Urban Design Strategy accompanying Planning Proposal and Development Application information

41 McLaren St, North Sydney

Prepared for: Erolcene Pty Ltd and Claijade Pty Ltd

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This document is for discussion purposes only unless signed.

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1 Overview

Overview

The objectives and principles in the Draft Ward St Precinct Master Plan (Draft Master Plan) are laudable and agreed. However the Draft Master Plan by Council's consultants does not deliver effectively on jobs or housing so near to the new Metro station. Remarkably the Draft Master Plan only delivers 6,827sqm GFA additional office space and 202 additional apartments. This Urban Design Strategy provides an Alternative Master Plan that delivers on Council's objectives as the context for considering development of 41 McLaren St, North Sydney.

It provides the strategic planning context and basis for a Planning Proposal and Development Application for 41 McLaren St, North Sydney. The Planning Proposal is to increase the height limit in the North Sydney LEP height map from RL 100 to RL226. 41 McLaren St is a locally listed heritage item and therefore an architectural design for a DA submission has been prepared for the site which accompanies this application and is reflected in the envelopes shown in this document.

This Urban design Strategy is based on a recent submission to North Sydney Council in regard to the public exhibition of the Draft Ward Street Precinct Master Plan (exhibited in February/March 2017) and is prepared by a team of consultants on behalf of the owners of 41 McLaren St, North Sydney, Erolcene Pty Ltd and Claijade Pty Ltd:

- Architectus - urban planning, urban design, architecture
- Harry Seidler and Associates - architecture
- Spackman Mossop Michaels - public domain, landscape architecture
- Hill PDA - economic viability
- Colliers - market viability
- Knight Frank - market viability
- GML - heritage
- Ason Group - traffic

The Ward St Precinct is very important for the future of the North Sydney Centre given that the Precinct is adjacent the new Metro Rail Station called Victoria Cross which is part of the $20billion Government investment in the new Metro rail line.

Architectus considers that the Draft Master Plan is very helpful in providing Council's objectives and principles for development of the Precinct but that the Draft Master Plan is limited to development on individual sites and we have major concerns that the resulting built forms are not economically viable or yield the best advantage to Council and the public. Architectus proposes an Alternative Master Plan and design concepts that better meets Council's objectives and principles.

In addition to the Alternative Master Plan presented here we have also shown a Visionary Master Plan in Section 7.2 that maximises land use opportunities in the subject street block commensurate with Government investment for the Sydney Metro.

This document addresses:

- A larger public domain for the Ward St spine where people can see directly between Berry St and McLaren St in a straight line of sight thus encouraging pedestrian permeability and legibility of the Precinct. A preliminary design concept for the public domain is provided by Spackman Mossop Michaels landscape architects.
- A major development on the amalgamation of 20 Ward St (Councils carpark site) with 56 and 66 Berry St. This yields a very real opportunity for Council for maximum financial return and public benefit. Architectus has prepared a design concept to show the opportunity for a major ''A'' Grade office tower with a high quality hotel. Council's community hub could be part of this development.
- A distinctive residential tower on top of retained office uses at 41 McLaren St with a design concept by Harry Seidler and Associates, the original architects for the existing heritage listed building, that retains the heritage values of the building. The Seidler office is well known for landmark towers such as Australia Square, the MLC Centre, Grosvenor Place, Horizon, and Cove Apartments. The opportunity is to provide a distinctive tower in the Precinct of high quality - the best residential tower on the north shore.
- Sunshine analysis in detail for Berry Square, the Ward St spine (NOC Square) and local residential uses showing that the area receiving direct sunshine is similar between the Draft Master Plan and the Alternative Master Plan proposed in this submission.
- A preliminary design concept for the public domain by Spackman and Mossop landscape architects.
- Economic viability by Hill PDA, Colliers Research and Knight Frank – and comparison of the Draft Master Plan with an Alternative Master Plan by Architectus, providing evidence that the Alternative Master Plan proposed by Architectus is far better suited to the market and maximises economic viability and financial return to Council.

At a glance

Compared to the exhibited Draft Master Plan the proposed Alternative Master Plan:

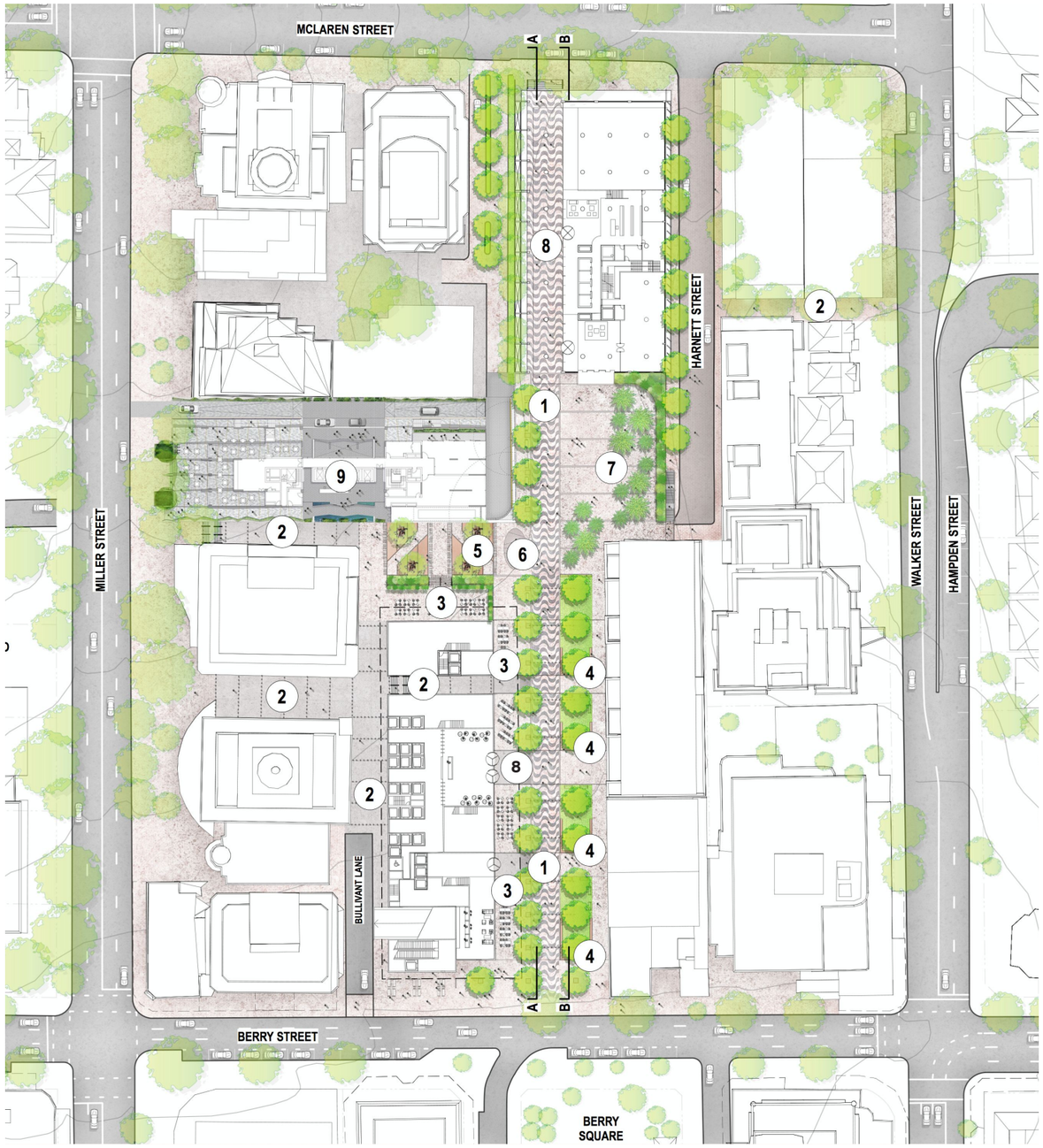
- Almost doubles the area of the public domain.
- Provides viable built forms.
- Maximises financial return to Council.
- Achieves similar area of sunlit public domain.
- Achieves 'A' grade office space.
- Achieves a fivefold increase in office space.
- Offers the best residential tower in North Sydney designed by Harry Seidler and Associates.
- Provides for a 4 star hotel.
- Enables a direct visual connection between Berry St and McLaren St.
- Provides an additional 328 apartments enhancing Centre vitality.

The public domain

Spackman Mossop Michaels landscape architects has been commissioned to prepare a public domain design concept to assist in understanding the opportunity for discussion with Council.

Hallmarks of the preliminary design concept for discussion are:

- Direct visual and pedestrian connections between Berry St/Berry Square and McLaren St by a Central Walk.
- Activate the new public domain as much as possible with outdoor dining, places for outdoor activities, kiosks, and active street frontage uses.
- Green the public domain by large trees in deep soil.
- Special high quality stone paving for the public domain including the new open space, potential shareways for the lane on the west side of 41 McLaren St, as well as parts of Harnett St and Bullivant Lane.



LEGEND

1. PEDESTRIAN AXIS "MAIN STREET"
2. LANEWAYS
3. OUTDOOR DINING / CAFE SPACE
4. TERRACED SEATING
5. STEPPED SEATING & VIEWING SPACE
6. PART-TIME WATER FEATURE / FLEXIBLE SPACE
7. LARGE FLEXIBLE OPEN SPACE
8. COLLONADE
9. 221 MILLER STREET (OCULUS)

Figure 1.1.1 Public domain concept plan

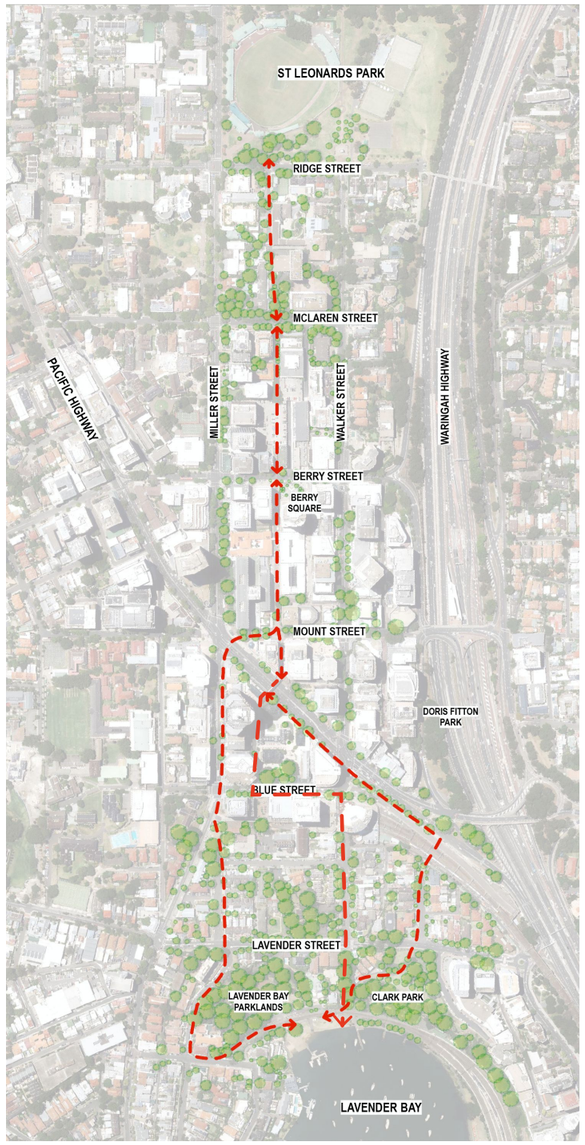


Figure 1.1.2 Central Walk

The long term vision is for a Central Walk from St Leonards Park to Lavender Bay. The Ward Street Precinct is integral to achieving this vision.

The **Draft Ward St Precinct Master Plan** provides:

- A mixed use building of office space and residential space on the Ward St carpark (20 Ward St) with an office tower plate of 532sqm NLA- marked 'B' as well as a 4 storey community hub building - marked 'G'.
- A small floorplate hotel tower (7-8 rooms/floor) on top of 7 storeys of offices on amalgamated 56 and 66 Berry St, replacing two existing office buildings - marked 'C'.
- 3-5 storey addition of apartments to the existing 7 storey component at 41 McLaren St (a heritage item) - marked 'D'.
- 12 storey apartment building replacing an existing 3 storey apartment building at 45 McLaren St - marked 'F'.
- Adaptive reuse of the disused Ausgrid building at 70-74 Berry St for up to 7 storeys of office space - marked 'E'.

Note 1: An indicative outline of a new tower above the new Metro Station (on the south east corner of Miller St and Berry St) is shown to illustrate the likely changing local built context - marked 'A'. It is not known how high the Metro Tower will be. However, in Architectus opinion it will likely be 50-60 storeys based on the Government's objective to maximise development above and near the metro stations.

Note 2: The uses outlined in the Draft Master Plan for the Community Hub buildings (marked 'G') are not fixed but are identified as *"active recreation, community education facilities, a library, community centre, childcare, creative spaces and exhibition event spaces"* (Council report 5112.16 page 19). Architectus considers most of these uses are inappropriate - the area is not big enough for active recreation, the best library in the North Shore is one block away, community facilities need to be co-located for efficient management and there is an existing community centre one block away, there is little sunlight for childcare - a better location would be on 41 McLaren St with its north aspect. A separate community hub building means Council needs to manage a whole building. It would be better as part of the Ward St development where Council has dedicated space suited to creative spaces and exhibition/events.

Figure 1.1.3 Draft Ward Street Precinct Master Plan - Site plan

Note: The above plan is derived from the Council document with storey numbers, RL's, building identification and the Metro Tower marked 'A', added. The graphics on this page are by Architectus to show the Draft Ward Street Precinct Master Plan in the same format as other graphics in this report.

The **Alternative Master Plan** provides:

- A larger, wider public space with a north - south public domain spine.
- A major 'A' grade office tower (with tower floorplates of 1344-1444sqm NLA) with a hotel on top (16 rooms/ floor) and a community hub in the 4 storey podium (1910sqm NLA) with a Metro entry on the Berry St frontage - marked 'B'.
- A high quality residential tower above 41 McLaren St designed by Harry Seidler and Associates.

Note 1: The Alternative Master Plan responds more effectively to the changing built scale of the future tower above the new Metro Station (marked 'A'), the greater public transport accessibility of the area and the massive spending by Government on infrastructure for the area.

Note 2: The Community Hub is ideally located within the podium of Tower B, which offers high visibility of the community hub as a good interface with the new public space.

Figure 1.1.4 Alternative Master Plan - Site plan

Note 1: The numbers in circles refer to the number of storeys.

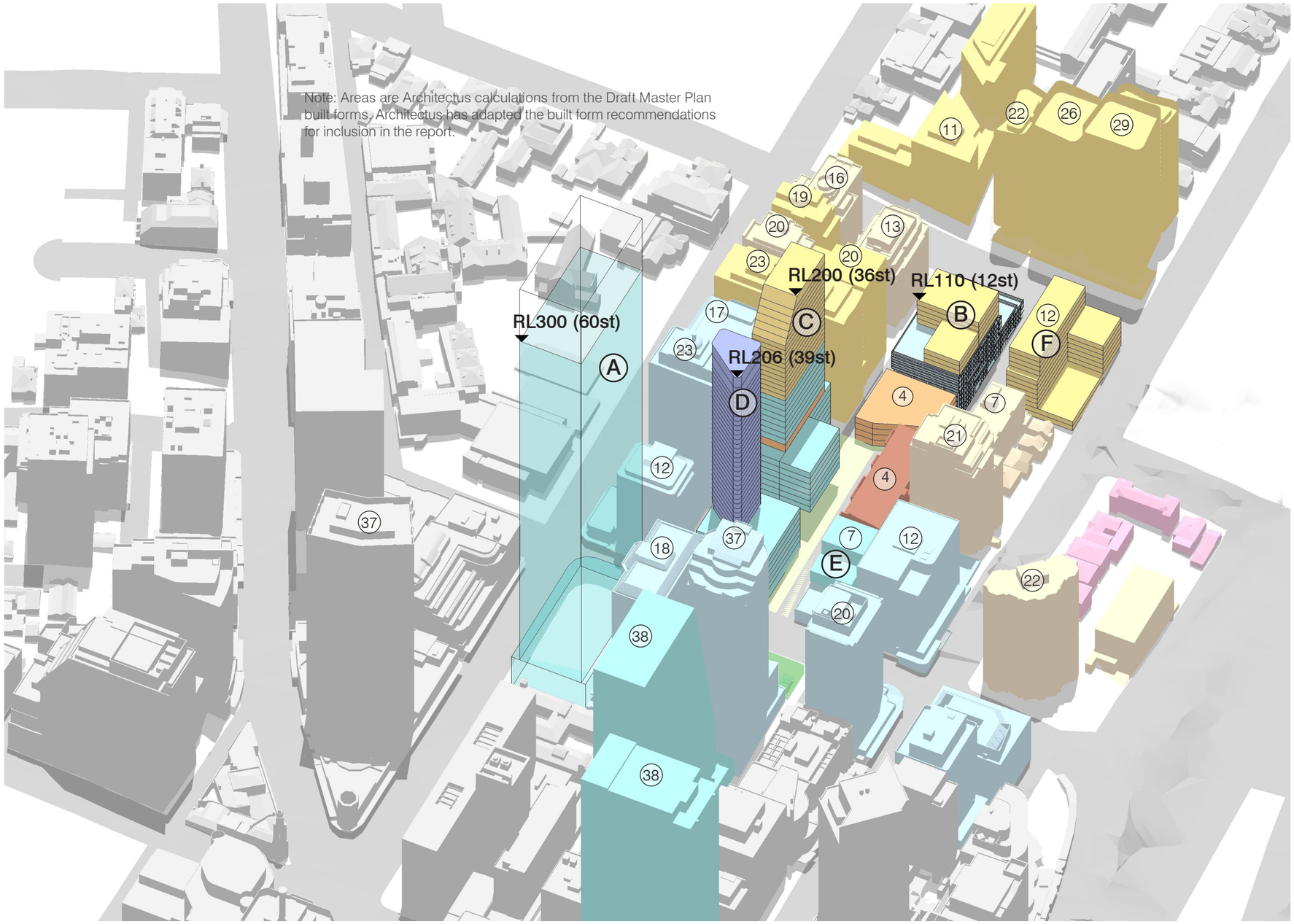
Note 2: There is a 4m level change between 41 McLaren St and Berry St which will result in a gently sloping public domain for about one-third of the street block length - the remainder being flat.

Draft Ward Street Precinct Master Plan

Summary of areas	sqm GFA
Commercial office	28,784
Retail	2,523
Hotel	10,412
Residential	21,512
Community	4,518
Total	67,749

Figure 1.1.5 Summary schedule by use

Note: Areas are Architectus calculations from the Draft Master Plan built forms. The graphics on this page are by Architectus to show the Draft Ward Street Precinct Master Plan in the same format as other graphics in this report.



A Indicative Metro Tower
B 41 McLaren St
C 20 Ward St
D 56/66 Berry St
E 70-74 Berry St (Ausgrid)
F 45 McLaren St

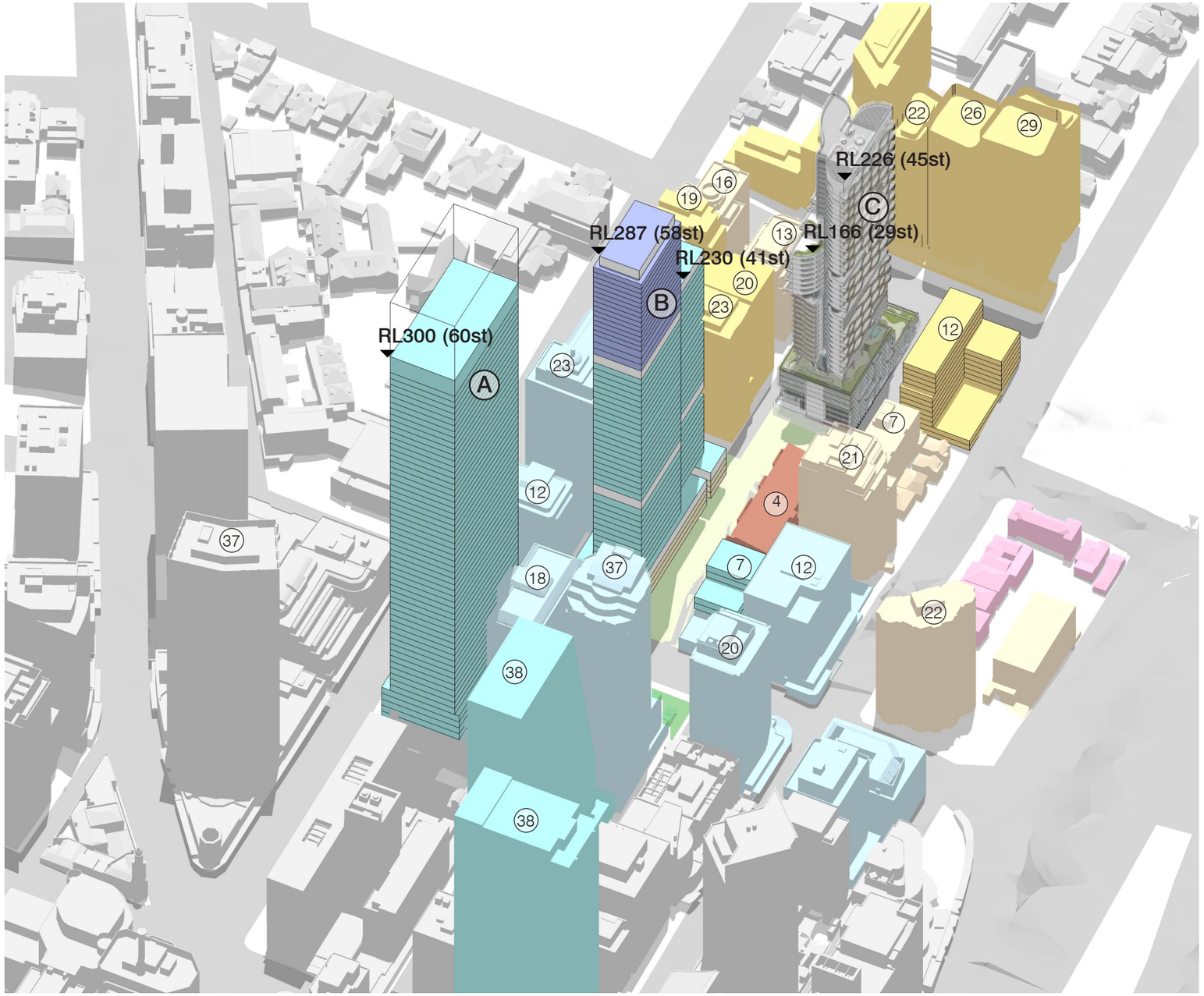
Figure 1.1.6 Draft Ward Street Precinct Master Plan - 3D view

Note: The floor plate sizes of the built forms are generally too small for market viability,

Alternative Master Plan

Summary of areas	sqm GFA
Commercial office	56,828
Retail	2,216
Hotel	13,274
Residential	32,889
Community	6,237
Total	**111,457**

Figure 1.1.7 Summary schedule by use



A Indicative Metro Tower
B Ward Street Tower
C 41 McLaren St

Alternative proposal on 41 McLaren St
Existing commercial
Existing residential
Future commercial
Future residential
Future community facilities
Future hotel
Substation
Opportunity site
Berry Square
Proposed N.O.C Square
(#) Number of storeys
RLXX Reduced levels AHD

Figure 1.1.8 Alternative Master Plan - 3D view

Note 1: The floorplate sizes for the built forms have been sized to suit market viability.
Note 2: The wider public domain spine can be seen in this view.

Figure 1.1.9 Summary table of response to objectives

Relevant Objectives	Draft Ward Street Precinct Master Plan	Alternative Master Plan by Architectus
North District Plan Objectives		
– **Maximise land use opportunities near Metro Station**	✗ Additional 24,721sqm GFA but none of the built form envelopes are considered economically viable.	✓ Additional 64,142 sqm GFA and all built form envelopes are considered economically viable.
Council's Draft North Sydney Centre Land Use Capacity Study Objectives		
– **Supply 'A' grade office space**	✗ There is no office space that is 'A' grade. Only 6,545sqm of secondary office space is additionally planned and new built forms are considered unviable. Note: The additional office space comprises 12,706 sqm GFA for Ward St tower, with a net loss of 7,703 sqm GFA for 56/66 Berry St and 1,542 sqm GFA for the Ausgrid site.	✓ 34,589 sqm of 'A' Grade office space is additionally provided, within a total of 56,828sqm office space.
Council's Draft Ward St Master Plan		
– **High quality public spaces**	✗ The new spaces are irregular and indirect. Total of 2,100 sqm of public space open to the sky.	✓ The new north-south public space is almost double the size (at 3,900 sqm open to the sky) and enables a direct line of sight between Berry St and McLaren St and therefore has good legibility. There is an almost equivalent amount of sunlight in midwinter to Berry Square and the new Ward Street open space.
– **Ensuring that financial return to Council is a key project driver**	✗ Neutral or not financially viable.	✓ Maximises financial return to Council.
– **Clarity for future growth**	✗ Built forms are not considered viable because of the small floorplates for the hotel and the office tower floors. There is insufficient return to fund the development forms and land costs. Land amalgamation options not considered (such as amalgamating 20 Ward St with 56 and 66 Berry Street.	✓
– **Bold response to Metro Station**	✗ A new tower on top of the new Metro station (Metro Tower) is likely to be the tallest building in North Sydney and close to the aviation height limit. The Draft Master Plan is a relatively small scale response.	✓ Responds to Metro Tower context.
– **Balance growth with surrounding residential amenity**	✗ Growth is minimal at only 6,545sqm GFA additional office space, 220 hotel rooms and 202 apartments.	✓ Growth adjacent to the Metro is appropriate at an additional 34,589sqm GFA commercial office, 220 hotel rooms and 328 apartments. Amenity for surrounding existing residential is balanced.
– **Stimulate North Sydney Centre as a destination/vibrant precinct**	✗ Subject to viability of built forms.	✓
– **Community hub**	✓ Separate building requires more maintenance by Council.	✓ Up to 6,200sqm GFA integrated with the proposed Ward Street tower results in less maintenance for Council.
– **Affordable housing**	✗ Not addressed.	✓ Offered as public benefit.
– **Acceptable environmental impact**	✓	✓
– **No net increase in traffic generation**	✓	✓ Subject to further study but likely to be acceptable.

Solar access summary

The adjacent tables summarise solar access to the new Ward St open space (NOC Square) and Berry Square from 9am-2pm June 21 midwinter as well as September 23 at the equinox.

Note: that the first two columns compare the areas from the Draft Master Plan exhibition document with the Architectus reassessment of the Draft Master Plan. The Architectus reassessment is more accurate because it is based on a more accurate 3D base model of the North Sydney Centre. The Draft Master Plan overstates sun access by an average of 7%.

Overall the Alternative Master Plan is not too dissimilar to the Draft Ward St Precinct Master Plan in terms of solar access as evidenced by the total line highlighted in dark yellow. In fact the key time of maximum sunlight at 12 noon shows that the Alternative Master Plan has greater sunlit area to the NOC Square.

Solar acess to NOC Square (sqm) - New Ward St open space - **midwinter**

Time	Draft Master Plan (from document)	Draft Master Plan (from Architectus model)	Alternative Master Plan
9am	151	79	121
9.30am	233	209	270
10am	154	58	406
10.30am	824	856	315
11am	1,362	1,401	86
11.30am	1,470	1,437	930
12pm	797	664	1,177
12.30pm	77	22	219
1pm	-	-	-
1.30pm	-	-	-
2pm	-	-	-
Total	5,068	4,726	3,524

Solar acess to NOC Square (sqm) - New Ward St open space - **equinox**

Time	Draft Master Plan (from document)	Draft Master Plan (from Architectus model)	Alternative Master Plan
9am	433	415	1,254
9.30am	666	793	1,648
10am	934	1,149	1,890
10.30am	1,276	1,462	1,664
11am	1,577	1,576	874
11.30am	1,686	1,736	1,715
12pm	989	1,043	1,681
12.30pm	159	195	654
1pm	-	6	227
1.30pm	-	-	-
2pm	-	-	-
Total	7,720	8,375	11,607

Figure 1.1.10 Solar access to NOC Square

Solar access to Berry Square (sqm) - **midwinter**

Time	Draft Master Plan (from document)	Draft Master Plan (from Architectus model)	Alternative Master Plan
9am	-	-	-
9.30am	-	-	-
10am	-	12	13
10.30am	441	388	388
11am	566	720	414
11.30am	588	756	272
12pm	446	513	487
12.30pm	51	98	98
1pm	-	-	-
1.30pm	-	-	-
2pm	-	-	-
Total	2,092	2,487	1,672

Solar access to Berry Square (sqm) - **equinox**

Time	Draft Master Plan (from document)	Draft Master Plan (from Architectus model)	Alternative Master Plan
9am	104	414	385
9.30am	324	556	529
10am	489	683	663
10.30am	595	758	744
11am	689	780	781
11.30am	694	780	780
12pm	559	661	325
12.30pm	237	323	-
1pm	225	273	167
1.30pm	497	602	450
2pm	568	640	584
Total	4,981	6,470	5,408

Figure 1.1.11 Solar access to Berry Square

Note: Shadow analysis is based on a 3D model of North Sydney Centre from AMM, approved DA drawings and key RL's have been survey checked. It is considered the modelling is accurate to within 200mm.

Errors and omissions in the Draft Ward Street Master Plan

In the Architectus submission to Council in response to the draft Ward St Precinct Master Plan, Architectus identified a number of errors and omissions in the Draft Master Plan by Council's consultants as follows:

1. There is **no consideration of amalgamation** of 20 Ward St with 56 and 66 Berry St properties – which would maximise development and offer the best financial return to Council for Council's Ward St Carpark site.
2. The **office floor plates are too small** in the Draft Master Plan. The proposed tower for 20 Ward St (Council carpark site) states the floor plate size for a typical commercial floor plate above the podium is 737sqm GBA (i.e. 532sqm NLA) – this is an **unviable floorplate size** even for new secondary grade space. The Property Council of Australia states that Grade 'A' office buildings need to be at least 1,000sqm NLA. The market prefers larger at 1,200-1,500sqm NLA.
3. The **amount of commercial office space** provided by the Draft Ward Street Precinct Master Plan is stated as being an additional 30,600sqm commercial space (office, hotel and retail) when in fact there is only an additional 6,545sqm GFA of office space. See Appendix A.3 for detailed calculations.
4. The **hotel floor plate is too small** at 342sqm GEA (Gross Envelope Area) or 7-8 rooms per floor. The market needs more rooms per floor preferably 20 but 14 can work in Architectus' experience.
5. The **floor space efficiencies** given in the Draft Master Plan for the Ward Street tower and 56/66 Berry Street tower are inconsistent and implausible ranging to over 100%. The Architectus analysis of the Draft Master Plan is based on more detailed modelling derived from information available within the Draft Master Plan document and uses an 85% efficiency from GBA to GFA generally. The figures stated on this page are derived from analysis by Architectus.
6. Berry Square sun access - there is **no discussion about the appropriate development control options for sun access** to Berry Square. For example, some Central Sydney spaces have no further overshadowing for lunch hours at August 31 rather than June 21 because of existing extensive overshadowing in mid-winter – which is also the case for Berry Square. There is a strong argument for not controlling sunshine to Berry Square given the impact on development potential so near the Metro Station and the private ownership of the Square.
7. **The additional height for 41 McLaren St is wrong**. 41 McLaren St is proposed for an increase in height by 5 storeys and up to RL110. The current RL height limit is RL100 which is the top of the existing plant. An increase to RL110 would only allow 3 storeys increase ignoring plant. In any case, a 3-5 storeys increase is not viable given the costs for an additional lift core, plant relocation and structural strengthening.
8. There is **no discussion about the range of criteria for setting building heights**. For example, there is no consideration of the aviation height limits and whether it is more appropriate to guide heights by contextual considerations, growth needs and protection of solar amenity of existing residential in accordance with the State Government's Apartment Design Guidelines and Draft Medium Density Design Guidelines.
9. There is **no discussion about potential development scenarios for tower(s) above the new Metro station** that would influence the height of towers in the Precinct because a new context of tower heights is very likely to be established by the new Metro Tower. Simply using the height of the 1970's Northpoint tower as a reference point is insufficient (the Northpoint tower height is RL 200 and the draft Capacity and Land Use Study sets RL 201 for the maximum height of the Metro tower). It is unimaginable to think the State Government will not maximise height for the Metro tower. A 50-60 storey tower is not inconceivable.
10. There is very little or **no examination of built form options and open space** configurations for the Ward St Precinct. Only one option is shown.
11. There is **no analysis of the usage patterns of Berry Square** or thorough assessment of the options for addressing sunlight to the Square.
12. There is **no detailed analysis of lateral expansion of the Centre** or justification for not including the whole Precinct in the North Sydney Centre.
13. There is **no discussion of targets in regards to affordable long term rental housing.**
14. The **overshadowing analysis by the Draft Master Plan is inaccurate** by an average of 7% with some inaccuracies at certain times ranging to more than 20% and far greater. Architectus has based shadow analysis on a more accurate North Sydney CBD model sourced from AMM which is accurate to 200mm and has been checked against surveyed RL's, whereas the Draft Master Plan shadow modelling is based on a basic model.

The Architectus submission to the draft Ward St Precinct Master Plan endeavoured to address the errors and omissions with comprehensive solutions. The submission also addressed shortcomings in the draft North Sydney Centre Capacity and Land Use Study 2016. A very noticeable shortcoming of this study is that the growth of the Centre is expressed as a proportion of the capacity remaining in the LEP controls i.e. the LEP controls have 348,000sqm of further capacity and the Study adds a further 148,000sqm or 37% more capacity. However the Study acknowledges how little of the LEP capacity is realisable. Expressed as a proportion of existing non residential space (800,000sqm GFA) the additional capacity of 148,000sqm is only 18% for the next 30 years!

The more recently released Draft North District Plan calls for 16,400 - 21,500 jobs or 328-420,000sqm of additional non-residential space (based on 20sqm per job). If a suitable buffer (to allow for realisable space within the planning controls) is added of 20-30% then about 500,000sqm of additional floor space is needed - that is, 60% more space on top of the existing 800,000sqm in the Centre needs to be accommodated in the planning controls.

Note that discussions with Council officer's indicate that 10sqm/job is used by Council upon feedback from industry. However City of Sydney Council use 20sqm/job in considering development capacity for planning controls. This is based on City of Sydney Council's Sydney census for all non-residential floor space (refer to City of Sydney Council floor space summary - Appendix A13). As per Phil Raskall, City of Sydney Strategic Research Manager, internal area is equivalent to NLA and excludes communal spaces, lobbies and vertical circulation.

Recommendations

The Architectus submission to Council in response to the draft Ward St Precinct Master Plan made the following recommendations to Council:

1. **The North Sydney Centre should be expanded to include all of the Ward Street Precinct.** Currently the North Sydney Centre excludes the northeast Part between Hampton St and Walker St and land bounded by Walker St, Berry St, the Warringah Expressway and Hampden St. This area should be included in the Centre because of its proximity of the land to the new Metro rail station (less than one street block away).
2. **An alternative set of development controls should be provided for the amalgamation of 20 Ward St, 56 and 66 Berry Street properties**. The LEP can have two sets of controls. This was done for key street blocks in Central Sydney known as the AMP Quarter and the Alfred, Pitt, Dalley, George street block – in both cases, alternative controls were provided if landowners undertook nominated property amalgamations and provided certain public benefits. The benefits of such amalgamation include greatly enhanced viability, significant financial return to Council through residual value of Council land, better public domain, larger open space, a direct line of sight between Berry St and McLaren St meaning better legibility, supply of 'A' grade office space (potentially the best in North Sydney), potential supply of a high standard hotel, and having reasonable sunshine to Berry Square. The community hub is best placed within this development at lower levels so that Council is only responsible for the internal floor space rather than the maintenance of a separate building. It is likely that the preferred community uses will be low rental creative spaces given the existing community facilities nearby.
3. **Provide alternative development controls for 41 McLaren St** to enable a tower. Public benefits for the Ward St Precinct may include a through site double height publicly accessible colonnade that connects the Ward St public domain spine with McLaren St so that people can see and move between Berry St and McLaren St, a child care centre facing north to McLaren St, provision of long term rental affordable housing dedicated to Council, and a significant financial contribution through a Voluntary Planning Agreement to Council for public domain works in the Precinct.
4. **A property economics review by Council is needed before finalising the exhibited Draft Master Plan**. Council's brief for the Ward St Precinct Master Plan included financial return as a key driver. Page 25 of the Council officer's report of 5.12.16 dilutes this criterion by saying that the Master Plan was premised on a financially neutral outcome for Council. Architectus' review of the building envelopes reveal that the envelopes are not market viable and therefore it is clear that Council will be having to expend considerable funds to create the desired public benefits. This is not satisfactory. This submission provides property economics reviews and Architectus provides a way forward in this document via an Alternative Master Plan as a basis for Council's review.
5. **Solar access controls for Berry Square should be re-considered by Council.** An LEP clause should replace the current controls to the effect that solar access should be considered as part of balancing the various urban planning issues in the area. There is a strong argument for not having solar access control standards for either Berry Square or the Ward St public domain spine (NOC Square) because of the proximity to the new Metro Station and the need to maximise land use opportunities nearby. Architectus has offered a Visionary Master Plan, that is separate to the Alternative Master Plan, that very substantially increases development potential – however, such potential cannot be achieved if the solar controls remain in place or are changed in accordance with the Draft Master Plan. If Council remains concerned about solar access, there is the potential to have a heliostat on top of the Ward St tower to reflect sunshine into Berry Square and the Ward St spine (NOC Square) – this is successfully done at Central Park on Broadway.
6. **Kickstart the Precinct with a Planning Proposal for 41 McLaren St.** This submission was intended to be the basis for a Planning Proposal for 41 McLaren Street which will play a vital role in kickstarting the Precinct.

2 Strategic Context

2.1 Plan for Growing Sydney and District Plan

The Greater Sydney Report Plan, A Plan for Growing Sydney 2014, identified North Sydney as part of Global Sydney CBD (needing to accommodate 689,000 new jobs and 664,000 new dwellings by 2031 in metropolitan Sydney) and specifically to *"investigate potential future employment and housing opportunities associated with a Sydney Rapid Transit (Metro) train station at Victoria Cross".*

Towards Our Greater Sydney 2056 (Nov 2016) is a draft amendment to the Greater Sydney Regional Plan and focuses on three cities: Western City, Central Sydney and Eastern City. Sydney could grow to 8 million by 2056.

The **draft North District Plan 2016** states that the Greater Sydney Commission will work with Council to:

- **Maximise the land use opportunities provided by the new Metro station.**
- Identify actions to grow jobs in the centre.
- Expand after hours activities.
- Provide a variety of high quality civic and public spaces.
- Improve amenity by reducing the impact of vehicles on pedestrians.

The draft North District Plan has targets for an additional 16,400-21,500 jobs for the North Sydney CBD by 2036. At 20sqm GFA average per job, this translates into an additional 328,000-430,000sqm of non-residential space in the North Sydney Centre.

The draft North District Plan forecasts an additional 19,600 people in North Sydney by 2036. At 1.9 people per apartment this results in 10,315 additional apartments for the local government area - a large part of which would need to be accommodated in the centre of North Sydney and St Leonards and possibly at Crows Nest near the Metro Station.

The North Sydney Community Strategic Plan 2013-2023 relevant matters include: enhanced infrastructure, transport sustainability, strong local economies, and active/healthy communities.

Conclusion: The draft North District Plan requires Council to maximise land use opportunities near the Metro station, targeting an additional 328,000 - 430,000sqm GFA of non-residential space for the Centre and forecast an additional 10,315 dwellings for the local government area by 2036. For non-residential space, this means the local planning controls need to allow for a 50% increase in floor space compared to the existing non-residential space in the centre of 800,000sqm GFA.

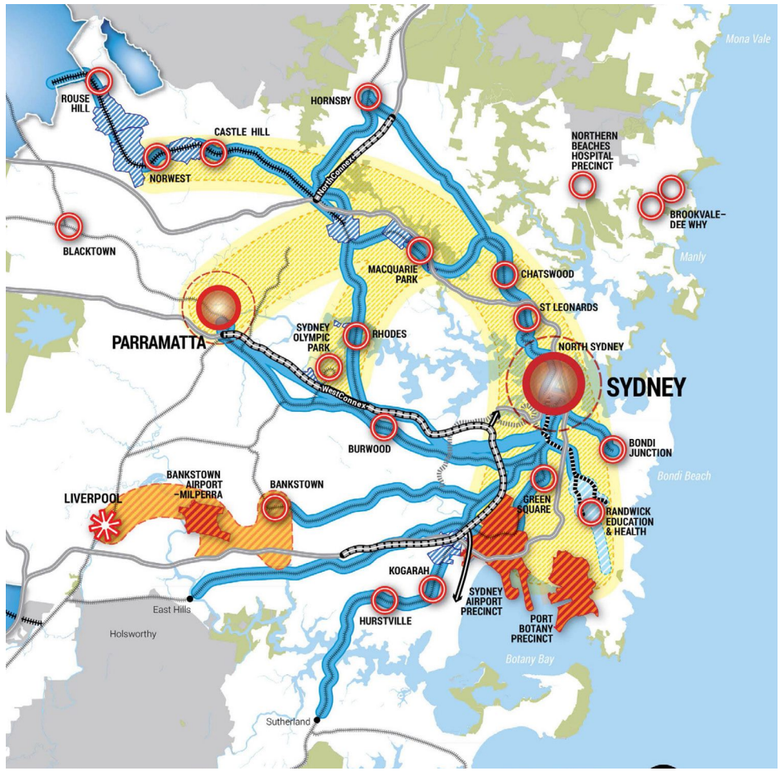


Figure 2.1.1 A Plan for Growing Sydney (extract). North Sydney is shown as part of the Global Sydney CBD.

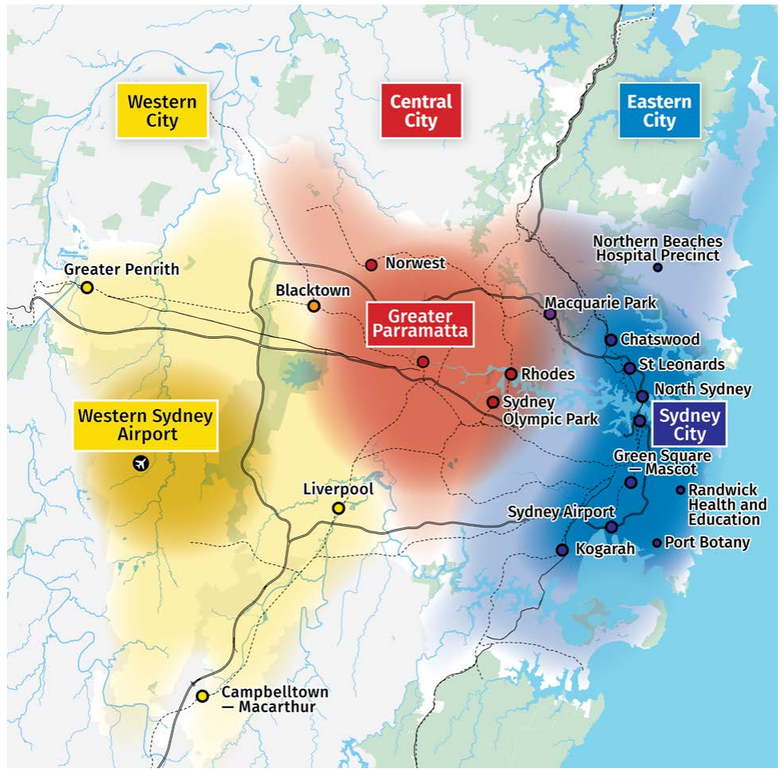


Figure 2.1.2 Draft North District Plan - A metropolis of three cities - Global Sydney (extract)

2.2 Sydney Metro

Sydney Metro is Australia's largest public transport infrastructure being developed across two (2) stages comprising Sydney Metro Northwest (previously known as North West Rail Link) and Sydney Metro City & South West. The project will eventually extend single-deck metro train services from Sydney's Northwest, through Chatswood and North Sydney (Victoria Cross), under Sydney Harbour and the Sydney CBD, to Waterloo in Sydney's inner south, before connecting to Sydenham and onwards to Bankstown.

The Sydney Metro construction cost of $20 billion is anticipated to boost economic activity by more than $5 billion per year along its 65km route, supporting major jobs and business growth through enhanced connectivity and increased development potential. The proposed new Victoria Cross Station will provide a substantial increase in capacity and frequency of transport services to the North Sydney Centre and will act as a catalyst for urban renewal and development opportunities by increasing the appeal and attraction of investing, living and working in the Centre.

The Victoria Cross Station will relieve overcrowding of the existing North Sydney Station during peak times and improve the transport experience for both existing and future users. **The Metro Station location was identified in the Environmental Impact Statement for the Metro line on a shortlist of potential locations for the North Sydney Metro stop and was subsequently selected as the preferred site due to its potential to accommodate significant residential, commercial and transit oriented development within its immediate catchment**, thereby maximising efficiency gains from delivering the major infrastructure project and facilitating the growth of the Centre.

