



WATERLOO METRO QUARTER OVER STATION DEVELOPMENT

Environmental Impact Statement Appendix HH – Visual Impact Assessment

SSD-10437 Southern Precinct

Detailed State Significant Development
Development Application

Prepared for **Waterloo Developer Pty Ltd**

30 September 2020

Reference	Description
Applicable SSD Applications	SSD-10437 Southern Precinct
Author	Cardno (NSW/ACT) Pty Ltd John O'Grady, Principal Planner / Landscape Architect
Reviewed	Waterloo Developer Pty Ltd Nick Owen
Document Number	WMQ-BLD3-CAR-VI-RPT-001
Status	Final
Version	02
Date of Issue	29 July 2020
© Waterloo Developer Pty Ltd 2020	

Table of Contents

1. Glossary and abbreviations	7
2. Executive summary	8
3. Introduction.....	9
4. The site.....	11
5. Background.....	14
5.1 About Sydney Metro	14
5.1.1 Sydney Metro North West.....	14
5.1.2 Sydney Metro City & Southwest	14
5.1.3 Sydney Metro West	14
5.1.4 Sydney Metro Greater West	14
5.2 Sydney Metro CSSI Approval (SSI 7400)	15
5.3 Concept Approval (SSD 9393)	16
6. Proposed development	17
6.1 Waterloo Metro Quarter Development	17
6.1.1 Southern Precinct [Subject DA]	17
6.1.2 Basement Car Park	17
6.1.3 Central Precinct	18
6.1.4 Northern Precinct.....	18
7. Methodology	19
7.1 Assessment of existing Conditions.....	19
7.2 Visual impact assessment	19
7.3 Review of conclusions against relevant Court planning principles (Rose Bay Marina Pty Ltd v Woollahra Council and anor [2013] NSWLEC 1046)	19
8. Baseline Investigations	20
8.1 Existing conditions	20
9. Implementation Plan.....	21
9.1 Vision Statement (Visual Quality)	21
9.2 Visual / urban quality plan	21
9.2.1 Planning / Design Objectives	21
10. View analysis – Southern Precinct	22
10.1 Regional views	22
10.1 Local views	23
10.2 Heritage Conservation Areas	24
11. Visual Impact Analysis	25
11.1 Close views	25
11.1.1 Visual environment (the existing view).....	25
11.1.2 Capacity to absorb change	26
11.1.3 Changes to close views resulting from the proposal (likely impact on close views).....	26
11.2 Medium distant views – within the Waterloo Estate	35
11.2.1 Visual environment (the existing view).....	35
11.2.2 Capacity to absorb change	35

11.2.3	Changes to medium distant views within Waterloo Estate resulting from the proposal (likely impact on medium views)	36
11.3	Medium distant views – outside the Waterloo Estate	43
11.3.1	Visual environment (the existing view)	43
11.3.2	Capacity to absorb change	43
11.3.3	Changes to medium distant views outside the Waterloo Precinct resulting from the proposal (likely impact on medium distant views)	43
11.1	Distant views	62
11.1.1	Visual environment (existing views)	62
11.1.2	Capacity to absorb change	62
11.1.3	Changes on distant views resulting from the proposal (likely impact on distant views)	62
12.	Summary of assessment outcomes	68
13.	Justification and mitigation measures	70
14.	Conclusion	71

List of Figures

Figure 1 - Aerial image of the site	12
Figure 2 - Waterloo Metro Quarter site, with sub-precincts identified	13
Figure 3 - Waterloo Metro Quarter site, with sub-precincts identified	13
Figure 4 - Sydney Metro alignment map	15
Figure 5 - CSSI Approval scope of works	16
Figure 6 – Regional Views external to the Waterloo Precinct	22
Figure 7 – Local Views	23
Figure 8 – Sydney LEP Heritage Map	24
Figure 9 – Viewpoint 1 – Southern Precinct base photo 55mm focal length (existing view)	28
Figure 10 – Viewpoint 1 – Southern Precinct Approved Concept envelope montage	28
Figure 11 – Viewpoint 1 – Southern Precinct Amended Concept envelope montage	29
Figure 12 – Viewpoint 1 – Southern Precinct Detailed Design rendered montage	29
Figure 13 – Viewpoint 2 – Southern Precinct base photo 55mm focal length (existing view)	30
Figure 14 – Viewpoint 2 – Southern Precinct Approved Concept envelope montage	30
Figure 15 – Viewpoint 2 – Southern Precinct Amended Concept envelope montage	31
Figure 16 – Viewpoint 2 – Southern Precinct Detailed Design rendered montage	31
Figure 17 – Viewpoint 3 – Southern Precinct base photo 55mm focal length (existing view)	32
Figure 18 – Viewpoint 3 – Southern Precinct Approved Concept envelope montage	32
Figure 19 – Viewpoint 3 – Southern Precinct Amended Concept envelope montage	33
Figure 20 – Viewpoint 3 – Southern Precinct Detailed Design rendered montage	33
Figure 21 – Viewpoint 7 – Southern Precinct base photo 55mm focal length (existing view)	34
Figure 22 – Viewpoint 7 – Southern Precinct Detailed Design rendered montage	34
Figure 23 – Viewpoint 4 – Southern Precinct base photo 55mm focal length (existing view)	37
Figure 24 – Viewpoint 4 – Southern Precinct Approved Concept envelope montage	37
Figure 25 – Viewpoint 4 – Southern Precinct Amended Concept envelope montage	38
Figure 26 – Viewpoint 4 – Southern Precinct Detailed Design rendered montage	38
Figure 27 – Viewpoint 5 – Southern Precinct base photo 55mm focal length (existing view)	39
Figure 28 – Viewpoint 5 – Southern Precinct Approved Concept envelope montage	39
Figure 29 – Viewpoint 5 – Southern Precinct Amended Concept envelope montage	40
Figure 30 – Viewpoint 5 – Southern Precinct Detailed Design rendered montage	40
Figure 31 – Viewpoint 6 – Southern Precinct base photo 55mm focal length (existing view)	41
Figure 32 – Viewpoint 6 – Southern Precinct Approved Concept envelope montage	41
Figure 33 – Viewpoint 6 – Southern Precinct Amended Concept envelope montage	42
Figure 34 – Viewpoint 6 – Southern Precinct Detailed Design rendered montage	42
Figure 35 – Viewpoint A – Southern Precinct base photo 55mm focal length (existing view)	46
Figure 36 – Viewpoint A – Southern Precinct Approved Concept envelope montage	46
Figure 37 – Viewpoint A – Southern Precinct Amended Concept envelope montage	47

<i>Figure 38 – Viewpoint A – Southern Precinct Detailed Design rendered montage</i>	47
<i>Figure 39 – Viewpoint B – Southern Precinct base photo 55mm focal length (existing view)</i>	48
<i>Figure 40 – Viewpoint B – Southern Precinct Approved Concept wire diagram</i>	48
<i>Figure 41 – Viewpoint B – Southern Precinct Amended Concept wire diagram</i>	49
<i>Figure 42 – Viewpoint C – Southern Precinct base photo 55mm focal length (existing view)</i>	50
<i>Figure 43 – Viewpoint C – Southern Precinct Approved Concept wire diagram</i>	50
<i>Figure 44 – Viewpoint C – Southern Precinct Amended Concept wire diagram</i>	51
<i>Figure 45 – Viewpoint D – Southern Precinct base photo 55mm focal length (existing view)</i>	52
<i>Figure 46 – Viewpoint D – Southern Precinct Approved Concept envelope montage</i>	52
<i>Figure 47 – Viewpoint D – Southern Precinct Amended Concept envelope montage</i>	53
<i>Figure 48 – Viewpoint D – Southern Precinct Detailed Design rendered montage</i>	53
<i>Figure 49 – Viewpoint D1 – Southern Precinct base photo 55mm focal length (existing view)</i>	54
<i>Figure 50 – Viewpoint D1 – Southern Precinct Approved Concept envelope montage</i>	54
<i>Figure 51 – Viewpoint D1 – Southern Precinct Amended Concept envelope montage</i>	55
<i>Figure 52 – Viewpoint D1 – Amended Concept rendered montage</i>	55
<i>Figure 53 – Viewpoint G – Southern Precinct base photo 55mm focal length (existing view)</i>	56
<i>Figure 54 – Viewpoint G – Southern Precinct Approved Concept envelope montage</i>	56
<i>Figure 55 – Viewpoint G – Southern Precinct Amended Concept envelope montage</i>	57
<i>Figure 56 – Viewpoint G – Southern Precinct Detailed Design rendered montage</i>	57
<i>Figure 57 – Viewpoint H – Southern Precinct base photo 55mm focal length (existing view)</i>	58
<i>Figure 58 – Viewpoint H – Southern Precinct Approved Concept envelope montage</i>	58
<i>Figure 59 – Viewpoint H – Southern Precinct Amended Concept envelope montage</i>	59
<i>Figure 60 – Viewpoint H – Southern Precinct Detailed Design rendered montage</i>	59
<i>Figure 61 – Viewpoint I – Southern Precinct base photo 55mm focal length (existing view)</i>	60
<i>Figure 62 – Viewpoint I – Southern Precinct Approved Concept wire diagram</i>	60
<i>Figure 63 – Viewpoint I – Southern Precinct Amended Concept wire diagram</i>	61
<i>Figure 64 – Viewpoint E – Southern Precinct base photo 55mm focal length (existing view)</i>	64
<i>Figure 65 – Viewpoint E – Southern Precinct Approved Concept envelope montage</i>	64
<i>Figure 66 – Viewpoint E – Southern Precinct Amended Concept envelope montage</i>	65
<i>Figure 67 – Viewpoint E – Southern Precinct Detailed Design rendered montage</i>	65
<i>Figure 68 – Viewpoint F – Southern Precinct base photo 55mm focal length (existing view)</i>	66
<i>Figure 69 – Viewpoint F – Southern Precinct Approved Concept wire diagram</i>	66
<i>Figure 70 – Viewpoint F – Southern Precinct Amended Concept wire diagram</i>	67

List of Tables

Table 1 - SEARs requirements	10
Table 2 - Conditions of Concept Approval	10

1. Glossary and abbreviations

Reference	Description
Concept DA	A concept DA is a staged application often referred to as a 'Stage 1' DA. The subject application constitutes a detailed subsequent stage application to an approved concept DA (SSD 9393) lodged under section 4.22 of the EP&A Act.
Council	City of Sydney Council
CPTED	Crime Prevention Through Environmental Design
CSSI approval	critical State significant infrastructure approval
DA	development application
DPIE	NSW Department of Planning, Industry and Environment
DRP	Design Review Panel
EP&A Act	Environmental Planning and Assessment Act 1979
EPA	NSW Environment Protection Authority
LGA	Local Government Area
NCC	National Construction Code
OSD	over station development
RMS	Roads and Maritime Services
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SSD	State significant development
SSD DA	State significant development application
SLEP	Sydney Local Environmental Plan 2012
Transport for NSW	Transport for New South Wales
The proposal	The proposed development which is the subject of the detailed SSD DA
The site	The site which is the subject of the detailed SSD DA
VIA	Visual Impact Assessment
WMQ	Waterloo Metro Quarter

2. Executive summary

This Visual Impact Assessment has been prepared by to accompany a detailed State significant development (SSD) development application (DA) for the Southern Precinct over station development (OSD) at the Waterloo Metro Quarter site.

This report has been prepared to address the relevant conditions of the concept SSD DA (SSD 9393) and the Secretary's Environmental Assessment Requirements (SEARs) issued for the detailed SSD DA (SSD 10437).

In summary, the entire proposed Southern Precinct (building 3 and 4) is contained wholly within the Approved Concept Envelope. When compared to the Approved Concept the proposed Amended Concept is less bulky and provides better articulation in façade design. Building 4 of the amended concept is of similar height to the approved concept but building 3 is shorter which further reduces what was already considered an acceptable visual impact.

