte-cochere is located adjacent the hotel lobby and lift cores, ensuring efficiency and ease of access for users.

Access to Dungate Lane from Castlereagh Street will be maintained to provide the necessary rear lane access to 255 Castle Street. Notwithstanding, Dungate Lane is also proposed to provide improved pedestrian amenity as an important east-west connection.

Parking

Parking for the various uses within the development is provided across the basement levels and includes:

- 377 residential spaces (including 19 accessible spaces);
- 35 hotel spaces (including 2 accessible spaces);
- 39 retail spaces (including 2 accessible spaces);
- 9 car share spaces;
- 38 motorcycle spaces.

There are also 10 car parking spaces dedicated for use by Telstra Plaza (320 Pitt Street) on Level B1. These car parking spaces are provided to preserve the rights afforded to 320 Pitt Street under existing easements (refer to **Appendix G**).

Loading and Servicing

The loading and servicing of the proposed development will occur from the loading dock on Level B1. The loading dock is accessed via the two-way ramp from Pitt Street, which will permit access to service vehicles up to 9.25m garbage truck. It is noted that the proposed development provides loading and servicing facilities for 320 Pitt Street, Sydney

The loading dock and service areas provides for the following:

- Four (4) loading bays for vehicles up to a 9.25m garbage truck (including one [1] bay for Telstra Plaza); and
- Seven (7) loading bays for vehicles up to a 6.4m small rigid vehicles (including two [2] bays for Telstra Plaza).

In total, there are three (3) service bays provided for the Telstra Plaza. As discussed above, these are provided to preserve the rights afforded to 320 Pitt Street under existing easements (refer to **Appendix G**).

Bicycle Access, Parking and End of Trip Facilities

The proposed development will encourage active transport, particularly cycling, through the provision of appropriate infrastructure and a Green Travel Plan (**Appendix W**). The proposed development provides a total of 736 bicycle parking spaces, including:

- 652 residential spaces, including 60 visitor spaces;
- 12 hotel spaces; and
- 72 retail spaces.

The secure bicycle parking spaces are provided separately within the mezzanine of Level B1, which is accessed via the lifts. The staff end-of-trip facilities are also located within the mezzanine of Level B1.

4.12 Landscaping

A detailed Landscape Report has been prepared by Martha Schwartz and Partners (**Appendix B**) which details the overall landscaping strategy for the proposed development, as well as the concept, planting and maintenance strategies for each landscaped area. The areas proposed to include landscaping include the courtyard and public realm, the Sky Terrace, the hotel garden and spa, laneways and rooftop areas.

4.13 Public Art

The proposed development provides a significant and exciting opportunity to contribute public art to the city. A Public Art Strategy has been prepared by FJMT (**Appendix B**) which outlines the vision, thematic framework, opportunity sites, reference artworks, budget and an implementation strategy.

As detailed in the original Public Art Proposal submitted to satisfy Condition 13(b) of the Concept Proposal, there has been a preliminary budget of $1.5 million allocated to public art.

The artist(s) will be procured through a Public Art Competition resulting in the commissioning of one or more artists based on an assessment of artwork concepts submitted against selection criteria set in consultation with the proponent, the architect and Council. This process will be managed by an Art Committee, which will guide the nomination and selection of artworks.

The Public Art Strategy identifies a number of opportunity sites for public art installations, which are generally located across three primary zones, being:

- Courtyard;
- Laneways; and
- Cityscape.

4.14 Waste Management

A Waste Management Plan has been prepared by MRA Consulting Group (**Appendix X**) which details the proposed management practices and procedures for waste generated during the construction and operation of the development.

4.15 Environmentally Sustainable Development

The proposed development represents an opportunity to provide a built form that is more sustainable than the existing buildings. This will be achieved through the integration of sustainability initiatives that ensure superior environmental performance of the buildings and achieve a high sustainability criteria.

The development has been designed to achieve the following minimum ratings:

- **Hotel:** NABERS Energy 5 Stars, Section J of the NCC 2019
- **Residential:** BASIX Energy 25 and BASIX Water 45
- **Retail:** Section J of the NCC 2019

The sustainability initiatives that will be pursued in the development include, but are not limited to, the following:

- Building Envelope:
  - External shade elements, spandrel zones and high performance double glazing to optimise thermal comfort and minimising solar heat gain (to reduce the required hours of operation for the mechanical system)
- Mechanical System:
  - High efficiency mechanical system.
- Water:
  - High efficiency water fixtures and rainwater harvesting/reuse systems; and
  - Management of stormwater prior to discharging into the public infrastructure, through the implementation of appropriate stormwater treatment devices (e.g. on-site detention) and Water Sensitive Urban Design Measures (WSUD), including bio-swales, rain gardens and gross pollutant traps.
- Energy:
  - Photovoltaic panels will be considered in the roof areas to offset electricity use and reduce energy consumption and emissions.

- Waste:
  - Selection of reused/recycled materials (where possible) and of low environmental impact materials; and
  - Reuse/recycling of construction and demolition waste, to avoid waste material going to landfill.
- Transport:
  - Encourage walking and cycling (less polluting forms of transport) by providing bicycle facilities for users of the buildings;
  - Provision of car parking spaces in accordance with the requirements of the Sydney LEP 2012, to encourage alternative modes of transport; and
  - Promoting development in close proximity to public transport.

An Ecologically Sustainable Design Report (ESD) has been prepared by Arup and is included at **Appendix R**. It provides greater detail around ESD principles and leading industry practice in sustainable building principles will be incorporated into the design, construction and operation of the development.

4.16 Infrastructure and Services

Arup has prepared a Utility Services Report (**Appendix L**) that identifies the existing utilities and infrastructure in the vicinity of the site and notes any expected impacts or required upgrades as a result of the proposed development. TTW have also prepared a Flood and Stormwater Report (**Appendix BB**) which details the proposed stormwater infrastructure.

4.17 Construction Management

A preliminary Construction Management Plan has been prepared by Touchstone Partners (**Appendix Q**) which outlines the overarching principles and practices for the management of construction activities. The plan provides an overview of on-site management during the construction phase of the project and considers management of site operations, soil, water and groundwater, construction waste, traffic, noise and vibration, air quality, hazardous materials, and community consultation and disputes. It will be used to inform the preparation of a detailed Construction Environmental Management Plan by the appointed contract, prior to the commencement of works and adhered to for the duration of construction.

Hours of Work

The proposed hours of construction are:

- Monday to Friday: 7am – 7pm
- Saturday: 7am – 6pm
- Sundays/Public Holidays: None

In addition to the above working hours, there will be occasional periods when out of hours works are required as is standard industry practice. Prior to scheduling any out of hours works, the proponent will agree the process with the Council.

Construction Staging

The proposed redevelopment is expected to commence in January 2022, with completion targeted for December 2025.

Table 7 Indicative Construction Staging and Timing

Stage	Start Date	End Date	Duration
Site Preparation	January 2022	December 2022	12 months
Demolition and Excavation	January 2023	December 2023	12 months
Construction – Towers	January 2024	June 2025	18 months
Construction – Podium	January 2025	December 2025	12 months

Source: GTA Consultants

Construction Traffic Management

GTA Consultants have prepared a Construction Traffic Management Plan (**Appendix W**) which details site access arrangements, anticipated truck volumes, truck routes, measures to preserve pedestrian and cyclist access and traffic control measures.

For the duration of construction, vehicle access will generally be provided via Pitt Street and Castlereagh Street, with vehicles entering the site along Pitt Street and exiting the site via Castlereagh Street. Heavy vehicle movement will be generally restricted to designated routes and confined to arterial roads (where feasible). These routes have been identified with the aim of providing the most direct routes to/from the site, as well as minimising the impact of heavy vehicles on local roads and surrounding development. There will be no on-site car parking provided for construction workers, with workers instead directed to utilise public transport.

To ensure safe pedestrian and cycle movements during construction, hoardings will be erected along all frontages and traffic controllers provided at each site access point to management pedestrian/cyclist movements when heavy vehicles are entering/exiting the site.

4.18 Demolition

Demolition of all existing structures is proposed as part of this SSD DA. A set of Demolition Plans is provided at **Appendix B** and demolition will be undertaken in accordance with the recommendations of the Preliminary Site Investigation Report (Stage 2) prepared by JBS&G (**Appendix I**).

5.0 Environmental Assessment

This section of the report assesses and responds to the environmental impacts of the proposed SSD DA. It addresses the matters for consideration set out in the SEARs (see **Section 1.5**). The Mitigation Measures at **Section 7.0** complement the findings of this section.

5.1 Secretary's Environmental Assessment Requirements

Table 4 in **Section 1.8** provides a summary of the individual matters listed in the SEARs and identifies where each of these requirements has been addressed in this EIS and the accompanying technical studies.

5.2 Environmental Planning and Assessment Act 1979 & Regulation 2000

The EP&A Act establishes a specific assessment system to consider projects classed as State Significant Development (SSD). SSD is development deemed to be of State significance and includes for example projects of a certain value that are being completed on sites regarded as important to the NSW Government, or for a particular purpose such as a major hotel. As noted, the proposed development that is the subject of this DA is categorised as SSD.

Division 4.4 of the EP&A Act relates to concept development applications. A staged development application is one that sets out concept proposals for the development of a site, and for which detailed proposals for separate parts of the site are to be the subject of subsequent development applications. The application may set out detailed proposals for the first stage of development.

This application comprises a detailed application for the redevelopment of 338 Pitt Street, Sydney, which is subject to the Concept Proposal (D/2016/1509), otherwise also known as a 'Stage 1 Development Application', 'Concept Plan' or 'Concept Proposal'. These terms are used interchangeably and should be interpreted to mean 'staged DA' (for the purposes of Section 4.22 of the EP&A Act) in each instance.

Section 4.24 of the EP&A Act provides that while any consent granted on the determination of a Concept Proposal for a site remains in force, the determination of any further development application in respect of that site cannot be inconsistent with that consent. The proposed development is consistent with the Concept Proposal, as proposed to be modified by the concurrent Section 4.55(2) Modification Application submitted to Council. This is considered further in **Appendix KK.**

This EIS has examined and considered all possible matters affecting or that are likely to affect the environment by reason of the proposed development. **Table 8** provides an assessment of the proposed development against the objects of the EP&A Act.

Table 8 Objects of the EP&A Act

Object	Comment
(a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,	The proposal has the potential to provide a range of social and economic benefits and has been carefully designed and tested and will be monitored through the delivery and operational period, to ensure that it does not result in any adverse environmental impacts. This is detailed further in **Section 5.13** and the Mitigation Measures in **Section 7.0** of this EIS.
(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,	The principles of Ecologically Sustainable Development, as set out in Schedule 2 of the EP&A Regulation, as well as other relevant economic, environmental and social considerations have been addressed in this EIS and the accompanying information. The 'Justification of the Proposal' outlined at **Sections 8.0** of this EIS demonstrates how ESD factors have been considered in the detailed design, delivery and operation of the proposed development.
(c) to promote the orderly and economic use and development of land,	The proposal provides for the orderly and economic development of the site in accordance with established planning parameters, facilitating the delivery of a new, high-quality mixed-use development.
(d) to promote the delivery and maintenance of affordable housing,	The proposed development will not impede the delivery and maintenance of affordable housing.

Object	Comment
(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,	The proposed development takes place in a modified and disturbed environment and does not impact on biodiversity values. The site is not considered to have habitat suitable for any threatened flora and fauna, as was confirmed in the Biodiversity Development Assessment Report Waiver submitted with the SSD DA (**Appendix V**). This waiver considered the values of the site and confirmed that a Biodiversity Development Assessment Report is not required.
(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),	A Heritage Impact Statement is provided at **Appendix DD** and an Aboriginal Cultural Heritage Assessment Report (ACHAR) is provided at **Appendix HH**. Refer to **Section 5.13**.
(g) to promote good design and amenity of the built environment,	The proposed development is the result of an Invited Architectural Design Competition undertaken in accordance with the projects Design Excellence Strategy and the City of Sydney's *Competitive Design Policy*. The proposed development maintains the design intent of the winning scheme and incorporates the recommendations of the Jury (refer to **Section 1.5.2**).
(h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,	The proposed development aims to provides world-class retail, hotel and residential uses. In accordance with this objective, the proposed development will achieve the highest standards in construction and maintenance.
(i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,	Consultation has been undertaken with various levels of government and government agencies during the preparation of this SSD DA as outlined in **Section 3.0**. All agencies will be afforded the opportunity for further input into the development process during the public exhibition process.
(j) to provide increased opportunity for community participation in environmental planning and assessment.	Community consultation and participation to date has informed, and will continue to assist, the development and operation of the proposed development. This is detailed in **Section 3.0** of the EIS. Further consultation will be carried out during exhibition of the application, through the design development process, prior to the commencement of construction, and throughout the construction period.

As required by Clause 7(1)(d)(v) of Schedule 2 of the EP&A Regulation, the following additional approvals set out in **Table 9** are either not required by virtue of the fact that the project is SSD, or because they are not required in order to permit the proposed development to occur.

Table 9 Other Legislation

Act	Approval Applicable/ Required
Approvals that do not apply to State Significant Development	
Coastal Protection Act 1979	N/A
Fisheries Management Act 1994	N/A
Heritage Act 1977	N/A
National Parks and Wildlife Act 1974	N/A
Native Vegetation Act 2003	N/A
Rural Fires Act 1997	N/A
Water Management Act 2000	Yes
Legislation that must be applied consistently	
Fisheries Management Act 1994	No
Mine Subsidence Compensation Act 1961	No
Mining Act 1992	No
Petroleum (Onshore) Act 1991	No
Protection of the Environment Operations Act 1997	No
Roads Act 1993	No
Pipelines Act 1967	No

5.3 Compliance with Strategic Planning Framework

The proposed development is generally consistent with the provisions of the relevant planning policies identified in the SEARs, as detailed in the following sections and other supporting technical information appended to the report.

5.3.1 Greater Sydney Region Plan – A Metropolis of Three Cities

The *Greater Sydney Region Plan* (the Region Plan) is the overarching strategy for growing and shaping the Greater Sydney Area. It sets a 40-year vision (to 2056) and establishes a 20-year plan to manage growth and change for Greater Sydney in the context of social, economic and environmental matters.

The plan was adopted in March 2018 and seeks to reposition Sydney as a metropolis of three cities – the western Parkland City, Central River City, and the Eastern Harbour City. In the same vein as the former *A Plan for Growing Sydney*, the Plan provides 10 high level policy directions supported by 40 objectives that inform the District Plans, Local Plans and Planning Proposals which follow in the planning hierarchy.

The proposed development is consistent with the policy directions and objectives under the Region Plan, which govern growth and development in Sydney. This is demonstrated in **Table 10** below. An assessment of the proposed development against the specific vision for the Eastern District is provided in **Section 5.3.2** below.

