



WATERLOO METRO QUARTER OVERSTATION DEVELOPMENT

**Environmental Impact Statement
Appendix AA Visual Impact Assessment**

SSD-10441 Amending Concept DA

State Significant Development
Development Application

Prepared for **WL Developer Pty Ltd**

30 September 2020

Reference	Description
Applicable SSD Applications	SSD-10441 Amending Concept DA
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Document Number	WMQ-SITE-CAR-VI-RPT-0001
Status	Final
Version	04
Date of Issue	30 July 2020
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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
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
OSD	over station development
PIR	Preferred Infrastructure Report
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 report has been prepared by Cardno to accompany a concept State significant development (SSD) development application (DA) for the Waterloo Metro Quarter over station development (OSD). This concept SSD DA is submitted as an 'amending DA', that modifies the current approved concept SSD DA issued for the site (SSD 9393). The modifications contained within the amending DA relate to the northern precinct and central building only. No change is proposed to the original concept SSD DA as it relates to the southern precinct of the Waterloo Metro Quarter site.

This report has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs) issued for the amending concept SSD DA (SSD 10441).

This report concludes that the proposed amending concept DA for the Waterloo Metro Quarter OSD is suitable and warrants approval subject to the implementation of the following overarching mitigation measures to ensure a high quality development that will have an acceptable impact on the existing visual environment of the site and its locality:

- Further design development to result in a high quality ground plane.
- 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 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.

With the implementation of the above mitigation measures, the impacts of the proposal on visual quality are considered appropriate.

3. Introduction

This report has been prepared to accompany a concept SSD DA for the over station development (OSD) at the Waterloo Metro Quarter site. The concept DA seeks consent for an amended building envelope and description of development for the northern precinct and central building of the Waterloo Quarter site approved under SSD 9393. For clarity, this concept DA (formerly referred to as a 'Stage 1' DA) is made under Section 4.22 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

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 concept DA seeks to modify the approved building envelope for the northern precinct (previously comprising 'Building A', 'Building B', 'Building C' and 'Building D' under SSD 9393) through:

- increasing the maximum building height for the southern portion of the building envelope from RL56.2 to RL72.60
- removing the 'tower component' of the northern precinct, reducing the overall height of the tower envelope from RL116.9 to RL90.40, to enable the redistribution of floor space to commercial office floor plates
- amending the description of development to refer to a mid-rise (approximately 17 storey) commercial office building, comprising approximately 34,125sqm of commercial office floor space within the northern portion of the site, rather than a third residential tower.

The concept DA seeks to modify the central building approved building envelope (previously comprising 'Building E' under SSD 9393) through:

- modifying the eastern extent of the podium envelope.

This proposal will not exceed the permissible building height for the site under the Sydney Local Environmental Plan 2012 (SLEP) or the maximum height approved under SSD 9393. Separate detailed SSD DA (s) will be lodged concurrently for the detailed design, construction and operation of the northern precinct and central building. No changes are proposed to the original concept DA as it relates to the southern precinct.

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARs) dated 9 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)
Key Issues	Visual and amenity impacts	Entire report
Item 5	The EIS shall	

	- provide a revised visual and view impact assessment, addressing any changes to the view / visual impacts arising from the amended envelope when viewed from adjoining developments, key vantage points and streetscape locations including photomontages or perspectives of the proposed development.	
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Table 1 - SEARs Requirements

4. The site

The site is located within the City of Sydney Local Government Area (LGA). The site is situated approximately 3.3 kilometres south of Sydney CBD and approximately 8 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 located 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 (the site) is a rectangular shaped allotment and 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 boundaries of the site the subject of the amending concept DA is identified at Figure 5.1. 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 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.

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.

The Sydney Metro project is illustrated in Figure 2.

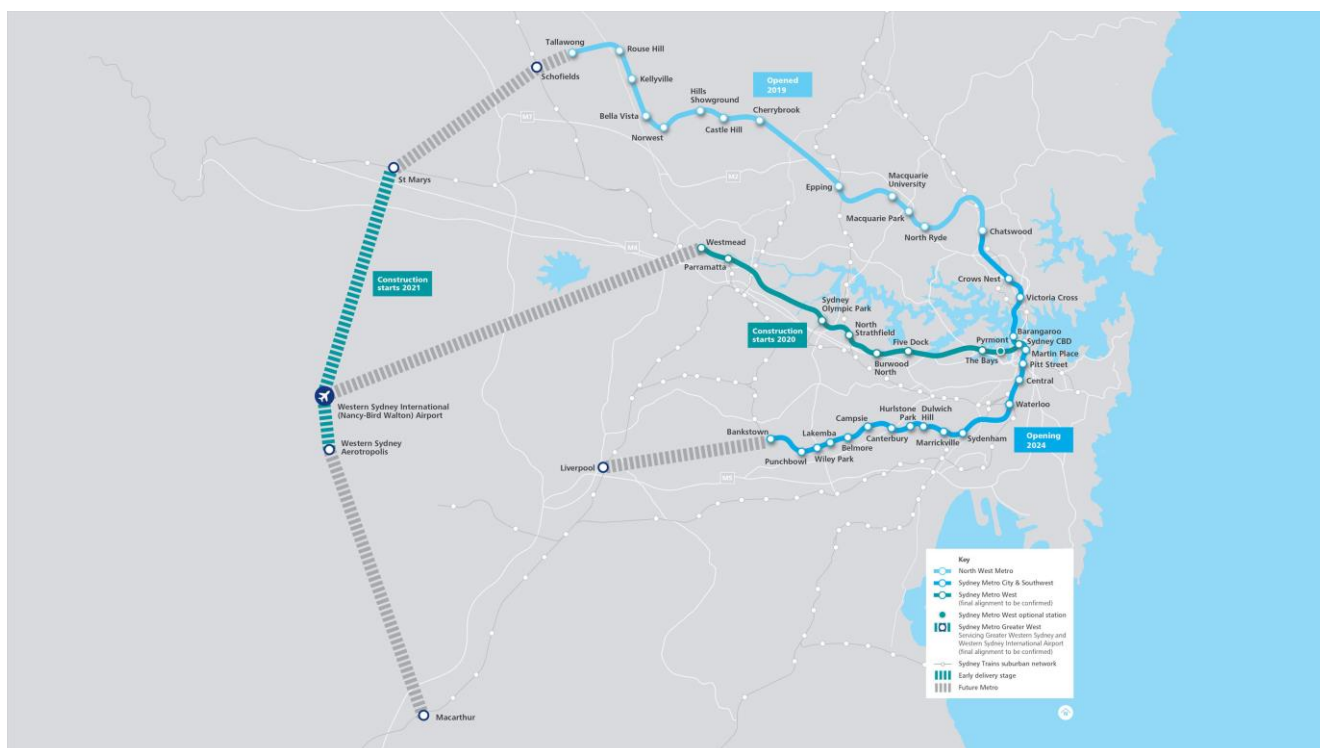


Figure 2 - Sydney Metro alignment map
Source: Sydney Metro

5.2 Sydney Metro CSSI Approval (SSI 7400)

On 9 January 2017, the Minister for Planning approved the Sydney Metro City & Southwest - Chatswood to Sydenham project as a critical State significant infrastructure (CSSI) project (reference SSI 7400) (CSSI approval). The terms of the CSSI approval includes all works required to construct the Sydney Metro Waterloo Station. The CSSI approval also includes the construction of below and above ground works within the metro station structure for appropriate integration with the OSD.

With regards to CSSI related works, any changes to the 'metro station box' envelope and public domain will be pursued in satisfaction of the CSSI conditions of approval and do not form part of the scope of the concept SSD DA or detailed SSD DA for the OSD.

Except to the extent described in the EIS or Preferred Infrastructure Report (PIR) submitted with the CSSI application, any OSD buildings and uses do not form part of the CSSI approval and will be subject to the relevant assessment pathway prescribed by the EP&A Act.

The delineation between the approved Sydney metro works, generally described as within the two 'metro station boxes' and surrounding public domain works, and the OSD elements are illustrated in Figure 3.

