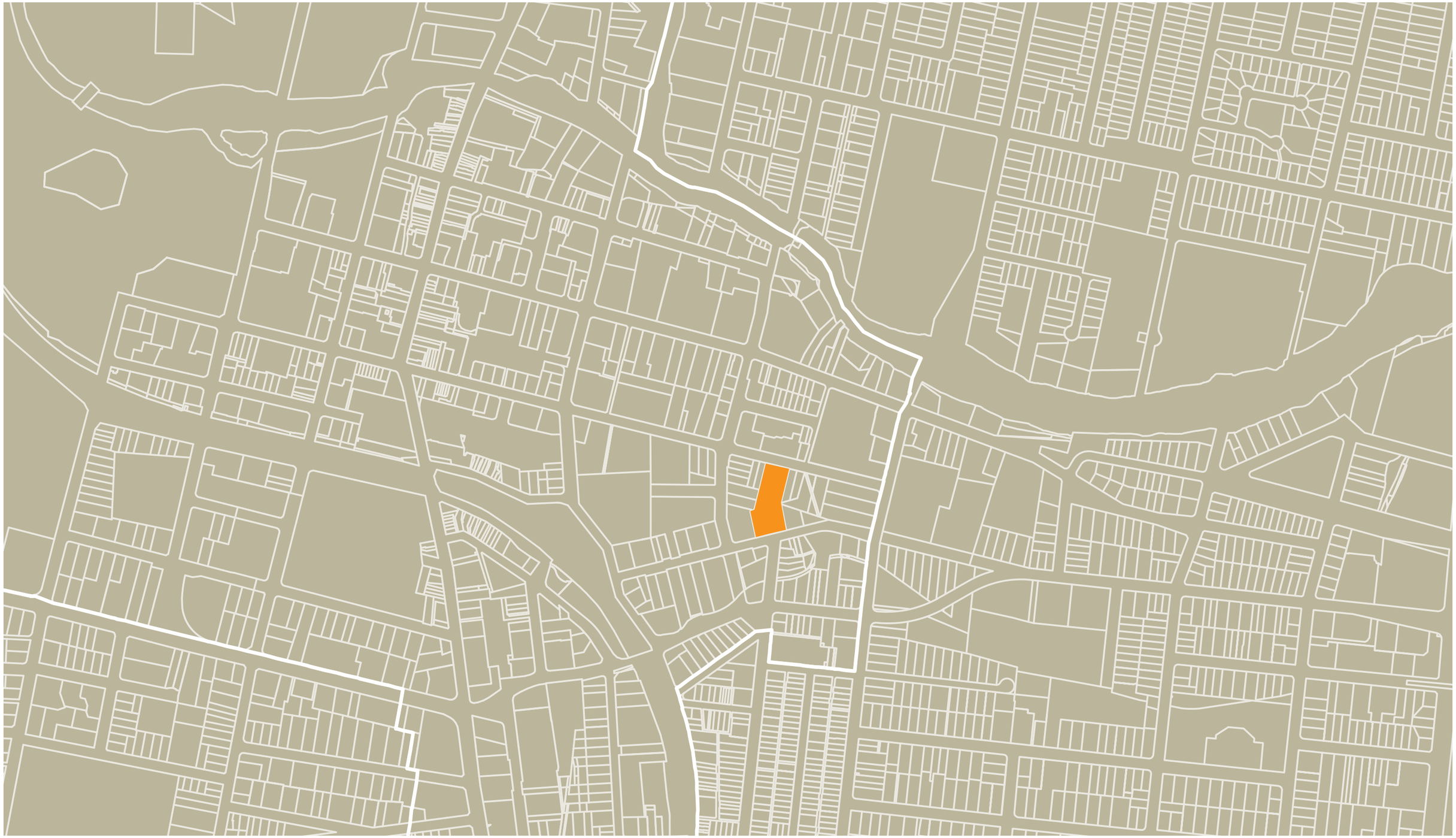

URBAN DESIGN REPORT
FOR 189 MACQUARIE STREET, PARRAMATTA

September 2015

GMU

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1. INTRODUCTION

1.1 THE BRIEF

GM Urban Design and Architecture (GMU) has been engaged by Toplace Pty Ltd to prepare an urban design report in support of a Planning Proposal for the site at 189 Macquarie Street, Parramatta. The site is currently under construction in accordance with DA 852/2013 which granted consent for a new mixed use development with 10 floors of public and residential car parking and two 24-storey towers.

The purpose of this report is to consider whether the site is justified in seeking a development of greater height given the recent changes in the new CBD Planning Strategy by Parramatta City Council. The review also includes recent approvals and Planning Proposals in the vicinity of the site.

In the context of Parramatta, the study considers the broader planning framework for the surrounding area, the intent of the Sydney Metropolitan Strategy for Parramatta and the role of the site as part of the future of Parramatta CBD. In formulating the views expressed in this report GMU has:

- Visited the site, its immediate and broader context;
- Reviewed the Sydney Metropolitan Strategy '*A Plan for Growing Sydney*' and the Sub Regional Strategies;
- Reviewed the current controls for the site and the surrounding area;
- Researched previous studies for Parramatta;
- Reviewed Planning Proposals approved at the Gateway stage for other sites in Parramatta, Camellia, Westmead and Granville;
- Reviewed recent DA approvals for other sites located in vicinity of the site;
- Reviewed controls for Parramatta CBD and other centres in the broader context;
- Considered the site and the block from various vantage points; and
- Considered any potential additional overshadowing or visual impact created, in particular to the heritage-listed Experimental Farm Reserve and Experimental Farm Cottage.

In undertaking this study GMU has considered the true potential of the centre and the site. The subject site is a large land holding in Parramatta City Centre that offers major potential for redevelopment. As Parramatta CBD undergoes transformation, this site will provide a contribution to creating a second CBD for the Sydney metropolitan area.

The recent change in focus by Council to encourage larger viable developments has resulted in a renewal of interest in Parramatta City Centre.

The current approval is a viable outcome for the subject site. However, the size of the site and its location presents a reasonable justification for a further review of the built form in light of the scale change near the site.

1.2 THE SUBJECT SITE

The site characteristics are as follows:

- The site's area is approximately 5,170.4m^2.
- The dimensions include 40.25m along the Macquarie Street frontage and 51.69m along Hassall Street frontage. The length of the site along the eastern edge is approximately 80m and 100m along the western edge.
- The slope of the site is approximately 2m from RL6.0 in the north to RL8.0 in the south.
- The site is subject to flooding. The 100 year ARI flood level estimated for Macquarie Street is RL 6.16 and the PMF (Probable Maximum Flood) level has been estimated to be RL 9.74. This results in a level of RL 6.66 to be applied to any entries within the development (this height includes a freeboard of 500mm).
- Construction of the approved development is currently underway.

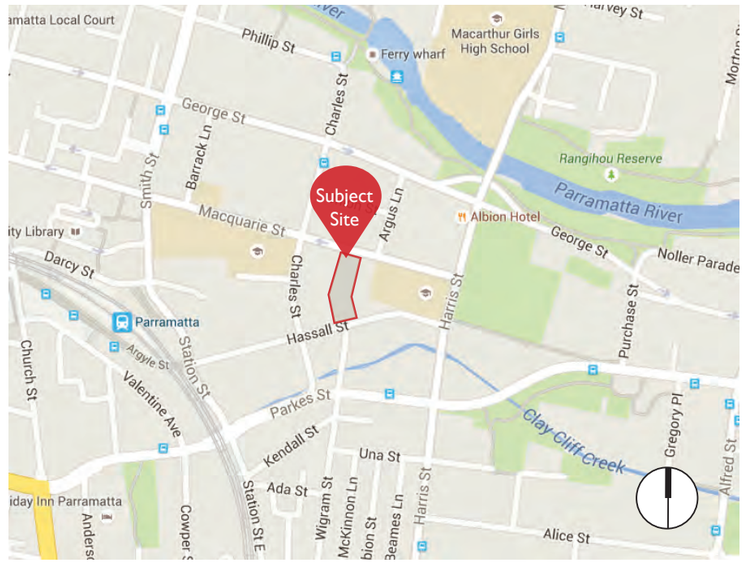


Figure 1. Location of the subject site in Parramatta CBD.

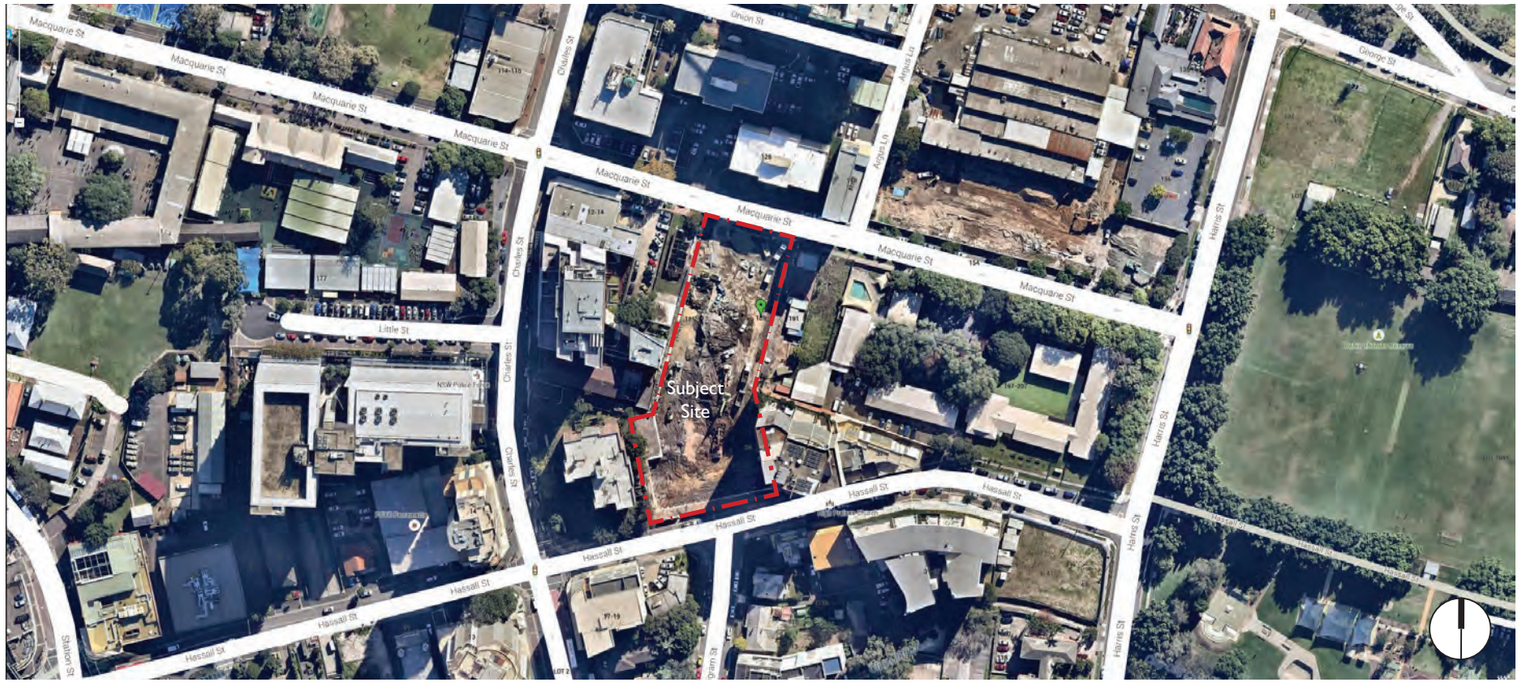


Figure 2. Aerial photo of the subject site (source: NearMap)

1.3 EXISTING PLANNING PROPOSAL & DA APPROVAL

The site has recently benefited from an amendment to the planning controls to allow a height of 83m and potential for a 10% bonus. This allows the site to be built up to 90.6m and 30 storeys for both towers. This is consistent with the new direction for Parramatta for height increases in the centre and to the north of the CBD. A design competition has been held for the site and subsequently a Development Application (DA/852/2013) has been approved allowing for a mixed use development that has a total height of 90.6m (RL98.5 at roof level) with Gross Floor Area of 36,000m^2 (not including communal areas or enclosed balconies). The approved scheme has a FSR of 6.96:1 compared to the LEP maximum allowable FSR of 6:1. The site has the benefit of the 15% design excellence bonus which permitted 6.9:1.

The DA approval is shown in the images on this page.

The recently adopted *Parramatta CBD Planning Strategy* suggests that the approved height will not achieve the appropriate scale and transition for this part of the city relative to new developments and height strategies.

Figure 3. Photomontage - DA approved scheme by KTA

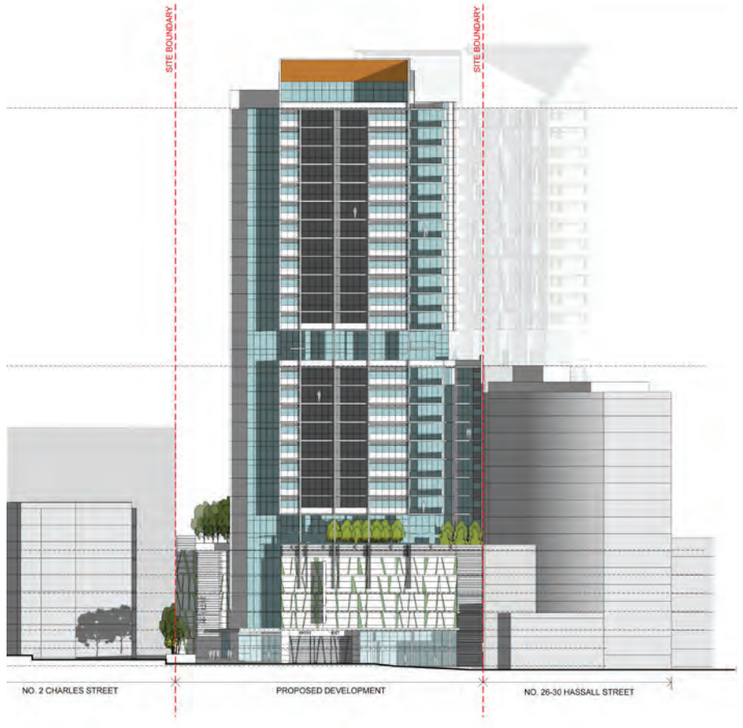


Figure 4. North elevation - Macquarie Street

Figure 5. South elevation - Hassall Street

1.4 METHODOLOGY

To investigate any opportunities for greater heights, GMU have researched the broader strategic framework to understand the role that the State Government intends for the centre. We have undertaken a comprehensive analysis of the structure of the CBD including the existing centre, recent Planning Approvals and planning strategies. We have compared other city skylines to understand the potential role and appropriate massing for Parramatta CBD.

GMU has considered the surrounding streetscape, the existing heritage values and the movement links to create the best built form outcome for the site. A desktop review of applicable controls has been undertaken.

GMU's analysis has documented a number of additional opportunities for the subject site beyond those realised by the current development approval. These include:

- Contributing to the creation of an interesting and taller skyline for the Parramatta CBD;
- Providing height transition that acknowledges increases in height for the eastern part of Parramatta CBD based on new proposed heights at the centre and edges of the CBD;
- Seeking a height that relates to the changing vision for Parramatta CBD whilst also ensuring no adverse overshadowing impacts that affect the significance of Experiment Farm Reserve and Experiment Farm Cottage within the context of a city scale;
- Further celebrating the termination of the visual axis from the south along Wigram Street;
- Capturing district views;
- Maintaining the current DA approval's architectural character as part of any height increase that may be appropriate to ensure design excellence is achieved;

Having identified the above opportunities, GMU has carried out extensive 3D modelling of the existing, approved and proposed heights of the Planning Proposals in the context of the site to understand the height directions for this part of the CBD. We have also considered potential overshadowing impacts on heritage item in the vicinity of the site.

Based on the above, GMU have explored a number of built form options to examine greater height for the site. The analysis and testing of the built form options have informed the preferred strategy, the general conclusions and recommendations presented in the later chapters of this report.

2. ANALYSIS OF PARRAMATTA'S FUTURE ROLE

2.1 PARRAMATTA'S ROLE AND ITS REGIONAL CONTEXT

The chapter studies the broader strategic framework to understand the role that the State Government intends for the centre, combined with a comprehensive analysis of the structure of the CBD and Council strategies, such as 'Strategy 2038', '*Draft Parramatta City Centre Planning Framework Review Study*' and the '*New Parramatta CBD Planning Strategy*'.

Sydney Metropolitan Strategy - 'A Plan for Growing Sydney'
A Plan for Growing Sydney (Figure 2) establishes that:

- Parramatta is Sydney's second CBD and Western Sydney's number one location for employment and health and education services. The Strategy assigns Parramatta with the same importance as Sydney CBD - higher than Regional City Centres such as Penrith and Liverpool in the hierarchy;
- Parramatta is the single largest concentration of employment in Global Economic Corridor outside the Sydney CBD and it is anticipated to be the fastest growing centre;
- Parramatta is recognised and planned as a transformational place;
- Additional capacity for mixed-use development is to be provided in Parramatta CBD and surrounding precincts;
- 50% of the future population of Sydney will reside in Parramatta and Western Sydney (which is serviced by Parramatta); and
- Expansion of the current CBD into the surrounding precincts of Westmead, North Parramatta, Harris Park, Rydalmere and Rosehill/Camellia is also expected.

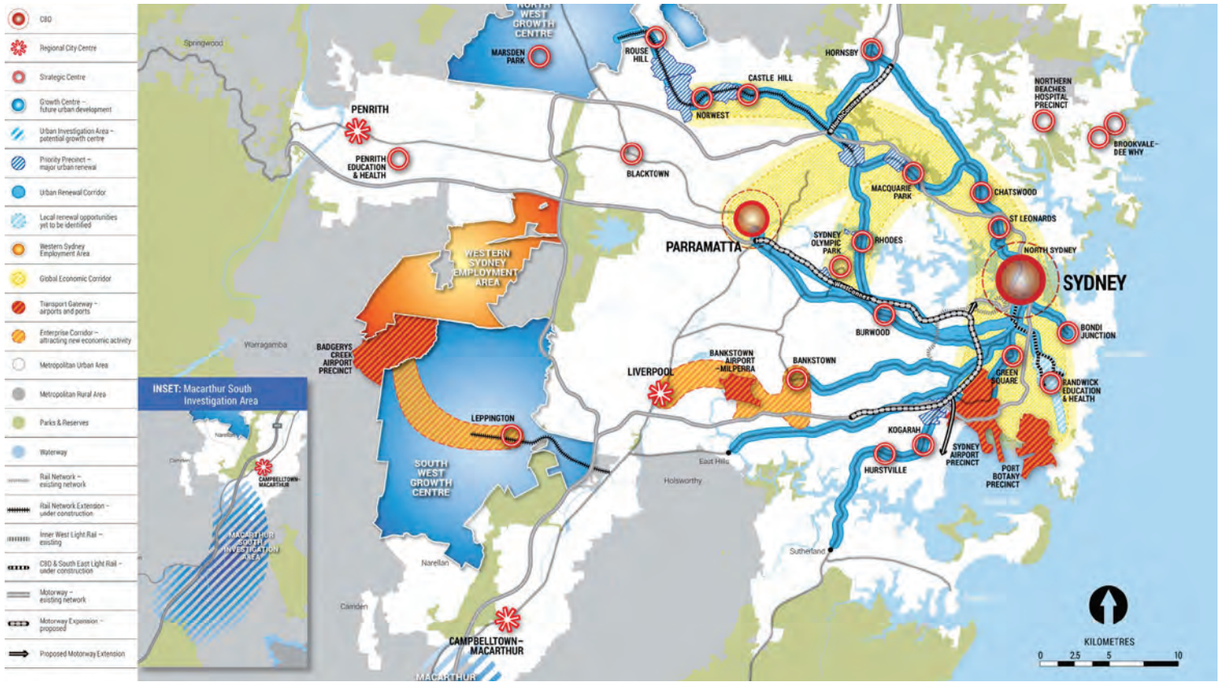


Figure 6. A Plan for Growing Sydney (source DoP&E website) - Parramatta is an anchor point on the Global Economic Corridor and Urban Renewal Corridor. The diagram above shows that Parramatta is intended to be the second CBD in the hierarchy of Sydney Metropolitan Area.