Table 10 Consistency with the Region Plan

	**A City Supported by Infrastructure** • The proposed development will deliver housing and jobs in proximity to major transport infrastructure, including the new Pitt Street Metro Station. In this regard, the development will help align land use planning and infrastructure planning, improving access to jobs in the heart of the CBD. It will also ensure that infrastructure usage is optimised, by encouraging more efficient land use. • The proposed development is supported by a Green Travel Plan (**Appendix W**) which will encourage the use of sustainable transport choices. The Green Travel Plan includes initiatives that will encourage sustainable travel, including the provision of car share spaces and bicycle infrastructure.
	**A Collaborative City** • This direction acknowledges that managing the competing needs of the city requires all levels of government, industry and the community to work together. While the site is not identified as being within a 'collaboration area', the proposed development is in the Sydney CBD, which is a key business and cultural hub in Greater Sydney. • The proposal has also been the subject of consultation with government agencies, the local community, other key stakeholders and Council to ensure that an acceptable local outcome is achieved as detailed in **Section 3.0** and the Consultation Outcomes Report included at **Appendix EE**.
	**A City for People** • The proposed development has been designed with consideration of intergenerational equity and promotes sustainability, universal design and accessibility, and community integration. • In accordance with the preliminary Green Travel Plan (**Appendix W**) the proposed development encourages the use of public transport, walking and cycling to minimise private vehicle use. In this regard, the development benefits from proximity to public transport infrastructure and cycleways. It will also provide bicycle parking and associated end of trip facilities, as well as car share spaces.
	**Housing the City** • The proposed development will provide new housing in the heart of the Sydney CBD, which will help to meet forecasted demand. • Future occupants will experience a high levels of residential amenity, with the design generally exceeding the minimum requirements of the NSW Apartment Design Guide (ADG).
	**A City of Great Places** • The proposed development will provide new housing and accommodation in the right location, being the financial, cultural and services heart of NSW. This will ensure future residents and visitors are in immediate proximity to a variety of services and social infrastructure, including jobs, shops, public transport, health, open space and leisure facilities. • The development will exhibit design excellence. It will comprise a permeable fine grain ground plane that will be activated by a mix of uses, and includes a number of new high quality public spaces that

	connect people and foster a sense of place, including a large urban courtyard and a publicly accessible bar and restaurant on Level 32.
	**A Well-Connected City** • The proposed development will provide a mix of retail, hotel and residential uses in proximity to major transport infrastructure, including the new Pitt Street Metro Station. In this regard, the development will help align land use planning and infrastructure planning, improving access to jobs in the heart of the CBD. This will take advantage of the substantial investment in public transport infrastructure and support the achievement of a '30-minute city'.
	**Jobs and Skills for the City** • Delivery of additional hotel accommodation will directly contribute to the long-term strength and productivity of the visitor economy in NSW by influencing the ability to attract domestic and international visitors. In this way, it will also support broader economic growth in the region, as a direct benefit of increased tourism and activity. The proposal will also directly benefit job creation in the local hospitality, accommodation and entertainment industries.
	**A City in its Landscape** • The development incorporates high quality landscaping across the ground plane and podium buildings, as detailed in the Landscape Plan prepared by Martha Schwartz and Partners (**Appendix B**). • As recognised by the BDAR Waiver granted by DPIE, the proposed development does not affect any protected biodiversity or remnant or significant vegetation.
	**An Efficient City** • The proposed development will achieve high sustainability targets, including: – NABERS Energy 5 Stars (Hotel); – Section J of the NCC 2019 (Hotel and Retail); and – BASIX Energy 25 and BASIX Water 45 (Residential). • The sustainability initiatives identified in the ESD Report (**Appendix R**) will address the baseload energy consumption of the proposed development, support the use of sustainable transport options, improve the efficient use and reuse of water, and minimise waste.
	**A Resilient City** • The proposal minimises exposure to natural hazards by ensuring it responds to overall climate adaption and resilience as outlined in the Flood and Stormwater Report (**Appendix BB**) and ESD Report (**Appendix R**). • The environmental initiatives implemented through the development contribute to enhanced environmental outcomes and seek to mitigate impacts related to climate change.

5.3.2 Eastern City District Plan

The *Eastern City District Plan* underpins the *Greater Sydney Region Plan* and sets the 20-year vision for the District through 'Planning Priorities' that are linked to the Regional Plan. The proposal is consistent with a number of these priorities, as follows:

- **Infrastructure and Collaboration:** The '30-minute city' model is a long-term aspiration for Sydney whereby jobs and services and strategic/metropolitan centres are accessible within 30 minutes by public transport. This development is uniquely placed to contribute to the '30-minute city' model, by providing a mix of retail, hotel and residential uses in proximity to major transport infrastructure, including the new Pitt Street Metro Station. In this regard, the development will help align land use planning and infrastructure planning, improving access to jobs in the heart of the CBD.
- **Liveability:** The proposed development will provide new housing and accommodation in the right location, being the financial, cultural and services heart of NSW. This will ensure future residents and visitors are close to a variety of services and social infrastructure, including jobs, shops, transport, health, open space and leisure facilities. The development will also exhibit design excellence and provide a well-designed built form, with a fine grain and permeable ground plane that is activated by a mix of uses and includes a number of new high quality public spaces that connect people and foster a sense of place.
- **Productivity:** The delivery of additional hotel accommodation will directly contribute to the long-term strength and productivity of the visitor economy in NSW by influencing the ability to attract domestic and international

visitors. In this way, it will also support broader economic growth in the region, as a direct benefit of increased tourism and activity.

- **Sustainability:** The measures identified in the Ecologically Sustainable Design Report (ESD) (**Appendix R**) will reduce baseload energy consumption, support the use of sustainable transport options, improve the efficient use and reuse of water, and minimise waste. This will be achieved through the integration of sustainability initiatives that ensure superior environmental performance and achieve the sustainability targets, including NABERS Energy 5 Stars, Section J of the NCC (2019) and BASIX Energy 25 and BASIX Water 45.

5.3.3 Additional Strategies and Plans

In addition to the above, the proposal remains consistent with the key additional planning policies, guidelines, and strategies identified in the SEARs as outlined in **Table 11** below.

Table 11 Summary of Consistency with additional Strategies and Plans

Document	Comment
NSW State Priorities	The priorities primarily relate to education, social policy, and governance and as such are not strongly related to or give effect to the proposed development. However, the project will have a positive impact on jobs in NSW by promoting the visitor economy and stimulating the construction industry in Sydney.
NSW Future Transport Strategy 2056	The proposal is consistent with the desire to encourage active and sustainable options and provide more seamless pedestrian experiences.
Better Placed: an integrated design policy for the built environment of NSW	FJMT have demonstrated how the proposal is consistent with the objectives of Better Placed in their Architectural Design Statement (**Appendix B**).
Better Placed – Design Guide for Heritage	The existing building is not identified as having heritage significance. Furthermore, the proposal will not impact on surrounding heritage items. The architectural significance of the building, as well as its future use, reflects the historical and cultural significance of CBD and its importance in developing the role of Sydney as a global city.
Sydney's Walking Future	The proposal's proximity to surrounding facilities, such as services and infrastructure encourages walking over private transportation.
Sydney's Cycling Future	The site benefits from access to extensive local and regional bicycle networks.
Sustainable Sydney 2030	An ESD Report has been prepared by Arup and is included at **Appendix R**, which demonstrates that the proposed development is targeted at achieving the following: • NABERS Energy 5 Stars (Hotel); • Section J of the NCC 2019 (Hotel and Retail); and • BASIX Energy 25 and BASIX Water 45 (Residential). Further the proposal will facilitate improved walking, cycling and public transport patronage in the Sydney CBD.
Legible Sydney	The proposed application will ensure clear wayfinding for pedestrians and increase permeability and additional through site links will further improve the amenity of the block.
City Centre Access Strategy	The proposal's central location will encourage visitors to take public transport, reducing pressure on local roads.
City of Sydney Interim Floodplain Management Policy	*The City of Sydney Interim Floodplain Management Policy* has been addressed in Section 4 of the Stormwater Management Plan prepared by TTW (**Appendix BB**). Flooding is discussed further in **Section 5.21** of the EIS.
City of Sydney Public Domain Manual	The proposed public domain will follow the high-quality standard set by the City of Sydney.
Make Sydney a Sustainable Destination	The proposal includes a series of sustainability initiatives as outlined within the ESD Report prepared by Arup (included at **Appendix R**).
Sydney Landscape Code	The purpose of the *City of Sydney Landscape Code* is to guide the creation of high quality, sustainable landscapes spaces within private developments. The proposal is consistent with the landscaping requirements as outlined within the City of Sydney DCP.
City of Sydney Archaeological Zoning Plan	Schedule 4 of the Sydney Archaeological Zoning Plan (SAZP) lists within the study site as an "Area of Archaeological Potential": • 241-243 Castlereagh Street

Document	Comment
	• 249-251 Castlereagh Street • 126 Liverpool Street • 128 Liverpool Street • 130 Liverpool Street Excavation will be undertaken in accordance with the Archaeological Assessment, Research Design & Excavation Methodology prepared by AMAC (**Appendix JJ**).
Tourism Action Plan 2013	The *Tourism Action Plan 2013* sets out how the City of Sydney will work with partners to maintain and develop a vibrant tourism sector in Sydney. Whilst there are no specific tourism uses proposed, the proposed development will provide additional visitor accommodation in the Sydney CBD, which will address the current deficit in high quality visitor accommodation and contribute towards making Sydney an attractive place to visit.
Retail Action Plan 2013	The *Retail Action Plan 2013* sets a course to position Sydney as Australia's premier retail destination with a shopping experience in the city centre and main streets in each of the villages that match those found in comparable global cities. The proposal seeks to contribute to the vitality of the CBD by providing ground floor retail uses.
Visitor Accommodation Action Plan 2015	The *Visitor Accommodation Action Plan 2015* recognises the importance of accommodation to the success of the visitor economy. It aims to promote private sector investment in new and existing visitor accommodation. The proposed development provides additional visitor accommodation in the Sydney CBD, within a boutique hotel that draws on the unique opportunity to locate hotel rooms and facilities across a series of connected podium buildings, as well as within the iconic South Tower. In this way, it is entirely consistent with the aims of the *Visitor Accommodation Action Plan 2015*.
City of Sydney Section 61 Contributions Plan 2013	The proposal will be subject to the relevant contributions.
City of Sydney Guidelines for Waste Management in New Development 2018	A Waste Management Plan has been prepared by MRA Consulting Group (**Appendix X**) which details the proposed management practices and procedures for waste generated during the construction and operation of the development.
EIS Guidelines – Road and Related Facilities (DoPI)	This EIS has been prepared with reference to the factors outlined within the guidelines.
Cycling Aspects of Austroads Guides	No cycling paths are proposed as part of this proposal. Bicycle Parking Facilities will be provided as per the relevant Australian Standard (AS2890.3 – Bicycle Parking Facilities).
NSW Planning Guidelines for Walking and Cycling	The proposal will improve the permeability of the ground plane which will contribute to the city's existing active transport network.
Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development	GTA Consultants have prepared a Transport Impact Assessment (**Appendix W**) which assesses the main operational traffic and transport features of the proposed development. Refer to **Section 5.16**.
Standards Australia AS2890.3 (Bicycle Parking Facilities)	The proposal bicycle parking facilities will be designed in accordance with relevant Australian Standard (AS2890.3 – Bicycle Parking Facilities).
Development near Rail Corridors and Busy Roads – Interim Guideline 2008 (DNRCBR)	The proposal has been designed to mitigate the impacts on and from the surrounding road network.
Guide to Traffic Generating Developments (Roads and Maritime Services)	Clause 104 of *State Environmental Planning Policy (Infrastructure) 2007*, discussed further in **Section 5.4** below, requires that the development be referred to the RMS as Traffic Generating Development. This EIS is accompanied by a Transport Impact Assessment prepared by GTA (**Appendix W**), which addresses the demand for parking and traffic generated by the proposal. This is discussed in **Section 5.16** below.

5.4 Relevant EPIs, Policies and Guidelines

The relevant strategies, environmental planning instruments, policies and guidelines as set out in the SEARs are addressed in **Table 12**.

Table 12 Summary of consistency with relevant Strategies, EPIs, Policies and Guidelines

Instrument/Strategy	Comments
State Legislation	
Biodiversity Conservation Act 2016	In accordance with the *Biodiversity Conservation Act 2016*, an assessment of any SSD's biodiversity impacts must be undertaken as part of the provision of any SSD DA, including the provision of a Biodiversity Development Assessment Report (BDAR) in instances where it is required. An application was lodged on 4 November 2019 requesting that the Department, in consultation with Environment, Energy & Science Group, waive the requirement to prepare a BDAR on the grounds of the development being unlikely to impact biodiversity values in accordance with Clause 1.5 of the *Biodiversity Conservation Act 2016* and Clause 1.4 of the *Biodiversity Conservation Regulation 2017*. A waiver was issued on 2 December 2019 (see **Appendix V**) under the delegation of the OEH Senior Executive.
SEPP (Infrastructure) 2007	Pursuant to Clause 86, the proposal requires referral to Sydney Trains as it involves excavation deeper than 2m on land within 25m of the existing City Circle and Eastern Suburbs Rail Tunnels.
	As detailed in the Noise and Vibration Assessment prepared by Arup (**Appendix Y**), the proposed development is capable of complying with the requirements of Clause 87, subject to the implementation of appropriate mitigation measures.
	Pursuant to Clause 88, the proposal requires referral to TfNSW and Sydney Metro as the site includes land in "Zone B" of the Rail Corridors Map relating to the CBDRL Corridor and CBD Metro. This is discussed further in the Geometrical Report at **Appendix P**.
	As detailed in the Noise and Vibration Assessment prepared by Arup (**Appendix Y**) Clause 102 does not apply as the development is not located in or adjacent to a road with an annual average daily traffic volume of more than 20,000 vehicles.
	Pursuant to Clause 104, the proposal requires referral to RMS as it is defined as traffic generating development under Schedule 3, on the basis that it provides more than 300 dwellings and more than 200 car parking spaces.
SEPP (State and Regional Development)	Under Schedule 1 Clause 13(2), development for tourist related purposes such as a hotel that has a CIV in excess of $100 million (see **Appendix F**) is defined as SSD. SSD applications are treated differently to regular 'local' and 'regional' developments, with a range of other legislation not applying (Section 4.41 and 4.46 of the EP&A Act) and other legislation needing to be applied consistently with the terms of any SSD consent (Section 4.42 of the EP&A Act). Furthermore, Development Control Plans (DCPs) are also specifically excluded from being applicable to SSD (Clause 11, SEPP SRD).
SEPP 55 – Remediation of Land (and Draft remediation of Land SEPP)	JBS&G have prepared a Preliminary Site Investigation (**Appendix I**) which concludes that it is *"considered unlikely that activities at the site will have contaminated the land to a degree that would prevent the redevelopment of the site for mixed commercial and residential land-use"* and that *"[i]n the event that contamination is identified at the site, it is anticipated that the site can be made suitable for the proposed land uses."*.
SEPP 65 Design Quality of Residential Development	The proposal is consistent with the nine design principles listed in SEPP 65. A Design Verification Statement and complete assessment of compliance against the relevant provisions of SEPP 65 and the ADG is provided in the Architectural Design Statement at **Appendix B**. A discussion of the relevant residential amenity provisions of the ADG is also provided in **Section 5.11**
SEPP (Building Sustainability Index – BASIX)	A BASIX Report and Certificate is provided at **Appendix GG** as well as an ESD Report at **Appendix R**. The proposed development will exceed the minimum BASIX targets.
Sydney Regional Environmental Plan (Sydney Harbour Catchment)	The site is located within the boundaries of Sydney Harbour Catchment REP. The precinct is not 'zoned' under this plan nor is it located within the 'Foreshores and Waterways Area', where the majority of the plans provisions apply. The proposed development will not result in adverse impacts on views from Sydney Harbour and is therefore consistent with the relevant Planning Principals of the Sydney Harbour Catchment SEPP and will not have any significant adverse impact on the Sydney Harbour Catchment.