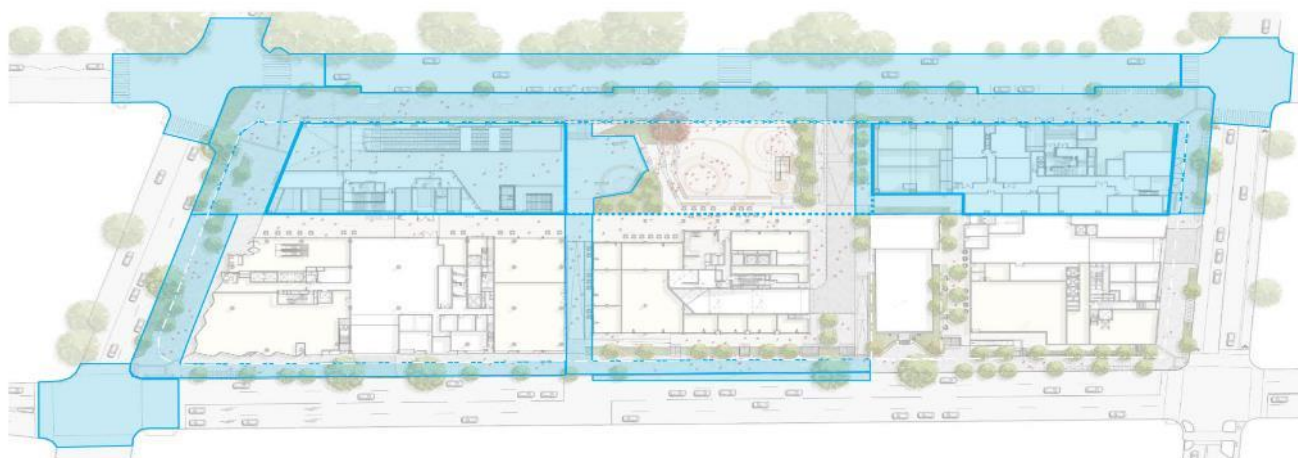


Figure 3 - CSSI Approval scope of works
Source: WL Developer Pty Ltd

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.

This concept DA has been prepared and submitted to the DPIE and proposes 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.

A concurrent detailed SSD DA will seek development consent for the OSD located within the southern precinct of the site, consistent with the parameters of the original concept approval. Separate SSD DAs have been prepared and will be submitted for the northern precinct, central building, and basement proposed across the Waterloo Metro Quarter site consistent with the amending concept DA.

6. Proposed development

The amending concept DA seeks consent for an amended building envelope and description of development for the northern precinct of the Waterloo Metro Quarter site approved under SSD 9393. Specifically, the proposal seeks to modify the approved building envelope for the northern precinct (previously comprising 'Building A', 'Building B', 'Building C' and 'Building D' under SSD 9393) through:

- increasing the maximum building height for the southern portion of the Northern Precinct from RL56.2 to RL72.60
- removing the 'tower component' of the Northern Precinct, reducing the overall height of the tower envelope from RL116.9 to RL90.40, to enable the redistribution of floor space to commercial office floor plates
- amending the description of development to refer to a mid-rise (approximately 17 storey) commercial office building, comprising approximately 34,125sqm of commercial office floor space within the northern portion of the site, rather than a third residential tower.

The concept DA seeks to modify the central building approved building envelope (previously comprising 'Building E' under SSD 9393) through:

- modifying the eastern extent of the podium envelope.

The modification of the approved concept SSD DA will enable the detailed design of a new commercial building (comprising office and retail premises) to be pursued on the site, significantly increasing the proportion of employment generating floor space on the Waterloo Metro Quarter site. This new commercial building is proposed in replacement of four building envelopes approved under SSD 9393, which comprised one residential tower, and three mid-rise residential buildings.

This proposal will not exceed the permissible building height for the site under the SLEP or the maximum height approved under SSD 9393. As noted above, separate detailed SSD DA(s) will be lodged concurrently for the detailed design, construction and operation of the northern precinct, and central building.

This amending concept DA does not propose to amend the original concept approval as it relates to the southern precinct.

7. Methodology

This report is intended to be read in conjunction with the report on visual impacts of the approved concept for the site (Cardno, 21 August 2018). In brief, the Cardno assessment of potential visual impacts of the approved concept included the following tasks:

- Assessment of existing conditions with respect to the current and potential future character of the site and its environs
- GIS mapping to identify the visual catchment of the proposal site
- Preparation of visual quality objectives to articulate specific components of the visual environment of the precinct that are to be preserved and enhanced in its development.
- Identification of critical viewpoints toward the development site and preparation of locational accurate computer generated photomontages from each of the agreed critical viewpoints.
- Assessment of the potential visual impacts of the proposal.
- Identification of mitigation measures to address any unacceptable impacts on views that may result from implementation of the concept proposal in its current form.

The process for this review of the amending concept has included:

- Preparation of revised photomontages based on the revised concept proposal. These have been prepared from each of the previously identified critical viewpoints.
- Review of the changes to views from the critical viewpoints as identified by the amended photomontages and provision of additional commentary and recommendations for additional mitigation measures where required.
- Provision of revised conclusions with respect to the impacts of the concept proposal on local visual quality.

7.1 Planning Principles

The 2018 assessment outlined a series of visual quality based Planning Principles proposed to guide the development of the Precinct masterplan. The Planning Principles were used as the basis for the summary assessment of the suitability of the proposal in its locality with respect to changes to the local and regional visual environment. The Planning Principles adopted for assessment of the approved concept are as follows:

- PRINCIPLE – *Maintain the unique visual character of the Precinct and the distinctive visual qualities that differentiate it from its neighbourhood.*
- PRINCIPLE – *Build upon the precedent of tall buildings in a landscape setting to create a visually distinctive built environment.*
- 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.*
- PRINCIPLE – *Retain the dominance of large forest scale trees at street level.*

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

These same principles have been used to assess the potential visual impacts of the amending concept. A summary of the impacts of the amending concept against these principles is provided in the summary of assessment outcomes section of this report.

7.2 Planning / Design Objectives

The design objectives set out in the 2018 Visual Impact Assessment remain current and do not require amendment for the purposes of this revised assessment. They are:

- 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 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 locally 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.

7.3 Existing conditions

Cardno's commentary on existing conditions is provided in the 2018 Visual Impact Assessment. The commentary remains current and does not require amendment for the purposes of this revised assessment.

7.4 Heritage Conservation Areas

Cardno's commentary on Heritage Conservation Areas is provided in the 2018 Visual Impact Assessment. The commentary remains current and does not require amendment for the purposes of this revised assessment.

8. Comparative changes in built form

The following diagrams illustrate the proposed changes between the approved concept and the proposed amended concept that have the potential to change the impacts of the development on visual quality.