The Southern Precinct proposal, as detailed in the Waterloo Metro Quarter SSDA Design Reports – Part One Southern Precinct (Bates Smart, June 2020), Part Two Building 3 (Bates Smart, July 2020), and Part Three Building 4 (Bates Smart, July 2020), demonstrates a high quality ground plane with a well-articulated architectural design that results in an improvement on the existing visual character of the concept proposal site and its environs.

The proposal has been through a rigorous Design Review Process and adheres to the Sydney Metro Design Excellence Strategy endorsed by the Government Architect.

As a result this report concludes that the proposed Southern Precinct OSD is suitable and warrants approval subject to the implementation of the following overarching mitigation measures to ensure a high quality development:

- Subsequent to approval of the revised concept proposal, implement principles of design excellence as articulated in the Waterloo Amenity and Design Guidelines (March, 2020) for precinct plans and development applications for individual buildings.
- Prepare and implement an integrated public domain plan that includes judicious planting of trees that will reach mature heights sufficient to provide tree canopies consistent with the existing local tree canopy. With respect to visual character, the objective of the tree planting scheme should be to break up continuous built form and provide human scale. Tree canopy studies for the Waterloo Precinct have been carried out by Aspect Studios and are outlined in the Landscape & Public Domain Report (Aspect Studios, July 7th, 2020). Based on the findings of these studies, we conclude that trees with mature heights between 8 and 15m would be expected to achieve this objective. The proposed tree species described in the Landscape & Public Domain Report would achieve these mature heights and be suitable to achieve this objective.

Following the implementation of the above mitigation measures, the remaining impacts are appropriate and it is considered the proposal will have an acceptable impact on the existing visual environment of the site and its locality.

3. Introduction

This report has been prepared to accompany a detailed State significant development (SSD) development application (DA) for the Southern Precinct over station development (OSD) at the Waterloo Metro Quarter site. The detailed SSD DA is consistent with the concept approval (SSD 9393) granted for the maximum building envelope on the site, as proposed to be modified.

The Minister for Planning, or their delegate, is the consent authority for the SSD DA and this application is lodged with the NSW Department of Planning, Industry and Environment (DPIE) for assessment.

The detailed SSD DA seeks development consent for the design, construction and operation of:

Southern Precinct

- 25-storey residential building (Building 3) comprising student accommodation, to be delivered as a mixture of studio and twin apartments with approximate capacity of 474 students
- 9-storey residential building (Building 4) above the southern station box to accommodate 70 social housing dwellings
- ground level retail tenancies including Makerspace and gymnasium lobby, and loading facilities
- level 1 and level 2 gymnasium and student accommodation communal facilities
- landscaping and private and communal open space at podium and roof top levels to support the residential accommodation
- new public open space including the delivery of the Cope Street Plaza, including vehicle access to the site via a shared way from Cope Street, expanded footpaths on Botany and Wellington streets and public domain upgrades
- signage zone locations
- utilities and service provision
- stratum subdivision (staged).

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARs) dated 8 April 2020 and issued for the detailed SSD DA. Specifically, this report has been prepared to respond to the SEARs requirements summarised below.

Item	Description of requirement	Section reference (this report)
6	Visual and Amenity Impacts The EIS shall: - provide a detailed visual / view impact analysis of the proposed building when viewed from the public domain and key vantage points surrounding the site. This is to include a written description of the existing view, the likely impact and justification of the proposal and any required mitigation measures. The view locations and methodology for the analysis must be prepared in consultation with the Department and Council.	section 8 onwards

	- provide a visual impact assessment of the proposed buildings as viewed by a pedestrian from the future Cope Street Plaza and the surrounding public domain surrounding the site.	section 11.1
--	--	--------------

Table 1 - SEARs requirements

This report has also been prepared in response to the following conditions of consent issued for the concept SSD DA (SSD 9393) for the OSD as summarised in the table below.

Item	Description of requirement	Section reference (this report)
Part B5	The Detailed Development Applications shall address compliance with: The Design Guidelines as endorsed by the Planning Secretary	Section 11
Attachment A	Amendments to Design and Amenity Guidelines (Condition A14)	Section 11.1.3
	Part 3 Section C Public Domain The through site link should align with breaks between buildings so that views are extended and there is less sense of enclosure The through site link should have a clear line of sight between public places and be open to the sky as much as possible. Assist in guiding people along the link while enabling long sight lines	

Table 2 - Conditions of Concept Approval

4. The site

The site is located within the City of Sydney Local Government Area (LGA). The site is situated about 3.3 kilometres south of Sydney CBD and eight kilometres northeast of Sydney International Airport within the suburb of Waterloo.

The Waterloo Metro Quarter site comprises land to the west of Cope Street, east of Botany Road, south of Raglan Street and north of Wellington Street (refer to Figure 1). The heritage-listed Waterloo Congregational Church at 103–105 Botany Road is within this street block but does not form a part of the Waterloo Metro Quarter site boundaries.

The Waterloo Metro Quarter site is a rectangular shaped allotment with an overall site area of approximately 1.287 hectares.

The Waterloo Metro Quarter site comprises the following allotments and legal description at the date of this report. Following consolidation by Sydney Metro (the Principal) the land will be set out in deposited plan DP1257150.

- 1368 Raglan Street (Lot 4 DP 215751)
- 59 Botany Road (Lot 5 DP 215751)
- 65 Botany Road (Lot 1 DP 814205)
- 67 Botany Road (Lot 1 DP 228641)
- 124-128 Cope Street (Lot 2 DP 228641)
- 69-83 Botany Road (Lot 1, DP 1084919)
- 130-134 Cope Street (Lot 12 DP 399757)
- 136-144 Cope Street (Lots A-E DP 108312)
- 85 Botany Road (Lot 1 DP 27454)
- 87 Botany Road (Lot 2 DP 27454)
- 89-91 Botany Road (Lot 1 DP 996765)
- 93-101 Botany Road (Lot 1 DP 433969 and Lot 1 DP 738891)
- 119 Botany Road (Lot 1 DP 205942 and Lot 1 DP 436831)
- 156-160 Cope Street (Lot 31 DP 805384)
- 107-117A Botany Road (Lot 32 DP 805384 and Lot A DP 408116)
- 170-174 Cope Street (Lot 2 DP 205942).

The detailed SSD DA applies to the Southern Precinct (the site) of the Waterloo Metro Quarter site. The site has an area of approximately 4830sqm. The subject site comprises the following allotments and legal description at the date of this report.

Southern Precinct DA

- 130–134 Cope Street (Lot 12 DP 399757) (Part)
- 136–144 Cope Street (Lots A-E DP 108312) (Part)
- 93–101 Botany Road (Lot 1 DP 433969 and Lot 1 DP 738891) (Part)
- 156–160 Cope Street (Lot 31 DP 805384)
- 107–117A Botany Road (Lot 32 DP 805384 and Lot A DP 408116)

- 119 Botany Road (Lot 1 DP 205942 and Lot 1 DP 436831)
- 170–174 Cope Street (Lot 2 DP 205942).

The boundaries of the overall site are identified at Figure 1, and the subject site of the detailed SSD DA is identified at Figures 2 and 3. The site is reasonably flat with a slight fall to the south.

The site previously included three to five storey commercial, light industrial and shop top housing buildings. All previous structures except for an office building at the corner of Botany Road and Wellington Street have been demolished to facilitate construction of the new Sydney Metro Waterloo station. As such the existing site is predominately vacant and being used as a construction site. Construction of the Sydney metro is currently underway on site in accordance with critical State significant infrastructure approval (CSSI 7400).



Figure 1 - Aerial image of the site
Source: Urbis

The area surrounding the site consists of commercial premises to the north, light industrial and mixed-use development to the south, residential development to the east and predominantly commercial and light industry uses to the west.

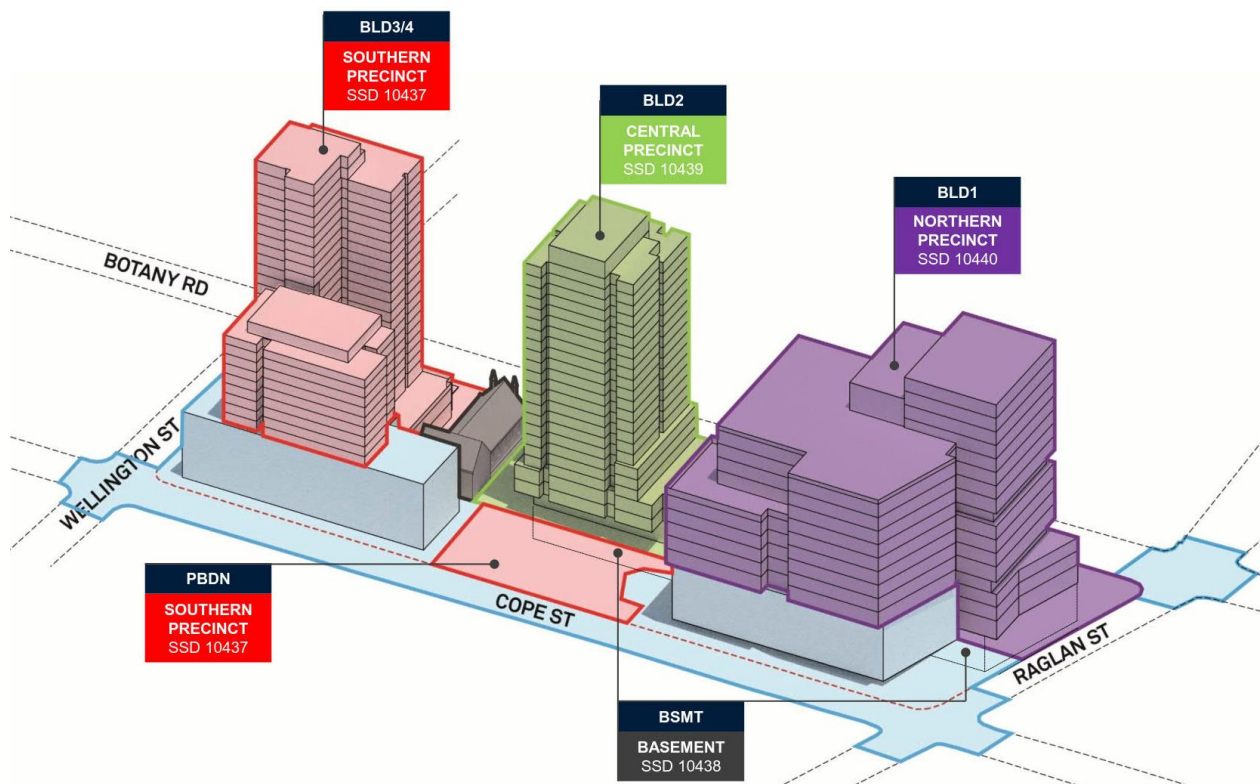


Figure 2 - Waterloo Metro Quarter site, with sub-precincts identified
Source: HASSELL

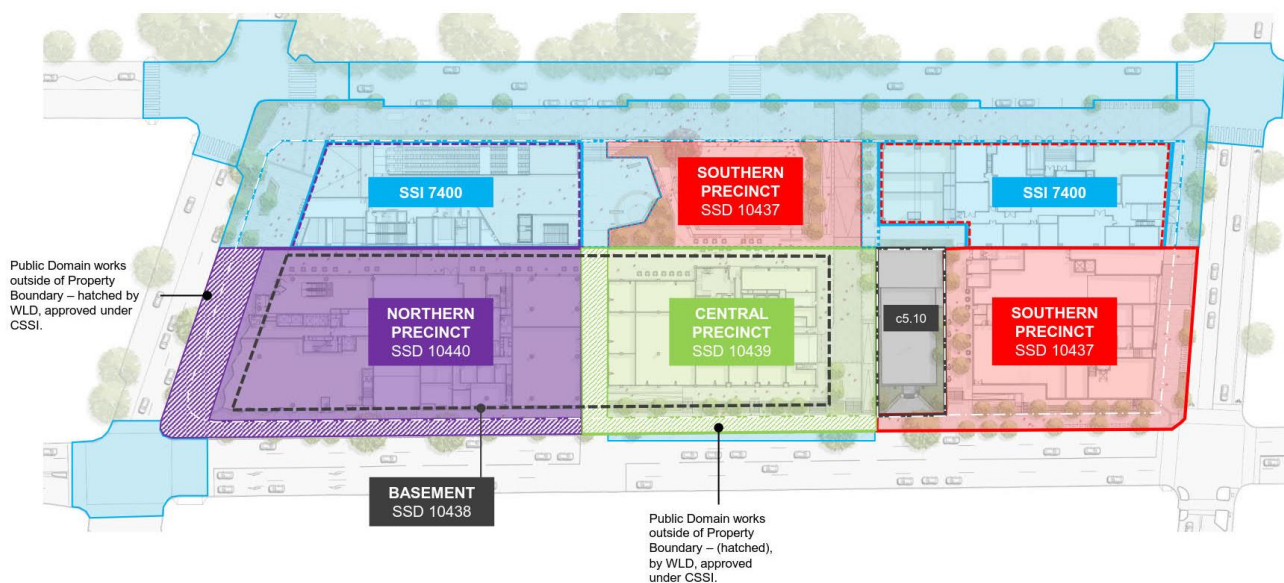


Figure 3 - Waterloo Metro Quarter site, with sub-precincts identified
Source: Waterloo Developer Pty Ltd

5. Background

5.1 About Sydney Metro

Sydney Metro is Australia's biggest public transport project. Services started in May 2019 in the city's North West with a train every four minutes in the peak. A new standalone railway, this 21st century network will revolutionise the way Sydney travels.