Instrument/Strategy	Comments
Draft SEPP (Environment)	The Draft SEPP Environment was released for public exhibition in October 2017 and aims to repeal and replace a number of SEPPs and SREPs that currently apply in NSW. Under the Draft SEPP, the site is identified as being within an area of 'Urban Bushland' and as such would be subject to controls relating to the protection of land that is reserved for public open space. No part of the site is zoned for this purpose at this time, and as such these provisions of the Draft SEPP do not apply. It is also noted that the Draft SEPP will also encompass the provisions of the Sydney Harbour Catchment REP. This SREP is discussed further above in the context of the proposal.
Sydney Local Environmental Plan 2012	
Land Use Zone (Clause 2.3)	The proposed development is consistent with the objectives of the B8 Metropolitan Centre Zone for the following reasons: • It will contribute substantially to Australia's participation in the global economy by delivering a mixed-use development that will exhibit design excellence and provide tourist accommodation, apartments and retail. • The intensity and mix of land uses, and the high-quality design is commensurate with Sydney's global status. • It will provide a mix of land uses that are compatible with and characteristic of Sydney's global status, while also serving the wider community. • It will provide a constrained supply of off-street parking and is well located to promote the use of public transport, walking or cycling. • It will improve the public domain along Pitt Street, Liverpool Street, Castlereagh Street and Dungate Lane by providing active ground floor uses and the provision of numerous through-site connections. All proposed land uses are permissible with development consent on land zoned B8 Metropolitan Centre.
Height of Buildings (Clause 4.3)	The maximum height of buildings under the Sydney LEP 2012 is 235m. Under Clause 6.21(7) a building demonstrating design excellence may have a building height that exceeds the maximum height by up 10%. The proposed development, which is eligible for the additional building height available under Clause 6.21(7), complies with the maximum building height standard, with a maximum height of 257m (277.5 AHD).
Floor Space Ratio (Clause 4.4. 4.5A, 6.4 and 6.7)	The maximum permissible FSR of the site is 13.92:1, with which the proposed development complies.
Wind Affected Balconies (Clause 4.5A)	In accordance with Clause 4.5A, the gross floor area of wind-affected balconies has been excluded from the calculation of the FSR.
Heritage Conservation (Clause 5.10)	The site does not contain any items of heritage significance. However, it is located in the vicinity of a number of heritage items. A Heritage Impact Statement is provided at **Appendix DD** which demonstrates that the proposed development will not undermine the setting or integrity of the surrounding heritage items. Refer to **Section 5.13**
Heritage Floor Space (Clause 6.10 and 6.11)	In accordance with Clause 6.10 and 6.11, an amount of heritage floor space will be allocated to the site as part of the proposed development.
Erection of Tall Buildings in Central Sydney (Clause 6.16)	The proposed development meets the objectives for erecting tall buildings in Central Sydney as: • It provides appropriate amenity for future residents and to surrounding buildings, commensurate with the site's location in the Sydney CBD; • It does not adversely affect the amenity of public places, in particular Hyde Park, Belmore Park and Harmony Park; • The height of the proposed development is compatible with the surrounding context, which is characterised by towers of varying heights; • The proposed development allows sunlight to reach the sides and rear of the future towers, having regard to existing/future buildings; • The proposed development will ensure future development is able to achieve ventilation of air around towers; and • The proposed development will accommodate active uses at street level.

Instrument/Strategy	Comments	
Sun Access Planes (Clause 6.17)	The proposed development is below the Hyde Park West and Belmore Park Sun Access Planes.	
Design Excellence (Clause 6.21)	The proposed development is the result of a competitive design process undertaken in accordance with the City of Sydney Design Excellence Policy. The development is considered to exhibit design excellence, on the basis that it maintains the design intent of the winning scheme and responds appropriately to the recommendations of the Jury. Refer to **Section 5.8**.	
Car Parking (Clause 7.3-7.9)	**Maximum Car Parking Rates**	**Proposed Car Parking**
	• Residential: 377 • Retail: 43 • Hotel: 35	• Residential: 377 • Retail: 43 • Hotel: 35
	The proposed development complies with Clause 7.3. A Traffic and Parking Assessment is provided at **Appendix W.** Refer to **Section 5.16**	
Acid Sulfate Soils (Clause 7.14)	The site is identified as Class 5 on the Acid Sulfate Soils Map and is not within 500m of land classified as Class 1, 2, 3 and 4. The Acid Sulfate Soils Assessment prepared by JBS&G (**Appendix J**) concludes the site is located in an area of low probability of acid sulfate soils given its geological and topographical setting.	
Flood Planning (Clause 7.15)	An assessment on the potential for flooding is included in the Stormwater Management and Flooding Report in **Appendix BB** and is discussed in **Section 5.21**	
Airspace Operations (Clause 7.16)	The proponent has submitted an application for the building directly to Sydney Airport Corporation Limited.	
Development Requiring a DCP (Clause 7.20)	A Concept Proposal (D/2016/1509) has been approved, which satisfies the requirements of Clause 7.20.	

5.5 Development Control Plans

It is noted that SSD applications are treated differently to regular 'local' and 'regional' developments, with a range of other legislation not applying (Section 4.41 and 4.46 of the EP&A Act) and other legislation needing to be applied consistently with the terms of any SSD consent (Section 4.42 of the EP&A Act). Accordingly, in this instance Development Control Plans are specifically excluded from being applicable to SSD applications per Clause 11 of the *State Environmental Planning Policy (State and Regional Development) 2011.* Notwithstanding an assessment against the relevant provisions of the Sydney Development Control Plan 2012 (Sydney DCP 2012) is provided at **Appendix N**. The proposed development is generally consistent with the relevant provisions and the objectives of the Sydney DCP 2012 however, alternative solutions are proposed to certain provisions. As required under Section 4.15(3A) of the EP&A Act, a consent authority is required to apply DCP provisions flexibly and allow reasonable alternative solutions that achieve the objects of those standards. The discussion at **Appendix B** demonstrates that the alternative solutions achieve the objectives of the relevant standards.

5.6 Local Strategic Planning Strategy

The Local Strategic Planning Statement (LSPS) represents Council's 20-year vision and strategy for the LGA's future direction on infrastructure, liveability, productivity and sustainability. The LSPS implements the planning priorities and actions identified in the Greater Sydney Regional Plan and Eastern City District Plan at the local level. It is also informed by Council's platform policy, Sustainable Sydney 2030, and the draft Central Sydney Planning Strategy (as discussed below).

Within the LSPS, Council has indicated that capacity exists for an additional 56,000 dwellings within the LGA by 2036, with nearly all of these to be medium to high density apartment buildings. Council have identified that the main target growth areas for residential development are Chinatown and CBD South, Green Square and Redfern / Waterloo. The site is situated within the Chinatown and CBD South Precinct and therefore the redevelopment of 338 Pitt Street for residential purposes would contribute to Council's dwelling population targets within an area that is transitioning to mixed use developments.

5.7 Consistency with the Concept Proposal

As described in **Section 1.5.1**, D/2016/1509 is a Concept Proposal that applies to the site. Under Section 4.24 of the EP&A Act, while a Concept Proposal remains in-force, any further detailed application in respect to the site cannot be inconsistent with the consent for the Concept Proposal.

As a result of the outcomes of the Architectural Design Competition and post-competition design development by FJMT, amendments are proposed to the Concept Proposal. These are contained within a separate application made subject to Section 4.55(2) of the EP&A Act to modify D/2016/1509. The modification application has been submitted concurrently to Council. In summary, the proposed modifications include:

- Condition 2: It is proposed to amend the building envelope to accommodate:

  Tower

  - The unique dual tower form established in the design competition winning scheme, with the amendments necessary to provide adequate separation between the North Tower and the South Tower;
  - The minor protrusion of the façade shading devices that are required to articulate the tower forms and provide shading, additional daylight penetration and rain cover for balconies; and
  - The inclusion of the iconic Sky Bridge, which couples the North Tower and South Tower and extends marginally beyond the approved building envelope between Level 32 and Level 36.

  Podium

  - Extension of the podium to encompass 128 & 130 Liverpool Street, which will allow for the expansion of the low height, human scale podium along Liverpool Street.
- Condition 4: Remove this condition to reflect its satisfaction prior to the commencement of the Competitive Design Process and improve the clarity of the Development Consent.
- Condition 5: Amend this condition to reflect the amended building envelope and facilitate the design competition winning scheme
- Condition 9: Amend this condition to enable residential uses from Level 6, where detailed analysis has confirmed they are capable of achieving adequate amenity.
- Condition 12: Amend this condition to ensure that the BASIX Energy targets are achievable for the competition winning scheme.
- Condition 13: Amend the condition to better align the timing of the submission of the detailed Public Art Proposal with the envisaged development program.

A compliance assessment with the terms of the approved Concept Proposal is also provided at **Appendix KK**.

5.8 Design Excellence

The proposed development is the winning entry of a competitive design process undertaken in accordance with the City of Sydney Competitive Design Policy (see **Section 1.5.2**). As noted in the Architectural Design Competition Report provided at **Appendix H**, the winning scheme was deemed capable of achieving design excellence pending the resolution of certain matters. These matters have been resolved in design development as discussed in **Section 1.5.2** and within the Architectural Design Statement at **Appendix B**. Therefore, the consent authority can be satisfied that the proposed development demonstrates design excellence.

5.9 Built Form

The built form parameters for the proposed development were largely determined by the Concept Proposal. As detailed in Architectural Design Statement (**Appendix B**) the proposed development generally falls within the established building envelope, with the main exception being the tower setbacks to Dungate Lane and Castlereagh Street. The Concept Proposal is subject to a concurrent modification application to align the concept building envelope with the detailed design.

The slender tower forms have been designed to reduce the overall mass of a single, much larger tower as envisaged under the Concept Proposal. The reduction in the overall mass will reduce the visual dominance of the development and maximise solar access to surrounding residential buildings and areas of public open space. As

detailed in in **Section 5.11**, the dual tower forms also provide superior residential amenity by maximising the number of dual-aspect apartments, which provide superior views, natural ventilation and solar access.

Importantly, the layout of the towers allows for the provision of an expansive area of open-air public domain. The public domain is anchored by a sizeable 1,050m² public courtyard, situated between the North Tower and the South Tower. This expansive area of open-air public domain, made possible by the design and position of the tower forms, will provide much needed shelter from the intense activity of the Sydney CBD and accommodate public art, water features and extensive landscaping (**Appendix B**).

The frontage heights of the podium buildings have remained low to provide a human scale interface with surrounding streets and to admit additional natural light to the public domain. The street frontage heights of the podium buildings have been designed to follow the predominant street wall height of adjacent buildings and relate to nearby heritage items.

5.9.1 Building Setbacks

As shown in **Figure 53**, the proposed development, with its unique dual tower forms, provides varying setbacks to the boundaries. This variation is the result of the layout of the dual tower forms, which create a 'stepping' of the façade along Castlereagh Street and Pitt Street, with the building setback varying between 5.4m and 37.4m. The minimum setback along the northern boundary with 320 Pitt Street and 233 Castlereagh Street is 11.4m.

However, these minimum setbacks have been measured to include the shading devices which project 600mm from the façade of the towers. Importantly, the main building walls remain a minimum of 6m from Pitt Street and Castlereagh Street, and a minimum of 12m from 320 Pitt Street and 233 Castlereagh Street. If it weren't for the façade shading devices, the development would also achieve an average weighted setback of 15.9m along Pitt Street and 14.7m along Castlereagh Street. It is also noted that the façade shading devices, while resulting in a technical reduction in the setbacks of the tower forms from the boundaries, have been designed to be visually unobtrusive and are limited to three slender horizontal bands. As detailed in **Section 4.4.2**, the façade shading devices form an important aspect of the design competition winning scheme prepared by FJMT, providing shading and rain cover for balconies, directing daylight into the floor plate, and contributing to the modulation between the lower and upper components of the North Tower and South Tower.

The Wind Study (**Appendix CC**) prepared by CPP confirms that the building setbacks are sufficient to manage downwash from the tower forms, and a ensure safe and comfortable ground floor pedestrian environment. Analysis from FJMT has also confirmed that the stepping of the tower façade will improve sky view from public domain.

Dungate Lane

Consistent with the competition winning scheme prepared by FJMT, the south-eastern shift of the building envelope has resulted in a reduced setback to Dungate Lane, comparative to the building envelope approved under the Concept Proposal. Along the eastern portion of Dungate Lane, the South Tower (above the podium) is setback 6m from the centre line of the laneway. Along the western portion of the Dungate Lane, the South Tower is built to the edge of the laneway. As detailed in the Architectural Design Statement (**Appendix B**), the variation to the Concept Proposal allows for increased separation between the North Tower and South Tower, improving residential amenity and solar access to the public domain. To mitigate potential future privacy impacts to 255 Castlereagh Street, principal windows and balconies have been removed along Dungate Lane between 45m and 55m.

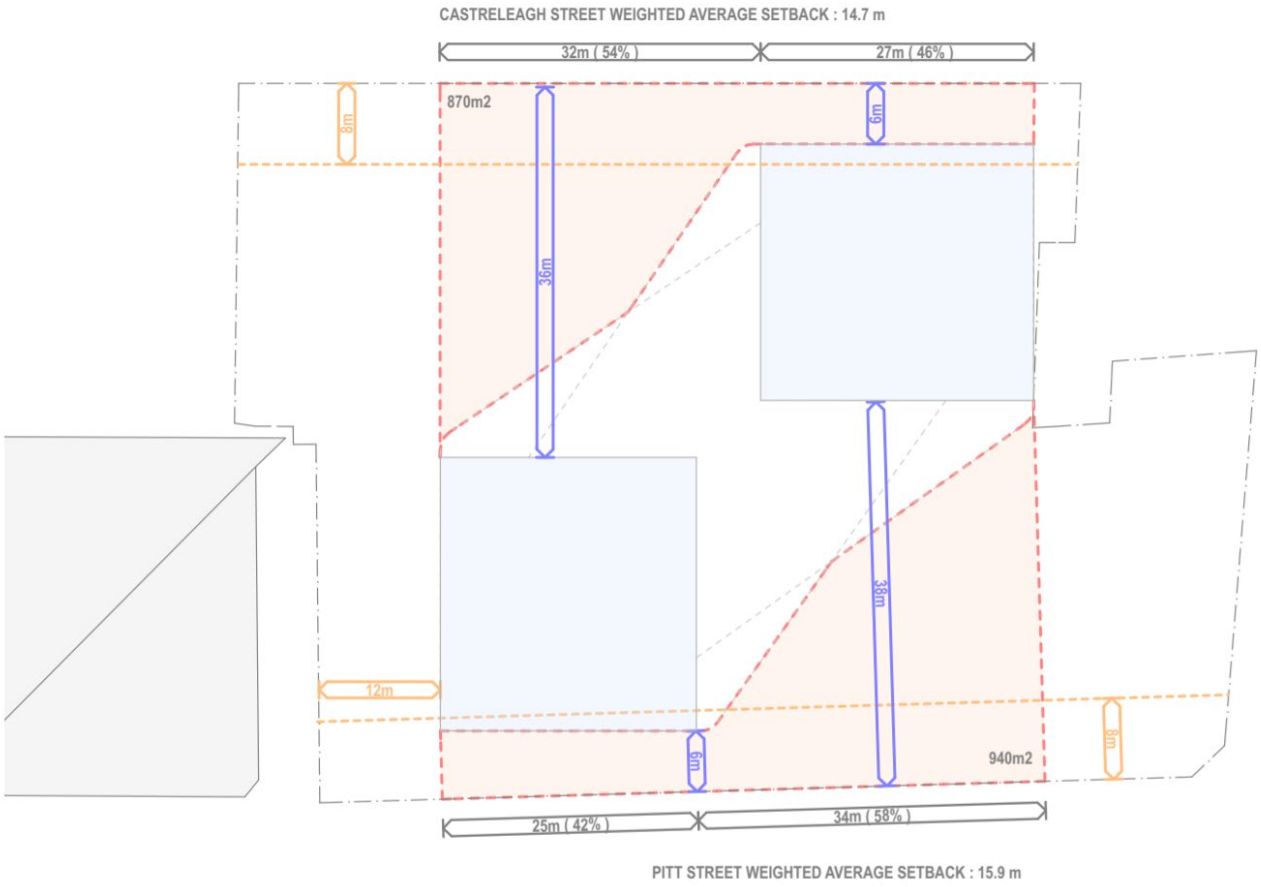


Figure 53 Weighted Average Setback Diagram
Source: FJMT

5.10 Solar Access, Daylight and Overshadowing

5.10.1 Overshadowing of Surrounding Residential Buildings

An analysis of the proposal's overshadowing on surrounding residential buildings has been undertaken and is provided at **Appendix B**. The analysis has been undertaken generally with consideration to the requirements of Objective 4A-1 of the ADG, Section 4.2.3.1 of the Sydney DCP 2012. The analysis provides a comparison between the proposed development and the building envelope approved under the Concept Proposal.

FJMT's analysis confirms that the proposed development does not result in any reduction in solar access below the two (2) hours recommended under the ADG and Sydney DCP 2012, when compared to the building envelope approved under the Concept Proposal. Rather, it provides improved solar access to buildings at 2-4 Cunningham Street, 393 Pitt Street and 47 & 49-53 Wentworth Avenue between 9am and 11am and between 1pm and 3pm, due to the reduced profile created by the two slender towers which allow for additional sun through the separation between them.

In addition, the increased height of the towers is compensated for by offset positioning of the North Tower, which ensures that the potential increase in shadow falls largely within the shadow of the building envelope approved under the Concept Proposal.

5.10.2 Overshadowing of Public Spaces

A detailed overshadowing study has been prepared by FJMT and is included at **Appendix A**. The overshadowing study follows the methodology adopted for the Concept Proposal and considers the:

- shadows cast by existing buildings;
- shadows cast by the approved Concept Proposal; and

- shadows cast by the proposed development.