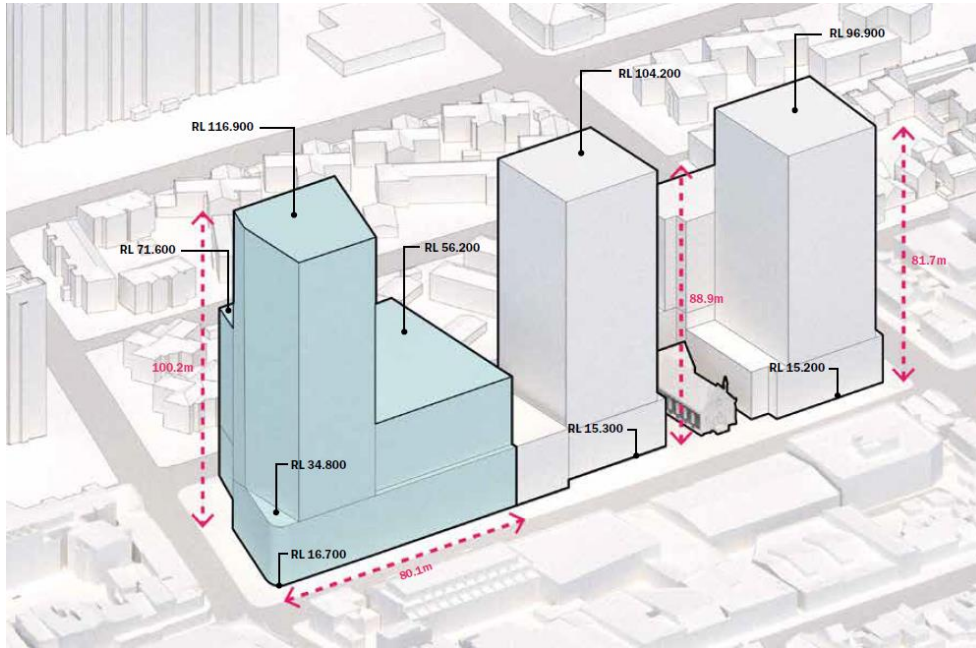


Figure 4 – 3D massing model of approved concept

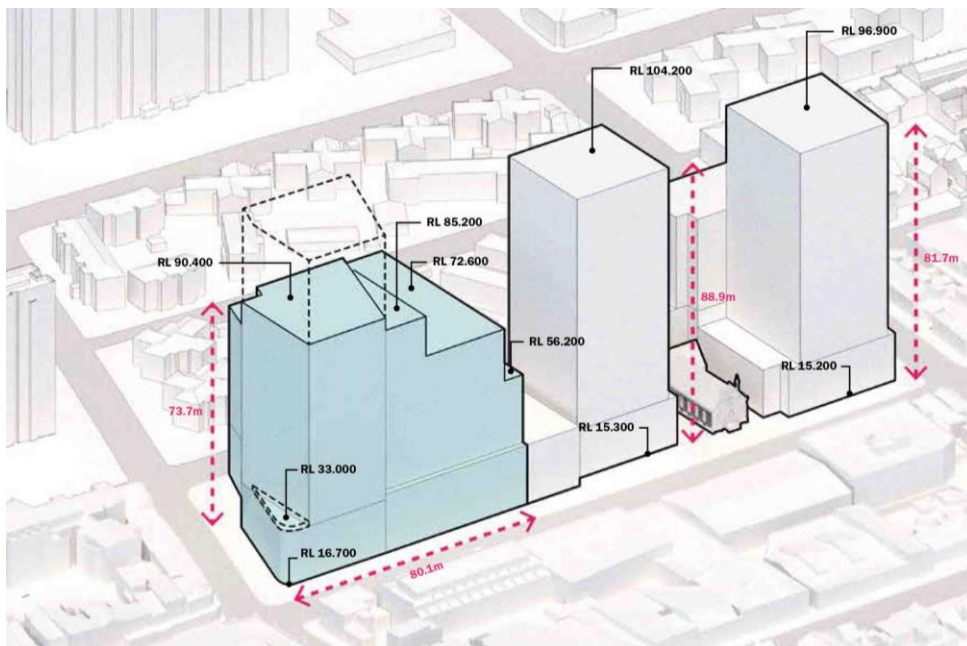


Figure 5 – 3D massing model of proposed amended concept

Principal changes to the proposed amended concept that may have implications for visual quality include:

- Reduction in the height of the tower envelope for the northern tower from RL116.90 to RL90.40.
- Increasing the maximum building height for the southern portion of the northern building envelope from RL56.2 to RL72.60

9. View analysis – Amended Concept

Critical viewpoints within the identified view catchment were selected for the 2018 assessment through a process of analysis of the visibility diagrams to identify representative viewpoints that would:

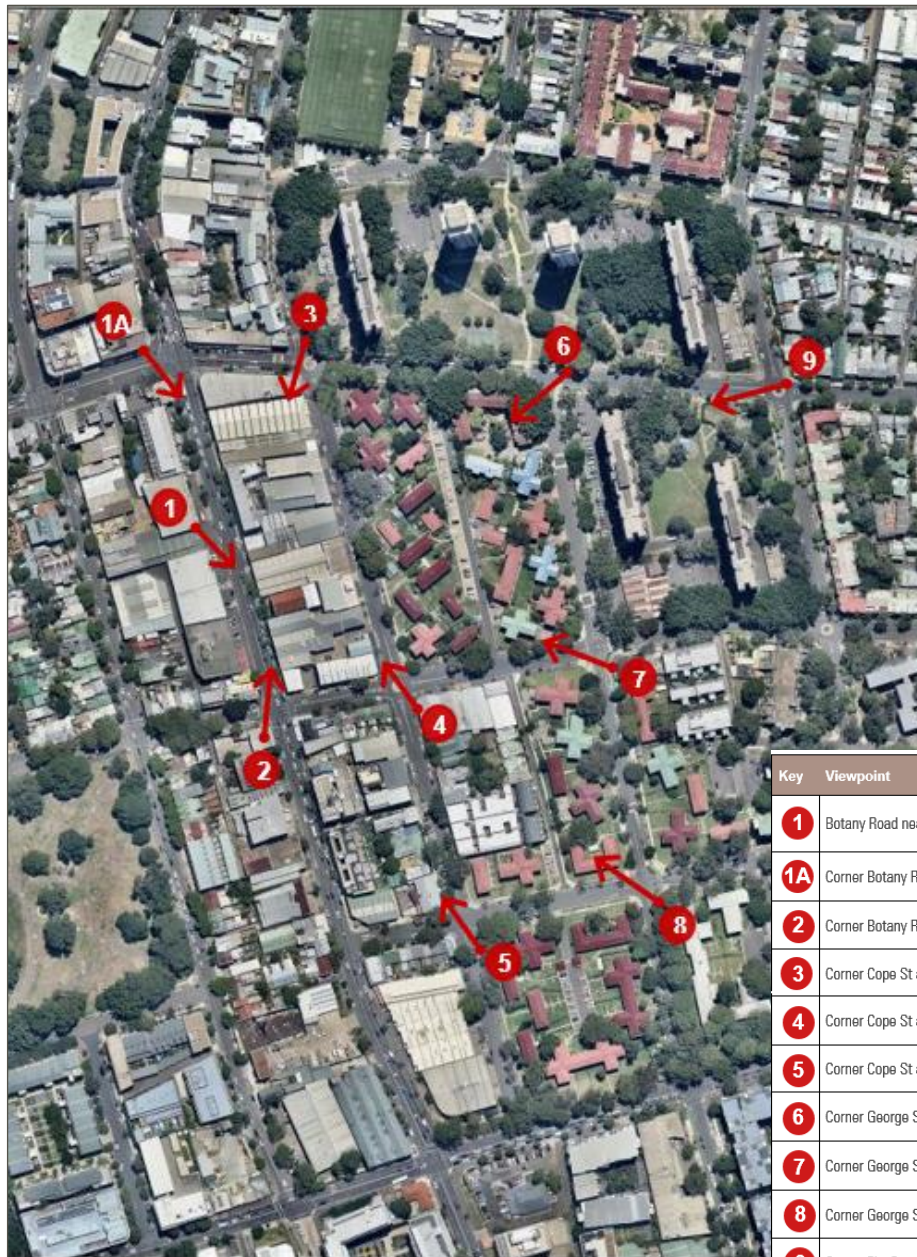
- Be likely to be subject to changes in views as a result of the development; and
- Be sensitive to these changes to views as a result of the expectations of viewers. In this regard, a typical hierarchy in sensitivity has been assumed. Residential and recreational areas are considered to have higher sensitivity to change than industrial or employment areas. Views from roads are considered to have high sensitivity if they are close to the development site or if the views are on an axis to the site.

Photomontages were prepared from each of these viewpoints to illustrate the changes to these views that would result from implementation of the proposed development.

For the purposes of this revised assessment, updated photomontages based on the amended concept model have been prepared for each selected viewpoint indicated on Figures 8 and 9.



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



Key	Viewpoint
1	Botany Road near intersection with Henderson Rd and Raglan St facing south-east
1A	Corner Botany Rd and Raglan St facing south-west
2	Corner Botany Rd and Wellington St facing north
3	Corner Cope St and Raglan St facing south
4	Corner Cope St and Wellington St facing north-west
5	Corner Cope St and John St facing north-west
6	Corner George St and Raglan St facing south-west
7	Corner George St and Wellington St facing north-west
8	Corner George St and John St facing north-west
9	Corner Pitt St and Raglan St facing south-west

Figure 7 – Local Views from within the greater Waterloo Precinct and along Botany
Source: Cardno

10. Visual Impact Assessment

The analysis of the potential visual impacts of the approved concept 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.