Parramatta 2038
The strategic role for Parramatta as Sydney's second CBD has not yet been realised. Major development will assist in realising the goal to achieve the future 'Global Scale Parramatta'. To respond to the role described in the Metropolitan Strategy, Parramatta Council has developed a Community Strategic Plan called 'Parramatta 2038' as a long-term plan for the City. This strategy is an updated version of the previous strategy 'Parramatta 2025'.

The new strategy investigates opportunities for Parramatta such as:

- The development of Parramatta CBD, Westmead, Camellia and Rydalmere;
- A Light Rail network and Local and Regional Ring Roads;
- The Parramatta River entertainment precinct; and
- A connected series of parks and recreation spaces.

The location of the subject site sits within the area identified by this strategy and offers the potential to contribute to the overall vision.

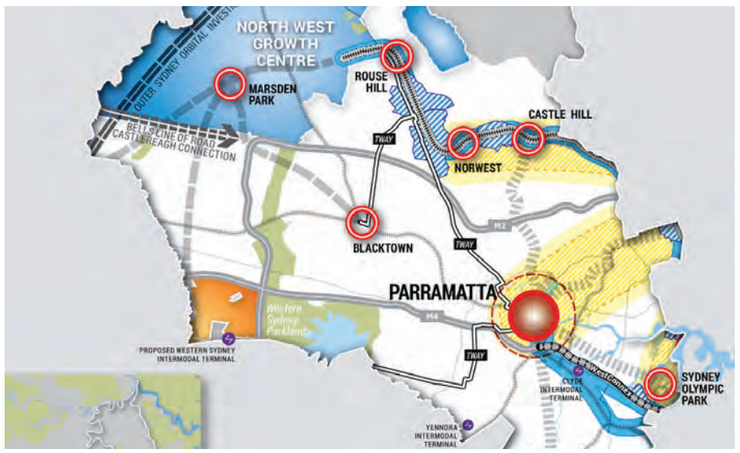


Figure 7. West Central Subregion diagram shows Parramatta as a CBD with Strategic Centres such as Blacktown, Sydney Olympic Park, Rouse Hill, Castle Hill and Bankstown as the satellites to Parramatta.

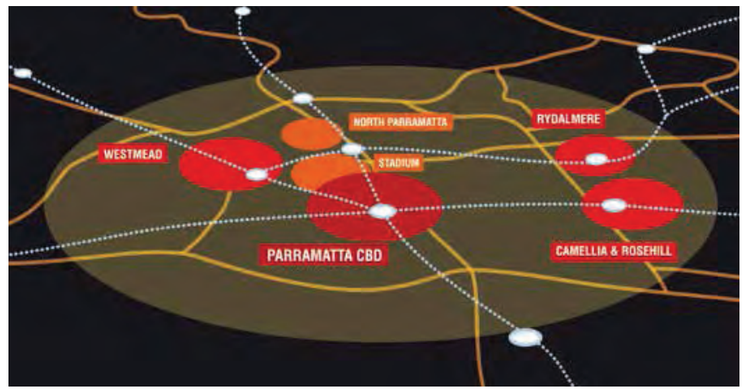


Figure 8. Community Strategic Plan - 'Parramatta 2038'

Key commercial precincts include Parramatta CBD, Westmead, Camellia and Rydalmere. The subject site on the eastern edge of the CBD creates a gateway to the city as approached from Camellia & Rosehill and from Rydalmere.

2.2 REGIONAL CONTEXT

Recent announcements about Sydney's new Airport at Badgery's Creek boosts the importance of Parramatta as a major City Centre. Proximity to the second airport will increase the importance of Parramatta as a place of employment and a liveable destination.

Other recent infrastructure projects announced by the State Government and Council also highlight the need for greater density and development in Parramatta including the area of the subject site. These projects include:

- Strengthening rail connections with more frequent express trains;
- WestConnex motorway project and the revitalisation of Parramatta Road;
- European-style Light Rail network from Castle Hill through Parramatta to Westmead and Macquarie Park;
- Laneways strategy; and
- Effective ring roads.

Western Sydney Regional Ring Road in context

> Proposed Regional Ring Road with complementary City Ring Road.

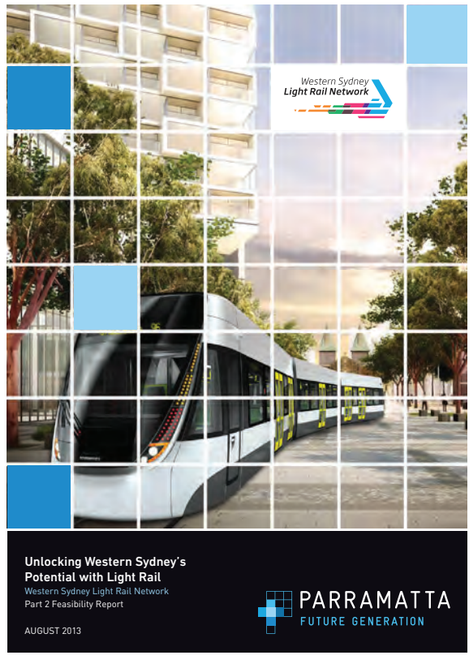
> The arrows show key road connections between proposed Ring Roads.

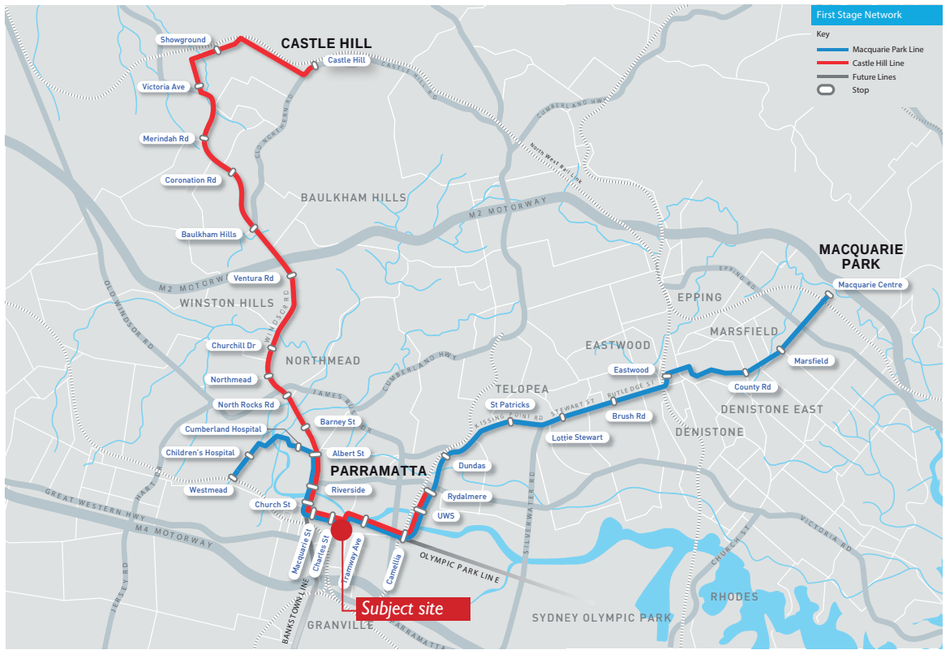
> The numbers refer to proposed improvement schemes 1-14. Colours indicate priority status: green - high, yellow – medium, red - low.

Regional Ring Road

City Ring Road

Figure 9. Western Sydney Ring Road (source: www.parracity.nsw.gov.au) - the Subject Site is located next to the internal City Ring Road. There are two major connections that feed into this side of the CBD which are from Camellia and from Rydalmere as well as through Victoria Road, which connects to Ryde. The diagram above shows that the Eastern approach to Parramatta is one of the most important and that the site could potentially act as a marker or the Eastern gateway to Parramatta.





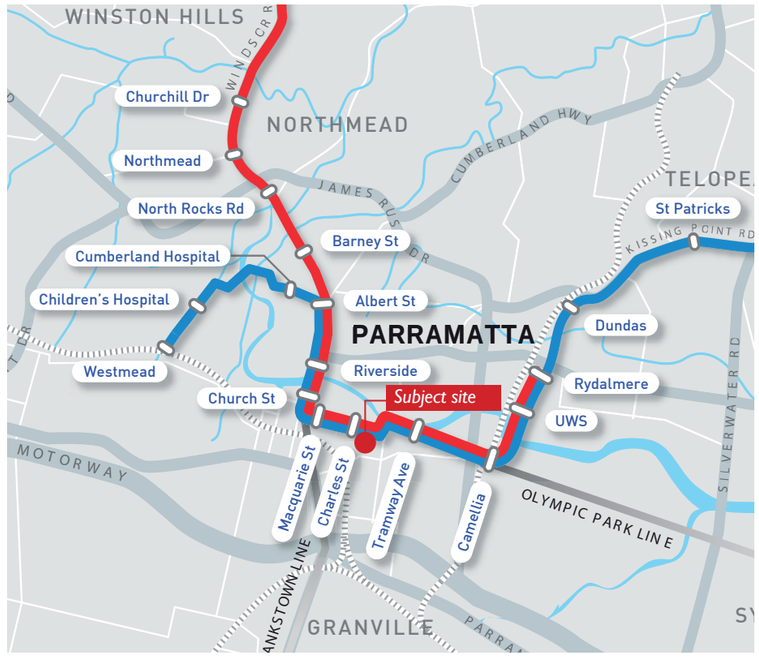


Figure 10. Western Sydney Light Rail project (source: www.parracity.nsw.gov.au) - the new tram light will bring a 'European' character to Parramatta. The connectivity between the main Specialised Centres and further to the north will be provided with two lanes, which both run next to the subject site as shown on the diagram to the right.

2.3 SCALE AND CITY STRUCTURE

The transformation of Parramatta has already started. This can be seen in the recent Planning Proposals within the CBD that have been approved to the Planning Proposal Gateway. These approvals increase the maximum height for the CBD up to 280m.

Approved Planning Proposals seek to increase the current LEP heights applying to various sites up to 10 times those within the current controls. Apart from the Planning Proposals, Council has also provided strategies for redevelopment of parts of the centre such as the intensification of the area around the Parramatta River.

All of these examples demonstrate that Parramatta is increasing its role and significance in NSW, as well as the Sydney metropolitan area.

SUBJECT SITE

PARRAMATTA CBD BOUNDARY

PARRAMATTA RIVER - CONNECTION BARRIER

RAILWAY LINE - CONNECTION BARRIER

MAJOR ROAD - CONNECTION BARRIER

MAIN GREEN OPEN SPACES

MAJOR AXES OF THE CITY
(Skeletal city structure along Church & Macquarie streets)

1. ASPIRE TOWER, 160-182 CHURCH STREET
(LEP height of 200m, approved to 280m/90 sty)
2. ALTITUDE, 330 CHURCH STREET
(LEP height of 200m, approved to 185.3m/58 sty)
3. DISCOVERY CENTRE, 331A-339 CHURCH STREET
(LEP height of 80m, approved to 150m/41 sty)
4. AUTO ALLEY PRECINCT
57, 63 & 83 CHURCH STREET 44 EARLY STREET
(LEP height of 12m, approved to 141.7m/44 sty)
5. V BY CROWN, 45 MACQUARIE STREET &
134-140 MARSDEN STREET
(LEP height of 54m, approved to 102.2m/30 sty)
6. 142-154 MACQUARIE STREET
(LEP height of 54m, approved to 157m/50 sty equivalent; potential to achieve 180m with 15% Design Excellence bonus)
7. 181 JAMES RUSE DRIVE, CAMELLIA
(LEP height of 12m, approved to 86m/28 sty)
8. WESTFIELD, 159-175 CHURCH STREET
(LEP height of 36m, approved to 120m/20 sty)
9. 184-188 GEORGE STREET
(LEP height of 36m, approved to 120m/38 sty)
10. 5-7 PARKES STREET
(LEP height of 18m, approved to 72m/24 sty)
11. 8-12 VICTORIA ROAD & 2A VILLIERS STREET
(LEP height of 24m, approved to 24 - 49m/15 sty)
12. 78-100 CHURCH STREET
(LEP height of 28m, approved to 126m/39 sty)

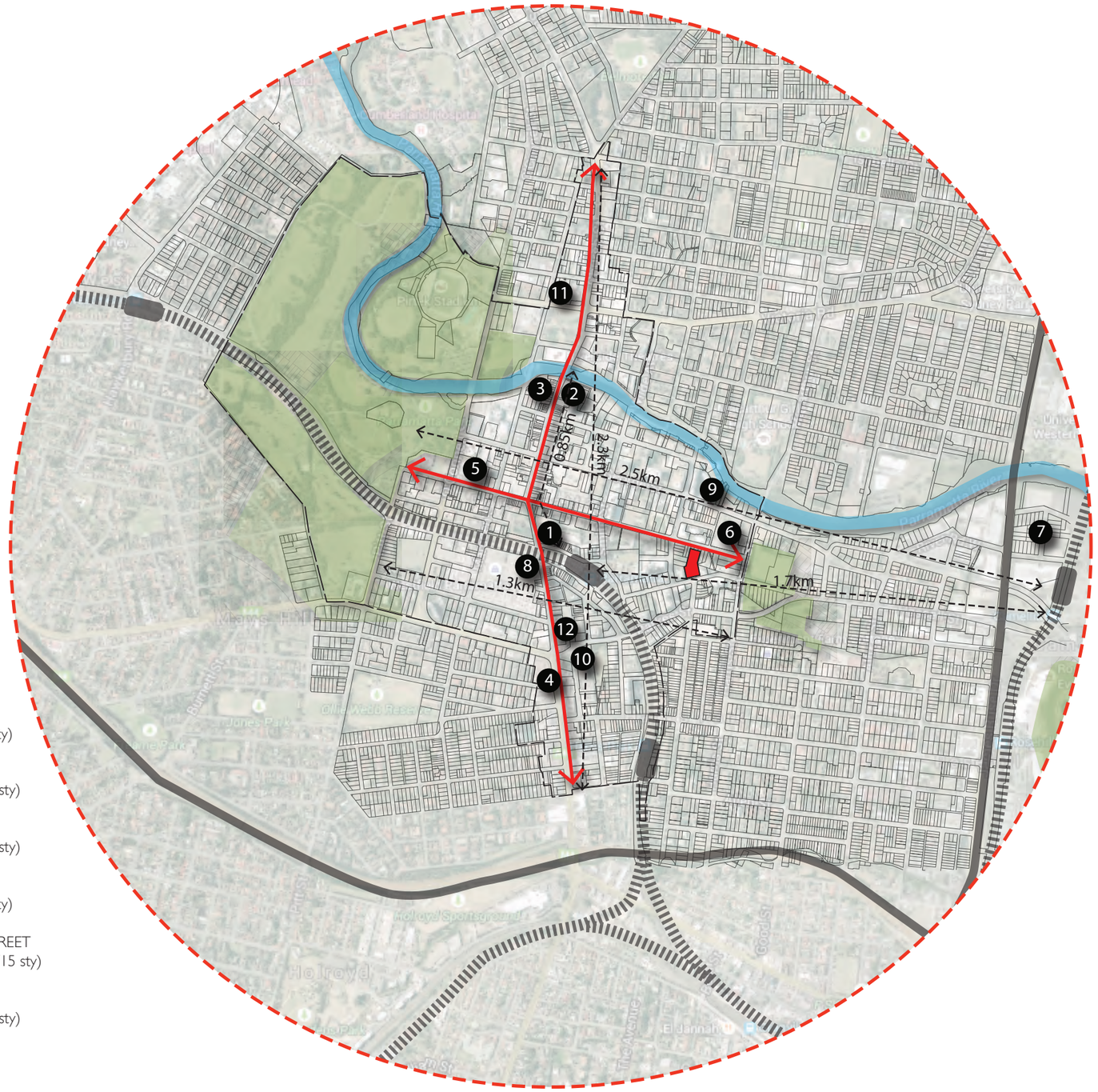
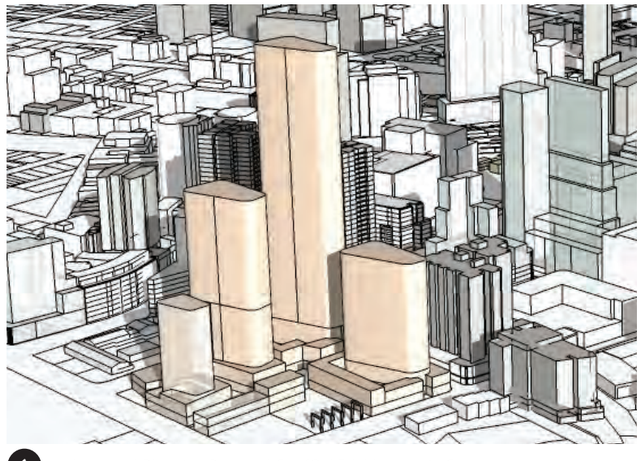


Figure 11. Location of the main planned/approved developments in Parramatta

2.4 RECENT DEVELOPMENT STRATEGIES AND APPROVALS IN PARRAMATTA

Development in Parramatta from 'Think inside the Square' - Council's brochure

Parramatta River Strategy - view from north-east



6 *Approved Planning Proposal for 42-154 Macquarie Street*

1 *Artist impression of 'Aspire' at 160-182 Church Street - tallest building in Parramatta*

2 *'Altitude' Apartments by Meriton*

3 *Artist impression of the Discovery Centre designed by JPW*

12 *39 storey mixed use development at 78-100 Church Street by Dyldam Development*

13 *Developments around Parramatta Square*

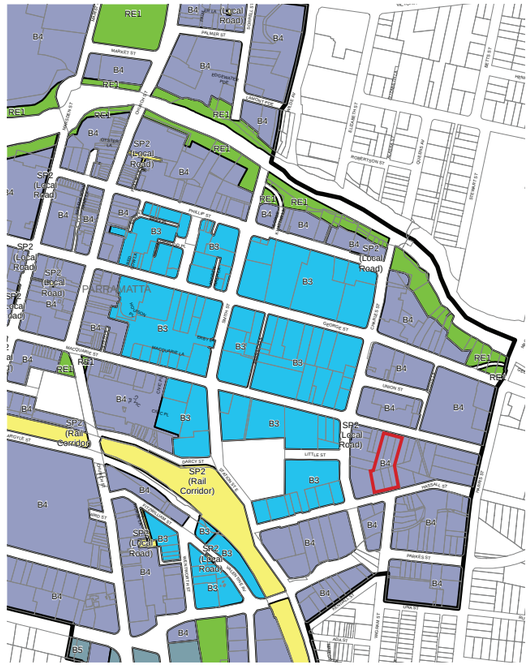
2.5 CURRENT CONTROLS FOR PARRAMATTA CBD

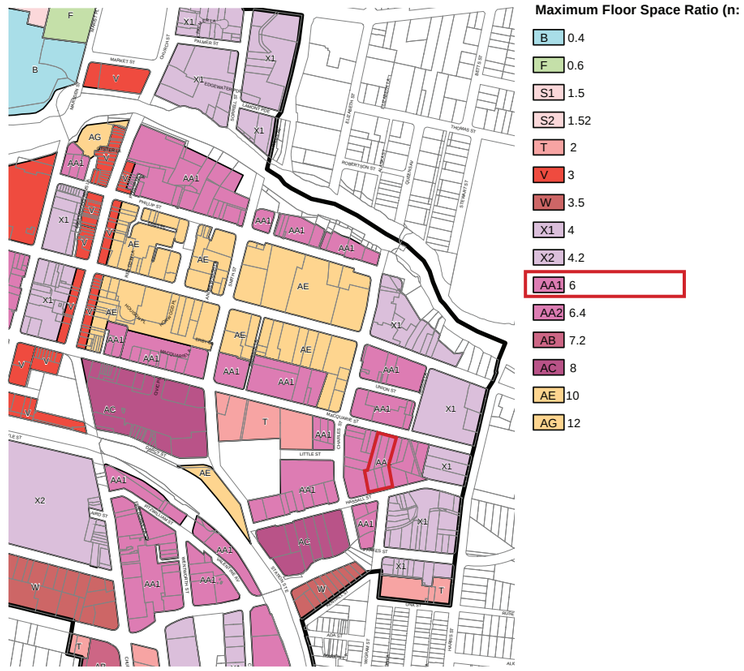
GMU's analysis of the applicable controls has concentrated on the built form of the subject site as well as overall built form patterns for the eastern part of the centre. This analysis, along with previous studies conducted by GMU in the area have helped us understand the outcomes of the existing controls under Parramatta City Centre LEP 2007 and the new directions currently being considered by Council.