The modelling has been carried out at one-hour intervals on 21 June from 9:00am to 3:00pm, consistent with the requirements of the SEARs and Sydney LEP 2012. FJMT also prepared detailed analysis of the overshadowing impacts of the proposed development on Harmony Park between 10:00am to 2:00pm on 21 June.

The Overshadowing Diagrams at **Appendix A** confirm that from 9:00am to 3:00pm on 21 June, the shadows do not reach Hyde Park.

Assessment

When compared to the building envelope approved under the Concept Proposal (D/2016/1509), the proposed development provides an overall 2.59% reduction in overshadowing of Harmony Park between 9:00am and 3:00pm on 21 June, with 60.6% of Harmony Park receiving sunlight for four (4) hours during this period.

A detailed assessment of the overshadowing impact of the proposed development on Harmony Park between 10:00am and 2:00pm on 21 June, calculated at minute intervals, shows that the proposed development will result in additional overshadowing on south-western corner of Harmony Park (refer to **Figure 54**) between 1:58pm and 2:00pm. FJMT's analysis confirms that this additional shadow falls on between just 0.02% and 0.46% of Harmony Park.

However, it is considered the benefits associated with the overall reduction in overshadowing of Harmony Park (compared to the Concept Proposal) across the course of the day (9:00am – 3:00pm), outweigh the fractional increase in overshadowing between 1:58pm and 2:00pm.

Figure 54 Overshadowing of Harmony Park at 1:58pm (left) and 2:00pm (right)

Source: FJMT

5.11 Residential Amenity

A Design Verification Statement and complete assessment of the proposal against the relevant provisions of the ADG are provided in the Architectural Design Statement at **Appendix B**. An assessment against the relevant residential amenity provisions in the SDCP 2012 is also provided at **Appendix B**.

Occupants of the residential apartments in the tower will experience a high level of amenity, with all apartments exceeding the minimum internal areas, minimum bedroom areas and minimum balcony areas recommended in the ADG.

5.11.1 Apartment Mix and Internal Sizes

The proposed apartment mix and range of internal areas are shown in **Table 13**. The proposed apartment mix is generally consistent with the mix for residential apartments in Section 4.2.3.12(1) of the SDCP 2012. It is noted that the number of one-bedroom apartments remains under 30% and all apartments exceed the minimum internal area requirements set in support of Objective 4D-1 of the ADG.

Table 13 Residential Apartment Mix and Sizes

Apartment Type	Internal Size	Number	Percentage
1-Bedroom	55m^2 – 62m^2	169	29%
2-Bedroom	82m^2 – 97m^2	321	54%
3-Bedroom (+3-Bedroom)	+108m^2	102	17%

5.11.2 Privacy and Separation

The proposed development generally achieves the minimum separation distances recommended in the ADG. The North Tower and South Tower have been carefully designed to achieve the minimum required separation distances between windows and balconies, as detailed in Section 3F of the ADG.

Generally, a minimum of 24m separation is provided between habitable rooms and a minimum of 12m is provided between non-habitable rooms, within the zone of influence (measured at 45 degrees to the window or balcony). A 12m setback from the northern boundary and the centreline of surrounding streets has also generally been provided consistent with the ADG.

As detailed in Section 8 of the Architectural Design Statement (**Appendix B**) and shown in **Figure 55** below, the visual privacy between habitable rooms has been achieved through an alternative design solution, incorporating a glazing interlayer along the portion of the façade most proximate to the adjoining tower. The glazing interlay will function as a 'micro louvre', restricting 45 degree views between the North Tower and South Tower.

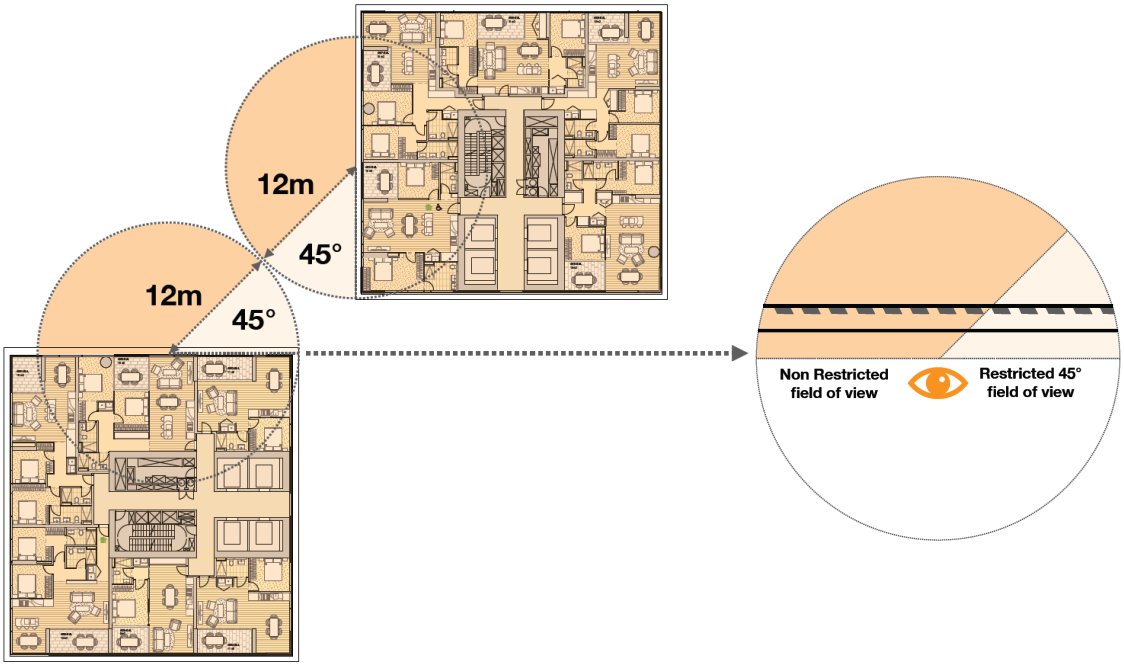


Figure 55 Separation between Habitable Rooms

Source: FJMT

There are limited instances where the recommended separation distances recommended in the ADG are not fully achieved, namely along Dungate Lane (refer to **Section 5.9.1**). Where the recommended separation distance under the ADG cannot be achieved, the detailed design of habitable rooms has considered ways to maximise visual privacy.

Specifically, along the western portion of the South Tower's southern façade, principal windows and balconies have been removed between 45m and 55m to mitigate privacy impacts (by removing direct line of sight) to future development at 255 Castlereagh Street. This is detailed further in Section 9.2 of the Architectural Design Statement (**Appendix B**).

Although the recommended separation between habitable rooms has been achieved, it is noted that the distance between the corners of the North Tower and South Tower is 8.5m, which is inconsistent with Section 5.1.2.4 of the Sydney DCP 2012. Notwithstanding, the two slender tower forms provide a superior outcome with regards to residential amenity by maximising the number of dual-aspect apartments (80.2%), which provide superior views, natural ventilation and solar access.

Hence, despite the inconsistency with the separation distances specified in the Sydney DCP 2012, the development provides a superior outcome and is consistent with Objective 3F-1 and 3F-2 under the ADG as:

- The design of the towers maximises visual privacy, with direct sight lines resolved through the detailed design of the façade; and
- The setting and design of the towers maximises views, solar access and natural ventilation.

5.11.3 Solar Access

The proposed development provides a high level of amenity for apartments and exceeds the design criteria in support of 4A-1, with 77.5% of all living spaces and 76.1% of all private open spaces receiving a minimum of 2 hours of direct sunlight between 9am and 3pm on 21 June. In addition, only 5.4% of apartments receive no direct sunlight. Details are contained within the Architectural Design Statement at **Appendix B**.

5.11.4 Private Open Space

Private open space is provided to apartments in the form of wind-affected balconies. The private open space provision exceeds the requirement under Section 4.2.3.7 of the SDCP 2012 to provide private open space to at least 75% of dwellings. Private open space achieves or exceeds the minimum areas set in the design criteria that support Objective 4E-1 of the ADG.

5.11.5 Communal Open Space

The proposed development provides 1,307m² of communal open space, equating to 21% of the site area which is a variation to the amount recommended under the ADG (25%). This communal open space is provided by the rooftop gardens on Level 4 and Level 36. Overall, the communal open space receives 16.5% direct solar access between 9am and 3pm on 21 June. It is noted that the communal open space on Level 36 exceeds the minimum requirement for direct solar access on June 21 (50.59%). There are additional communal spaces provided throughout the proposed development, including meeting, food preparation and entertainment rooms on Level 04, and a pool and gym on Level 36 (427m^2). Residents will also benefit from the 1,050m² public courtyard provided on the ground floor and proximity to Hyde Park, Darling Harbour, the Domain and the Royal Botanic Gardens.

5.11.6 Noise and Pollution

The proposed development has been contextually designed to respond to the site's setting and traffic noise associated with Sydney CBD. As set out at **Section 5.18** below, all apartments are capable of achieving acoustic amenity based on the recommendations of the Noise and Vibration Assessment provided at **Appendix Y**. The preliminary Construction Management Plan (**Appendix Q**) identifies measures to ensure the proposed development does not adversely impact air quality.

5.11.7 Natural Ventilation

The proposed development achieves the design criteria in support of Objective 4B-3 of the ADG, with 80% (16 out of 20) of apartments at Level 09 and below achieving natural cross-ventilation (refer to **Appendix B**). Although most of the apartments are located above Level 09 (where they are deemed to be naturally cross-ventilated), the FJMT design provides for 80.2% (475 out of 592) of apartments to have natural cross-ventilation, to reduce reliance on mechanical ventilation.

5.12 Visual Impact

A View Impact Assessment (VIA) has been prepared by Ethos Urban (**Appendix T**) to assess the view impacts of the proposed development from locations in the public and private domain (see **Appendix S**). The analysis

compares the proposed development against the building envelope approved under the Concept Proposal (D/2016/1509).

Public Views

The VIA considered public views from:

- Whitlam Square, at the north-east corner of the intersections of Liverpool Street, College Street, Oxford Street and Wentworth Avenue (Viewpoint 1);
- The southern footpath of Liverpool Street opposite its intersection with Kent Street (Viewpoint 2); and
- Eastern footway of the Pool of Reflection in Hyde Park (Viewpoint 3).

The VIA concludes that:

> *"When considered against the criteria of sensitivity and magnitude, the visual impact of the proposal at two of the three locations in the public domain was determined to be 'low – medium' (from east Sydney and within the CBD), while at one (within Hyde Park) it is determined to be medium. On this basis, the proposal is considered to have an acceptable level of visual impact on the selected views in the public domain.'*

Private Views

The VIA considered private views from the upper floors of the nearby Hordern Towers and World Tower. These buildings and apartments were selected as they currently enjoy views to the north-east over features such as Hyde Park and Sydney Harbour, including North Head and South Head. The VIA's assessment methodology is consistent with the assessment methodology applied by Council to assess the visual impacts of the Concept Proposal (refer to CSPC Business Paper 30 November 2017, Item 4 para 148-153).

When assessed against the planning principles for view sharing handed down by the NSW Land and Environment Court in *Tenacity Consulting v Warringah Council* [2004] NSWLEC 140 (Tenacity), the visual impact of the proposal at the locations in the private domain was determined to be 'severe or devastating'. This is largely due to views to the north-east across large parts of eastern Sydney, which take in 'iconic' elements such as Sydney Harbour and other valued elements such as Hyde Park.

While the visual impact on existing private views is severe to devastating, this visual impact is acceptable considering the entirely of the exiting planning framework, in particular the draft Central Sydney Planning Strategy (CSPS). Specifically, the draft CSPS which makes clear that there are a number of qualifications and other considerations which should be taken into account in the circumstances:

- Protection of private views should not impede the orderly and economic development of land within Central Sydney to meet the broader economic and social objectives of the City.
- Providing a higher level of protection for 'iconic' views within Central Sydney would be unreasonable given the concentration of landmark buildings and vistas and would place an undue constraint on future development.
- Protection of public views should be prioritised above any consideration of private views within the Central Sydney area.
- It is not reasonable to expect 'more skilful design' to be able to mitigate potential impacts on private views given the more complex set of design constraints arising in the case of high-density buildings (unlike the low-scale development considered in Tenacity).
- In a dense urban context, the preservation of a reasonable 'outlook' for existing residential apartments is a more appropriate planning objective (as opposed to the preservation of views).

Therefore, the VIA concludes that while the visual impact on existing private views is severe to devastating, this visual impact is acceptable considering the entirety of the existing planning framework. The conclusion is consistent with the Council's assessment of the Concept Proposal which concluded that:

> *'Although the view impacts are considered devastating in the most extreme cases…, it is considered that the expectation to retain these views is unrealistic.'*

The private view impacts of the proposed development are reasonable in the circumstances.

Mitigation Measures

The VIA concludes that it is not necessary to modify the proposed development to mitigate visual impact.

5.13 Heritage

5.13.1 Non-Indigenous Heritage

A Heritage Impact Statement (HIS) has been prepared by Urbis (**Appendix DD**), which identifies and assesses the potential heritage impacts associated with the proposed development on surrounding heritage items, their context and setting, and significant views. The HIS also assesses the proposed development against the Heritage Division's guidelines for 'Statements of Heritage Impact'.

Overall, Urbis conclude that the proposed development will have an acceptable heritage impact and will not adversely impact on the significance of surrounding heritage items given:

- Existing improvements on the site are not considered to meet the threshold for individual heritage listing and are therefore not required to be retained on heritage grounds.
- There are no physical works proposed to any of the surrounding heritage items. The majority of the heritage items are robust masonry buildings which will retain their street presence and can withstand some density within the broader streetscape without a detrimental impact to their setting.
- The subject site is separated physically from the boundaries of listed heritage items, and therefore the proposed excavation on the subject site will not have a physical impact on the surrounding heritage items.
- The proposal will have no adverse impacts on existing views to and from heritage items, which already sit within an urbanised and highly densified environment.
- The potential visual impact of the proposed massing and scale of the high-rise towers is mitigated by the proposed podium that generally complements the scale, bulk and street presence of the heritage items in the vicinity, as well as the prevailing streetscape.
- The design has responded to the heritage character of the area and surrounding heritage items as follows:
  - The proposed scheme is clearly contemporary and has been designed to provide another landmark corner building within this intersection without detracting from the traditional proportions and detailing of the two heritage items at opposite corners.
  - The base of the proposed building form along Castlereagh Street adopts a sandstone base responding to the general historic character of the Sydney CBD where buildings are typically designed with strong masonry bases.
  - Articulation of the façade of the new development along Castlereagh Street has also responded to the fenestration and articulation of the adjoining Former Sydney South Telephone Exchange building through the inclusion of vertically proportioned façade elements and use of natural toned materials such as bronze.
- Sydney's CBD is characterised by situations where high rise towers are located adjacent to smaller historic buildings. These relationships, when handled appropriately, contribute to the diversity of the townscape and historic layering of the streetscape.
- The proposed development is of a scale which is substantially higher than the existing building on the site, but it is unlikely to have any additional heritage impacts noting that the surrounding locale already features high density development.
- The proposed development is supportable on heritage grounds.

5.13.2 Indigenous Heritage

Archaeological Management and Consulting Group (AMAC) in conjunction with Streat Archaeological have prepared an Aboriginal Cultural Heritage Assessment Report (ACHAR) (**Appendix HH**) and an Aboriginal Archaeological Technical Report (**Appendix II**). The ACHAR has been prepared in consultation with the Aboriginal community in accordance with Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW,

2010). The ACHAR documents the process which has been undertaken for consulting, investigation and assessing Aboriginal cultural heritage and Aboriginal archaeology.

Archaeological Impacts

A search of the Aboriginal Heritage Information Management System (AHIMS) database confirms that there are no known artefacts or potential archaeological deposits identified within the site area, or within close proximity of the site (see **Figure 56**). However, there are 13 registered sites within 1km of the study report, two (2) of which have been indicated as invalid sites.