For the purposes of this assessment of the impacts on visual quality of the amended concept the same views towards the site have been assessed. The outcome of the assessment follows.

10.1 Close views

10.1.1 Visual environment

The Concept VIA report (Cardno 2018) included a description of the visual environment of the streets in the locality of the Metro site. This description is summarised below. 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 Metro site occupies the eastern side 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 three boundaries of the Metro Quarter 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.

10.1.2 Capacity to absorb change

The capacity of the land adjoining the Metro site remains unchanged since Cardno's 2018 assessment of visual impacts of the approved Concept Proposal.

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.

10.1.3 Changes to close views resulting from the proposal

Comparison between the current approved concept and the proposed amending concept has been facilitated via preparation of amended massing montages from Viewpoints 1, 1A, 2, 3, and 4.

Comparison of the montages indicates the amended concept will lead to a net improvement in visual impacts resulting from some additional visibility of open sky.

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



*Figure 8 – Viewpoint 1 – base photo 55mm focal length
Source: David Duloy*



Figure 9 – Viewpoint 1 – photomontage - approved concept
Source: David Duloy



Figure 10 – Viewpoint 1 – photomontage - amended concept
Source: David Duloy

Viewpoint 1A – Corner Botany Rd and Raglan St facing south-west.



*Figure 11 – Viewpoint 1A – base photo 55mm focal length
Source: David Duloy*



Figure 12 – Viewpoint 1A – photomontage - approved concept
Source: David Duloy



Figure 13 – Viewpoint 1A – photomontage - amended concept
Source: David Duloy

Viewpoint 2 – Corner Botany Rd and Wellington St facing north



***Figure 14 – Viewpoint 2 – base photo 55mm focal length
Source: David Duloy***



Figure 15 – Viewpoint 2 – photomontage - approved concept
Source: David Duloy



Figure 16 – Viewpoint 2 – photomontage - amended concept
Source: David Duloy

Viewpoint 3 – Corner Cope St and Raglan St facing south



*Figure 17 – Viewpoint 3 – base photo 55mm focal length
Source: David Duloy*



Figure 18 – Viewpoint 3 – photomontage - approved concept
Source: David Duloy



Figure 19 – Viewpoint 3 – photomontage - amended concept
Source: David Duloy

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



*Figure 20 – Viewpoint 4 – base photo 55mm focal length
Source: David Duloy*

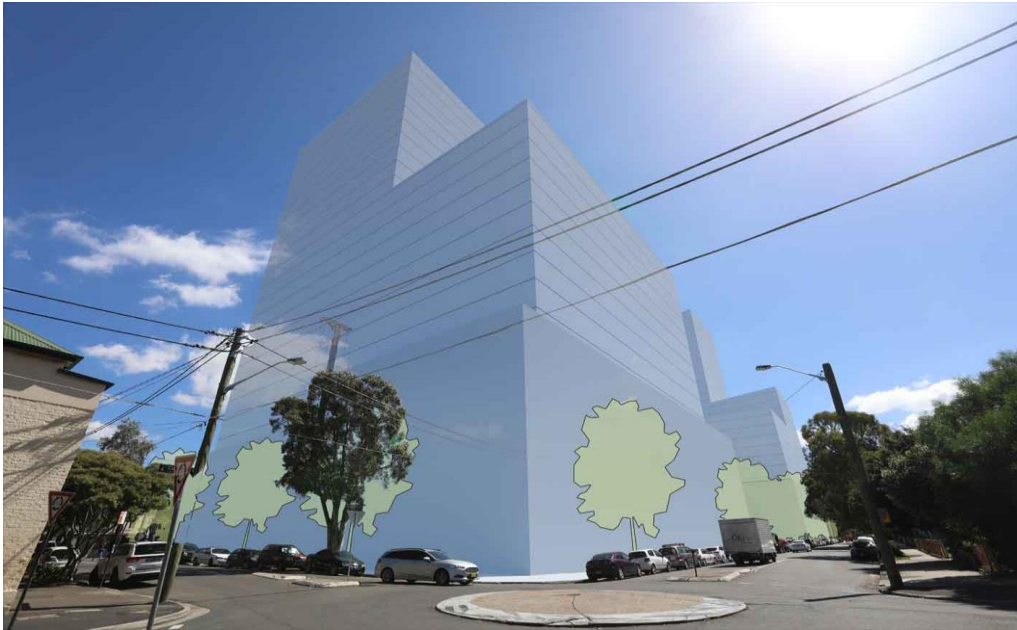


Figure 21 – Viewpoint 4 – photomontage - approved concept
Source: David Duloy

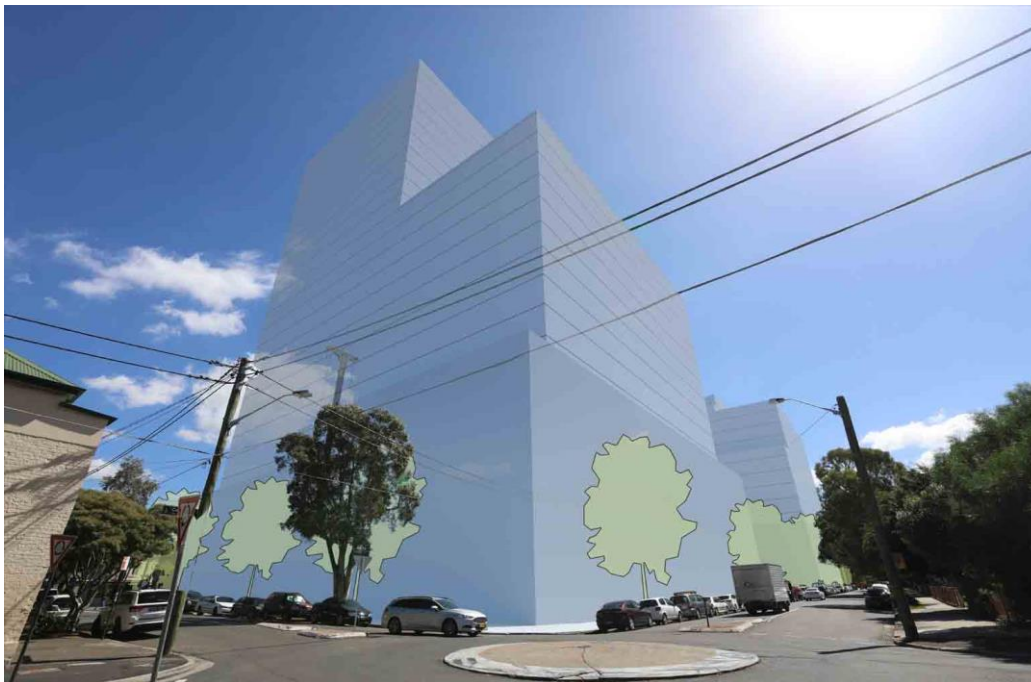


Figure 22 – Viewpoint 4 – photomontage - amended concept
Source: David Duloy

10.2 Medium distant views – within the Waterloo Estate

10.2.1 Visual environment

The visual environment within the Waterloo Estate remains relatively unchanged since Cardno's previous assessment of visual impacts of the approved concept proposal. The previous VIA report (Cardno 2018) included a description of the elements of the Waterloo Estate visual environment that contribute to its existing visual character. These elements are all intact at the time of this report and 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.

10.2.2 Capacity to absorb change

The capacity of the land adjoining the Waterloo Estate also remains unchanged since Cardno's previous assessment of visual impacts of the currently approved Concept Proposal.

The following principles remain relevant to the capacity of the Waterloo Estate to absorb change to its visual environment, with particular regard to the development of the Metro 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.

As stated in the previous assessment of visual impacts, out of these principles, our opinion is that the Waterloo Estate still has a moderate capacity to absorb change, contingent on:

- Retention 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 Metro 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 Metro Precinct.

10.2.3 Changes to medium distant views within the Waterloo Estate resulting from the proposal

Comparison between the approved concept and the proposed amending concept has been facilitated via preparation of amended massing montages from Viewpoints 7, 5, 8, 6, and 9.

From these viewpoints the difference between the concepts is relatively minor. However, on balance the decreased height of the northern tower proposed by the amending concept will decrease the impacts of the proposal on visual quality due to less visibility of built form and an increase in the proportion of open sky in medium distant views from within the Waterloo Estate.