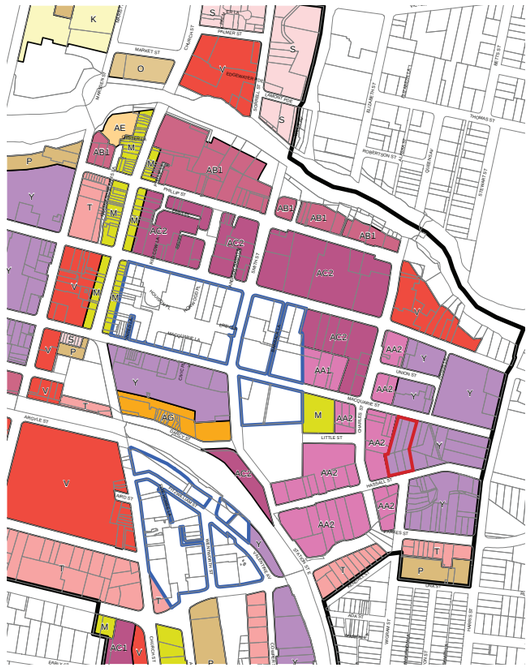
The subject site is zoned B4 Mixed Use, with an allowable maximum height listed under the site specific clause in the LEP - Clause 22J(2)(d) that allowed development on this site to increase from 54m to 91.3m.

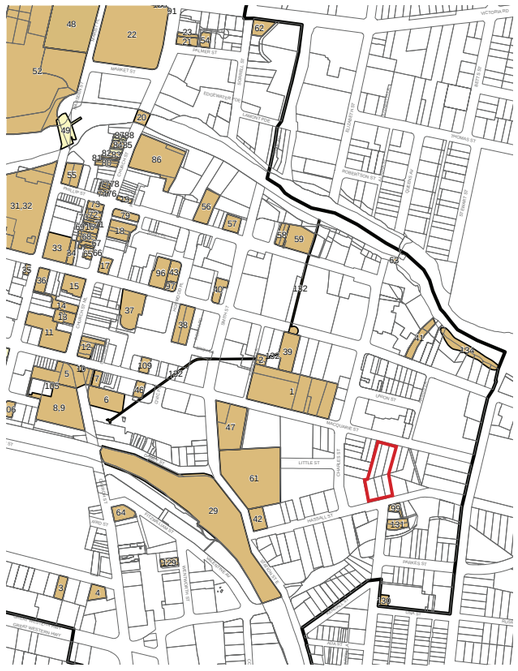
The site also benefits from a change in the floor space ratio change from the previous 6:1 to 6.9:1 and an allowable 36,000m2 of floor space on the site with and exclusion of 2,750m2 of GFA for the purpose of communal open space or wintergardens not included as GFA.

Recent Planning Proposals are amending the heights on a number of sites in the CBD. These changes are reflected on the height and FSR map for Planning Proposals recently approved or through the Gateway.









2.6 NEW STRATEGIES FOR PARRAMATTA CBD

Draft Parramatta City Centre Planning Framework Review Study

In light of the new direction from for Parramatta CBD, Council commissioned consultants to prepare the *Draft Parramatta City Centre Planning Framework Review Study* in 2014 .

The Draft Study reviewed the current planning framework and identified opportunities, constraints and market conditions to support the city's progression to a premier CBD. The study explored four built form scenarios for future development in the Parramatta CBD as follows:

- Scenario A - existing controls;
- Scenario B - no height or FSR controls;
- Scenario C - increased FSR, no height controls; and
- Scenario D - increased height, no FSR controls.

Having compared the outcome of each scenario, the Draft Study recommended Scenario C to be the preferred approach for Parramatta. The study considered that this scenario allows for the projected floorspace demand within Parramatta and encourages tall, slim towers. As part of Scenario C, an increased FSR of 10:1 was recommended for the main central area, which is comparable to (although slightly less than) those of Central Sydney.

The study also considered various options for potential expansion of the CBD boundary:

- Option 1 - minor amendments;
- Option 2 - local growth;
- Option 3 - significant growth; and
- Option 4 - broader area.

The new expanded CBD boundary has been determined by Council after having considered Parramatta's economic growth and the associated built form testing. Council's proposed new CBD boundary is shown on the following page.

The above recommendations in the Draft Study were used to inform the preparation of the new P*arramatta CBD Planning Strategy*. The new Strategy was subsequently adopted by Council on 27 April 2015.

The 10:1 FSR would increase development potential on the subject site and therefore created the opportunity to consider a greater height for the site in line of the new direction for Parramatta CBD.

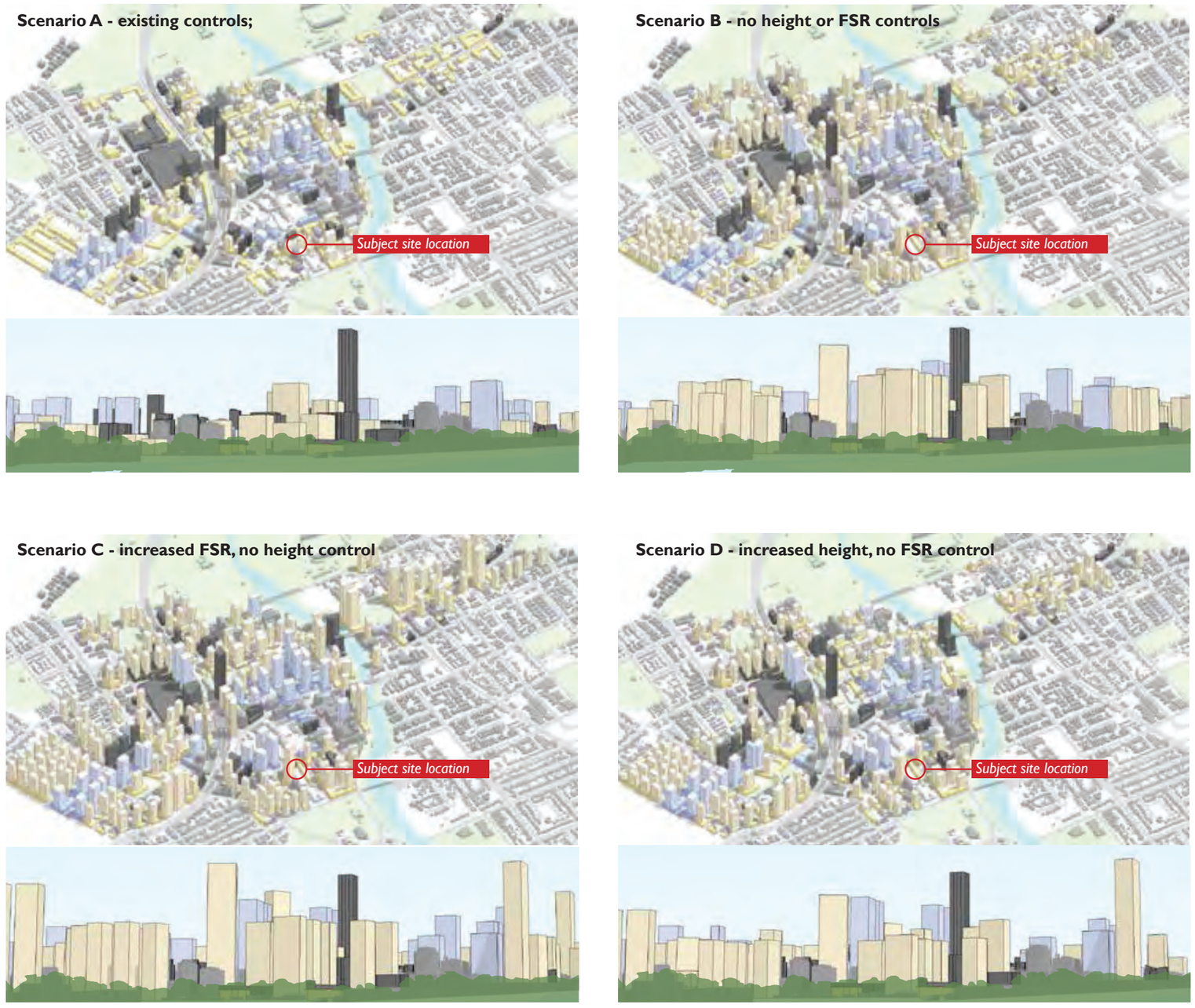


Figure 12. Comparison of built form scenarios for Parramatta CBD (source: Draft Parramatta City Centre Planning Framework Review Study by Architectus)

Parramatta CBD Planning Strategy

The recently adopted *Parramatta CBD Planning Strategy* has a vision to develop Parramatta into "*Australia's next great city, defined by landmark buildings and high quality public spaces with strong connections to regional transport. It will respect its heritage, be an exemplar in design excellence, facilitate job growth and ensure its streets are well activated.*"

In general, the Strategy has set out the following six actions:

1. To potentially expand the boundaries of the CBD;
2. To amend primary built form controls with:
   - overall increase of FSR;
   - solar access to key public spaces;
   - potential removal of maximum building height controls;
3. To potentially expand Parramatta's commercial core;
4. To facilitate local infrastructure upgrades;
5. To establish tower slenderness controls depending on the floorplate Gross Building Area;
6. To encourage design excellence with a 15% FSR bonus;

The above strategy is to be implemented through a Planning Proposal which is anticipated to be finalised by the end of 2016.

The subject site is located within the main central area where a FSR of 10:1 is proposed under the new Strategy. The new Strategy provides the evidence that Parramatta CBD is anticipated to grow both vertically and horizontally. Therefore, the current approved level of FSR and height of the site no longer reflects the level of growth and the development trends that are encouraged under the new Strategy.

Figure 13. Proposed CBD expansion (source: Parramatta CBD Planning Strategy)

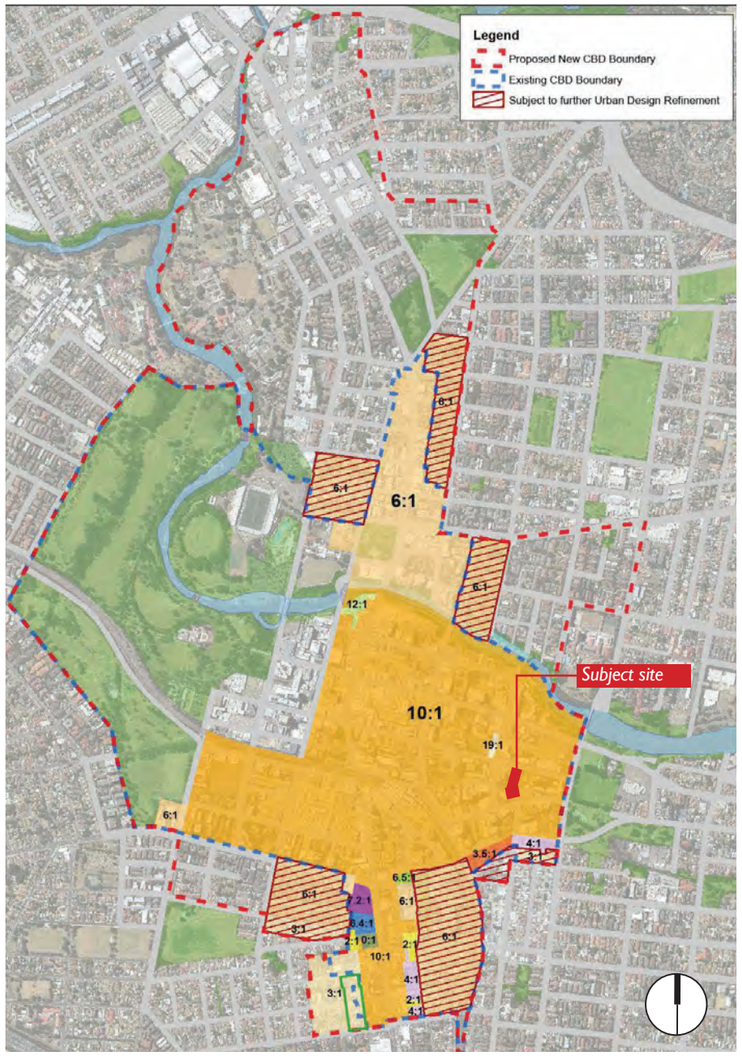


Figure 14. Proposed FSR controls (subject to testing) (source: Parramatta CBD Planning Strategy)

3. OPPORTUNITIES FOR PARRAMATTA'S SKYLINE

3.1 CITY FORM

This chapter studies the current city form of Parramatta and compares it with other cities to understand the role and appropriate massing for the Parramatta CBD.

City form is a complex juxtaposition of massing and urban structure that varies between centres based on their location, culture, topography, infrastructure and rate of development. It is an understood urban design principle that cities have a unique but unmistakable profile over time.

However, there are some common characteristics that are seen in contemporary cities in both Australia, America and 'new centres' in European cities. These characteristics include expression of greatest height at major railway stations and along primary street networks. Scale often then diminishes towards the city edges with a sharper change of scale at the change in land use zoning.

A study undertaken by Arthur Stamps, Jack L. Nasar and Kazunori Hanyu, titled 'Using Pre-construction Validation to Regulate Urban Skylines' concludes that the following principles contribute to a positive urban skyline:

- A variety of turns in roofline silhouette;
- A variety in height, width, depth and setback; and
- A simple convex shape.

As seen in examples of other cities below, they are made up of a combination of variables including different rooflines and heights (New York) and skyline shapes - from convex (Sydney) to concave (Chicago). The same studies also note that a continuity of the city's density and tall buildings reinforce the City's image. The shape of the skyline without major gaps is generally a preferred model. On the major approaches to the centres there is often an increase in scale to mark the gateways to the centre.

Each of these cities experienced development in the 20th and 21st Centuries that significantly transformed their skyline profiles. Other urban design studies emphasise that a well developed and designed skyline is a tangible measure of a city's growth.

Vancouver matured from a lower scale town to a fully fledged city in just over 20 years. The form celebrated its financial centre and clearly marked its gateways with a significant change of scale at its edges. The banks of the waterway also developed a spine of density to maximise appreciation and use of the high level of amenity. The example of Vancouver included in '*The Future of The City*' is shown below.

New York skyline

Figure 15. Less noticeable arc, greater density over time which evens out the height but there is still a significant scale difference at edges and an edge height similar to the centre

Sydney skyline

Figure 16. The greatest scale at the centre but significant scale differential at edges and height to mark gateways - Circular Quay, Central Park/UTS, Barangaroo, Macquarie Street towers

Chicago skyline

Figure 17. The transformation of Chicago's skyline to a concave form (below) since 1920s (top).

Figure 18. Vancouver skyline in 1980s (left) and 2000s (right) - showing growth of the Vancouver CBD. (Source: K.Al-Kodmany and M.Ali)

3.2 PARRAMATTA'S SKYLINE

Parramatta's skyline under the current controls creates a notional arc providing a transition in height from Parramatta Square to the edges of the City. The actual height of this arc has been raised significantly by the recent Planning Proposal approvals and will be further influenced by the proposed removal of height controls by Council. The existing strategy for Parramatta is trending to this typology particularly with the increased height at the station (centre of Parramatta) and the gateways of the city.

The recent gateway approvals will alter the profile and scale of the Parramatta's skyline. A taller scale for the subject site along with the other approvals will strengthen the status of Parramatta as Sydney's second CBD and fulfil the vision in '*A Plan for Growing Sydney*'.

To achieve a true city form the answer is not necessarily to increase the slope of the arc to accommodate only greater height at the city core and gateways. The opportunity is to revisit heights across the CBD whist still achieving a transitional scale/form towards the city edge. Removal of the height controls with retention of FSR means that the city profile will be dictated by site size rather than a specific geometric silhouette form. Therefore the gateways to the city and the city centre does need landmark developments that define these important places. The diagram (Parramatta's Structure) on the next page shows the opportunity for Parramatta to celebrate its gateways as fundamental city characteristics markers which provide visual emphasis when viewed from the edges of the CBD.

For the subject site, an increase height that matches the heights considered for the eastern gateway can deliver a better urban design outcome. The 3D modelling of Parramatta's skyline presented in adjacent images illustrate how the proposed heights of tower up to 150m high would complement the overall skyline, balance the already approved building heights on Macquarie Street and fully achieve an eastern gateway to Parramatta CBD.