The site has been subject to deep excavations to bedrock in order to establish the basement levels for a number of the existing buildings. Areas outside of the current building footprint such as the driveway/access way, are also predicted to also be disturbed as a result of modern service trenches. However, in undisturbed areas where basements are not present, specifically along Castlereagh Street, natural/intact soils are likely to be encountered. An assessment of the environmental and archaeological context of the study area suggests that there is potential for sub-surface Aboriginal objects and/or natural deposits to be in these undisturbed areas. If found, these objects and/or natural deposits are likely to be considered of low to moderate Aboriginal archaeological significance.

Other Heritage Impacts

To determine the historic, scientific and aesthetic significance of the study area, AMAC and SAS have consulted with Registered Aboriginal Parties in accordance with Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010). These parties have indicated that the study area has no identifiable historic, scientific and aesthetic significance.

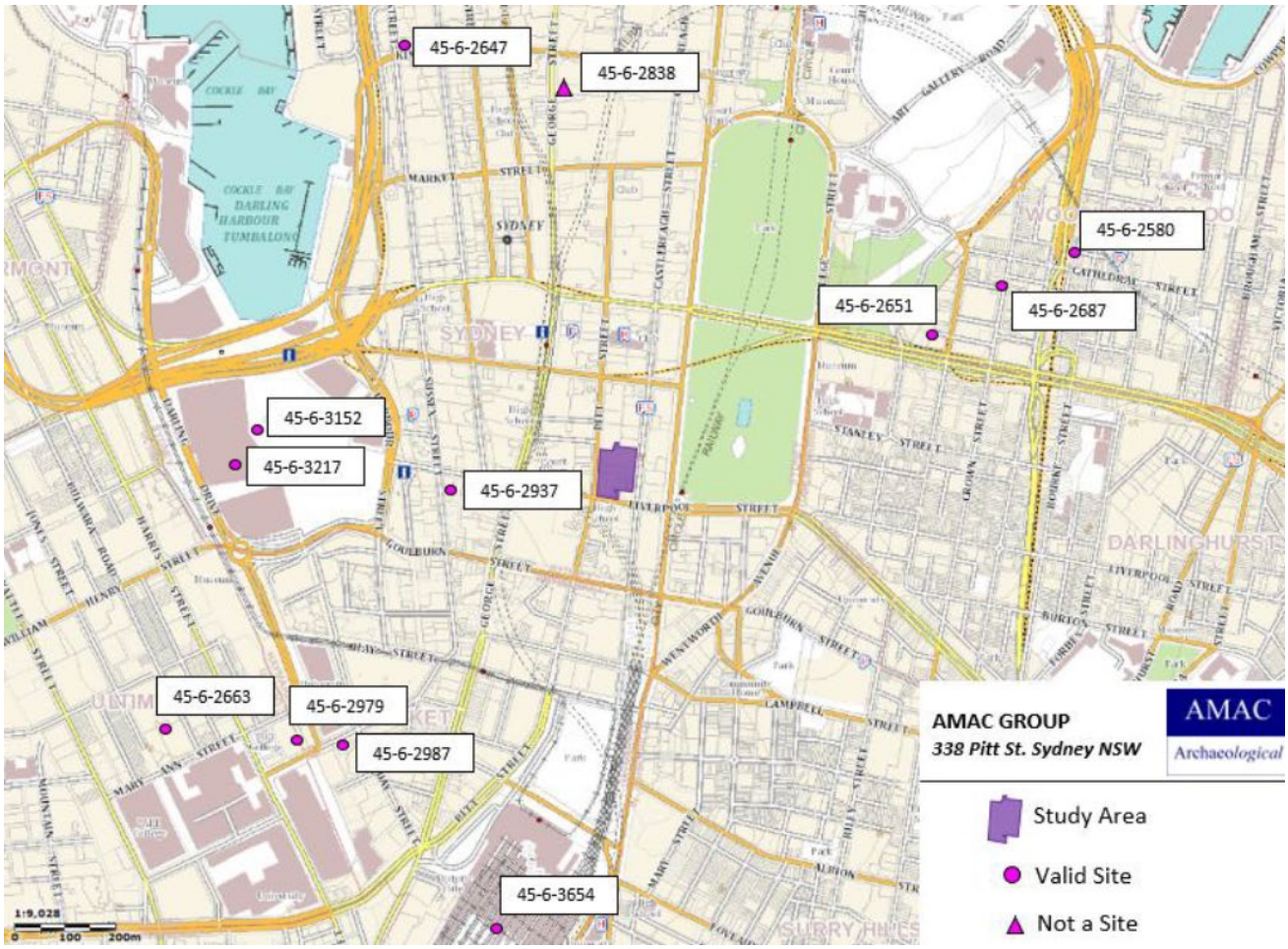


Figure 56 Registered Aboriginal Sites in proximity to the Site.

Source: AMAS, SAS

Recommendations

AMAC and SAS, in consultation with RAPs, have developed the following mitigation measures to manage potential impacts on indigenous heritage.

Mitigation Measure	Indicative Timing
Prepare an Aboriginal Cultural Heritage Management Plan (ACHMP) in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales* (DECCW 2010).	Prior to works commencing
Consultation with the Registered Aboriginal Parties (RAPs) should continue, as per the requirements detailed in the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010).	Prior to works commencing
A systematic subsurface disbursed test excavation programme and open area test excavation (if required) should be carried out under the proposed Aboriginal Cultural Heritage Management Plan as recommended conditions of the SSD. Aboriginal test excavation should be managed in accordance with the methodology outlined by AMAC 2019 in their Research Design & Excavation Methodology.	Following demolition of existing structures, but prior to construction.
In the event archaeological test excavations reveal Aboriginal archaeological objects and/or deposits, it is recommended that the nature and extent of the archaeological site be analysed and synthesised into an Aboriginal Archaeological Technical Report (to be appended to the ACHMP). In addition, an analysis of artefacts retrieved should be conducted to allow for comparison with previous relevant results.	During construction.
Before any ground disturbance takes place as part of the construction, all development staff, contractors and workers should be briefed prior to works commencing on site, as to the status of the area and their responsibilities regarding any Indigenous archaeological deposits and/or objects that may be located during the following development through a Cultural Heritage Awareness Induction;	Prior to the commencement of works and during construction.

5.14 Environmentally Sustainable Development

An ESD Report has been prepared by Arup and is included at **Appendix R**, which demonstrates that in accordance with the requirements of the Concept Proposal (as proposed to be modified by the concurrent Section 4.55(2) Modification Application), the proposed development seeks to achieve the following targets:

- NABERS Energy 5 Stars (Hotel)
- Section J of the NCC 2019 (Hotel and Retail)
- BASIX Energy 25 and BASIX Water 45 (Residential)

Achieving the sustainability targets will occur through implementing the sustainability measures identified in the ESD Report and discussed in **Section 4.15** above.

The proposed measures will address the baseload energy consumption of the proposed development, support the use of sustainable transport options, improve the efficient use and reuse of water, and minimise waste. This will ensure the proposed development provides a superior environmental performance, comparative to the existing buildings.

5.15 Wind Assessment

Cermak Peterka Petersen (CPP) has prepared a Wind Study which is included at **Appendix CC**. In preparing the Wind Study, CPP has completed wind tunnel of the proposed development to determine the potential wind impacts and to advise on potential improvements in terms of comfort and amenity for the ground plane, podium terraces and the Sky Bridge.

As part of the study, wind speed measurements were recorded at 11 locations to evaluate pedestrian comfort within and around the proposed development. The locations were chosen to determine the degree of pedestrian wind comfort and safety at building corners where relatively severe conditions are frequently identified, including near building entrances and passageways, and at upper level outdoor terraces.

Table 14 Assessment of Wind Conditions

Area	Assessment
Ground	The wind tunnel testing confirms that the wind conditions in all locations around the ground plane of the proposed development achieve the relevant safety criteria. The conditions on the ground plane were found to be relatively calm and generally suitable for a combination of pedestrian sitting and pedestrian walking activities (from a comfort perspective). At the boundary, conditions were found to be similar to, or better than, surrounding areas. The internal courtyard and pedestrian connections are expected to experience mild wind conditions, owing to the shielding provided by the surrounding podium massing. The inclusion of distributed landscaping elements, colonnades and under crofts (as proposed) are expected to further improve wind conditions. To further improve conditions across the ground plan, CPP recommend local treatments to dedicated seating or dining areas (e.g. awnings, canopies and vertical screening elements).
Podium Terraces	CPP found that the rooftop gardens on Level 4 and Level 8 were somewhat exposed to wind. These areas received less shielding and were more exposed to downwash from the towers, which would degrade conditions. To achieve wind conditions suitable for pedestrian sitting on the podium terraces, CPP recommend that the detail design incorporate some of the following measures: • Horizontal awnings or canopies, particularly near tower bases. • Fence-type structure or high balustrades at podium edges. • Vertical screening elements around dedicated seating areas, using a mix of solid and porous media. • Pavilion-type structures to provide localised calm areas.
Sky Bridge	Due to the exposed nature of the Sky Bridge, tested locations were found to be 'uncomfortable' and exceeded the relevant safety criteria. Accordingly, outdoor areas on the Sky Bridge will require mitigation treatments during detailed design to ensure these areas are suitable for permanent outdoor use, including high balustrades or screens, semi-enclosed areas, and localised protection to seating areas. These measures can be developed, and their effectiveness verified through further wind tunnel testing.

5.16 Traffic, Access and Parking

GTA Consultants have prepared a Transport Impact Assessment (**Appendix W**) which assesses the main operational traffic and transport features of the proposed development. The management of potential construction impacts on access, circulation and traffic are addressed separately at **Section 5.24**.

5.16.1 Traffic Generation and Impacts

GTA Consultants have assessed the anticipated traffic generation of the proposed development and considered potential impacts on the operation of surrounding roads. The assessment is based on information provided by Roads and Maritime Services and surveys of similar hotels in the Sydney CBD. The anticipated trip generation is detailed in **Table 15** below.

Table 15 Proposed Traffic Generation Estimate

Description	Size	Trip Rates		Trip Generation	
		AM Peak	PM Peak	AM Peak	PM Peak
Residential	377 spaces	0.15 trips per space	0.12 trips per space	57	45
Retail	39 spaces	20 traffic movements	40 traffic movements	20	39
Hotel	158 rooms	0.17 trips per room	0.15 trips per room	27	24
Total				**104**	**108**

Source: GTA Consultants

With consideration of the above, GTA Consultants conclude that the combined traffic to be generated by the proposed development during peak periods is:

- AM Peak: 104 vehicles per hour
- PM Peak: 108 vehicles per hour

On the basis of a comparative analysis of the existing and proposed traffic generation estimates, GTA Consultants estimate that the proposed development will result in a net increase in weekday vehicle generation of between 68

(AM Peak) and 71 (PM Peak). However, these figures are considered to be conservative given, amongst other things, the proximity of the proposed development to jobs and numerous high frequency public transport options.

Using this figures, GTA Consultants have undertaken SIDRA Intersection Modelling, which demonstrates that despite the increase in trip generation, all surrounding intersections will continue to operate at a satisfactory level of service (across all periods). Therefore, GTA Consultants conclude that the proposed development will have relatively minor impacts on the surrounding local environment and will not inherently change traffic conditions.

5.16.2 Parking

The proposed development includes a total of 460 car parking spaces, across five basement levels. The proposed development will provide car parking in accordance with the rates provided in the Sydney LEP 2012 and Sydney DCP 2012. A summary of the proposed car parking, against the rates, is provided in **Table 16** below.

Table 16 Proposed Car Parking

Heading	Maximum Provision	Proposed Development
Residential • 1 Bedroom (169) • 2 Bedroom (321) • 3 Bedroom (102)	 • 50 • 225 • 102	• 377 (including 19 accessible)
Retail	-	• 39 (including 2 accessible)
Hotel	• 35	• 35 (including 2 accessible)

In accordance with the rates established in the Sydney DCP 2012, the proposed development incorporates the following:

- Car Share: 9 spaces (eight residential, one retail); and
- Motorcycle Parking: 38 spaces

Service Vehicles

The seven (7) proposed service vehicles spaces and four (4) loading bays in the loading dock on Level B1 will be shared by the residential, retail and hotel uses. While the proposed provision is below the rate established in the Sydney DCP 2012, GTA Consultants conclude that it is sufficient for the proposed development.

The use of the loading dock by service vehicles will be monitored by the building manager in accordance with a Loading Dock Management Plan, prepared prior to the commencement of use, to ensure that the capacity of the loading dock is not exceeded at any time.

Hotel Parking and Servicing

To service the hotel, there is a porte-cochere on the Lower Ground Level, which provides generous space for set-down/pick-up and minibus activity. The porte-cochere is located adjacent the hotel lobby and lift cores, ensuring efficiency and ease of access for users. It also provides six (6) car parking spaces, in excess of the minimum requirement under the Sydney DCP 2012.

It is noted that under the Sydney DCP 2012, the size of the hotel (158 rooms), triggers the need to provide parking for coaches. However, considering the high-end nature of the future hotel, it is not expected to cater for large groups of tourists (who typically use coaches) and will instead attract smaller groups, capable of being transferred by minibus. In this regard, the porte-cochere has been designed to accommodate minibuses, with additional overflow capacity available in the loading dock (if required).

If coaches are required, it is standard practice for smaller hotels located in the CBD to have an out-of-CBD location where guests can be transferred to minibuses. In the event that coach layover is required, there are publicly accessible coach layover zones along Pitt Street, near the site.

5.16.3 Access

Pedestrian Access

The proposed development is accessible from Pitt Street, Liverpool Street and Castlereagh Street. It provides three east-west through-site pedestrian connections between Pitt Street and Castlereagh Street, as well a connection from Liverpool Street. By removing a number of vehicle crossovers on Castlereagh Street and parallel ramps on Castlereagh Street and Pitt Street, the proposed development will also significantly improve the interface with surroundings streets, and improve pedestrian safety and amenity.

Vehicle Access

The proposed vehicle access arrangement involves the creation of a single, two-way access/egress point on Pitt Street, at the northern boundary. The vehicle access will consolidate a number of existing vehicular access points along Castlereagh Street. A ramp leads down from Pitt Street to the drop-off on the Lower Ground Level and Level B1-B4.

Circulation within the Lower Ground Level and Level B1-B4 will be via a combined ramp, to ensure efficient circulation paths within the small footprint of the basement. The ramp has been designed with vertical curves to achieve the required floor to floor height to accommodate minibuses accessing the porte-cochere on the Lower Ground Floor and vehicles up to an 9.25m garbage truck accessing the loading dock on Level B1.

GTA Consultants have prepared a swept path analysis (**Appendix W**) demonstrating that vehicles will be capable of entering and exiting the development in a forward direction. However, to improve vehicle access and circulation, GTA Consultants recommend:

- Installation of convex mirrors in key locations along the ramp; and
- Installation of security doors and/or boom gates between different car parking and servicing areas.

5.16.4 Servicing and Loading

The Transport Impact Assessment prepared by GTA Consultants (**Appendix W**) has calculated the expected demand for loading and servicing and have assessed the ability of the development to accommodate this demand.

GTA Consultants conclude loading dock on Level B1 has been designed in accordance with the relevant Australian Standards. The swept paths confirm that all services vehicles, up to a 9.25m long garbage truck, will be able to enter and exit the site in a forward direction.

A Loading Dock and Hotel Drop-Off/Pick Up Plan of Management, detailing the logistics of operating and managing the loading dock and hotel drop-off/pick-up area, will be prepared prior to the commencement of use of the loading dock on Level B1. This will include processes for managing contingencies such as blocked access, delayed or early deliveries, and access for emergency vehicles.

5.16.5 Cycling Access and Parking

The proposed development is ideally located to take advantage of existing and planned cycling connections within the CBD. It will be provided with dedicated and secure bicycle parking spaces and end of trip facilities. The proposed cycling infrastructure has been designed with consideration of the Sydney DCP 2012 and the relevant Australian Standards. The overall quantum of facilities will accommodate expected demand. In addition, the proposed removal of three existing vehicle crossovers along Castlereagh Street will improve the safety of cyclists travelling along the proposed Castlereagh Street Cycleway.

5.16.6 Green Travel Plan

A preliminary Green Travel Plan has been prepared by GTA Consultants (**Appendix W**), which outlines how the development will encourage the use of public transport, walking and cycling to minimise private vehicle use. The Green Travel Plan will be implemented in the future operation of the proposed development, and while it is expected that the initiatives will evolve over time, the preliminary Green Travel Plan includes the following programs:

- Limiting on-site parking provision.