There are four core components:

5.1.1 Sydney Metro North West

This project is now complete and passenger services commenced in May 2019 between Rouse Hill and Chatswood, with a metro train every four minutes in the peak. The project was delivered on time and \$1 billion under budget.

5.1.2 Sydney Metro City & Southwest

Sydney Metro City & Southwest project includes a new 30km metro line extending metro rail from the end of Metro Northwest at Chatswood, under Sydney Harbour, through new CBD stations and southwest to Bankstown. It is due to open in 2024 with the ultimate capacity to run a metro train every two minutes each way through the centre of Sydney.

Sydney Metro City & Southwest will deliver new metro stations at Crows Nest, Victoria Cross, Barangaroo, Martin Place, Pitt Street, Waterloo and new underground metro platforms at Central Station. In addition, it will upgrade and convert all 11 stations between Sydenham and Bankstown to metro standards.

5.1.3 Sydney Metro West

Sydney Metro West is a new underground railway connecting Greater Parramatta and the Sydney CBD. This once-in-a-century infrastructure investment will transform Sydney for generations to come, doubling rail capacity between these two areas, linking new communities to rail services and supporting employment growth and housing supply between the two CBDs.

The locations of seven proposed metro stations have been confirmed at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock and The Bays.

The NSW Government is assessing an optional station at Pyrmont and further planning is underway to determine the location of a new metro station in the Sydney CBD.

5.1.4 Sydney Metro Greater West

Metro rail will also service Greater Western Sydney and the new Western Sydney International (Nancy Bird Walton) Airport. The new railway line will become the transport spine for the Western Parkland City's growth for generations to come, connecting communities and travellers with the rest of Sydney's public transport system with a fast, safe and easy metro service.

The Australian and NSW governments are equal partners in the delivery of this new railway.

[illegible]

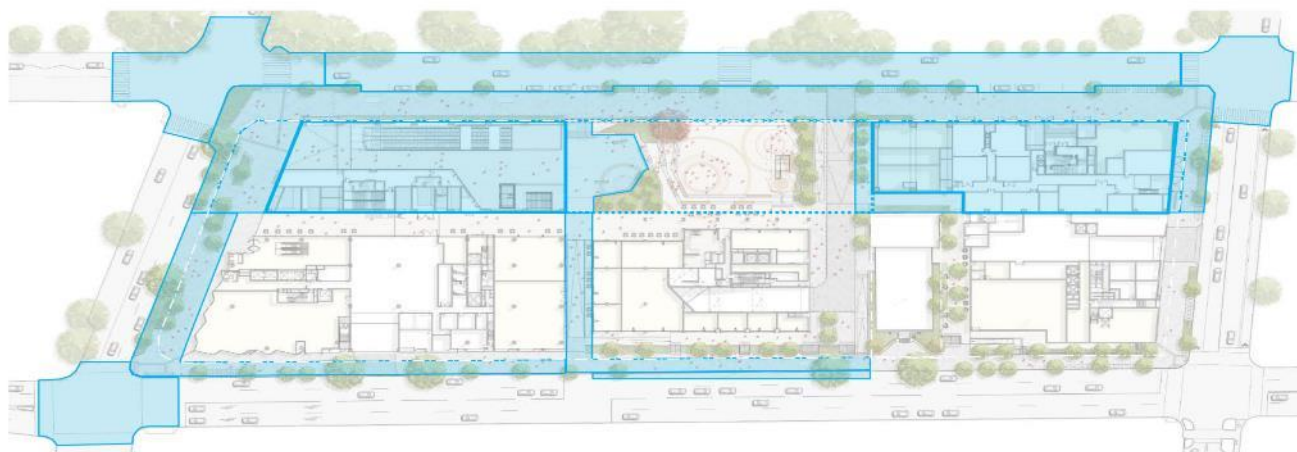


Figure 5 - CSSI Approval scope of works
Source: WL Developer Pty Ltd

5.3 Concept Approval (SSD 9393)

As per the requirements of clause 7.20 of the *Sydney Local Environmental Plan 2012* (SLEP), as the OSD exceeds a height of 25 metres above ground level (among other triggers), development consent is first required to be issued in a concept DA (formerly known as Stage 1 DA).

Development consent was granted on 10 December 2019 for the concept SSD DA (SSD 9393) for the Waterloo Metro Quarter OSD including:

- a maximum building envelope for podium, mid-rise and tower buildings
- a maximum gross floor area of 68,750sqm, excluding station floor space
- conceptual land use for non-residential and residential floor space
- minimum 12,000sqm of non-residential gross floor area including a minimum of 2,000sqm of community facilities
- minimum 5% residential gross floor area as affordable housing dwellings
- 70 social housing dwellings
- basement car parking, motorcycle parking, bicycle parking, and service vehicle spaces.

The detailed SSD DA seeks development consent for the OSD located within the Southern Precinct of the site, consistent with the parameters of this concept approval. Separate SSD DAs have been prepared and will be submitted for the Central Precinct, Northern Precinct and basement proposed across the Waterloo Metro Quarter site.

A concurrent amending concept SSD DA has been prepared and submitted to the DPIE which proposed to make modifications to the approved building envelopes at the northern precinct and central building. This amending concept SSD DA does not impact the proposed development within the southern precinct.

6. Proposed development

6.1 Waterloo Metro Quarter Development

The Waterloo Metro Quarter OSD comprises four separate buildings, a basement carpark and public domain works adjacent to the Waterloo Metro station.

Separate SSD DAs will be submitted concurrently for the design, construction and operation of each building in the precinct;

- Southern precinct SSD-10437,
- Basement Car Park SSD-10438,
- Central precinct SSD-10439, and
- Northern precinct-SSD-10440.

An overview of the Development is included below for context. This detailed SSD DA seeks development consent for the design, construction and operation of the Southern Precinct:

6.1.1 Southern Precinct [Subject DA]

The Southern Precinct comprises:

- 25-storey residential building (Building 3) comprising student accommodation, to be delivered as a mixture of studio and twin apartments with approximate capacity of 474 students
- 9 storey residential building (Building 4) above the southern station box to accommodate 70 social housing dwellings
- ground level retail tenancies including Makerspace and gymnasium lobby, and loading facilities
- level 1 and level 2 gymnasium and student accommodation communal facilities
- landscaping and private and communal open space at podium and roof top levels to support the residential accommodation
- new public open space including the delivery of the Cope Street Plaza, including vehicle access to the site via a shared way from Cope Street, expanded footpaths on Botany and Wellington Streets and public domain upgrades
- signage zone locations
- utilities and service provision
- stratum subdivision (staged).

6.1.2 Basement Car Park

The Basement Car Park comprises:

- 2-storey shared basement car park and associated excavation comprising
- Ground level structure
- Carparking for the Commercial Building 1, Residential Building 2, social housing Building 4, Waterloo Congregational Church and Sydney Metro
- Service vehicle bays
- commercial end of trip and bicycle storage facilities

- Retail end of trip and bicycle storage facilities
- residential storage facilities
- shared plant and services.

6.1.3 Central Precinct

The Central Precinct comprises:

- 24-storey residential building (Building 2) comprising approximately 126 market residential and 24 affordable housing apartments, to be delivered as a mixture of 1 bedroom, 2 bedroom and 3 bedroom apartments
- Ground level retail tenancies, community hub, precinct retail amenities and basement car park entry
- level 1 and level 2 community facilities (as defined in the SLEP) intended to be operated as a childcare centre
- landscaping and private and communal open space at roof top levels to support the residential accommodation
- new public open space including the delivery of the Church Square, including vehicle access to the basement via a shared way from Cope Street, expanded footpaths and public domain upgrades on Botany Road
- external licensed seating areas
- signage zone locations
- utilities and service provision
- stratum subdivision (staged).

6.1.4 Northern Precinct

The Northern Precinct comprises:

- 17-storey commercial building (Building 1) comprising Commercial floor space, with an approximate capacity of 4000 workers
- ground level retail tenancies, loading dock facilities serving the northern and central precinct including Waterloo metro station
- landscaping and private open space at podium and roof top levels to support the commercial tenants
- new public open space including the delivery of the Raglan Street Plaza, Raglan Walk and expanded footpaths on Raglan Street and Botany Road and public domain upgrades
- external licensed seating areas
- signage zone locations
- utilities and service provision
- stratum subdivision (staged).

7. Methodology

Cardno has recently carried out an assessment of the visual impacts of the amending concept development application (*Waterloo Metro Quarter Overstation Development - Environmental Impact Statement SSD-10441 Concept DA Modification, Appendix BB Visual Impact Assessment*, July 2020) – the amending concept report. This visual impact assessment of the Southern Precinct is intended to be read in conjunction with the Concept DA Modification report.

The process followed for the assessment is outlined below.

7.1 Assessment of existing Conditions

Existing conditions are described in earlier studies for the greater Waterloo Metro Quarter. These conditions remain relevant for this assessment of the Southern Precinct.

7.2 Visual impact assessment

Key viewpoints towards the broader Waterloo Metro Quarter were identified in the Concept Application and subsequent amending concept report. The assessment of impacts on the Southern Precinct has included selected views from the amending concept report that would potentially be impacted by development of the Southern Precinct as indicated in the detailed DA. This work has been carried out via a combination of electronic modelling and ground-truthing with the aid of viewshed analysis using GIS data. Critical views within the viewshed of the precinct have been identified through ground truthing with the aid of photography. Views within and towards the site have been evaluated for their perceptual (scenic) quality. Views that have cultural, historic or community values have also been identified in consultation with other relevant members of the project team.

The process of the visual impact assessment included the following tasks:

- Take professional quality photographs from each of the identified key viewpoints and certify the location of each photograph using survey technology.
- Liaise with Urban Designers to integrate each photo into the 3D model to generate accurate photomontages.
- Prepare a Verification Statement as to the accuracy of the photomontages in accordance with the relevant Land and Environment Court Planning Principles.
- Carry out and document a detailed visual impact assessment of the Precinct Proposal.

The assessment of impacts on views from the public domain has been informed by relevant planning principles for assessment of such impacts set by the Land and Environment Court of NSW, specifically in *Rose Bay Marina Pty Ltd v Woollahra Council and anor [2013] NSWLEC 1046*. A summary of the impacts against these principles is provided in the in the summary of assessment outcomes section of this report.

7.3 Review of conclusions against relevant Court planning principles (*Rose Bay Marina Pty Ltd v Woollahra Council and anor [2013] NSWLEC 1046*)

For consistency with planning principles for visual impact assessment set by the NSW Land and Environment Court, the Southern Precinct proposal has been reviewed against the planning principles set by the Court Commissioner in the matter: *Rose Bay Marina Pty Ltd v Woollahra Council and anor [2013] NSWLEC 1046*.