Viewpoint 7 – Corner George St and Wellington St facing north-west

From viewpoint 7 the tall and lower towers would be prominent new elements in the landscape. This condition would be generally common in views within two blocks of the Metro Precinct. The impact of the towers would be mitigated, however, by the substantial stock of existing foreground trees and the decrease in the height of the northern tower would allow for greater visibility of sky from this viewpoint.



***Figure 23 – Viewpoint 7 – base photo 55mm focal length
Source: David Duloy***



***Figure 24 – Viewpoint 7 – photomontage - approved concept
Source: David Duloy***



***Figure 25 – Viewpoint 7 – photomontage - amended concept
Source: David Duloy***

Viewpoint 5 & 8 - Corner Cope St and John St facing north-west & Corner George St and John St facing north - west

In views from the southern parts of the Precinct, represented by montages from Viewpoints 5 & 8, the taller buildings would appear as skyline elements above the existing lower scale 2 and 3 storey “walk up” residential blocks that characterise the built environment in this locality. When comparing the approved concept and the proposed amending concept the visual impact from viewpoint 5 is similar.

From viewpoint 8 all three towers are visible in both concepts. The notable difference with the proposed amending concept is that the northern building mass is a substantially less prominent element in the view, again allowing for increased visible sky and an overall improvement in visual quality in comparison to the approved concept.



Figure 26 – Viewpoint 5 – base photo 55mm focal length
Source: David Duloy



Figure 27 – Viewpoint 5 – photomontage - approved concept
Source: David Duloy



Figure 28 – Viewpoint 5 – photomontage - amended concept
Source: David Duloy



*Figure 29 – Viewpoint 8 – base photo 55mm focal length
Source: David Duloy*



Figure 30 – Viewpoint 8 – photomontage - approved concept
Source: David Duloy



Figure 31 – Viewpoint 8 – photomontage - amended concept
Source: David Duloy

Viewpoints 6 & 9 - Corner George St and Raglan St facing south-west & Corner Pitt St and Raglan St facing south-west

From locations in the northern portion of the Waterloo Estate, illustrated by the montages from Viewpoints 6 & 9, again only the taller buildings would be visible and these would be largely obscured by the existing very tall buildings and the substantial stock of tall, forest scale trees in this part of the Waterloo Estate. The reduction in height of the northern tower, as proposed in the amending concept, will result in significantly less visibility of that built element in these views.

In summary, the proposed amending concept of the Metro site would be variably visible and would result in moderate levels of change to the visual environment of the Waterloo Precinct. Generally, the amending concept would result in a decreased impact on the visual environment resulting from a decrease in the overall mass of the northern building group. As was the case with the approved concept, the existing built form and large trees would continue to be mitigating factors on the impact on views from within the Precinct as a result of the amended concept development. Maintaining slender plan forms and separation distances between the towers as proposed in the amended concept will be important in achieving acceptable impacts as will ensuring high quality architectural outcomes.



***Figure 32 – Viewpoint 6 – base photo 55mm focal length
Source: David Duloy***



Figure 33 – Viewpoint 6 – photomontage - approved concept
Source: David Duloy



Figure 34 – Viewpoint 6 – photomontage - amended concept
Source: David Duloy

From viewpoint 9, the developed Metro site of the approved concept is visible amongst the existing tall buildings and above the street trees. In comparison, due to the decrease in tower height, the amending concept is almost completely obscured by the existing stock of tall, forest scale trees in the foreground. This results in an improvement in visual quality.



***Figure 35 – Viewpoint 9 – base photo 55mm focal length
Source: David Duloy***



Figure 36 – Viewpoint 9 – photomontage - approved concept
Source: David Duloy



Figure 37 – Viewpoint 9 – photomontage - amended concept
Source: David Duloy

10.3 Medium distant views – outside the Waterloo Precinct

10.3.1 Visual environment

Views towards the Metro and greater Waterloo Precincts from the suburban environments in the medium distance remain unchanged since Cardno's previous assessment of visual impacts of the currently approved Concept Proposal. The prominent visual elements within these views include the existing Waterloo towers and residential blocks.

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.

10.3.2 Capacity to absorb change

The capacity of the land adjoining the Metro site remains unchanged since Cardno's previous assessment of visual impacts of the currently approved Concept Proposal.

In summary, due principally to the dominance of the existing large scale development within the Waterloo Precinct, views from locations at medium distances from the Metro site are considered to have a high capacity to absorb change.

10.3.1 Amount of change on medium distant views outside the Waterloo Precinct resulting from the proposal

Comparing the change to the visual environment between the approved concept and the proposed amending concept has been facilitated via preparation of amended massing montages from Viewpoints A, B, I, C, D, D1, H and G.

Comparison of the montages indicates that the likely changes to the visual impacts of the amended concept on medium distant views outside the Waterloo Precinct is very minor. Further commentary, which is broken down into views from the north, south, west and east, is provided below.

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 from the Estate. From Redfern Park (Viewpoints A, B & I) the montages of the approved concept reveal that the developed Metro site would be barely visible with only small portions of the proposed northern and southern towers appearing above the line of existing large apartment blocks in Waterloo in views from the western side of Redfern Oval (Viewpoint A). Comparison between montages of the approved concept and amended concept (Figures 41 & 42) indicates that the

northern tower, visible above the line of existing buildings in the approved concept, would not be visible in the amended concept.

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 Metro electronic model indicate that the approved concept buildings would sit below the line of sight and would not be visible. This is also the case for the proposed amending concept.

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.

Consequently we consider that the visual impacts of the amended concept on this Conservation Area would be an improvement on the already very low impacts of the approved concept.

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



Figure 38 – Viewpoint A – base photo 55mm focal length
Source: David Duloy



Figure 39 – Viewpoint A – photomontage - approved concept
Source: David Duloy



Figure 40 – Viewpoint A – photomontage - amended concept
Source: David Duloy

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



***Figure 41 – Viewpoint B – base photo 55mm focal length
Source: David Duloy***



Figure 42 – Viewpoint B – wire diagram - approved concept
Source: David Duloy

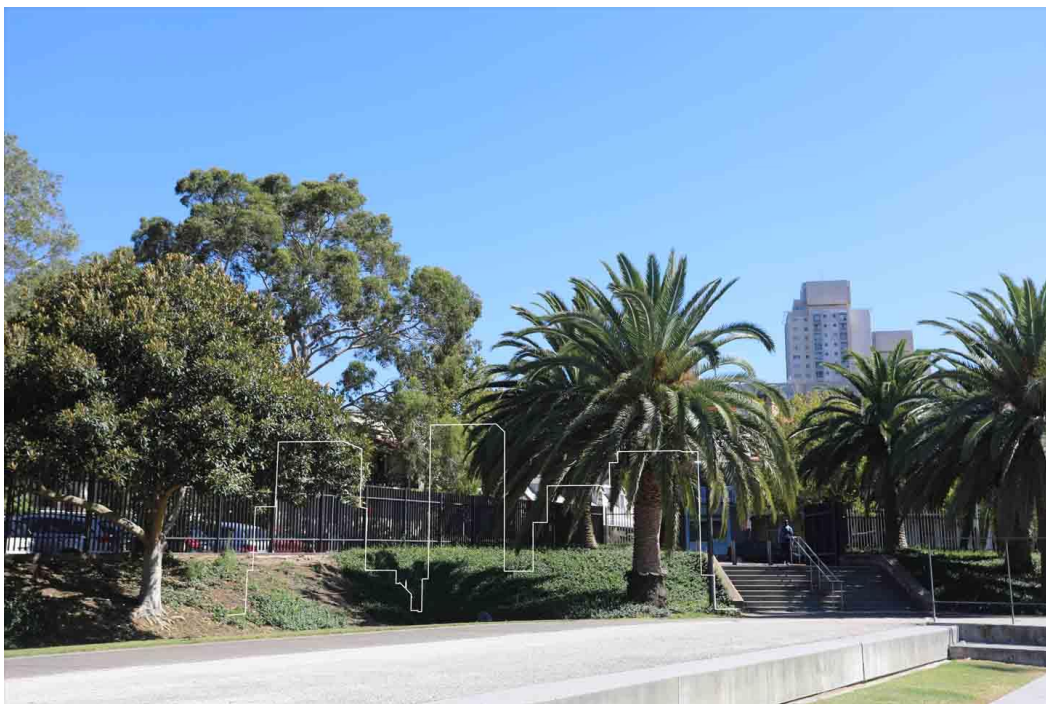


Figure 43 – Viewpoint B – wire diagram - amended concept
Source: David Duloy

Viewpoint I – Redfern Park (north eastern edge)



*Figure 44 – Viewpoint I – base photo 55mm focal length
Source: David Duloy*



Figure 45 – Viewpoint 1 – wire diagram - approved concept
Source: David Duloy



Figure 46 – Viewpoint 1 – wire diagram - amended concept
Source: David Duloy

Views from the south (viewpoint C)

The wire diagram overlaid onto the photo from Viewpoint C illustrates that the developed Metro site would also not be visible from locations adjacent to the southern boundary of the Waterloo Precinct, including Waterloo Oval and its environs. This is the case for both the approved concept and the proposed amending concept.