- Providing a Travel Access Guide (TAG) to all residents and staff (and publicly available for visitors) to detail surrounding public transport services and active transport initiatives.
- Providing public transport information (e.g. information boards/apps) to inform residents, staff and visitors of alternative transport options.
- Providing a car sharing pod(s) on-site or nearby and promoting the availability of car sharing pods for trips that require the use of private vehicles.
- Providing bicycle facilities including secure bicycle parking for staff, bicycle racks/rails for visitors and shower and change room facilities.
- Encouraging carpooling amongst staff (that drive) through the creation of a club or registry/forum.
- Regularly promoting riding/walking to work days.

These initiatives demonstrate the development's commitment to achieving a high level of sustainability. It will effectively promote and enable occupants of the development to use sustainable modes of transport. The success of the adopted initiatives will be the subject of review, to assess travel demand and incorporate refinements.

5.17 Rail Corridor Impact

In accordance with Condition 40 of the Concept Proposal, consultation has occurred with TfNSW/Sydney Metro and Sydney Trains in relation to any potential impacts from the detailed design of the development on the existing and future rail corridors. This consultation has informed the Rail Corridor Impact Assessment prepared by Arup (**Appendix M**), which examines potential impacts on existing and future rail corridors in the vicinity of the site, including:

- Sydney Metro City & South West Tunnels (Sydney Metro Tunnels)
- Existing City Circle Rail Tunnels
- CBD Railing Link (CBDRL)

To inform Arup's Rail Corridor Impact Assessment, Pells Sullivan Meynink Geotechnical Engineers (PSM) has prepared a Geometrical Desktop Study Report (**Appendix P**), which includes a preliminary three dimensional substratum analysis investigation model to demonstrate that the proposed development will not adversely impact on the operation of rail infrastructure.

It has been prepared with regard to the relevant standards and guidelines, including TfNSW's standard *Sydney Metro Underground Corridor Protection* (the Sydney Metro Standard) and standard *Development Near Rail Tunnels* (the TfNSW Standard).

City Circle Rail Tunnels

While the proposed Second Protection Reserve for the City Circle Rail Tunnels partially extends into the site boundary, it is located outside of the extent of the proposed excavation. Therefore, PSM conclude that the proposed excavation is to have 'minor or no impact' on the existing City Circle Rail Tunnels.

Sydney Metro Rail Tunnels

Part of the First and Second Protection Reserve for the Sydney Metro Tunnels extends into the site boundary. As required by the Metro Standard, an allowance will be made between the proposed basement and the First Protection Reserve. This will ensure that there is no excavation (or ground anchors and rock bolts) within the First Protection Reserve. Excavation within the Second Protection Reserve will be subject to detailed analysis to confirm that the associated impacts are acceptable. This will occur at the detailed design stage, in close consultation with Sydney Metro.

Future CBD Rail Link

The First Reserve of the CBDRL tunnel under Pitt Street traverses under Pitt Street, adjacent to the western boundary. However, PSM has not received the documents required to reliably assess the geotechnical relationship between the CBDRL and the proposed development. Once the necessary information is made available, detailed

assessment can be carried out to inform mitigation measures that ensure the structural integrity and the safe, effective operation and maintenance of the future CBDRL.

Recommendations

Arup's assessment concludes that the basement excavation and the imposed loads from the proposed development are not expected to adversely impact on the operation of the rail infrastructure, due to the relative depth of the rail tunnels.

However, to manage potential impacts to and from the surrounding rail infrastructure, Arup recommend:

- That a three-dimensional rock substratum analysis investigation model be prepared prior to the commencement of excavation to demonstrate that the proposed development will not adversely impact on the operation of rail infrastructure. If any issues are identified as a result of the modelling investigation, the extent of the proposed basement or founding depths of the structure may be modified to mitigate impacts.
- That the foundations of the basement and towers are located outside of the First Reserve and Zone of Influence. It is also recommended that tower foundations are located below the Zone of Influence, with no temporary or permanent structure encroaching on the First Protection Reserve.
- That protection from stray electrical currents is provided by insulating structural steel and reinforcing steel with adequate cover concrete. This could be achieved through a reinforced concrete foundation and shoring elements with a minimum cover of 50mm for 32 MPa concrete that is in contact with the ground.

5.18 Noise and Vibration

A Noise and Vibration Assessment Report has been prepared by Arup (**Appendix Y**) which assesses the noise and vibration impacts associated with the construction and operation of the proposed development. The outcomes and mitigation measures detailed in the report are summarised below.

The findings of the Noise and Vibration Assessment Report indicate that the development is capable of complying with the relevant acoustic policies and standards, subject to detailed acoustic mitigation measures that will be developed further as the design progresses.

The area surrounding the proposed development is zoned B8 Metropolitan Centre and is predominately comprised of a mix of general retail and commercial premises, as well as high density residential buildings.

Noise Intrusion

Arup's Noise and Vibration Assessment Report has been informed by unattended and attended noise monitoring in a number of locations surrounding the proposed development. The results of this monitoring have informed the preparation of a Project Specific Noise Criteria, based on the requirements of the Sydney DCP 2012. The existing background noise environment was found to be dominated by mechanical plan, traffic and pedestrian activity.

Arup's assessment has focused on the residential apartments located on Level 6 of the North Tower, which are the closest to the street and are likely to be the most noise affected (i.e. the worst-case scenario). The purpose of this approach is to demonstrate that the noise intrusion criteria can be achieved through the design of the building envelope/façade.

The ambient noise levels adopted for the acoustic assessment have been measured from Level 6. However, this is a conservative approach which does not account for the acoustic barrier effect provided by the setback of the building along Pitt Street. A summary of Arup's assessment is provided in **Table 17**.

Table 17 Summary of Noise Intrusion Assessment

Area	Comment
Scenario One: Windows and Doors Closed	
Bedrooms / Living Areas	In a scenario where windows and doors are closed, it is anticipated that the acoustic criteria can be achieved, subject to detail design of the building envelope (including acoustic treatment).
Scenario Two: Windows and Doors Opened	
Bedrooms	However, in a scenario where windows and doors are open, Arup's assessment indicates that the noise intrusion criteria for bedrooms may be exceeded, due to the high external noise level.

Area	Comment
	Accordingly, where noise levels exceed the recommended criteria with windows open the proposed design response is to achieve satisfactory noise levels with windows closed, while providing the necessary background through mechanical ventilation consistent with the National Construction Code (NCC).
Living Areas	In the scenario where windows and doors are open, Arup's acoustic assessment indicates that living areas will achieve the acoustic criteria at night, but there will be a marginal 1dB exceedance of the noise criteria during the day. However, this is assuming a conservative noise reduction by open windows/doors of 10dB. Based on the typical façade design, balconies will provide a noise reduction of greater than 10Db. On this basis, Arup anticipate that the noise criteria will be achieved for living areas across the day and night.

Operational Noise Emission

Arup have assessed the potential operational noise emission from the proposed development in accordance with the NSW EPA 'Noise Policy for Industry'.

Mechanical Plant and Emergency Equipment

As specific mechanical plant and equipment has not yet been selected, detailed assessment of operational noise cannot yet be undertaken. Space for appropriate noise and vibration control treatments will be allowed for during the design of areas for mechanical plant and detailed noise emission predictions will be prepared once specific mechanical plant noise data is available. However, Arup confirm that it is possible to achieve compliance with noise objectives via standard acoustic treatment practices, including:

- Rectangular and circular attenuators to control fan noise;
- Acoustic louvres to control noise from plantroom ventilation openings;
- Cooling air and flue gas attenuators on the generator set;
- Acoustic screens around any external plant;
- Incorporation of sound absorptive treatments in plantrooms; and
- Provision of vibration isolation devices to rotating and reciprocating plant.

It is expected that limitation on operational noise emissions from mechanical plant should form a conditional requirement of the development, to be satisfied prior to the issue of a Construction Certificate.

Retail

Arup have conducted a preliminary assessment of the potential noise emission from retail uses throughout the proposed development, including from the ground floor retail, ballroom, podium roof bar, and the uses within the Sky Bridge. The preliminary assessment has found that the potential for noise impacts from these retail uses on surrounding sensitive receivers will be low and preliminary measures are proposed to ensure impacts are acceptable. It is noted that retail uses will be subject of separate development application(s) in the future, which will include additional acoustic assessment based on the detailed design and use of the spaces.

Loading Docks

The loading dock on Level B1 is a fully enclosed space and is not adjacent to an outdoor space. Accordingly, Arup do not consider there will be an acoustic impact generated by the loading dock. However, the following provisional noise mitigation measures are considered to control the noise from the operation of the loading dock:

- Installation of broadband non-tonal and ambient noise sensing to control the noise of alarms for vehicles existing the loading docks and car parks (where required); and
- Identification of relevant noise mitigation and management measures in the Loading Dock Management Plan for distribution to relevant contractors and operators.

Traffic Generation

Based on the traffic generation estimates prepared by GTA Consultants, which is expected to be minor in the context of the existing traffic volume, Arup conclude that the proposed development will comply with the relevant road noise assessment criteria (less than 2dB).

Rail Vibration

Arup have assessed potential ground-borne noise and vibration from the Sydney Metro, which will run beneath the proposed development. The assessment is based on the information from the *Noise and Vibration Assessment* included with the Sydney Metro Environmental Impact Statement (May 2016). The predicted ground-borne noise and vibration impacts were measured from the tunnels of the Sydney Metro to the bedrooms of the closest affected apartments, being those located on Level 6 of the North Tower. The preliminary measurements found that acoustic mitigation measures may be required to control ground-borne noise and vibration. It is emphasised that this prediction is conservative and based on preliminary information available at the current time.

Recommendation

- Arup have requested updated information from Sydney Metro, but this has not yet been received. Arup recommend that during the detailed design stage, when site specific data/information is received from Sydney Metro, a detailed ground-borne noise and vibration assessment should be conducted.

Demolition and Construction Noise and Vibration

Arup has also prepared a Construction Noise and Vibration Management Plan (CNVMP) (**Appendix Y**) which assess the potential impacts of construction noise and vibration on surrounding sensitive receivers. The CNVMP has been prepared in accordance with Council's *Construction Hours/Noise within the Central Business District (1992)* and the Condition 30 of the Concept Proposal. In accordance with the CNVMP, any work that is carried out shall be done in such a way as to reduce noise levels generated and comply with the noise limiting criterion. A number of management measures have been included to limit noise and vibration impacts on nearby receivers. The CNVMP will be updated and improved once specific details regarding the proposed methods of demolition/construction (and plant and equipment to be used) are confirmed.

5.19 Reflectivity

Cermak Peterka Petersen Pty Ltd (CPP) has prepared a Solar Reflectivity Assessment (**Appendix FF**) which assesses the chosen materials and finishes of the building façade to determine whether any unacceptable glare would result affecting surrounding roadways. CPP found that at all investigated locations along surrounding roadways the proposed development will not produce significant disability glare onto vehicles travelling toward the development, and that detected solar glare would be within recommended limits where the normal specular reflectivity of façade materials is limited to 20%, as per the design documentation.

5.20 Water Cycle Management

TTW has prepared a Flood and Stormwater Report (**Appendix BB**) which assesses the proposed stormwater and drainage arrangements. The identified stormwater management measures have been development in consultation with Sydney Water. **Table 18** details the proposed stormwater treatment measures and **Table 19** details the consistency of the proposed stormwater treatment measures with the relevant stormwater quality requirements of the Sydney DCP 2012.

Table 18 Summary of Stormwater and Drainage Measures

Item	Management Measure / Response
Stormwater Design	Stormwater will be collected in a series of pits and pipes that drain to the south-west into the on-site detention tank on Level B1, which will discharge into the existing Sydney Water drainage infrastructure on the corner of Pitt Street and Liverpool Street.
On-Site Detention	The requirements for the OSD have been confirmed by Sydney Water. In accordance with the recommendation of Sydney Water, the OSD will have a volume of 101m³ and a Permissible Site Discharge of 241L/S. The configuration of the OSD will be finalised at the detail design stage, with additional input from a hydraulic engineer.
Stormwater Quality Treatment	The stormwater strategy also includes measures to ensure stormwater quality, which will be incorporated into the OSD in Level B1. These measures include:

Item	Management Measure / Response
	• 150m³ rainwater tank; • 1 SPEL Storm Sack (or equivalent); and • 9 SPEL Filters (or equivalent). With regard to water quality, the proposed stormwater treatment devises have been modelled in MUSIC to demonstrate that they achieve the stormwater treatment targets established in Section 3.7.3 'Stormwater Quality' of the Sydney DCP 2012. The results of this assessment are shown in **Table 19** below.

Table 19 Water Quality Targets and Results

Pollutant	Load (KG/Year)	Residual Load	Reduction Target	Load Reduction
Gross Pollutants	168	0	100%	90%
Total Suspended Soils	1,300	191	85.4%	85%
Total Phosphorus	2.06	0.694	66.1%	65%
Total Nitrogen	15.3	6.93	54.1%	45%

Source: TTW

5.21 Flooding

The Flood and Stormwater Report (**Appendix BB**) assesses the impact of the proposed development on flood behaviour and potential flood impacts.

The study is based on *Council's Darling Harbour Flood Study (2014)* and TUFLOW Flood Model for the Darling Harbour Catchment. TTW have made minor refinements to the existing flood model to include detailed topographical survey levels and updated buildings extents. The proposed flood model has also been updated to include the building extents of the proposed development, the proposed through-site connections and site levels, and proposed upgrades to the stormwater pit and pipe capacity at the low point in Dungate Lane.

In accordance with Condition 14 of the Concept Proposal, flood planning levels for the development have been dictated by the *Interim Floodplain Management Policy* (City of Sydney, 2014). Specifically, TTW confirm that the proposed development meets the require flood planning levels as follows:

- Ground Floor businesses and retail floors are above the 1% AEP flood levels;
- The access ramp to the basement car park is above the PMG and above the 1% AEP (+500mm flood level);
- Accesses to the basement levels are above the PMF; and
- The residential floors are located above ground floor and above the 1% AEP (+500mm flood level).

The proposed through-site connections will allow the existing overland flow from Dungate Lane to flow freely through the site towards Pitt Street (under existing conditions it remains trapped in Dungate Lane). There is also a slight reduction in the flood level within Dungate Lane (to the rear of 255 Castlereagh Street), due to increased pit capacity and pipe outlet.

The other through-site connections from Castlereagh Street have been design with a crest above the level of the PMF, which prevents overland flow from entering the site.

The proposed development results in a slight increase in flood levels (up to 80mm) during the 1% AEP on the eastern side of Pitt Street. This increase only occurs adjacent to the frontage of the development, which has been designed to achieve the required flood planning levels. Accordingly, the change in existing flood behaviour will have no adverse impact on the proposed development or surrounding development.

On this basis, drawing from the existing and proposed development scenarios and Council's adopted Darling Harbour Catchment Flood Study, TTW confirm that the development:

- Is located within a low flood hazard precinct;
- Does not significantly change existing flood behaviour;
- Does not result in significant increases in the potential flood affectation of existing development or properties;

- Incorporates appropriate measures to manage risk to life from flood; and
- Achieves the required Flood Planning Levels.

TTW have also examined the effect of climate change in terms of rainfall intensity and rising sea levels. They confirm that there will be an increase in the flood level of less than 0.1m, assuming at 10% increase in rainfall (which is consistent with the regional estimate). The future rise in sea levels will have no effect on flood levels due to the location of the site in the upper catchment and relatively height above sea level (minimum site RL of 18m).

5.22 Infrastructure and Services

Arup has prepared a Utility Services Report (**Appendix L**) that identifies the existing utilities and infrastructure in the vicinity of the site and notes any expected impacts or required upgrades as a result of the proposed development.

Preliminary consultation has been undertaken with the relevant service providers, noting that further consultation will be required to obtain the necessary consents prior to undertaking works on the site or in the vicinity of existing infrastructure.

The assessment confirms that there is sufficient existing capacity within the vicinity of the site to provide water, sewer, stormwater, gas and communication services to the proposed development. The electricity capacity will be advised by a qualified consultant during the design development.