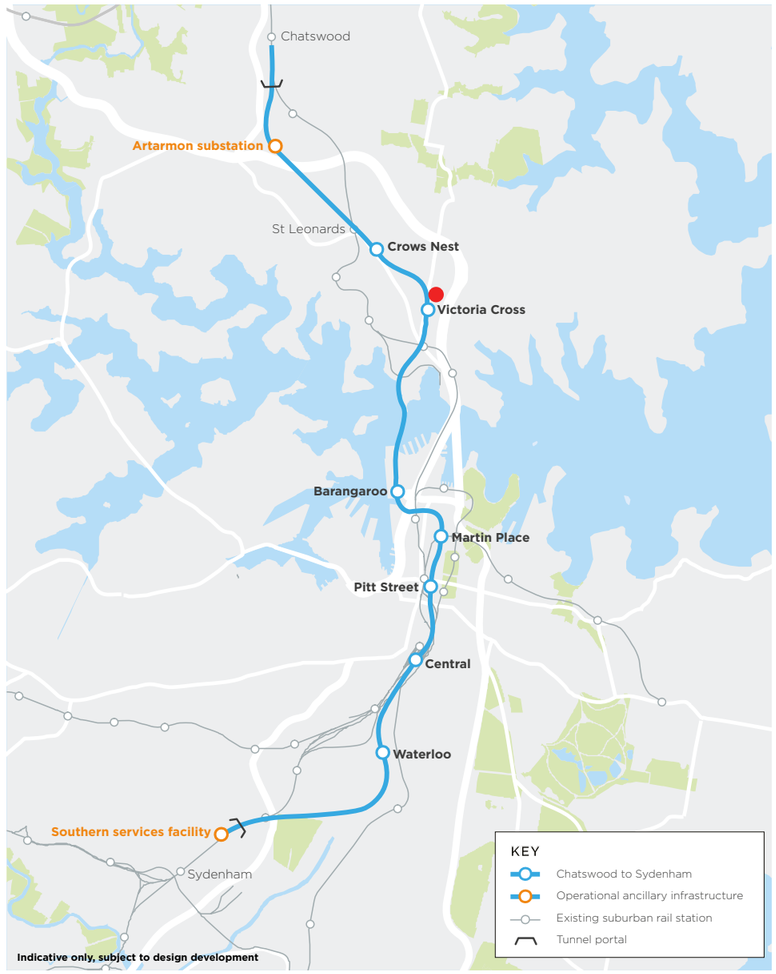


Figure 2.2.1 Chatswood to Sydenham Environmental Impact Statement - The project (extract)

Subject site (41 McLaren Street)

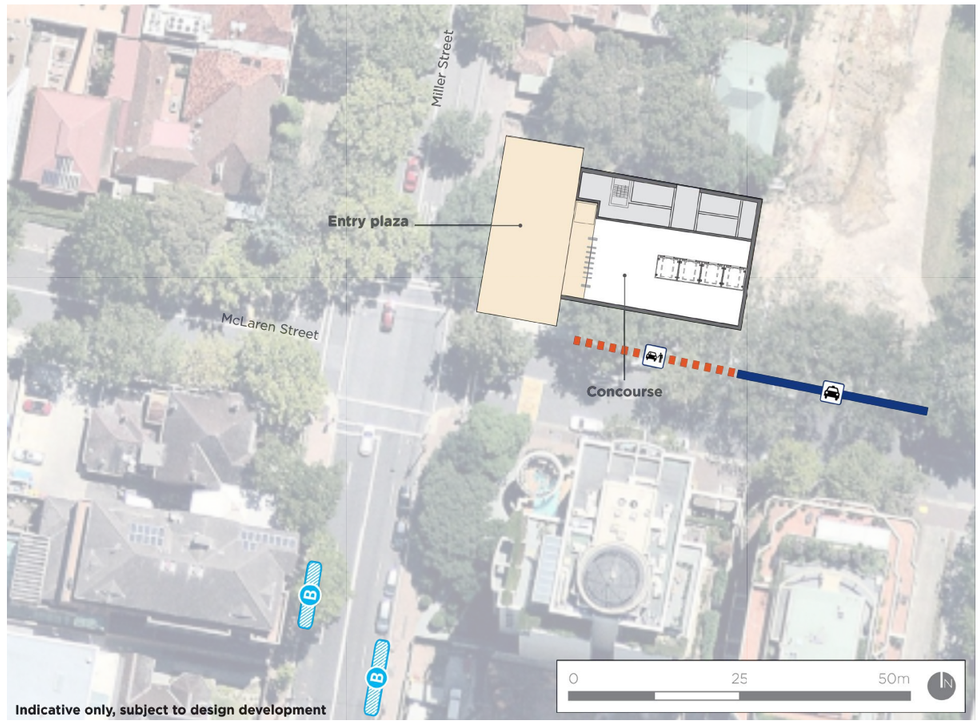


Figure 2.2.2 Chatswood to Sydenham - Victoria Station and Artarmon Substation Modification Report - Victoria Cross Station (extract)

Note 41 McLaren St is less that 150m from Victoria Cross Rail Station.

Land zoning

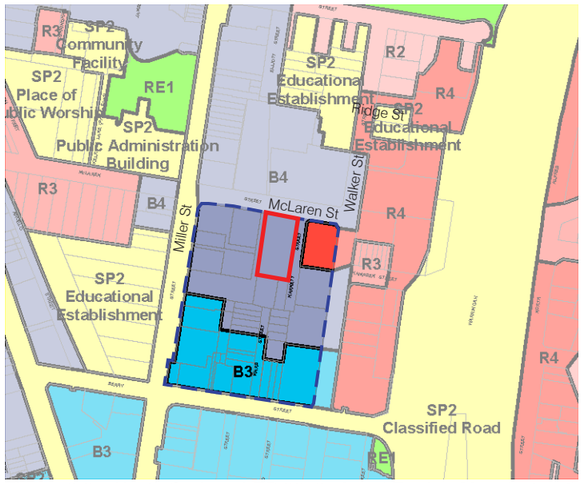


Figure 2.3.1 North Sydney LEP 2013 - Land Zoning Map (extract)

B1	Neighbourhood Centre	RE1	Public Recreation
B3	Commercial Core	RE2	Private Recreation
B4	Mixed Use	SP1	Special Activities
E2	Environmental Conservation	SP2	Infrastructure
E4	Environmental Living	UL	Unzoned Land
IN2	Light Industrial		
IN4	Working Waterfront		
R2	Low Density Residential		
R3	Medium Density Residential		
R4	High Density Residential		

Height of buildings

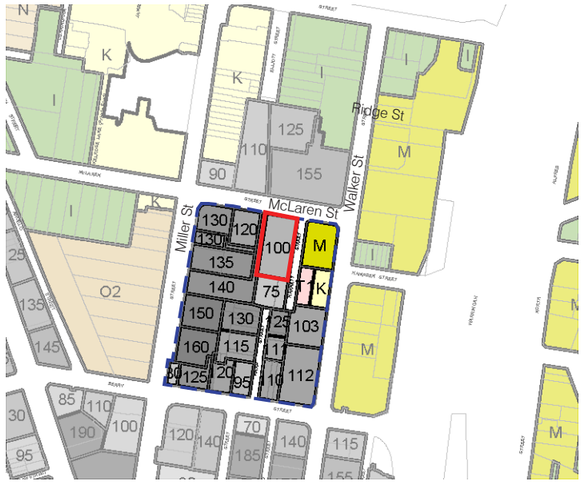


Figure 2.3.2 North Sydney LEP 2013 - Height of Buildings (extract)

I	8.5	S	24		0 - 20
K	10	T1	25		21 - 40
L	11	T2	26		41 - 60
M	12	U1	30		61 - 80
N	13	U2	33		81 - 100
O1	15	W1	40		101 - 120
O2	16	W2	42		121 - 140
Q1	19.15	X	49		141 - 160
Q2	20	Y	50		161 - 180
					181 - 200

Heritage

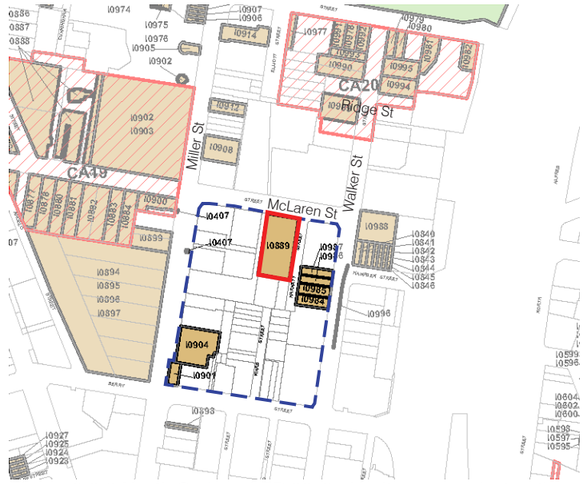


Figure 2.3.3 North Sydney LEP 2013 - Heritage map (extract)

	Conservation Area - General
	Item - General
	Item - Landscape

Special Areas

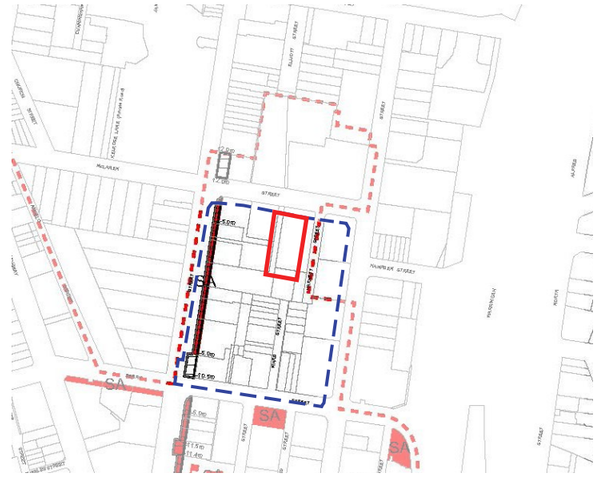


Figure 2.3.4 North Sydney LEP 2013 - Foreshore Building Line Map, North Sydney Centre Map, Exceptions to Development Standards Map (extract)

	Miller Street Setback
SA	Special Area
	North Sydney Centre

N 1 0 50 100 20M

41 McLaren St and part of the Council carpark are in the B4 Mixed use Zone.

Note 1. The current B4 Mixed Use zoning permits residential use. There is no maximum FSR - however the planning controls require a minimum of 0.5:1 FSR for non-residential uses.

Note 2. Part of the Ward Street Carpark is in the B3 Commercial Core zone that prohibits residential uses.

41 McLaren St has a height control of RL100 (7 storeys).

Note 1. 168 Walker St is opposite the site to the north and has a height limit of RL155 (20 Storeys set 1 storey above McLaren St. However, there is a DA approved on this site for RL167.46 (29 storeys).

Note 2. Beau Monde residential tower behind Berry St Plaza at RL185 (37 Storeys of office and residential space) and Northpoint office tower is at RL200 (37 office storeys).

Note 3. Discussions with Council Officers prior to the Draft Ward Street Precinct Master Plan indicated that Council is willing to consider a planning proposal to increase the height of 41 McLaren Street commensurate with public benefits (similar to the recent St Leonards Precinct Study).

41 McLaren St is a local heritage item.

Note. Council has indicated a willingness to review the heritage significance of the existing office building on 41 McLaren St. The owners of 41 McLaren Street are currently working with the original architects, Harry Seidler and Associates and GML heritage consultants for a new residential tower to be built above the existing office building and retain the heritage significance of the existing building.

Special Area - Berry Square

Clause 6.3 (2) within the North Sydney LEP requires that development must not overshadow the Special Area between 12pm and 2pm as follows: *"Development consent must not be granted for the erection of a building on land to which this Division applies if: (a) the development would result in a net increase in overshadowing between 12 pm and 2 pm on land to which this Division applies that is within Zone RE1 Public Recreation or that is identified as "Special Area" on the North Sydney Centre Map…"*

Note. The Draft Ward Street Precinct Master Plan seeks to extend the control to 10am-2pm. However, this submission recommends against extending the controls and prefers to delete the control altogether for the reasons stated.

2.4 DCP key controls

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Built form

Section 2 Commercial and Mixed Use Development of the North Sydney DCP 2013 outlines the following specific built form controls:

Visual privacy

- The residential components of mixed use developments are to provide adequate separation in accordance with the following table:

TABLE B-2.8: Building Separation Requirements

Building height (metres)	Separation between habitable rooms	Separation between habitable balconies & non-habitable rooms	Separation between non-habitable rooms
Up to 12m	12m	9m	6m
12-25m	18m	12m	9m
25m +	24m	18m	12m

Note: The NSW Apartment Design Guide states that a development should be setback half of the separation distance.

Note: The Joint Regional Planning Panel in approving the DA for 229 Miller St remarked that the building separations in this part of North Sydney are less than normal given the proximity, density and height of existing towers nearby.

Setbacks

- *Front:* That part of the building located above the podium must be setback a weighted average in accordance with the relevant area character statement. For example, Part C of the DCP provides that a maximum podium of 3 storeys to McLaren Street and Miller and Walker Streets north of McLaren Street, with a weighted setback of 3m above the podium.
- *Back:* Zero metre setback Note: SEPP65 building separation will apply for residential uses.

Podiums

- Where required, a podium must be provided along all street frontages including laneways, with a height and setback above the podium, in accordance with the relevant area character statement (refer to Part C of the DCP).
- Podiums should match the height and setbacks of adjacent buildings or the average of the heights of the adjacent podiums having regard to their existing nature and/or their redevelopment potential.

Building design

- Balconies are to be incorporated within the setback or building envelopes.

Skyline

- The built form should step down from the centre of each commercial or mixed use centre to a comparable scale at the interface of any adjoining residential zone.
- Roofs should be designed such that they are integral with the overall design of the building.
- With respect to buildings greater than 30m in height, and all buildings within the North Sydney Centre, the roof is to be designed such that consideration is given to the building being seen in a regional view catchment.

Streetscape

- Continuous active uses, such as shops and cafes, should be provided at the ground level of the building to all streets, laneways and public spaces.
- Where practical, the building's ground level façade to a laneway should be provided as an active frontage (e.g. has a retail or commercial premises fronting the laneway).
- All ground level windows fronting street, laneways and public spaces must be glazed with clear glass, to promote active surveillance of the public domain.
- All ground level shopfronts are to have a zero metre setback unless specified in the relevant area character statement (refer to Part C of the DCP).

Parking

For residential (under Council DCP - rates given as a maximum)

- Studio - 1 bedroom: 0.5 space/dw
- 2 or more bedrooms: 1 space/dw
- Motorcycle parking: 1 space/10 car spaces

DCP Non-residential (maximum rates)

- Food and drink premises - 1 space/50sqm GFA
- Hotel 1 space/100sqm (licensed floor area) and 1 space/5 bedrooms
- Other uses (including office) - 1 space/400sqm GFA

Note: The parking rates are a maximum and could be reduced, given the proximity of the site to the proposed Metro and the B4 zoning of the land. The parking rates in this Strategy document are the DCP maximum rates.

2.5 Alternative planning controls idea

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Architectus proposes to Council that for some sites in the Precinct that “Alternative Planning Controls” be considered to achieve certain planning objectives and public benefits by incentivising landowners to do certain things such as amalgamating key sites and/or providing nominated benefits.

When Michael Harrison of Architectus was appointed as Director of City Strategy and Design at Sydney City Council during 2007-11 he pioneered the idea of Alternative Planning Controls on strategic sites. Examples are the street blocks near Circular Quay – one block bounded by Alfred, Pitt, Dalley and George Streets known as the APDG site, and the other is the AMP Quarter where AMP owned almost two street blocks bounded by Alfred, Phillip, Bridge and Loftus Streets. The idea was that the land owners could develop under the current planning controls or choose an alternative set of controls that enabled transfer of floor space to achieve about double the height on certain lots providing nominated public benefits were achieved such as connected public lanes, additional open space and greater separation between tall slender towers. A welcome economic result was to achieve large floor plate A grade office towers and a premium hotel. Within 5 years of gazetting the alternative planning controls, most of the landowners have fully participated and have approved Development Applications with one tower already constructed at 200 George St by Mirvac. The alternative planning controls of height and public domain improvements are in the Specific Sites section of Sydney LEP and DCP 2012.

For the Ward Street Precinct a similar approach could identify the specific sites of 20 Ward St to be amalgamated with 56 and 66 Berry Street to achieve an A grade office tower with public benefits such as a large pedestrian area of open space, 5,000-6,000sqm GFA of community facilities, a potential 4 star hotel and significant financial return to Council.

For 41 McLaren St a premium grade residential tower atop the existing office building designed by the office of Harry Seidler and Associates could enable heritage values of the Seidler designed heritage building to be retained, a north-south pedestrian throughway via a double height colonnade, a proportion of affordable housing dedicated to Council, a child care centre with north aspect and a contribution to public domain works in the Precinct. These benefits are detailed separately in the draft principles for a Voluntary Planning Agreement for 41 McLaren St.

3 Analysis

3.1 Precinct context

The Ward St Precinct is situated within a dense local context, with existing and approved apartment buildings of up to 37 storeys to the south and up to 29 storeys to the north. The Draft Ward St Precinct Master Plan identifies a number of development opportunity sites within the Precinct outlined in purple on the adjacent aerial photo.

41 McLaren St is less than 200m from the proposed Victoria Cross metro station. Also both the office core of North Sydney and North Sydney train station are within walking distance.

The new Metro station is being planned by the NSW Department of Transport for a tall tower above. It is likely that such a tower will be 50-60 storeys in order to maximise development near the metro station (a key objective of the Government) and be within aviation height limits. This would set a new context of tower heights for the area.

Figure 3.1.1 Site context

Current Development Approvals

Figure 3.2.1 Location plan

Site boundary
D.A approved buildings

1. 50-52 McLaren Street

Description: 15 storey aged care housing comprising 24,350 m^2 GFA.

Status: Stage 1 DA approval, with demolition already commenced.

2. 168 Walker Street

Description: 22 - 29 storey mixed use development with a max RL of 167.5:

- 415 apartments;
- 1074m^2 retail floor space;
- 1424m^2 commercial floor space; and
- 375 basement parking spaces.

Status: DA approved

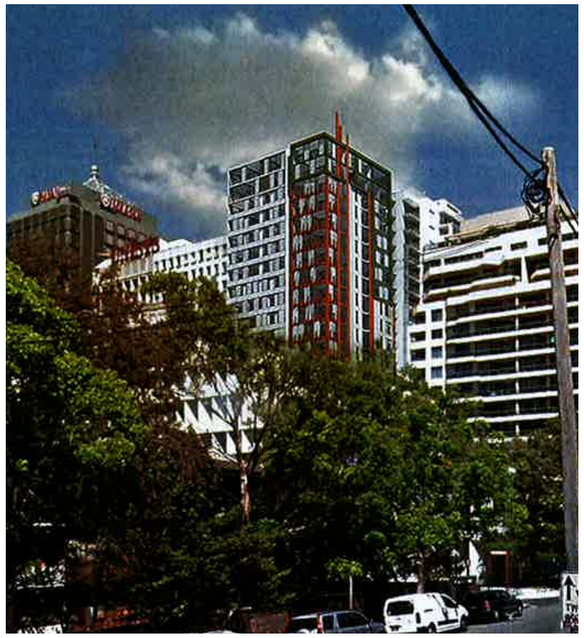
3. 231 Miller Street

Description: 19 storey mixed use development comprising:

- 60 apartments;
- 270m^2 retail/commercial space; and
- 39 car parking spaces.

Status: DA approved

4. 229 Miller Street

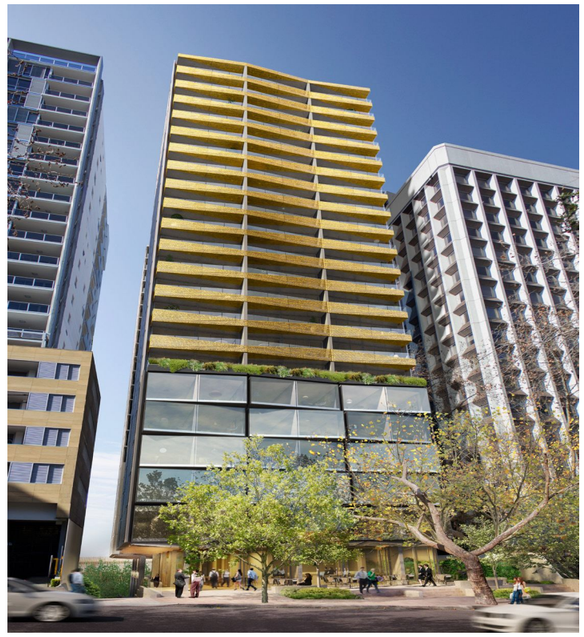


Description: 20 storey mixed-use commercial and residential development comprising:

- 99 apartments;
- 580m^2 commercial floor space; and
- 83 basement car parking spaces.

Status: DA approved

5. 221 Miller Street



Description: 23 storey mixed use development comprising:

- 100 serviced apartments and 183 residential apartments;
- Retail/commercial at lower levels; and
- 5 levels of basement parking.

Status: DA approved

3.3 Key views

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The Alternative Master Plan is assessed for visual impact in Section 8.8 within the existing and potential context.

The following selected views consist of local and distant views from St Leonards Park to the north of the site, along the Warringah Freeway, and key open spaces in Neutral Bay. Additional views can be nominated in discussion with Council.

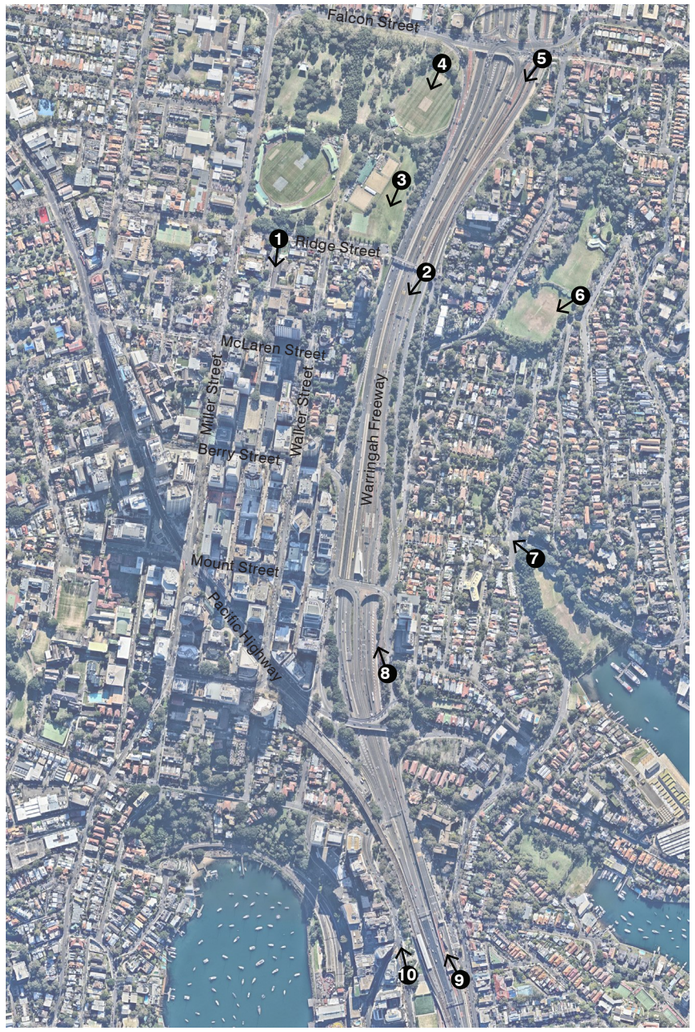

Figure 3.3.1 Location Map

1 View looking south from Ridge Street

3 View looking south from St Leonards Park

2 View looking southwest from Ridge Street pedestrian bridge

4 View looking south from Bon Andrews Oval

❺ View looking southwest from Falcon Street overpass

❼ View looking northwest from Anderson Park

❾ View looking north from Cahill Expressway pedestrian path

❻ View looking southwest from Forsyth Park

❽ View looking northwest from Alfred Street North/High Street intersection

❿ View looking north from Milsons Point Station forecourt

3.4 Tree issue

The owners of 41 McLaren St were horrified to discover the removal of an avenue of trees cut down on the west side of their building (in January 2017) in order to accommodate construction trucks to 221 Miller St.

The photographs on this page testify to the tragic loss of amenity which would otherwise be conducive to a pedestrian shareway along the lane/right of way.

It is understood that the approved DA for 221 Miller St involved removal of these trees to enable a two way lane - even though it already operated as a two-way lane with a median of trees.

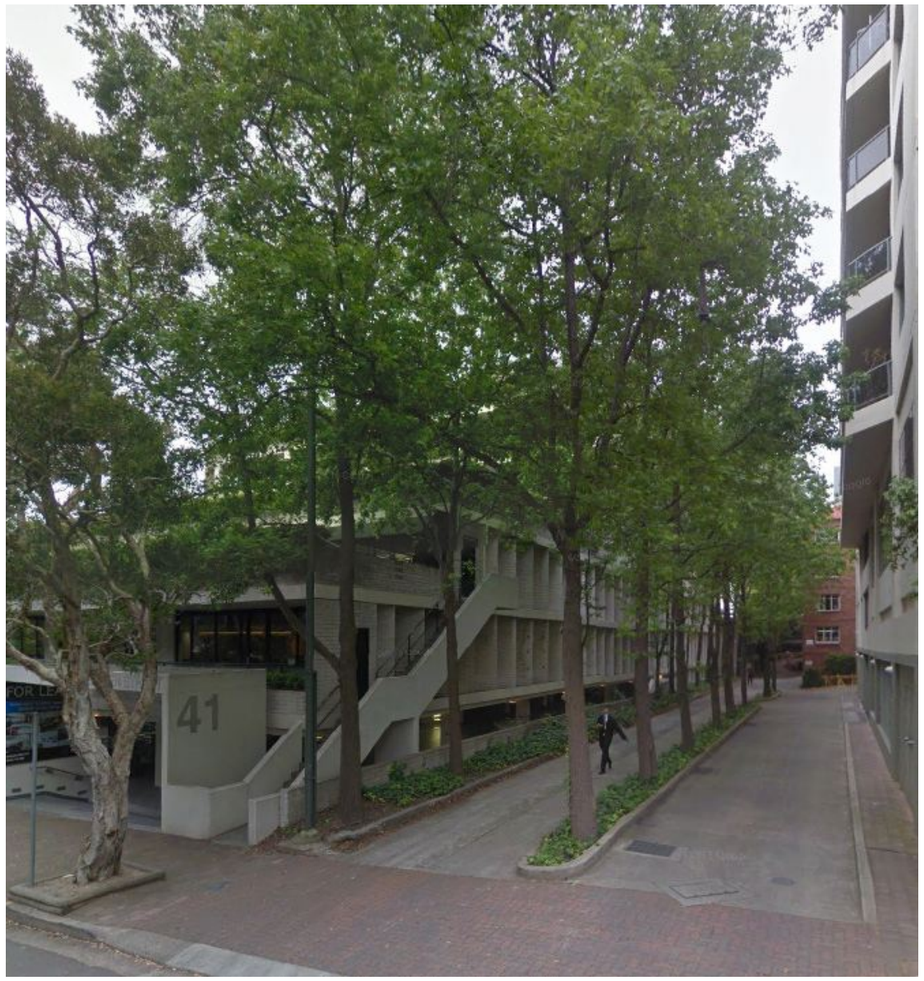

Figure 3.4.1 Trees along the laneway west of 41 McLaren St - Before (December 2016)

Figure 3.4.2 Laneway west of 41 McLaren St - Existing (January 2017)

Figure 3.4.3 Laneway west of 41 McLaren St - Existing (January 2017)

4 Current Draft studies

4.1 Draft North Sydney Centre Capacity and Land Use Study

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Appended is a submission by Architectus to the recent exhibition of the draft North Sydney Capacity and Land Use Study. This section summarises the relevant points of the submission.

1. **Study aim**

The aim of the Study is that the North Sydney Centre: *"…remains the principle economic engine of Sydney's North Shore"*.

2. **Principles**

In pursuit of Council's vision for a more engaging and economically sustainable Centre that offers a range of activities and unique public spaces, the following principles will be applied as summarised from the Study:

- Employment land uses will take precedence in policy development.
- A balance will be struck between growth and long-standing principles of protecting surrounding lands.
- Commercial, educational and other non-residential uses that contribute to the economic, cultural and social diversity of the Centre will be encouraged and supported.
- An improved public domain for workers, residents and visitors that provides spaces for socialising and recreation is a priority for achieving the vision for the Centre.
- North Sydney Council will take the lead in facilitating and implementing positive change within the Centre.

These principles are considered very appropriate for the North Sydney Centre. However, the principles should acknowledge that surrounding lands benefit from the activities of the Centre and that there needs to be a balancing of private amenity with the public benefits of the Centre enjoyed by all. A statement needs to be made about North Sydney being part of the global role of Central Sydney by growth in high quality jobs and increasing the diversity/vibrancy of the Centre.

3. **Building heights**

The Study applies height controls based on no additional overshadowing of residential land outside the North Sydney Centre between 10am and 2pm (reduction from currently 9am-3pm) – but has no discussion about the range of considerations for establishing height controls such as:

- Including the aviation height limit as the maximum limit (RL335 – the same as Central Sydney);
- Amending the current controls of no overshadowing of surrounding residential land from 9am-3pm midwinter to another period, such as 10am-2pm August 30; or
- To be consistent with NSW State Guidelines for medium density residential development based on retaining at least 2 hours direct sunshine to surrounding dwellings between 9am and 3pm midwinter.

Architectus considers that in the light of the huge $20 billion investment in the new metro line by the State Government, it would be more appropriate and consistent with State guidelines if the height controls were based on ensuring dwellings outside the Centre retain at least 2 hours sunshine, consistent with the NSW Apartment Design Guidelines and Medium Density Design Guidelines.

Note that the indicative future height controls provided in Figure 26 on Page 89 of the Study (copied on opposite page) suggests that most sites have no change and less than 20 sites have heights significantly increased. The Metro site is recommended to be at approximately the same height as the Northpoint tower and the Belle Monde tower. The rationale behind arriving at this height limit has not been provided and is not understood. Recommended height limits vary significantly between adjacent sites, with no reason given for these differences. Applying a maximum building height equivalent to the height of the Northpoint tower, which was built in the 1970's, to the Metro site is a missed opportunity to maximise the productivity benefit of the transport capacity being provided, with no justification given.

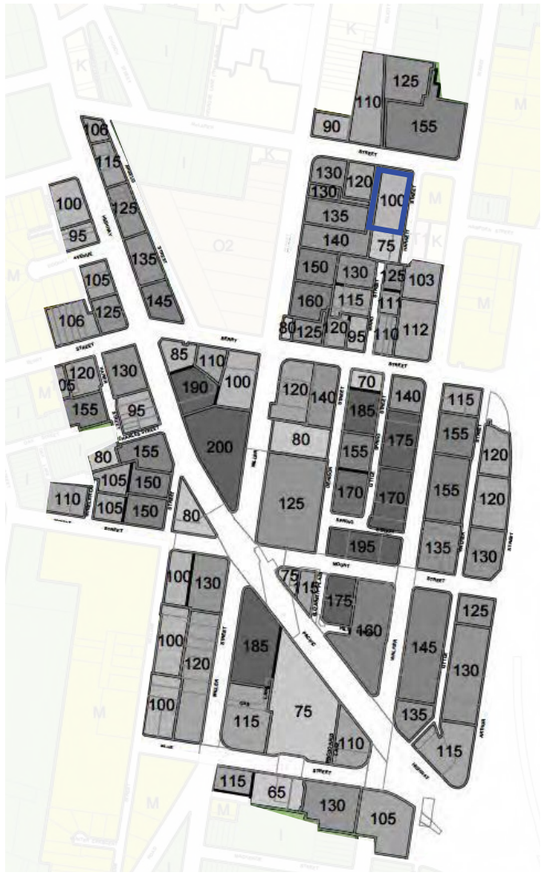
Note: The indicative future building height controls overleaf are supposed to be based on no further overshadowing of surrounding residential zoned land between 10am and 2pm. However, many of the heights do not appear to follow this logic and appear quite haphazard. Alternative scenarios should have been investigated. The Metro Tower site is increased from RL 120m to RL 201m which is very similar to the North Point tower at RL 200m built about 30 years ago. This site could be much taller and not affect residential land.

4. **North Sydney Centre boundary**

Part of the Ward St Precinct remains outside the North Sydney Centre. Architectus considers that the whole of the Ward St Precinct should be included in the North Sydney Centre boundary. Currently, the northeast part of the Ward Street street block (east of Harnett Lane) and the street block bounded by Walker / Hampden / Berry / Warringah Expressway are excluded from the Centre. Clearly, these areas should be included because of their close proximity to the new Metro Station and that there is little other opportunity for lateral expansion of the Centre as analysed in the Study mainly due to heritage conservation areas around the Centre.

5. **Berry Square**

The special area status of Berry Square (special area status) is noted as being reviewed as part of the draft Ward St Precinct Master Plan. This is discussed elsewhere in this submission.



Current Height of Buildings map (LEP 2013)

North Sydney Centre Capacity and Land Use Study - Indicative future building height controls (RLs) (extract)

Site boundary
North Sydney Centre boundary

Figure 4.1.1 Above plans from Figure 26 on Page 89 of the Draft North Sydney Centre Capacity and Land Use Study.

6. **Capacity for Growth**

Forecast growth in employment in the Centre has been provided across multiple plans, including:

- State Government's Plan for Growing Sydney is for another 190,000 jobs across Sydney over the next 15 years. The Plan says the State Government will work with North Sydney Council to grow office and residential markets including capacity studies, opportunities to change densities and heights and targeting the use of commercial core zoning in the right place.
- The Greater Sydney Commission has released the draft North District Plan – this was after the Study – which reinforces the role of the North Sydney Centre for increased employment for 21,500 additional jobs which translates to 328,000-430,000sqm of additional GFA at an average of 20sqm/job. Architectus considers that the planning controls should allow for at least 30% buffer – and so additional non-residential space should be planned for 500,000sqm - this is 60% increase on current non-residential floor space of above 800,000swm GFA (which is still being eroded by conversion of space to residential in the mixed use zone).
- Council's 2020 Vision includes capacity for employment growth.
- Council's Local Development Strategy 2009 has directions for 15,000 additional jobs for the Centre and to further review the Centre.
- Council's Residential Development Strategy 2009 demonstrated sufficient capacity for delivering an additional 5,500 dwellings under the draft Subregional Strategy – this informed LEP 2013. However, the draft Subregional Strategy is very outdated and the new draft North District Plan should be regarded as minimum targets to be achieved which deliver the target of over 10,000 dwellings.

According to Figure 24 of the Study, with both new supply and withdrawals of office space the actual supply of office space in the Centre has fluctuated from 785,000sqm in 2000, to a high of 862,000sqm in 2013, and down to 822,000sqm in 2015. This suggests there has been only minimal growth in the overall supply of commercial accommodation during this period.

7. **Discussion of North Sydney Commercial Centre Study (Urbis 2015)**

North Sydney has traditionally been the second largest office market in NSW but has recently been overtaken by Macquarie Park. Parramatta City Centre has a high growth forecast and is also likely to overtake the North Sydney Centre.

While diversity of existing office supply in the North Sydney Centre is good – it is mainly comprised of B and C grade office space, with the market wanting higher quality and larger floorplates (Urbis 2015).

Architectus considers there are at least two opportunity sites in the Ward Street Precinct which may go some way to meeting this demand– the amalgamated Council Ward Street carpark site/ 56 Berry Street / 66 Berry Street and the current office building site on the NW corner of Berry and Walker St. Architectus considers that more than 80,000sqm of A-grade office space could be delivered on these two sites in the Ward Street Precinct within one block of the proposed Metro station.

8. **Discussion of North Sydney Economic Development Strategy 2016 (SGS 2016)**

The Strategy states that larger firms with over 100 employees are commonly seeking A-grade buildings with over 40,000sqm. The supply of such buildings is constrained in North Sydney. Further, the Centre is losing its competitive advantage in relation to competing centres and particularly in relation to Central Sydney, due to its superior public space amenity, transport accessibility, and retail/entertainment offering. The proposed Metro station is an opportunity to spur on new development and provide additional commercial floor space to compete with surrounding centres.

9. **Capacity testing**

Future capacity testing for non-residential floor space by SJB for the Study addressed the following scenarios:

Control scenario	Additional floor space capacity (GFA)
LEP base case (existing controls)	394,000sqm (mostly not realisable)
Test 1 - No special areas	+292,000sqm
Test 2 - No small site limits	+36,000sqm
Test 3 - No height controls	+1,794,000sqm
Test 3A - No height controls (with viable buildings)	+530,000sqm
Test 4 - Balanced (no overshadowing 10am-2pm)	+454,000sqm
Test 5 - Balanced (with viable buildings	+148,000sqm

The last test (Test 5 above) was recommended by the Study. This is a 37% increase on the LEP capacity (Note: The Study says this is a 47% increase, which Architectus considers to be an error: 148/394=0.37). Expressed as a percentage of existing non-residential floor space the result is a paltry 18% (148,000/820,000)

It is important to acknowledge that the existing LEP capacity is mostly not realisable. The Study commissioned property economics consultants to assess eight (8) of the most likely sites and found them all to be not financially viable, given the current buildings on the sites and the costs to purchase and replace with larger new buildings.

Architectus considers that 18% additional development capacity for the Centre is a very poor outcome given the increased transport capacity to be provided by the proposed Metro station, which will very substantially increase the public transport capacity of the Centre – particularly for the north part of the Centre.

Also, this additional development capacity is well short of the targets set by the Draft North District Plan for the North Sydney Centre as discussed above. The Draft North District Plan effectively targets 328,000-430,000sqm, with a suitable buffer for unrealisable space Architectus that 500,000sqm should be the LEP target for additional capacity on top of the existing non residential floor space of about 800,000sqm i.e. about 60% increase upon existing floor space.

10. **New Special Areas**

The possible new special areas identified by the Study that are subject to further consideration are:

- Education precinct – park adjacent Don Bank museum
- Extend Miller St Special Area
- Central Laneways (Denison St etc.) – consider with metro station development.
- Ward St Precinct – part of Ward St Carpark site and Ward St itself
- Victoria Cross Plaza - possible re-consideration

Other opportunities for new special areas were not recommended by the Study either because of the small size of the space or the effect on potential development opportunity.

Architectus considers that given the role of North Sydney as part of the Global Sydney CBD and the need to maximise land use opportunities near the Metro station (North District Plan statement), that designation of Special Areas including Berry Square needs very careful consideration given the massive negative effect on future development potential. The North Sydney Centre does have a good provision of sunlit open space (Civic Park and St Leonards Park) as well as a good pedestrian network that can be expanded (Mount St and the east side of Miller St with potential Denison St and Ward St.

11. Affordable housing

Affordable housing is not identified as a use and this is lacking in the local government area as well as the Centre. This appears to be an oversight; given the contribution this could make to the vibrancy and diversity of the Centre and the requirement of the Greater Sydney Commission through the draft North District Plan for 5-10% of new residential development for affordable long term rental housing. Council needs a clear policy on affordable housing and how future development can contribute to it. It is noted that the Greater Sydney Commission has stated that shortly it will provide guidelines for achieving affordable housing.

It is noted that Willoughby Council has an affordable housing program amounting to 4% of the increase of rezoned land in nominated land housing areas. This program has operated since 1999 with very limited success as the Minister for Planning has refused to expand the program to the whole LGA to date.

It is understood that North Sydney Council does not have an equivalent program although the North Sydney Housing Strategy 2015 does state that it supports a regional approach to meet local affordable housing needs and Voluntary Planning Agreements for site specific Planning Proposals.

4.2 Draft Ward Street Precinct Master Plan

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The graphics on this page are by Architectus to show the Draft Ward Street Precinct Master Plan in the same format as other graphics in this submission. Also an indicative tower is shown on the Metro Station site to show the change of context.

Figure 4.2.1 Site plan

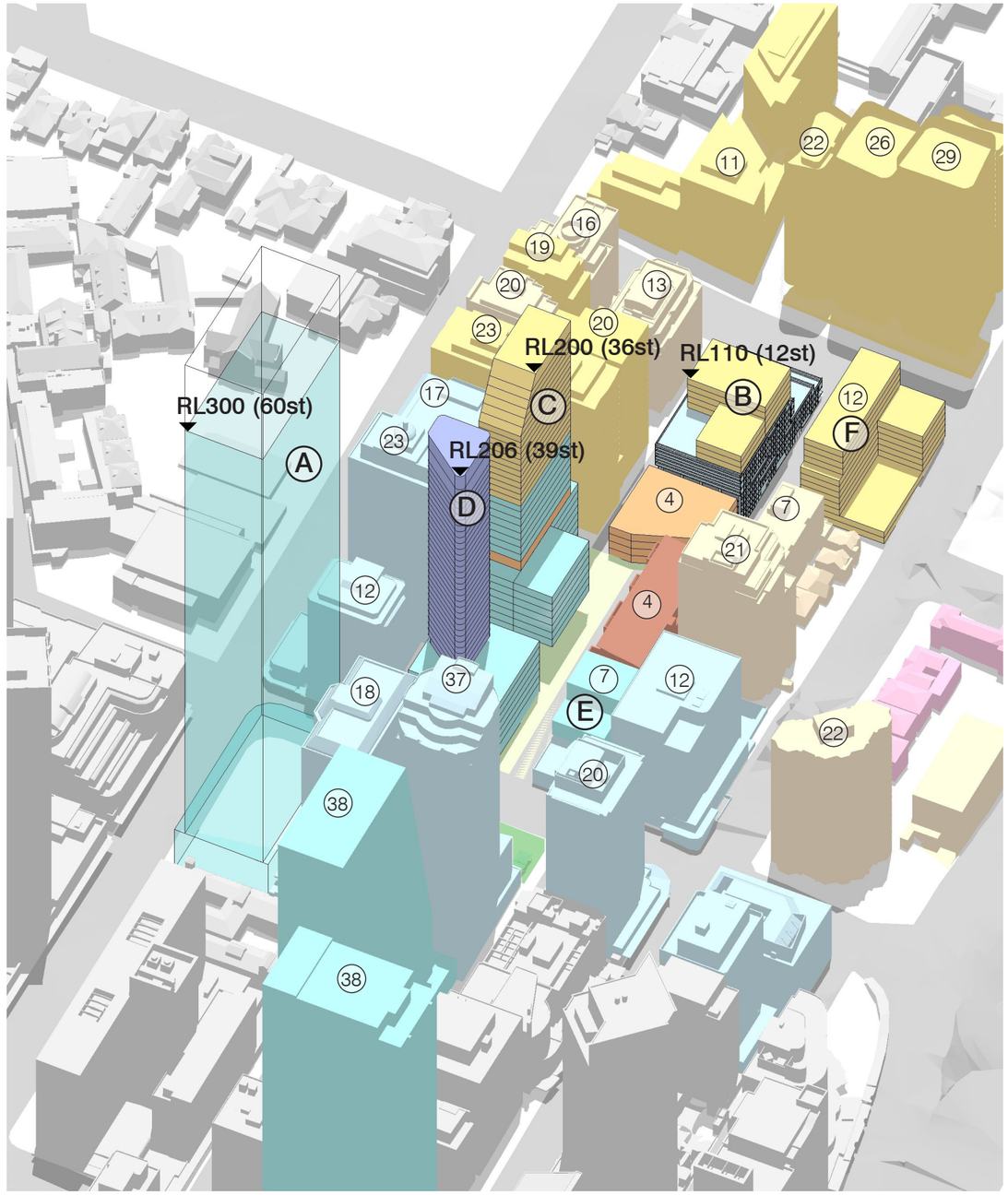

Figure 4.2.2 3D view

This section is a specific review of the draft Ward St Precinct Master Plan as exhibited in February/March 2017.

1. **Objectives**

The objectives stated in the Master Plan are summarised below:

- Building on the outcomes of the North Sydney Centre review and applying a precinct scale methodology.
- Assisting property owners and Council by providing clarity on the future strategic growth of the precinct.
- Providing a bold and vibrant public domain and built form response to the proposed Victoria Cross Metro Station.
- Ensuring a built form response that effectively balances growth within the Centre and amenity to surrounding properties.
- Improving the public domain across the precinct by identifying the precinct as a destination, via high quality new and embellished public spaces that prioritise pedestrians.
- Encouraging public and private development outcomes that activate the precinct, stimulating North Sydney Centre as a destination.
- Ensuring that significant public benefit is achieved as a result of development that is seeking to amend the planning controls.
- Identifying opportunities for the Council-owned Ward and Harnett Street car parks.
- Ensuring that community benefit is a key project driver.
- Ensuring that a financial return to Council is a key project driver.

While these objectives are laudable, the built form arising from the Master Plan is generally not economically viable as explained elsewhere in this document and therefore the objectives cannot be achieved. And the last objective about financial return being a key project driver is ignored by the Master Plan as it states in the Council Officer's report accompanying the Master Plan that the Master Plan is based on being financially neutral to Council. As stated elsewhere in this submission, Architectus proposes an Alternative Master Plan that achieves the above objectives in a much more comprehensive and beneficial way.