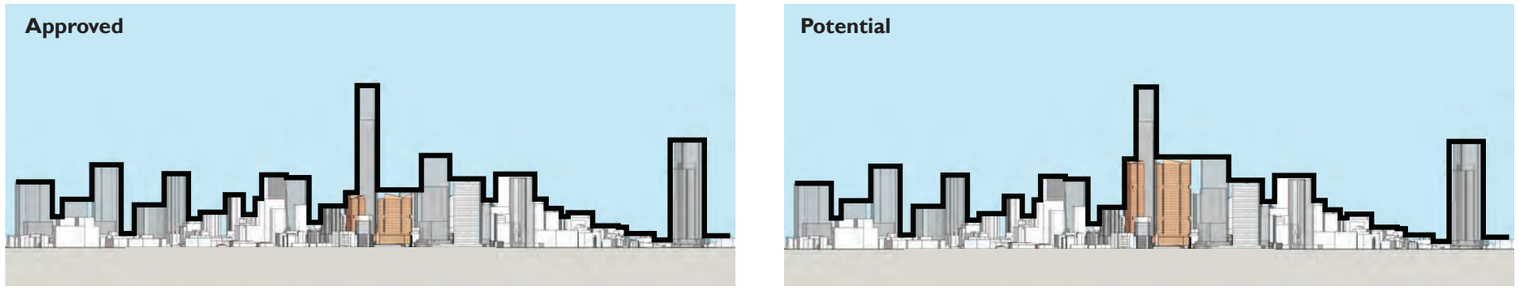


Figure 19. Viewing southwest to the Parramatta skyline from the northern bank of Parramatta River (subject development shown in orange)

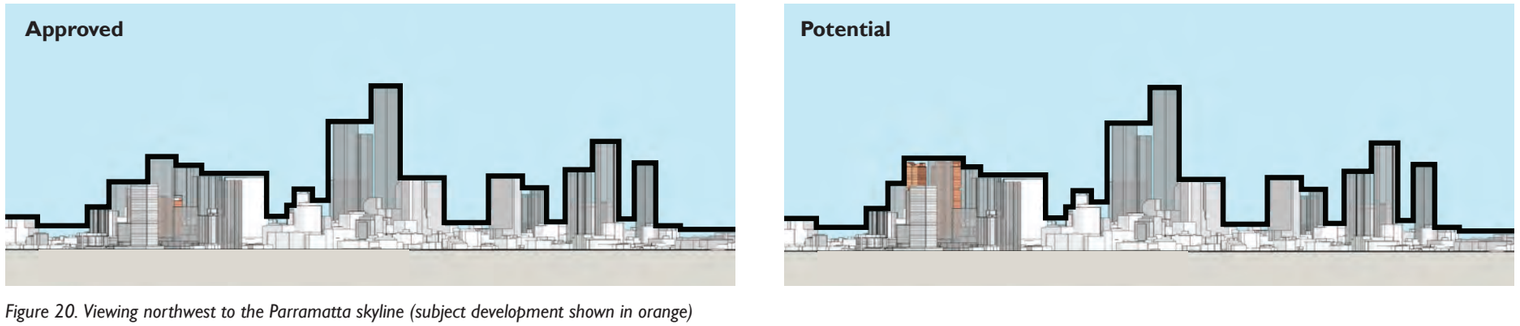


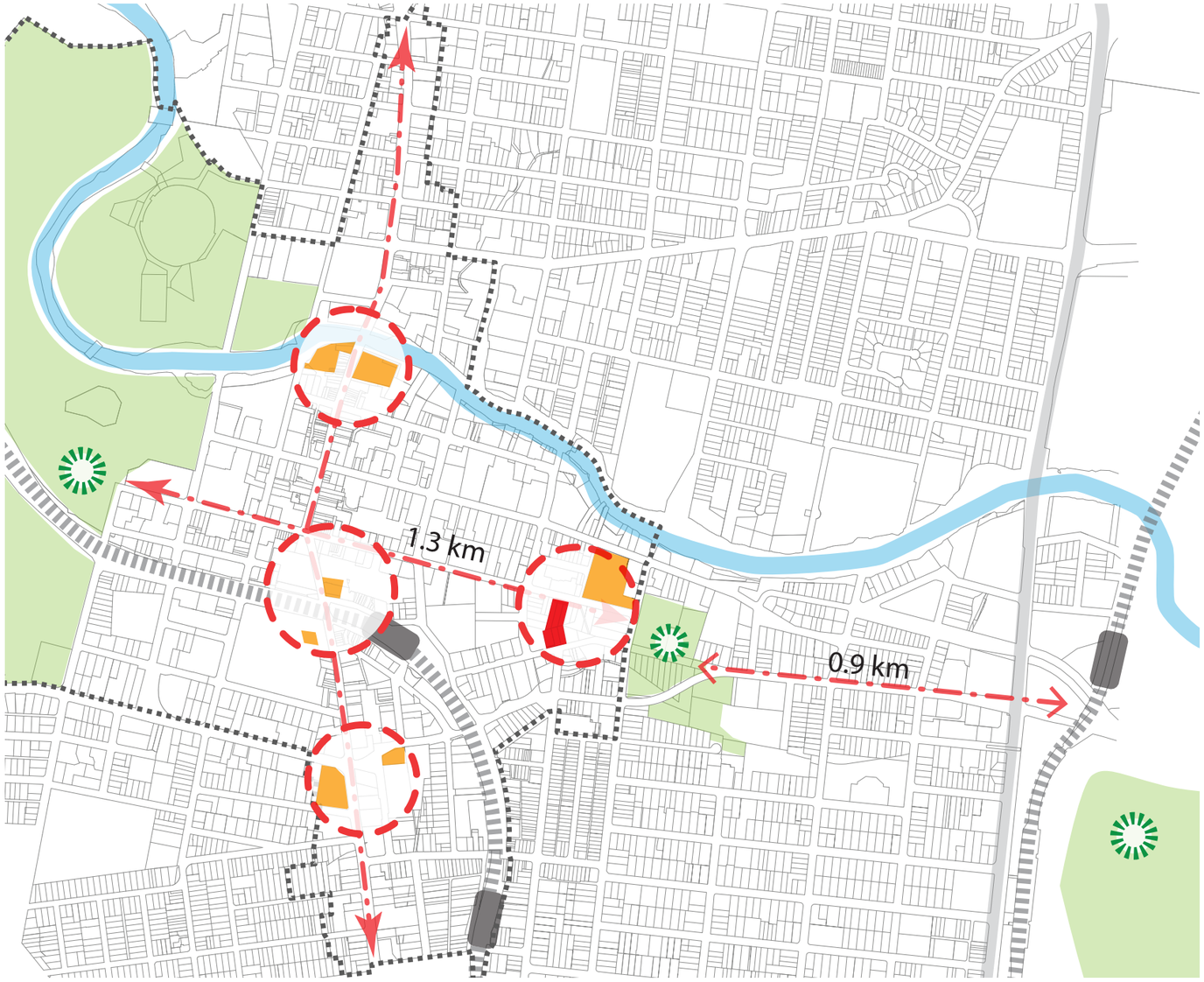
Figure 20. Viewing northwest to the Parramatta skyline (subject development shown in orange)

As shown on the adjacent diagram, Parramatta has four emerging built form markers within the CBD and they are all located on the city's major axes - Macquarie Street and Church Street, including:

- The city centre - marked by Parramatta Square development site approved to 280m height;
- Northern gateway - marked by the Discovery Centre development and Altitude, 330 Church Street approved to 185.3m height;
- Southern gateway - marked by 5-7 Parkes Street and the Auto Alley Precinct development approved to 141.7m height; and
- Eastern gateway - marked by 142-154 Macquarie Street development approved up to 180m height (including 15% Design Excellence bonus).

As shown in the adjacent diagram, within each marker location there are two major development sites, one on each side of the street, creating gateways on these axes. The subject site is one of these elements that can provide balance to the already approved heights on No.142-154 on the northern side of Macquarie Street axis.

Parramatta's Structure



SUBJECT SITE

CURRENT CBD BOUNDARY

PARRAMATTA RIVER - CONNECTION BARRIER

RAILWAY LINE - CONNECTION BARRIER

MAJOR ROAD - CONNECTION BARRIER

GATEWAY SITE

MAJOR AXIS OF THE CITY (CHURCH & MACQUARIE STREETS)

FUTURE GATEWAY MARKER - HIGH-RISE TOWER CREATING A NEW CBD SKYLINE

LANDSCAPE MARKER (ROBIN THOMAS RESERVE ACTING AS AN INTERCITY PARK)

The vision included in '*A Plan for Growing Sydney*' and the *Parramatta 2038* Strategy developed by Council indicates a strong intention to develop the connection between the surrounding satellite centres such as Rydalmere, Westmead, Camellia and the Parramatta CBD. Therefore, a strong celebration of the eastern gateway is important to mark the entry from these satellite centres.

The east-west axis of the CBD is now receiving attention to balance the northern gateway at 330 Church Street and Discovery Centre, the southern gateway at the Auto Alley Precinct and eastern gateway at 142-154 Macquarie Street and potentially the subject site.

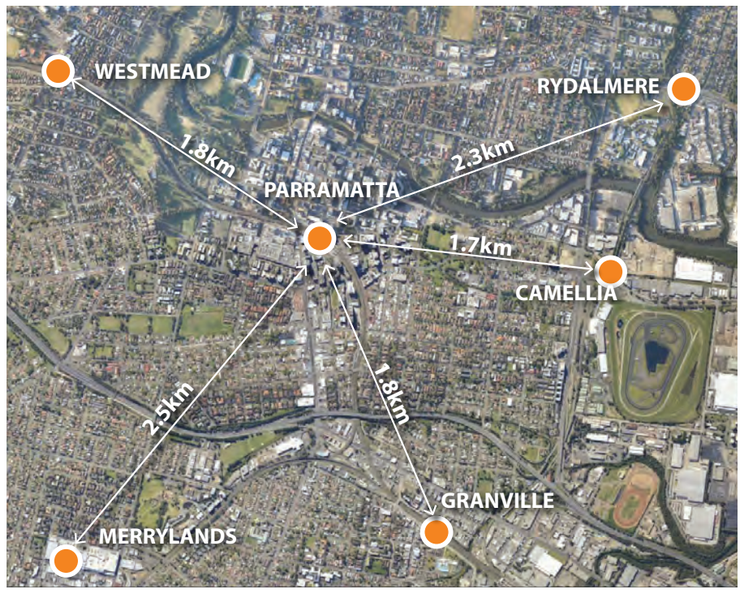
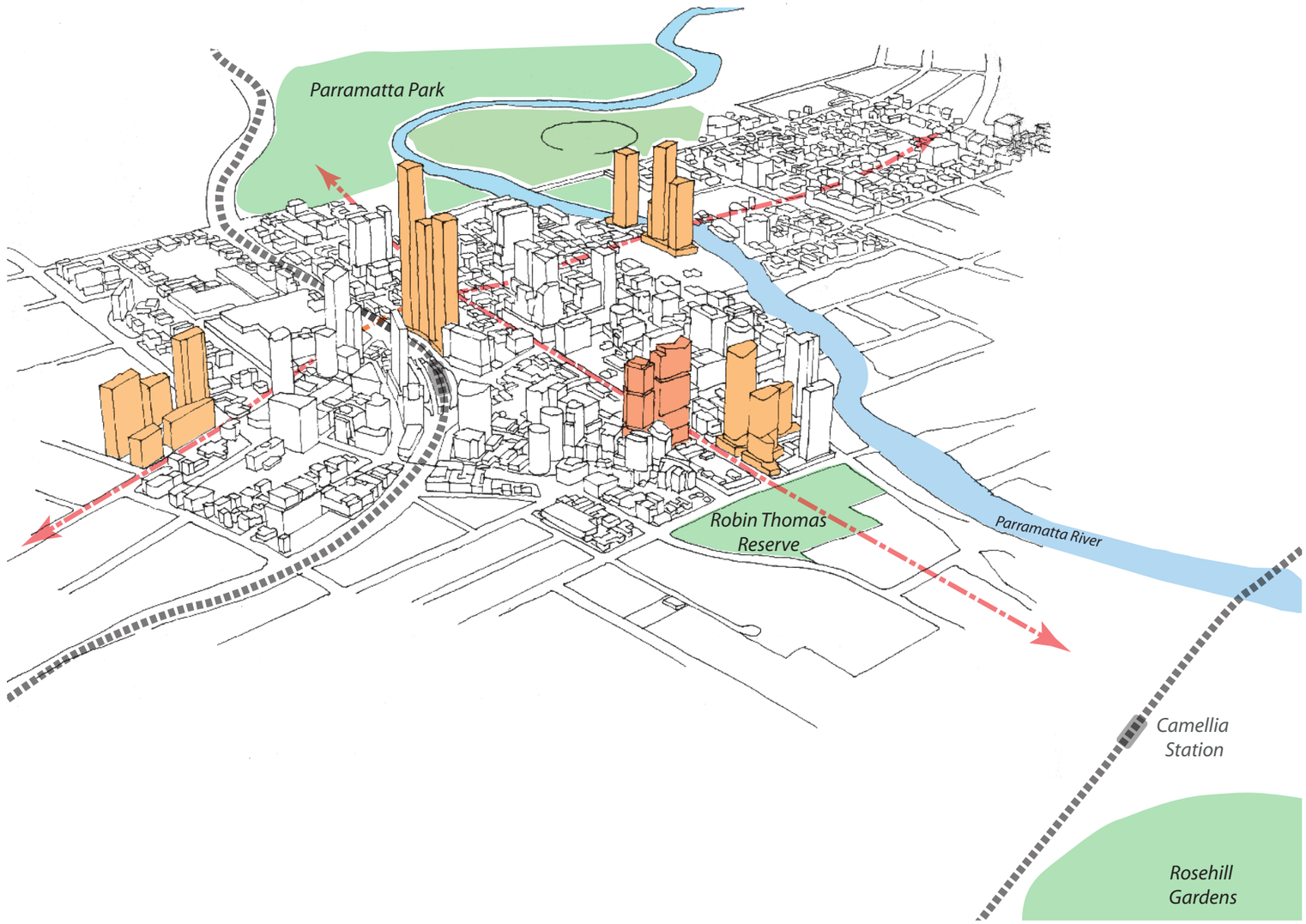


Figure 21. Parramatta CBD's location in relation to surrounding satellite towns

Parramatta in 5 Years



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4. LOCAL CONTEXT

4.1 LOCAL CONTEXT

It is understood that under Council's proposal, the CBD boundary will grow extensively to the north and somewhat to the south. In contrast, the eastern and western ends of the CBD will remain the same. The site is located near the eastern end of the CBD which acts as a gateway point. Given its strategic location, the site benefits from the following:

- Proximity to Robin Thomas Reserve and the River;
- Proximity to schools and employment destinations;
- Existing public transport links such as the ferry, trains and buses;
- The future light rail which is planned to run along the northern boundary of the site;
- A location within a heritage setting of the first landing with a conservation area and the Experiment Farm Cottage approximately 500m walk to the south-east; Elizabeth Farm and its conservation area approximately 1km walk to the east and the area of first landing and the first barracks at the Queens Wharf Park and Robin Thomas Reserve directly to the eastern end of Macquarie Street; and
- Proximity to the eastern edge of the Inner Ring Road for Parramatta.

The site has great potential to celebrate this location and complement the gateway on the approach to Parramatta from the east and north-east and by river.

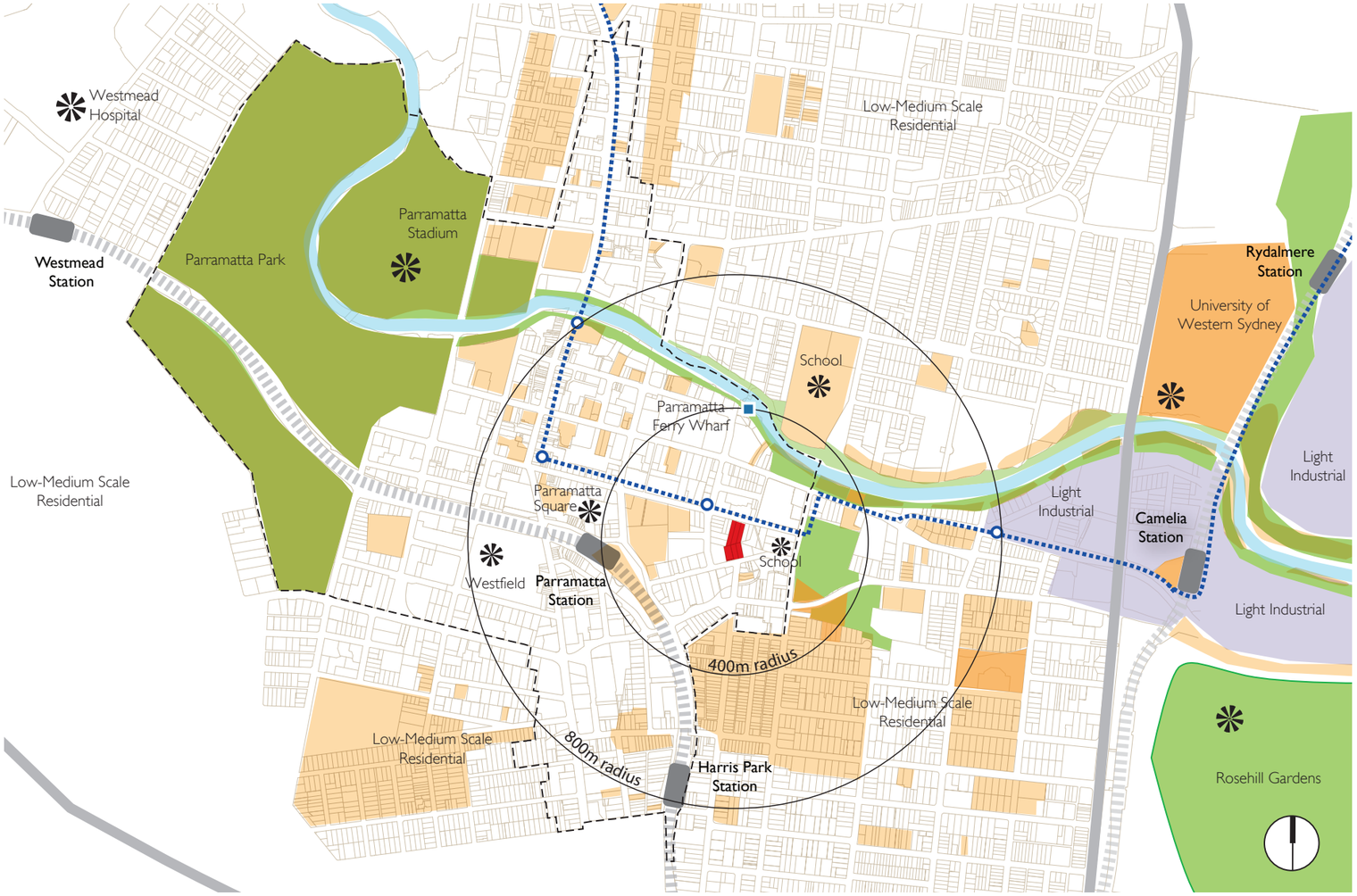


Figure 22. Local Context

4.2 EXISTING ALLOWABLE HEIGHTS & DEVELOPMENT POTENTIAL IN THE CBD

The existing Parramatta City Centre LEP 2007 designates the greatest heights for the area around Parramatta station with heights ranging from 200m - 280m. The scale then is limited by the sun access plane but rises again towards the river with heights of 80m - 120m. Recent planning approvals at the northern gateway and river edge are 150m and 176m adjacent to heights of 80m, 28m, and 24m. On the southern side of the railway heights range from 12m - 120m, with the southern gateway heights rising from 12m, 28m to 130m.