8. Baseline Investigations

Baseline investigations for visual quality for the broader Waterloo Metro Quarter were carried out in earlier studies informing the Approved Concept and Amended Concept SSDA's. These were aimed at identifying issues, opportunities and constraints with respect to visual quality to be explored through the master planning process for the broader Waterloo Metro Quarter. They remain relevant for the Southern Precinct.

8.1 Existing conditions

The Southern Precinct presents a good opportunity for urban renewal of this part of Botany Road which, generally due to a predominance of semi industrial building stock, lack of good quality street trees and traffic dominance, does not currently demonstrate high levels of visual amenity. It also presents a good opportunity for urban renewal for street frontages on Wellington Street and Cope Street. Design decisions about the height and architectural form of the proposed new buildings need to account for how they will affect local and regional views. Critical views identified in the report include views to the city from Sydney Park, and views to the Waterloo Estate from Redfern Park and its neighbourhood, Alexandria Park and its neighbourhood, and Waterloo Park and its neighbourhood.

Maps showing the identified critical viewpoints can be found at Figures 6 and 7.

9. Implementation Plan

An implementation plan incorporating a vision statement and visual impact based planning / design objectives was developed in earlier studies for the greater Waterloo Metro Quarter. The plan remains relevant for this assessment of the Southern Precinct and is repeated below.

9.1 Vision Statement (Visual Quality)

The Metro Quarter urban renewal will contribute to a high quality local and regional visual environment by:

- Incorporating built form, architectural design and finishes that respect and respond appropriately to local and regional visual character.
- Enhancing the visual quality of the ground plane within the site and in its immediate vicinity.
- Creating visual connections between Botany Road and the Waterloo Estate.
- Respecting and enhancing the visual values of heritage items and conservation areas within and in the locality of the site.

9.2 Visual / urban quality plan

9.2.1 Planning / Design Objectives

- The redevelopment of the site is to be a catalyst for major improvement to the visual quality of Botany Road. The redevelopment is to set a standard for future urban renewal of the Botany Road public domain incorporating generous pavement widths with allowance for boulevard scale street trees well separated from vehicular carriageways.
- Ensure that the built form of the new development responds appropriately to its local and regional context with particular regard to:
 - Close views from surrounding and nearby suburban streets;
 - Views of the proposed buildings that would be experienced by a pedestrian in the future Cope Street Plaza and the surrounding public domain;
 - Views from significant local open space (notably Waterloo Park, Alexandria Park and Redfern Park); and
 - Regional views including from Sydney Park.
- Enhance the heritage values of the site and its locality. Specifically, ensure that the redevelopment retains, protects and enhances the visibility of the Waterloo Congregational Church and reinstates its curtilage. And ensure that the development does not impact negatively on the heritage values of local listed Heritage Conservation Areas.
- Develop and enhance at least one cross site visual link between Botany Road and the Waterloo Estate.
- Ensure that tall towers are slender in form and well separated in skyline views so that a high percentage of sky remains visible between the built elements.

10. View analysis – Southern Precinct

A GIS based visual catchment diagram for the greater Waterloo Precinct was prepared by Cardno to inform the selection of viewpoints in the visual impact assessment of the initial concept for its development (Cardno, June 2019). Representative viewpoints from the originally selected group were used for the Southern Precinct assessment these were selected on the basis that:

- They are from broad open public places where it would be expected that views and visual quality would be highly valued by visitors; and
- They include views towards the site that would be representative of the types of views that would be available from private places in the same vicinity.

10.1 Regional views

Selected regional views are indicated at Figure 6.



Figure 6 – Regional Views external to the Waterloo Precinct
Source: Cardno

10.1 Local views

Local viewpoints were selected from within the greater Waterloo Precinct and along Botany Road in order to give a good representation of views to the Southern Precinct site from local streets and other public places.

The agreed local views are indicated at Figure 7.

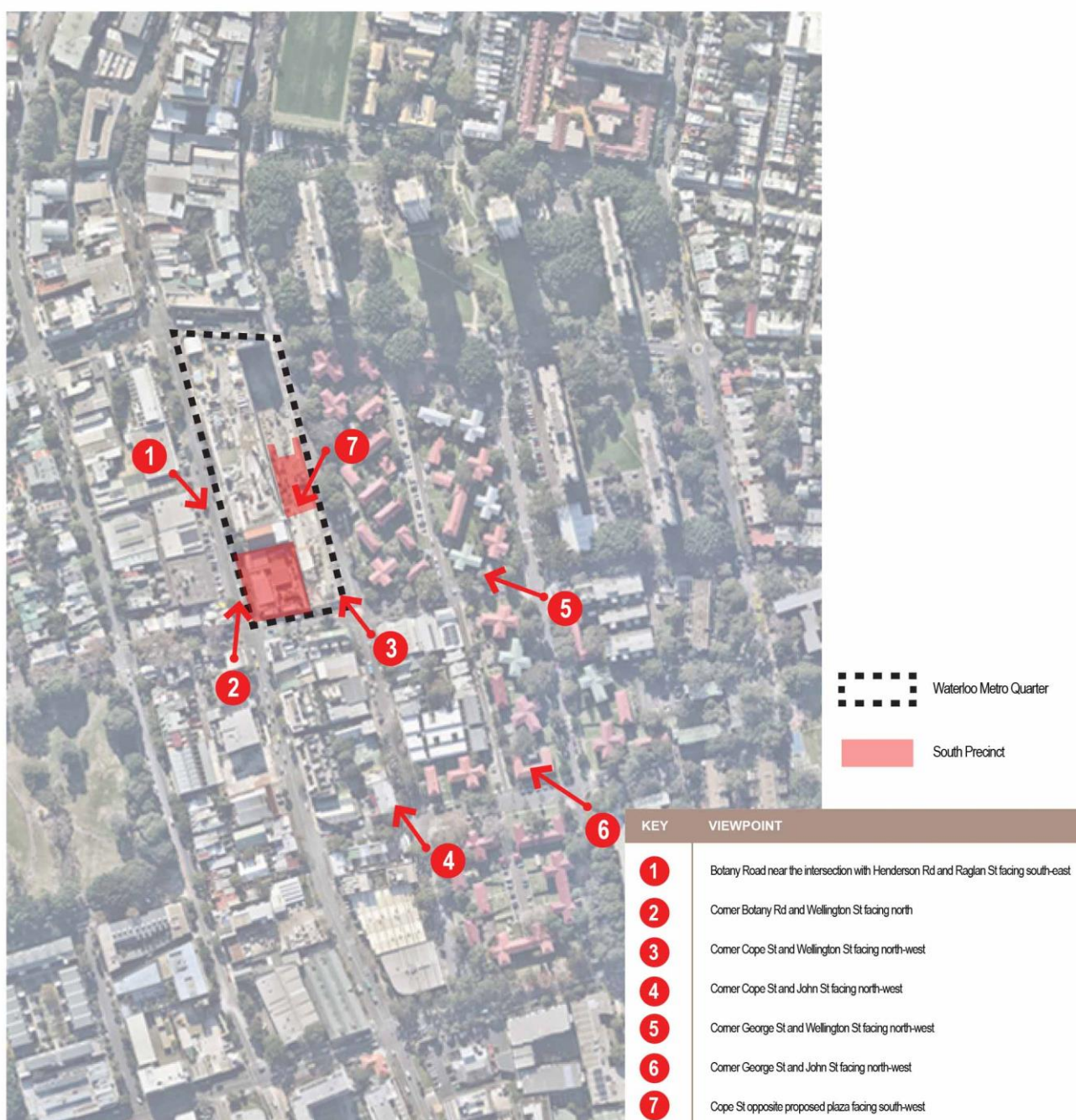


Figure 7 – Local Views
Source: Cardno

10.2 Heritage Conservation Areas

The Study Requirements for the Visual Assessment include, among other things, an assessment of the impacts of the Southern Precinct Proposal on the visual quality of local Conservation Areas. Conservation Areas in the vicinity of the Metro Quarter are indicated on the extract from the *Sydney Local Environmental Plan, 2012 Heritage Map* at Figure 8. Conservation Areas in the vicinity of the Metro Quarter include:

- The Redfern Estate (incorporating Redfern Park and adjacent residential streets)
- The Alexandria Park Conservation Area (incorporating Alexandria Park and adjacent streets); and
- The Waterloo Conservation Area (incorporating Waterloo Park and Oval, the Our Lady of Mt Carmel Church and School and adjoining residential streets).

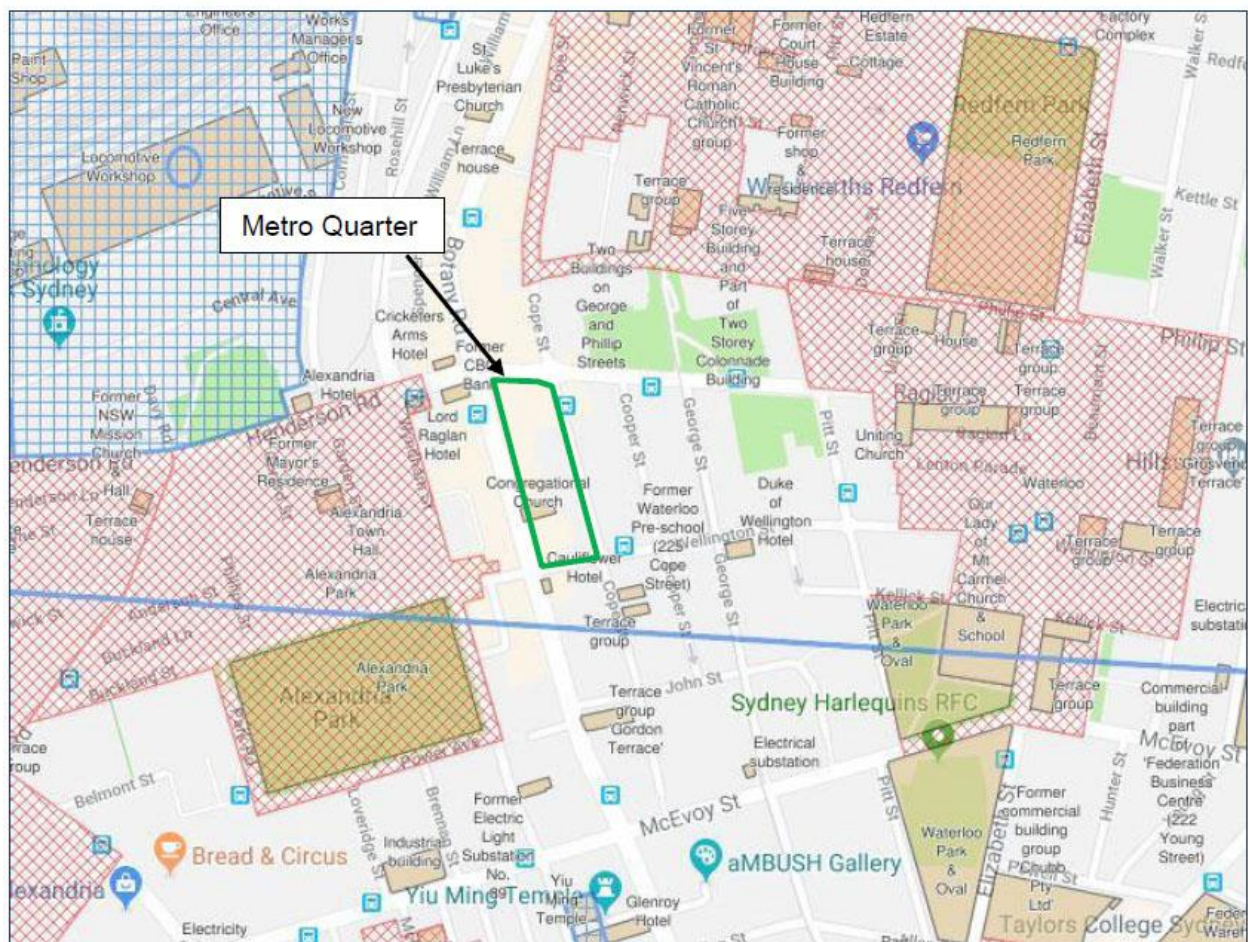


Figure 8 – Sydney LEP Heritage Map
Source: Department of Planning & Environment Planning Portal

11. Visual Impact Analysis

The analysis of the potential visual impacts of the Southern Precinct was carried out along conventional lines for visual assessment of built developments and included qualitative assessment of:

- The existing visual environment (as viewed from the agreed critical viewing points);
- The capacity of the visual environment to absorb change (as viewed from the agreed critical viewing points);
- The amount of change that would be experienced as a result of the implementation of the proposal (carried out with the aid of survey accurate photomontages prepared from agreed critical viewing points);
- The visual quality of the changed visual environment in comparison with the environment prior to development.