2. **Principles**

The Master Plan lists nine principles to guide development in the precinct. These principles include design excellence, place-making, high quality public spaces, universal access, prioritising pedestrian amenity, and no net traffic generation (as the Master Plan removes public commuter carparking and the consequent reduction in traffic generation is replaced by the increase in development). There are three of the Principles that are highlighted below for further discussion (referred to as P5, P7 and P8):

P5 Ensure transparency where the leveraging of public benefits is pursued in exchange for additional development potential.

This is an appropriate principle. However, there is little opportunity to exercise it under the Master Plan. Six development opportunity sites are nominated by the Master Plan:

1. 56 and 66 Berry St - The draft Master Plan calls these two sites to be amalgamated to achieve a tower up to RL206. The tower above the podium is planned to be a hotel with hotel pick-up-drop-off via Bullivant Lane. Architectus considers that the tower floor plate is not viable being only 302sqm in area for each floor enabling about 7-8 rooms of 22sqm each per floor including allowance for the lift/stair core and services. The Master Plan states that this floorplate achieves 10 rooms per floor – after deducting for lift/stair core and corridors, the rooms would have to be less than 20sqm each. A standard 3 star hotel room is 25-28sqm, 2 star budget is 22-25sqm. The financial return from the hotel development cannot be sufficient to purchase the two existing office buildings (one is strata titled) – refer to the appended economics consultants reports. The total GFA for the hotel/ tower podium is calculated by Architectus at 15,678sqm. The total office space in the podium is 4,388sqm, well below the 12,091sqm total office space of the existing commercial buildings at 56 and 66 Berry St resulting in a net loss of 7,703sqm GFA for office space.
2. 20 Ward St (Council Carpark) – The mixed use building has 626sqm GFA floorplates (532sqm NLA) for the tower office floors. It is considered very unlikely that this would be accepted by the development market – even as secondary grade office space. The site has no street address and therefore has no opportunity to offer ''A'' grade office space. This site development is further reviewed in this Urban Design Strategy document.
3. 41 McLaren St – the Master Plan proposes 3-5 additional storeys on part of this site. This would require a new lift core for the existing 7 storey office development which is clearly not financially viable. This site is further discussed below.
4. 45 McLaren St – It is possible that 12 storeys nominated in the Master Plan may be sufficient to replace the existing 3 storey residential flat building. The question is whether the built form shown in the Master Plan is the right shape and height. No options are shown or analysed.
5. 70-74 Berry St (Ausgrid) - This site is the former Ausgrid substation. It is understood that this site is surplus to Ausgrid's needs. The draft Master Plan calls for adaptive re-use of the structure for ground level retail and 4 storeys of office space above to add about 1,542sqm office space plus some ground level retail space. Architectus considers that the existing structure being fundamentally a solid brick wall to its perimeter is not suited to adaptive re-use. Regardless, it is understood that the existing 5 storey building needs to be demolished due to remediation requirements. The financially viable approach would be a new building with amalgamation of the site to the east to create a new office tower as discussed in Section 7.2 of this document.. No options are considered by the Draft Master Plan.
6. East Walker St – This site is not addressed by the Master Plan despite being nominated as a development site.

P7 Advocate for a mix of uses to revitalise the precinct, with a focus on employment generation, community spaces and the 18 hour economy.

As discussed elsewhere in this document, built form viability means that this principle cannot be achieved without change to the built form approach. The focus on employment generation is rather minimal compared to the Architectus Alternative Master Plan presented in this document.

P8 Acknowledge that commercial amenity and viability of the North Sydney Centre is critical to future investment and prosperity.

Architectus and our economics consultants clearly do not consider that this fundamental Principle can be achieved by the Master Plan due to the lack of viability of the built forms proposed in the Master Plan. Economics consultants Hill PDA, Colliers Research and Knight Frank have been commissioned to review the viability of the Master Plan and the Architectus Alternative Master Plan. Their reports are included in the Planning Proposal.

3. Yield

The draft Master Plan Overview chapter states the yield is:

- 5,100sqm community space
- 2,100 sqm public space, including 1,450sqm plaza
- Pedestrian permeability with 850m improved lanes/ connections
- New landscape open space opportunities
- Temporary event and pop-up spaces
- 30,600sqm of "high quality" commercial floor space Note: It is actually 12,706sqm of lower grade office space in the Ward Street tower, 4,388sqm in the 56-66 Berry Street tower and 1,813sqm in 70-74 Berry Street and 10,148 in 41 McLaren Street. It is noted that the net increase in office space is only 6,545sqm GFA (see Summary of Master Plan Schedule in Appendix A3).
- 2,000+sqm of new retail space
- 150-220 new dwellings

Given the proximity of the precinct 50m to north east of the new Metro Station and the enormous $20billion investment by the State Government in the Metro – this yield for commercial floor space and new dwellings is underwhelming. Such strategically located land should at least increase the existing space by 50-100% in the Precinct. Currently there is 75,000 sqm GFA of commercial space and 1,115 dwellings (figures from Ward St Precinct Master Plan). A reasonable target would be at least 32,500-75,000 sqm additional GFA for commercial use and at least 550-1,100 additional dwellings. The draft Master Plan is well down on what should be expected.

4. Community hub

The community uses for the hub are undefined but are stated that they could include active recreation, community education facility, library, community centre, child care, creative spaces or exhibition space and event spaces (page 19 Council officers report 5.12.16). Architectus notes that library use is unlikely given the Stanton Library is only a street block away and is the best library on the North Shore, and active recreation is unlikely as there is insufficient floor plate area (e.g. Council's recreation centre plans for the Crows Nest carpark site would occupy the whole of 20 Ward St). It is also unclear why a community centre is needed given the North Sydney community centre and activities are only a street block away and given that efficient management objectives would prefer a coalescence and intensification of such activities together where possible. Child care is probably not a good use either given the lack of sunlight to this area. Thus by a process of elimination – the likely possible uses for the community hub are creative spaces (that is, low rent or no rent space for creative uses) and exhibition/ events. Being located adjacent the Square, Architectus considers that the hub could be also a good conference and banquet venue (although these uses are better suited associated with a hotel).

The draft Master Plan says that the rooftop of the community hub could be an additional public open space – however, there are few precedent examples of such a space working elsewhere in Australia. Inevitably, access and security considerations are likely to rule out informal public access.

Note that the Alternative Master Plan in this submission offers a realistic solution to providing a community hub. It is advisable for property economics experts to review the costs and ongoing operational costs of the community hub before Council decides on its future.

5. 20 Ward St (Council carpark site)

The draft Master Plan provides for a mixed use tower up to RL200. There is no analysis of why RL200 is decided other than it is a similar height to Northpoint (built in the 1970's). It is noted that substantially higher heights are likely for a future tower above the Metro rail station (which is likely to be part of a State Significant Development Application) – such as 50-60+ storeys for commercial offices/mixed use.

The tower building envelope for 20 Ward St is a 37 storey mixed use building comprising the following floor areas as scaled from the drawings provided:

Level 1 retail/lobby	965sqm GBA (say 500sqm GFA of retail)
Level 2 community use	965sqm GBA (820sqm GFA @ 85% efficiency)
Level 3-9 office floorplate	1,398sqm GBA (1,188sqm GFA at 85% efficiency)
Level 10 community use	737sqm GBA (627sqm GFA at 85%)
Levels 11-17 office floorplate	737sqm GBA (627sqm GFA at 85%)
Levels 19-30 resi floorplate	633sqm GBA (538sqm GFA at 85% efficiency)
Levels 31-35 resi floorplate	512sqm GBA (435 sqm GFA at 85% efficiency) average stepped floorplate
Levels 36,37 plant floorplate	489sqm GBA
With Basement parking for a maximum 134 cars	
Totals:	
Commercial	12,706sqm GFA
Residential	8,875sqm GFA
Retail	500sqm GFA
Community	1,447sqm GFA
Total	26,919sqm GFA

Note: All figures on this page are based on Architectus' modelling of the Ward Street Precinct Master Plan (from plans in the Master Plan document). Typical efficiency calculations have been used as described. Council's figures have not been used due to discrepancy in some areas (e.g. GFA figures which are greater than the floor plate area described; upper levels described as having greater floorplate area than lower levels despite not appearing this way in the model).

The tower is proposed as the funding mechanism for the community uses space and the public domain improvements including the new square. However, there is no economic/financial analysis publicly available to support this – and our economics consultants disagree that the built form is viable enough in being able to offer a financial return to Council in addition to the community uses and the public domain.

The tower is broadly a 50/50 mix of residential and commercial uses. There is no reason given for the mix. Such a mixed use building is rare in Sydney because the market has consistently considered it unviable – office building owners prefer their investments unencumbered by residential strata titling management. No doubt this attitude will change in the future for some projects such as very tall buildings in Central Sydney but Architectus considers that the subject site has too many shortcomings – such as no street address – to add the further complication of such a high proportion of commercial office within a mixed use development.

The proposed commercial office floor plates are not viable from a market standpoint. The podium office levels are 1,398 sqm envelope area which translates to 1,188sqm GFA. The market preference is 1,200-2,000sqm net area (1,400-2,350sqm GFA) with a strong preference of 1,400+sqm net area (1,650+sqm GFA). The proposed tower levels at 737sqm envelope area (i.e.533sqm NLA) are simply unworkable from a market standpoint and would have a very low level of acceptance in the development market.

Note that the podium floorplates are achieved by cantilevering the podium levels over part of the new public square to "allow for a viable commercial floor plate for 'Á' Grade commercial space internally"(page 20, Council officers report 5.12.16). There is no discussion about what constitutes typical office floor plates for 'Á' Grade commercial office space. At best this office space would be secondary grade office space given the lack of street address.

Parking – the draft Master Plan allows up to 140 car spaces for the 20 Ward St development which is considered acceptable. In terms of land use breakdown this could mean:

Commercial – 11,970sqm GFA @ 1space/400sqm GFA	30 spaces
Residential – 11,184sqm GFA (125 apartments) @ 0.75 spaces/apt	94 spaces
Community – 5,301sqm	16 spaces
Total	140 spaces

Current DCP parking rates for the North Sydney Centre are: commercial 1 space/400sqm GFA, residential 1 space/2bed apt. Note that in recognition of proximity to the Metro the parking rate for apartments is 25% less than the current maximum control.

Architectus considers that an option that amalgamates 20 Ward St with 56 and 66 Berry Streets should be considered. Such a site would provide a street address to the development and maximise the development potential of the land that could not otherwise be realised. This is proposed in this document by the Architectus Alternative Master Plan.

6. **41 McLaren St**

The Council officers report of 5.12.16 on page 21 states that a tower form is inappropriate on this site for the following reasons:

- Unacceptable level of overshadowing of the proposed Ward Street public square.
  - *Comment* – The proposed square will be significantly shadowed with or without a tower on 41 McLaren St due to the mid-block location of the Square. The Alternative Master Plan achieves a similar area of public domain in sunshine as the Draft Master Plan. In order to further improve solar access, a solution would be to incorporate a heliostat on the top of the 20 Ward St tower to reflect sunshine into the square to the extent that Council wishes. This has been successfully achieved at Central Park Broadway.
- Undesirable level of solar impact to the east facing elevations of existing and approved mixed use buildings fronting Miller St.
  - *Comment* – Figure 8 of the Council officers report of 5.12.16 shows a diagram of solar access which is used to justify the "undesirable level of solar impact". This diagram refers to one property – 221 Miller St that has solar impact. This property will retain excellent outlook eastwards and south eastwards if a tower was built on 41 McLaren St. As reasoned by the JRPP in approving 229 Miller St, it is reasonable for development in a such a high density area in close proximity to the metro rail station and with access to the amenities of activities of the Centre to be subject to solar impact in exceedence of the NSW Apartment Design Guide criteria.
  - 229 Miller St has been recently approved for a residential tower (adjacent to the south-west of 41 McLaren St), This was approved by the JRPP in the full knowledge of the potential for a tower on 41 McLaren St. Michael Harrison of Architectus was present at the JRPP meeting on 18 November, 2016. The Panel asked the applicant's solar amenity expert Mr Steve King if the amenity would be acceptable with a tower on 41 McLaren St and he said yes. On that basis, the DA was approved (with conditions).
- Advice from Councils Design Excellence Panel that the central objective of the new public space would be compromised.
  - *Comment* – It is agreed that the new public space should have a good level of amenity and be as successful as possible. Development and adaptive re-use of 41 McLaren St will enable a better larger square, with better pedestrian connections (one connection will be through 41 McLaren St), and a better frontage to the Square with the community hub being incorporated into part of the 20 Ward St development facing the Square. The Alternative Master Plan provides similar area of the public domain in direct sunshine as the Draft Master Plan.

Other relevant issues raised in the Council officers report are:

- That the heritage element of the building be retained both in form and its commercial use.
  - *Comment* – 41 McLaren St is a locally listed heritage item. As discussed with Council, the owners have commissioned heritage experts GML and architects Harry Seidler and Associates to consider the potential for a tower on the site while retaining the heritage significance of the existing building and its commercial/non-residential use. Seidler's office envisage a 2 storey high pedestrian link between McLaren St and the new square through 41 McLaren St that would provide weather protection for pedestrians and be lined with active uses on one side.
- The proponent enter into a Voluntary Planning Agreement (VPA) to contribute to public infrastructure components of the Master Plan.
  - *Comment* – This is understood by the owners of 41 McLaren St as part of the development of a tower on the site and a VPA is proposed.
- The proposed envelope would increase to RL110.
  - *Comment* – As noted elsewhere in this submission such a small increase in height from the current RL100 is insufficient to allow a viable increase in floor space and is also insufficient to allow an additional 5 storeys as proposed in the draft Master Plan. In conclusion, the Alternative Master Plan enables significant public benefits to be achieved as described in Section 8.11.

7. **Financial return to Council**

Council's brief for the Precinct Master Plan included financial return as a key driver. Page 25 of the Council officer's report of 5.12.16 dilutes this criterion by saying that the Master Plan was premised on a financially neutral outcome for Council.

Pages 138 and 139 of the attachment to the Council Officer's report of 5.12.16 includes the following points:

1. $45-55million return to Council for improved community benefit (high level estimate). Note: there is no evidence of how this number is calculated.

2. The opportunity sites:

   1. 56 and 66 Berry St (hotel tower - 280 rooms) – "Council could work with the landowners to leverage additional development potential towards public benefit"
   2. 41 McLaren St – 5 additional residential levels to offset costs to refurbish the building for contemporary office space standards.
   3. 45 McLaren St – 12 storey apartment building – public benefit opportunity to be provided.
   4. 70-74 Berry St – "Array of unknowns": in developing the site for adaptive re-use

   – *Comment* – With the possible exception of 45 McLaren St, these opportunity sites do not yield much development potential at all even if they were viable.

8. **Engagement with landowners**

It is understood there has been limited engagement with landowners during preparation of the draft Master Plan. Certainly there was no engagement with the owners of 41 McLaren St despite several requests. Architectus made a submission for Council's consideration but Council preferred to not let Council's consultants Roberts Day speak with us. We presume no other landowner had an opportunity to discuss issues with Roberts Day.

The Council officers report of 5.12.16 says on page 25 and 26 that the draft Master Plan will be refined following consideration of submissions to the exhibition of the draft Master Plan and further consultation with key stakeholders.

The Council officers report also states on page 25 that there are "various private interests in properties around the precinct should be capable of delivering community facilities within the precinct, in exchange for height and zoning incentives on their own sites". Architectus considers that this is an invitation to landowners such as 41 McLaren St to put forward a Planning Proposal for 41 McLaren St to accommodate Council's objectives in the best way possible.

9. **Transport and traffic**

Arup consultants prepared a transport assessment of the draft Master Plan for Council and made the following points:

- Worker trip mode share is 50% public transport and 29% car. Resident trip mode share is 36% public transport (2011 census).
- Pedestrian permeability is limited.
- No dedicated bike routes serve the precinct.
- Potential additional floor space under the LEP is 27,118 commercial, 6,967sqm residential and 2,678sqm community and under the draft Master Plan will total an additional 30,602sqm commercial, 23,375sqm residential and 5,101sqm community.
  - *Comment* – Firstly, the numbers for additional commercial space are incorrect as noted elsewhere in the document. The net increase in commercial space is only 6,545sqm GFA not 30,602sqm as stated by Arup (presumably the figures given to Arup by Roberts Day). Secondly, using Arup's figures, either way the additional floor space provided by the draft Master Plan compared to the capacity under the LEP is therefore only 3,743sqm commercial, 16,408sqm residential and 2,423sqm community. Architectus considers that this is not a reasonable increase in floor space given the new metro station nearby. A far more substantial increase for the Precinct should be planned for as discussed above.
- Over the past decade the proportion of people using a car for work in North Sydney has fallen by 25%. Also, recent surveys at St Leonards shows that for every 100 dwellings only 7 car trips are generated in peak hour – that is 0.07 trips per dwelling in the peak hour. St Leonards has one of the lowest rates for a high density area in Sydney. Arup remarks that this demonstrates a willingness of residents to leave their cars at home when other transport modes provide a good alternative.
- The traffic impact of the planned increase in development in the Precinct would be more than entirely offset by the removal of the Ward St public carpark. Even if the Ward St public carpark were to be relocated in the area, increases in traffic generation would not be significant.
  - *Architectus comment*: Therefore, from a traffic impact standpoint further increased development in the Precinct than the draft Master Plan is likely to be able to be justified. Transport consultants Ason Group have been commissioned to assess traffic impacts of the Alternative Master Plan (see Appendix A7).
- The preferred vehicle access point for development of the Ward St carpark site is Harnett St
  - *Architectus comment* – If 56 and 66 Berry St properties are amalgamated with 20 Ward St (Council's carpark site), then there would be less vehicles accessing Berry St via non-signalised means.
- A mid-block pedestrian crossing should occur over Berry St aligned with the planned Ward St pedestrian spine. This was traffic modelled and considered by Arup to be acceptable.
  - *Architectus comment* – It is considered essential that such as mid-block pedestrian crossing be built for pedestrian safety given the volume of pedestrians crossing at this point and the increase with future development. Ason group (traffic consultants for this Urban Design Strategy) say that such a crossing would need to be signalised and coordinated with the signal at Berry/Miller and Berry/Walker St to minimise impact of traffic flows.

10. **North Sydney Design Excellence Panel**

The Panel met on 8.11.16 to comment on a presentation about the draft Master Plan. The Panel also met on 13.9.16 to comment on earlier concepts. The comments included:

- Sought compliance with the NSW Apartment Design Guide
- Achieving a high proportion of commercial development should be a priority.
- East Walker St – concern about scale of development proposed.
- 56 and 66 Berry St – Hotel supported but commercial viability of the floor plate should be researched.
- Ward St – Building separation with Miller St building needs to be studied. Also concern that Miller St buildings would seek extra height. Should encourage affordable housing/seniors living as an incentive for additional development in the Precinct.
- Community Hub – Questioned considering proximity to the North Sydney Community Centre. Space could be for pop up type solutions or like the St Leonards Arts Precinct.
- Berry Square – Berry Square and the new square should be considered together for solar access. Berry Square may have increased overshadowing if at least 50% of the new square has sunlight between 12 and 2 midwinter. Panel also raised question about how important Berry Square really is given the alternate new square. Council should survey usage of Berry Square.
- NOC Square (new square) – a fundamental principle is that there is no point in creating a public domain and then overshadowing it. The cantilever is positive subject to height and solar access.
- Miller St setback embellishment – Miller St is the main spine of North Sydney – the NOC spine needs to be considered in the broader context.
- 41 McLaren St – noted that Council's architectural consultant (presumably FKM Architects) advised that the design process had determined that 41 McLaren St is incompatible with a tower. Panel supportive considering shadowing of NOC. The Panel queried the Conservation Management Plan (CMP) for 41 McLaren St and whether the proposal for the additional 35 apartments in the Draft Master Plan is pre-empting the CMP content – which could set an unfortunate precedent.
  - *Comment* – The Panel only reviewed the built form presented to them. Architectus considers that there is a better alternative built form for the key sites in the Precinct that would result in better urban form, public domain and economic viability. The Panel clearly expressed reservations about much of the Draft Master Plan. GML heritage consultants have prepared a Heritage assessment of 41 McLaren St (see Appendix A.10).

Conclusion: The errors and omissions identified by Architectus in the Draft Master Plan are summarised in Section 1.

5 Key issues for North Sydney's future

5.1 Development potential of North Sydney Centre

The North Sydney Centre is tightly bound by heritage items, heritage conservation areas and the Warringah Freeway. There is not a significant capacity for lateral growth of the Centre.

If North Sydney is to maintain its role, land near to the existing centre which is not tightly constrained by conservation areas should be at least considered for addition to the Centre.

From a strategic perspective, the area east of the site, to the Warringah Freeway should be considered as a part of the Centre. It should not be required to have no additional overshadowing as stated in the Draft North Sydney Centre Capacity and Land Use Study. It should be considered in the light of the NSW Apartment and Medium Density Guidelines so that new development seeks only to address retaining 2 hours sun access between 9am to 3pm June 21 to existing dwellings/ apartments. This would enable taller development near the new Metro station and thus allow significant growth for this part of the North Sydney Centre.

Figure 5.1.1 North Sydney Centre and surrounding context plan

Note: The light grey areas are the least constrained land in terms of heritage, strata titling, open space and infrastructure notwithstanding the current planning controls.

5.2 Criteria for tower height

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There are several methods to consider when setting controls for tower heights:

1. **Aviation height limit**. This height limit is the same as Central Sydney at RL335 (see map of PANSOPS overleaf). With an average ground RL70 at 41 McLaren Street and RL65 at Berry Square, this would enable buildings of about 65 office storeys or 80 residential storeys. Architectus expects that up to such heights will be tested for the tower above the Victoria Cross metro station. By comparison, the Parramatta City Centre has approved heights of 70+ residential storeys, and the Chatswood Centre is limited to about 40 residential storeys due to aviation limits. It is a normal urban design principle to locate the highest heights close to rail stations in an urban centre – consequently, Architectus considers that 50+ office storeys or 60+ residential storeys equivalent is appropriate above the Metro Station and close by – given that 40-45 residential storey buildings are being built near St Leonards Station and North Sydney is a higher order urban centre.
2. **NSW Apartment Design Guidelines** and Medium Density Design Guidelines - As discussed in the previous section, height limits could be based on no overshadowing of existing dwellings (principal living room window/balconies) for less than 2 hours during 9am -3pm June 21 with some variation allowed with justification. Under this scenario, Architectus testing indicates that the aviation height limit would apply to the 20 Ward St tower.
3. **No overshadowing of residential areas** outside the North Sydney Centre during control times assuming the Centre is expanded to include the whole of the Ward Street Precinct. Architectus considers this would result in the same heights as Point 2 for the Ward Street tower and about 55 storeys for 41 McLaren Street (41 McLaren Street would be restricted in height by the residential land east of the Warringah Freeway). Note that Clause 4.3 of LEP 2013 states that heights may be further varied where it is not likely to reduce the amenity of any dwelling on that land. This requires testing on a site by site basis.
4. **No overshadowing of designated public spaces** during control times – i.e. Berry Square. This would result in a stepped building of 29 to 45 storeys for 41 McLaren St and about 15 storeys for 20 Ward St. It is clear that a balanced consideration of this issue is needed rather than absolute adherence to the LEP rule. For example, a reasonable level of sunshine between 12noon-2pm would be possible by a tall tower on 20 Ward St as amalgamated with 56 and 66 Berry St. Comprehensive solar analysis is appended to this submission.
5. **Balanced consideration** of overshadowing of public spaces. As analysed elsewhere in this document, Architectus considers that a reasonable balancing of the various considerations would result in a tall tower on the amalgamated 20 Ward/56 Berry/66Berry site limited by the aviation height limit or a balance between the highest existing tower heights nearby and the aviation height limit. In regard to 41 McLaren St, a stepped tower could occur from 29 to 45 storeys and together with the 20 Ward St tower, provide a reasonable level of sun access to both Berry Square and the new NOC square.
6. **Urban context** built form heights:

– Relationship to heritage conservation areas and heritage items

  – *Comment* - There are no heritage conservation areas adjacent the Precinct (other than to the west across Miller St). There are two heritage items in the southwest corner of the precinct – the Rag and Famish Hotel and the office building nearby to the north. Both these heritage items could accommodate tall development adjacent to the east on the 20 Ward St site. There are heritage items to the east of 41 McLaren St however recent new development between the heritage items and 41 McLaren St provide a good transition. 41 McLaren St is the other heritage item within the street block and it is considered possible to accommodate a tower in a sensitive manner above it.

– Existing built form heights

  – *Comment* - while existing building heights should be acknowledged , they should not determine tower heights on the two main development opportunity sites – Ward/Berry site and 41 McLaren St – but may be a consideration in setting podium heights.

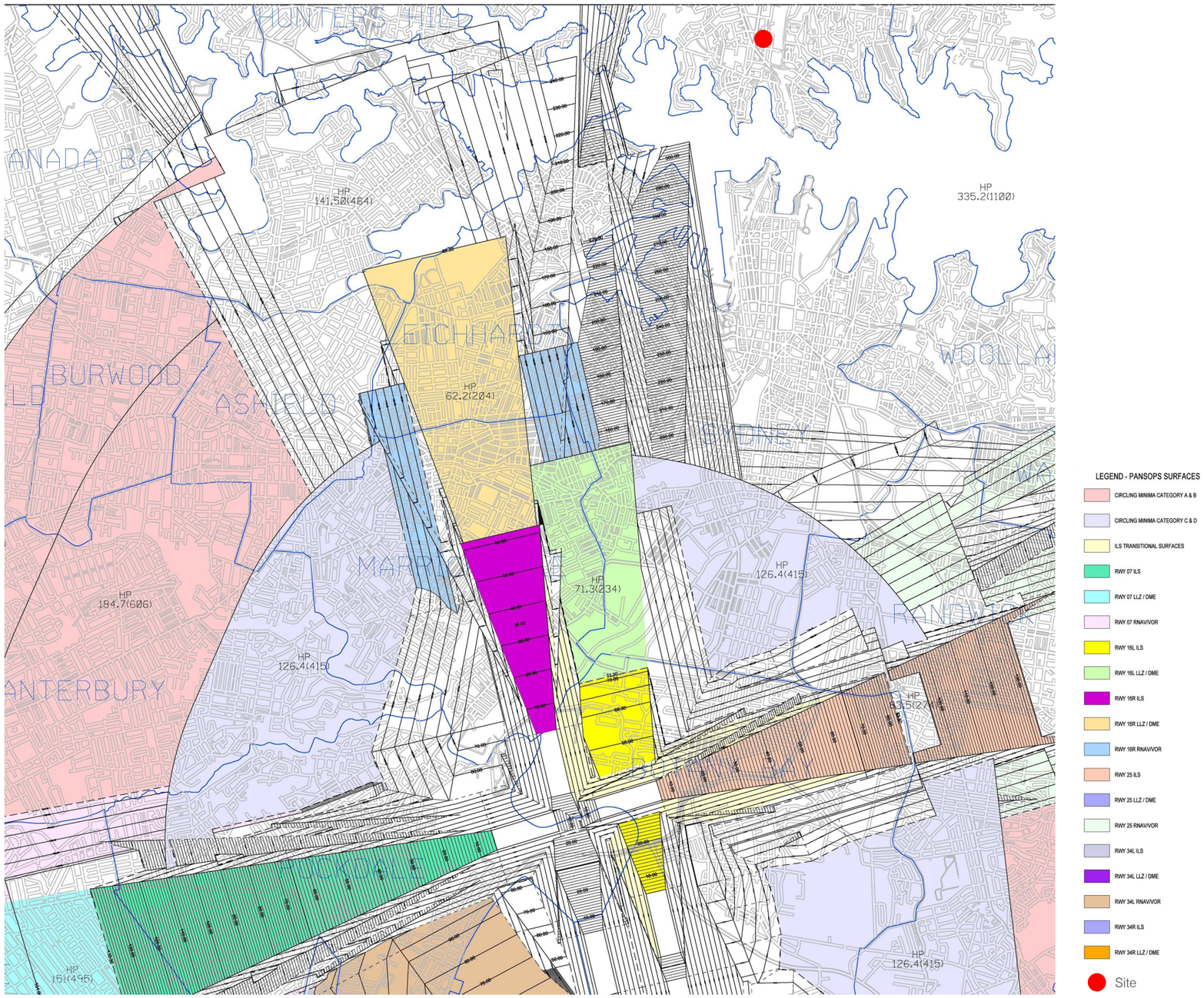
– Desired future built form in the light of strategic planning policies and changes in infrastructure and demographics

  – *Comment* – The advent of the new metro station changes the local context. In addition, the recent draft North District Plan calls for significant increases in employment and housing for the North Sydney area stating to “Maximise land use opportunities near the Metro” as well as the state publication “Jobs for the Future, Adding 1 million Rewarding Jobs in NSW by 2036”. These policies and massive increase in public transport infrastructure dictate maximising, or at least optimising, development where possible in the precinct.

Conclusion: The height of a tower on the amalgamation of 20 Ward St / 56 Berry St / 66 Berry St should be comparable to the height of the Metro tower at a likely 50-60 storeys.

The height of a tower atop 41 McLaren St could be limited to no further overshadowing of Berry Square during the Council LEP control times resulting in 25 storeys to part of the site, up to 45 storeys.

As can be seen from the adjacent map, the site is outside the PANSOPS surface height limit areas. The maximum height for the site is RL335.



5.3 Solar access and open spaces

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Existing local and surrounding open space

The Ward Street Precinct represents a unique opportunity to provide additional open space within the North Sydney Centre.

It is noted that the North Sydney Centre has existing large scale open spaces around the Centre in the following locations:

1. St Leonards Park - approx. 150,000m^2

2. Civic Park - approx. 6,000m^2

3. Lavender Bay - approx. 25,000m^2

Various street spaces have increased amenity for people such as:

- East side of Miller Street;
- Mount Street Plaza; and
- Future shareway of Denison Street and other streets and lanes should be investigated for improved pedestrian amenity.

It is also noted that there are various smaller plaza areas within the Centre but that these are generally privately owned and function primarily as entry forecourts to commercial / residential buildings.

Figure 5.3.1 Key open spaces - North Sydney Centre and surrounding context

Berry Square

Berry Square is mostly overshadowed between 12-2pm in midwinter (noting that there is reasonable sunshine from 11am-12.30pm to parts of Berry Square in midwinter. The Victoria Cross urban space was removed from consideration in 2001 because it would have prohibited a number of major development proposals. Architectus considers that the same principle should be applied to Berry Square, given its proximity to the proposed Metro Station and the Ward Street Precinct.

According to the draft North Sydney Centre Capacity and Land Use Study (2016), Berry Square sun protection was added to the LEP in 2013. At the same time, sun protection of protected places was generally reduced from 10am - 2pm to 12 - 2pm for all protected spaces, the minor variations clause was removed, and the relevant overshadowing clause (Clause 6.3(2)(a)) was identified as a clause which could not be varied under Clause 4.6. The intent of these changes was to focus solar access protection on the period between 12 - 2pm. The inability to vary this provision can have unintended consequences, where disallowing minor increases in shadow could jeopardise refurbishment of buildings with new cladding etc. Amending this control has merit and is supported by Architectus.

Retention of special areas was subject to the following criteria:

1. Contributes to Centre's garden character
2. Diverse range of activities 12noon to 2pm
3. Popular destination
4. Positive user experience
5. Minimal overshadowing 12-2pm
6. Potential for increased activity

Berry Square is inconsistent with most of these criteria, particularly with criterion 5 and functions more as a building forecourt than as a quality public space.

The Draft North Sydney Centre Capacity and Land Use Study reviewed 11 Special Areas – of these, Berry Square, Doris Park, Elizabeth Plaza, Blue St Plaza and Brett Whitely Place are the most overshadowed. Blue Street Plaza is recommended for removal as a Special Area because it is wholly overshadowed from 12noon-2pm and Elizabeth Plaza is recommended for removal as a Special Area because it has 100% overshadowing from 12.20pm. Berry Square is 40% overshadowed at 12noon and 100% at 1pm and Brett Whitely Place is almost completely overshadowed, however, these are recommended to be retained as a Special Areas. The recommendations are therefore considered to be inconsistent.

The draft Master Plan is now publicly available and recommends that the Berry Square retain its Special Area status for sunlight protection and recommends extending the hours of protection from 12-2pm to 10-2pm noting that 12-2pm is currently mostly overshadowed in midwinter. Architectus strongly questions this recommendation. The implications are that maximising development potential near the new Metro Station cannot occur and for no real reason given that the Square is almost fully overshadowed during the current control hours. There is no analysis showing if an alternative control date should be chosen, such as 30 August or the equinox – nor analysis of effect on development potential. Further, Berry Square is a very small square that is privately owned and not very pedestrian friendly.

Being a privately owned plaza, mainly controlled by residents of Beau Monde – it is unlikely that the residents will allow extended hours of active uses such as outdoor dining in the Plaza in the evening. The Plaza really acts as a building forecourt and Architectus considers that it is not worthy of sunlight protection.

Further discussion of Berry Square is provided elsewhere in this submission.

In response to the assertion the North Sydney Centre lacks open space – this is not particularly true when considering Civic Park (located one block away), St Leonards Park (located 2 blocks away) and the network of pedestrian friendly street spaces. Further, the pedestrian friendly street spaces are likely to be increased with Denison Street and Ward Street in the near future.

Berry Square should be not listed as a Special Area given its current extent of overshadowing and the quality of open space it provides (which is privately owned). It is recommended that sun access is a consideration in balancing amenity with development potential in proximity to the Metro station. Architectus considers the sky exposure, slivers of sunlight and potential reflected light is appropriate for the amenity of Berry Square.

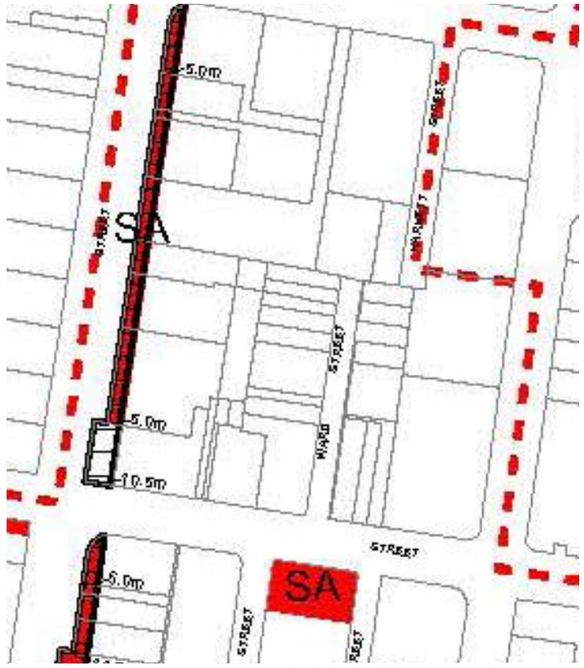


Figure 5.3.2 Special Area - Berry Square

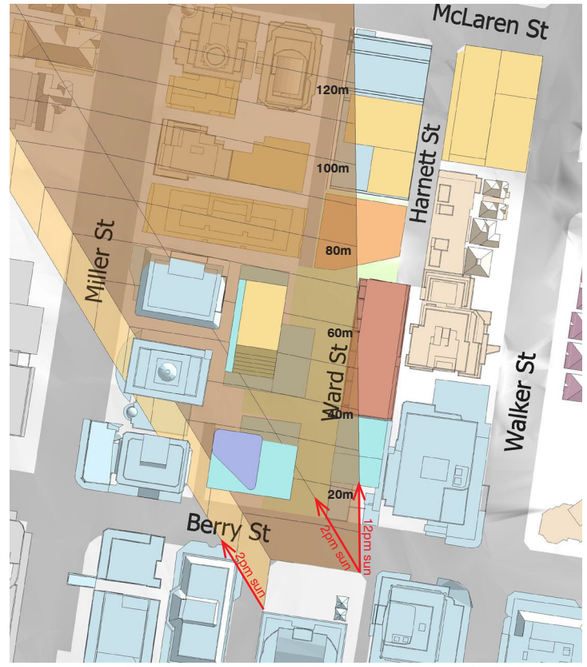


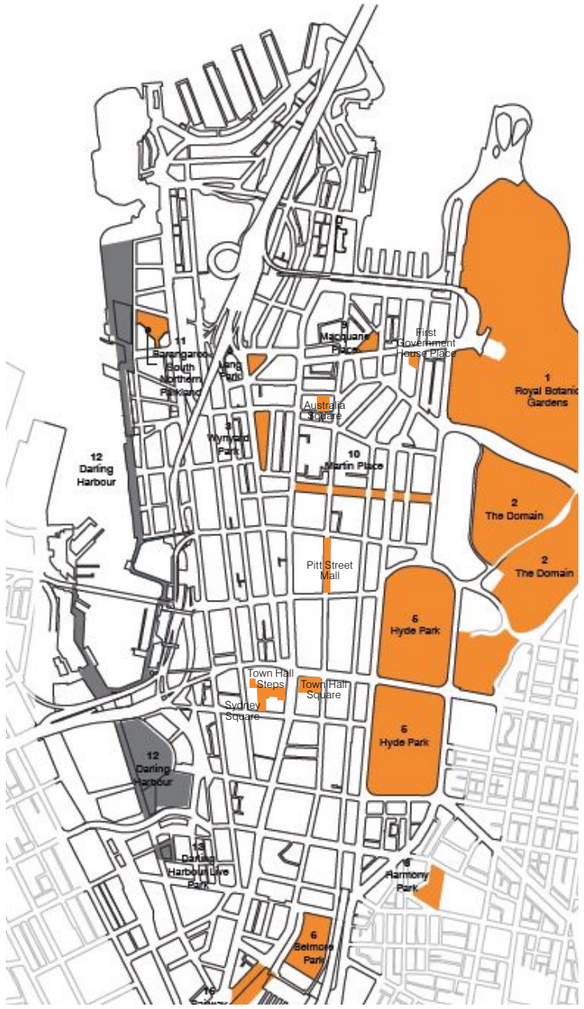
Figure 5.3.3 Sun access plane (with 10m contours) from Berry Square - 12-2pm

Comparison with other centres

Comparing Berry Square to other urban spaces and parks that have protected sunlight controls such as those in Central Sydney, Green Square Town Centre, Parramatta City Centre and Chatswood – Berry Square is by far the smallest space and the only one, with the exception of Australia Square, that is privately owned. Unlike Berry Square, the Australia Square complex comprising two towers and a plaza, is identified as a heritage item and provides a high level of pedestrian amenity and attractiveness.

North Sydney Centre

- No additional overshadowing 12pm-2pm midwinter (North Sydney LEP 2013)
- Approximate urban space areas from 600sqm-5,000sqm (Berry Square approx. 880sqm)
- Berry Square is currently 40% in shadow at 12noon and 100% in shadow by 1pm
- Berry Square is privately-owned



Sydney CBD (proposed- Central Sydney Strategy)

- Open spaces protected by no additional overshadowing and sun access planes controls are determined on a case by case basis (Central Sydney Strategy)
- Approximate areas from 1,000sqm - 550,000sqm
- All publicly-owned spaces except Australia Square

Parramatta CBD (proposed - Parramatta CBD Planning Strategy)

- No overshadowing 12pm-2pm midwinter (Parramatta CBD Planning Strategy)
- Approximate areas from 3,000sqm-35,000sqm
- All publicly-owned spaces

Chatswood CBD (proposed - Chatswood CBD Strategy)

- No additional overshadowing 12pm-2pm midwinter, Chatswood Oval from 11am-2pm midwinter
- Approximate areas from 2,000sqm- 14,000sqm
- All publicly-owned spaces

N 1 0 0.1 0.2 0.4 1km

Note: All plans presented at the same scale.

Reflected solar access to open spaces - heliostats

The use of heliostats is an accepted method of providing sunlight to an overshadowed urban space. Architectus considers this technique to be particularly appropriate for generally hard urban surfaces in contrast to parkland spaces.

The accompanying illustrations show a well known local example and key principles for heliostats. While Architectus considers a heliostat is not needed for the new Ward St open space or Berry Square bearing in mind winter sun is achieved between 11am and 12.30pm to reasonable parts of these spaces and more is achieved at the equinox. Nevertheless, Council may elect to locate a heliostat on top of the Ward St tower to further improve sun access at these times.

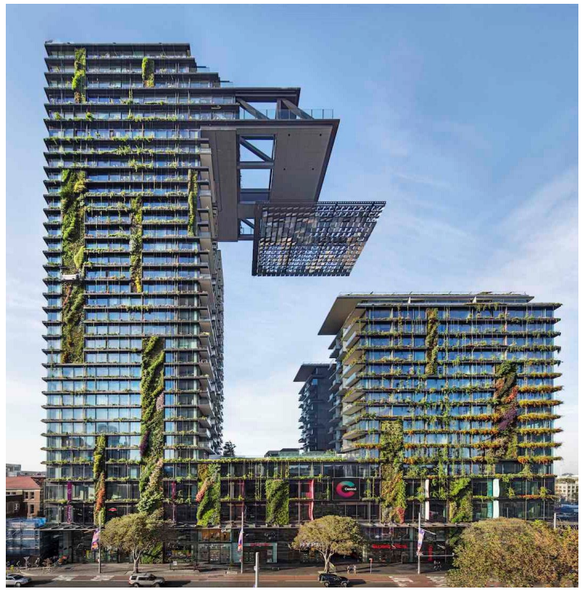


Figure 5.3.4 Central Park

Central Park at Broadway, Chippendale is a world class example of a heliostat. This project by Frasers Developments has received many awards for design excellence.

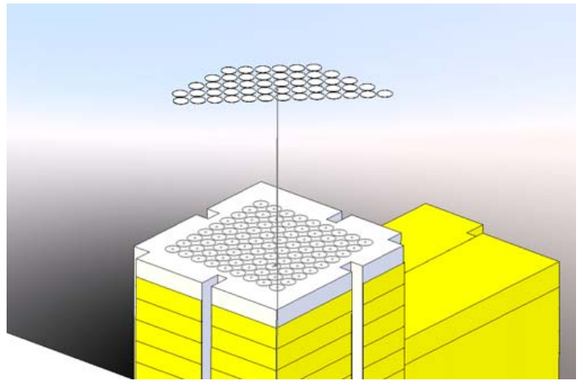
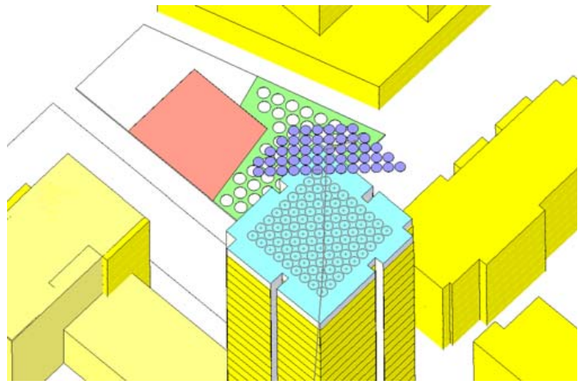


Figure 5.3.5 Heliostat principles (Source: Tilt, consultant)

Heliostat Principle 1: As a general rule, the amount of sunlight that can be reflected into a public space is equivalent to the total surface area of the mirror panels mounted on the heliostat.



Heliostat Principle 2: A line of sight ‘rule-of-thumb’ applies to the capacity of the system to hit any target area i.e. if you can stand in the target area and see a Reflector, then sunlight can be directed to that position.

5.4 Solar access to existing residential uses

Existing residential uses potentially affected by new tower(s) in the Precinct can be categorised into 4 areas:

1. **Residential areas east of Warringah Freeway**
2. **Existing and future residential along the east side of Walker Street**
3. **Existing residential along the west side of Walker Street**
4. **Existing residential along Miller Street**

The Draft Ward Street Precinct Master Plan recommends that residential land surrounding the North Sydney Centre should not be further overshadowed between 10am-2pm on June 21. No other options are considered. Architectus considers that referring to the 1990's formula of the no further overshadowing 9am-3pm is outdated and inconsistent with the North Sydney Centre role as part of the Global Centre of Sydney.

Architectus recommends that solar access to these four areas should be considered by applying relevant Apartment Design Guidelines and Medium Density Guidelines - protecting solar access for 2 hours on June 21 between 9am-3pm.

Figure 5.4.1 Location plan - relevant existing residential areas

5.5 Tower slenderness

Slender towers and their benefits

As urban densities increase, the slenderness of tall towers and their appropriate separation are becoming an important consideration. Slender towers are towers which:

– Are visually elegant and vertical rather than bulky when viewed from the public domain.
– Enable good access to sunlight and daylight for the public domain, minimising in particular extended periods of overshadowing for the public domain.
– Provide opportunities for sky views between buildings to maintain the perception of openness.
– Provide excellent light, ventilation and view amenity for occupants through maximising their access to windows.
– For residential towers, limit the number of apartments per level and the length of corridors.

The Victoria Square North Tower, Zetland (see overleaf - 750sqm floorplate, 26 storeys) has been seen as an exemplar for residential tower slenderness.

Market demand for tower floorplates
As there has generally been little regulation in Sydney for maximum tower floorplates, recent residential examples range considerably (see examples overleaf) from 430sqm to 1750sqm.

Commercial tower floorplates tend to be even larger with recent examples ranging from around 1500sqm (e.g. Eclipse Tower Parramatta) to around 3000sqm (e.g. Barangaroo towers).