To the east, the heights are currently 54m and 34m but significant height up to 180m (with 15% bonus) has been recently supported by Council to celebrate this gateway as the historic approach to Parramatta via the river .

It must be considered that heights responding to the new scale of the northern gateway would be appropriate for the subject site.

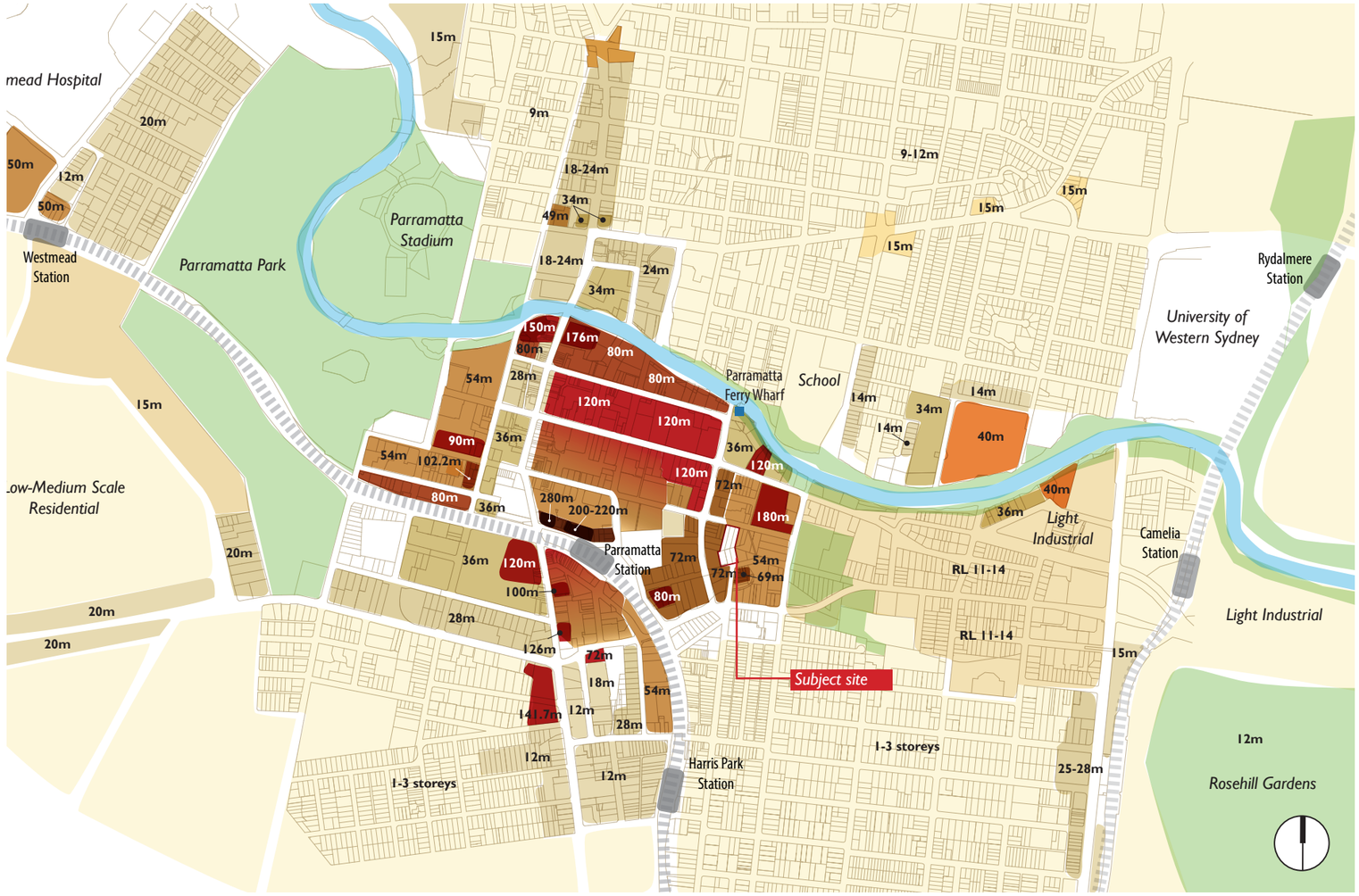


Figure 23. Existing LEP heights and development potential

LEP heights (low to high)

Green open space

Railway line

Parramatta River

4.3 EXISTING DESIGN CONTROLS FOR THE SITE

The Parramatta DCP 2011 includes additional and updated provisions for the Parramatta City Centre. The main DCP controls which apply to the subject site include:

- Front setback of 3m to Hassall Street and 0m to Macquarie Street (as per PDCP 2011 Figure 4.3.3.1.1);
- Building separation – 6m side setbacks and 12m rear setbacks are required for building heights over 54m, with a zero-lot setback permitted for buildings up to 26m in height in both cases (as per PDCP 2011 Figure 4.3.3.1.12);
- 4-storey / 14m 'South City Centre' street frontage height with built form above set back 6m behind this (as per PDCP 2011 Figures 4.3.3.1.3 and 4.3.3.1.6);
- Providing a new pedestrian link or arcade through the site (as per PDCP 2011 Figures 4.3.3.3.1 and 4.3.3.3.2);
- Additional vehicle entries are not permitted from Macquarie Street (as per PDCP 2011 Figure 4.3.3.5.1);
- No awnings are required (as per PDCP 2011 Figure 4.3.3.3.3); and
- Above ground car parking fully sleeved with active uses facing Macquarie Street, and sleeved at ground level with screened car parking above facing Hassall Street (as per PDCP 2011 Figures 4.3.3.5.2 and 4.3.3.5.3).

Furthermore, SEPP65 and the *Apartment Design Guide* require building separation distances of:

- 24m between habitable rooms or balconies,
- 18m between habitable and non-habitable, and
- 12m between non-habitable rooms with 50% of the above distances applying across boundaries;

The existing DA approval already establishes the street, setback and separation relationship. It is not proposed to change these outcomes under this Planning Proposal.

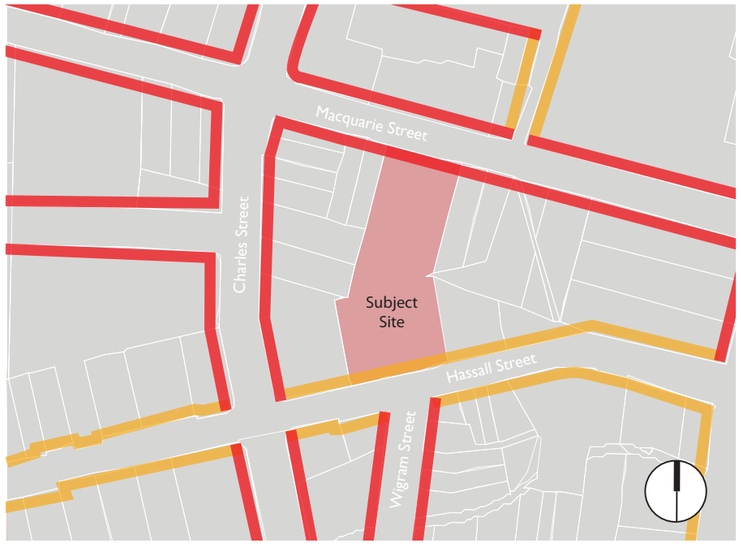
3M FRONT SETBACK

0M FRONT SETBACK

6M SIDE SETBACK FOR BUILDINGS OVER 54M
0M LOT SETBACK FOR BUILDINGS UP TO 26M

MIN 8 STOREY / 26M CHARLES STREET FRONTAGE

MIN 4 STOREY / 14M SOUTH CITY CENTRE FRONTAGE
WITH 6M SECONDARY SETBACK



MIN 8 STOREY / 26M CHARLES STREET FRONTAGE

MIN 4 STOREY / 14M SOUTH CITY CENTRE FRONTAGE
WITH 6M SECONDARY SETBACK

NEW ARCADE / THROUGH SITE LINK

ADDITIONAL VEHICLE ENTRIES NOT PERMITTED

4.4 LOCAL CHARACTER

The subject site is surrounded by a variety of building heights and open spaces. The heights in the immediate surrounding area include:

- Approved 157m (potentially 180m with 15% bonus) at 142-154 Macquarie Street to the northeast;
- 19 storeys to the north on Union Street;
- 9 to 10 storeys across Macquarie Street;
- 13 to 18 storeys to the west across Charles Street;
- DA approved 63.9m (20 storeys) to the south on Hassall Street, and
- DA approved 55m (17 storeys) to the south on Parkes Street.

The site benefits from proximity to a number of open spaces, such as:

- Queens Wharf Park and the foreshore reserve along Parramatta River, which include cycle and walking paths connecting to the ferry stop and Parramatta Park;
- Robin Thomas Reserve and Parramatta Stake Park to the east - used by local schools as playing field;
- James Ruse Drive Reserve, which is directly to the south of Robin Thomas Reserve and includes a water park/playground and a skate park;and
- Elizabeth Farm Reserve to the southeast and the Experiment Farm Cottage.

There are also a number of schools and education facilities in the area indicated on the adjacent diagram.

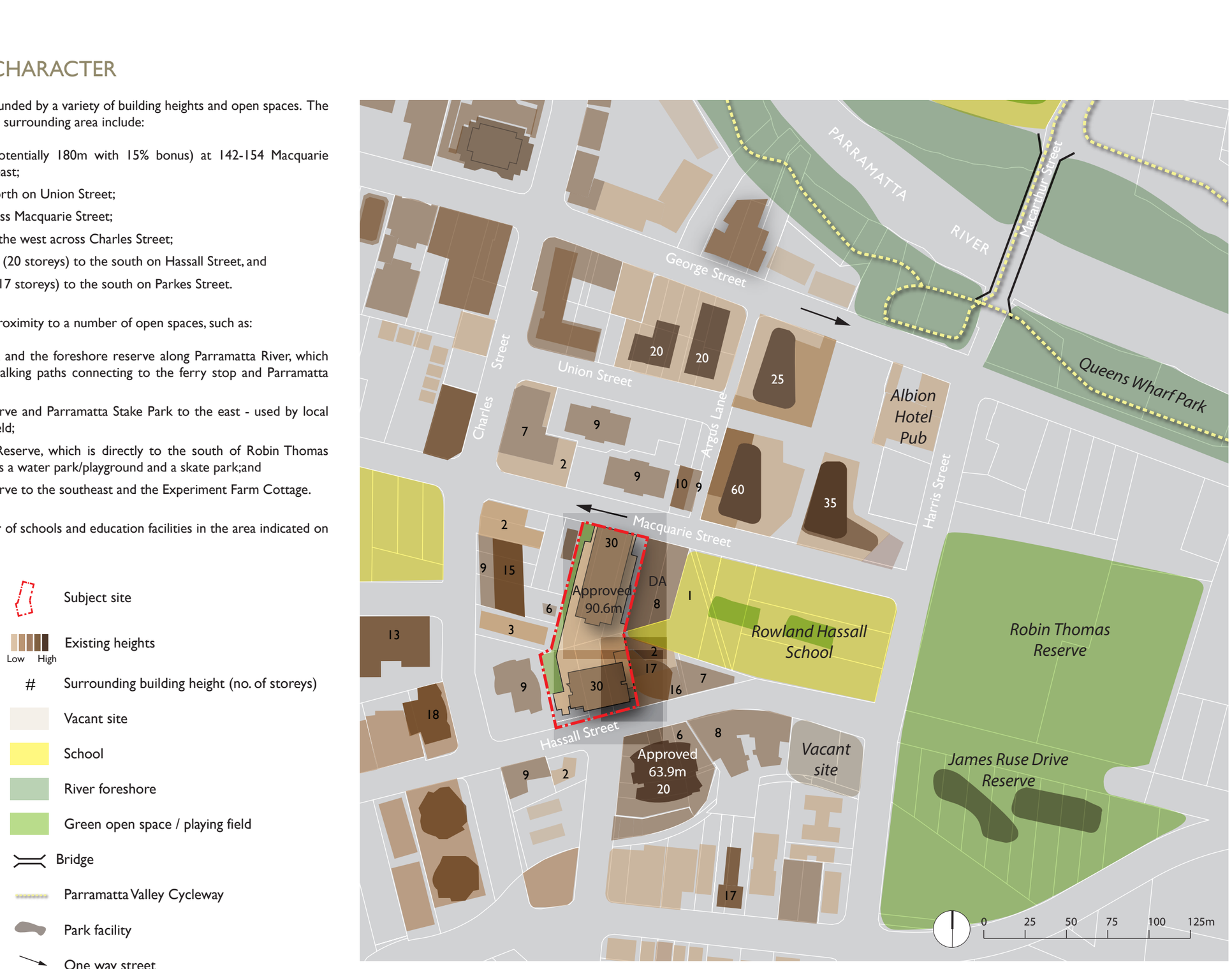


Figure 24. Immediate context analysis

4.5 ADJACENT SIGNIFICANT OPEN SPACE AND HERITAGE ITEMS

Robin Thomas & James Ruse Reserve Master Plan

Parramatta Council has recently issued a draft Robin Thomas & James Ruse Reserve Master Plan. The master plan prepared by Group GSA indicates Council's intention to incorporate some of the heritage values of the site to the east into the proposed landscape master plan.

The area originally used for first the soldier's barracks is proposed to be revitalised as an urban park. The park will include landscape elements that recognise the heritage values but also add more activation and refine the existing public green open space at the corner of Harris Street and George Street. The current use of the Reserve as playing fields is proposed to be retained. The other additions to the reserves are mainly new bridge connections and landscape features such as the water management area next to Cliff Creek. The master plan proposed by Council shows that this side of the CBD is to become a more active and vital precinct.

Any change to heights to the subject site must be tested in terms of overshadowing impacts to these open spaces.

Figure 25. Robin Thomas & James Ruse Reserve master plan (source: Draft master plan prepared by Group GSA)

Experiment Farm Reserve & Experiment Farm Cottage

Experiment Farm Cottage stands on the site of the first land grant in Australia by Governor Phillip from 1789 to former convict James Ruse. By 1791 Ruse had farmed the 30 acre site as an experiment in self-sufficiency. The existing cottage was built by Surgeon John Harris in 1835. It is one of the oldest stocking properties in Australia.

The cottage is a part of a historical precinct that also includes other state significant items such as Hambledon Cottage and Elizabeth Farm as well as the Queen's wharf. The potential impact of the proposal on the state significant items was assessed in the Heritage Report dated August 2015 by NBRS. The report recommends that:

"A review of conservation management documents for these two properties (Hambledon Cottage and the Experiment Farm) and for the further afield Elizabeth Farm indicates that development of the subject site would not interfere with identified significant views to and from these items. There will however be some minor overshadowing of these two properties and that known as 'Ancient Aboriginal and Early Colonial Landscape' ('Robin Thomas Reserve'. There is however no significant impact from this overshadowing on the archaeological site. Arboricultural advice provided for other development in the vicinity has confirmed that there would be little adverse impact on significant plantings at Experiment Farm Cottage and Hambledon Cottage and grounds of minor shadowing."

"As no development is proposed within the land entered on the State Heritage Register, the approval of the Heritage Council would not be necessary."

On this basis any increase in the height for the subject site must ensure that the shadow impact on the cottage and the surrounding is minimised. This has been taken into account as one of the main elements that determines the preferred height configuration and it is discussed in detail in the next chapter.

Aerial photo of the Experiment Farm Reserve & Experiment Farm Cottage

Photograph of the Experiment Farm Cottage

4.6 IMMEDIATE CONTEXT

As shown on the adjacent images, the local context is characterised by an eclectic mix of buildings of varying heights, styles and age. It can be said that the area is in transition. Examples of new development are 111 Wigram Street and 4 Charles Street. Heights along Hassall Street across the subject site and along both sides of the street to the east vary from single storey heritage cottages to 17 storey residential flat buildings, an example of which is located immediately to the east of the subject site at 26-30 Hassall Street.

These height variations are typical throughout the area. Older and heritage sites are often characterized by lower built form centred on the lot or with setbacks to the street where more recent buildings present a podium form to the edge of the street with a street wall height ranging between 6-7 storeys.

The built form to the west of the subject site along Hassall Street changes from the perimeter wall model where the existing residential building immediately adjacent to the western boundary sets back from all street frontages to create a 'tower in a park' setting. The site immediately across from this property to the south follows Council's preferred built form scenario of a street wall to the edge of the street with a height of 7 storeys.

GMU understands that the 20-storey development immediately to the south at 113-117A Wigram Street and 23-29 Hassall has been approved. It has 6 level of podium up to approximate 29m high which is setback behind existing heritage-listed buildings. The general landscape and public domain quality of Hassall Street is very poor with little in the form of mature street plantings, ground covers, pedestrian amenities or public domain improvements.

Built form and streetscape along Wigram Street (south of subject site):

Recent development 111 Wigram Street - 6 storeys street wall and up to 9 storeys above

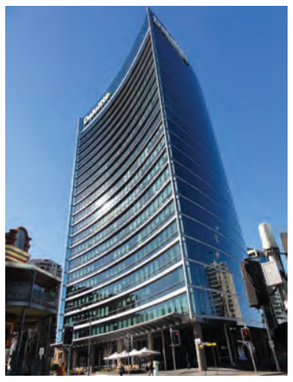
Heritage cottage on Wigram Street

View along Wigram Street axis from the south towards the site

Built form and streetscape along Hassall Street (south and west of subject site):

26-30 Hassall Street - 17 storey buidling to the east of subject site presenting a blank wall toward the site

Adjacent DA approval (DA/241/2013) at 113-117A Wigram Street & & 23-29 Hassall Street (middle)
Existing heritage-listed cottage to be retained and adaptively reused as commercial premises (right)



Deloitte Building at 60 Hassall Street

20 storey building at the southern cnr Hassall and Charles St

18 storey building at the northern cnr Hassall & Charles St

Hassall Street looking west (subject site on the right)

The character along Macquarie Street to the west of Charles Street is characterized by a number of older and low density buildings that form part of the Parramatta Public School. To the east of Charles Street are a number of sites that vary in height and built form configuration. The buildings along both footpaths at the western end of the subject block, are commercial/retail facilities built to the edge of the street. The existing building across from the subject site is a residential flat building that sets back from the edge of the street with a tower form of approximately 8 storeys in height. The typology of this building is reminiscent of 1960-70s architecture with strongly accentuated external balconies.