The above described exercise was carried out for the following categories of views:

- Close views – streets adjacent to the site;
- Medium distant views – streets and open spaces within the Waterloo Precinct;
- Medium distant views - streets and parks outside of the Waterloo Precinct and between 200 and 700m of the development site;
- Distant views – significant viewpoints up to 2kms from the site.

The outcome of the assessment follows.

11.1 Close views

11.1.1 Visual environment (the existing view)

Streets immediately surrounding the site can be roughly described in two categories with respect to their existing visual character:

Botany Road

Botany Road is an arterial road carrying traffic from the Sydney CBD through the inner southern suburbs to the port of Botany and its surrounding low to medium density residential suburbs. The Southern Precinct site occupies the southern end of Botany Road between Raglan Street and Wellington Street. The heritage listed Waterloo Congregational Church is the only structure of significance remaining on the Botany Road frontage to the site. In general terms the visual environment of this portion of Botany Road is of low quality, dominated by private and industrial vehicular traffic, buildings of low architectural quality that do not present well to the street and generally low pedestrian amenity.

Streets adjacent to the Waterloo Estate

Streets on the other boundaries of the Southern Precinct site are of a significantly different character to Botany Road. They are less urban and are influenced by their proximity to residential and traditional fine grain retail uses. Vehicular traffic is recessive and there is a relatively high level of pedestrian amenity. Street trees are also significant components of the visual environment.

11.1.2 Capacity to absorb change

Botany Road has a high capacity for change and the proposed development represents an opportunity for major improvement to visual quality at street level. The principle constraint for the Botany Road address with regard to visual quality is the requirement that the development must respond appropriately to the heritage values of the Waterloo Congregational Church.

The streets to the north, south and west of the site display built form and landscape elements that contribute to a relatively intact visual character of medium quality. The streets are considered to have a moderate capacity to absorb change.

11.1.3 Changes to close views resulting from the proposal (likely impact on close views)

The amending concept VIA report (Cardno, July 2020) made the following broad conclusions with regard to the impacts of the amending proposal on close views:

- The proposal would result in additional visibility of open sky from close viewpoints to the north west and east.
- The proposal would lead to increased visual permeability at street level resulting from increased street setbacks on Botany Road and Raglan Street and the proposed additional through site link from Botany Road to Cope Street.
- The increased setbacks of the towers at podium level would result in a decrease in building bulk and correspondingly lesser impacts on views from all four streets adjoining the site.

The amount of likely change for close views was assessed via preparation of Amended Concept montages from viewpoints 1, 2, 3 and 7. These were then compared against the Approved Concept Envelope montages. Anticipated change to the existing visual environment is assessed below with reference to each of these viewpoints.

When compared to the Approved Concept Envelope montage, the montages for the Amended Concept in direct views from the south at Wellington Street, Cope Street and Botany Road (viewpoints 2 & 3) indicate that the Southern Tower is wholly contained within the approved concept envelope. These montages also illustrate a further improvement in visual quality resulting from the articulation in façade design and the implementation of good urban design practices including clear delineation between base, middle and top in the building form. Close views from the south west (viewpoint 3) are substantially dominated by the approved Metro box on the south western corner of the site.

In close views from the north of the site (viewpoints 1 & 7) the Southern Precinct building group will be visible as part of the overall developed precinct.

The Southern Precinct includes the proposed public plaza on the western side of the Waterloo Metro Quarter addressing Cope Street. The montage from viewpoint 7 addresses the requirement in the SEARs to assess views of the proposed buildings that would be experienced by a pedestrian in the future Cope Street Plaza. The montage illustrates the presentation of the plaza and the Southern Precinct building group in the context of the overall Waterloo Metro Quarter and indicates that the plaza will provide visual relieve to the building group by allowing for open views of the sky and, significantly, opening up views towards the heritage listed Waterloo Congregational Church.

The Design and Amenity Guidelines (as amended under Attachment A to the Key Sites Development Consent) include clauses of relevance to close views of the proposed development. These are included below with commentary with respect to this detailed development application.

Part 3 Section C Public Domain

The through site link should:

- *Align with breaks between buildings so that views are extended and there is less sense of enclosure*
- *Have a clear line of sight between public places and be open to the sky as much as possible*
- *Assist in guiding people along the link while enabling long sight lines*

Our assessment is that the proposal is consistent with these design criteria. The proposal included two through site links from Botany Road - one to the north of the Waterloo Congregational Church and one between the Northern and Central Precincts. Our assessment is that these links are consistent with each of the design criteria listed above. They facilitate views through the site from the Botany Road public domain, reduce enclosure effects by providing connections to the Cope Street Plaza and increase visual access to the open sky

Viewpoint 1 – Botany Road near the intersection with Henderson Rd and Raglan St facing south-east



Figure 9 – Viewpoint 1 – Southern Precinct base photo 55mm focal length (existing view)
Source: David Duloy



Figure 10 – Viewpoint 1 – Southern Precinct Approved Concept envelope montage
Source: David Duloy



Figure 11 – Viewpoint 1 – Southern Precinct Amended Concept envelope montage
Source: David Duloy



Figure 12 – Viewpoint 1 –Southern Precinct Detailed Design rendered montage
Source: David Duloy

Viewpoint 2 – Corner Botany Rd and Wellington St facing north



Figure 13 – Viewpoint 2 – Southern Precinct base photo 55mm focal length (existing view)
Source: David Duloy



Figure 14 – Viewpoint 2 – Southern Precinct Approved Concept envelope montage
Source: David Duloy



Figure 15 – Viewpoint 2 – Southern Precinct Amended Concept envelope montage
Source: David Duloy



Figure 16 – Viewpoint 2 – Southern Precinct Detailed Design rendered montage
Source: David Duloy

Viewpoint 3 – Corner Cope St and Wellington St facing north-west



Figure 17 – Viewpoint 3 – Southern Precinct base photo 55mm focal length (existing view)
Source: David Duloy

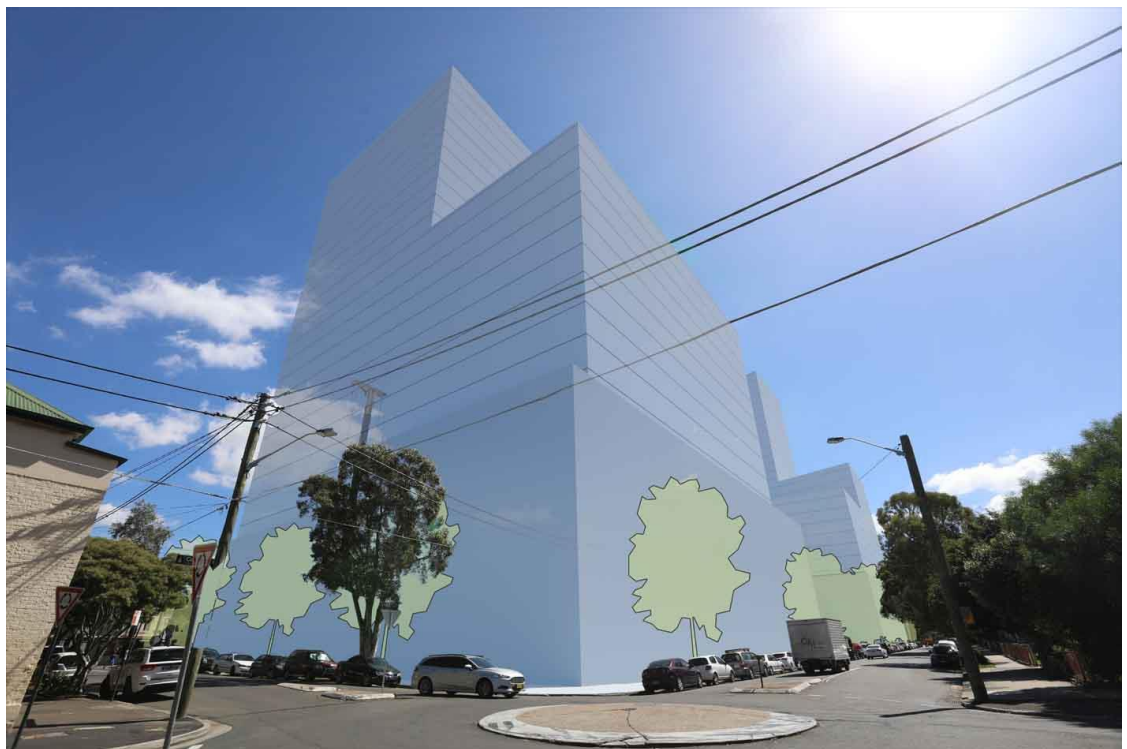


Figure 18 – Viewpoint 3 – Southern Precinct Approved Concept envelope montage
Source: David Duloy

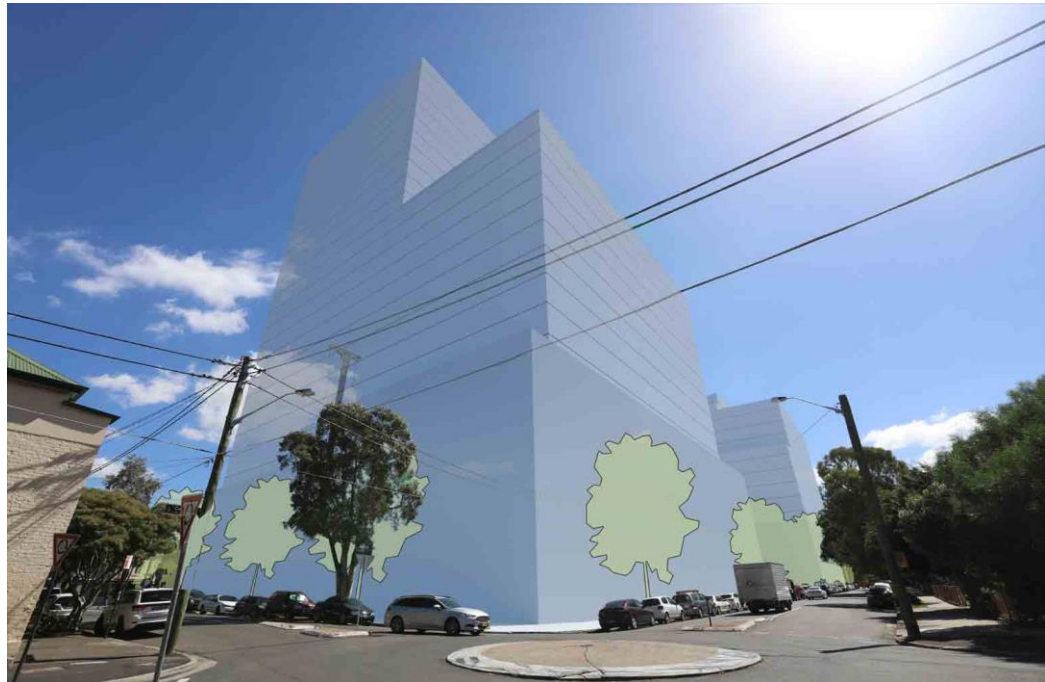


Figure 19 – Viewpoint 3 – Southern Precinct Amended Concept envelope montage
Source: David Duloy



Figure 20 – Viewpoint 3 – Southern Precinct Detailed Design rendered montage
Source: David Duloy

Viewpoint 7 – Cope St opposite proposed Cope St Plaza facing south-west

This additional viewpoint was selected in order to allow analysis of the view that would be experienced by a pedestrian from within the proposed Cope Street Plaza.