The majority of these are considerably larger than the exemplar for slenderness above.

Larger floorplate towers tend to reduce the amenity for occupants, particularly residential towers which result in large proportions of deep, single-aspect apartments. (Note: Standards for this are generally set by SEPP65 - see discussion adjacent).

Existing standards for New South Wales

There are no state-wide floor-plate controls for tall buildings in NSW. However the Apartment Design Guide, which is required to be considered as part of determining a development application under SEPP65, provides guidance and criteria which are related to the size of a tower floor plate include the following:

– The maximum number of apartments off a circulation core on a single level is eight (ADG 4F-1) although exceptions up to 12 are noted.
– The maximum habitable room depth is 8 metres from a window (ADG 4D-2).
– Building indentations are to have a width to depth ratio of 2:1 or 3:1 to ensure effective air circulation and avoid trapped smell (ADG 4B-2).

Together with fire regulations, the proper application of the Code should have the effect of limiting floorplates in residential buildings.

The above can easily be achieved with the smallest tower envelope sizes described adjacent (750sqm envelope) however as envelope sizes increase, good outcomes become minimum compliance or non-compliance. Conformance with the above controls will also have some relationship with:

– Building height (particularly as taller buildings are likely to have larger cores, at upper levels).
– Apartments sizes and mix (the floorspace needed for eight large apartments may be significantly larger than eight smaller apartments)
– Site and tower geometry.
– The detailed design of the building.
– The assessing authorities view on variation to the above standards.

However, it is important when providing maximum tower floorplate controls not to describe an envelope for any site which will result in non-compliant outcomes.

In the early master planning stages of a project, it is difficult to test all of the detailed design provisions of SEPP65. As a result, master plans, and planning controls can describe envelopes for large floor-plates that are not acceptable from a design and amenity perspective.

Precedent buildings

The tower floorplate examples presented overleaf demonstrate that:

– 8 apartments per core (noted as a maximum in the Apartment Design Guide) tends to focus on buildings of 750-1000sqm GBA floorplate.
– Larger floorplates than 1000sqm GBA tend to have greater issues with providing compliant apartment depth (8m maximum for open plan habitable rooms) and visual bulk.
– Where a tower sits over a podium this is generally read as its apparent height.
– Apparent visual slenderness can depend on the angle of view and visibility from key angles. Towers are often longer in one dimension than another and appear more slender when seen from the narrow end.
– The visual slenderness of towers increases with their height as well as decreasing with their floorplate. This means that taller towers are more likely than shorter towers to achieve both:
  – A floorplate size which fits current market demands; and
  – Visual slenderness within the streetscape

Recommendations for development of controls

It is now commonly acknowledged that the Green Square provisions (700sqm GBA floorplate, 22-25 storeys) produce a tower with slender proportions.

Taller buildings can accommodate proportionally larger footprints, and still achieve good internal amenity, as more floor space is dedicated to lift cores/services.

Reducing the size of upper floorplates is a solution to reducing visual bulk for very tall buildings (say, over 50 storeys). In Sydney's context, it is usually preferable to have a podium/tower form of development where the podium relates to the alignment and scale of the street and the tower relates to a wider context of towers. It is usually preferable to not have "wedding cake"or stepped built forms in favour of simplicity of built form.

Although commercial office towers tend to have significantly greater floorplates than residential towers, controlling their floorplate sizes is generally seen as discouraging employment and not typically required.

Tower slenderness proposed at 41 McLaren St

The proposal for 41 McLaren St includes a tower with floorplates between 570-765 sqm GFA (typically 8 apartments/floor).

The tower is comparable in size to the exemplar Victoria Square North Tower, Zetland and the Skyline, Rhodes and is much more slender than the majority of recent development in Sydney such as Central Park, Sydney and Crown V Parramatta, Parramatta (see aforementioned examples overleaf).

The smaller floorplates of the 41 McLaren St tower enable the building to achieving a visually slender profile. This results in a good urban design and architectural outcome for the site, as it enables good solar access, view sharing and amenity within the building, for neighbouring buildings and for the public domain and streetscape.

Example residential tower floorplates

The examples provided on the following pages demonstrate a broad range of residential tower footprints from recently developed sites in Sydney. They have been ordered by envelope/floorplate size.

They reflect a range of:

– Site sizes

– Tower floorplates

– Approaches to key issues in SEPP65 and the Apartment Design Guide.

– Dimensions, bulk and visual slenderness.

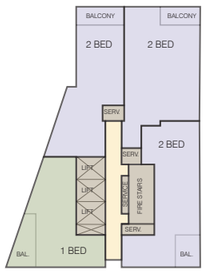
“Metro Spire”, Chatswood

430sqm floorplate envelope / GBA - 36 storeys

4 apartments per typical floor

Prominent location in group of towers (larger floorplate towers adjacent).

Slenderness ratio (depth: height) approx. 1:5.5 - 1:10.5



Victoria Square North, Zetland

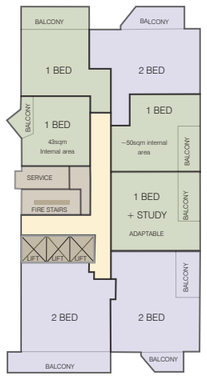
750sqm floorplate envelope / GBA - 26 storeys

7 apartments per typical floor

Apartment sizes include small studio (<50sqm)

Slenderness given detailed consideration

Slenderness ratio (depth: height) approx. 1:6



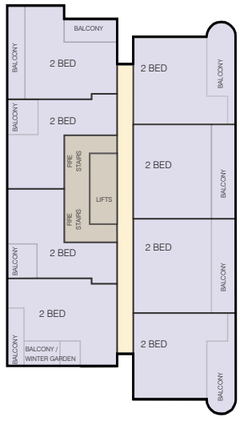
“Skyline”, 42 Walker St Rhodes

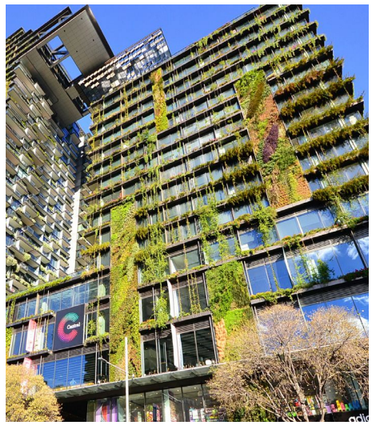
1000 sqm floorplate envelope / GBA - 25 storeys

8 apartments per typical floor

Height and common angle of views gives greater appearance of visual slenderness.

Slenderness ratio (depth : height) approx. 1:3 above podium





One Central Park (west)

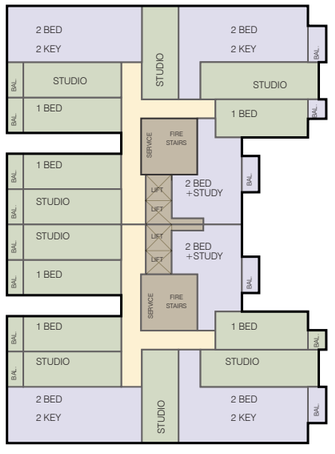
1650sqm floorplate envelope / GBA - 17 storeys

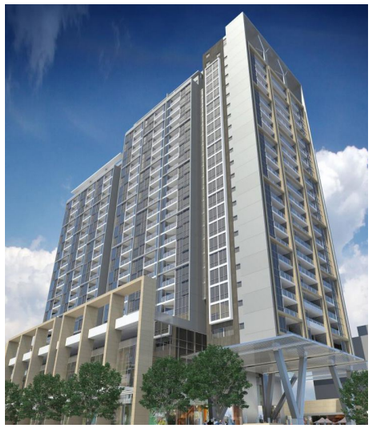
20 apartments per typical floor (10 / core, 12 incl. 2 key)

Indentations to not meet ADG requirements

Unlikely to be considered visually slender

Slenderness ratio approx. 1:1 above podium





Crown V Parramatta

~1750sqm envelope / GBA 30 storeys

18 apartments per typical floor (2 cores)

Visually bulky when seen along long face (approx. 72m)

Slenderness ratio approx. 1:1 above podium

0 2 5 10 25m

6 Options for the Precinct and the Site

6.1 Overview of options

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Initial options considered

Four urban design options were initially considered by Architectus in discussion with Council in 2015 to mid 2016, prior to the announcement of starting the Draft Ward Street Precinct Master Plan.

These included options for both the 41 McLaren Street site and the Council's Ward Street Carpark site to represent a range of development potential possibilities for discussion with Council.

A fifth option was also considered appropriate for investigation in regards to potential amalgamations of land.

The five options included:

- **Option 1** - Open space and laneway network - 3 towers are provided and the Berry Square sun access plane is retained.
- **Option 2** - Open space to north - removes sun access protection to Berry Square and introduce a new public space on 41 McLaren Street
- **Option 3** - Independent development of 41 McLaren Street.
- **Option 4** - Seidler Scheme - development from Option 3 with a architectural proposal by Harry Seidler and Associates) and retains the Berry Street sun access plane.
- **Option 5 -** Amalgamation - 41 McLaren Street with Ward Street carpark (north) and amalgamated 56/66 Berry Street with Ward Street carpark (south).

For options 1-5, option testing and shadow analysis is based on the following:

- Terrain with approximate 2m GIS contours;
- Storeys on site calculated from ground McLaren Street;
- Approximate building heights as determined by assumed floor to floor heights (3.1m for residential and 3.8m for commercial); and
- Information available for recently approved properties nearby.

Development potential and solar access

The five urban design options were further considered to address a number of issues:

- As a response to the North Sydney Centre Capacity and Land Use Study.
- As a response to the Draft Ward Street Precinct Master Plan.
- No overshadowing controls and solar access protection of Berry Square, the new N.O.C Square and existing residential areas outside of North Sydney Centre, as described in the above documents.
- Tower potential above the proposed Victoria Cross Metro Station site and its repercussions on the Ward Street Precinct block.

These are:

- **Option 6** - Balanced solar access to Berry Square.
- **Option 7** - Balanced solar access to Berry Square, greater solar access to N.O.C Square by offset tower to 41 McLaren Street.
- **Option 8** - No overshadowing east of Warringah Freeway.
- **Option 9** - No overshadowing east of Warringah Freeway, greater solar access to N.O.C Square by offset tower to 41 McLaren Street.

For options 6-9, option testing and shadow analysis is based on the following:

- Terrain with approximate 2m GIS contours checked by surveyed RL points;
- A detailed North Sydney context model purchased from AMM accurate to within 200mm;
- Information available for recent DA approvals; and
- Survey information for 41 McLaren Street and Berry Square.

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Initial options considered

Option 1 - Open space and laneway network

- 3 towers of varying heights.
- 2 public spaces.
- No further overshadowing of Berry Square 12-2pm.

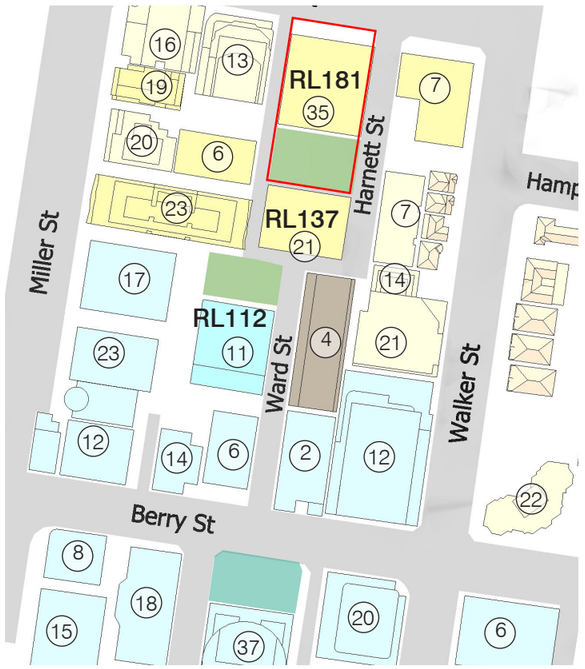

Figure 6.1.1 Option 1- Site plan

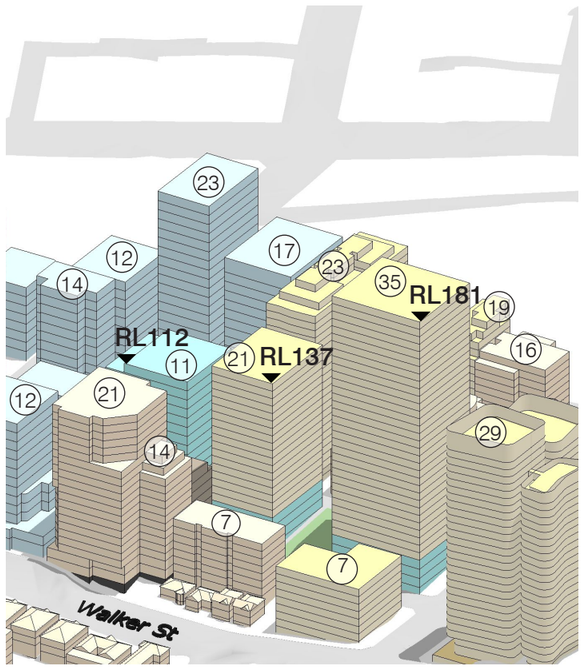

Figure 6.1.2 Option 1- 3D View

Option 2 - Open space to north

- 2 main public spaces.
- Provision of open space to the north on McLaren St.
- Significant development potential on site and Council land.
- Increased overshadowing of Berry Square.

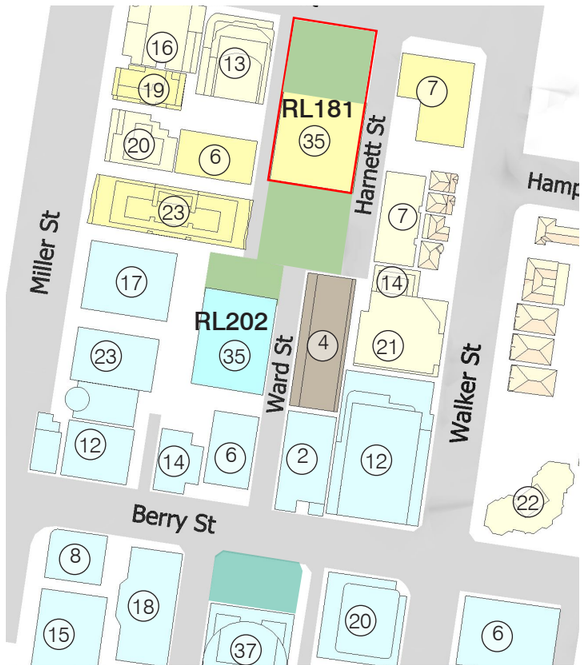

Figure 6.1.3 Option 2- Site plan

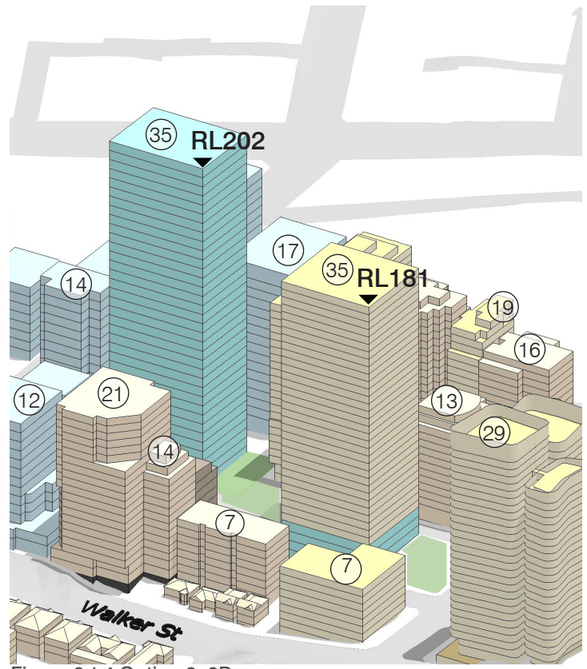

Figure 6.1.4 Option 2- 3D View

Site boundary
Existing commercial
Existing residential
Future commercial
Future residential
Substation site
Proposed open space
Berry Square
(#) Number of storeys
RLXX Reduced Levels AHD

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Option 3 - Independent development of 41 McLaren Street

- Independent development of 41 McLaren St with potential pedestrian connections and access to Council land.
- No further overshadowing of Berry Square 12-2pm.

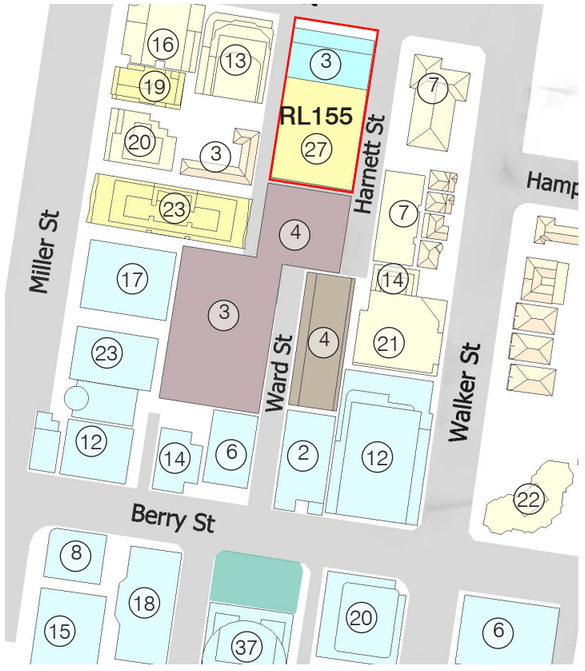

Figure 6.1.5 Option 3- Site plan

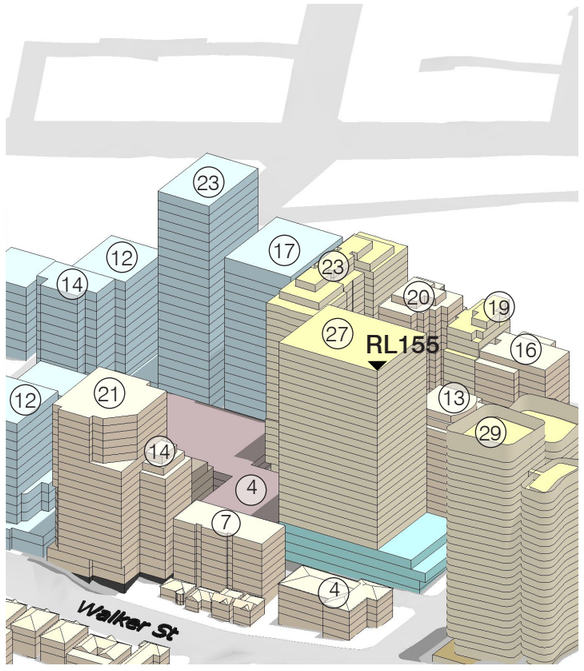

Figure 6.1.6 Option 3- 3D View

Option 4 - Seidler Scheme

- Iteration of Option 3 with an architectural massing analysis provided by Harry Seidler and Associates.
- Retains some sun access to Berry Square.
- Retains heritage values of 41 McLaren St.

Site boundary
Existing commercial
Existing residential
Future commercial
Future residential
Substation site
Proposed open space
Berry Square
(#) Number of storeys
RLXX Reduced Levels AHD

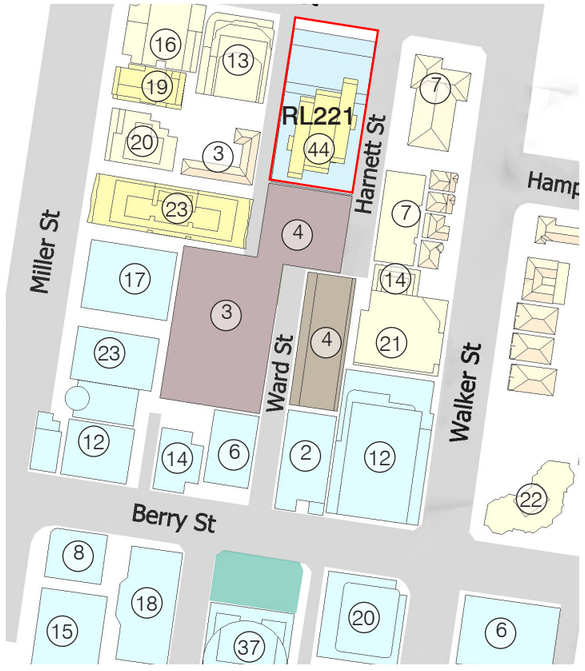

Figure 6.1.7 Option 4- Site plan

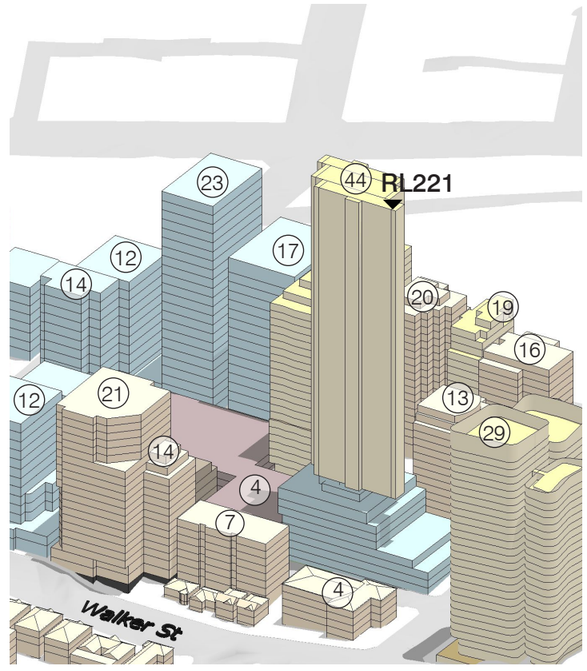

Figure 6.1.8 Option 4- 3D View

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Option 5 - Amalgamated 41 McLaren Street with Ward Street Carpark (north) and amalgamated 56/66 Berry St with Ward Street Carpark (south)

- Two towers -
  1. Amalgamated 41 McLaren St with northern part of the Ward Street Carpark.
  2. Amalgamated 56/66 Berry St with southern part of the Ward Street Carpark.
- Significant development potential on amalgamated sites.
- Retains heritage values of 41 McLaren St.

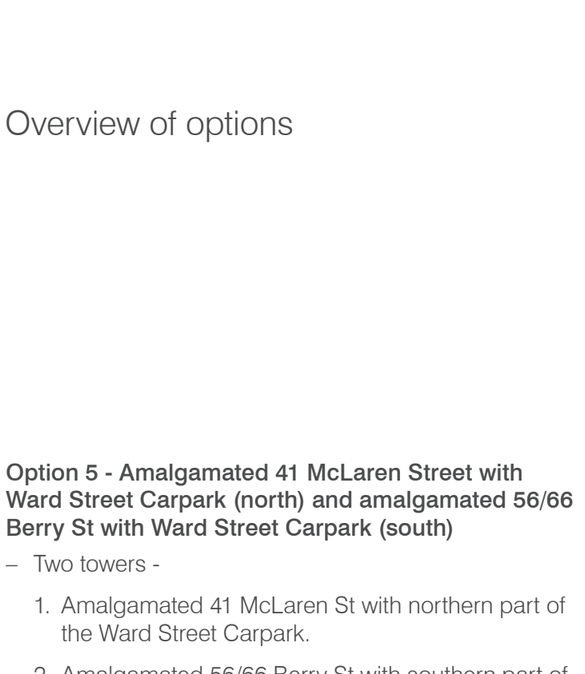

Figure 6.1.9 Option 5- Site plan

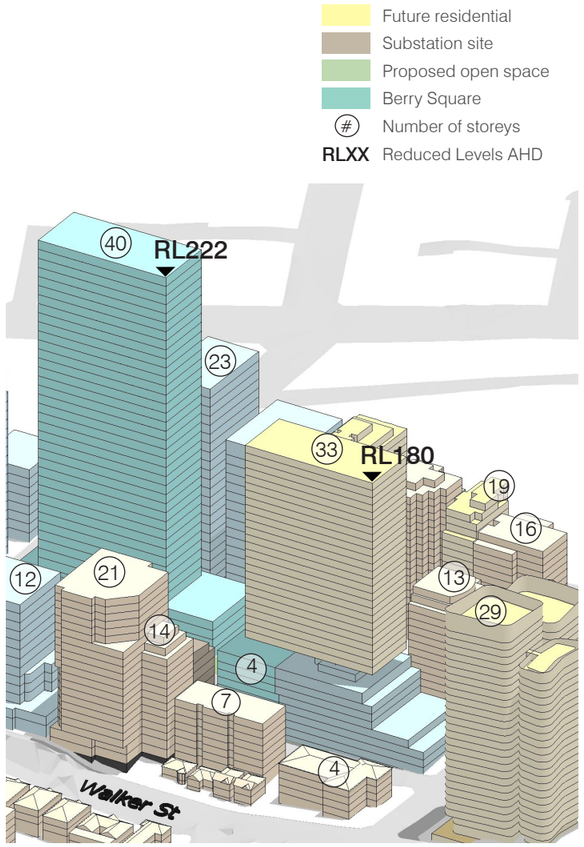

Figure 6.1.10 Option 5- 3D View

Development potential and solar access

Option 6 - Balanced solar access to Berry Square, amalgamated 20 Ward/56 Berry/66 Berry St

- Balanced sunlight/overshadowing of Berry Square.
- 27 storeys 41 McLaren St.
- 41-58 storeys 20 Ward/56 Berry/66 Berry St (hotel on top of office tower).

Option 7 - Balanced solar access to Berry Square, greater solar access to N.O.C Square by offset tower to 41 McLaren Street

- No overshadowing of Berry Square at any time by 41 McLaren St.
- Provides greater solar access to N.O.C Square than Option 6.

- Site boundary
- Proposed building envelope
- Existing commercial
- Existing residential
- Future commercial
- Future residential
- Future community facilities
- Future hotel
- Substation site
- Proposed N.O.C Square
- Berry Square
- (#) Number of storeys
- RLXX Reduced Levels AHD

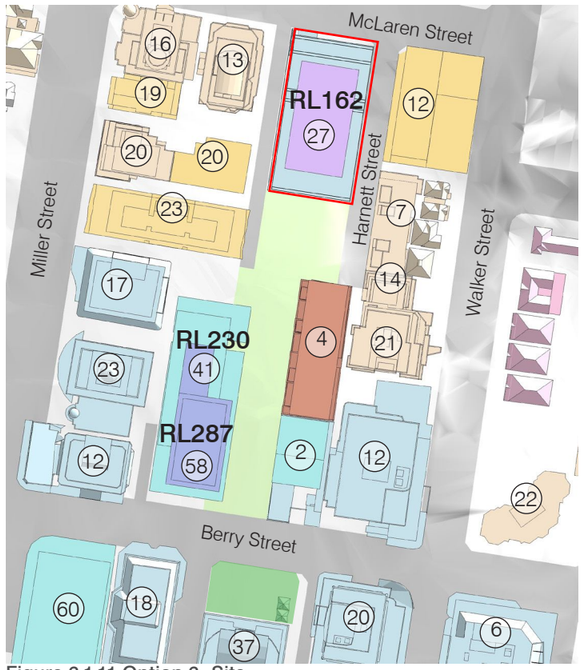

Figure 6.1.11 Option 6- Site plan

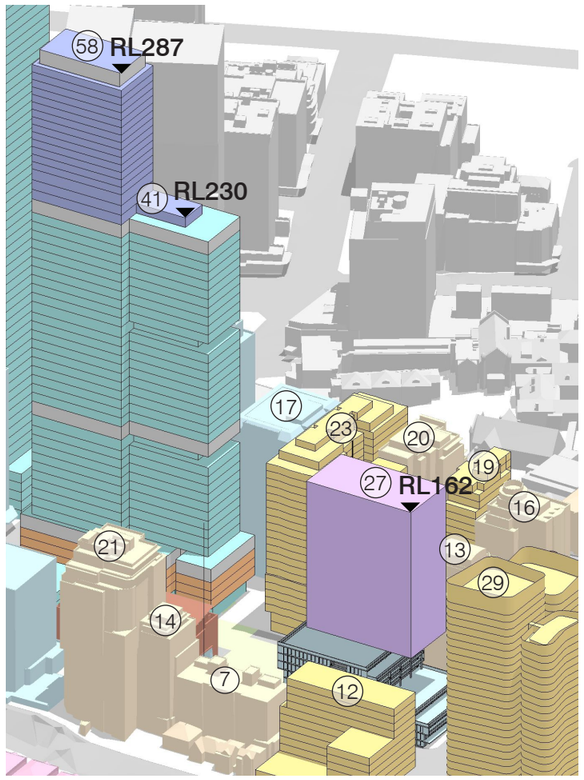

Figure 6.1.12 Option 6- 3D View

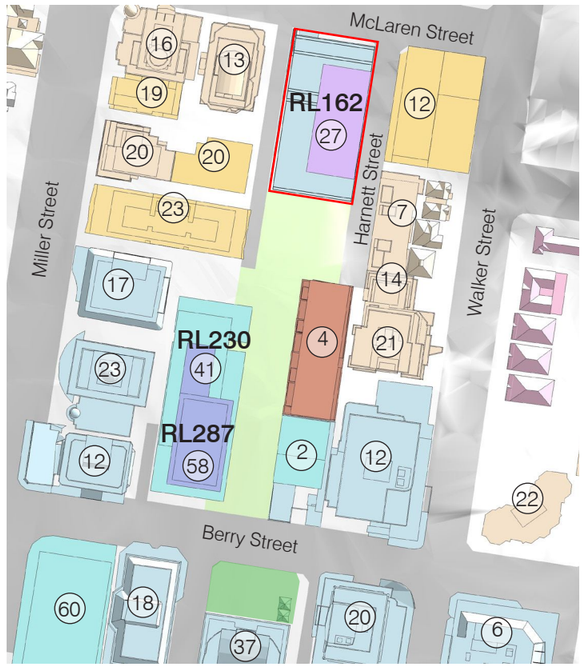

Figure 6.1.13 Option 7- Site plan

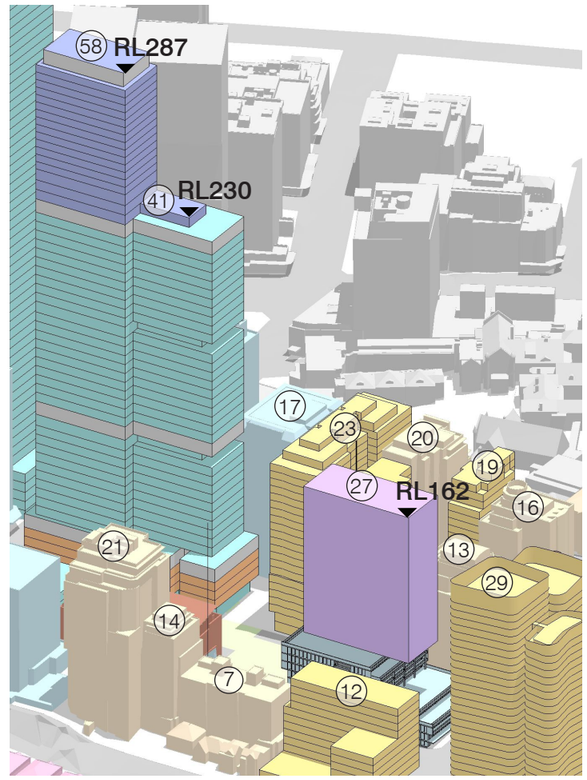

Figure 6.1.14 Option 7- 3D View

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Option 8 - No overshadowing east of Warringah Freeway

- Maximises development potential of 41 McLaren St (52 storeys).
- No overshadowing east of Warringah Freeway 10am-2pm.
- Increases overshadowing of Berry Square.

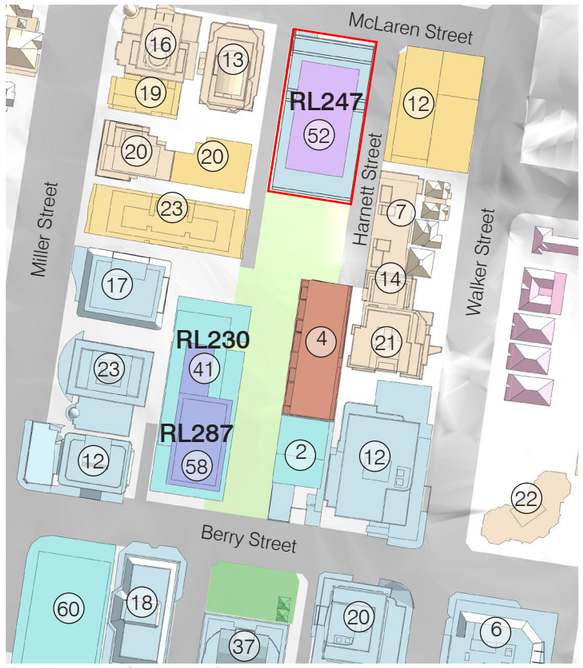


Figure 6.1.15 Option 8- Site plan

N 1 0 10 20 50 100M

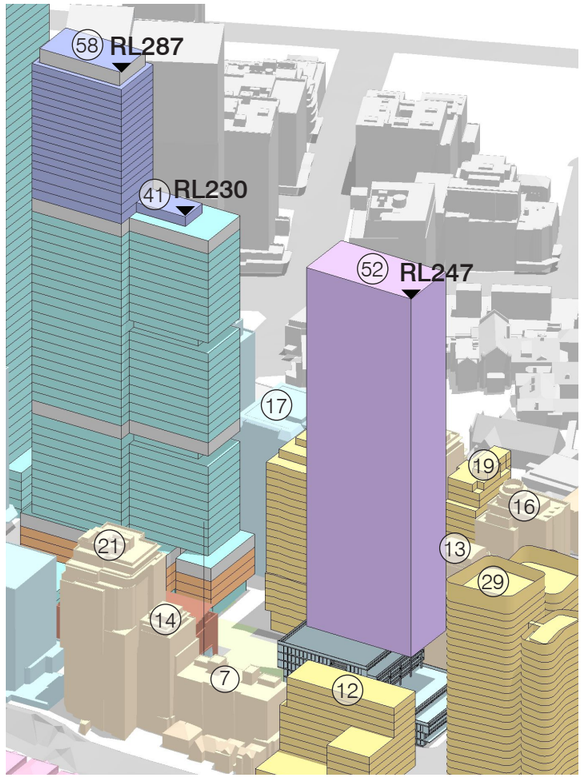


Figure 6.1.16 Option 8- 3D View

Option 9 - No overshadowing east of Warringah Freeway, greater solar access to N.O.C Square by offset tower to 41 McLaren Street

- Maximises development potential on site of 41 McLaren St.
- No overshadowing east of Warringah Freeway 10am-2pm.
- No additional overshadowing of Berry Square 12pm-2pm by 41 McLaren St.
- Provides greater solar access to N.O.C Square than Option 6 and 8.

Site boundary
Proposed building envelope
Existing commercial
Existing residential
Future commercial
Future residential
Future community facilities
Future hotel
Substation site
Proposed N.O.C Square
Berry Square
(#) Number of storeys
RLXX Reduced Levels AHD

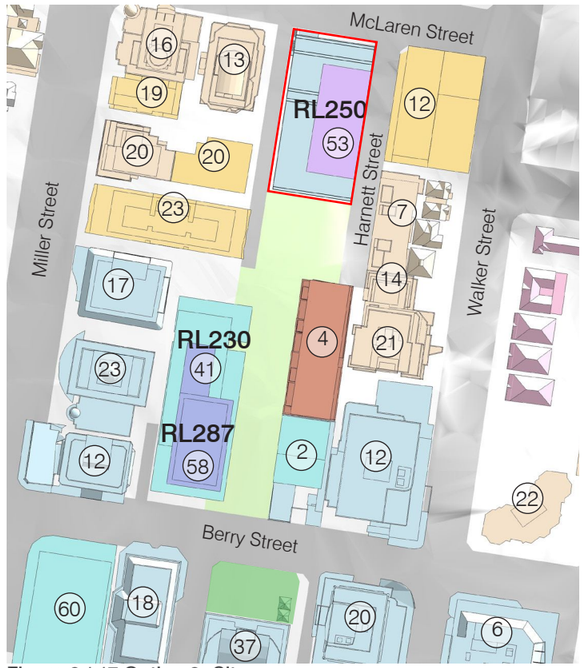


Figure 6.1.17 Option 9- Site plan

N 1 0 10 20 50 100M

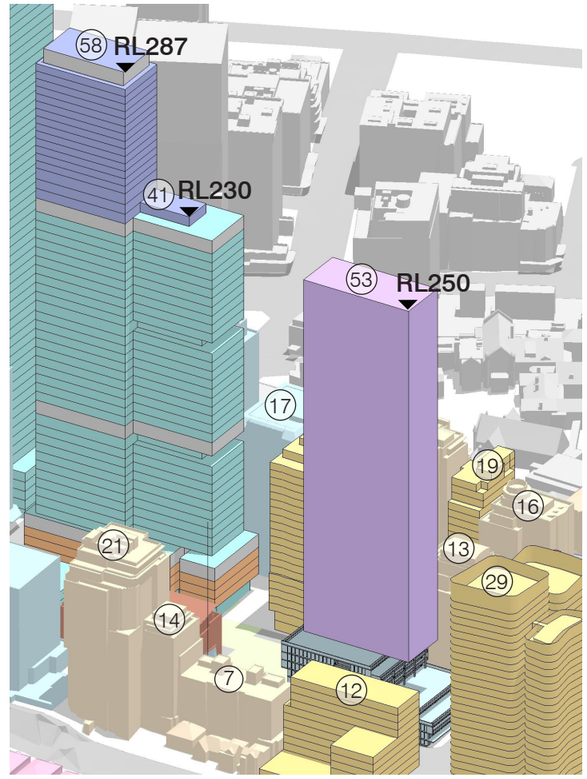


Figure 6.1.18 Option 9- 3D View

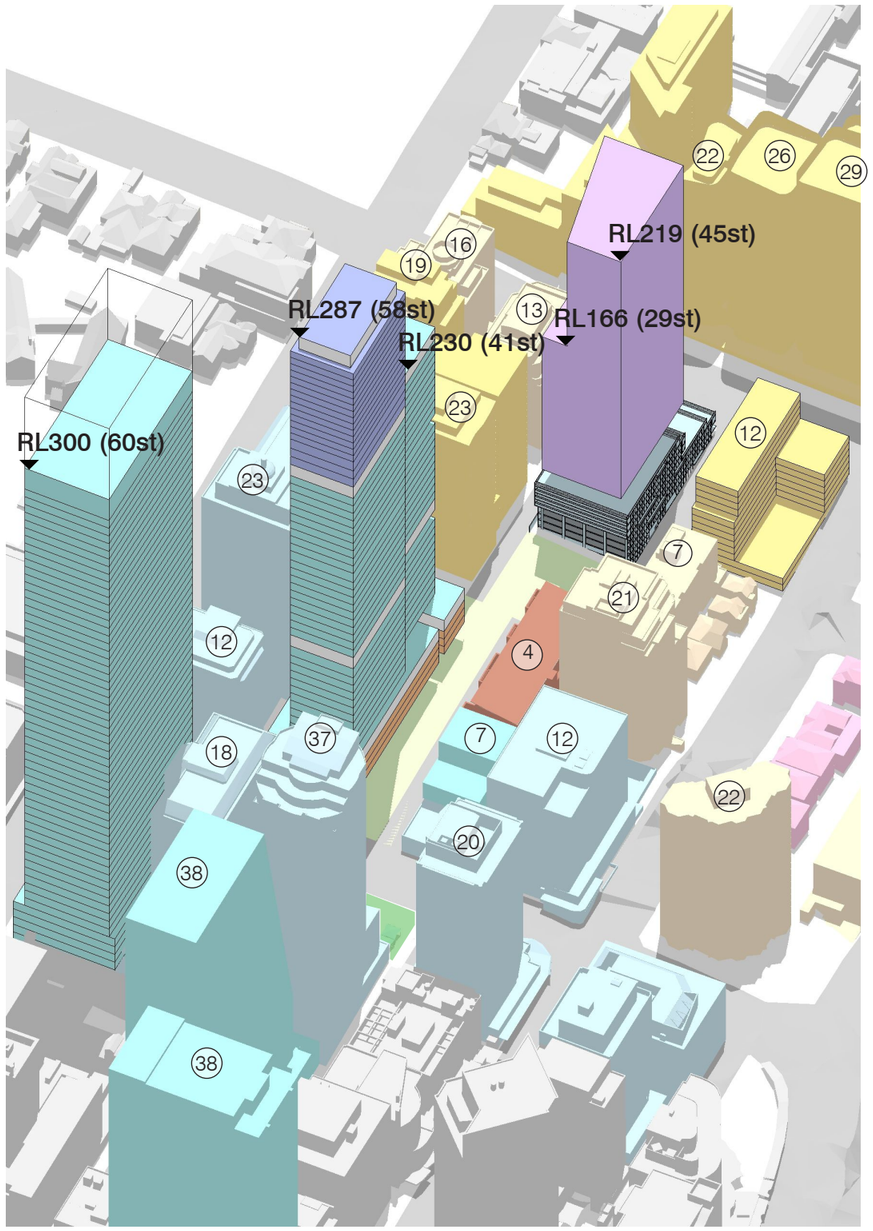
6.2 Selection of preferred options for detailed study

Two preferred scenarios have been selected for detailed study.

- Option 6 Balanced solar access to Berry Square - based on Option 6 a stepped tower for 41 McLaren St maintains no additional overshadowing of Berry Square 12-2pm. 20 Ward/56 Berry/66 Berry St casts additional shadow to part of the Square but compensates by increasing sunlight to other parts of the Square.
- Visionary with metro - a visionary scheme based on Option 8 that maximises development potential in the precinct, though does not cause any additional overshadowing of existing residential uses east of Warringah Freeway till 2pm.

These have been developed in further architectural and landscape detail and considered against the Draft Ward Street Precinct Master Plan in the following sections.

Option 6 - Balanced solar access to Berry Square (29-45 stepped storeys)



Proposed building envelope
Existing commercial
Existing residential
Future commercial
Future residential
Future community facilities
Future hotel
Substation site
Opportunity site
Berry Square
Proposed N.O.C Square
(#) Number of storeys
RLXX Reduced Levels AHD

Figure 6.2.1 3D view

Option 8 - No overshadowing east of Warringah Freeway (53 storeys)

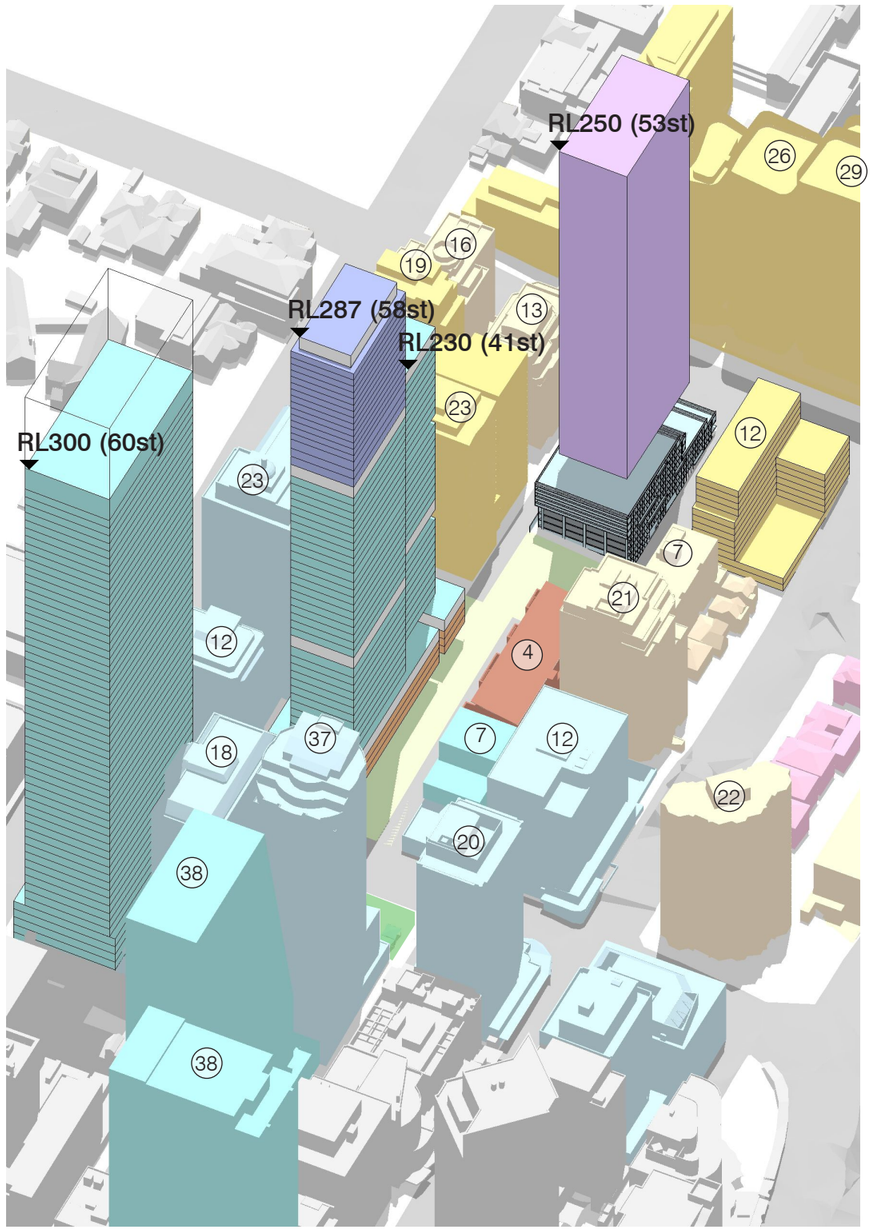


Figure 6.2.2 3D view

7 Two Master Plan Scenarios for the Precinct

7.1 Alternative Master Plan

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Overview

This Alternative Master Plan proposes a tower on the amalgamated site at 20 Ward St/56 Berry St/66 Berry St of comparable height to the Metro Tower and a stepped wing tower on 41 McLaren St that enables sun access to the new Ward St open space (NOC Square) and Berry Square, similar to the Draft Ward St Master Plan, from 11am to 2pm.