Other properties to the east are characterised by lower scale development including the school grounds on the southern footpath at the end of the block. These sites are considered to have significant redevelopment potential. However, their likely availability for redevelopment depends on changes to the legislation regarding the need to maintain or relocate school grounds near or within major centres. The landscape character along this street has a better presence along both footpaths with medium to mature trees lining the school grounds and a number of street trees along both footpaths toward the intersection with Charles Street.

The character along Wigram Street, which terminates in an axis on the subject site also has a mixed character where the predominant scale is lower density development with the exception of recent development taking place north of Parkes Street. This street has a poor landscape character and it is in need of general public amenity upgrades.

Character of Macquarie Street:

Infrastructure building (9-10 storeys)

Macquarie Street streetscape and built form - view from east - subject site on the left

9 storey residential building to the north of the subject site on Macquarie Street

Views from the east:

Build form seen from Thomas Park along Hassall Street

Build form and streetscape seen from Thomas Park along Macquarie Street

Build form and streetscape along Macquarie Street

Built form surrounding the subject site:

9 storey residential building on the south-western corner of the site

3 storey walk up building between taller element on the western boundary with a 13 storey commercial building behind facing Charles Street

Recently developed 15 storey mixed use building - western boundary, fronting Charles Street

Blank wall along the south-eastern edge of the site

Buildings fronting Hassall Street seen from the northern side of the subject site

5. STRATEGIES CONSIDERED

5.1 OPTIONS CONSIDERED

Analysis of the height developing across the Parramatta CBD shows that the city has come of age. The increase in height supported by the Council is allowing sites in Parramatta to reach their full potential as the western Sydney's CBD. The new airport at Badgerys Creek will change the status of Parramatta and substantially increase its attraction to business and residents. It is appropriate that Council and State Government are supporting city scale buildings.

The changes in height contemplated across the CBD range from the 280m high Aspire Tower to major buildings marking the gateways and edges of Parramatta. These buildings have an allowable height in the order of 120-180m including an additional 15% height and FSR available for the achievement of design excellence through a competitive process.

These gateway sites, in combination with the height increase towards the centre of Parramatta, will create a new profile for the city silhouette. This will inform and affect the potential of all sites between them including sites which form part of the transition to the edges. The subject site currently enjoys a maximum height of 91.3m through the approved DA. As shown in the earlier analysis, the gateway site to the north presents the potential for heights up to 180m on the opposite side of Macquarie Street (142-154 Macquarie Street called 'Cumberland News Ltd site').

Relative to the northern gateway site, the subject proposal has a role in balancing this scale on the other side of Macquarie Street as well as contributing to a transition of height towards the centre of the city and the eastern portion of the CBD. In terms of the southern transition it is appropriate if the building forms respond to this increased height and the lower height of the development on the other side of Hassall Street, such a response will reinforce the transition towards the dwelling houses on Una Street.

To the south, the site has LEP applicable heights of 72m to 54m, which in combination with the 15% height bonus available, could deliver built form in the range of 83m and 63m. Therefore the subject site is transitioning from heights potentially of 180m closer to the river to 83m and 63m on Hassall Street. The tower form on Hassall Street also has the role of terminating the view from Wigram Street as it is directly on an axis with this street. The site also creates part of the transition from the east to the centre of Parramatta. This is a transition from 63m to 280m.

The approach adopted by the LEP currently is to relate height in the east to the scale in the centre. This would suggest that the towers should seek to step up from the eastern edge towards the centre as a key principle, with transition from the north to the south to be achieved within the block of Parkes to Una Street (to the existing low scale to the south). Such an approach to transition is not unusual for the edges of cities.

In terms of how these towers are perceived, they are most clearly visible in the cityscape seen from Robin Thomas Reserve to the east. From the reserve they will be viewed in the context of the gateway towers at the Cumberland News Ltd and Albion Hotel block with the gateway building of 180m on the Macquarie Street axis. It is important that the height of the towers on the subject site corresponds to that gateway, especially when viewed from the east. It is also more appropriate for the site to be slightly less dominant than the gateway of 180m. Together they create a stronger marker on the Macquarie Street axis.

On that basis we consider that the maximum appropriate height for the site would be in the order of 150-175m, depending on the configuration of the heights within the site and any potential shadow impacts.

It is important to provide some level of height variation between the proposed towers to deliver a more interesting skyline silhouette. This has informed the basis for GMU's testing of the height configuration for the site.

The height strategies tested by GMU and the project team include:

- Strategy 1 - equal height for both towers;
- Strategy 2 - greater height on Hassall Street;
- Strategy 3 - greater height on Macquarie Street.

These three general strategies have been tested in terms of impacts on the city skyline and shadow impacts to Experiment Farm Cottage (which is the closest State significant heritage item).

The existing development application establishes the ground level, podium, tower footprints and tower relationships. Given Council has supported these outcomes, it is not proposed to revisit such relationships as part of any height increase on the site. On this basis the impact of additional height has been considered relative to these relationships and using the current footprints.

GMU notes that greater height to both towers (beyond that approved) will improve the vertical proportions of these towers resulting in more elegant tower forms. This is a positive outcome architecturally.

Based on the information from other Planning Proposals reviewed as a preparation to this study, GMU understands the significance of the shadow impacts to the reserves that adjoin the Experiment Farm. However, this proposal will have very little impact on the reserve area in mid-winter. It is limited to a maximum of 30 minutes. It is also our understanding that a short term shadow impact will not adversely affect the landscaped areas (as reviewed by Earthscape Horticultural Services in their Development Impact Assessment Report, dated June 2014). This analysis was provided as part of the original Planning Proposal for the Cumberland News site to the north at 142-154 Macquarie Street, Parramatta.

The issue occurs when the shadow impacts the actual heritage item, therefore, GMU has undertaken a thorough analysis to determine the potential impact including consultation with NBRS+PARTNERS.

As a result of testing of different heights and roof forms, one option was considered to result in no impact. This option has been selected as the best option. The testing and main options are provided and discussed on the following pages.

5.2 STRATEGY 1

Strategy 1 considered an equal increase in height on the site of up to 150m for both towers. This is an increase of approximately 60m above the currently approved development height.

The increase in height has been considered in terms of its contribution to the city's skyline, tower proportion and the shadow impacts to the Experiment Farm.

CITY FORM:

Below is a list of pros and cons for this strategy:

Pros:

- The shorter tower than the approved 180m on the Cumberland News Ltd site ensures that the it still dominates as the eastern gateway to the CBD.
- The increased height provides better proportions for each tower when viewed from the east. However, more height on Macquarie Street would deliver a slimmer and more elegant tower given its greater overall breadth.

Cons:

- The equal height means that any transition to the southern part of the city would have to occur south of Hassall Street. It is questionable if there is any capacity to achieve this in this location.
- Due to the established separation and depth of the towers (if set at equal height), the form of the proposal is read as one large massing and creates a flat silhouette outcome for the skyline, which is otherwise characterised by a variation of height. A varied height for the two towers would create more visual interest.
- The equal height of 150m separates the site from the eastern gateway of 180m and doesn't achieve an appropriate balance. The established form seen elsewhere in Parramatta of two gateway marker buildings would not be achieved with this height configuration.

SHADOW IMPACTS:

As part of determining the appropriate built form for the site GMU has also considered shadow impacts on the nearby State Significant Heritage Item - Experiment Farm. This is discussed in the Heritage Report by NBRS+PARTNERS dated August 2015.

The height proposed for this option of 150m for both towers results in shadow to the heritage cottage for up to 10 minutes from 2:51pm to 3:00pm in mid-winter. The shadow is created by both towers.

The shadow to the reserve is increased but only for a minimal time of 20 minutes from 2:40pm to 3:00pm. This will not have any significant impact on the reserve as most plants are dormant in winter and the shadow is fast moving.

Shadow diagrams are included in Appendix 1.

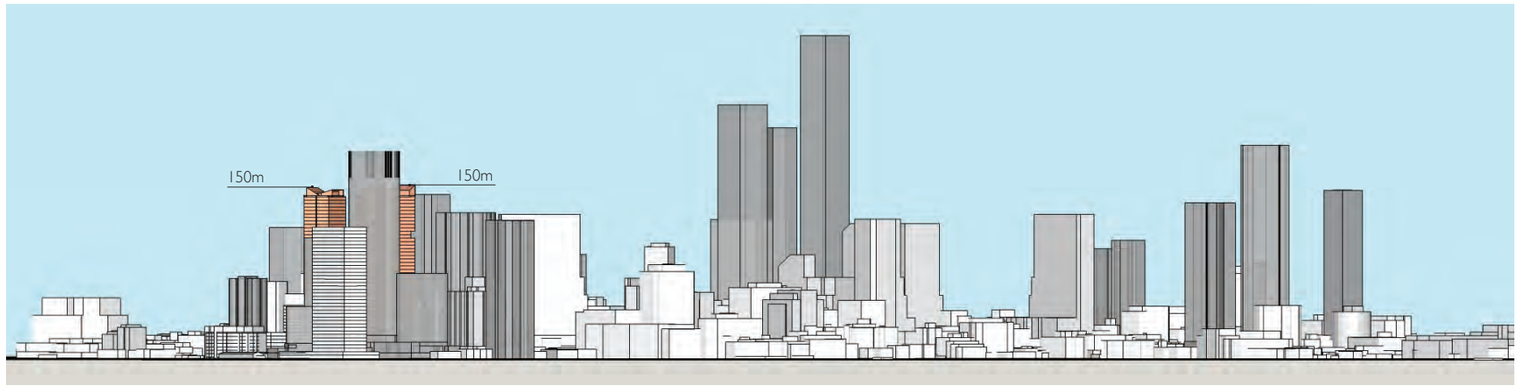


Figure 26. Parramatta's potential skyline viewed from the north (subject development shown in orange)

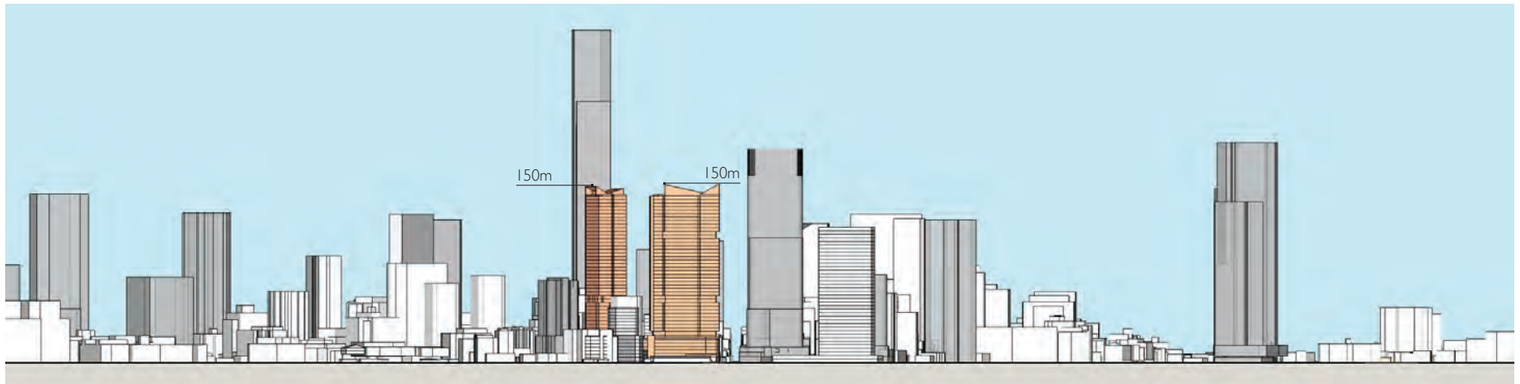


Figure 27. Parramatta's potential skyline viewed from the east (subject development shown in orange)

5.3 STRATEGY 2

Strategy 2 provides a height emphasis on Hassall Street as a response to a visual axis observed along Wigram Street. The height increase on the Macquarie Street tower is now matching the height of the lower towers on the Cumberland site proposal (up to 136m). The Hassall Street tower has a smaller footprint therefore to achieve a similar FSR to the first strategy, the height here needs to be roughly equivalent to the maximum height on the Cumberland News site. This delivers a lower scale to Macquarie Street.

The increased height at the southern end of the subject site, when seen from a distance, is a reasonable outcome. However, it changes the dynamic of the city skyline and results in a discordant note to the otherwise harmonious notional arc of the city. An increase in height at Hassall Street disregards the prominence of the Eastern gateway and disrupts the transition sequence from the Cumberland News Ltd site to the south-east.

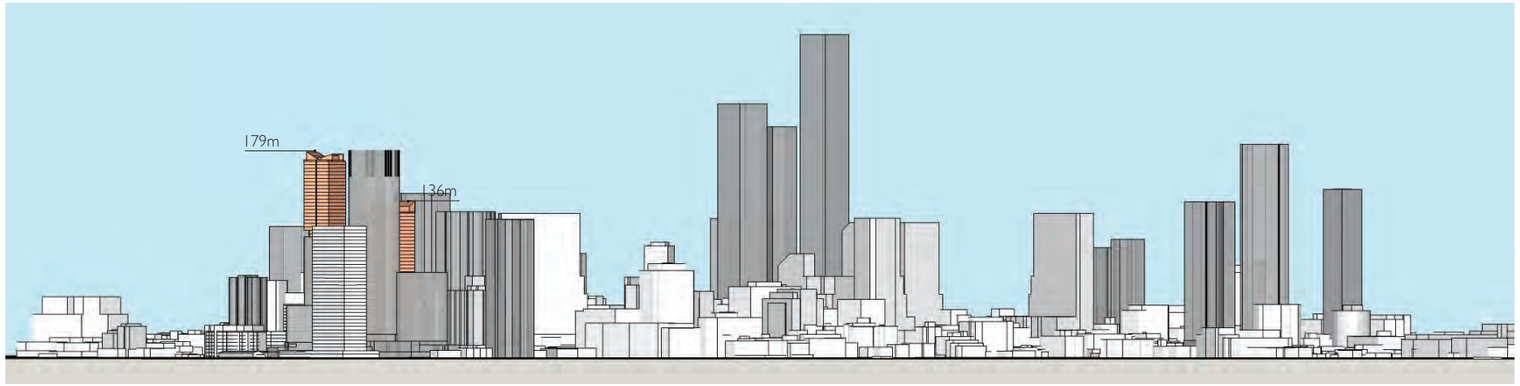


Figure 28. Parramatta's potential skyline viewed from the north (subject development shown in orange)

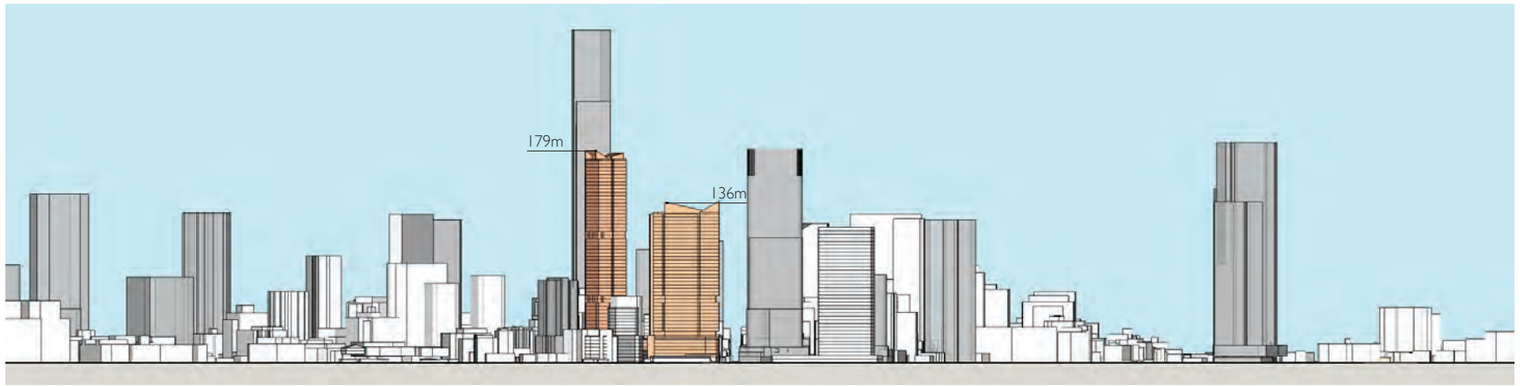


Figure 29. Parramatta's potential skyline viewed from the east (subject development shown in orange)

CITY FORM:

Below is a list of pros and cons for Strategy 2 when seen from the east the height juxtaposition:

Pros:

- Minimised self shading by locating the height to the south.
- On a site basis a more interesting silhouette is achieved due to the variation of height when compared to Strategy 1.
- Slim tall towers provide more elegant proportions.

Cons:

- Northern tower becomes shorter and therefore will appear bulkier next to the tall slim tower at Hassall Street.
- Distracts from the established skyline form and doesn't contribute to the outcome of a stronger gateway at the Macquarie Street axis.
- The axis from Hassall Street is not as significant as the axis along Macquarie Street yet it would have the more dominant built form.
- Height on Hassall Street may cast shadow to the low scale heritage conservation area to the south.

SHADOW IMPACTS:

The height proposed for this option results in shadow to the heritage cottage for up to 22 minutes from 2:38pm to 3:00pm in mid-winter.

The shadow to the reserve is slightly more than is Strategy 1 at 21 minutes from 2:39pm to 3:00pm.

Shadow diagrams are included in Appendix 1.

5.4 STRATEGY 3

Strategy 3 includes greater height on the northern end of the site along the main CBD axis - Macquarie Street. The height here is slightly lower than the main Eastern gateway building located at the Cumberland News site across the street and to the east.

The southern tower is lower and it provides a height transition from the main axis and the Cumberland site to the south-eastern corner of the CBD.

As seen in Figures 30 and 31, the proposed height provides a balanced city form by leaving the already established gateway site as the predominant height at the eastern edge in Figure 30 but emphasising the importance of the gateway and the axis in Figure 31.

CITY FORM:

Below is a list of pros and cons for Strategy 3 in terms of the city form outcome:

Pros:

- Increased height of the northern tower provides a much better width to height ratio for the building form when viewed from the east and therefore delivers a more elegant addition to the skyline.
- The lower tower at Hassall Street starts the transition down to the south-east.
- Variation in height provides a much more defined eastern gateway and interest in the skyline when viewed from the east.

Cons:

- The design of the roof feature for the northern tower needs to be carefully considered to avoid any potential overshadowing to the cottage on the Experiment Farm land.

SHADOW IMPACTS:

With careful design of the top of the buildings, this height configuration can avoid shadow impacts to the cottage.

The shadow impact to the reserve is similar as in Strategy 1, however as stated in the heritage report, this impact is not considered to be significant.

Shadow diagrams are included in Appendix 1.