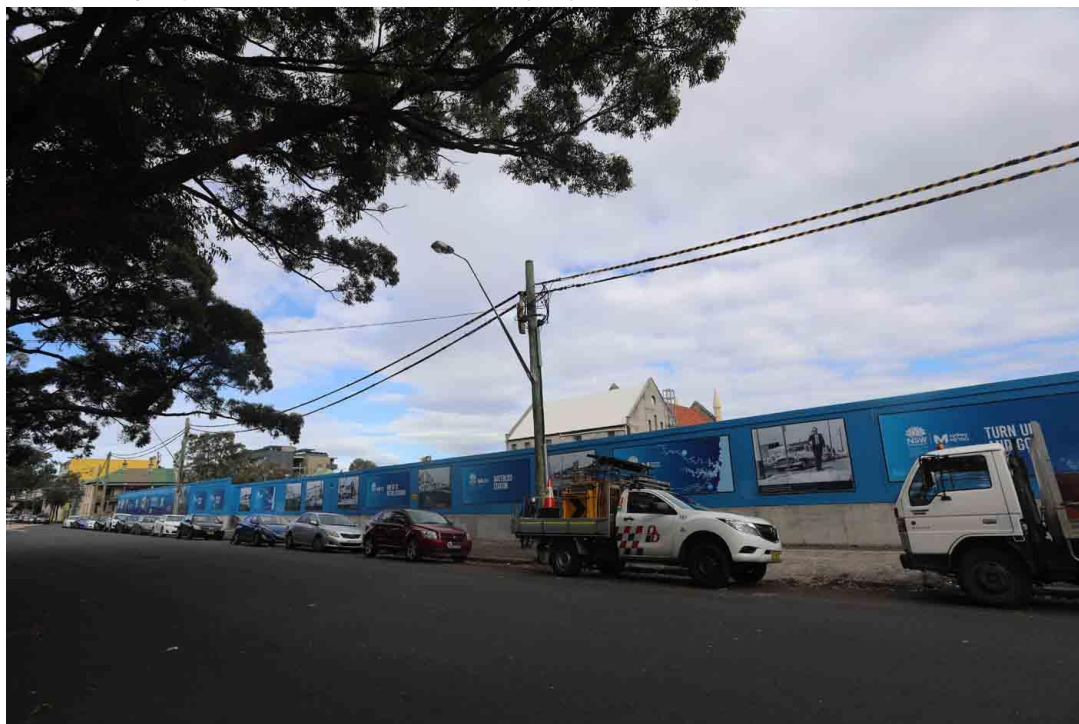


Figure 21 – Viewpoint 7 – Southern Precinct base photo 55mm focal length (existing view)
Source: David Duloy



Figure 22 – Viewpoint 7 – Southern Precinct Detailed Design rendered montage
Source: David Duloy

11.2 Medium distant views – within the Waterloo Estate

11.2.1 Visual environment (the existing view)

The Waterloo Estate incorporates a number of elements that contribute to its existing visual character. These include:

- A mix of residential buildings including 29-storey apartment blocks in the northern portion of the site, residential flats up to around 6 storeys in height in the south east, circa 1950 vintage “3 storey walk-ups” in the western portion and commercial offices / showrooms on the proposed Metro station site fronting Botany Road;
- Wide streets, many of which are lined with large street trees;
- Buildings that are well set back from the streets resulting in a feeling of spaciousness, particularly in comparison to the more densely developed surrounding neighbourhoods; and
- Many large “forest scale” trees in the streets and around the existing buildings.

11.2.2 Capacity to absorb change

The following principles are relevant to the capacity of the Waterloo Estate to absorb change to its visual environment, with particular regard to the development of the Southern Precinct:

- Street level quality needs to be maintained in the redevelopment. An open, tree dominated character at the street should be a contributing component of the future character of the developed Precinct.
- The existing street grid pattern should be maintained and enhanced in the redevelopment. The broad streets with buildings well set back from the street boundaries should be a constraint, particularly where tall buildings are proposed.
- The very tall buildings in the Precinct are prominent in close, medium and distant views. Because they exist on the site and people are used to seeing them, they provide an opportunity to build tall, slender towers that would continue the established theme of dramatic sculptural elements in the local and regional townscape.
- The significant amount of open space at ground level provides an opportunity to develop a distinctive character for the new neighbourhood that would set it apart from existing surrounding precincts.
- The grid of long, straight streets provides opportunities for long views through, into and out of the Precinct and for dramatic views toward buildings. Master planning should take advantage of these established internal and local view lines.

Out of these principles, our opinion is that the Waterloo Estate has a moderate capacity to absorb change, contingent on:

- Retention and improvement of the existing streetscape quality and open character with buildings set back from the street. This constraint is of less significance at the interface of the Precinct with the more urban character of Botany Road and its environs.
- The Southern Precinct has the capacity to support tall buildings, provided that they do not result in continuous skyline elements and that they exhibit architectural design excellence.
- Tall buildings appearing as sculptural elements would be appropriate in the redevelopment of the Southern Precinct.

11.2.3 Changes to medium distant views within Waterloo Estate resulting from the proposal (likely impact on medium views)

Likely impacts on visual quality from medium distant views within the Waterloo Estate were assessed via preparation of Amended Concept montages from a series of representative street intersections within the Precinct (Viewpoints 4, 5, and 6). These were then compared against the Approved Concept Envelope montages.

Viewpoints 4 and 6:

From locations in the southern portion of the Waterloo Estate, illustrated by the montages from viewpoints 4 & 6, the Southern Precinct would form a new built element on the skyline. It will be viewed in the context of the existing built environment and substantial trees within the Estate and, contingent on achievement of high design quality, it will make a positive contribution to the visual character of the locality in these views. When comparing the proposed Amended Concept montages with the Approved Concept Envelope montages from these views it is evident the Southern Precinct building would be wholly contained within the approved concept envelope and represents an improvement to the visual impact of the proposal.

Viewpoint 5:

From the central eastern part of the Waterloo Estate the southern building group would present as a substantial new built element on the skyline to the north west. Again its contribution to local visual character will be contingent on achieving high quality design outcomes in built form and finishes. From this view the top portion of building 3 and 4 of the Southern Precinct are visible. When comparing the proposed Amended Concept against the Approved Concept the proposed is less bulky and provides better articulation in façade design. The reduction in height of building 3 of the proposed Amended Concept also results in a higher percentage of sky remaining visible.

Viewpoint 4 – Corner Cope St and John St facing north-west



Figure 23 – Viewpoint 4 – Southern Precinct base photo 55mm focal length (existing view)
Source: David Duloy

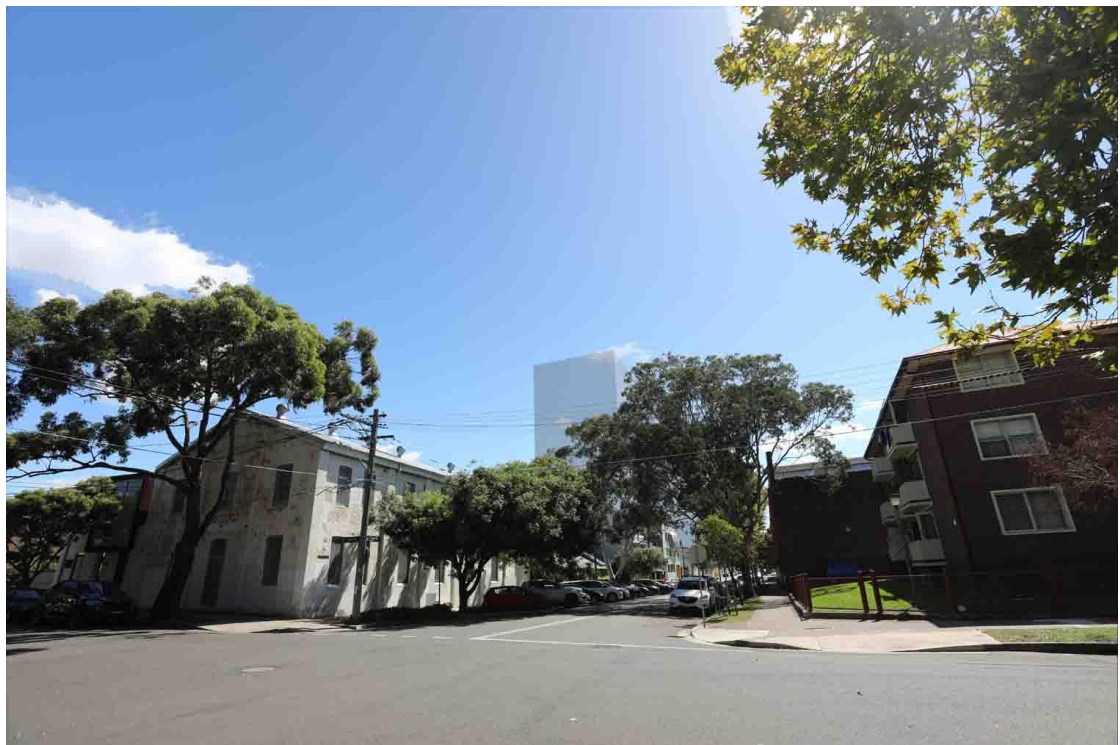


Figure 24 – Viewpoint 4 – Southern Precinct Approved Concept envelope montage
Source: David Duloy



Figure 25 – Viewpoint 4 – Southern Precinct Amended Concept envelope montage
Source: David Duloy



Figure 26 – Viewpoint 4 – Southern Precinct Detailed Design rendered montage
Source: David Duloy

Viewpoint 5 – Corner George St and Wellington St facing north-west



Figure 27 – Viewpoint 5 – Southern Precinct base photo 55mm focal length (existing view)
Source: David Duloy



Figure 28 – Viewpoint 5 – Southern Precinct Approved Concept envelope montage
Source: David Duloy



Figure 29 – Viewpoint 5 – Southern Precinct Amended Concept envelope montage
Source: David Duloy



Figure 30 – Viewpoint 5 – Southern Precinct Detailed Design rendered montage
Source: David Duloy

Viewpoint 6 – Corner George St and John St facing north-west



Figure 31 – Viewpoint 6 – Southern Precinct base photo 55mm focal length (existing view)
Source: David Duloy



Figure 32 – Viewpoint 6 – Southern Precinct Approved Concept envelope montage
Source: David Duloy



Figure 33 – Viewpoint 6 – Southern Precinct Amended Concept envelope montage
Source: David Duloy



Figure 34 – Viewpoint 6 – Southern Precinct Detailed Design rendered montage
Source: David Duloy

11.3 Medium distant views – outside the Waterloo Estate

11.3.1 Visual environment (the existing view)

Views towards the Waterloo Metro Quarter and Southern Precinct from the largely medium density suburban environments in the medium distance generally include the existing Waterloo towers and residential blocks as prominent visual elements.

Substantial parcels of open space in close proximity to the Waterloo Precinct include:

- Redfern Oval and Park;
- Waterloo Park (north and south); and
- Alexandria Park.

These generally well designed and managed parcels of open space provide visual relief and contrast in the generally densely developed environment. They are critical to the visual amenity and character of the region.

11.3.2 Capacity to absorb change

Due principally to the dominance of the existing large scale development within the Waterloo Precinct, views from locations at middle distances from the Southern Precinct site are considered to have a high capacity to absorb change. Specifically, in views from the north-east (Viewpoints A, B and I), the existing Waterloo Precinct built form dominates the skyline as an almost continuous wall, providing a screen between the viewer and the Southern Precinct site. From the south (Viewpoint C) the Waterloo built form is less visible largely due to the screening properties of the local topography and existing trees within the southern sector of the Waterloo Precinct. From the west (Viewpoints D, D1 and H), the Waterloo tall towers are isolated but significant skyline elements appearing above a foreground of large trees. From some closer locations to the west (Viewpoint G) axial view lines towards the Waterloo Precinct are available along road corridors. Built form in the northern part of Waterloo is dominant in these views and forms a precedent for the appearance of additional tall towers in the view.