1. **Public domain**

– Increases area of public domain compared to the Draft Master Plan by almost double.

– Enables direct line of sight between Berry Street and McLaren Street (via a double height colonnade through 41 McLaren St aligned with the Ward St open space spine).

2. **20 Ward St/56 Berry St/66 Berry St**

– Provides 'A' grade office tower with hotel on top.

– Balances solar access to Berry Square by increasing sunlight to part and reducing to part.

– Incorporates community uses at podium levels.

– Provides retail and lobbies with potential tunnel connecting to Metro Station concourse.

3. **41 McLaren Street**

– Retains heritage value of 41 McLaren Street with an additional residential tower.

– Stepped wing built form with a maximum height of RL219 (45 storeys) on the east wing. A stepped west wing from RL166 (29 storeys) and maximum height of RL226 (45 storeys).

– No additional overshadowing of Berry Square 12pm-2pm midwinter.

Figure 7.1.1 Site plan

The Alternative Master Plan achieves the following development yield:

	Proposed GFA
A. Indicative Metro Tower	
Commercial	84658
Retail	510
Total	85168
B. 41 Mclaren Street	
Commercial	7285
Residential	23637
Total	30922
C. 20 Ward*/56 & 66 Berry Street*	
Commercial	48001
Retail	1391
Community	6237
Hotel	13274
Total	68903
D. 70-74 Berry St	
Commercial	1542
Retail	825
Total	2367
E. 45 McLaren Street	
Residential	9252
Total	9252
Totals	
Commercial	141486
Retail	2726
Community	6237
Hotel	13274
Residential	32889
Grand Total	**196612**

*Assumed amalgamation of 20 Ward St/56 Berry St/66 B

Note: efficiency assumptions used are:
- 85% efficiency from GBA to GFA
- Proposed 41 McLaren St based on detailed architectural design by Harry Seidler and Associates

Figure 7.1.2 Summary schedule

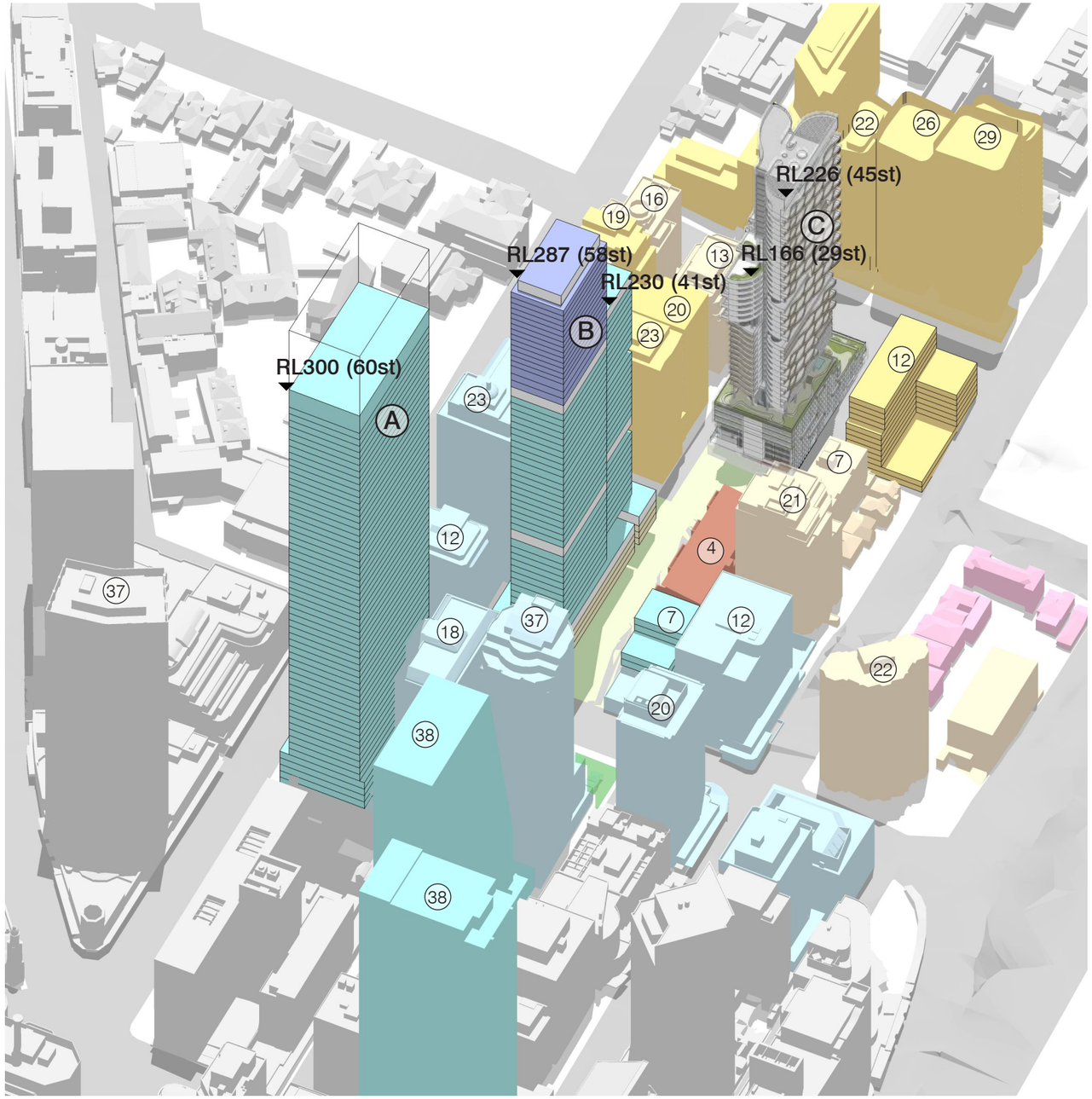
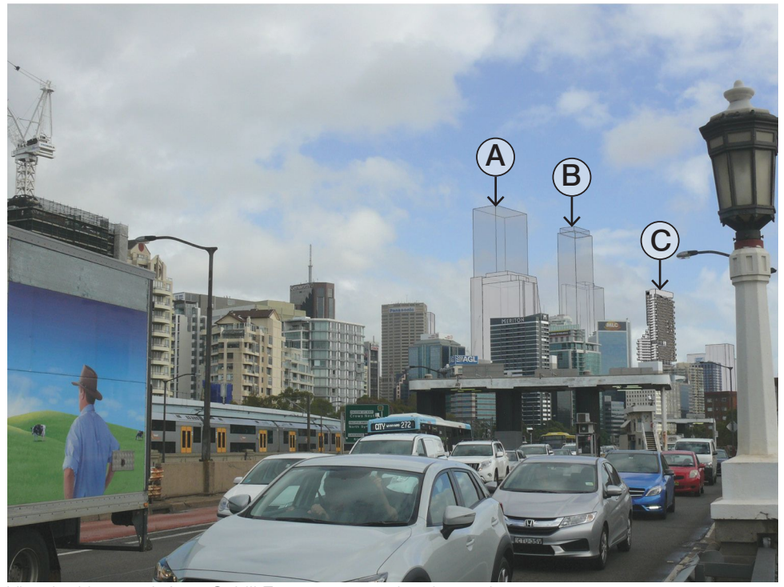


Figure 7.1.3 3D view

A Indicative Metro Tower
B Ward Street Tower
C 41 McLaren St

Proposed on Site
Existing commercial
Existing residential
Future commercial
Future residential
Future community facilities
Future hotel
Substation site
Opportunity site
Berry Square
Proposed N.O.C Square
(#) Number of storeys
RLXX Reduced Levels AHD

View looking southwest from Falcon Street overpass



View looking north from Cahill Expressway pedestrian path

Figure 7.1.4 Photomontage views

Visionary Master Plan

Overview

This Visionary Master Plan examines how development potential could be maximised near the Metro Station and is consistent with the new tower height context being established by the new Metro Tower. Berry Square is not sun protected.

The visionary scheme includes:

- **A**. Indicative metro tower at 60 commercial office storeys
- **B**. Office hotel tower on amalgamated 20 Ward St (Council carpark site) with 56 and 66 Berry St sites to achieve a tower comparable to the Metro tower in the order of 58 storeys.
- **C**. Tower atop 41 McLaren St limited by no overshadowing of the residential land east of Warringah Freeway from 10am-2pm on June 21 to 53 storeys.
- **D**. Commercial office tower on amalgamation of two existing buildings on the corner of Berry St and Miller St with height to 40 storeys. The height is moderated being opposite a school.
- **E.** Commercial office tower on amalgamation of the Ausgrid site with the corner of Berry St and Walker St with height limited to no overshadowing of residential land east of Warringah Freeway to 42 storeys.
- **F.** Residential tower on 45 McLaren St with height limited to no overshadowing of residential land east of Warringah Freeway and moderated being opposite heritage houses to 15 storeys.

Figure 7.2.1 Site plan

- (A) Indicative metro tower
- (B) 20 Ward St/56 Berry St/66 Berry St
- (C) 41 McLaren St
- (D) Corner Berry St/Miller St tower
- (E) Corner Berry St/Walker St/Ausgrid tower
- (F) 45 McLaren St tower

- Site boundary
- Proposed on site
- Existing commercial
- Existing residential
- Future commercial
- Future residential
- Future community facilities
- Future hotel
- Substation site
- Opportunity site
- Berry Square
- Proposed N.O.C Square
- (#) Number of storeys
- RLXX Reduced Levels AHD

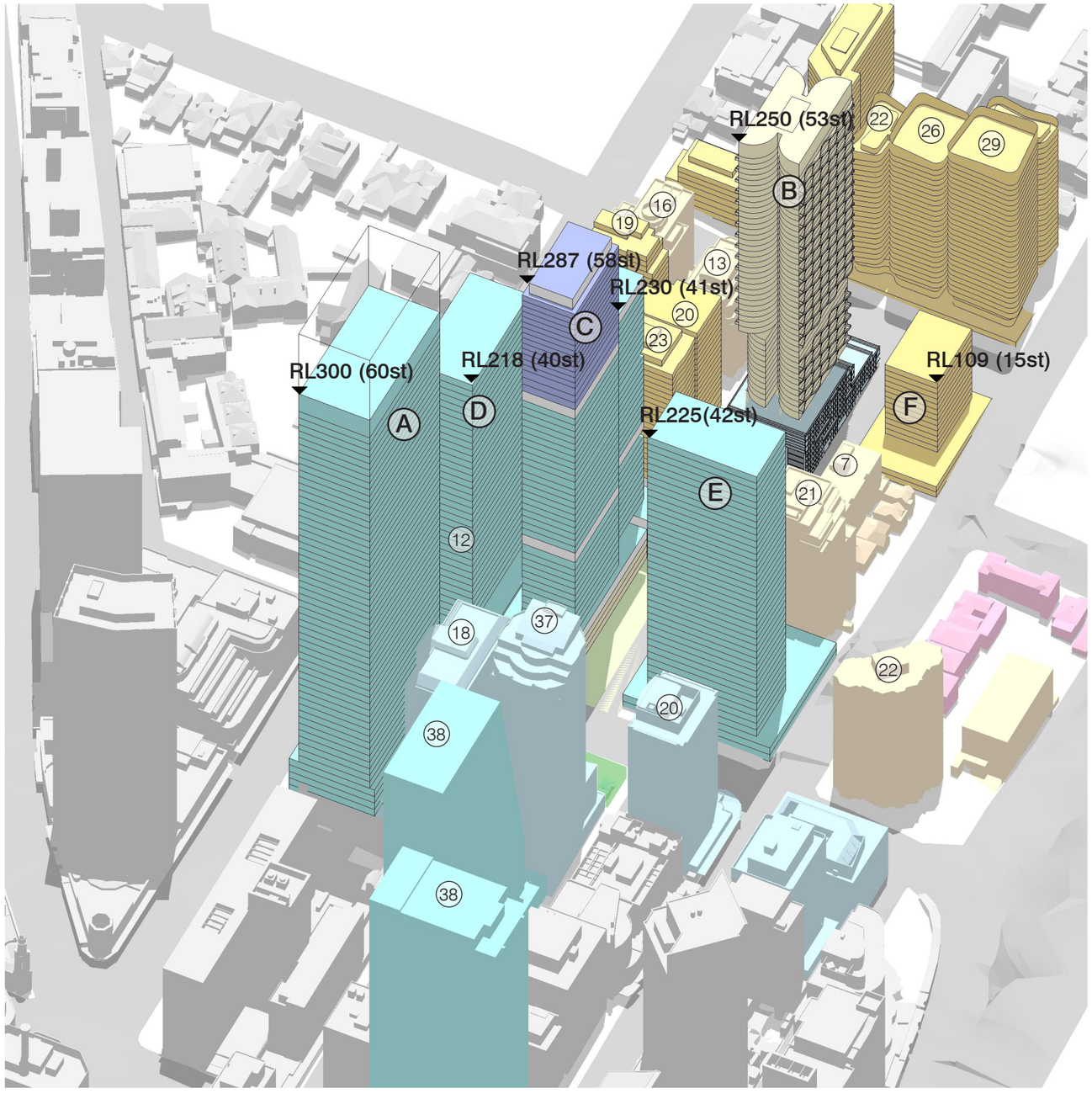
The Visionary Master Plan achieves the following development yield:

	Proposed GFA
A. Indicative Metro Tower	
Commercial	84658
Retail	510
Total	85168
B. 20 Ward*/56 & 66 Berry Street*	
Commercial	48001
Retail	1391
Community	6237
Hotel	13274
Total	68903
C. 41 Mclaren Street	
Commercial	7285
Residential	32162
Total	39447
D. 50 Berry St/101 Miller St**	
Commercial	44022
Total	44022
E. 70-74 Berry St/76 Berry St***	
Commercial	43989
Total	43989
F. 45 McLaren Street	
Residential	10199
Total	10199
Totals	
Commercial	227955
Retail	1901
Community	6237
Hotel	13274
Residential	42361
Grand Total	**291728**

*Assumed amalgamation of 20 Ward St/56 Berry St/66 Berry St
* Assumed amalgamation of 50 Berry St/101 Miller St

*Assumed amalgamation of 70-74 Berry St/76 Berry St

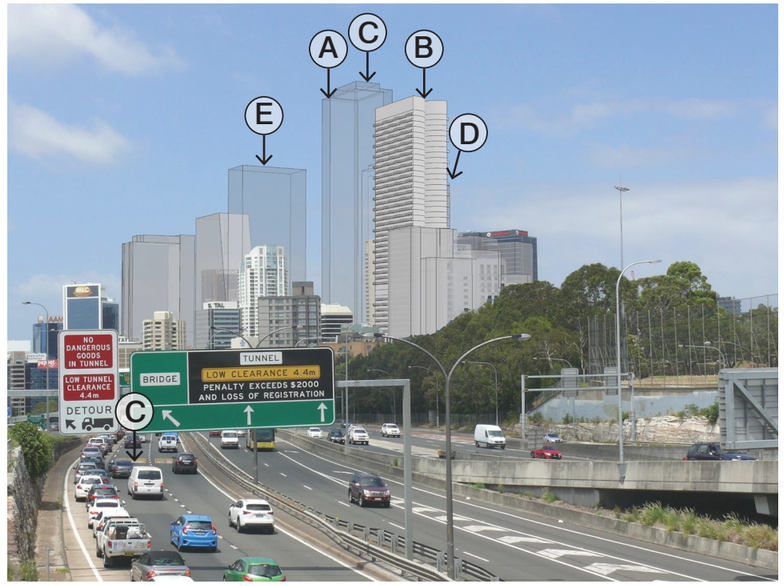
Figure 7.2.2 Summary schedule



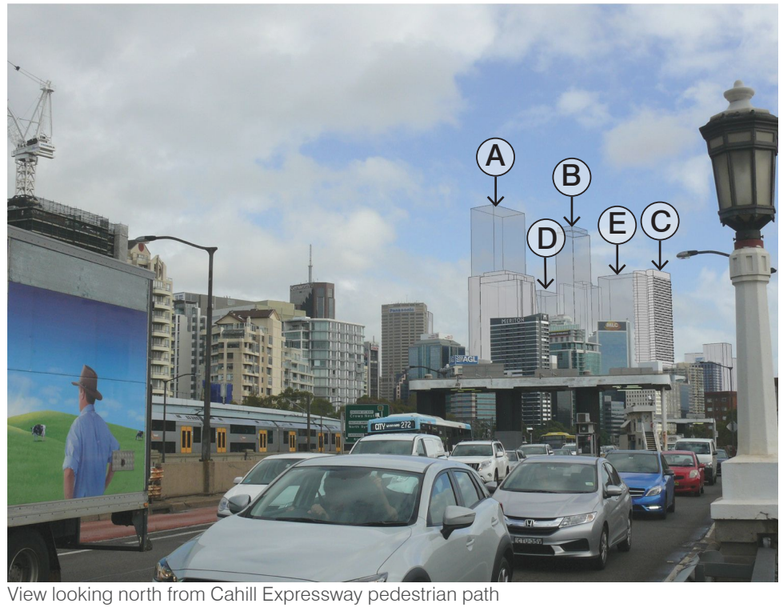
A Indicative metro tower
B 41 McLaren St
C 20 Ward St/56 Berry St/66 Berry St
D Corner Berry St/Miller St tower
E Corner Berry St/Walker St/Ausgrid tower
F 45 McLaren St tower

Proposed on Site
Existing commercial
Existing residential
Future commercial
Future residential
Future community facilities
Future hotel
Substation site
Opportunity site
Berry Square
Proposed N.O.C Square
(#) Number of storeys
RLXX Reduced Levels AHD

Figure 7.2.3 3D view



View looking southwest from Falcon Street overpass



View looking north from Cahill Expressway pedestrian path

Figure 7.2.4 Photomontage views

7.3 Comparison of Master Plans - public domain solar access

This section compares solar access to the public domain in the Draft Master Plan, Alternative Master Plan and the Visionary Master Plan by checking Berry Square and the Ward Street open space. It is noted that Brett Whiteley Place is not affected during the LEP control times.

Refer to Appendix A.1 Solar access assessment - open spaces for further shadow diagrams and calculations of areas of direct sunlight to key open spaces.

1. Berry Square

On June 21, Berry Square (880sqm in area) receives sunlight as shown below:

Solar access to Berry Square (sqm)- midwinter

Time	Draft Master Plan (from document)	Draft Master Plan (from Architectus model)	Alternative Master Plan	Visionary Master Plan
9am	-	-	-	-
9.30am	-	-	-	-
10am	-	12	13	12
10.30am	441	388	388	300
11am	566	720	414	180
11.30am	588	756	272	204
12pm	446	513	487	498
12.30pm	51	98	98	120
1pm	-	-	-	-
1.30pm	-	-	-	-
2pm	-	-	-	-
Total	2,092	2,487	1,672	1,314

Figure 7.3.2 Solar access to Berry Square - midwinter (June 21)

Note: Shadow analysis is based on a 3D model of North Sydney Centre from AMM, approved DA drawings and key RL's have been survey checked. It is considered the modelling is accurate to within 200mm.

At the equinox (sept 23), Berry Square is in almost full sun from 11am to 12noon, with sun to the northeast part at 12.30pm, southwest part at 1pm, and almost full sun at 1.30-2pm

The draft Master Plan for 56 and 66 Berry St provides for a podium set back from Ward St and a thin tower. This effectively widens Ward St by 5m enabling more winter sun than currently in the winter months by 130sqm at 11am, 129sqm at 11.30am, 114sqm at 12noon and 51sqm at 12.30pm. The draft Master Plan reduces sunlight from existing mainly between 12.30pm and 1pm at the equinox but this is considered reasonable in the draft Master Plan document given the benefits of the increase in winter sun. At the equinox the draft Master Plan increases sun very slightly by 24sqm at 1pm, 83sqm at 1.30pm and 84sqm at 2pm.

Conclusion for Berry Square: The Alternative Master Plan is comparable in sunlight access to the Draft Master Plan while providing almost double the area of open space. The Visionary Master Plan still provides sunshine and yields much greater development potential.

2. NOC Square (new Ward St Square)

The new Square in the Draft Master Plan includes all of Ward St plus part of the current Council carpark site and has an area of 2,100sqm open to the sky. The Alternative Master Plan and the Visionary Master Plan both have new open space at 3,900sqm.

On June 21, the proposed NOC Square receives the following sunlight:

Solar acess to NOC Square (sqm) - New Ward St open space- midwinter

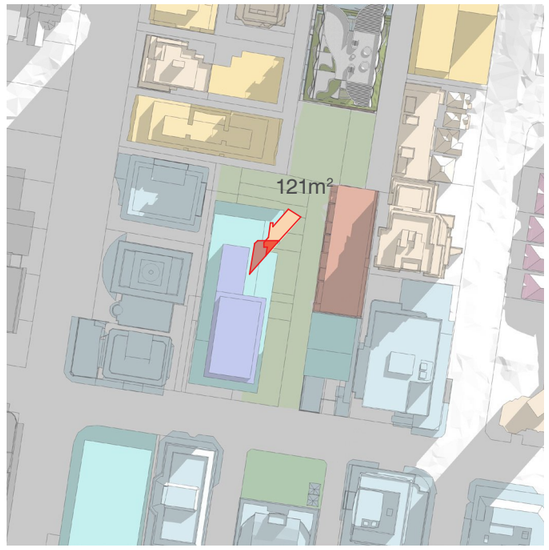
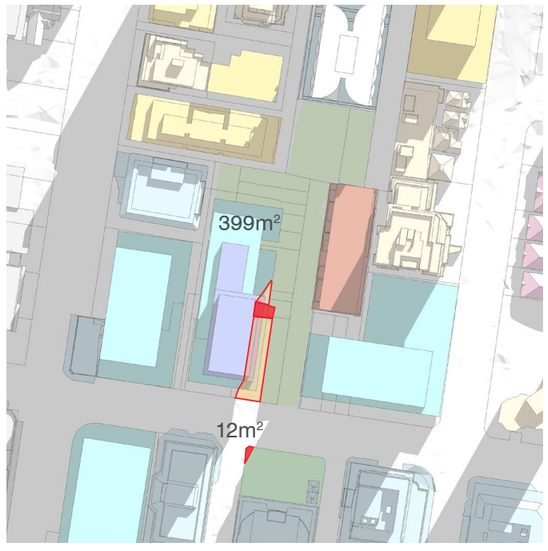
Time	Draft Master Plan (from document)	Draft Master Plan (from Architectus model)	Alternative Master Plan	Visionary Master Plan
9am	151	79	121	67
9.30am	233	209	270	212
10am	154	58	406	399
10.30am	824	856	315	297
11am	1,362	1,401	86	146
11.30am	1,470	1,437	930	1,218
12pm	797	664	1,177	1,316
12.30pm	77	22	219	227
1pm	-	-	-	-
1.30pm	-	-	-	-
2pm	-	-	-	-
Total	5,068	4,726	3,524	3,882

Figure 7.3.1 Solar access to NOC Square - midwinter (June 21)

Note: Shadow analysis is based on a 3D model of North Sydney Centre from AMM, approved DA drawings and key RL's have been survey checked. It is considered the modelling is accurate to within 200mm.

Conclusion for the new Ward St Square: From 10.30am to 12noon the new open space will have good sun to a significant part for all three Master Plans. The huge development potential foregone by the Draft Master Plan compared to the Alternative Master Plan and Visionary Master Plan need to be seriously considered.

Figure 7.3.3 Comparison diagrams - Solar access to Berry Square and NOC Square (midwinter 21 June)

	Draft Ward Street Precinct Master Plan - shadow analysis by Architectus	Alternative Master Plan	Visionary Master Plan
Shadow Diagram (21 June at 9am)			
Shadow Diagram (21 June at 10am)			

Approximate area receiving sun access - Ward Street Precinct Plan
Sunlight addition
Sunlight reduction
Proposed N.O.C Square
Berry Square

Note: Shadow analysis is based on a 3D model of North Sydney Centre from AMM, approved DA drawings and key RL's have been survey checked. It is considered the modelling is accurate to within 200mm.

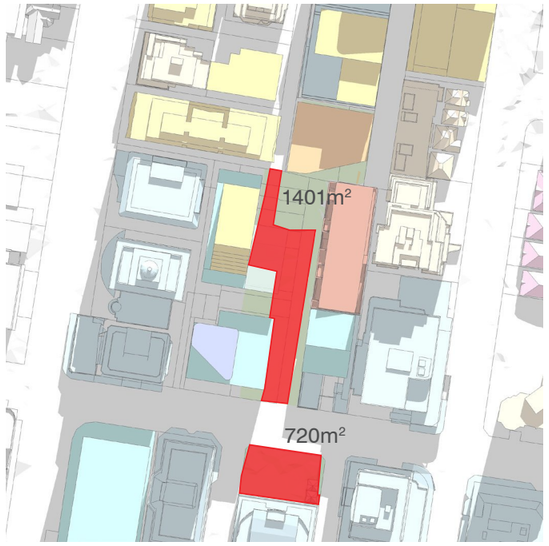
N 1 0 10 20 50 100M

Draft Ward Street Precinct Master Plan - shadow analysis by Architectus

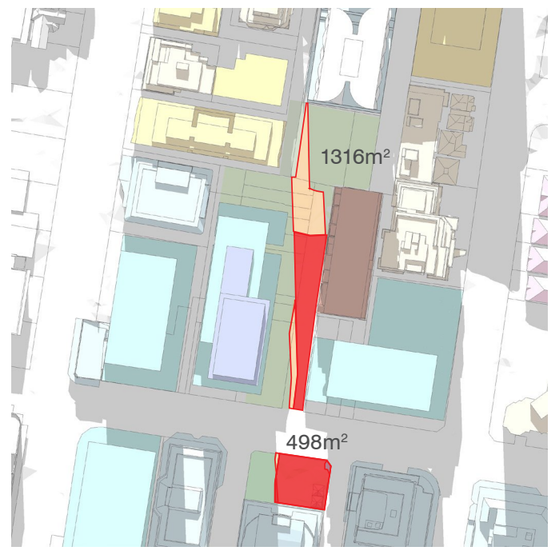
Alternative Master Plan

Visionary Master Plan

Shadow Diagram (21 June at 11am)



Shadow Diagram (21 June at 12pm)



Approximate area receiving sun access - Ward Street Precinct Plan
Sunlight addition
Sunlight reduction
Proposed N.O.C Square
Berry Square

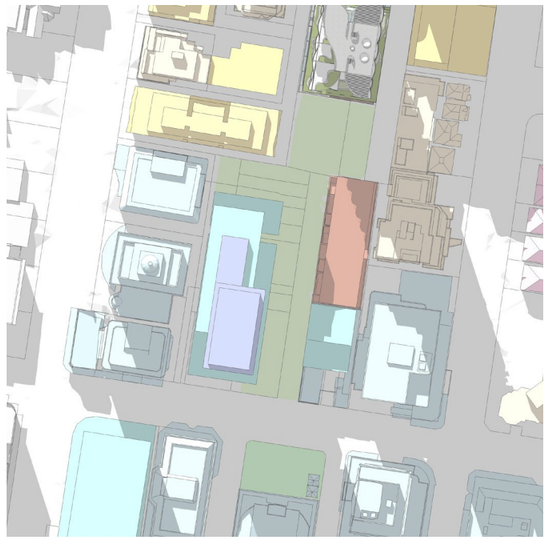
Note: Shadow analysis is based on a 3D model of North Sydney Centre from AMM, approved DA drawings and key RL's have been survey checked. It is considered the modelling is accurate to within 200mm.

N 1 0 10 20 50 100M

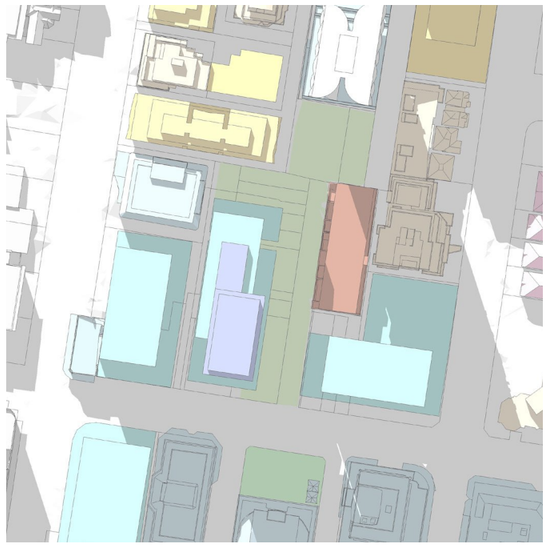
Shadow Diagram (21 June at 1pm)

Draft Ward Street Precinct Master Plan - shadow analysis by Architectus

Alternative Master Plan



Visionary Master Plan



- Approximate area receiving sun access - Ward Street Precinct Plan
- Sunlight addition
- Sunlight reduction
- Proposed N.O.C Square
- Berry Square

Note: Shadow analysis is based on a 3D model of North Sydney Centre from AMM, approved DA drawings and key RL's have been survey checked. It is considered the modelling is accurate to within 200mm.

N 1 0 10 20 50 100M

8 The Proposed Alternative Master Plan

Public domain concept

Landscape and Public Domain Statement by Spackman Mossop Michaels

Our design seeks to create a vibrant, pedestrian-oriented precinct in the heart of North Sydney that will provide visitors and residents with access to large public open spaces, modern transportation infrastructure, and new dining and entertainment options at all hours of the day. In order to achieve this range of programs and amenities, our design capitalizes on the site's sloping topography to create a hierarchy of paths and gathering spaces at different spatial and experiential scales.

A central pedestrian corridor links Berry Street to McLaren Street through gently sloping walkways and terraces, allowing for barrier-free movement across the entire site. This sense of openness to reinforced by large-format pavers and clear sightlines framed by trees and tiered seating walls. By eliminating the need for stairs, ramps, and handrails, we have maximized the amount of usable public space for flexible programming, such as food trucks, night markets, lunch-time performances, exhibitions, public screenings, and other community events. The pedestrian corridor connects all existing and proposed buildings through a unified and contemporary urban palette, and provides an important connection to the new Sydney Metro station.

This primary pedestrian axis is fed by a network of laneways which connect to the surrounding road network. These laneways will provide contrasting spatial experience to the expansive central open space through fine-grain brick paving, overhead catenary lighting, and opportunities for public art. The laneways and building frontages will be activated by new ground floor retail, cafes, and restaurants offering a range of attractions throughout the day and night.

North Sydney is experiencing a period of reinvestment and densification which will bring more visitors and residents to the CBD. It is essential that the public domain support these imminent developments and reflect North Sydney's aspirational transformation into a vibrant and cosmopolitan urban centre. Our design proposes a clean and contemporary public domain strategy that prioritizes openness, flexibility, and a diversity of experiences to attract and retain both visitors and future investment.

LEGEND

1. PEDESTRIAN AXIS "MAIN STREET"
2. LANEWAYS
3. OUTDOOR DINING / CAFE SPACE
4. TERRACED SEATING
5. STEPPED SEATING & VIEWING SPACE
6. PART-TIME WATER FEATURE / FLEXIBLE SPACE
7. LARGE FLEXIBLE OPEN SPACE
8. COLLONADE
9. 221 MILLER STREET (OCULUS)

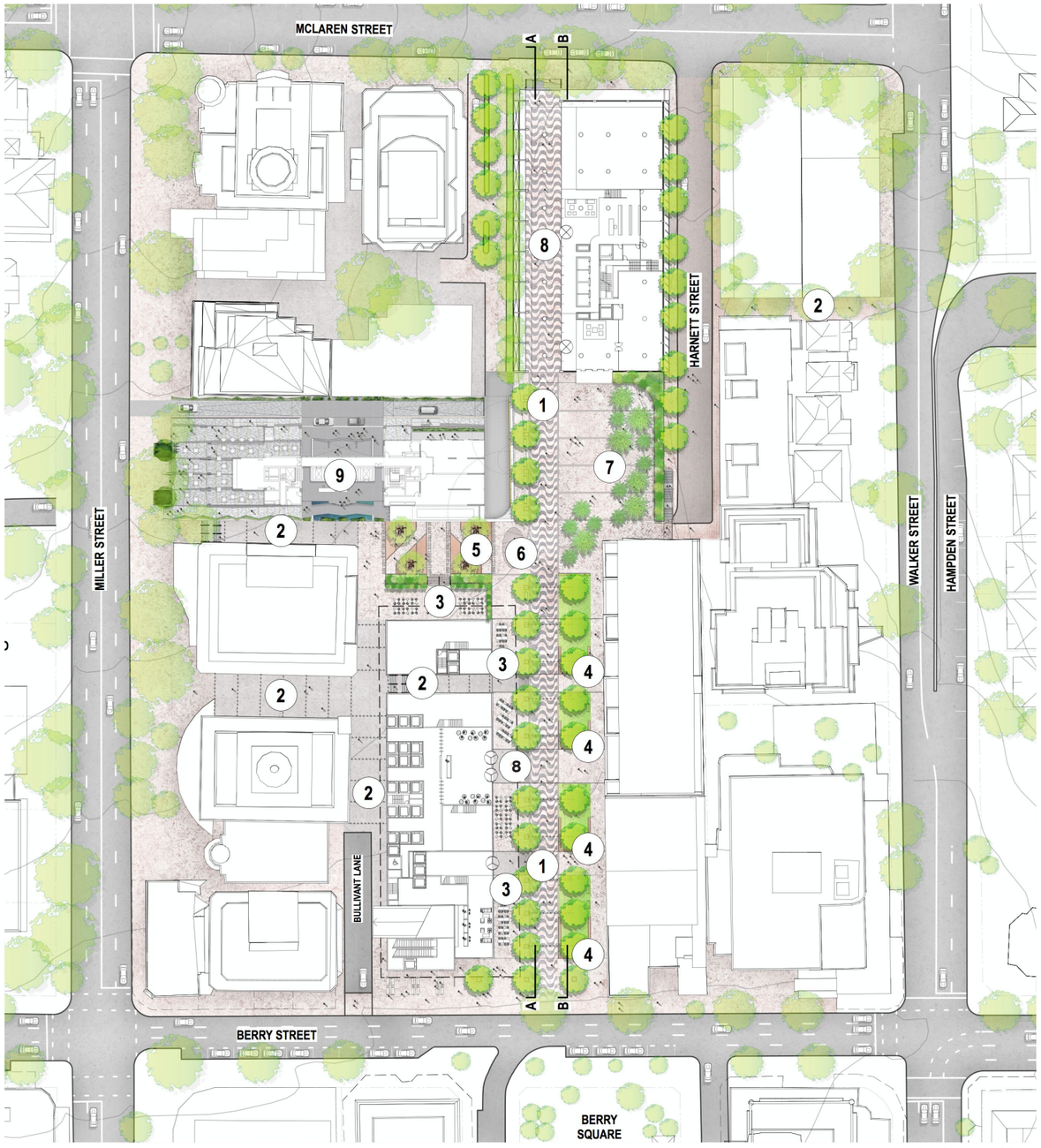


Figure 8.1.1 Public domain concept plan

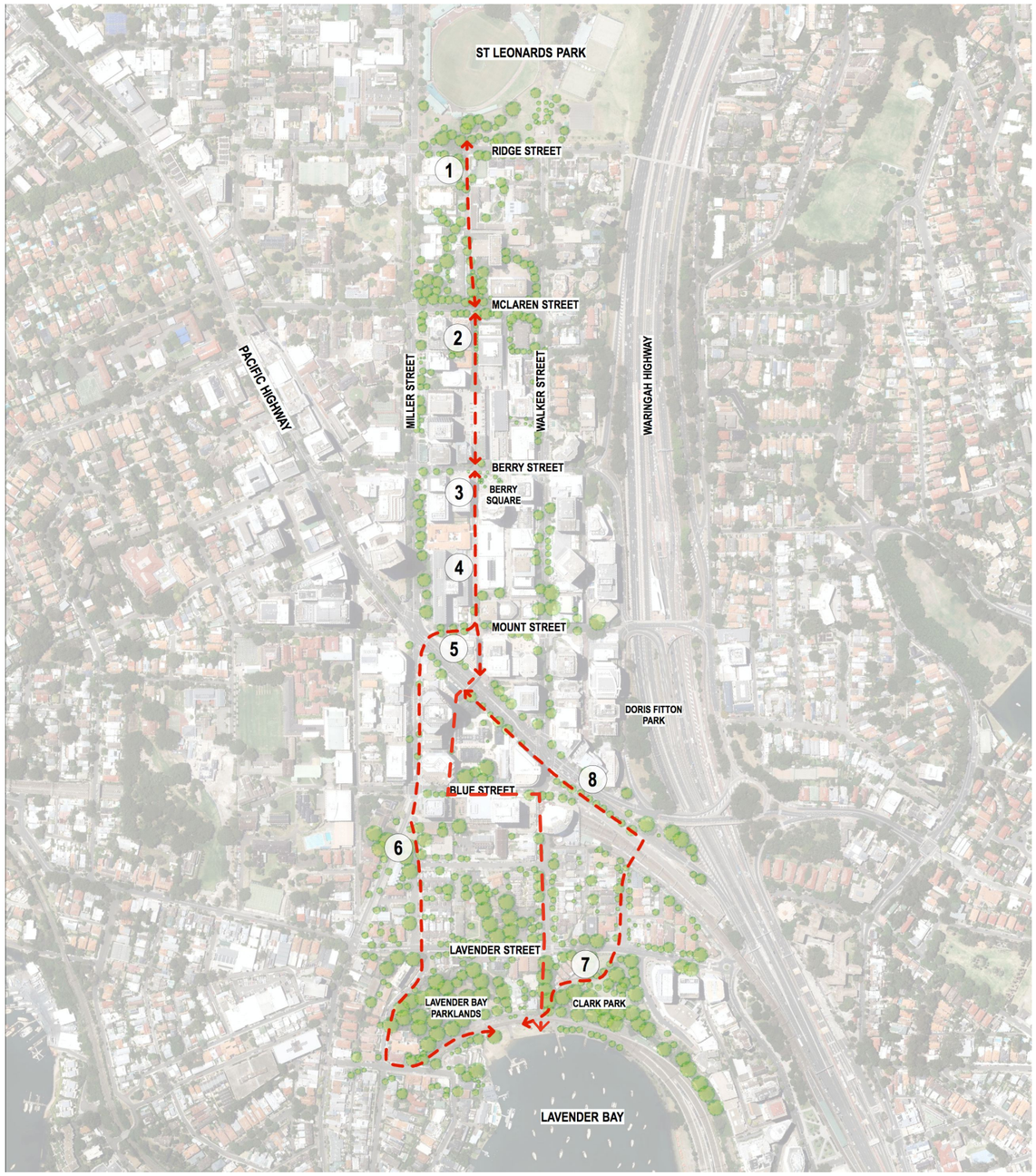
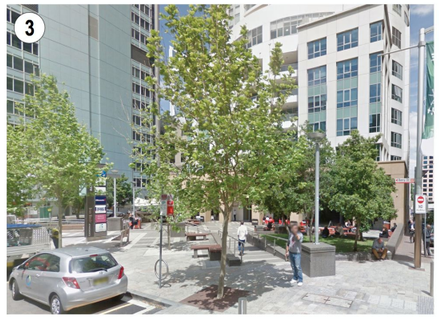
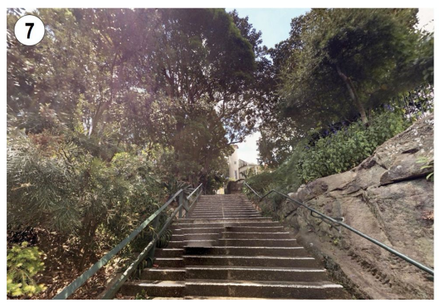


Figure 8.1.2 Central Walk - Public domain connections





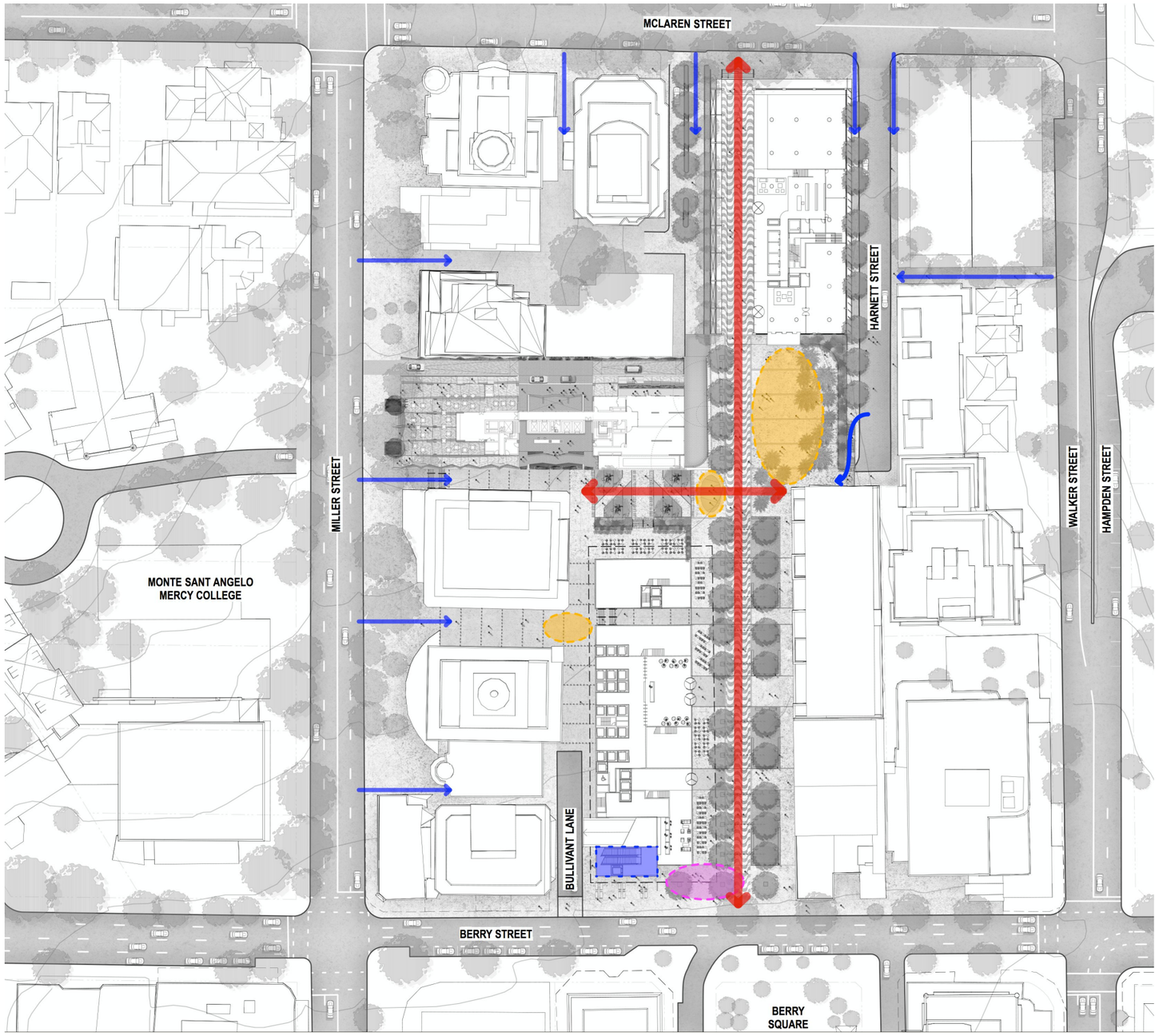


Figure 8.1.3 Public domain principles

41 MCLAREN STREET DESIGN PRINCIPLES

1. DESIGN AXIAL PATHWAYS AND PEDESTRIAN STREETS TO EMPHASISE THE SITE'S TOPOGRAPHY AND PROVIDE CLEAR SIGHTLINES

2. PROVIDE MAXIMUM 1:20 GRADE BETWEEN BERRY ST AND MCLAREN ST TO ENSURE ACCESSIBLE CIRCULATION ACROSS THE SITE'S LEVEL CHANGES

3. PROVIDE VISUAL LANDMARKS AND WAYFINDING TO GUIDE PEOPLE THROUGH THE SITE AND TO PUBLIC TRANSPORT CONNECTIONS

4. CREATE FLEXIBLE OPEN SPACE FOR PROGRAMMING SUCH AS NIGHT MARKETS, LUNCH TIME PERFORMANCES, CINEMA SCREENINGS, OUTDOOR GALLERIES, ETC.