Viewpoint C – Waterloo Oval



***Figure 47 – Viewpoint C – base photo 55mm focal length
Source: David Duloy***



Figure 48 – Viewpoint C – wire diagram - approved concept
Source: David Duloy



Figure 49 – Viewpoint C – wire diagram - amended concept
Source: David Duloy

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

The Alexandria Park Conservation Area includes land to the west of the 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.

When comparing the approved concept and the proposed amending concept the montages illustrate that from the western edge of Alexandria Park (Viewpoints D & D1), the visual impact is similar. In both concepts the developed Metro site would read as three new tower elements on the skyline above a foreground of large established trees. The obvious difference between the two concepts is that the towers of the amended concept appear lower, however there is increased bulk and less building separation visible to the north. This results in less loss of sky in the view but increased visibility of the built form at lower level. On balance our opinion is that the overall impact of the amended proposal on these views is improved by the decreased height of the northern building group and consequent greater proportion of visible sky in the view.

From the north eastern point of the Park (Viewpoint H) only a portion of the developed site would be visible behind the substantial stock of existing tall, forest scale trees and buildings. Compared to the approved concept, the proposed amending concept appears as a consolidated, substantially lower building group in the north. The higher tower to the south is not visible in this view due to existing trees. When comparing the approved concept and the proposed amending concept the visual impact is reduced by the amending concept due to significantly less loss of visible sky resulting from the decreased heights of the proposed northern tower.

The impact of the proposed amended concept on views from Alexandria Park and the Alexandria Park Conservation Area is considered an improvement of the approved concept, contingent on achievement of design excellence in the proposed tall tower buildings.

In views towards the site from nearby roads (Viewpoint G), the montages of both the approved concept and the proposed amending concept illustrate that the taller buildings would again be the only element of the proposal visible above existing foreground buildings. When comparing the two concepts, the obvious difference between the two is that the towers of the amended concept appear as a consolidated, substantially lower building group in the north. The result is significantly less loss of sky in the view in comparison to the approved concept.

While the new skyline created by the towers of the amended concept will still change the character of these views, chiefly by decreasing the amount of visible sky, the amount of visible sky screened by the approved concept will be decreased by implementation of the amended concept and the consequent impact on views from these locations to the west of the site will be correspondingly decreased. Similar to the approved concept, we consider that with high quality design the new visible tower elements proposed by the amended concept will not impact negatively on the quality of these views. Rather, 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.

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



*Figure 50 – Viewpoint D – base photo 55mm focal length
Source: David Duloy*



Figure 51 – Viewpoint D – photomontage - approved concept
Source: David Duloy

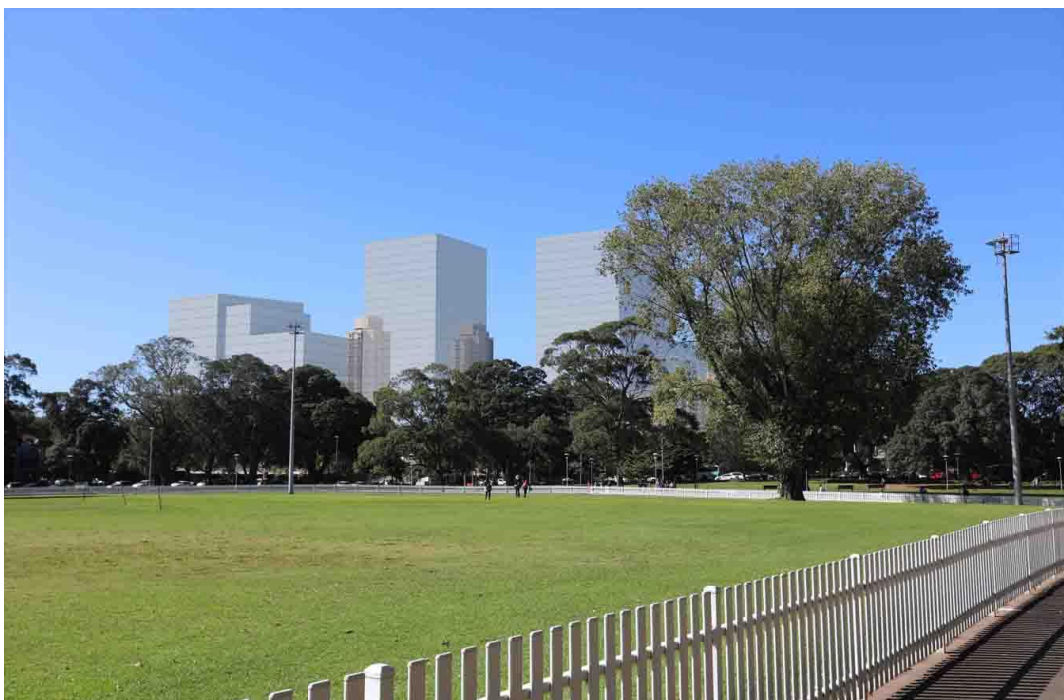


Figure 52 – Viewpoint D – photomontage - amended concept
Source: David Duloy

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



*Figure 53 – Viewpoint D1 – base photo 55mm focal length
Source: David Duloy*



Figure 54 – Viewpoint D1 – photomontage - approved concept
Source: David Duloy



Figure 55 – Viewpoint D1 – photomontage - amended concept
Source: David Duloy

Viewpoint H – Alexandria Park (north eastern edge)