The Alexandria Park Heritage Conservation Area is located near to the western edge of the Southern Precinct (see Figure 8). As an urban form, the area is comprised of a mosaic of traditional terrace housing on a grid street pattern and parklands (principally Alexandria Park). Large forest scale trees constitute a further significant element in the landscape. Views out of and into the Conservation Area are contained by this structure of dense housing and mature trees so that the area has a high capacity to absorb change in its surroundings. Specifically, views in the direction of the Southern Precinct are substantially screened by these elements.

11.3.3 Changes to medium distant views outside the Waterloo Precinct resulting from the proposal (likely impact on medium distant views)

The amount of likely change to medium distant views outside the Waterloo Precinct resulting from the proposal was assessed via preparation of montages from viewpoints A, B, C, D, D1, G, H and I. Amended Concept montages from each of these viewpoints have been compared against the Approved Concept Envelope montages. In summary, the Amended Concept montages illustrate the proposal sits wholly within the Approved

Concept Envelope with building 3 being reduced in height. The shorter, less bulky towers of the proposal results in greater visibility of open sky and an overall improvement to the visual impact

A detailed commentary on the anticipated change to the existing visual environment is assessed below with reference to each viewpoint.

Views from the north (viewpoints A, B, and I)

Redfern Park is within the Redfern Estate Heritage Conservation Area. Assessment of views from the Park provide an indication of the general visibility of the Metro Quarter, including the Southern Precinct, from the Estate. The viewpoint A montage indicates that the developed Southern Precinct would be largely screened by the existing large apartment blocks in Waterloo in views from the western side of Redfern Oval. Building 3 would be the only visible element of the proposed Southern Precinct development from this view and it would appear marginally above the existing Waterloo Estate apartment blocks. When compared to the Approved Concept the proposed Amended Concept from this view is shorter and less bulky which results in further improvement in visual quality.

At the southern edge of Redfern Oval and the northern eastern edge of the adjoining Redfern Park (Viewpoints B & I) accurately located wire diagram outlines of the Waterloo Metro Quarter electronic model also indicate that the Southern Precinct and the entire developed site would sit below the line of sight and would not be visible.

In other areas within the Redfern Estate, the developed site resulting from implementation of the amended concept would be similarly screened by existing buildings on the Waterloo site and / or within the Estate.

The visual impacts of the Southern Precinct on this Conservation Area would minimal.

Views from the south (viewpoint C)

The wire diagram overlaid onto the photo from Viewpoint C illustrates that the developed Metro site, including the Southern Precinct, would also not be visible from locations adjacent to the southern boundary of the Waterloo Precinct, including Waterloo Oval and its environs.

Views from the west (viewpoint D, D1, H and G)

The Alexandria Park Conservation Area includes land to the west of the Waterloo Metro Quarter site, one block west of Botany Road. It incorporates Alexandria Park and several blocks of traditional medium density housing, largely as terrace housing. The impacts of the proposal on views from this area have been assessed via selected viewing points within Alexandria Park and along Henderson Road, at the southern and northern edges of the Conservation Area respectively.

The montages illustrate that from the western edge of Alexandria Park (Viewpoints D & D1), the developed Waterloo Metro Quarter site would read as three new tower elements on the skyline above a foreground of large established trees. In this context, the Southern Precinct appears as a visually prominent new built element on the skyline, partially screened by existing foreground trees. When compared to the Approved Concept the proposed Amended Concept of the Southern Precinct is less bulky and provides better articulation in façade design. Building 4 of the amended

concept is of similar height to the approved concept but building 3 is shorter which further reduces what was already considered an acceptable visual impact.

From the north eastern point of the Park (Viewpoint H) only a portion of the developed Southern Precinct would be visible behind the substantial stock of existing tall, forest scale trees and buildings.

The impact of the proposed Southern Precinct on views from Alexandria Park and the Alexandria Park Conservation Area is considered acceptable, contingent on achievement of design excellence in the proposed tower elements.

In views towards the site from nearby roads (Viewpoint G), the montage illustrates that the taller buildings of the overall Waterloo Metro Quarter would again be the only element of the proposal visible above existing foreground buildings. The Southern Precinct building group is substantially screened by existing buildings and trees in views from this locality and its impact on views would be low.

While the new skyline created by the towers of the amended concept, including the new built form in the Southern Precinct, will change the character of these views, chiefly by decreasing the amount of visible sky and introducing sculptural forms on the skyline, we consider that with high quality design the Southern Precinct tower elements will not impact negatively on visual quality. Rather, in conjunction with the greater Waterloo Metro Quarter redevelopment, they will function as visual markers that will enhance wayfinding in the neighbourhood and contribute to the presentation of the Metro Centre as a new regional node of activity.

Views from the east

Views towards the Waterloo Metro Quarter, including the Southern Precinct, from within the Waterloo Conservation Area to the east were tested and investigated via a visit to the locality. The outcome of the investigation was that there are no views to the Southern Precinct site available from the parks and streets in this location. As a result development of the Southern Precinct will have no impact on views from these locations to the east.

Viewpoint A – Redfern Oval (adjacent to north eastern edge of oval)



Figure 35 – Viewpoint A – Southern Precinct base photo 55mm focal length (existing view)
Source: David Duloy



Figure 36 – Viewpoint A – Southern Precinct Approved Concept envelope montage
Source: David Duloy



Figure 37 – Viewpoint A – Southern Precinct Amended Concept envelope montage
Source: David Duloy



Figure 38 – Viewpoint A – Southern Precinct Detailed Design rendered montage
Source: David Duloy

Viewpoint B – Redfern Oval (south western edge of oval)



Figure 39 – Viewpoint B – Southern Precinct base photo 55mm focal length (existing view)
Source: David Duloy

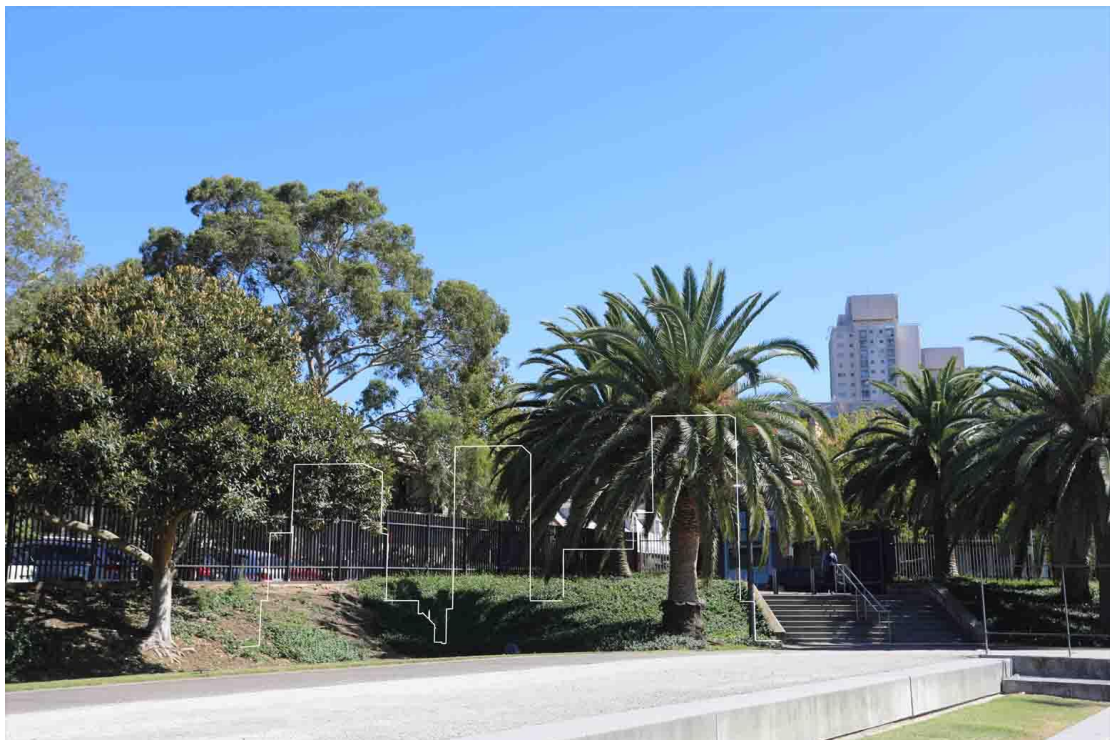


Figure 40 – Viewpoint B – Southern Precinct Approved Concept wire diagram
Source: David Duloy



Figure 41 – Viewpoint B – Southern Precinct Amended Concept wire diagram
Source: David Duloy

Viewpoint C – Waterloo Oval



*Figure 42 – Viewpoint C – Southern Precinct base photo 55mm focal length (existing view)
Source: David Duloy*



*Figure 43 – Viewpoint C – Southern Precinct Approved Concept wire diagram
Source: David Duloy*



Figure 44 – Viewpoint C – Southern Precinct Amended Concept wire diagram
Source: David Duloy

Viewpoint D – Alexandria Park (south western corner of park)



Figure 45 – Viewpoint D – Southern Precinct base photo 55mm focal length (existing view)
Source: David Duloy



Figure 46 – Viewpoint D – Southern Precinct Approved Concept envelope montage
Source: David Duloy



Figure 47 – Viewpoint D – Southern Precinct Amended Concept envelope montage
Source: David Duloy



Figure 48 – Viewpoint D – Southern Precinct Detailed Design rendered montage
Source: David Duloy

Viewpoint D1 – Alexandria Park (western side of playing fields)



Figure 49 – Viewpoint D1 – Southern Precinct base photo 55mm focal length (existing view)
Source: David Duloy



Figure 50 – Viewpoint D1 – Southern Precinct Approved Concept envelope montage
Source: David Duloy



Figure 51 – Viewpoint D1 – Southern Precinct Amended Concept envelope montage
Source: David Duloy



Figure 52 – Viewpoint D1 – Amended Concept rendered montage
Source: David Duloy

Viewpoint G – Henderson Rd / Gerard St (view from the carriageway)



Figure 53 – Viewpoint G – Southern Precinct base photo 55mm focal length (existing view)
Source: David Duloy



Figure 54 – Viewpoint G – Southern Precinct Approved Concept envelope montage
Source: David Duloy



Figure 55 – Viewpoint G – Southern Precinct Amended Concept envelope montage
Source: David Duloy



Figure 56 – Viewpoint G – Southern Precinct Detailed Design rendered montage
Source: David Duloy

Viewpoint H – Alexandria Park (north eastern edge)



Figure 57 – Viewpoint H – Southern Precinct base photo 55mm focal length (existing view)
Source: David Duloy



Figure 58 – Viewpoint H – Southern Precinct Approved Concept envelope montage
Source: David Duloy



Figure 59 – Viewpoint H – Southern Precinct Amended Concept envelope montage
Source: David Duloy



Figure 60 – Viewpoint H – Southern Precinct Detailed Design rendered montage
Source: David Duloy

Viewpoint I – Redfern Park (north eastern edge)



Figure 61 – Viewpoint I – Southern Precinct base photo 55mm focal length (existing view)
Source: David Duloy



Figure 62 – Viewpoint I – Southern Precinct Approved Concept wire diagram
Source: David Duloy



Figure 63 – Viewpoint I – Southern Precinct Amended Concept wire diagram
Source: David Duloy

11.1 Distant views

11.1.1 Visual environment (existing views)

In the highly developed regional environment that incorporates the Metro Southern Precinct site, opportunities for panoramic long views towards the sites are limited. The only open distant view from a public place that incorporates the Precinct is from the hilltop at Sydney Park. Largely for the reason that the Sydney Park hilltop provides a relatively rare publically available 360 panorama that includes the Sydney CBD, this view is considered to be critically important at a regional level.