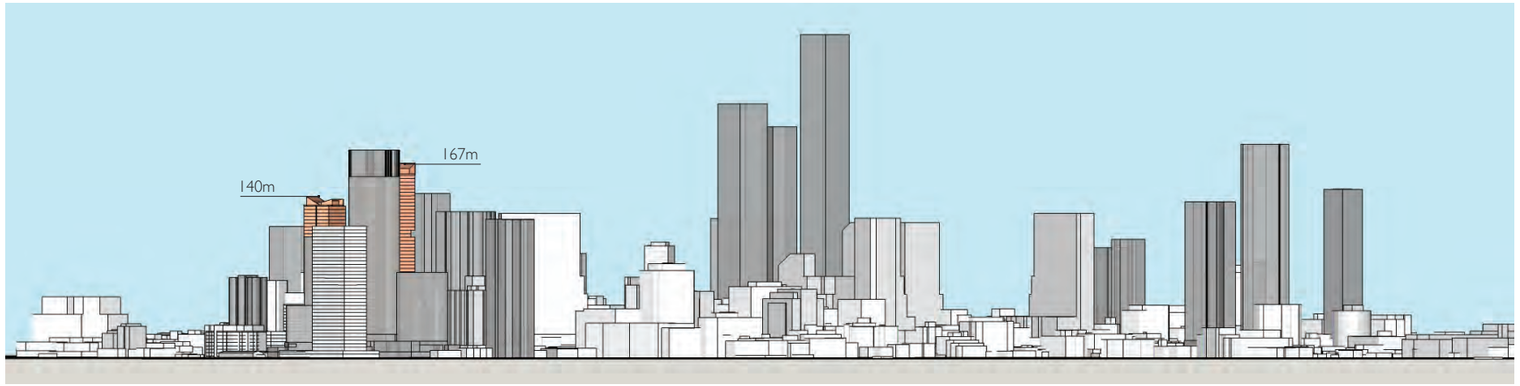


Figure 30. Parramatta's potential skyline viewed from the north (subject development shown in orange)

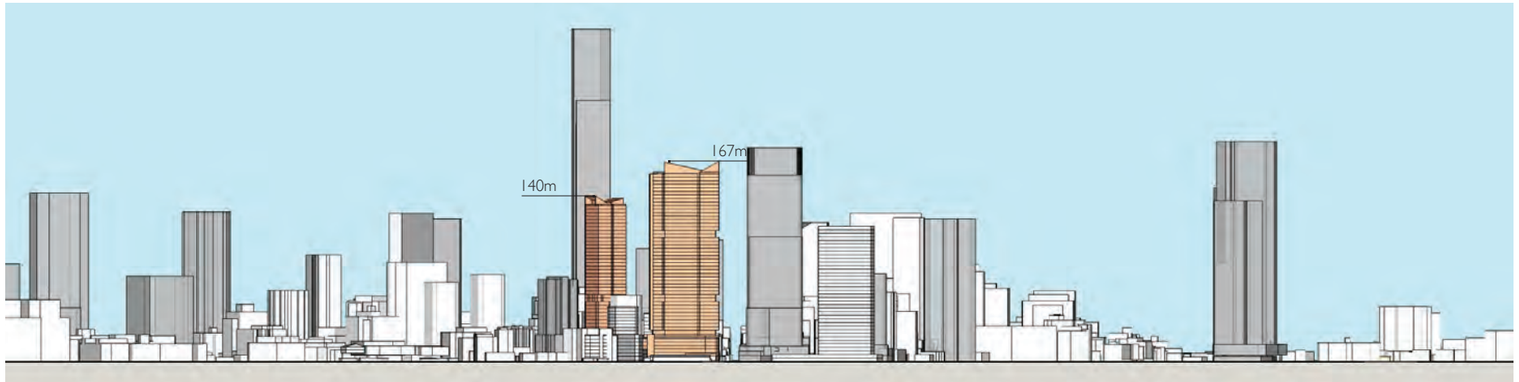


Figure 31. Parramatta's potential skyline viewed from the east (subject development shown in orange)

5.5 CONSIDERATION OF THE HEIGHT

As described on previous pages, the height configuration for the site was considered relative to the Parramatta skyline and potential shadow impacts to the State Significant Experiment Farm.

Apart from shadow impacts, GMU considers it is important that the two towers at an increased height, actually contribute to the eastern gateway, the arc of the CBD from the east, the sense of transition to the south and the axial view along Wigram Street. In achieving the outcomes it is also important to ensure that the two towers are not discerned as one 'bulk'. Difference in height assists in avoiding this outcome. Therefore, GMU does not consider that Strategy 1 with equivalent heights for both towers achieves an appropriate outcome.

Strategies 2 and 3 both offer the opportunity to differentiate the height and massing across the site. However, Strategy 2 fights the transition to the south, diminishes the emphasis of the eastern gateway and overly emphasises the visual axis to Hassall Street.

Strategy 3 in our opinion delivers the best height outcome with greater height on Macquarie Street rather than Hassall Street. The scheme will:

- reinforce the eastern gateway balancing height across Macquarie Street;
- reinforce the arc form and sense of transition to the south;
- achieve a better slenderness ratio to the bulkier Macquarie Street tower delivering an improved urban form and architecture;

This conclusion is subject to detailed consideration of the shadow impacts and heritage consideration for Experiment Farm.

6. RECOMMENDATIONS

6.1 THE PREFERRED OPTION

As discussed in the previous chapters, GMU have concluded that the best city form outcome will be achieved when the two tower elements are varied in height. The Macquarie Street (northern) tower should be taller than the Hassall Street (southern) tower.

All options have been tested in terms of the overshadowing to Experiment Farm reserve and the cottage itself. Due to the site's location in relation to Experiment Farm Reserve, the development will not cause any shadow impact onto the reserve for the morning and middle of the day, regardless of the height configuration. This allows excellent solar access to the reserve up to approximately 2.30pm in mid-winter.

The chosen option with greater height towards Macquarie Street was then tested in more detail to ensure no impact occurred to the cottage. The images on the following page and in Appendix 1 include details of the shadow cast towards the Experiment Farm. It has been agreed with the heritage consultant that any impact to the reserve itself is not significant.

The heritage report in its conclusion stated that:

'Although Experiment Farm is a considerable distance from the subject site, it would have a small portion of its grounds occasionally shaded for part of the afternoon in winter with the built form the Planning Proposal envisages. The plantings that would be shaded are recent and of low significance. The vegetation would be dormant in any case during the periods of shading. There is no remnant indigenous woodland nor are there any plantings that are associated with the period of significance for Experiment Farm. No significant views to or from the Farm would be impacted upon. No shadowing of the building would occur as a result of the additional height proposed in the application. There would be no significant impact.'

The shadow testing has determined the final massing of the preferred option for the development site. The following parameters have resulted in:

- A maximum height of 178m - to the top of roof feature (if measuring to roof excluding roof feature, it is 167m) or 54 storeys for the Macquarie Street tower with a low edge to the south at 39 storeys as shown in Figure 32;
- A maximum height of 135m - to the top of roof feature (if measuring to roof excluding roof feature, it is 126m) or 41 storeys for Hassall Street tower; and
- Height of podium retained at 6 storeys and relationships at the podium and street as per the currently approved envelopes as these have been deemed acceptable by Council.

Figure 32 shows the extent of the built form on the site and the proposed heights.

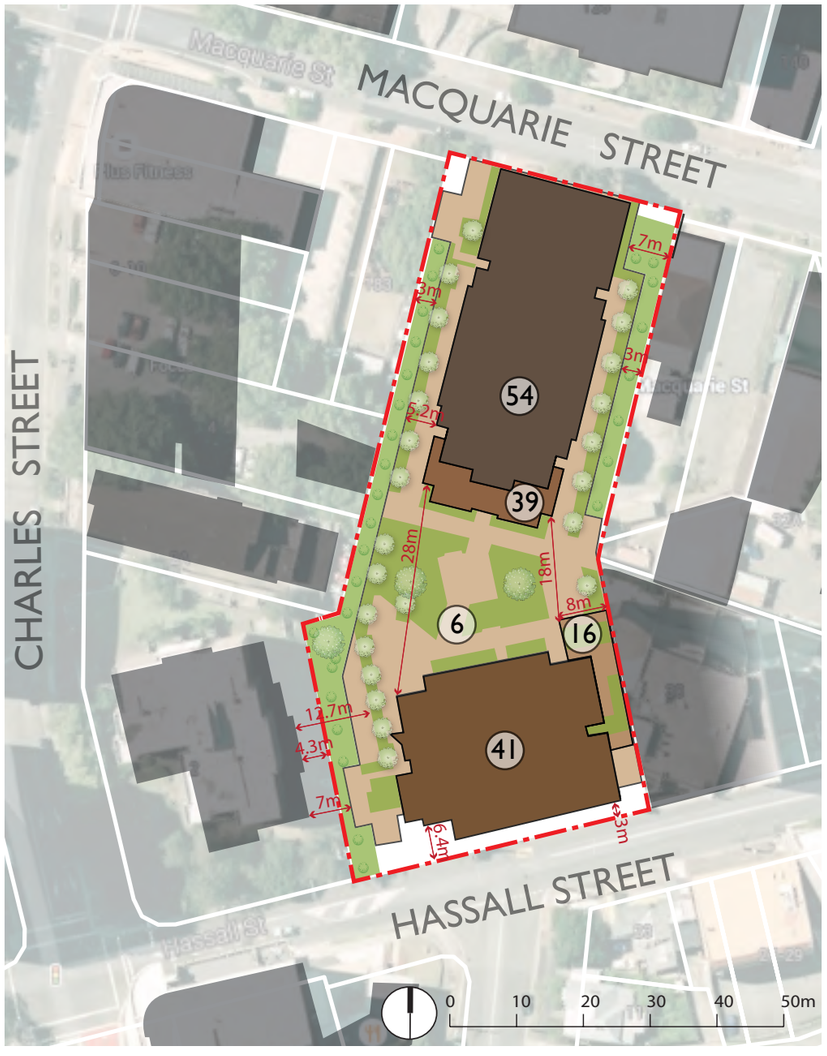


Figure 32. Preferred master plan option for the subject site

Figure 33. Perspective view of the proposed development (Source: KTA)

Figure 34. The shadow cast of Experiment Farm cottage was testing for evey minute from 2.50pm to 3pm.The closest shadow occurs at the times shown above.This proves that no shadow impact to the building can be achieved with the appropriate design of the roof feature for the proposed towers.

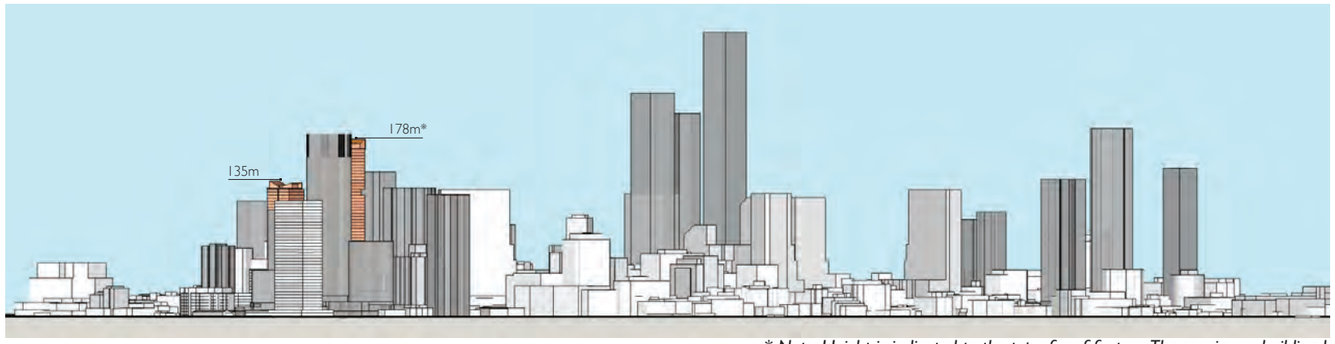


Figure 36. Parramatta's potential skyline viewed from the north (subject development shown in orange) ** Note: Height is indicated to the top of roof feature.The maximum building height is 167m.*

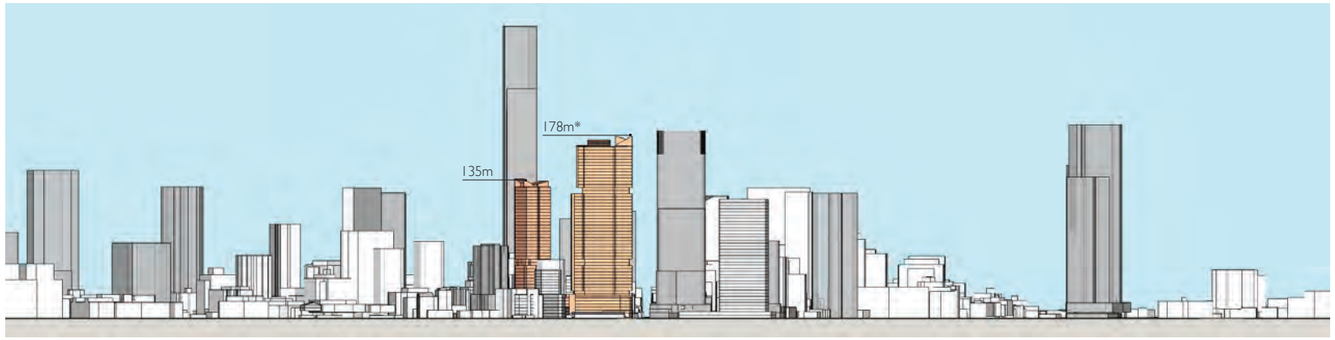


Figure 37. Parramatta's potential skyline viewed from the east (subject development shown in orange) ** Note: Height is indicated to the top of roof feature.The maximum building height is 167m.*

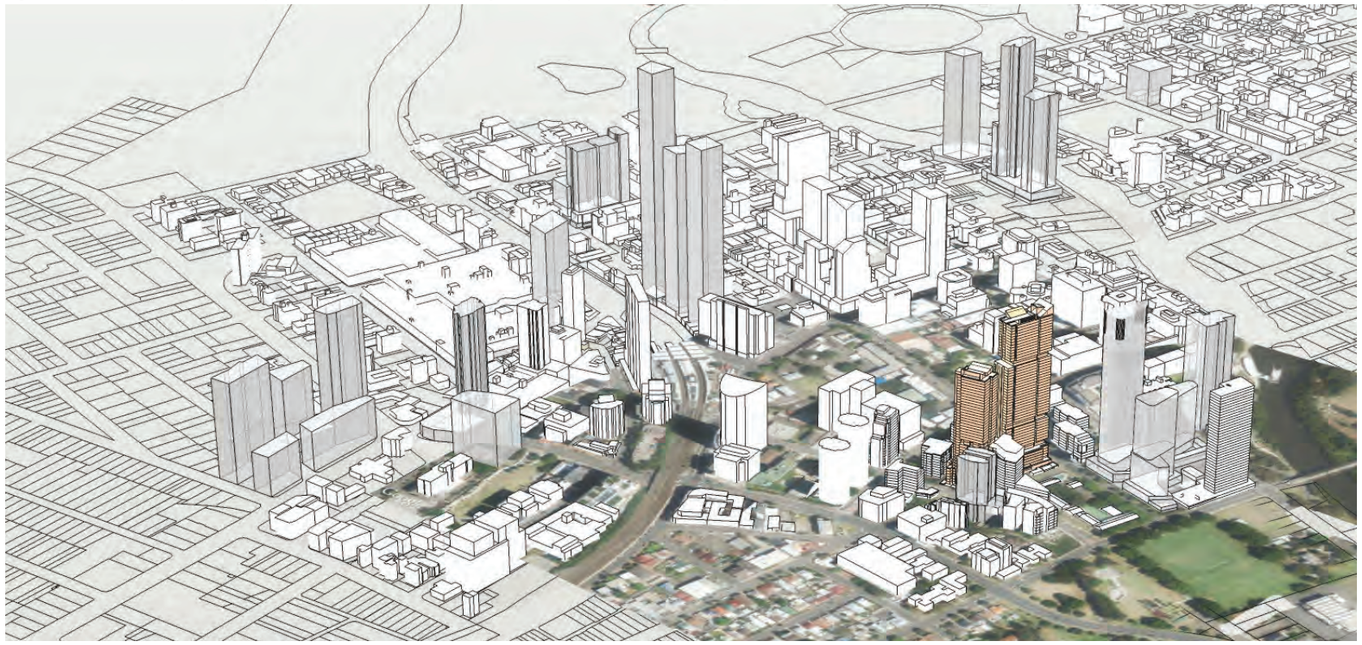


Figure 35. Bird's eye view of the 3D model of the proposed development and Parramatta CBD.

6.2 DESIGN PRINCIPLES & GUIDELINES

GENERAL DESIGN PRINCIPLES:

The general design principles for the subject site that apply to the increase of height for the already approved DA for the site are as follows:

- To strengthen the Parramatta's CBD skyline form as Sydney's second CBD;
- To strengthen the Eastern gateway development at the Macquarie Street axis and provide transition from the core of the city to the periphery of the Parramatta CBD to the south-east;
- To help regenerate and provide renewed interest to Hassall, Wigram and Macquarie Streets;
- To provide a termination to the axis along Wigram Street and to Macquarie Street;
- To capture and take advantage of local and district views available to the east of the Parramatta CBD;
- To encourage high quality built form outcomes and achieve design excellence;
- To respond sensitively to the scale, proportions and form of the heritage items in the vicinity of the subject site;
- To ensure the heritage significance and public enjoyment of Experiment Farm Reserve and Cottage is maintained and preserved;
- To minimise any adverse impacts on the amenity of adjoining uses in particular residential apartments;

The other general principles that apply to the site as a whole are as follows:

- To provide an important community benefit in the form of a public car park;
- To improve the landscape character and quality of the public domain for this area in particular Hassall and Wigram Streets;
- To activate the lower ground floor levels with appropriate uses;
- To achieve appropriate separation and transition to the surrounding residential developments;
- To integrate the new built form with adjacent development especially at podium levels taking into account important alignments and predominant built forms at podium level;
- To achieve a safe and vibrant public domain along the streets with appropriate levels of overlooking and natural surveillance; and
- To encourage street level movement networks, pedestrian linkages and existing pedestrian desire lines between Hassall and Macquarie Streets.

DESIGN GUIDELINES:

The proposed development will follow the same podium design, and the same relationship between the building elements as in the approval, therefore most of the following guidelines and principles have already been deemed acceptable through the approval process of previous DA.

The following are specific design guidelines that are to be applied to the elements of the new height for the proposal regarding built form, amenity and design excellence:

HEIGHTS

The proposed/desired heights for the site are shown in Figure 32 at the beginning of this chapter and include:

- Maximum heights of up to 54 storeys (178m to the top of roof feature and 167m to the top of habitable space) for the Macquarie Street tower; and
- Maximum of 41 storeys (135m to the top of a roof feature and 126m to the top of the habitable space) for the Hassall Street portion of the site.

BLANK WALLS

- Areas of blank walls are to be minimised throughout the development.
- Where they are unavoidable these facades should be treated with high quality materials and articulation to create visual and architectural interest. - Refer Figure 39.
- Wherever possible, fenestrations need to be provided within the walls to or back of office or house areas.

SHADOW IMPACTS

- Development is to maintain a minimum required solar access between 9am and 3pm on 22 June to living room windows and balconies of residential apartments to the surrounding or adjacent residential development as per the requirements of Apartment Design Guide.
- The proposal is to minimise the shadow impact on the reserve and the cottage located on the lands of the Experiment Farm. The acceptable impact has been shown in Figure 34.