5.23 Operational Waste Management

The Waste Management Plan prepared by MRA Consulting Group (**Appendix X**) outlines the ambitions and management systems for the proposed development and aims to support best practice waste management and environmentally sustainable development. It provides guidance on waste minimisation, management, and effective waste separation, recycling and re-use measures. MRA Consulting Group have identified the likely waste streams and quantities to be generated by the various uses during operation. These figures have been developed with reference to the waste generation rates in the Sydney DCP 2012 and are detailed **Table 20** below.

Table 20 Maximum Estimated Waste

Table Heading	Total Weekly Volume (L)
Residential	
General Waste	71,040
Recycling	71,040
Hotel	
General Waste	22,197
Recycling	35,063
Food Waste	13,209
Retail	
General Waste	15,022
Recycling	85,043
Food Waste	10,003
Total	**322,617**

Source: MRA Consulting Group

The following waste management systems and facilities have been incorporated into the design of the development in order to promote the reuse, recycling and safe disposal of waste:

Waste Storage and Recycling Area Specifications

- Waste Storage and Recycling Areas (WSRAs) will provide centralised storage and have adequate capacity to receive and store waste between collections. Each WSRA will be constructed to ensure adequate amenity, minimise odour, protect surrounding areas and promote user safety.

Waste and Recycling Equipment, Chute System

- Residents will have access to a dual core waste and recycling chute system on each level. The waste chutes connect to the residential waste rooms on Level B1, where 1,100L MGBs will collect the disposed waste (with a carousel system used to replace full bins with empty bins).
- It is proposed that each WSRA will contain a waste compactor and a plastic and cardboard baler to reduce the volume of waste and the required collections for recycling.

Collection Method and Loading Areas

- The collection areas for handling and loading of waste are located adjoining the loading dock on Level B1. Each collection area has been designed to be a clear, safe and accessible space for handling of MGBs (and other equipment) and loading of collection vehicles.

Management Systems and Responsibilities

- The building management and waste contractor will be responsible for the management of waste. Their collective responsibilities will include:
  - implementing the Waste Management Plan;
  - providing educational materials and information on waste management procedures to residents, staff and visitors;
  - manoeuvring bins to specified collection points prior to, and following, scheduled collection;
  - organising, maintain and cleaning waste management areas as part of a regular maintenance schedule;
  - organising additional waste collection and maintenance (where required); and
  - ensuring bin allocation and waste/recycling collection frequency adequately responds to the waste generated by the development.

Signage and Education

- Signage will be prominently posted in each waste service area to promote resource recovery, waste minimisation, safety and amenity. The signage will provide details on acceptable recyclables, appropriate waste practices and contact details for the disposal of bulky items.

Prevention of Pollution, Illegal Dumping and Litter Reduction

- To minimise litter and prevent pollution site management will be responsible for:
  - maintenance communal areas and the WSRA;
  - securing the waste storage area from vandalism and the escape of litter;
  - identification and appropriate disposal of goods with hazardous material content (paints, e-waste, fluorescent tubes);
  - acting to prevent dumping and unauthorised use of waste areas; and
  - requiring contractors to clean up any spillage that may occur during waste servicing etc.

5.24 Construction Management

A preliminary Construction Management Plan has been prepared by Touchstone Partners (**Appendix Q**) which outlines the overarching principles and practices for the management of construction activities. The plan provides an overview of on-site management during the construction phase of the project and considers management of site operations, soil, water and groundwater, construction waste, traffic, noise and vibration, air quality, hazardous materials, and community consultation and disputes. The preliminary CMP is supplemented by the Demolition and Excavation Methodology Report prepared by Arup (**Appendix Y**). Together, these documents will be used to inform the preparation of a detailed Construction Environmental Management Plan by the appointed contractor, prior to the commencement of works and adhered to for the duration of construction.

5.24.1 Construction and Pedestrian Traffic Management

GTA Consultants have prepared a preliminary Construction Traffic Management Plan (**Appendix W**) which details site access arrangements, anticipated truck volumes, truck routes, measures to preserve pedestrian and cyclist

access and traffic control measures. However, it is emphasised that this report forms a preliminary assessment that will be updated by a future detailed CPTMP and associated Traffic Control Plan(s) that will be prepared by the building contractor. The detailed CPTMP will confirm the detailed construction methodology and specific methods for safely managing construction traffic in the surrounding area.

5.24.2 Construction Waste

The Waste Management Plan prepared by MRA Consulting Group (**Appendix X**) addresses the management of waste generated during the construction of the proposed development. It has been prepared in accordance with the Sydney DCP 2012 and Council's *Guidelines for Waste Management in New Developments (2018)*.

The construction contractor will develop a detailed Construction Waste Management Plan (CWMP) to ensure that construction waste is minimised and diverted from landfill where possible. During construction, suitable areas on site (or off site, if necessary), will be provisioned which provide adequate space and access for the:

- storage of building materials;
- storage of demolition and construction waste;
- sorting of demolition and construction waste; and
- removal of demolition and construction waste for recycling, re-use or landfill.

5.25 Crime and Safety

A Crime Prevention Through Environmental Design (CPTED) Review has been prepared by Ethos Urban and is provided at **Appendix O**. The review identifies the potential security concerns in and around the site and provides recommendations to guide crime prevention, safety and security arrangements as part of detailed design of the development.

This strategy includes a detailed assessment which includes:

- A review of the Safer by Design Manual by the NSW Police Force
- Collection and analysis of local and NSW State crime statistic from the Bureau of Crime Statistics and Research (BOSCAR)
- A crime risk assessment, in accordance with the current NSW policy and practice, of the following regulation and assessment principles:
    1. Surveillance
    2. Lighting and Technical Supervision
    3. Territorial Reinforcement
    4. Environmental Maintenance
    5. Activity and Space Management
    6. Access Control
    7. Design, Definition and Designation.

Recommendations were provided in the CPTED review, as outlined below.

Recommendations

Key findings of the CPTED Report undertaken have been detailed at **Table 21** below and should be incorporated in in the delivery of development.

Table 21 CPTED Review

Principle	Recommendation
Surveillance	• Maintain sightlines to and from the proposed development and the surrounds by ensuring signage and equipment do not create a significant visual obstruction. • Ensure circulation spaces (internal courtyard, hotel / residential lobby curtilage, basement ingress/egress, public areas surrounding the external walls of the building) are

Principle	Recommendation
	unobstructed by structures, to remove opportunities for concealment and ensure that pedestrians can move freely with clear sightlines of their surrounds. • The glazed facades of the building at street level should be free of clutter and signage to allow sightlines between the development and the public domain. • Ensure glazed elements to the concierge desk within the hotel foyer is clearly visible from the street frontage to assisting in maximising surveillance.
Lighting and Technical Supervision	• A CCTV network is essential for the back of house areas and overall development. The CCTV network is to be designed in consultation with a suitably qualified security consultant with a Class 2A licence under the *Security Industry Act* 1997 who can provide specific advice on the placement, installation, monitoring and maintenance of the CCTV network. • The CCTV network should endeavour to ensure blackspots of coverage are not created. • The CCTV network strategy should be partnered with the internal and external lighting strategy to ensure facial recognition is achieved in all lighting conditions and a minimum colour rendering index of 60 is achieved. • Discrete CCTV systems such as small dome cameras are recommended. • A lighting strategy should be developed by or in consultation with a suitably qualified and experienced lighting expert. It is recommended that when designing the lighting strategy for the publicly accessible areas of the ground levels and the basements, a CPTED professional is consulted.
Territorial Reinforcement	• Ensure public furniture is durable and of high-quality design. • Maintain that building entrances remain free of clutter to ensure entry points are highly visible from the street frontages. • Provide signage within the basement and ground floor plane to direct pedestrian movements and deter loitering. • Ensure that pathways within lobbies and through site link corridors are unobstructed at all times to avoid blind spots. • Provide wayfinding signage and building / business identification signage where appropriate to reinforce perceptions of safety and legibility.
Environmental Maintenance	• Ensure mechanisms are in place to facilitate the on-going maintenance of the building, including the implementation of a rapid removal policy for vandalism repair and the removal of graffiti.
Activity and Space Management	• Ensure business, building and wayfinding signage is appropriate to deter access to private spaces and direct pedestrian movements to desired locations. • Maximise the inclusion of glazed facades with anti-graffiti coatings wherever possible to maximise lines of sight and mitigate the risk of damage.
Access Control	• Provide secure electronic access (card / key controlled entries / lifts etc.) to all private entrances of the building and differing lifts to facilitate in demarcating the residential and non-residential uses of the building and providing a delineation between public and private spaces. • Basement car parking needs to include additional access control provisions to ensure that no public or employee persons are able to access private residential parking areas. • Install a security door at an appropriate location to prevent unauthorised individuals from entering restricted areas not intended for public use (such as within the back of house basement areas, areas where there is residential sensitivity and loading dock). • Install an appropriate bollard/barrier system at the main entrance to the internal courtyard to prevent vehicles driving into this area. A security consultant with a Class 2A licence under the *Security Industry Act 1997* is recommended to be engaged to provide specific advice on the type, placement and installation of this bollard/barrier system to ensure vehicles moving at high velocity cannot enter the main street level entry area of the internalised courtyard and hotel basement lobby drop-off/ pick up turning circle, if need be. • Ensure concierges / receptions and formal guardians occupy publicly accessible spaces such as the lobbies and the hotel foyer.
Design, Definition and Designation	• Security, general hotel personnel and employees of the building are advised to parole / occupy the publicly accessible areas visibly and regularly to minimise opportunities for anti-social behaviour.

5.26 Building Code of Australia and Disability Discrimination Act

BCA Logic (**Appendix Z**) and Morris Goding Access Consulting (**Appendix T**) have reviewed the documentation against the statutory requirements. BCA Logic and MGAC confirm that the design complies or is capable of compliance during detailed design with the Disability Discrimination Act (DDA), DDA Premises Standards 2010 (including DDA Access Code), Building Code of Australia (BCA), the relevant Australian Standards. The design of the development will be continuously refined during the detailed design phase to ensure that various elements of the proposal meet the applicable performance requirements.

Recommendations

No mitigation measures have been nominated by BCA Logic and Morris Goding Access Consulting and it is noted that compliance with the *Disability Discrimination Act 1992* and Building Code of Australia is a standard requirement as part of the issuance of a Construction Certificate. No specific mitigation measures are necessary in this instance.

5.27 Ecologically Sustainable Development

The EP&A Regulation lists 4 principles of ecologically sustainable development to be considered in assessing a project. They are:

- The precautionary principle;
- Intergenerational equity;
- Conservation of biological diversity and ecological integrity; and
- Improved valuation and pricing of environmental resources.

An analysis of these principles follows.

Precautionary Principle

The precautionary principle is utilised when uncertainty exists about potential environmental impacts. It provides that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. The precautionary principle requires careful evaluation of potential environmental impacts in order to avoid, wherever practicable, serious or irreversible damage to the environment. This EIS has not identified any direct serious threat of irreversible damage to the environment and therefore the precautionary principle is not required to be given further consideration in this instance. Notwithstanding, indirect avoidance of damage to the environment can be achieved through implementing the mitigation measures identified in this EIS, which will inform the construction and operation of the proposed development.

Intergenerational Equity

Inter-generational equity is concerned with ensuring that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations. The proposal has been designed to benefit both the existing and future generations through the provision of permeable and activated public domain with new pedestrian connections, a new 1,050m² publicly accessible courtyard, and high-quality retail and housing. The development has also been designed to achieve the relevant sustainability targets.

The proposal has also integrated short and long-term social, financial and environmental considerations so that any foreseeable impacts are not left to be addressed by future generations. Issues with potential long-term implications such as waste disposal can be avoided and/or minimised through construction planning and the application of safeguards and management measures described in this EIS and the appended technical reports. The proposed development will assist with the success of Sydney as a Global City for future generations.

Conservation of Biological Diversity and Ecological Integrity

This principal upholds that the conservation of biological diversity and ecological integrity should be a fundamental consideration in development. The proposed development will not result in any direct impacts on the biophysical environment, with the site not having any present or significant ecological features and has been designed to achieve the relevant sustainability targets and mitigate or minimise all projected environmental impacts.

Improved Valuation, Pricing and Incentive Mechanisms

The principles of improved valuation and pricing of environmental resources requires consideration of all environmental resources which may be affected by a proposal, including air, water, land and living things. Mitigation measures for avoiding, reusing, recycling and managing waste during construction and operation would be implemented to ensure resources are used responsibly in the first instance. Additional measures will be implemented to ensure no environmental resources in the locality are adversely impacted during the construction or operational phases.

5.28 Social and Economic Impacts

The operation of the proposed development is expected to promote the diversity of employment opportunities in the Sydney CBD. Specifically, it is anticipated that the development will create 750 ongoing jobs, associated primarily with the provision of 17,633m² hotel GFA and 5,123m² retail GFA.

In addition to this, the construction of the proposed development will support a significant number of construction jobs (over 3,090 jobs). This will be supplemented by further employment and broader economic benefits occurring within the local and wider economy, relating to flow-on multipliers during the construction period.

Housing Supply and Choice

The proposed development provides for 592 residential dwellings. The proposed development will accommodate a mix of apartment types and a range of apartment sizes, which can meet diverse household needs. Located within the heart of the Sydney CBD, the proposed development supports the key strategic objectives Council and State Government with regard to locating housing in proximity to infrastructure and employment opportunities, while also contributing towards achieving housing targets.

Tourism

The proposed development also provides additional visitor accommodation in the Sydney CBD, within a boutique hotel that draws on the unique opportunity to locate hotel rooms and facilities across a series of connected podium buildings, as well as within the iconic South Tower.

The hotel will contain 158 rooms, which will contribute to addressing the current deficiency in high quality visitor accommodation within the Sydney CBD. Tourism plays an important role in the City of Sydney's and NSW's economy and the proposed development will contribute towards making Sydney an attractive place to visit.

Amenity, Safety and Security of the Public Domain

The proposed development will revitalise the public domain along and between Liverpool Street, Castlereagh Street and Pitt Street. This is an area that constitutes nearly one third of the city block and its revitalisation will play an important role in the continuing renewal of the south-eastern portion of the Sydney CBD.

The proposed development provides activating uses along adjoining streets and will enhance the traditional grid of the Sydney CBD with new pedestrian connections. This will:

- Improve the amenity and quality of the public domain;
- Generate increased pedestrian activity and interaction;
- Increase safety and security in the public domain; and
- Provide opportunities for the integration of public art and extensive landscaping.

5.29 Public Benefits / Development Contributions

The proposal will be subject to Council's contributions requirements under Section 61 of the *City of Sydney Act 1988.* This will levy an additional monetary contribution (1% of the development cost) to fund public facilities, amenities and services to meet the needs of the growing workforce and residential population within Central Sydney.

5.30 Site Suitability

Having regard to the characteristics of the site and its location in the Sydney CBD, the proposed development is considered suitable in that:

- It will deliver both high quality tourist accommodation and additional housing supply, servicing Sydney's global tourist status and providing for its growing population;
- It has been designed in a manner that minimises impacts on surrounding development and public spaces;
- It will contribute to the revitalisation of the south-eastern portion of the Sydney CBD by delivering considerable benefits, including a high-quality public domain and a wide variety of services and amenities for workers, residents and visitors; and
- It will result in result in only minor environmental impacts that can be appropriately managed and mitigated.

In regard to the characteristics of the site and its location in the Sydney CBD, it is also considered to be highly suitable for the proposed development in that:

- It is zoned B8 Metropolitan Centre;
- It is located within the south-eastern portion of the Sydney CBD, which is currently in transition towards a mixed-use neighbourhood, with an increasing number of high rise residential and commercial developments, alongside older style retail shopfronts and heritage items;
- The site remains capable of being appropriately serviced to accommodate the development;
- It is close to existing and future public transport services, including the recently completed CBD and South East Light Rail along George Street and the Sydney Metro City & Southwest, being 150m south of the Pitt Street Metro Station.
- It has excellent access to a wide range of services and facilities that will support, and benefit from, the future occupants of the development; and
- The character of surrounding precincts, including existing built form, are compatible with the scale and nature of the proposal.