11.1.2 Capacity to absorb change

In distant views, notably from Sydney Park, the existing tall buildings within the Waterloo Estate are distinctive and prominent elements in the landscape. The building group, including the towers and the other large building blocks in combination with other residential blocks of similar form off the site, presents as skyline element and an almost continuous line of buildings in this view. The uniformity and lack of relief of this built element is considered to be a negative element in this view.

The view also illustrates the critical role played by the mature trees on and adjacent to the Study Area as elements that mitigate the impacts of built form in regional views such as this.

With regard to development of the Southern Precinct, we consider that the continuous built wall in this view essentially constitutes a backdrop to the Metro development. The further foreground development that would potentially be the outcome of the Southern Precinct development would not be likely to increase the impact of this element on the view. Moreover, the Metro site and Southern Precinct forms a small component of this very broad and expansive view and a change on the site would only impact on this small portion of the panorama. With the Waterloo building wall as a backdrop, we consider that the view has a high capacity to absorb change.

11.1.3 Changes on distant views resulting from the proposal (likely impact on distant views)

Our investigations of the visual catchment of the Metro site, including the Southern Precinct have concluded that the Sydney Park view line is the most representative publically available regional view that includes the development site. Our assessment of distant views is therefore constrained to Viewpoint E. To assess the amount of likely change from this view an Amended Concept montage was prepared and compared against the Approved Concept Envelope montage from this view.

Both montages indicate that the 3 tall towers of the Northern, Central and Southern Precinct of the developed site will be the only new elements in this view post construction of the Metro proposal. The Amended Concept montage, when compared against the Approved Concept Envelope montage, illustrates that the Southern Precinct proposal sits wholly within the approved envelope and results in a reduction in tower height and bulk. The buildings of the Northern, Central and Southern Precinct will be foreground elements in the highly built portion of the view that incorporates high rise housing in Waterloo both within the Waterloo Precinct and further to the north east in Redfern. Forest scale trees within Alexandria Park and on the western side of the

Waterloo Precinct read as a continuous bank of foreground vegetation which softens the impact of the built wall behind and, as indicated by the montage, would also screen lower level development on the Metro site. In the context of this highly built component of the very broad and expansive view available from the Sydney Park hill, our opinion is that the Southern Precinct of the Metro development would be an acceptable addition to the view.

In response to a request from City of Sydney Council, we have also assessed the impact of the proposal from Hollis Park, a suburban park in Erskineville approximately 1.5km west of the Metro site. This small park is slightly elevated above Wilson Street Erskineville and has an easterly aspect which is in the direction of the Metro and Waterloo Precincts. The Park supports a continuous row of mature trees along its eastern and north eastern borders and these screen all skyline views in those directions. This effect is supported by the wire diagram at View F which indicates that the entire Metro development would not be visible in views from the Park.

In summary, the impact of the Southern Precinct development on distant views would be acceptable.

Viewpoint E – Sydney Park (Hill top)



Figure 64 – Viewpoint E – Southern Precinct base photo 55mm focal length (existing view)
Source: David Duloy



Figure 65 – Viewpoint E – Southern Precinct Approved Concept envelope montage
Source: David Duloy



Figure 66 – Viewpoint E – Southern Precinct Amended Concept envelope montage
Source: David Duloy



Figure 67 – Viewpoint E – Southern Precinct Detailed Design rendered montage
Source: David Duloy

Viewpoint F – Hollis Park, Erskineville



Figure 68 – Viewpoint F – Southern Precinct base photo 55mm focal length (existing view)
Source: David Duloy



Figure 69 – Viewpoint F – Southern Precinct Approved Concept wire diagram
Source: David Duloy



Figure 70 – Viewpoint F – Southern Precinct Amended Concept wire diagram
Source: David Duloy

12. Summary of assessment outcomes

A series of visual quality based Planning Principles proposed to guide the development of a Precinct masterplan for the entire Waterloo Metro Quarter site were developed in Cardno's earlier visual quality assessment studies. These same Planning Principles have been used as the basis for the summary assessment of the suitability of the Southern Precinct proposal in its locality with respect to changes to the local and regional visual environment. The outcomes of this assessment are:

- **PRINCIPLE** – *Maintain the unique visual character of the Precinct and the distinctive visual qualities that differentiate it from its neighbourhood.*

RESPONSE – It has been established through this assessment that the existing visual character of the Metro Quarter site is relatively non-descript with the only built element of particular value to local visual quality being the heritage listed Waterloo Congregational Church.

The development of the Southern Precinct, including the new Cope Street Plaza and through site link to Botany Road, will impact positively on the heritage significance of the Congregational Church by opening up views to and around the Church that were not available prior to the development of the Metro site.

Aside from the constraint of the Congregational Church, this Principle is relevant to the Metro Quarter and specifically to its Southern Precinct only in how it relates to the character of the greater Waterloo Precinct. Notwithstanding that the Southern Precinct development would constitute a significant change to the visual character of its locality, our assessment has found that at the local level, the developed site would only be substantially visible from its surrounding streets and from residential blocks immediately to its east. The immediate street frontages will change significantly in character, but the net change will be positive in that it will result in a substantial increase in amenity for the existing and future residential community. Detailed design, particularly of the new public domain and notable the Cope Street plaza, will be critical to the success of the development in its immediate locality. Large scale street trees will be a requisite to maintain human scale and to reinforce a visual connection with the residential precinct.

- **PRINCIPLE** – *Build upon the precedent of tall buildings in a landscape setting to create a visually distinctive built environment.*

RESPONSE – We consider the proposed Southern Precinct development to be positively consistent with this principle. The proposal has already been through a rigorous Design Review Process and adheres to the Sydney Metro Design Excellence Strategy endorsed by the Government Architect. Our opinion is that the building group in the Southern Precinct will contribute to a distinctive and interesting urban skyline that, in combination with the greater Waterloo Metro Quarter development, would create distinctive local place markers and contribute positively to the local built environment. The inevitable flipside of the introduction of tall buildings into the visual environment will be a reduction in the amount of open sky that appears in the view. This reduction in the visibility of open sky as a result of the Southern Precinct proposal will be more pronounced in closer views where the new built form will occupy a larger percentage of the view and will correspondingly screen more open sky. With movement away from the site, the amount of sky lost in the view decreases. From within the Waterloo Estate the impact of the proposal is generally restricted to the intrusion of the proposed new built form on the skyline.

- **PRINCIPLE** – *Retain the open internal qualities and legibility of the Precinct that result from its existing development pattern of broad streets in a clear grid pattern.*

RESPONSE – The Southern Precinct development will contribute positively to the open character of the locality due largely to the proposed treatment of the ground plane. The building group is well set back from its street frontages and will result in a significant increase in area of public domain available at street level. This will also provide a generous setting for the new building group which will correspondingly improve its legibility and visual bulk in views from the street. The proposal is considered positively consistent with this Principle.

- **PRINCIPLE** – *Retain the dominance of large forest scale trees at street level.*

RESPONSE – A consistent grid of street trees is included in the treatment of streets adjoining the Southern Precinct group. The success of the landscape scheme in satisfying this principle will be contingent on tree species selection and provision of sufficient space for trees to develop to maturity. Tree canopy studies for the Waterloo Precinct have been carried out by Aspect Studios and are outlined in the Landscape & Public Domain Report (Aspect Studios, July 2020). This planting scheme, if applied to the street adjoining the Southern Precinct, would be consistent with this principle.

- **PRINCIPLE** – *Avoid continuous “walls” of built form in local and regional views.*

RESPONSE – As illustrated in this assessment, continuous building walls are existing elements in the built environment of Waterloo. The assessment has also found that the development of the Southern Precinct as proposed will not extend this negative characteristic. In views that include the existing “development walls”, the proposed Southern Precinct building group will either be hidden behind the “walls” (in views from north / north east) or will appear as foreground elements that protrude above the “wall” line (views from the south west).

In summary, we consider that the proposed Southern Precinct development will contribute positively to the local and regional visual environment with respect to these Principles. We therefore consider the proposal suitable for its locality with respect to changes to the local and regional visual environment.

13. Justification and mitigation measures

The proposed development of the Southern Precinct of the Waterloo Metro site is considered justified with regard to impacts on visual quality for the following reasons:

- The proposal has been found in this assessment to be consistent with the Planning Principles for protection of visual quality that have been adopted for the greater Waterloo precinct.
- The development will result in a number of improved outcomes in comparison to the currently approved Metro precinct concept specifically with regard to design development of the building group to provide façade articulation, overall built form improvements and increased visibility of open sky.
- The Southern Precinct building group is wholly contained within the approved concept envelope and the detailed built form represents an improvement to the visual impact of the proposal.

The following overarching mitigation measures are recommended to ensure a high quality development that will have an acceptable impact on the developing visual character of the concept proposal site and its environs:

- Subsequent to approval of the revised concept proposal, implement principles of design excellence as articulated in the Waterloo Amenity and Design Guidelines (March, 2020) for precinct plans and development applications for individual buildings.
- Prepare and implement an integrated public domain plan for the Southern Precinct that includes judicious planting of trees along Botany Road, Wellington Street, and Cope Street that will reach mature heights sufficient to provide tree canopies consistent with the existing local tree canopy. With respect to visual character, the objective of the tree planting scheme should be to break up continuous built form and provide human scale. Tree canopy studies for the Waterloo Precinct have been carried out and are outlined in the Landscape & Public Domain Report (Aspect Studios, July 7th, 2020). Based on the findings of these studies, we conclude that trees with mature heights between 8 and 15m would be expected to achieve this objective. The proposed tree species described in the Landscape & Public Domain Report would achieve these mature heights and be suitable to achieve this objective.

14. Conclusion

This study of the likely impacts of the proposed Southern Precinct development of the broader Waterloo Metro Quarter on local and regional visual quality has been prepared to address the relevant Planning Secretary's Environmental Assessment Requirements (SEARs) quoted in Section 3 of the report. It has been informed by the outcomes of the earlier completed assessment of visual impacts of the amending concept development application (Cardno, July 2020).

The assessment has been carried out with the aid of electronically generated photomontages over a series of photos from surveyed locations. By comparing the Amended Concept montages with the Approved Concept Envelope montages it is evident that the proposed Southern Precinct development is wholly contained within the approved envelope and is generally shorter and less bulky than the previously approved design. In regards to visual impact, the amended concept is therefore an improvement.

In summary, the conclusions of the visual impacts of the proposed Southern Precinct with respect to the Planning Secretary's requirements are:

- In comparison to the approved concept the proposal for the Southern Precinct will have a lesser impact on the local visual environment, due principally to the reduction in height and inclusion of detailing and articulation in the building form and façade.
- The proposal will impact on views from streets immediately surrounding the Southern Precinct site and from street blocks to the east of the site within the Waterloo Estate. A healthy growth of forest scale trees in the street and other proposed public places within the precinct will be an important mitigation measure to address the visual impacts the proposal will have on views from streets immediately surrounding the site and from street blocks to the east of the site within the Waterloo Estate.
- The proposal will be only moderately visible from other parts of the Waterloo Precinct and from the west. Its success as a new element in views from these locations will be contingent on achievement of design excellence in the completed development, with particular regard to the architectural design of the proposed building group.
- From the north and south, at locations outside of the Waterloo Precinct, the proposal will be almost completely screened from view by vegetation and existing buildings in the line of view.
- In distant regional views, the proposal will appear in the context of the existing tall and visually bulky buildings and the substantial tree canopy within and adjacent to the Waterloo Precinct. If designed against principles of design excellence, the Southern Precinct building group has the potential to improve the quality of these distant regional outlooks by creating architectural relief to the continuous building "walls" in these views.
- The Southern Precinct proposal has been found to have an acceptable impact on the heritage listed Waterloo Congregational Church and on the conservation values of all local Conservation Areas including specifically, the Redfern Estate, the Alexandria Park Conservation Area and the Waterloo Conservation Area.
- The Southern Precinct proposal has been found to be consistent with the visual quality Planning Principles for development of the Waterloo Precinct and the Metro Quarter

Contingent on the recommended mitigation measures in this report, the Southern Precinct proposal has been found to represent an improvement in visual impacts in comparison with the approved concept and is considered worthy of support with regard to its effects on the existing visual environment of the site and its locality.