COMMUNAL OPEN SPACE

- Communal open space for the site is to achieve the minimum requirement of ADG and no less than already approved for the site as per DA852/2013 approval.

INTERNAL AMENITY

- Internal layouts are to achieve high levels of amenity and outlook.
- Development is to achieve SEPP65 recommended levels of solar access and natural ventilation.
- Location of towers and direction of units and private open space is to achieve adequate privacy as per ADG & SEPP 65.
- General building depths to meet the objectives of the SEPP65.

DESIGN EXCELLENCE

- The proposal is to achieve design excellence as per Council's Design Excellence Guidelines (Item 22B of Parramatta City Centre LEP 2007).
- The proposal is to refer to the visual impression images shown in Figure 33.

SEPARATION DISTANCES

- Separation distances above podium are to meet the ADG separation distances to adjacent boundaries and in between towers within the subject site.
- Location of tower as per the approved DA852/2013.

The following are specific design guidelines that apply to the lower levels of the proposal and have already been established in the approved DA:

PEDESTRIAN MOVEMENT

The subject site will provide a pedestrian link across the site. This connection is required to provide the following:

- A link between Hassall and Macquarie Streets.
- Activation along the pedestrian link whenever possible.
- The pedestrian link may be integrated into the car park circulation where possible and where safety of pedestrians can be maintained to enable a view line from street to street.
- Daylight and visual permeability with glass roof covering allowing shelter and sunlight access for the majority of the link's length whenever practical.
- A minimum height to the pedestrian link of 2 storeys.
- A minimum width of 3m with direct visual connection from the street to the entry of the link.
- Appropriate levels of lighting at night.
- Landscape softening and attractive surface treatments.

VEHICLE ACCESS AND SERVICING

- Public vehicle access from Hassall Street to comply with Council's transport and access requirements.
- The width of vehicle and service access to both streets are to be minimised and incorporated into the building form.
- The public car park pedestrian entrance is to be separated and differentiated from the residential apartment pedestrian entrance.
- High quality design and high quality materials are to be used for the security shutters into the car park and loading areas. Refer to Figure 38
- Where possible any on grade service areas are to be sleeved with other uses and not to be visible to the public domain.
- Where possible garbage is to be located in basement levels.
- Services and service access points are to be minimised along the street frontages.

6.3 CHARACTER IMAGES

STREETSCAPE RESPONSE
The proposal will provide the following setbacks and streetscape response:

- Street setbacks to attempt to provide continuity to predominant setbacks along the ground floor for adjacent development along both Hassall and Macquarie Streets, with the exception of the residential building to the west of the site on Hassall Street, which setback contravenes the objectives of the controls.
- Street frontage heights along both Hassall and Macquarie Streets are to capture key alignments and heights along the street scape.
- Street wall response is to attempt to mitigate the impacts of the bulk and scale of the car park facility through horizontal and vertical articulation as to achieve the appearance of being 'connected with the ground' as part of the car park and not appear to sit on the parking podium. Towers should be integrated with the design language of the podium.

ACTIVE EDGES
Active edges include retail entries and windows as well as residential entries. The proposal will provide active edges to in the following locations as a minimum:

- The edges of the side pedestrian link, whenever possible.
- The frontages to Hassall and Macquarie Streets along the ground floor and the level above the ground floor on Macquarie Street with active uses (not car park).
- Activation, sleeving and or screening to all levels of the carpark along street frontages provided that the operational requirements of the carpark are met.

SETBACKS:
- Up to the street frontage height the development is to have a nil side setback to the adjacent property to the east on Hassall Street.

Figure 38. Examples of high quality design and materials for vehicle access

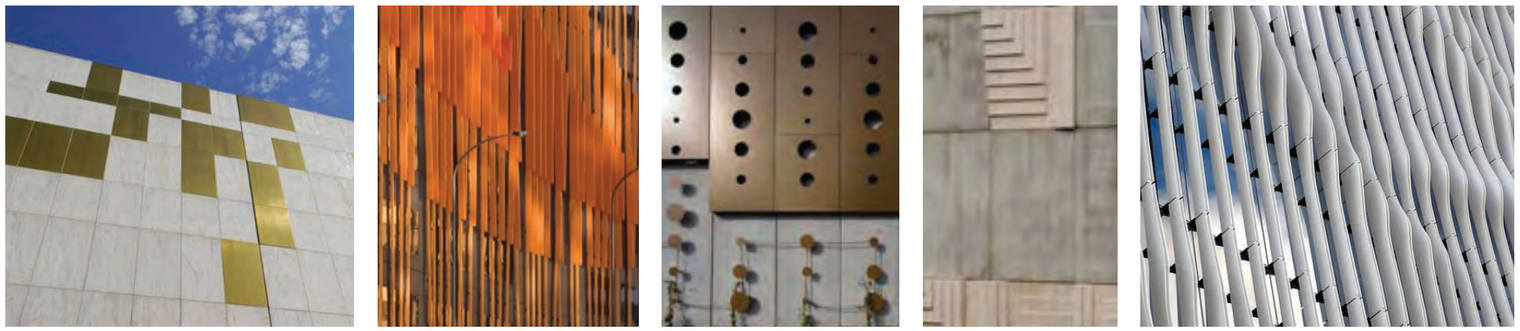


Figure 39. Examples of high quality design and materials for side facades and blank walls

Figure 40. Perspectives of proposed development

6.4 STATUTORY RECOMMENDATIONS

Based on the urban design study and testing, GMU recommends the following changes to the statutory controls for the subject site with regards to the maximum building height and FSR.

Figures 41 and 42 to the right illustrate the proposed amendment to the LEP that is the subject of this Planning Proposal.

HEIGHT
The maximum building height shall not exceed 167 metres. This height does not include the height of a roof feature as it is excluded from the LEP standard definition. (note this does not include the architectural roof feature as this is excluded from height under the LEP).

FSR
The maximum GFA of 60,000m^2 which equates to a FSR of 11.5:1)

HEIGHT
The proposed maximum height for the subject site is 167m.

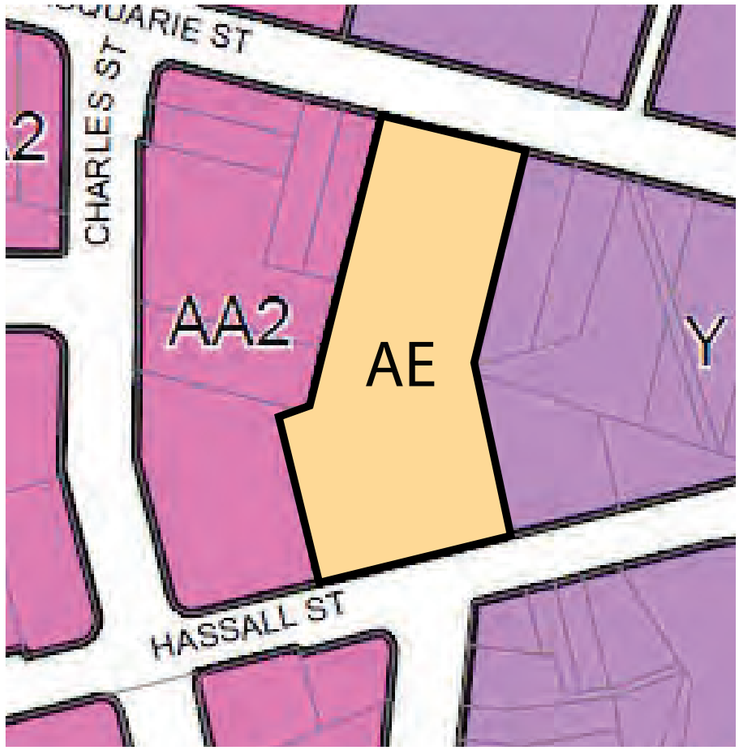


Figure 41. Proposed Maximum Building Height map for the subject site.

FSR
The proposed maximum FSR for the subject site is 11.5:1

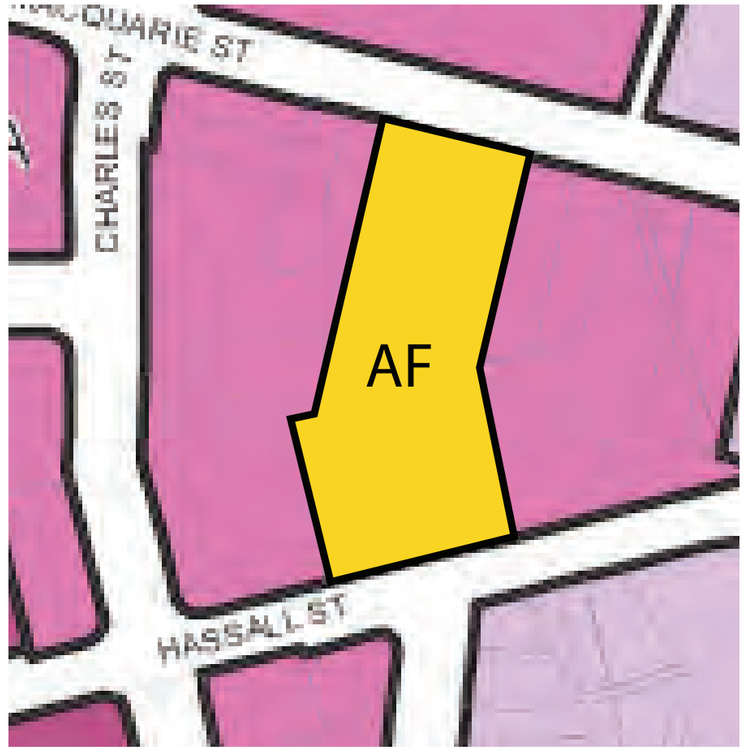


Figure 42. FSR map for the subject site.

7. FINAL CONCLUSIONS

7.1 FINAL CONCLUSIONS & RECOMMENDATIONS

The proposed development at 189 Macquarie Street, Parramatta will offer distinct advantages to the community. It will provide an important parking facility to service the Parramatta Centre as a whole while improving the urban design and amenity to Hassall, Macquarie and Wigram Streets. It will also provide additional density and activation of the eastern end of the CBD in a location proximate to many community facilities and amenity. These overall benefits and improvements include:

- Proposed heights which reinforce the developing status and form of Parramatta as the western city for Sydney.
- Renewed interest to Hassall, Wigram and Macquarie Streets.
- Improved landscape character and quality of the public domain in particular to Hassall and Wigram Streets;
- Appropriate responses to existing built form of adjacent development especially at podium levels;
- Eradicating the negative impacts of an existing large and open surface car park site.
- Providing a termination to the vista at the end of Wigram Street.
- The creation of defined building forms along both streetscapes that relate and respond to exiting recent development that will help to consolidate the streetscape character along both Hassall and Wigram Streets.
- The provision of a landscaped pedestrian link created by interesting and high quality landscape design.

We consider that the increased height and built form strategy can achieve high quality architectural solution to deliver a high quality and distinctive development that will achieve design excellence and enhance the sense of place of this area of the Parramatta Centre.

Therefore we recommend the built form strategy as presented in this report to be taken into consideration by Council and encourage Council to consider allowing the proposed height and FSR amendments.

END OF DOCUMENT

GMU

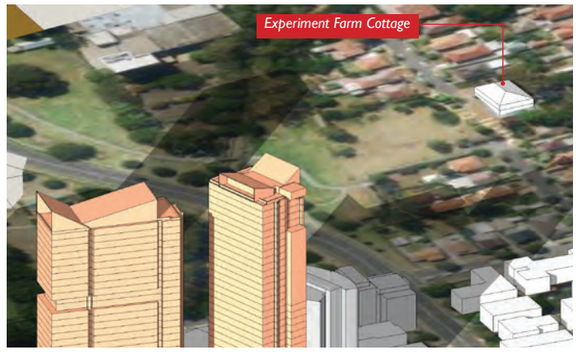
URBAN DESIGN / ARCHITECTURE / LANDSCAPE ARCHITECTURE

Project	URBAN DESIGN REPORT FOR 189 MACQUARIE STREET, PARRAMATTA
Prepared for	TOPLACE PTY LTD
Job number	15112
Date issued	16 June 2016

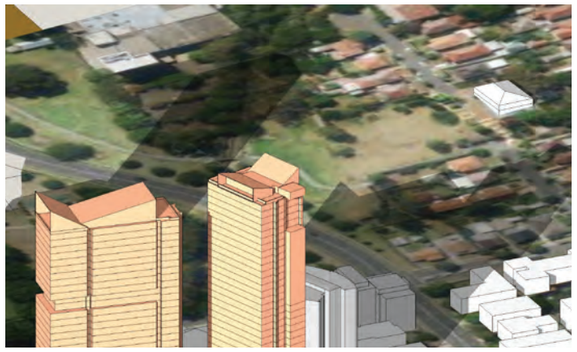
APPENDIX 1

SHADOW ANALYSIS - STRATEGY 1

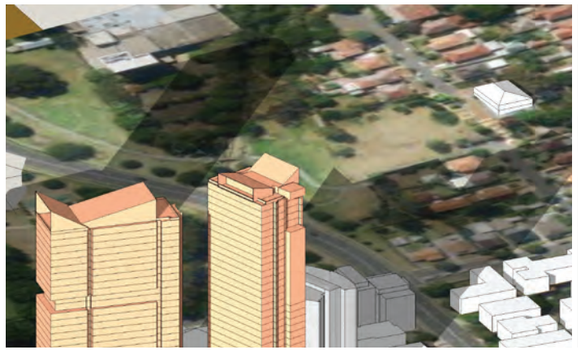
Detailed shadow analysis of strategy 1 showing shadow impacts on the Experiment Farm Reserve and Experiment Farm Cottage between 9am to 3pm in mid-winter.



21 June - 2:30pm



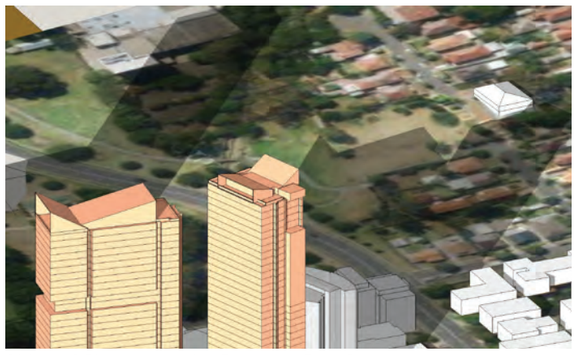
21 June - 2:35pm



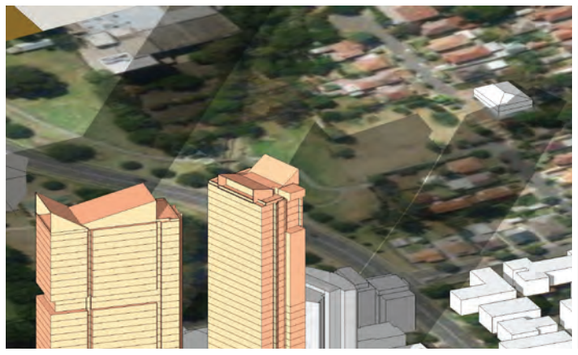
21 June - 2:40pm; start shading Experiment Farm Reserve

21 June - 2:45pm

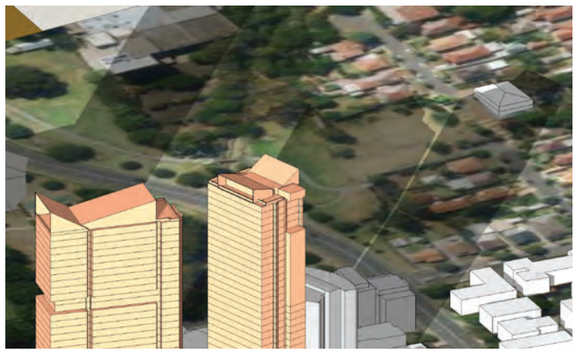
21 June - 2:50pm;



21 June - 2:51pm; start shading Experiment Farm Cottage



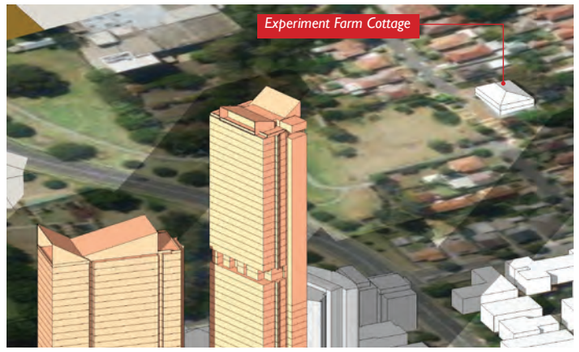
21 June - 2:55pm



21 June - 3:00pm

SHADOW ANALYSIS - STRATEGY 2

Detailed shadow analysis of strategy 2 showing shadow impacts on the Experiment Farm Reserve and Experiment Farm Cottage between 9am to 3pm in mid-winter.



21 June - 2:30pm

21 June - 2:35pm

21 June - 2:37pm

21 June - 2:38pm; start shading Experiment Farm Cottage

21 June - 2:39pm; start shading Experiment Farm Reserve

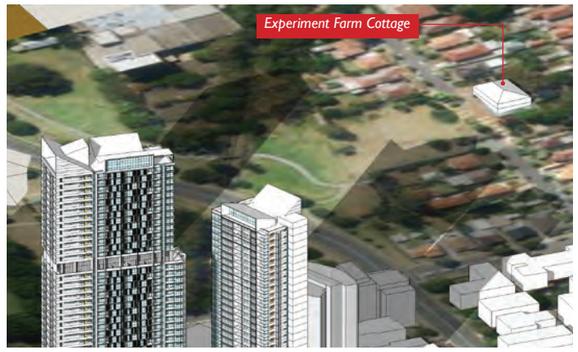
21 June - 2:40pm;

21 June - 2:50pm

21 June - 3:00pm

SHADOW ANALYSIS - PREFERRED OPTION

Detailed shadow analysis of the preferred option showing no overshadow on the Experiment Farm Cottage between 9am to 3pm in mid-winter.



21 June - 2:30pm


21 June - 2:35pm


21 June - 2:40pm


21 June - 2:50pm


21 June - 2:51pm


21 June - 2:52pm


21 June - 2:53pm


21 June - 2:54pm


21 June - 2:55pm


21 June - 2:58pm


21 June - 2:59pm


21 June - 3:00pm

SHADOW ANALYSIS (PLAN VIEW) - PREFERRED OPTION

Detailed shadow analysis of the preferred option showing the additional shadowing impacts on adjacent open spaces on 21 June as a result of the increased heights. In min-winter, the proposal starts to cast shadow onto the open space from approximately 2pm, half an hour earlier than the orignal DA approval does.

21 June - 1:30pm

21 June - 2:30pm

21 June - 2:00pm

21 June - 3:00pm

LEGEND

PROPOSED DEVELOPMENT

SHADOW OF ORIGINAL APPROVAL

ADDITIONAL SHADOW CAUSED BY THE PROPOSAL