5. PROVIDE UNIVERSAL ACCESSIBILITY THROUGH GRADING AND LANDFORM IN ORDER TO REDUCE THE NEED FOR HANDRAILS AND OTHER VISUAL CLUTTER

6. ENCOURAGE SITE ACTIVIATION THROUGHOUT THE DAY AND NIGHT WITH SHOPS, RESTAURANTS, BARS, ARTWORK, AND CREATIVE LIGHTING IN ORDER TO ATTRACT LOCAL RESIDENTS, VISITORS, AND WORKERS

7. PROVIDE MULTIPLE SPATIAL SCALES AND ACTIVITIES, FROM EXPANSIVE GATHERING SPACES TO FINER-GRAIN LANEWAYS AND SITTING NOOKS

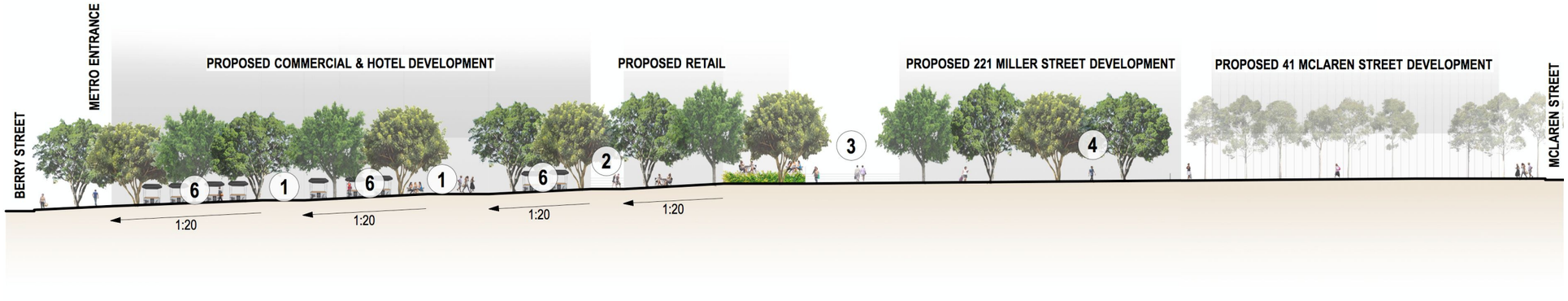
PRIMARY CIVIC PEDESTRIAN AXIS

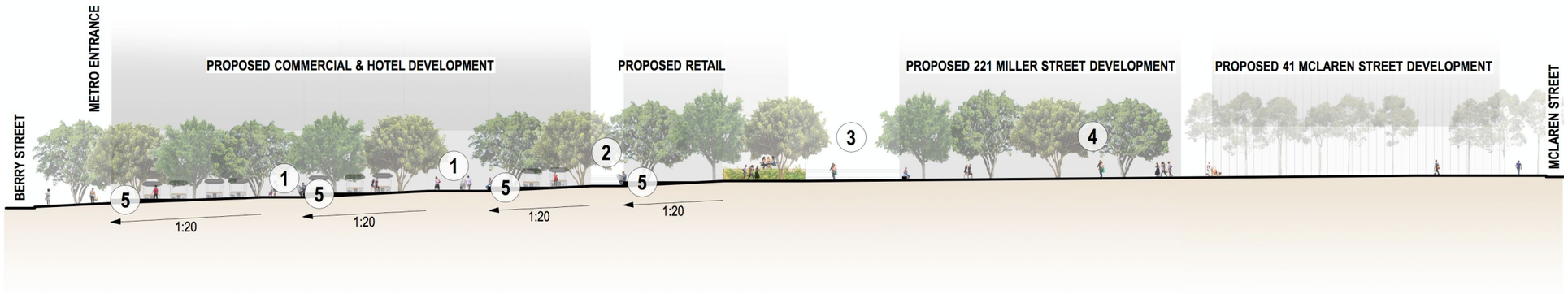
SITE ENTRY POINTS AND LANEWAY CONNECTIONS

FLEXIBLE OPEN SPACES

KEY LANDMARKS

NEW METRO ENTRANCE





LEGEND

1. BUILDING ENTRANCE
2. LANEWAY
3. STEPPED SEATING AND VIEWING AREA
4. FLEXIBLE OPEN SPACE
5. STEPPED SEAT WALL
6. INDICATIVE MARKET STALL LOCATION

0 5 15 25M

Figure 8.1.4 Public domain site sections

8.2 Indicative architectural design for 20 Ward St/56 Berry St/66 Berry St

architectus™

Architectural Statement by Architectus

The amalgamated site of 20 Ward St with 56-66 Berry St provides for greater opportunity to provide a large mixed use building comprising 'A' grade office space with floor plates of 1,344-1,444 sqm NLA in the tower and 1910 sqm NLA in the podium and a smaller floor plate on top for a 4 star 220 rooms hotel. The four storey podium is ideal for a community hub on the upper levels and retail/ lobby space at ground level.

A Metro station entry could occur at the Berry St frontage with underground connections to the Metro station concourse on the opposite side of Berry St. There is also a sub-option for residential apartments for part of the office tower to increase financial return to Council and vibrancy to the Precinct.

A double height colonnade would run along the eastern side of the tower providing weather protection for pedestrians and scale down the tower to a human scale. Dining tables and chairs under umbrellas can be placed alongside the colonnade for outdoor dining not unlike East Circular Quay.

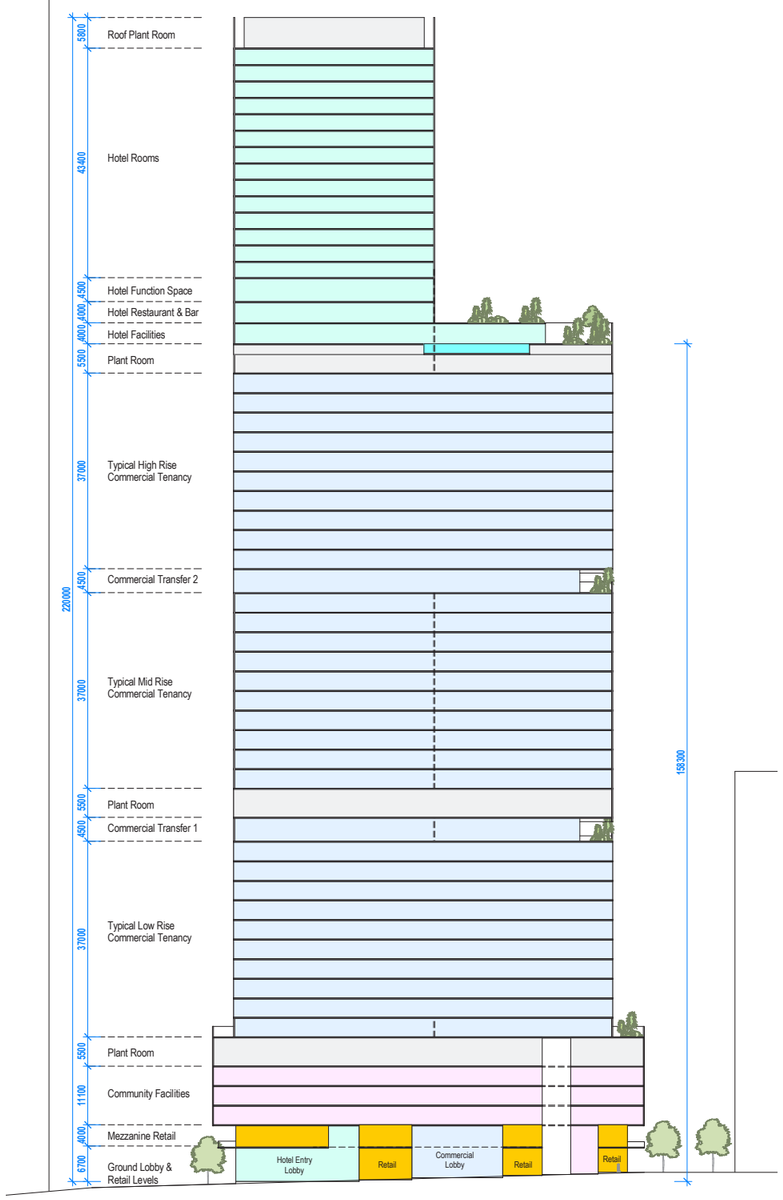


Figure 8.2.1 Elevation

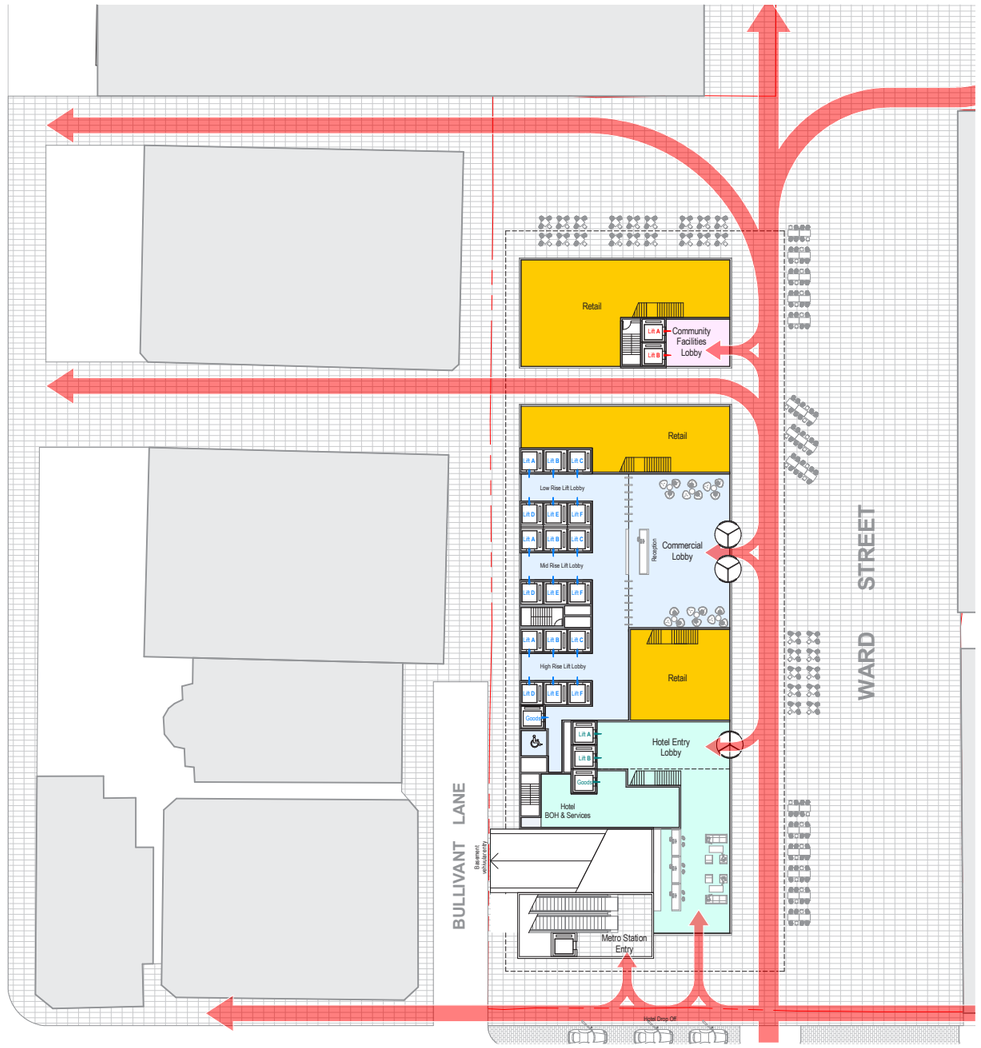


Figure 8.1.5 Indicative ground floor plan

N 0 5 10 20M

Figure 8.2.2 Indicative floor plan - commercial transfer floor low-rise/mid-rise

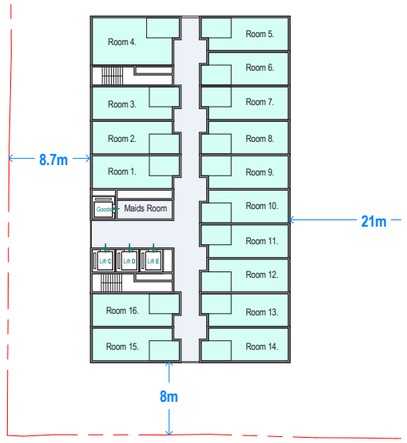


Figure 8.2.3 Indicative floor plan level 43 - typical hotel rooms

Figure 8.2.4 3D render of indicative architectural design

Figure 8.2.5 Example of roof top bar

N 0 5 10 20M

Commercial/hotel/residential sub-option

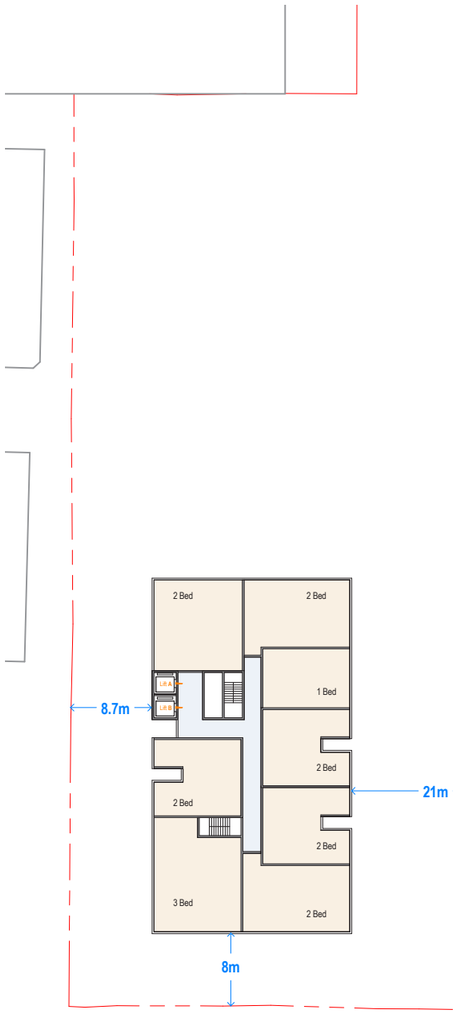


Figure 8.2.7 Indicative floor plan - typical residential level

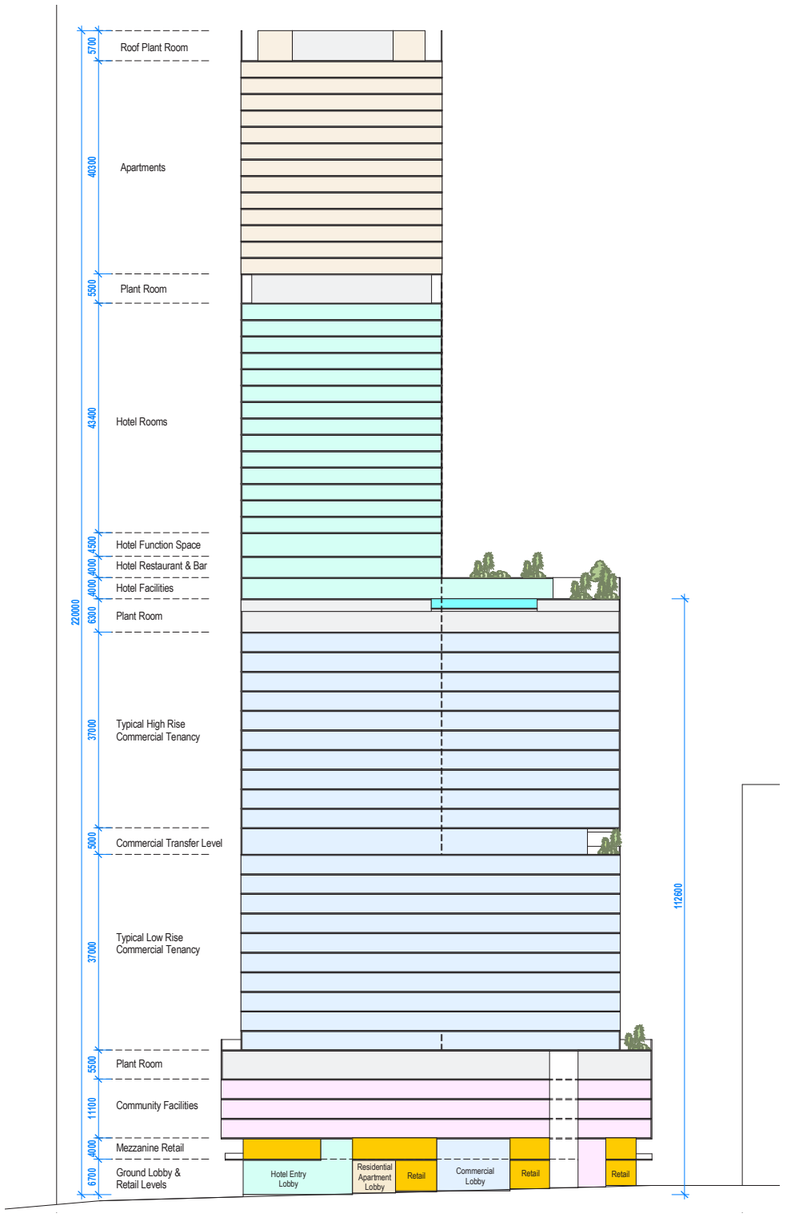


Figure 8.2.6 Elevation

8.3 Indicative architectural design for 41 McLaren Street

architectus™

Architectural Statement by Harry Seidler and Associates

Note: This statement was provided as part of the Architectus submission to the exhibition of the draft Ward St Precinct Master Plan in March 2017.

Introduction

With the proposed Victoria Cross new Metro stop to be located at the south east corner of Miller Street and Berry Street, and the master-planning envisaged for the Ward Street precinct, 41 McLaren Street is ideally situated presenting the owners, Erolcene Pty Ltd and Claijade Pty Ltd, with an opportunity site suitable for significant development and contribution to the North Sydney CBD precinct.

A modest seven to eight storey office building designed by Harry Seidler was completed in 1972 and still occupies the site. Locally heritage listed by North Sydney Council as a significant example of the work of Harry Seidler and the early growth of the North Sydney CBD the building remains substantially intact.

Essentially the owners propose to retain the existing commercial building as a podium over which a premium quality residential tower will be constructed to contribute to the growing fabric of North Sydney as a 24/7 vibrant centre. To do so a new core will be built through the centre of the podium to suit the residential tower, new carpark basements will be excavated beneath the podium with a new inner column grid extending up through the podium supporting the perimeter of the tower.

Significant features of the heritage building are to be enhanced as a base to the tower which is intended to hover above the podium by way of a substantial break that contains landscaped recreational spaces and a pool deck for the residences.

In accordance with the Burra Charter the design of the tower is proposed to appear distinct from the historic podium yet be sympathetic in character. It is intended that the tower expresses a development of the architectural design of Harry Seidler from the early rectilinear buildings (displayed in the podium) through the introduction of simple curved geometric forms to his later use of more complex curvilinear forms and counter-forms.

Podium

The scale and character of the podium with stepped landscaped terraces provides a special urban streetscape unique to this site and is intended to be retained and enhanced with the new work. In particular the sundrenched terraces fronting McLaren Street will be utilised for both community and private active functions.

The east and west façades are also considered significant with the expression of sun-blades and on the east face with asymmetric inset terraces adding interest and variation. While the east façade fin treatment still assists with sun control the west face will be given further consideration given substantial buildings now protect the glazing and diminish natural light to this elevation.

Lifts to distinctly serve the commercial floors of the podium will be introduced to the rear elevation which will otherwise be maintained with overhanging upper terraces. Glazing treatment will further consider the future removal of the council carpark site.

The podium will be substantially used for offices and commercial functions, there is the opportunity for community facilities including childcare.

The existing undercroft entry along the west side of the podium is proposed to be extended to the southern end to enhance a through-link to the Ward Street Precinct public realm and onward to the Metro station. Together with the shared access way on the west side it is recognised as an important pedestrian ant track from the north and builds upon the objectives of the precinct master-planning.

It is also proposed to expand this through-link vertically to be two storeys high to open up the scale to be commensurate with the new entry functions of the residential lobby, the commercial lobbies and food and beverage offerings which activate the undercroft. The original character of the undercroft with artwork and unique paving is intended to be reintroduced to the design.

Residential tower

As noted above a premium quality residential tower is proposed to float over the podium with a substantial gap to the podium roof on which recreational facilities including a pool deck and landscaped garden are proposed along with inset plantrooms over two levels to replace the existing rooftop plantroom infrastructure to the podium. With the first residential floor starting some ten storeys above the ground, thirty five floors are proposed for the tower which will enjoy harbour views predominantly to the south east and south. Two storey penthouses crown the tower along with up to two plantroom levels.

A tall slim structure comprising two wings with curved ends returning to a naturally lit central core lift lobby is proposed for the tower. The slim proportion ensures suitable separation and amenity to surrounding sites, fast moving slim shadows and shallow apartments with good outlook and access to daylight and sunshine. The curved re-entrant ends to the wings allow opportunities for cross ventilation, cross views and sun access to apartments that would otherwise have restricted outlook.

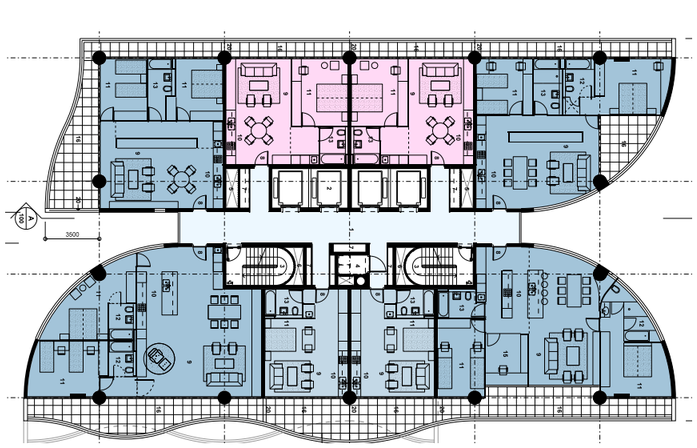
Existing and approved apartments to the west are afforded broad angled views and access to sunlight past the proposed tower while visual separation is considered to facing elevation treatment recalling the podium façades below. Otherwise open balconies and terraces are proposed to take advantage of the views and reinforce the character of the podium with varied façade modulation interrupting the more consistent waving treatment, particularly to the east facade. Northern winter sun is accessed to the north east and north west either side of the proposed residential tower opposite on the corner of McLaren Street and Walker Street. This sun access to 41 McLaren Street and surrounding sites is further reinforced by a substantial setback to McLaren Street which is proposed to respect the scale and stepping terraces of the heritage listed podium frontage below.

To avoid further overshadowing to Berry Plaza the west wing of the tower is stepped above L21 to account for the vertical winter sun angle at 12 noon and the floors above this are scalloped back in plan to also respect the sun orientation at this time. This stepping form of the tower's west wing recalls the opposing stepping to the heritage podium terraces below. These features also help limit the overshadowing to the public realm envisaged for the Ward Street Precinct.

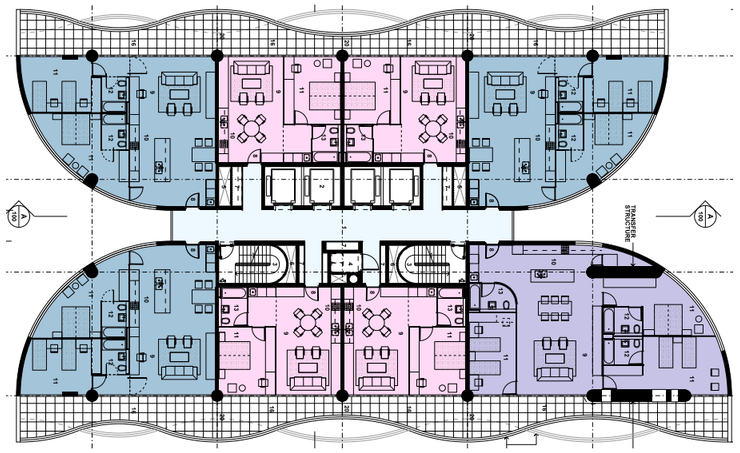
Conclusion

Overall a vibrant, mixed use premium quality development is proposed for 41 McLaren Street that will contribute to, and encourage a vibrant centre beyond the 6pm office curfew. The heritage significant podium with its community scaled urban streetscape is to be retained and adapted to suit the range of new and existing community and commercial functions, while a proposed premium residential tower contributes to the necessary uplift to a key developing centre ready to take advantage of the benefits of the new Metro system.

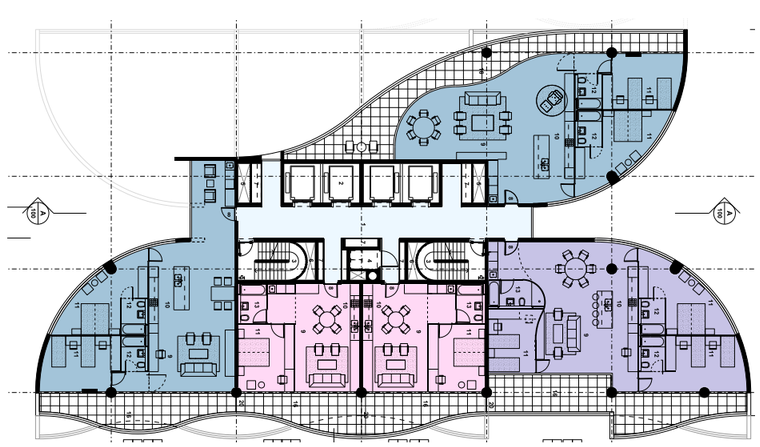
Indicative floor plans



Typical lower level plan



Typical mid level plan



Typical upper level plan

LEGEND

1 Lift Lobby
2 Fire Escape Stairs
3 Garbage Room
4 Service Shafts
5 Balcony / Terrace
6 Kitchen
7 Living
8 Bedroom
9 Bathroom
10 En Suite

Figure 8.3.1 Indicative tower floor plans

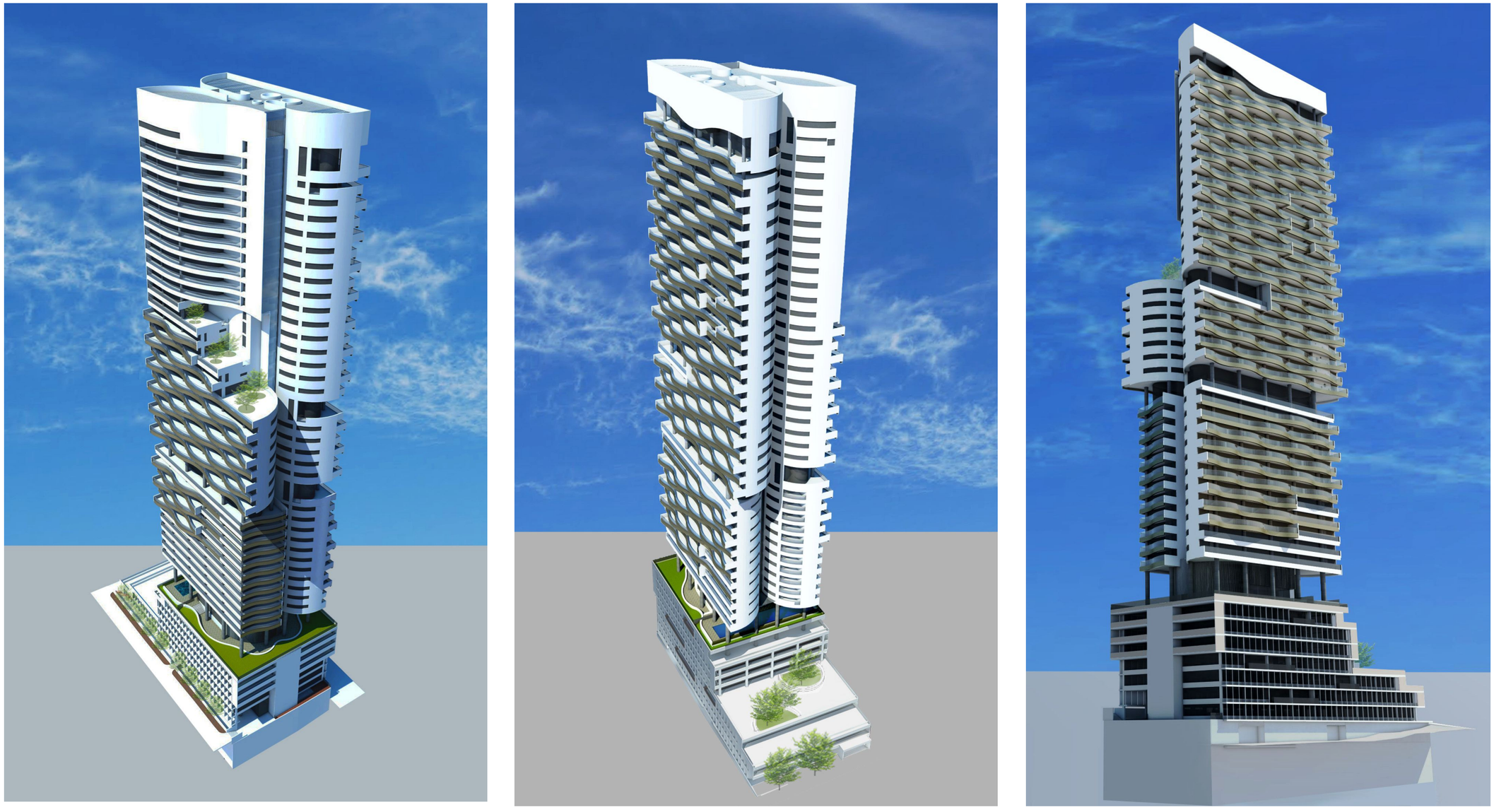
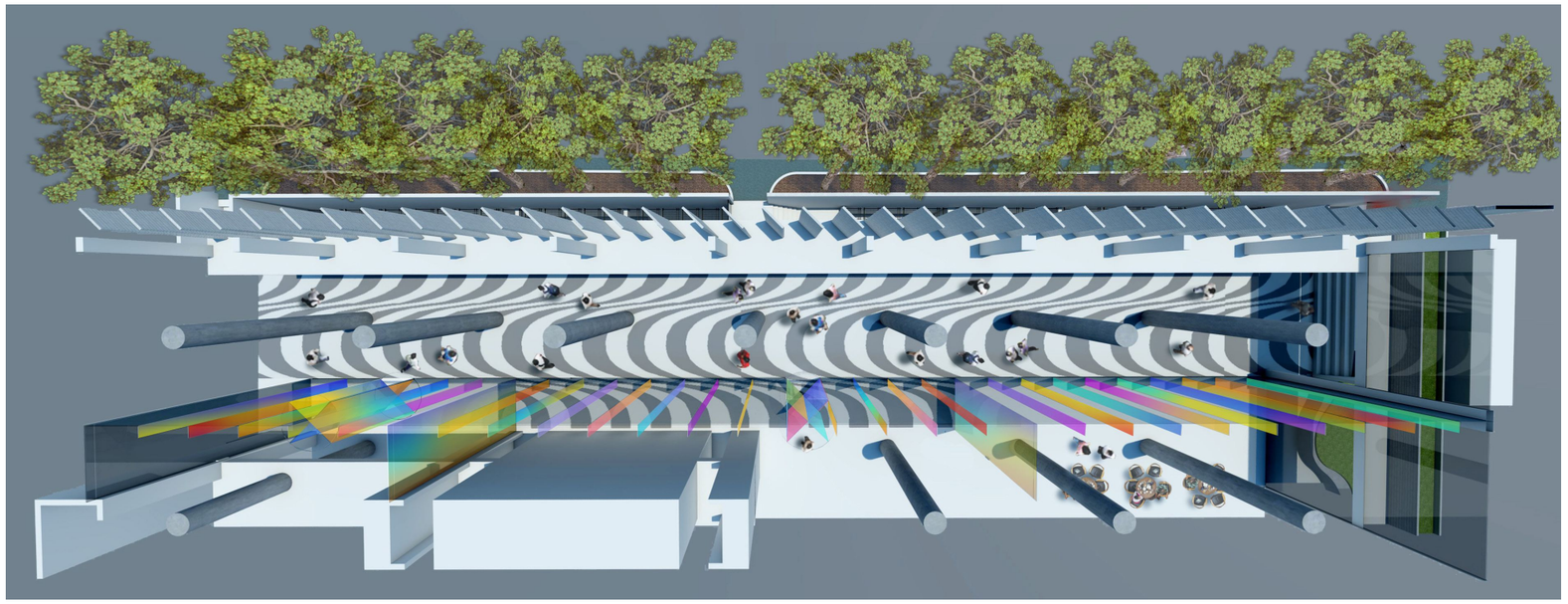


Figure 8.3.2 Renders



PHOTOGRAPHY: MAX DUPAIN, CA 1971

Figure 8.3.3 Throughlink Concept - indicative artwork proposal by artist Robert Owen 2017

8.4 Economic viability

Three firms of economic consultants have been commissioned to review viability aspects of the exhibited Draft Ward Street Precinct Master Plan and the Alternative Master Plan proposed in this document. A summary of the main points is provided adjacent.

Colliers Research

- Draft Ward St Precinct Master Plan
  - 20 Ward St (Council carpark site) – generally, uses for residential and commercial space in the same tower do not integrate well and should be avoided due to disjointed ownership structure and the negative impact from both an occupant's and an investor's perspective. The commercial floor plate size of the tower floors is insufficient to meet market demand for 1,500-2,000sqm.
  - 56 and 66 Berry St – the hotel floorplates and the commercial floor plates are not optimal. Current market demand is for large regular office floor plates with side core and more hotel rooms per floor for operational efficiency. As a stand alone project, it is unlikely the proposal would financially be able to replace the existing office buildings on the site.
- Alternative Master Plan
  - The Alternative Master Plan appropriately addresses the issue of market acceptable floor plate sizes for commercial offices and hotels – including the issues of operational cost efficiency and attractiveness to an investor.
- Colliers recommended solution
  - Rather than separate site development the central spine of the street block should be considered as two sites – 1. an amalgamation of the south part of Council's carpark site with 56 and 66 Berry St to achieve a development such as the Architectus proposal - and 2. an amalgamation of the north part of Council's carpark site with 41 McLaren St to achieve a community collaboration hub in the lower levels of 41 McLaren St opening out onto a large plaza with residential tower above.
  - *Architectus comment:* This solution can occur under the Alternative Master Plan. However Architectus considers that the solution presented in this Urban Design Strategy for the PP/DA for 41 McLaren St meets the Colliers objectives and is the most practical and beneficial for the site concerned.

Knight Frank

- The proposed commercial floorplates of the Draft Ward St Precinct Master Plan for the Ward St Carpark with a hotel floorplate at 56-66 Berry St are not appropriate for the North Sydney market and are unfeasible/unviable from a development/construction perspective.
- The Knight Frank report reviews the North Sydney office market, supply and demand, net absorption and vacancy, rental growth, incentives, leasing activity, market outlook floorplates, office withdrawals, tenant demand, as well as a hotel market review in terms of hotel performance, market outlook, market requirements, and retail market in terms of trends and rents.

Hill PDA

- The draft North Sydney Council Ward Street Precinct Masterplan (the Masterplan) provides a vision for the urban renewal of the Ward Street Precinct. The new vision proposes a mix of commercial, mixed use and residential development. However, the proposed vision and design for the site may not develop the potential for the Precinct in a manner than is commercially feasible – specifically the Berry Street, Ward Street and McLaren Street components.
- As a result, HillPDA was commissioned to: analyse NSC's Ward Street Master Plan; assess an alternate options and articulate the merits of each option; and undertake an assessment relating to proposed residential development of 41 McLaren Street, North Sydney.
- Overall, our analysis suggests that the assessed components of the Masterplan would not attain the target development margins or project IRR of 22% and 18% respectively.
- In practice, under the Masterplan, to provide for public plaza space as proposed means commercial and hotel floor plates that do not meet market expectations.
- In effect, the Ward Street development would achieve its target development performance targets at the expense of the Berry Street and McLaren Street sites. Overall, the net impact to the Precinct would likely be negative.
- Also, with respect to 41 McLaren Street specifically, it is important to note (as discussed in Section 2) that the redevelopment under the current LEP is likely not feasible. Further, given the scale of the potential infrastructure and public amenity contribution resulting from a larger scaled residential development, the redevelopment of the McLaren Street site is closely related to the terms of a VPA. As a result, 41 McLaren Street has been treated separately.
- Given this result, we have assessed three options across the Ward Street Precinct. The primary aim of each option was to explore ways to make more effective use of the available space, deliver floor plates that better meet market expectations, and provide community space and amenity. We have assessed the following options:
  - Option 1: Large Commercial & Hotel Tower;
  - Option 2: Consolidated Commercial, Hotel & Residential Tower; and
  - Option 3: Consolidated Commercial & Hotel Tower, excluding 56 Berry Street.1
- Based on our analysis, Option 1 outperforms Council's proposal in all three scenarios in terms of absolute developer profits. Option 3 could outperform Option 1 in terms of relative profit margin and IRR (without both Berry Street sites); however, it would also likely not meet Council's vision for the Precinct as a whole (e.g. open plaza concepts, public access to the precinct and community spaces, etc.).

8.5 Heritage

GML Heritage consultants have been commissioned in regard to the heritage aspects of 41 McLaren St as it is a locally listed heritage item.

A summary of their assessment is provided here. Note that a Heritage Impact Assessment by GML separately accompanies this statement.

As the building Simsmetal House at 41 McLaren Street has been identified as an item of environmental heritage significance in NSLEP 2013, GML has been engaged (in 2016) to assist planning for the future of the site by:

- Identifying relevant heritage-related issues to inform development options; and
- Providing a framework for appropriate recommendations to mitigate potential adverse heritage impacts for proposed development as part of the Heritage Impact Assessment (HIA) submitted with the DA to North Sydney Council.

As part of this process, GML Heritage have prepared a Heritage Assessment report to identify and evaluate the heritage significance of Simsmetal House, together with the components and attributes that contribute to its heritage significance.

Simsmetal House was designed in 1971 by the architect Harry Seidler and it is one of a handful of small office developments he worked on in this decade, until larger multistorey commercial and institutional projects occupied more of his output. The history of the current site development and its relationship to key themes in North Sydney's evolution, as well as the work of Seidler as a whole, are addressed in the initial sections of the report. An account of the current physical fabric of the site is also included, focussing on its key components and attributes and their condition. More detailed supporting documents—including samples of the original architectural and engineering drawings, contemporary accounts of the building and recent measured drawings of the site—are included as appendices. This information provides the basis for the report's assessment of heritage significance, summarised in a Statement of Significance.

The Heritage Assessment report has also identified the major opportunities and constraints facing the future conservation of the building, taking into account its heritage significance, physical condition, future use and physical and planning contexts (including current recommendations in the Draft Ward Street Precinct Master Plan). These issues have been identified as relevant to any future development of the site and associated Heritage Impact Assessment.

Statement of Significance

The Statement of Significance from the Heritage Assessment identifies a range of significant associations, components and attributes of Simsmetal House and is included in full, below. This Statement supplements and expands the assessment of significance in Council's listing (which is included as Appendix A of the Heritage Assessment).

Simsmetal House is significant because of its close association with the work of Harry Seidler, an outstanding Australian architect of the post-war period and is an important example of his smaller scale commercial office buildings at a time when the larger, iconic developments that established his national and international reputation were establishing themselves as the major focus of the practice. It is one of a relatively small group of low-scale, commercial office buildings that feature in published records of Seidler's completed architectural projects and survive today in readily recognisable form.

The building's association with Harry Seidler is demonstrated by its ready recognition as one of the architect's works, incorporating key components and attributes—form, massing, materiality and façade treatment—characteristic of his design approach and aesthetic sensibility, with the incorporation of sun-shading devices on the major façades representing a high degree of creative achievement, as noted by both contemporary and subsequent reviews.

The building also demonstrates Seidler's response to the imperatives of a more budget-conscious project brief, providing a still high quality of overall design with a simpler repertoire of forms and construction details, and experimenting with standard, 'off-the-shelf' building components and materials (with mixed results as to their long term quality, performance and condition). This approach, used more frequently in his early residential work as part of his desire to make progressive design available to people of average means undoubtedly contrasted with many of his contemporary and later projects but maintained his fundamental belief in the importance of good, 'Modern design'.

The aesthetic distinctiveness of the site is also due, in large measure, to the low scale of the northern three storey block with its roof terraces fronting McLaren Street and the accompanying terrace and planter box planting 'greening' the front of the building. This component of the building represents both a sympathetic streetscape component—compatible with human scale—and an historic remnant of a time when this area of North Sydney was a less densely developed commercial centre.

More generally, the site development provides evidence of the mid to late twentieth century expansion of North Sydney as a major commercial and business hub and Sydney's second CBD, including the replacement and consolidation of previous residential sites and the burgeoning of modern office blocks from the late 1960s.

The site also reflects many aspects of the changing planning and regulatory environment for development throughout North Sydney over the latter half of the twentieth century, ranging from its own original site-specific controls (on height, density and set-back) through to the present diversity of use/function, density and character within its immediate and wider settings as changing economic, social and development pressures have been reflected in the built environment.

Recommendations for Integration of Simsmetal House and Ward Street Precinct

The Ward St Precinct Master Plan has the potential to impact significantly on the future of the Simsmetal House and its setting, including opportunities to support and enhance meaningful conservation of the heritage significance of the site as part of larger civic and planning goals. Recommendations identified in the Heritage Assessment for the future of the subject site—and its role within the Ward Street Precinct Master Plan—include the following:

- Decisions about the future of Simsmetal House as an item of heritage significance should be based on appropriate heritage analysis, assessment and conservation methodology incorporating specific considerations as to its significance and conservation requirements. The Heritage Assessment report identifies key heritage issues and objectives for the site based on the appropriate information and assessment methodology. It also includes advice on significance and conservation objectives, as required by Council for any development of a heritage site.
- The fact that the site is faced by a large number of problems with physical fabric that need costly remediation and conservation work is of particular importance, with the future viability of the site and retention of meaningful heritage values requiring support for appropriate development, including adaptation, to provide funding for essential conservation.

– **The current draft Master Plan proposal to limit both the extent and form of additional development does not appropriately respond to the heritage values of the place, its relationship to its setting or its meaningful retention, adaptation and interpretation nor allow for its appropriate long term conservation.** The original limitations on the site's development potential (i.e. height and massing) no longer relate to the existing building's immediate setting. In addition, the building is effectively isolated—visually, functionally and physically—from its surrounding development in a context where improved through site linkage, additional commercial and residential accommodation and public/community amenities could be readily integrated.

– Given the proximity of the Council's multi-storey carpark immediately south of the site, and the fact that this represents an 'intrusive' component of Simsmetal House setting in heritage assessment terms, this site has the potential to be positively and pragmatically used to give the best outcome for both the conservation of the heritage item and civic/planning and community objectives for this area. In this context, the proposed provision of community facilities (currently via a potential 'community hub building') could provide an opportunity to consider new uses in, and access through, the site and enhance the benefits of the conservation of Simsmetal House.

– With better functional and civic integration of the heritage item—which would allow positive exploitation of its location, unique streetscape character and scale and architectural presence to McLaren Street in particular—would add value to Council's functional, social and civic goals for this area, including the better use of an existing 'iconic built form'. In this context, exploiting the significant covered colonnade along the west of Simsmetal House and extending through to Berry Street—with new functions/uses including community facilities, coffee-shop, residential apartments etc.—as well as commercial office spaces accessed via entry lobbies from ground floor level, as currently, would support conservation and public interpretation goals as well as pedestrian movement to areas/facilities north of the CBD.

– Similarly, the significant components and attributes of all three streetscape frontages (including scale, architectural character, greening, etc.) of Simsmetal House (as identified and assessed above) provide an opportunity for creative adaptation and interpretation as part of a conservation project with local streetscape benefits. Public access through the site, use of its lower level facilities and/or passing by it on McLaren Street would allow many of its heritage values to be appreciated by the community. Given the architectural quality of the building's overall form/massing and streetscape elevations, these elements should be retained, repaired and interpreted as a discrete entity within future development of the site.

– Given the status of Seidler's architectural work generally, and Simsmetal House's significant association with his legacy, it is also important that any additional development on the site be of sufficiently high design quality and presence to positively contribute to its 'iconic built form'. New development should be sympathetic to the forms, elements and materiality of Seidler's architecture, conserving and interpreting the existing seven storey structure and distinguishing all new structures/components. In addition, appropriate future development of a more substantial scale, quality and visual/civic presence would provide an opportunity to reinstate the building's original role as an architectural landmark and associations with the aesthetic and design principles of Harry Seidler.

Conclusions

In summary, the recommendations of the Heritage Assessment report identify the need for:

– Conservation and interpretation of the external form of the current seven storey building—in its original stepped form—including significant components and attributes.

– Additional development of a substantial nature, clearly distinguished from but sympathetic to the identified heritage significance of the site to support the extensive conservation/repair works required and give the building a viable future. (That is, without adequate support, there is little to support meaningful conservation of the heritage values of the place.)

– These issues are addressed in more detail in a Heritage Impact Assessment (HIA) based on the existing GML Heritage Assessment which accompanies the DA to Council for proposed future development of the site.