5.31 Public Interest

The proposed development is in the public interest for the following reasons:

- It will provide numerous public benefits, including new through site links, and a publicly accessible plaza incorporating high quality landscaping, public art and water features;
- It will substantially improve the public domain, with a human-scale podium designed to enhance the penetration of natural light into the public domain, while enhancing the permeability of the traditional grid of the Sydney CBD through new pedestrian connections and activated laneway frontages;
- It will deliver both high quality tourist accommodation and additional housing supply, contributing to Sydney's global tourist status and providing for its growing population; and
- It will deliver a world-class retail destination, with an iconic two-tower form that makes a dramatic contribution to the skyline of Sydney.

The proposed development is therefore considered to be in the public interest and will play an important role in the continuing revitalisation of the south-eastern end of the Sydney CBD.

6.0 Environmental Risk Assessment

The Environmental Risk Assessment (ERA) establishes a residual risk by reviewing the significance of environmental impacts and the ability to manage those impacts. The ERA for the proposed development has been adapted from Australian Standard AS4369.1999 Risk Management and Environmental Risk Tools.

In accordance with the SEARs, the ERA addresses the following significant risk issues:

- the adequacy of baseline data;
- the potential cumulative impacts arising from other developments in the vicinity of the Site; and
- measures to avoid, minimise, offset the predicted impacts where necessary involving the preparation of detailed contingency plans for managing any significant risk to the environment.

Figure 57 indicates the significance of environmental impacts and assigns a value between 1 and 10 based on:

- the receiving environment;
- the level of understanding of the type and extent of impacts; and
- the likely community response to the environmental consequence of the project;

The manageability of environmental impact is assigned a value between 1 and 5 based on:

- the complexity of mitigation measures;
- the known level of performance of the safeguards proposed; and
- the opportunity for adaptive management.

The sum of the values assigned provides an indicative ranking of potential residual impacts after the mitigation measures are implemented.

Significance of impact	Manageability of impact				
	5 Complex	4 Substantial	3 Elementary	2 Standard	1 Simple
1 – Low	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)	2 (Low)
2 – Minor	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)
3 – Moderate	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)
4 – High	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)
5 – Extreme	10 (High)	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)

Figure 57 Risk Assessment Matrix

Identification and Discussion				Risk Assessment		
Item	**Phase**	**Potential Environmental Impact**	**Proposed Mitigation Measures and / or Comment**	**Significance of Impact**	**Manageability of Impact**	**Residual Impact**
Transport and Accessibility	C / O	• Impacts on intersection performance • Impacts on pedestrian movement	• The Transport Impact Assessment prepared for the EIS does not identify any significant or adverse impact from the elected construction vehicle routes and the expected traffic volumes. The preparation of a detailed Construction Pedestrian and Traffic Management Plan (CPTMP) is recommended.	2	2	4 Low/Medium
Heritage	C / O	• The physical and visual impacts on surrounding heritage items • The impacts on archaeology and potential artefacts	• The Heritage Impact Statement (HIS) confirms that the proposed development will have an acceptable heritage impact and will not adversely impact on the significance of surrounding heritage items, either physically or visually. • The Aboriginal Cultural Heritage Assessment Report (ACHAR) has established a number of mitigation measures to ensure that Aboriginal cultural heritage values and Aboriginal archaeological potential is managed appropriately.	2	2	4 Low/Medium
Noise and Vibration	C / O	• Unacceptable noise and vibration impacts on sensitive noise receivers.	• The noise and vibration mitigation measures identified by Arup in their Noise and Vibration Assessment (December 2019) will be adopted. • The noise emission of mechanical plant and equipment associated with the development will be controlled so that the operation of such plant does not adversely impact nearby noise sensitive receivers including those within the proposed development site. Attenuation measures will include attenuators, acoustic louvres, equipment enclosures, sound absorption within plant rooms and internal duct lining. The detailed mechanical system noise control strategies will be developed as part of the detailed design. • The electrical plant and equipment will be assessed at the time of the detailed design having regard to nearby residential and commercial properties and criteria as discussed in the Acoustic Report. It is anticipated that a condition of consent will be imposed requiring compliance with the relevant standards. • When site specific data/information is received from Sydney Metro, a detailed ground-borne noise and vibration assessment should be conducted. The detailed noise and vibration assessment should inform acoustic mitigation measures to control the ground-borne noise and vibration.	3	3	6 Medium

Identification and Discussion				Risk Assessment		
Rail Corridor	C / O	• Impact on nearby rail infrastructure during construction and operation.	• Arup's assessment concludes that the basement excavation and the imposed loads from the proposed development are not expected to adversely impact on the operation of the rail infrastructure. • The assessment includes measures to manage impacts on surrounding rail infrastructure, including: – That a three-dimensional rock substratum analysis investigation model be prepared to demonstrate that the proposed development will not adversely impact on the operation of rail infrastructure. If any issues are identified as a result of the modelling investigation, the extent of the proposed basement or founding depths of the structure may be modified to mitigate impacts. – That the foundations of the basement and towers are located outside of the First Reserve and Zone of Influence. It is also recommended that tower foundations are located below the Zone of Influence, with no temporary or permanent structure encroaching on the First Protection Reserve. – That protection from stray electrical currents is provided by insulating structural steel and reinforcing steel with adequate cover concrete. This could be achieved through a reinforced concrete foundation and shoring elements with a minimum cover of 50mm for 32 MPa concrete that is in contact with the ground.	4	4	8 High/Medium
Reflectivity	O	• Unacceptable reflectivity on public domain and surrounding roadways.	• All external materials and finishes that are visible from a public road and footpath are to have a spectral reflectivity of less than 20%.	3	1	4 Low/Medium
Stormwater and Flooding	C / O	• Water conservation • Water quality • Water quantity	• The Stormwater and Flooding Report prepared by TTW confirms that the proposed development will not adversely impact on the management of stormwater and that the proposed stormwater treatment measures are capable of achieving the relevant water quality targets. • The proposed development will not significantly change existing flood behaviour, does not result in significant increases in the potential flood affectation of existing development, incorporates appropriate mitigation measures and achieves the required Flooding Planning Levels.	2	3	5 Low/Medium
Crime Prevention	C / O	• Potential for crime and perception of crime within future public domain.	• Implementation of the recommendations identified in the Crime Prevention through Environmental Design (CPTED) Report prepared by Ethos Urban, which will inform detailed design and operation measures that reduce the risk of crime.	3	3	6 Medium
Contamination	C / O	• Potential for contaminated soil in Dungate Lane and	• A targeted program of intrusive investigations to determine the presence of contamination.	3	2	5 Low/Medium

Identification and Discussion				Risk Assessment		
		existing building footprints.	• If contaminated soils are identified, they will be managed in accordance with SEPP 55.			
Waste Management	C / O	• Construction waste • Operational waste	• A Waste Management Plan (WMP) has been prepared that identifies and quantifies the likely waste streams generated during construction and operation of the proposed development. The WMP includes measures that will support best practice waste management.	2	2	4 Low/Medium
Overshadowing	O	• Potential for overshadowing of surrounding areas, including future residential development and open space	• The shadow diagrams prepared by FJMT demonstrate that the proposed development does not result in any reduction in solar access below the two (2) hours required under the ADG and Sydney DCP 2012, while providing improved solar access to buildings at 2-4 Cunningham Street, 393 Pitt Street and 47 & 49-53 Wentworth Avenue between 9am and 11am and between 1pm and 3pm • The shadow diagrams also demonstrate that the proposed development results in an overall 2.59% reduction in overshadowing of Harmony Park between 9:00am and 3:00pm on 21 June, with 58.14% of Harmony Park receiving sunlight for four (4) hours during this period.	1	2	3 Low
Pedestrian Wind Environment	O	• Potential wind impacts on safety and comfort.	• CPP's wind tunnel testing confirms that the wind conditions in all locations around the ground plane of the proposed development achieve the relevant safety criteria. • Investigation and testing of the mitigation measures identified in CPP's Wind Study will ensure that the proposed communal areas achieve the relevant comfort criteria.	3	3	Medium
Communications and Community	C / O	• Information about the application • Construction impacts and complaints • Operational information • Operational impacts and complaints	• **Section 3.0** of this EIS and the Stakeholder Communications Report identify consultation activities that have been undertaken to date to inform the scope of the project and provide information to the community regarding the proposal and planning process. • This EIS will be publicly exhibited by the NSW Department of Planning and Environment. Infrastructure NSW will also undertake further public engagement during this period. • Subject to the granting of Development Consent, regular communications will be provided to local residents throughout the construction phase to advise of the progress of works, likely impacts and special activities.	3	2	5 Low/Medium

Identification and Discussion				Risk Assessment		
Building Code Compliance	O	• Compliance with relevant building codes and standards, including the Disability Discrimination Act	• The Development Application documentation has been the subject of expert review against the provisions of the Building Code of Australia, which confirm that the project is capable of complying with the relevant requirements, subject to further detailed design and certification at the relevant construction and occupation stages.	4	2	6 Medium

7.0 Mitigation Measures

The collective measures required to mitigate the impacts associated with the proposed works are detailed in **Table 22** below. These measures have been derived from the previous assessment in **Section 5.0** and those detailed in appended consultants' reports.

Table 22 Mitigation Measures

Mitigation Measures
Noise and Vibration • Adopt the measures identified in Arup's Noise and Vibration Assessment (December 2019). • The noise emission of mechanical plant and equipment associated with the development will be controlled so that the operation of such plant does not adversely impact nearby noise sensitive receivers including those within the proposed development site. Attenuation measures will include attenuators, acoustic louvres, equipment enclosures, sound absorption within plant rooms and internal duct lining. The detailed mechanical system noise control strategies will be developed as part of the detailed design. • The electrical plant and equipment will be assessed at the time of the detailed design having regard to nearby residential and commercial properties and criteria as discussed in the Acoustic Report. It is anticipated that a condition of consent will be imposed requiring compliance with the relevant standards. • When site specific data/information is received from Sydney Metro, a detailed ground-borne noise and vibration assessment should be conducted. The detailed noise and vibration assessment should inform acoustic mitigation measures to control the ground-borne noise and vibration.
Reflectivity • All external materials and finishes that are visible from a public road and footpath are to have a spectral reflectivity of less than 20%.
Construction • Adopt the measures identified in Arup's detailed Demolition and Excavation Methodlogy Report (December 2019) • Prepare a detailed Construction Traffic and Pedestrian Management Plan, generally in accordance with the principles established in the preliminary Construction Traffic and Pedestrian Management Plan prepare by GTA Consultants (December 2019).
Crime Prevention • A CCTV network is the be designed and installed with consultation with a suitably qualified security consultant with a Class 2A licence under the *Security Industry Act 1997*. • A lighting strategy should be developed by or in consultation with a suitably qualified and experienced lighting expert, in consultation with CPTED professional. • The detailed design of the proposed development should be consistent with the recommendations of the CPTED Report prepared by Ethos Urban (dated December 2019), with regard to: – Public Furniture – Signage – Access and Circulation – Sightlines – Glazing • The following measures should be implemented during the operation of the development: – Ensure concierges/receptions and formal guardians occupy publicly accessible spaces such as the lobbies and the hotel foyer. – Security, general hotel personnel and employees of the building are advised to parole and/or occupy the publicly accessible areas visibly and regularly to minimise opportunities for anti-social behaviour. – Ensure mechanisms are in place to facilitate the on-going maintenance of the building, including the implementation of a rapid removal policy for vandalism and graffiti.
Contamination • Undertake a targeted program of intrusive investigations to determine the presence of contamination. This investigation should target potential fill materials in Dungate Lane and existing building footprints, with the exception of areas occupied by building basements.

Mitigation Measures

Rail Corridor Impact

- Prepare a three-dimensional rock substratum analysis investigation model to demonstrate that the proposed development will not adversely impact on the operation of rail infrastructure. If any issues are identified as a result of the modelling investigation, the extent of the proposed basement or founding depths of the structure may be modified to mitigate impacts.
- Locate the foundations of the basement and towers are located outside of the First Reserve and Zone of Influence. The foundations of towers are to be located out of the Zone of influence of the Rail Corridor, with no temporary or permanent structure encroaching on the First Protection Reserve.
- Ensure insulating structural steel and reinforcing steel with adequate cover concrete is installed where required to protect from stray electrical currents. This could be achieved through a reinforced concrete foundation and shoring elements with a minimum cover of 50mm for 32 MPa concrete that is in contact with the ground.

Heritage

- Prepare an Aboriginal Cultural Heritage Management Plan (ACHMP) in accordance with the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales (DECCW 2010).
- Consultation with the Registered Aboriginal Parties (RAPs) should continue, as per the requirements detailed in the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010).
- A systematic subsurface disbursed test excavation programme and open area test excavation (if required) should be carried out under the proposed Aboriginal Cultural Heritage Management Plan as recommended conditions of the SSD. Aboriginal test excavation should be managed in accordance with the methodology outlined by AMAC 2019 in their Research Design & Excavation Methodology.
- In the event archaeological test excavations reveal Aboriginal archaeological objects and/or deposits, it is recommended that the nature and extent of the archaeological site be analysed and synthesised into an Aboriginal Archaeological Technical Report (to be appended to the ACHMP). In addition, an analysis of artefacts retrieved should be conducted to allow for comparison with previous relevant results.
- Before any ground disturbance takes place as part of the construction, all development staff, contractors and workers should be briefed prior to works commencing on site, as to the status of the area and their responsibilities regarding any Indigenous archaeological deposits and/or objects that may be located during the following development through a Cultural Heritage Awareness Induction;

Wind

- Implement local treatments to the dedicated seating or dining areas to further improve conditions across the ground plane. This could include the investigation of awnings, canopies and vertical screening elements.
- Implement mitigation treatments for the podium terraces to achieve wind conditions suitable for pedestrian sitting. Investigate the following mitigation treatments:
  - Horizontal awnings or canopies, particularly near tower bases;
  - Fence-type structure or high balustrades at podium edges;
  - Vertical screening elements around dedicated seating areas, using a mix of solid and porous media; and
  - Pavilion-type structures to provide localised calm areas.
- Implement mitigation treatments for the Sky Bridge during the detailed design to ensure areas are suitable for permanent outdoor use, which could include high balustrades or screens, semi-enclosed areas, and localised protection to seating areas. The effectiveness of these mitigation treatment is to be verified through further wind tunnel testing.

Sustainability

- The detailed design of the proposed development is to achieve the following minimum targets, with consideration of the initiatives identified in the Ecologically Sustainable Development Strategy prepared by Arup:
  - NABERS Energy 5 Stars (Hotel)
  - Section J of the NCC 2019 (Hotel and Retail)
  - BASIX Energy 25 and BASIX Water 45 (Residential)

8.0 Conclusion

The EIS has been prepared to consider the environmental, social and economic impacts of the proposed 257 metre high mixed-use development at 338 Pitt Street, Sydney. The EIS has addressed the issues outlined in the SEARs and accords with Schedule 2 of the EP&A Regulation with regards to consideration of biophysical, economic and social considerations, including the principles of ecologically sustainable development. In conclusion, the carrying out of the project is justified as it will achieve a number of positive outcomes for the site and the surrounding area, including:

- Provision of two elegant towers of landmark quality that will make a positive contribution to the skyline of Sydney;
- Provision of a publicly accessible urban courtyard at ground level of approximately 1,050m².
- Increasing mid-block pedestrian permeability through the provision of new through-site links between Pitt Street, Castlereagh Street and Liverpool Street.
- Improvements to the public domain through the removal and rationalisation of basement driveway crossovers on the footpaths.
- Provision of high-quality podium buildings designed by emerging architects in collaboration with FJMT which will contribute to architectural diversity and the revitalisation of the public domain in the south-eastern portion of the Sydney CBD.
- The addition of 592 high-quality apartments and 158 boutique hotel rooms close to jobs, entertainment, places of interest, public transport and services.
- The proposed development will reinforce Sydney's global competitiveness through the provision of high quality residential and visitor accommodation, and the delivery of high-quality retail floor space in the Sydney CBD.
- Further, the proposed development is the result of a competitive design process completed in accordance with the Council's requirements. The proposed development does not result in any unreasonable impacts with respect to overshadowing, heritage, streetscape, traffic, views, wind, noise or reflectivity.

Given the merits described above it is requested that the application be approved.