***Figure 56 – Viewpoint H – base photo 55mm focal length
Source: David Duloy***



Figure 57 – Viewpoint H – photomontage - approved concept
Source: David Duloy



Figure 58 – Viewpoint H – photomontage - amended concept
Source: David Duloy

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



***Figure 59 – Viewpoint G – base photo 55mm focal length
Source: David Duloy***



Figure 60 – Viewpoint G – photomontage - approved concept
Source: David Duloy

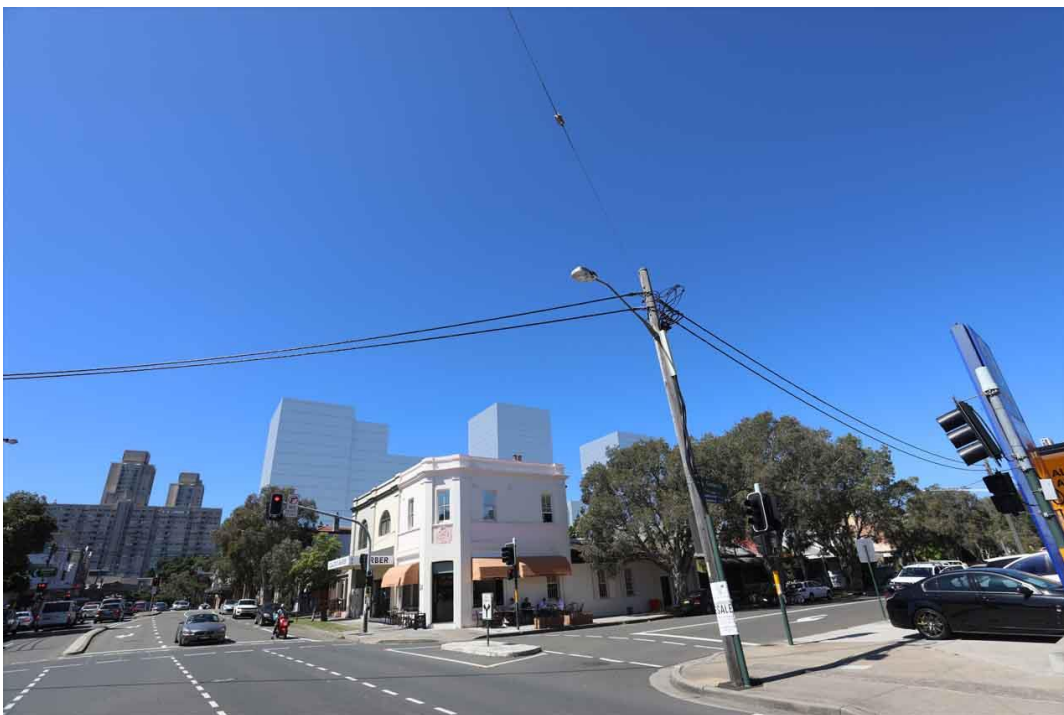


Figure 61 – Viewpoint G – photomontage - amended concept
Source: David Duloy

Views from the east

As stated in Cardno's previous assessment of visual impacts views towards the Metro Quarter 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 Metro Quarter site available from the parks and streets in this location. As a result neither the approved concept nor the proposed amending concept will have any impact on views from these locations to the east.

10.4 Distant Views

10.4.1 Visual environment

In the highly developed regional environment that incorporates the Metro and Waterloo sites, opportunities for panoramic long views towards the sites are limited. The only open distant view from a public place that incorporates the Precincts 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.

10.4.2 Capacity to absorb change

The capacity of the land adjoining the Metro site remains unchanged since Cardno's previous assessment of visual impacts of the currently approved Concept Proposal.

In distant views, notably from Sydney Park, the 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 Metro site, 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 Metro development would not be likely to increase the impact of this element on the view. Moreover, the Metro site 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

10.4.1 Amount of change on distant views resulting from the proposal

As described in Cardno's previous assessment of visual impacts the assessment of distant views is constrained to Sydney Park which is the most representative publically available regional view that includes the Metro / Waterloo sites. Comparison between the approved concept and the proposed amending concept has therefore been facilitated via preparation of amended massing montages from Sydney Park (Viewpoint E).

Comparison of the montages indicates that the difference between the approved concept and the proposed amending concept is relatively minor from this view. In both concepts the proposed towers will be the only new elements visible in this view post construction of the Metro proposal. The key difference between the two concepts is that the towers in the proposed amending concept appear lower but with increased bulk and less building separation visible to the north. This results in increased visibility of the built form at the lower level, offset by less loss of visible sky in the view. 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 Metro development, as per the proposed amending concept, would be an acceptable addition to the view.

In response to a request from City of Sydney Council, the impact of the proposal from Hollis Park, a suburban park in Erskineville approximately 1.5km west of the Metro site, was also assessed in Cardno's assessment of visual impacts of the now approved concept proposal. The results of this assessment, illustrated in viewpoint F, indicated that the Metro development of the approved concept would not be visible in views from the Park. For consistency an amended wire diagram of the proposed amended concept from viewpoint F was also produced. This indicated that the amended concept buildings would also sit below the line of sight and would not be visible from this location.

In summary, the impact of the amended concept proposal on distant views would be acceptable.

Viewpoint E – Sydney Park (Hill top)



Figure 62 – Viewpoint E – base photo 55mm focal length
Source: David Duloy



Figure 63 – Viewpoint E – photomontage - approved concept
Source: David Duloy



Figure 64 – Viewpoint E – photomontage - amended concept
Source: David Duloy

Viewpoint F – Hollis Park, Erskineville

From Hollis Park and its neighbourhood, the developed Metro site would be obscured from view by existing buildings and vegetation.



*Figure 65 – Viewpoint F – base photo 55mm focal length
Source: David Duloy*



Figure 66 – Viewpoint F – wire diagram - approved concept
Source: David Duloy



Figure 67 – Viewpoint F – wire diagram - amended concept
Source: David Duloy

11. Summary of assessment outcomes

Our assessment has found that the visual impacts of the proposed amended concept will be generally decreased in comparison to the approved concept, due to the proposed decrease in the height of the northern tower element.

For consistency with the previous assessment of visual impacts, and to further assess the suitability of the proposed amended concept in its locality with respect to changes to the local and regional visual environment, an additional assessment of the amended concept was carried out against the series of visual quality based Planning Principles described in section 8 of this report. The outcome of this assessment highlighted that both the approved concept and the proposed amending concept met the requirements and achieved all five Principles in very similar ways. As a result the response to each Principle for the proposed amended concept described below is very similar, if not the same, to that of the approved concept that was described in the previous assessment of visual impacts.

- **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 proposed amended concept protects the Congregational Church and improves its significance as a local landmark by setting it within a more open context incorporating increased setbacks of adjacent development to Botany Road, inclusion of a new pedestrian “street” connection along its northern boundary and developing a new community square addressing the Waterloo residential precinct adjacent to the Church. The proposed amended concept also provides an additional through site ground level link between Botany Road and Cope Street.

Aside from the constraint of the Congregational Church, this Principle is relevant to the Metro Quarter only in how it relates to the character of the greater Waterloo Precinct.

Notwithstanding that the Metro Quarter indicative concept would constitute a major 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 major increase in amenity for the existing and future residential community. Detailed design, particularly of the new public domain, 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 amended concept to be positively consistent with this principle. It incorporates tall, well separated building forms that, subject to design excellence in their delivery, will contribute to a distinctive and interesting urban skyline that 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 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 (Viewpoints 1-4). With movement away from the site, the amount of sky lost in the view decreases. From within the Waterloo Estate (Viewpoints 5-9) the impact of the proposal is generally restricted to the intrusion of the proposed tall towers on the skyline.

This assessment has found that in comparison to the approved concept, the proposed amended concept results in a reduced height of the northern tower leading to increased visibility of open sky in the majority of views assessed. This constitutes a significant improvement in the overall visual impacts of the proposal.

- **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 development will contribute positively to the open character of the locality due largely to the proposed treatment of the ground plane which will include a new public plaza and two through site pedestrian connections from Botany Road to Cope Street, including the additional through site link at the northern edge of the Plaza. The introduction of a series of tall, well separated towers above a coherent podium with substantial new ground plane, increased in area in the amended concept, open community spaces and connections 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 supplemented by additional trees in the new community space and through site link is included in the indicative concept as part of the approved concept. No changes are proposed as part of the amending concept. The success of the indicative concept in satisfying this principle will be contingent on tree species selection and provision of sufficient space for trees to develop to maturity. We understand that a street tree plan will be provided by Aspect Studio which will generally include:

- *Lophostemon confertus*;
- *Corymbia eximia*;
- *Robinia pseudoacacia* 'Frisia'
- *Waterhousea floribunda*;
- *Harpullia pendula*;
- *Lagerstroemia indica*;
- *Brachychiton acerifolius*.

This planting scheme 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 Metro site as proposed in the amended concept will not extend this

negative characteristic. In views that include the existing “development walls”, the proposal Metro towers 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). By creating distinctive slender architectural forms, the new towers will serve as visual relief to these currently unbroken building forms.

In summary, we consider that the proposed amending concept will contribute positively to the local and regional visual environment with respect to these Principles. On balance we have found that the reduced height of the northern tower, resulting in substantial improved visibility of open sky and less visibility of built form will offset the additional lower level building mass proposed in the amending concept, resulting in a net improvement in impacts of the amended concept on local and regional visual quality. We therefore consider the proposal suitable for its locality with respect to changes to the local and regional visual environment.

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

In this matter in the NSW Land and Environment Court the Commissioners established principles specifically to guide assessment of visual impacts of development on the public domain. The Cardno 2018 visual impact assessment included a review of the visual impacts of the proposal against these Principles. Following is an updated review based on the proposed amended concept.

Identification stage

Nature and scope of views

“The first step of this stage is to identify the nature and scope of the existing views from the public domain.”