8.6 Solar impact on existing residential

architectus™

Existing residential uses for consideration of solar impact comprise 4 areas:

1. **Residential areas east of Warringah Freeway**
2. **Existing and future residential along the east side of Walker Street**
3. **Existing residential along the west side of Walker Street**
4. **Existing residential along Miller Street**

The draft North Sydney Centre Capacity and Land Use Study proposed a no overshadowing control of areas outside of the North Sydney Centre between 10am-2pm midwinter. The Draft Master Plan and the proposed Alternative Master Plan do not cause any overshadowing east of Warringah Freeway during this time.

The diagrams on this page show shadow impacts on Areas 1 and 2. Architectus recommends expansion of the North Sydney Centre boundary to include the area east of Walker St so that the whole of the Ward Street Precinct is within the North Sydney Centre.

Note: the Alternative Master Plan does not impact on Area 1 and in regard to Area 2 existing dwellings/ apartments will retain more than 2 hours of sunlight between 9am and 3pm June 21 consistent with the NSW Apartment Design Guide and Medium Density design Guide for solar access.

Figure 8.6.1 Location plan - relevant existing residential areas

Site
North Sydney Centre boundary
Existing residential areas

N 1 0 100 200 500m

Draft Ward Street Precinct Draft Master Plan

Figure 8.6.2 Shadow diagram (21 June at 2pm)

Alternative Master Plan

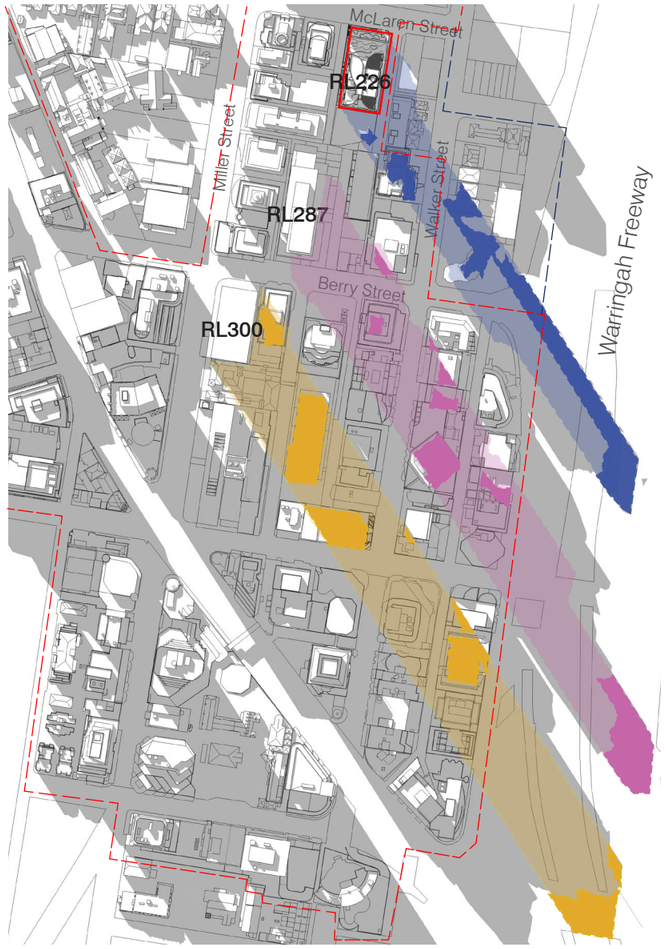


Figure 8.6.3 Shadow diagram (21 June at 2pm)

Site boundary
North Sydney Centre boundary
Proposed expansion of North Sydney Centre boundary
Shadow of proposed on 41 McLaren St
Additional overshadowing
Shadow of proposed tower/s at 20 Ward St, 56 Berry St, 66 Berry St
Additional overshadowing
Shadow of potential Metro Tower
Additional overshadowing

N 1 0 20 50 100 250M

The adjacent table provides an overview of sun access to relevant neighbouring buildings in Areas 3 and 4.

The shadow impacts are assessed against the SEPP65 standard of 2 hours sun access 9am-3pm. Typical floor plans for relevant buildings are shown on the next page and have been used to understand the number of affected apartments.

Even under the Ward St Precinct Master Plan, 221 and 229 Miller St do not achieve the SEPP65 Apartment Design Guide guideline of 2 hours sun access for 70% of apartments. This is typical of dense urban centres such as North Sydney. The Alternative Master Plan will increase the number of apartments receiving below 2 hours by 4% for 229 Miller St, 16% for 221 Miller St and 4% for 126-140 Walker St.

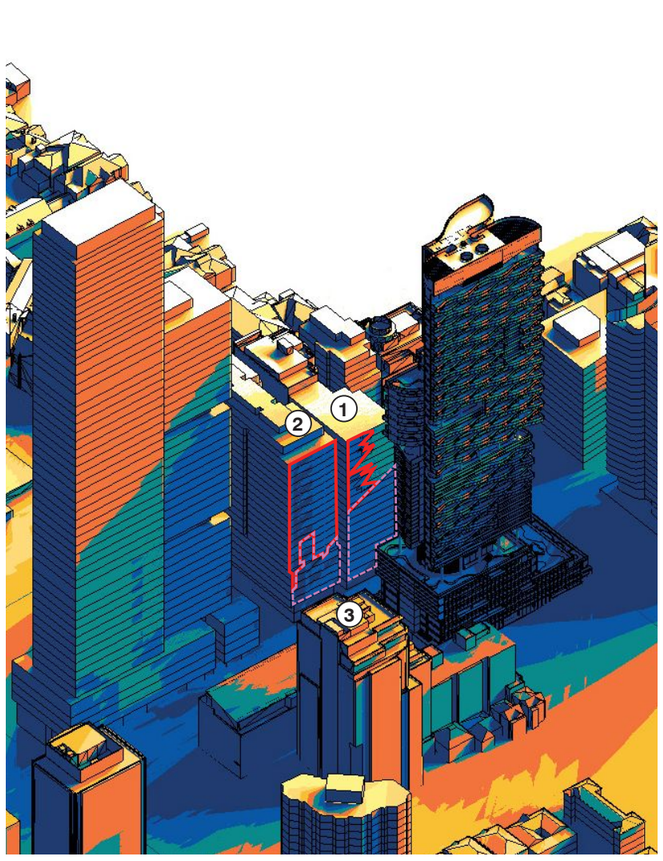
A reduction of this nature is not uncommon for new development in dense urban centres and will be comparable to the effects of other recently approved developments (e.g. 168 Walker St to the north).

Refer to Appendix A.2 for detailed sun access analysis for the three relevant apartment buildings.

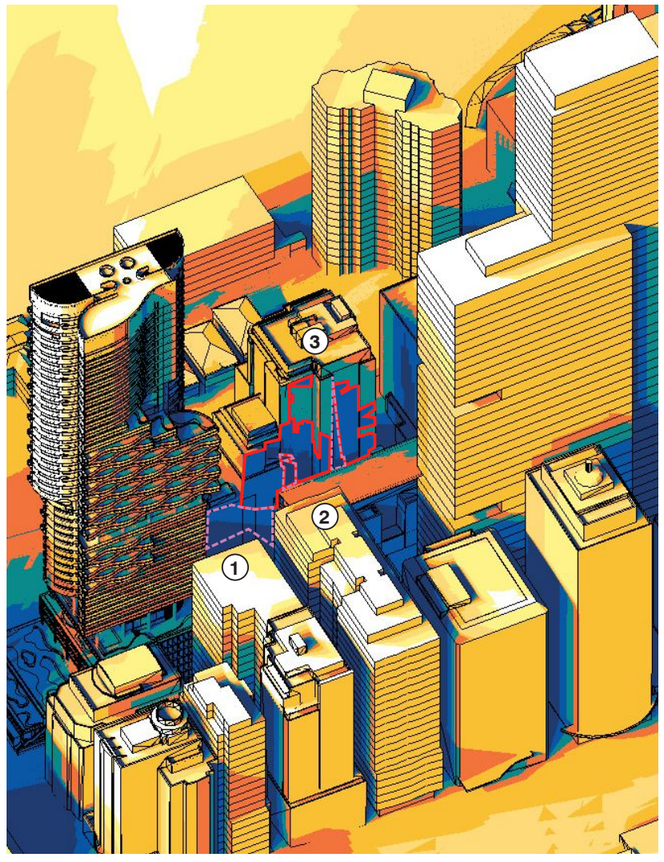
		Apartments receiving below 2 hours solar access		
Street Address	Total no. of apartments	Ward Street Precinct Master Plan (%)	Alternative Master Plan (%)	Change (%)
1. 229 Miller St	99	54%	58%	**4%**
2. 221 Miller St	283	55%	71%	**16%**
3. 136-140 Walker St	195	27%	31%	**4%**

Figure 8.6.4 Summary table - solar access to key residential buildings

Alternative Master Plan



Hours of solar access midwinter (21 June) - view northwest



Hours of solar access midwinter (21 June) - view southeast

1 229 Miller St
2 221 Miller St
3 136-140 Walker St

Additional areas receiving less than 2 hours solar access between 9am-3pm (Alternative Master Plan)

Areas receiving less than 2 hours solar between 9am-3pm (Draft Ward Street Precinct Master Plan)

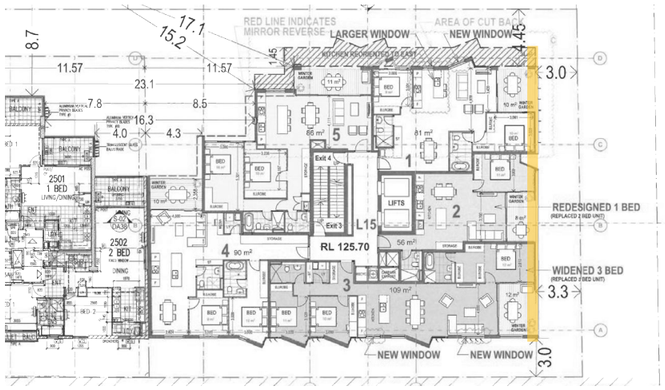
0 0-1 1-2 2-3 3-4 4-5 5-6

Number of hours of solar access between 9am-3pm (midwinter)

Figure 8.6.5 Hours of solar access to apartments

Floor plans - Typical floor of solar affected buildings

1. 229 Miller Street



Typical floor plan - Level 15

Affected areas (approx max extent across all levels)

N 0 5 10 20M

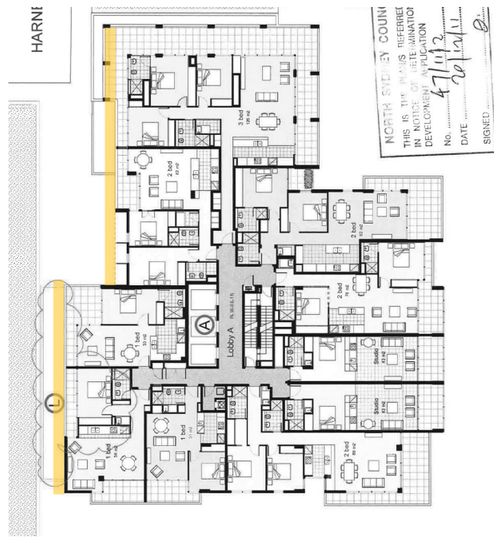
2. 221 Miller Street

Typical floor plan - Levels 7-19

Affected areas (approx max extent across all levels)

N 0 5 10 20M

3. 136-140 Walker Street



Typical floor plan - Levels 11-12

N 0 5 10 20M

Affected areas (approx max extent across all levels)

Location Map

1 229 Miller St
2 221 Miller St
3 136-140 Walker St

Site boundary

Apartments potentially affected by additional overshadowing - below 2 hours solar access

Ward Street Precinct Master Plan buildings

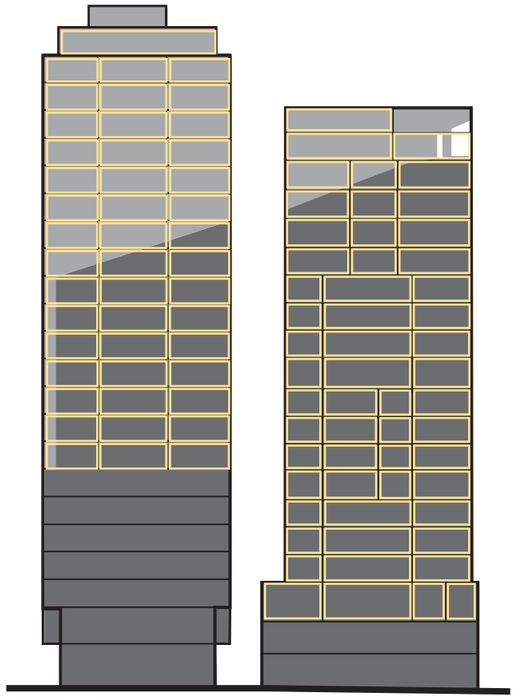
D.A approved

N 0 20 50 100 250M

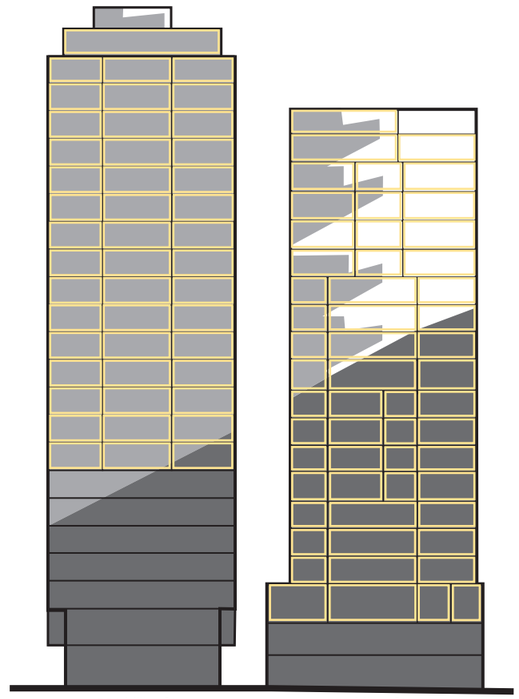
The adjacent elevations compare the overshadowing impacts of the Ward St Precinct Master Plan with the Alternative Master Plan, on the eastern facade of 221 and 229 Miller St.

As can be seen, the Ward St Precinct Master Plan primarily through the approved development at 168 Walker St already significantly overshadows these neighbouring buildings at 9am and 10am.

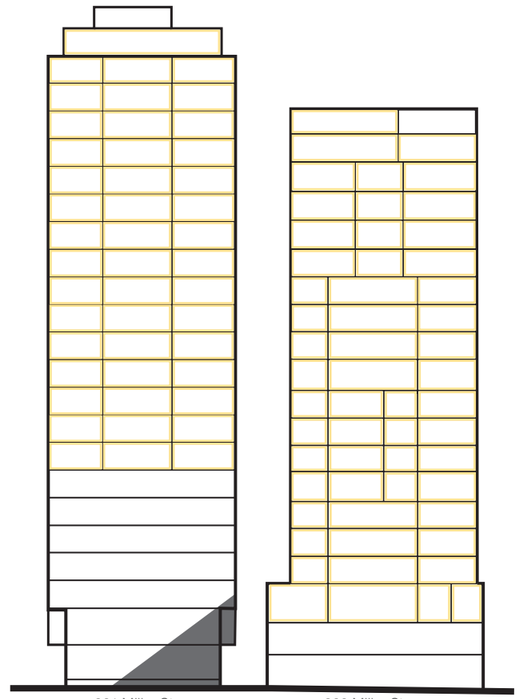
By 11am there is no overshadowing of 229 Miller St and minimal overshadowing of 221 Miller St with no additional impact in the Alternative Master Plan at this time.



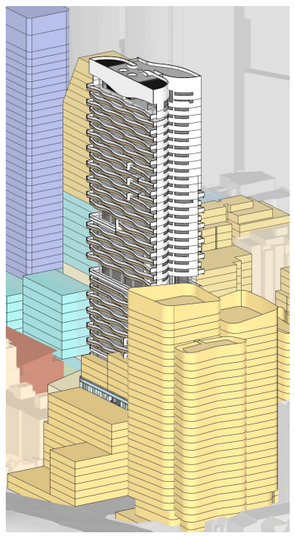
9am mid winter - elevation



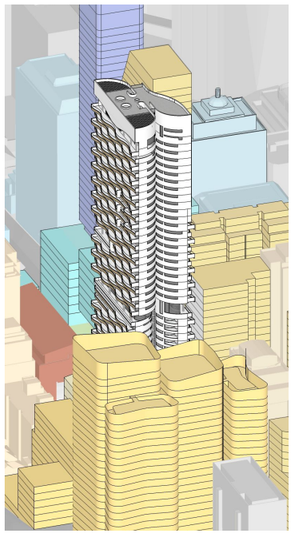
10am mid winter - elevation



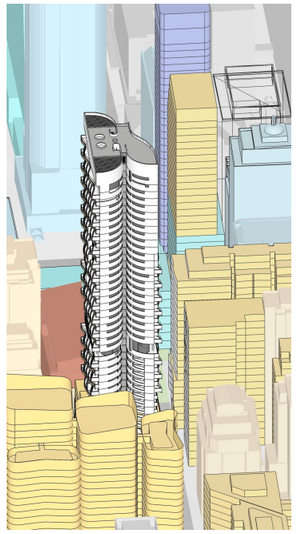
11am mid winter - elevation



9am mid winter - sun eye view



10am mid winter - sun eye view



11am mid winter - sun eye view

Overshadowing caused by Ward St Precinct Master Plan

Additional overshadowing caused by Alternative Master Plan

Residential

0 5 10 15 30m

8.7 Traffic

Ason Group Traffic Consultants has been commissioned to provide a review of traffic impact of the Alternative Master Plan.

Ason Group have previous experience of the area as they undertook the traffic impact assessment of the redevelopment/adaptive re-use of 168 Walker Street north of the site - which has DA approval for up to 29 storeys.

Note that Ason Group have provided a separate traffic impact report in regard to the DA for 41 McLaren St and this is appended to the Statement of Environmental Effects for the DA.

In summary, the main points of Ason Group's review include:

- **The Alternative Master Plan would generate relatively similar levels of vehicular traffic as existing**, whilst achieving significantly greater GFA compared to the Draft Master Plan. It optimises development potential, increases the public domain and opportunity for active forms of transport. It is unlikely to have a material impact on the overall performance of intersections in the locality.
- The Precinct is well positioned for greater transit oriented development due to its proximity to the proposed Victoria Cross metro station.
- The Draft Master Plan proposes shared zones along McLaren Lane and Harnett Street as part of its vision for a "Pedestrian Core" (the pedestrian connection between North Sydney CBD and St Leonards Park), however forecast traffic flows indicate that the traffic volumes along these streets would create a pedestrian safety issue. This is addressed in the Alternative Master Plan and instead it provides a pedestrian colonnade through 41 McLaren St adjacent to McLaren Lane to allow for a safe, direct and sheltered north-south route for pedestrians.
- The Alternative Master Plan addresses pedestrian accessibility to the new Metro Station and congestion on Berry Street through an additional station entry on the northern side of Berry Street and a signalised pedestrian crossing on Berry Street. This would improve pedestrian and traffic flows whilst increasing pedestrian connectivity through the Precinct.

8.8 Views

The view photomontages are for the Alternative Master Plan and are indicative of the visual appearance of the proposals built form from representative public viewing points. The proposal for 41 McLaren St is shown in more detail given is higher level or design resolution. The envelopes show the proposed tower on 20 Ward St/56 Berry St/66 Berry St site and the potential tower above the Metro Station.

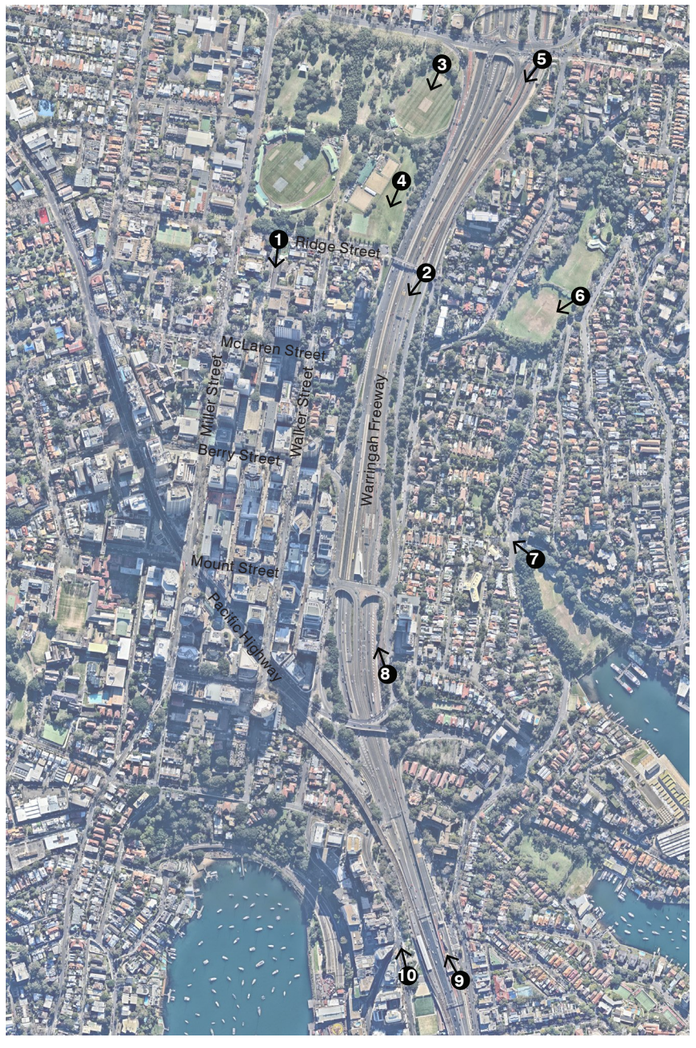


Figure 8.8.1 Location Map

1 View looking south from Ridge Street

3 View looking south from Bon Andrews Oval

2 View looking southwest from Ridge Street pedestrian bridge

4 View looking south from St Leonards Park

5 View looking southwest from Falcon Street overpass

7 View looking northwest from Anderson Park

9 View looking north from Cahill Expressway pedestrian path

6 View looking southwest from Forsyth Park

8 View looking northwest from Alfred Street North/High Street intersection

10 View looking north from Milsons Point Station forecourt

8.9 Impact of neighbouring resident views

architectus™

The residential neighbouring developments that will have their outlook and views particularly impacted by the proposed 41 McLaren St tower are:

1. 39 McLaren St
2. 229 Miller St

Architectus considers that view sharing control lines at a 60 degree angle in plan from the centre of the south east corner balcony of 39 McLaren St and a 60 degree angle in plan from the north east balcony of 229 Miller St are an appropriate balance to share views and provide for outlook. These control lines are shown in the plan opposite.

39 McLaren St

This building is 13 storeys high and has its main orientation to the north to McLaren St. Its east facade from 41 McLaren St and its east facing apartments (from the 8th floor to the top of the 13th floor), have views towards the harbour. The proposed tower at 41 McLaren St is substantially setback from McLaren St enabling the east facing apartments to have good expansive outlook. It is unreasonable for the harbour views to be retained across the side boundary. If a building was built on 41 McLaren St to the same height as 39 McLaren St the impact of views would be no different. Height above 13 storeys has no additional impact on views. The draft Ward St Precinct Master Plan proposed 5 additional storeys plus plant - this would similarly block views of Sydney Harbour from 39 McLaren St.

229 Miller St

This property has a recently approved DA for 20 storeys. The DA is located within a congested group of residential towers with minimal tower separations. The proposed tower on 41 McLaren St is undercut to allow for views in accordance with the 60 degree control line in plan referred to above. The best views from these apartments, to Sydney Harbour, are likely to be mostly retained.

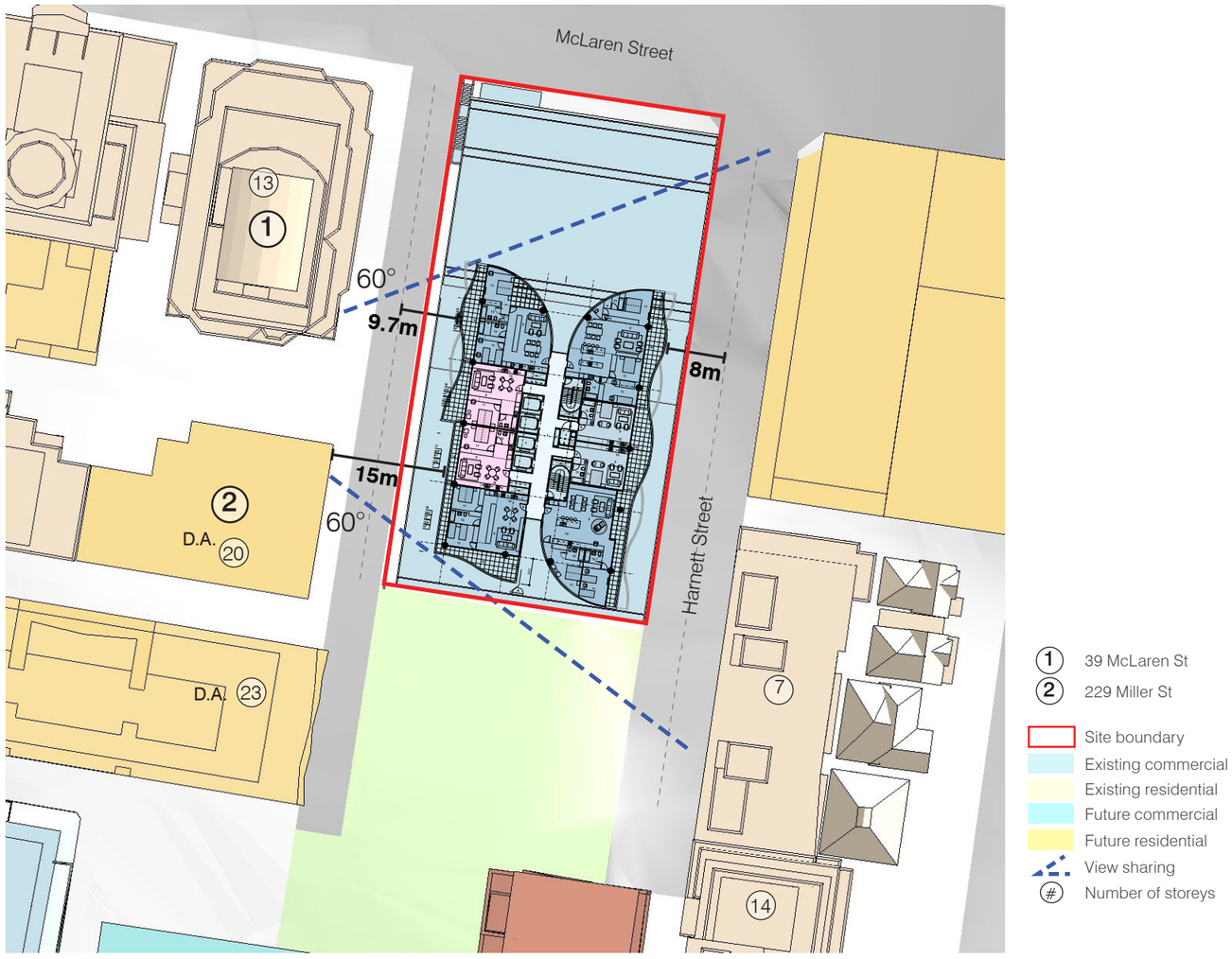


Figure 8.9.1 View sharing and separation to adjacent residential - lower level plan

Note: Typical tower lower level plan at 41 McLaren St shown. View sharing by placement of the new tower on 41 McLaren St within 60 degree view lines projected from the centre of the corner balconies of 39 McLaren St and 229 Miller St.

8.10 Recommended alternative LEP controls

architectus™

The recommended alternative LEP controls are briefly described below for the Ward St Precinct with an indicative list of public benefits:

1. Upon amalgamation of 20 Ward St, 56 Berry St and 66 Berry St the maximum building height is RL230 subject to achieving:
   - 3,900sqm of new public open space to the sky.
   - At least 30,000sqm of 'A' grade office space.
   - At least 200 room 4 star hotel.
   - Metro Station entry to the north side of Berry St (subject to Transport NSW).
   - 6,000sqm GFA to be dedicated to Council for community use.
2. The maximum height for 41 McLaren St is RL226 subject to achieving:
   - Double height through colonnade between McLaren St and the new Ward St open space.
   - Contribution to public domain works.
   - Consistency with heritage impact assessment by GML.
   - Dedication of community space to Council (subject to Council discretion).
   - Dedication of a percentage of apartments to Council (subject to Council discretion) for long term rental affordable housing for key workers.

8.11 Public benefits

The Alternative Master Plan provides the opportunity for many significant public benefits to be achieved by two major developments:

Note: A draft set of principles for a Voluntary Planning Agreement to relate to the Planning Proposal for 41 McLaren St is appended to the Planning Proposal.

20 Ward St / 56 Berry St / 66 Berry St

- Community hub for up to 6,201sqm GFA.
- 220 room 4 star hotel.
- 47,606sqm GFA 'A' grade office space.
- Metro Station entry on north side.
- 3,900sqm new open space.

41 McLaren St

The following public benefits are considered as a basis for discussion with Council in preparing a Voluntary Planning Agreement for additional development of 41 McLaren Street.

- Retain heritage values of 41 McLaren St.
- Provide employment space in excess of LEP requirements by retaining non-residential floor space within the envelope of the existing office building.
- Benchmark high quality apartment building for North Sydney.
- Public accessibility at ground level with through site links via double height colonnade space.
- Potential for child care.
- Potential value sharing contribution to local public domain upgrade.
- Potential for affordable housing.
- Potential to provide community uses at lower levels (noting preference for community uses to be provided in the Ward St tower).

Together the developments achieve:

- **A vibrant, active focus for the North Sydney Centre.**
- **Minimal additional traffic generation for the area.**
- **Optimise development potential near the new Metro rail Station.**
- **Maximise financial return to Council.**

Appendix

A.1 Solar access assessment - open spaces

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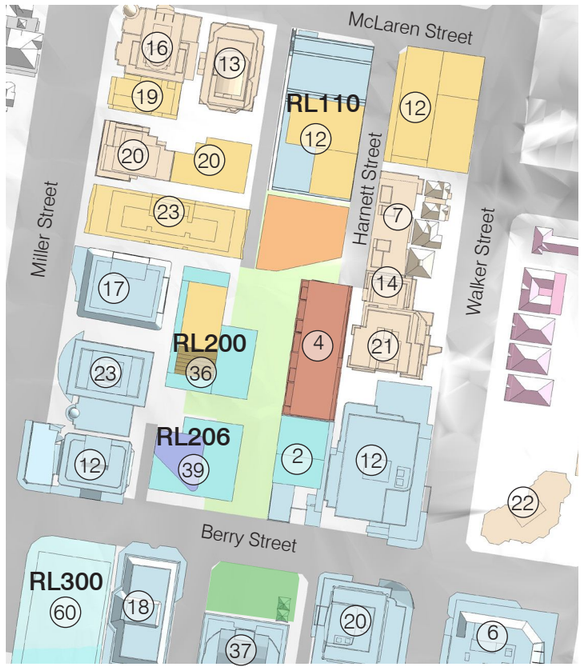
The Draft Ward Street Precinct Master Plan, Alternative Master Plan and Visionary Master Plan were assessed for its solar impacts on the public domain.

This section includes both the solar analysis found within the Ward Street Precinct Master Plan exhibition document and the Architectus reassessment of the Draft Master Plan.

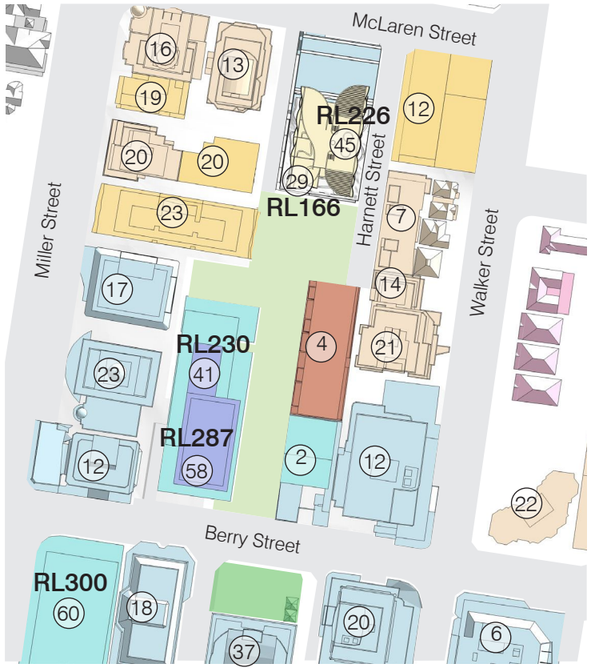
The Architectus reassessment is considered more accurate and is based on:

- A 3D model of North Sydney from AMM considered accurate to 200mm.
- Key RL's have been survey checked.
- Approved DA drawings.

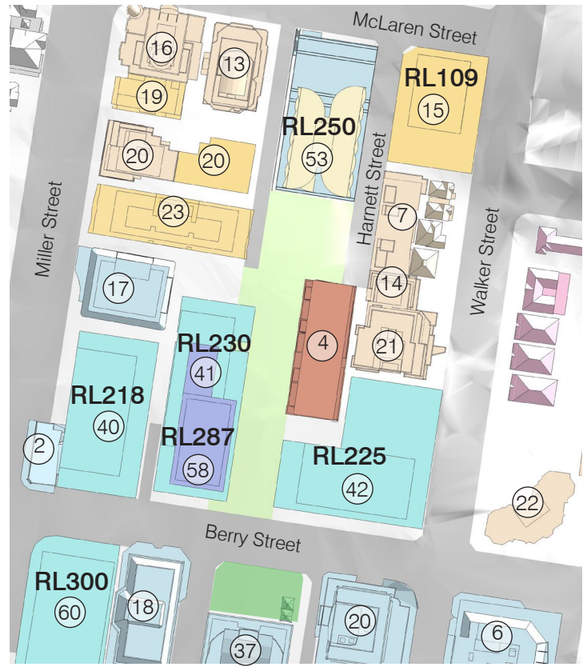
Note that the North Sydney Planning Panel questioned the importance of Berry Square and said that NOC Square should receive more sun. The tables overleaf show that NOC Square generally receives more sun under the draft Master Plan for both midwinter and for the equinox.



A.1.1 Draft Ward Street Precinct Master Plan



A.1.2 Alternative Master Plan



A.1.3 Visionary Master Plan

- Proposed on Site
- Existing commercial
- Existing residential
- Future commercial
- Future residential
- Future community facilities
- Future hotel
- Substation site
- Opportunity site
- Berry Square
- Proposed N.O.C Square
- (#) Number of storeys
- RLXX Reduced Levels AHD

N 0 10 20 50 100M

Solar acess to NOC Square (sqm) - New Ward St open space - **midwinter**			
Time	Draft Master Plan (from document)	Draft Master Plan (from Architectus model)	Alternative Master Plan
9am	151	79	121
9.30am	233	209	270
10am	154	58	406
10.30am	824	856	315
11am	1,362	1,401	86
11.30am	1,470	1,437	930
12pm	797	664	1,177
12.30pm	77	22	219
1pm	-	-	-
1.30pm	-	-	-
2pm	-	-	-
Total	5,068	4,726	3,524

Solar acess to NOC Square (sqm) - New Ward St open space - **equinox**			
Time	Draft Master Plan (from document)	Draft Master Plan (from Architectus model)	Alternative Master Plan
9am	433	415	1,254
9.30am	666	793	1,648
10am	934	1,149	1,890
10.30am	1,276	1,462	1,664
11am	1,577	1,576	874
11.30am	1,686	1,736	1,715
12pm	989	1,043	1,681
12.30pm	159	195	654
1pm	-	6	227
1.30pm	-	-	-
2pm	-	-	-
Total	7,720	8,375	11,607

Figure 8.11.1 Solar access to NOC Square

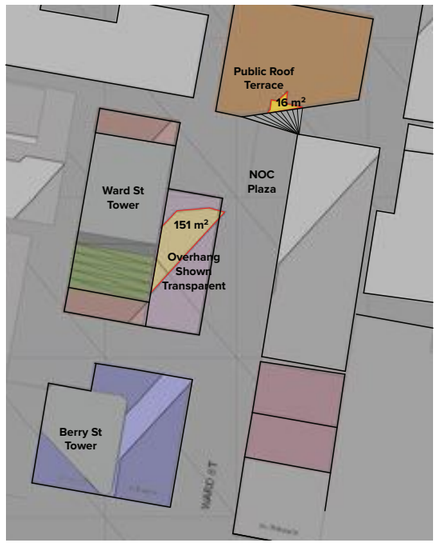
Solar access to Berry Square (sqm) - **midwinter**			
Time	Draft Master Plan (from document)	Draft Master Plan (from Architectus model)	Alternative Master Plan
9am	-	-	-
9.30am	-	-	-
10am	-	12	13
10.30am	441	388	388
11am	566	720	414
11.30am	588	756	272
12pm	446	513	487
12.30pm	51	98	98
1pm	-	-	-
1.30pm	-	-	-
2pm	-	-	-
Total	2,092	2,487	1,672

Solar access to Berry Square (sqm) - **equinox**			
Time	Draft Master Plan (from document)	Draft Master Plan (from Architectus model)	Alternative Master Plan
9am	104	414	385
9.30am	324	556	529
10am	489	683	663
10.30am	595	758	744
11am	689	780	781
11.30am	694	780	780
12pm	559	661	325
12.30pm	237	323	-
1pm	225	273	167
1.30pm	497	602	450
2pm	568	640	584
Total	4,981	6,470	5,408

Figure 8.11.2 Solar access to Berry Square

Note: Shadow analysis is based on a 3D model of North Sydney Centre from AMM, approved DA drawings and key RL's have been survey checked. It is considered the modelling is accurate to within 200mm.

Draft Ward Street Precinct Master Plan (midwinter 21 June) - shadow analysis from Council document



9AM

9:30AM

10AM

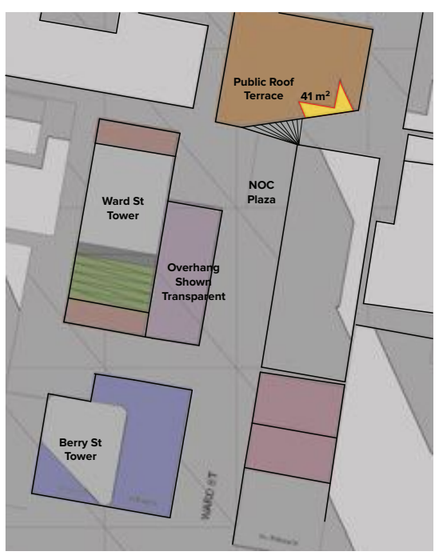
10:30AM

11AM

11:30AM

12PM

12:30PM

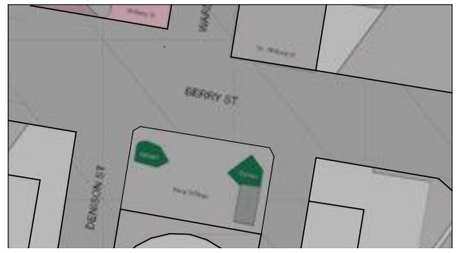


1:30PM

2PM

A.1.4 Shadow diagrams - solar access to NOC Square midwinter 21 June (Draft Ward Street Precinct Master Plan, Pgs128-131)

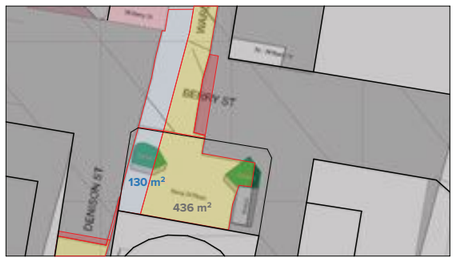
9AM



9:30AM

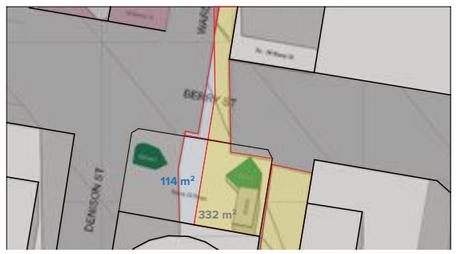
10AM

10:30AM

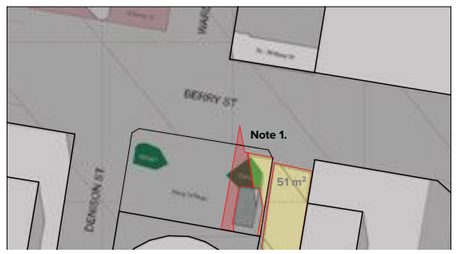


11AM

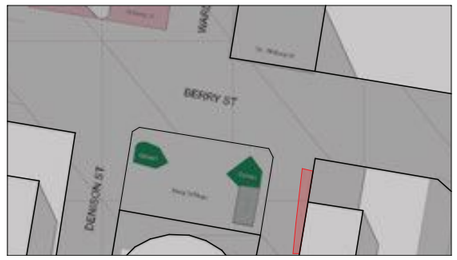
11:30AM



12PM



12:30PM

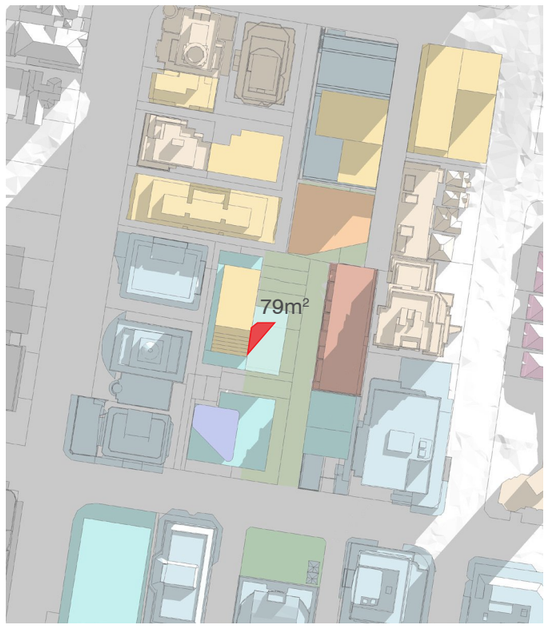


1:30PM

2PM

A.1.5 Shadow diagrams - solar access to Berry Square midwinter 21 June (Draft Ward Street Precinct Master Plan, Pgs121-122)

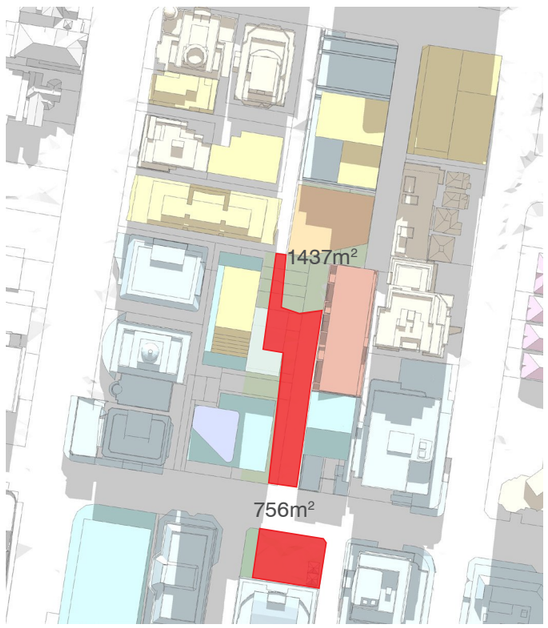
Draft Ward Street Precinct Master Plan (midwinter 21 June) - shadow analysis by Architectus



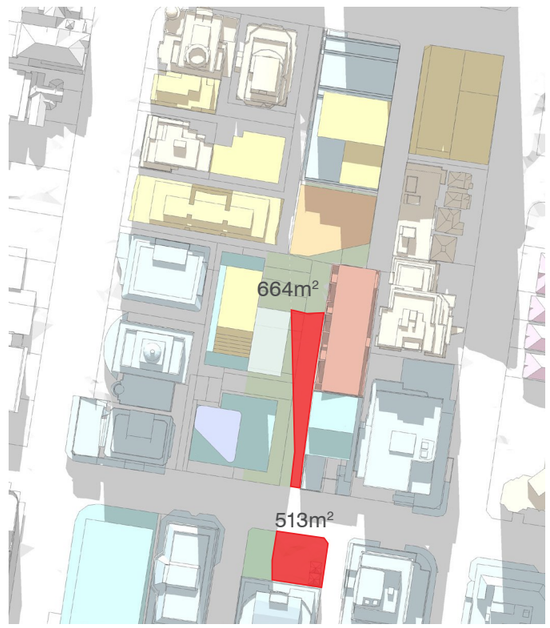
Shadow Diagram (21 June at 9am)

Shadow Diagram (21 June at 9.30am)

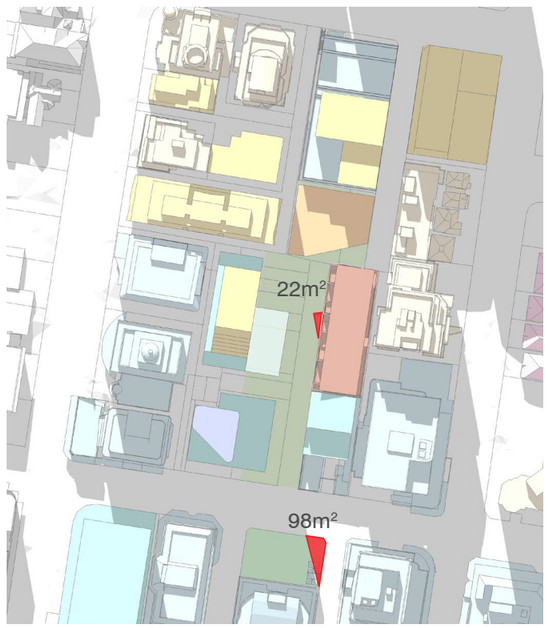
Shadow Diagram (21 June at 10am)



Shadow Diagram (21 June at 11.30am)



Shadow Diagram (21 June at 12pm)



Shadow Diagram (21 June at 12.30pm)

Shadow Diagram (21 June at 10.30am)

Shadow Diagram (21 June at 11am)

Shadow Diagram (21 June at 1pm)

Shadow Diagram (21 June at 1.30pm)

Approximate area receiving sun access - Ward Street Precinct Plan

Proposed N.O.C Square

Berry Square

Note: Shadow analysis is based on a 3D model of North Sydney Centre from AMM, approved DA drawings and key RL's have been survey checked. It is considered the modelling is accurate to within 200mm.