- Approved concept
The views identified in the assessment of this proposal are composed exclusively of man made elements – buildings, roads and pavement, planted vegetation and constructed open space and recreation areas. The open sky is the only natural element in the views. Trees and green spaces are naturalistic elements in the views that provide visual relief. As such they are important contributors to the visual quality of the locality. The elements in the views are all static and only subject to change as a result of further human interventions such as development. In turn, the quality of the views is contingent on the aesthetic quality of the individual man made elements and their composition in relation to one another. Impacts of changes to these views will be contingent on the design quality of the new elements of any development. With respect to the natural (or naturalistic) elements, whether impacts of change are positive or negative will depend, among other things, on the extent to which the natural and naturalistic elements are obscured or enhanced by the change.
- Proposed amended concept
The nature and scope of existing views from the public domain remain unchanged.

Location

The second step is to identify the locations in the public domain from which the potentially interrupted view is enjoyed.

- Approved concept
Locations of views have been determined via the process described in Section 10 of this report. A logical process was followed involving identification of the visual catchment of the site and ground truthing by site inspection to identify critical view locations within the catchment that are representative of general views towards the site from the public domain. The locations identified were agreed with officers of the City of Sydney.
- Proposed amended concept
For the purposes of this assessment of the impacts of the proposed amended concept against the approved concept, the same views have been selected.

“The third step is to identify the extent of the obstruction at each relevant location.”

- Approved Concept
The Principle maintains that views from the public domain should not be defined at any specific eye height. Viewers may be seated or standing. Visual interpretations for the purposes of this assessment have been prepared from height of a standing person. This is appropriate in the circumstances of this case as it can be assumed that close viewers would most likely be walking or standing in local streets. The exception would be viewers in cars or people seated in public spaces. However, views of the site in its developed state would not change appreciably from a seated or standing position.
- Proposed amended concept
This situation remains unchanged for the proposed amended concept.

“The fourth step is to identify the intensity of public use of those locations where that enjoyment will be obscured, in whole or in part, by the proposed private development.”

- Approved Concept
The intensity of the use of the locations studied will vary. With respect to close viewing locations, the intensity of use will inevitably increase significantly as a result of the proposed development of the Metro Station and Precinct. In the case of more distant locations (parks and streets in the surrounding neighbourhood) the intensity of use is moderate, typical of residential and recreational locations in an inner city location and the level of use would not be likely to change dramatically as a result of implementation of the proposal.
- Proposed amended concept
Again this situation will not change for the proposed amended concept.

“The final step to be identified is whether or not there is any document that identifies the importance of the view to be assessed.”

- Approved Concept
Views from the Conservation Management Areas within the visual catchment of the site are subject to protection under the SLEP 2012. Aside from this, there are no controls in the planning policies that pertain specifically to protection of views from the public domain.
- Proposed amended concept

Planning controls pertaining to protection of views from the public domain have not changed since the assessment of the approved concept.

Analysis of impacts

The Court guidelines go to quantitative and qualitative evaluations of impacts of development on views. With respect to quantitative evaluation the fundamental question to be posed is:

“If the view remaining (if the development were to be approved) will be sufficient to understand and appreciate the nature of the existing view.”

Some factors to be considered in qualitative assessment of visual impacts include, among other things:

- Is any significance attached to the view likely to be altered?
- If so, who or what organisation has attributed that significance and why have they done so?
- Is the present view regarded as desirable and would the change make it less so (and why)?
- Should any change to whether the view is a static or dynamic one be regarded as positive or negative and why?
- If the present view attracts the public to specific locations, why and how will that attraction be impacted?
- Is any present obstruction of the view so extensive as to render preservation of the existing view merely tokenistic?
- However, on the other hand, if the present obstruction of the view is extensive, does that which remains nonetheless warrant preservation (it may retain all or part of an iconic feature, for example)?
- If the change to the view is its alteration by the insertion of some new element(s), how does that alter the nature of the present view?
- Approved Concept
Existing views to the site from surrounding streets have been found to be of variable quality so that with respect to close views, the “nature of the existing view” is not a critical consideration in assessment of the impacts of the proposal. In more distant views from local and regional parks such as Alexandria Park and Sydney Park, our assessment has found that the more expansive views across the site available from these locations would change but would remain intact with regard to their “nature”. The proposed taller buildings would present as new elements in these views but they would not alter the fundamental composition of the views that currently include built elements, vegetation and sky.
- Proposed amended concept
Our opinion is that this situation has not changed with regard to changes to the composition of views towards the developed site.

With regard to the Courts principles for qualitative assessment, the following observations are made:

- Approved concept
Only views from Sydney Park would have any generally recognised significance. This is the only location within the identified visual catchment of the site that people would visit with the specific

intention of observing the view. To our understanding the significance of this view is popular rather than being formally recognised. Sydney Park attracts visitors to observe its panoramic city views at moderate levels in general times and in substantial numbers during special events such as New Year's fireworks. Our assessment has found that the quality of the view from Sydney Park would not be changed substantially by the proposed development and the enjoyment by visitors would not be noticeably impacted.

- Proposed amended concept

Our assessment has found that the impacts of the proposed amended concept on views from Sydney Park would be somewhat less than the impacts of the approved concept. The enjoyment of visitors to the Park would remain unaffected by the amended concept.

The change to the majority of views assessed is the result of the insertion of new built elements – the built podium and taller buildings of the proposed Metro Precinct development. The views will alter as a result to varying degrees. In close proximity, views will alter significantly where the podium and taller buildings will replace the existing built form. View alteration will be moderate to minor from distances further away from the site where only the taller buildings will appear as new elements in views that are currently dominated by other built elements as well as trees and sky. Our general finding is that, contingent on achievement of high quality design outcomes, the proposal will result in improvements to the quality of all of the views assessed. This finding remains with regard to the impacts of the proposed amended concept.

12. Mitigation measures

The following overarching mitigation measures are recommended to be applied to the amending concept application in order 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:

- Further design development to result in a high quality ground plane.
- 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 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.

13. Conclusion

This study of the likely impacts of the amending concept of the proposed development of the 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 4 of the report. It has been informed by the outcomes of the earlier completed visual impacts of the approved concept for the site (Cardno, 21 August 2018).

The assessment has been carried out with the aid of electronically generated photomontages over a series of photos from surveyed locations.

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

- The proposal will impact on views from streets immediately surrounding the Metro Quarter site and from street blocks to the east of the site within the Waterloo Estate. However, in comparison with the approved concept, the proposed amending concept will result in additional visibility of open sky and a consequent improvement in the level of visual impact of the proposal, increased visual permeability at street level and greater setbacks of the towers at podium level. Mitigation measures to address the visual impacts the proposal will have on views from streets immediately surrounding the Metro Quarter site and from street blocks to the east of the site within the Waterloo Estate will include design development to result in a high quality ground plane including allowance for healthy growth of forest scale trees in the street and other propose public places.
- The proposal will significantly improve the visibility of the Waterloo Congregational Church building by setting back new built form from the northern and southern boundaries of the Church, creating a broad through site link on the northern side of the Church and increasing street setbacks to Botany Road on either side of the Church to align with its street building line. The net result of the proposed development will be to open up new view lines to the Church and provide it with an open curtilage that will enhance its heritage values.
- The proposal will be only moderately visible from other parts of the Waterloo Precinct and from the west. When compared to the approved concept the proposed amending concept is considered to have less visual impacts on views within Waterloo Estate. 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 towers.
- 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. Comparison between the approved concept and the proposed amending concept showed that the amending concept results in reduced visual impact due to less loss of sky as a result of reduced tower heights. If designed against principles of design excellence, the taller buildings in the proposal have the potential to improve the quality of these distant regional outlooks by creating architectural relief to the continuous building "walls" in these views.

- The amended concept proposal has been found to have an acceptable impact 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 amended concept proposal has been found to be consistent with the visual quality Planning Principles for development of the Waterloo Precinct and Metro Quarter and is considered to be worthy of support with regard to its effects on the existing visual environment of the site and its locality.

Contingent on the recommended mitigation measures in this report, the amended concept proposal has been found to be worthy of support with regard to its effects on the existing visual environment of the site and its locality.