N 1 0 10 20 50 100M

A.1.6 Shadow diagrams - solar access to NOC Square and Berry Square midwinter 21 June - Draft Master Plan

Alternative Master Plan (midwinter 21 June)

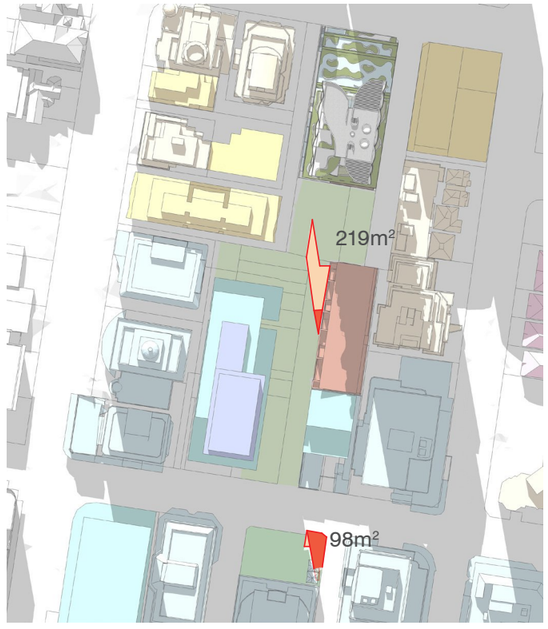
Shadow Diagram (21 June at 9am)

Shadow Diagram (21 June at 9.30am)

Shadow Diagram (21 June at 10am)

Shadow Diagram (21 June at 11.30am)

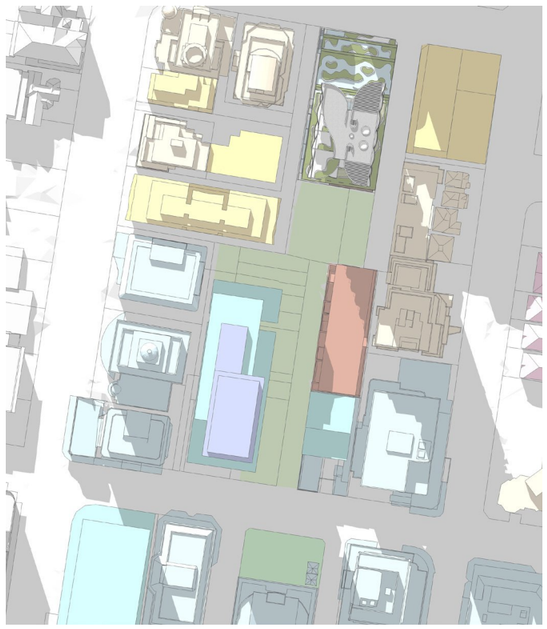
Shadow Diagram (21 June at 12pm)



Shadow Diagram (21 June at 12.30pm)

Shadow Diagram (21 June at 10.30am)

Shadow Diagram (21 June at 11am)



Shadow Diagram (21 June at 1pm)

Shadow Diagram (21 June at 1.30pm)

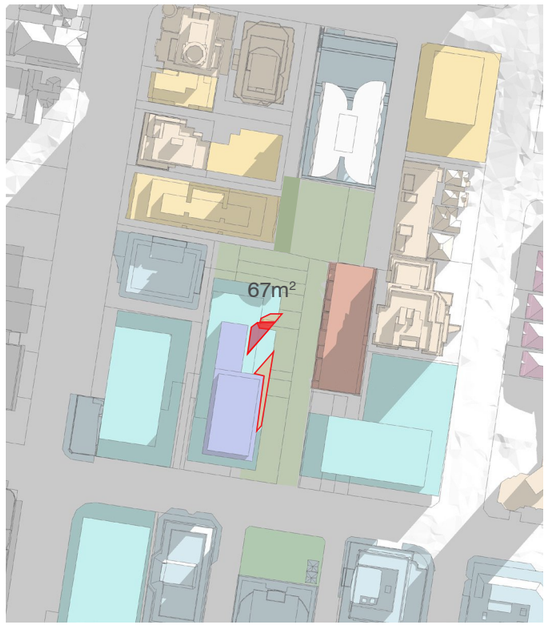
Approximate area receiving sun access - Ward Street Precinct Plan
Sunlight addition
Sunlight reduction
Proposed N.O.C Square
Berry Square

Note: Shadow analysis is based on a 3D model of North Sydney Centre from AMM, approved DA drawings and key RL's have been survey checked. It is considered the modelling is accurate to within 200mm.

N 1 0 10 20 50 100M

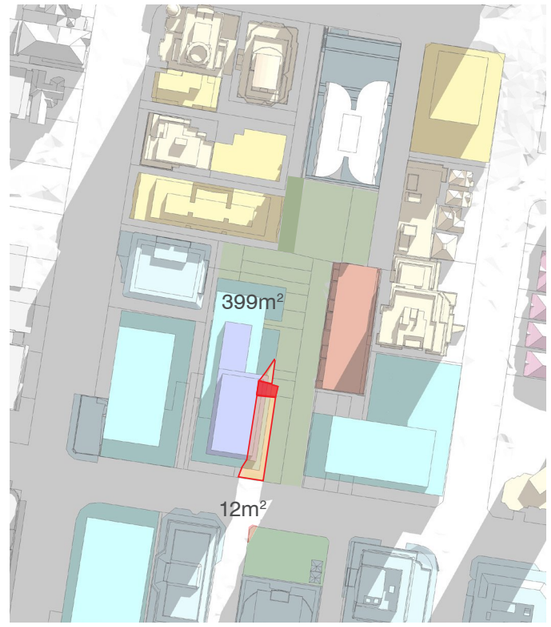
A.1.7 Shadow diagrams - solar access to NOC Square and Berry Square midwinter 21 June - Alternative Master Plan

Visionary Master Plan (midwinter 21 June)

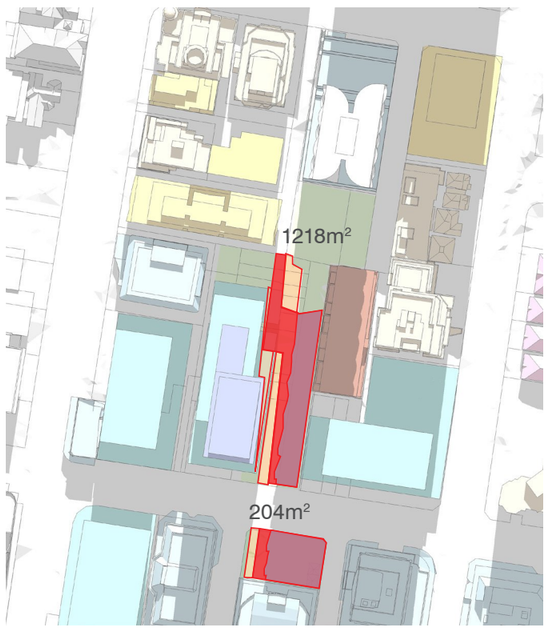


Shadow Diagram (21 June at 9am)

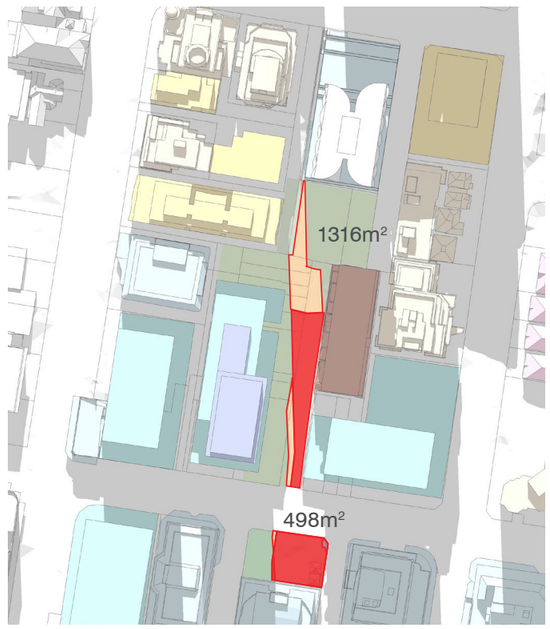
Shadow Diagram (21 June at 9.30am)



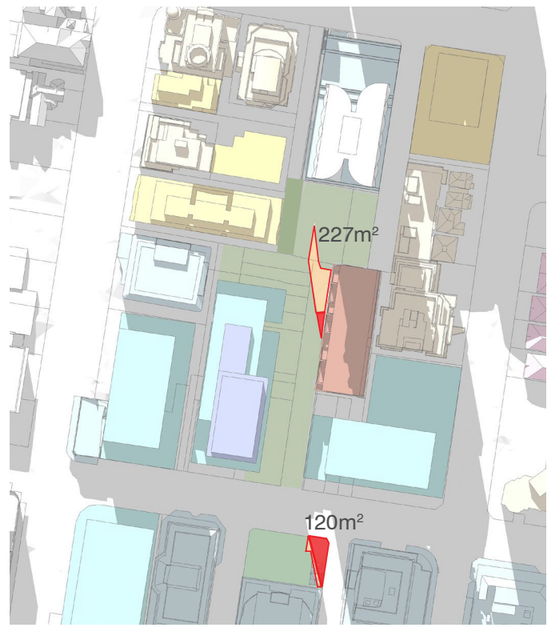
Shadow Diagram (21 June at 10am)



Shadow Diagram (21 June at 11.30am)

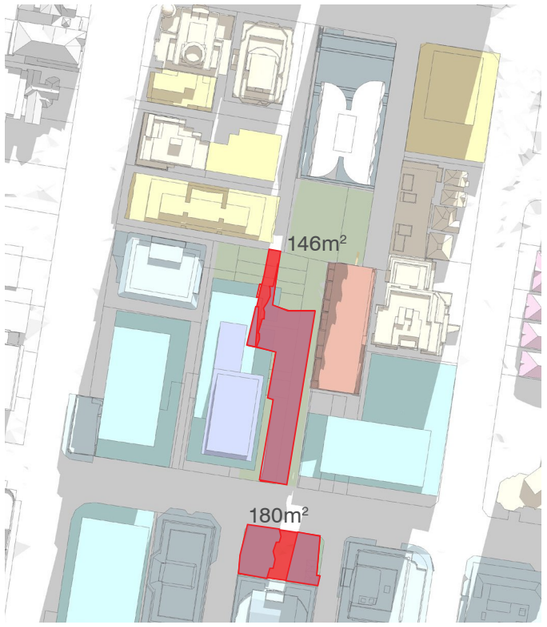


Shadow Diagram (21 June at 12pm)



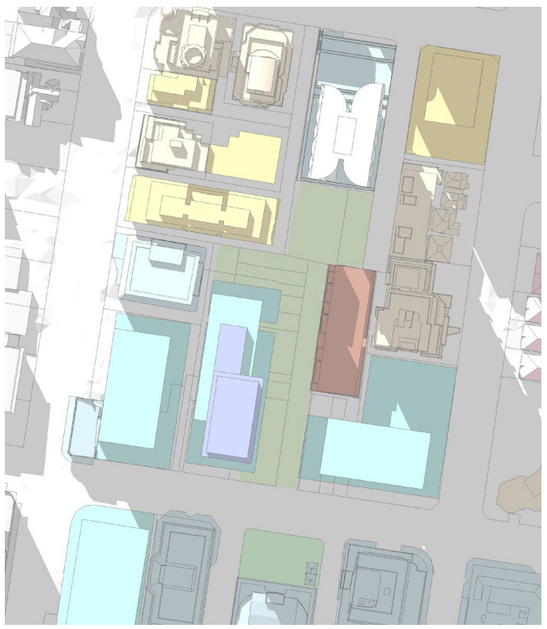
Shadow Diagram (21 June at 12.30pm)

Shadow Diagram (21 June at 10.30am)



Shadow Diagram (21 June at 11am)

Shadow Diagram (21 June at 1pm)



Shadow Diagram (21 June at 1.30pm)

Approximate area receiving sun access - Ward Street Precinct Plan
Sunlight addition
Sunlight reduction
Proposed N.O.C Square
Berry Square

Note: Shadow analysis is based on a 3D model of North Sydney Centre from AMM, approved DA drawings and key RL's have been survey checked. It is considered the modelling is accurate to within 200mm.

N 1 0 10 20 50 100M

A.1.8 Shadow diagrams - solar access to NOC Square and Berry Square midwinter 21 June - Visionary Master Plan

Draft Ward Street Precinct Master Plan (equinox 23 September) - shadow analysis from Council document

9AM

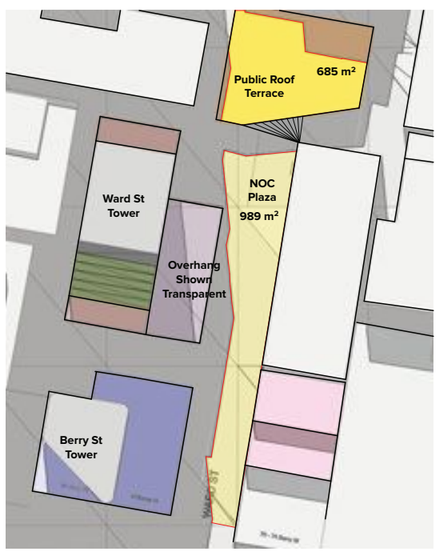
9:30AM

10AM

10:30AM

11AM

11:30AM



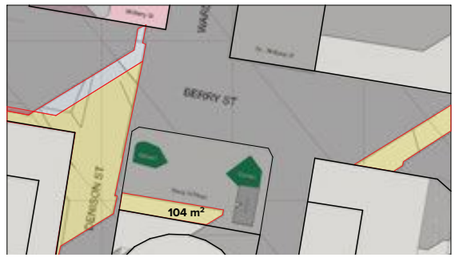
12PM

12:30PM

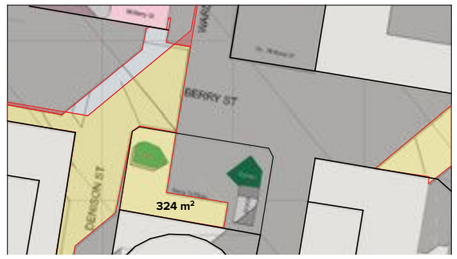
1:30PM

2PM

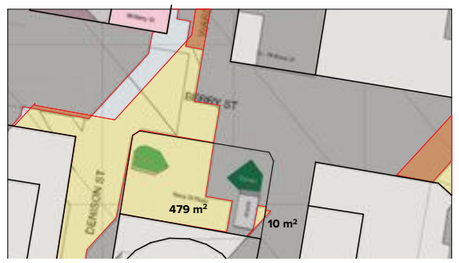
A.1.9 Shadow diagrams - solar access to NOC Square equinox 23 September (Draft Ward Street Precinct Master Plan, Pgs132-135)



9AM

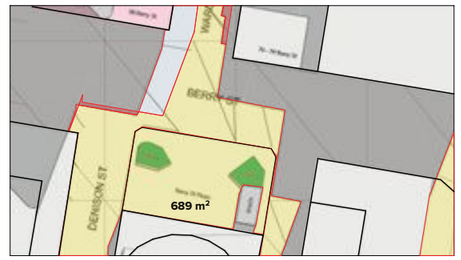


9:30AM

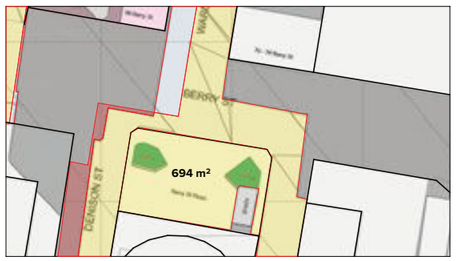


10AM

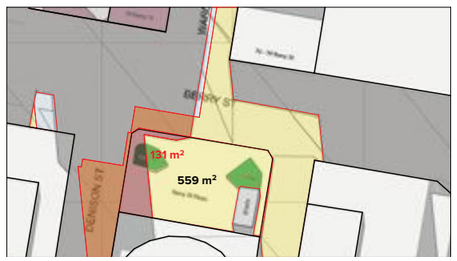
10:30AM



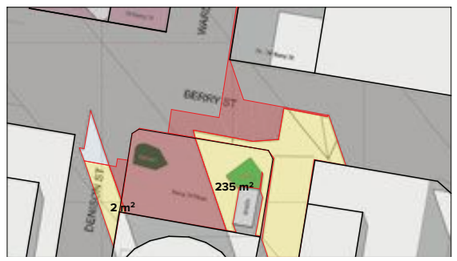
11AM



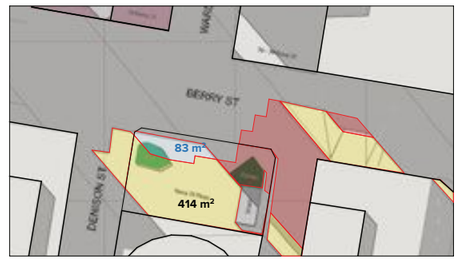
11:30AM



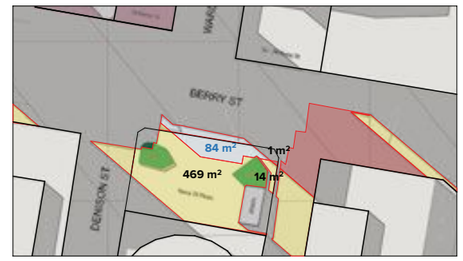
12PM



12:30PM



1:30PM

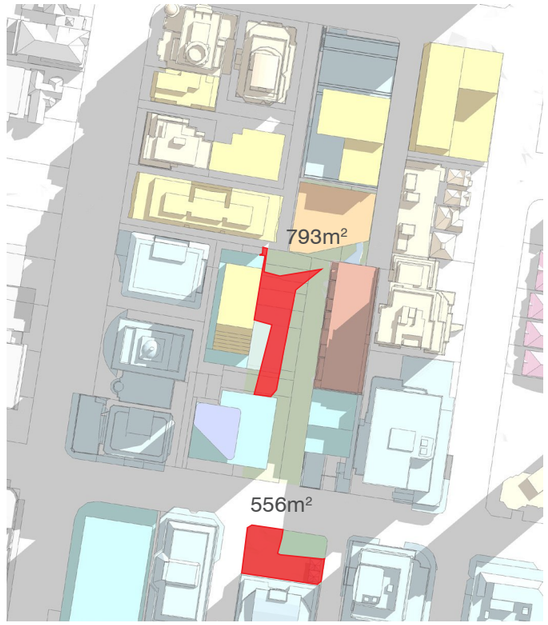


2PM

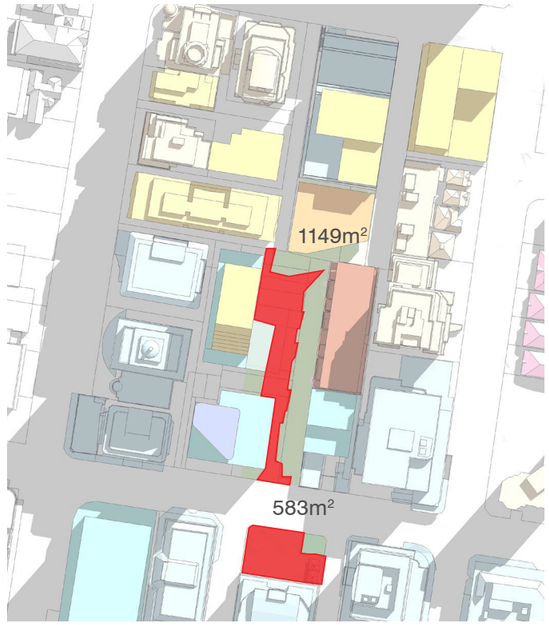
A.1.10 Shadow diagrams - solar access to Berry Square equinox September 23 (Draft Ward Street Precinct Master Plan, Pgs123-124)

Draft Ward Street Precinct Master Plan (equinox 23 September) - shadow analysis by Architectus

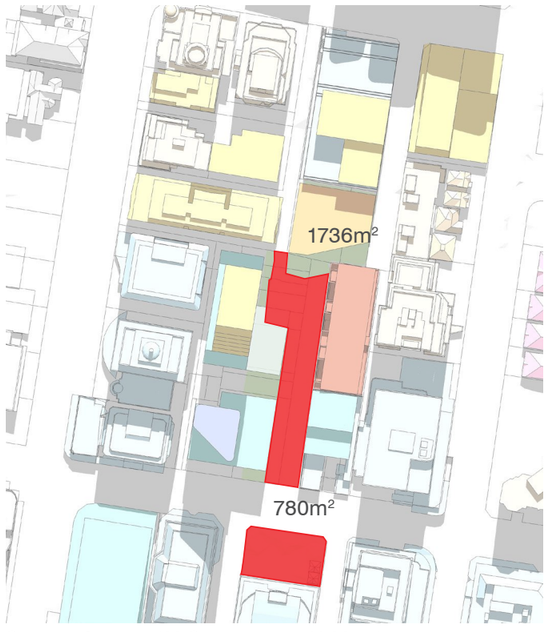
Shadow Diagram (23 September at 9am)



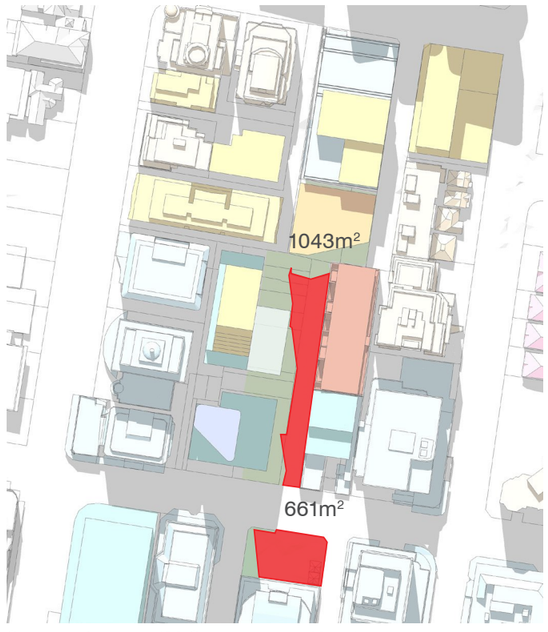
Shadow Diagram (23 September at 9.30am)



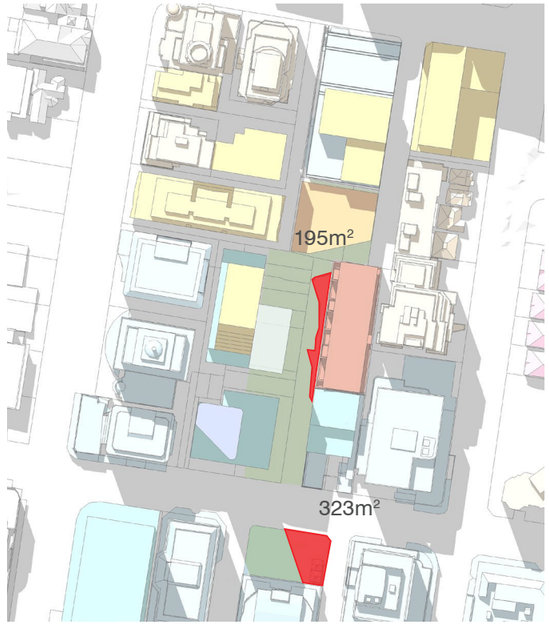
Shadow Diagram (23 September at 10am)



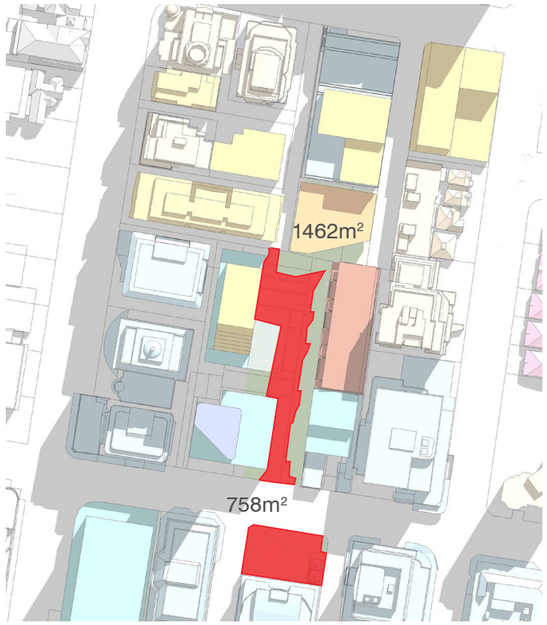
Shadow Diagram (23 September at 11.30am)



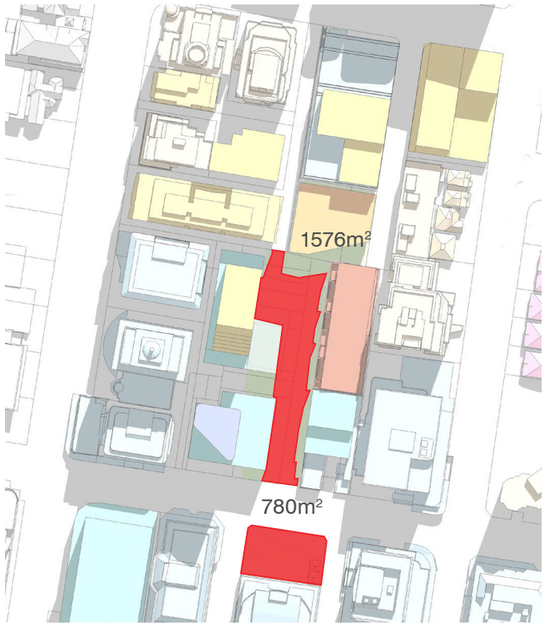
Shadow Diagram (23 September at 12pm)



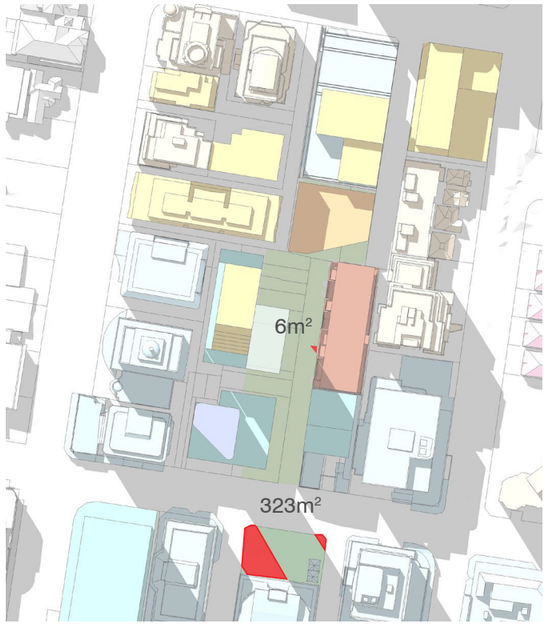
Shadow Diagram (23 September at 12.30pm)



Shadow Diagram (23 September at 10.30am)



Shadow Diagram (23 September at 11am)



Shadow Diagram (23 September at 1pm)

Shadow Diagram (23 September at 1.30pm)

Approximate area receiving sun access - Ward Street Precinct Plan

Proposed N.O.C Square

Berry Square

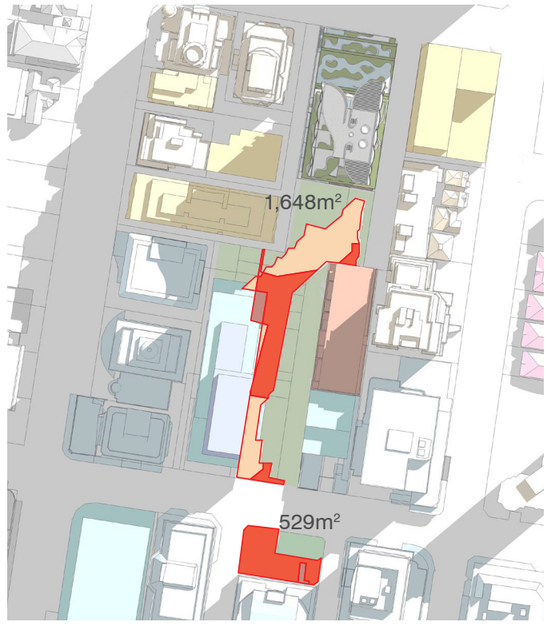
Note: Shadow analysis is based on a 3D model of North Sydney Centre from AMM, approved DA drawings and key RL's have been survey checked. It is considered the modelling is accurate to within 200mm.

N 1 0 10 20 50 100M

A.1.11 Shadow diagrams - solar access to NOC Square and Berry Square equinox 23 September - Draft Master Plan

Alternative Master Plan (equinox 23 September)

Shadow Diagram (23 September at 9am)



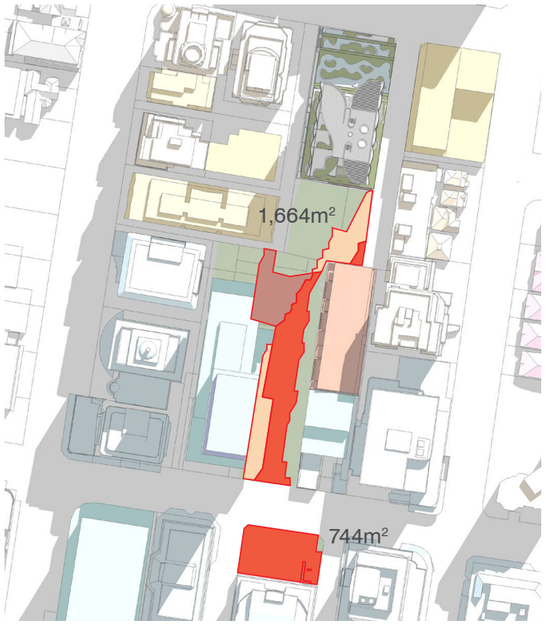
Shadow Diagram (23 September at 9.30am)

Shadow Diagram (23 September at 10am)

Shadow Diagram (23 September at 11.30am)

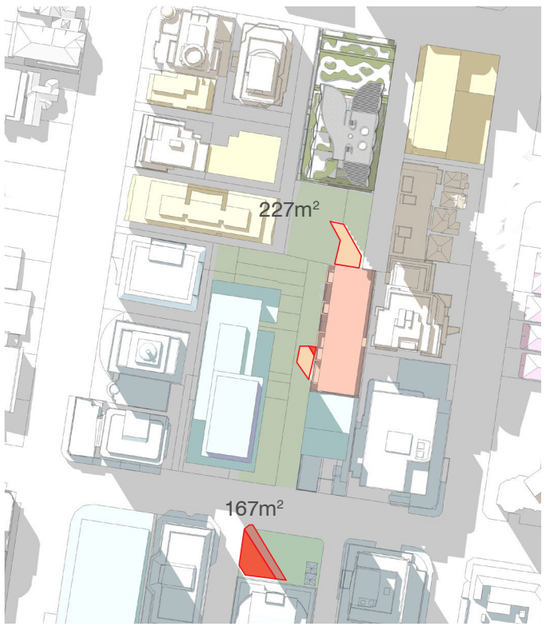
Shadow Diagram (23 September at 12pm)

Shadow Diagram (23 September at 12.30pm)

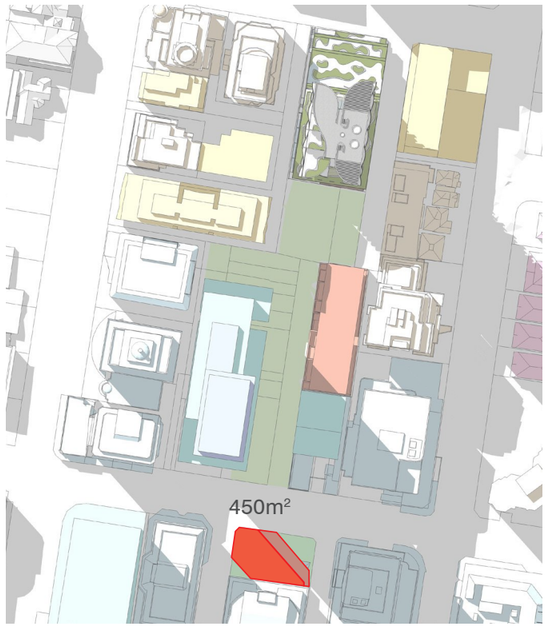


Shadow Diagram (23 September at 10.30am)

Shadow Diagram (23 September at 11am)



Shadow Diagram (23 September at 1pm)



Shadow Diagram (23 September at 1.30pm)

Approximate area receiving sun access - Ward Street Precinct Plan
Sunlight addition
Sunlight reduction
Proposed N.O.C Square
Berry Square

Note: Shadow analysis is based on a 3D model of North Sydney Centre from AMM, approved DA drawings and key RL's have been survey checked. It is considered the modelling is accurate to within 200mm.

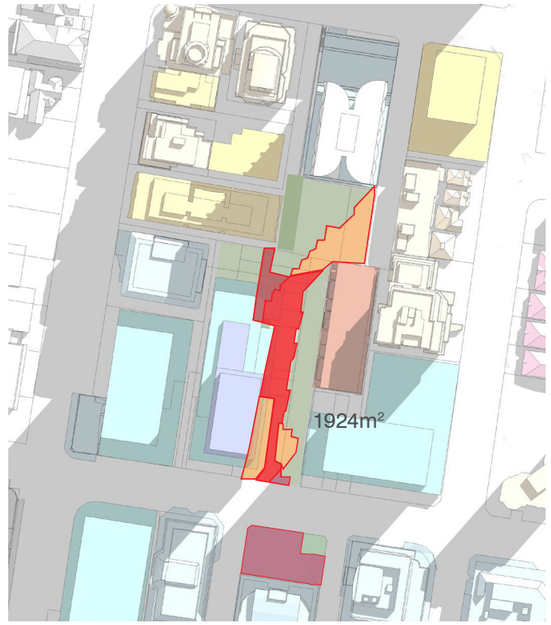
N 1 0 10 20 50 100M

A.1.12 Shadow diagrams - solar access to NOC Square and Berry Square equinox 23 September - Alternative Master Plan

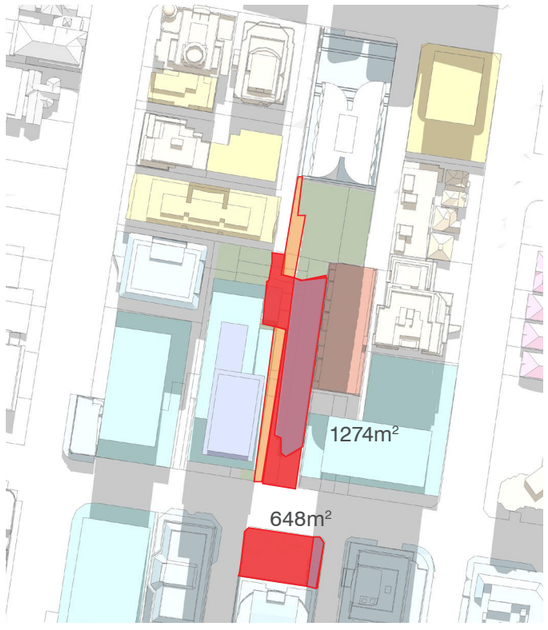
Visionary Master Plan (equinox 23 September)

Shadow Diagram (23 September at 9am)

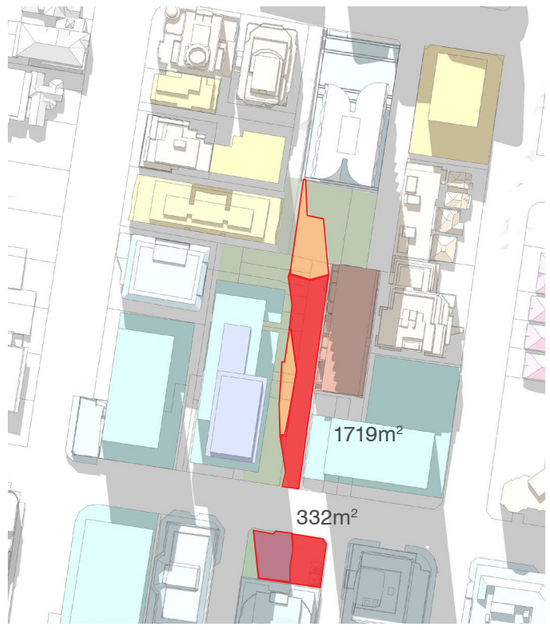
Shadow Diagram (23 September at 9.30am)



Shadow Diagram (23 September at 10am)



Shadow Diagram (23 September at 11.30am)

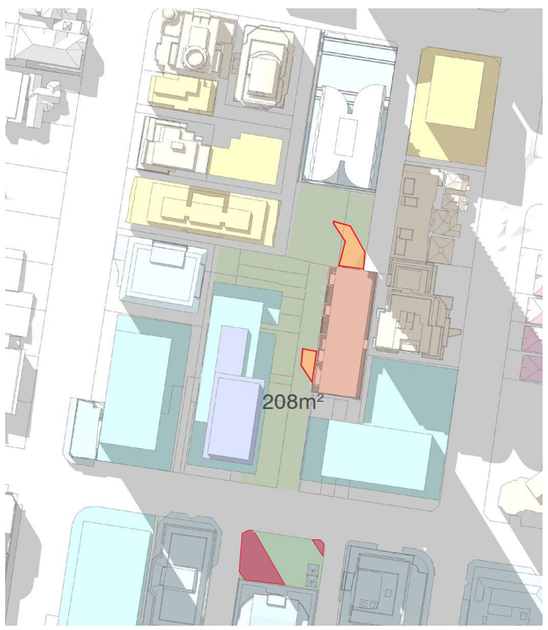


Shadow Diagram (23 September at 12pm)

Shadow Diagram (23 September at 12.30pm)

Shadow Diagram (23 September at 10.30am)

Shadow Diagram (23 September at 11am)



Shadow Diagram (23 September at 1pm)

Shadow Diagram (23 September at 1.30pm)

Approximate area receiving sun access - Ward Street Precinct Plan
Sunlight addition
Sunlight reduction
Proposed N.O.C Square
Berry Square

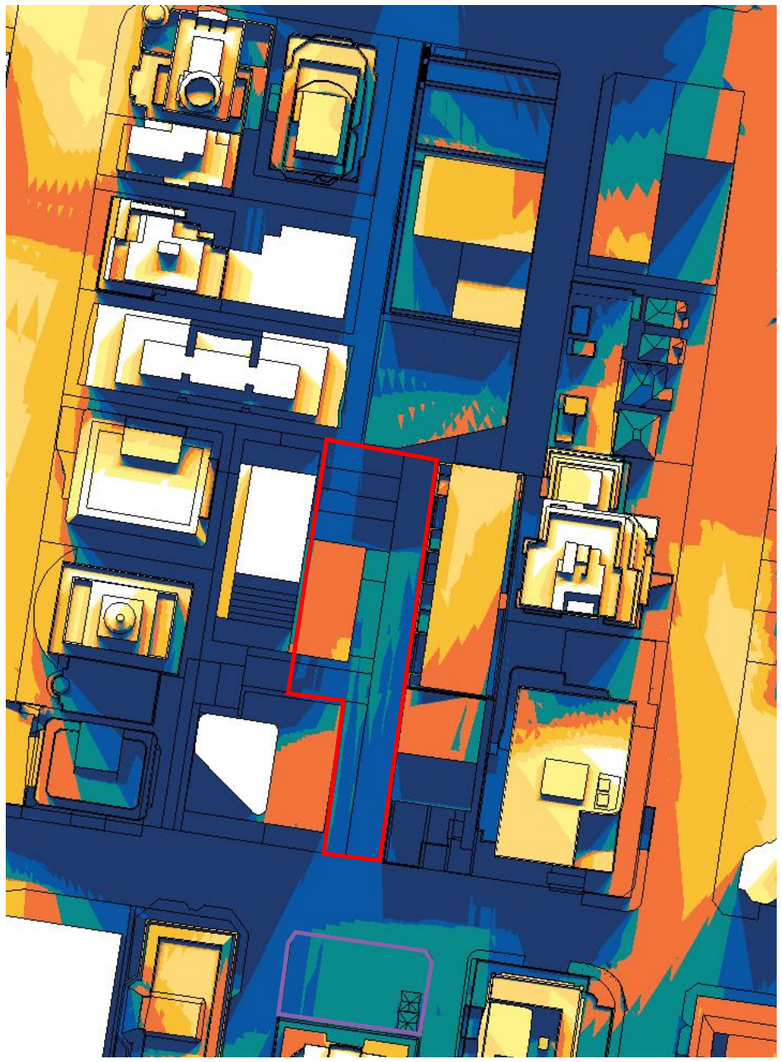
Note: Shadow analysis is based on a 3D model of North Sydney Centre from AMM, approved DA drawings and key RL's have been survey checked. It is considered the modelling is accurate to within 200mm.

N 1 0 10 20 50 100M

A.1.13 Shadow diagrams - solar access to NOC Square and Berry Square equinox 23 September - Visionary Master Plan

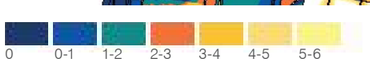
Solar access to key open spaces - hours of solar access (midwinter 21 June)

Ward Street Precinct Draft Master Plan



Alternative Master Plan

Visionary Master Plan



Number of hours of solar access between 9am-15pm (June 21)

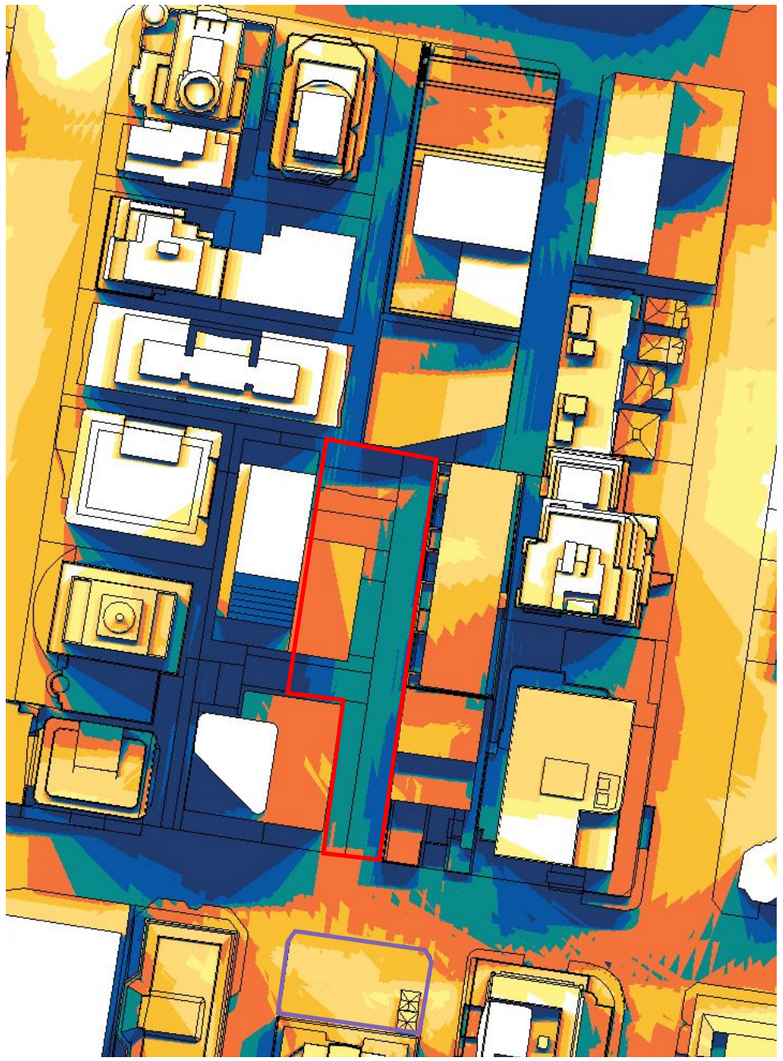
Proposed N.O.C Square

Berry Square

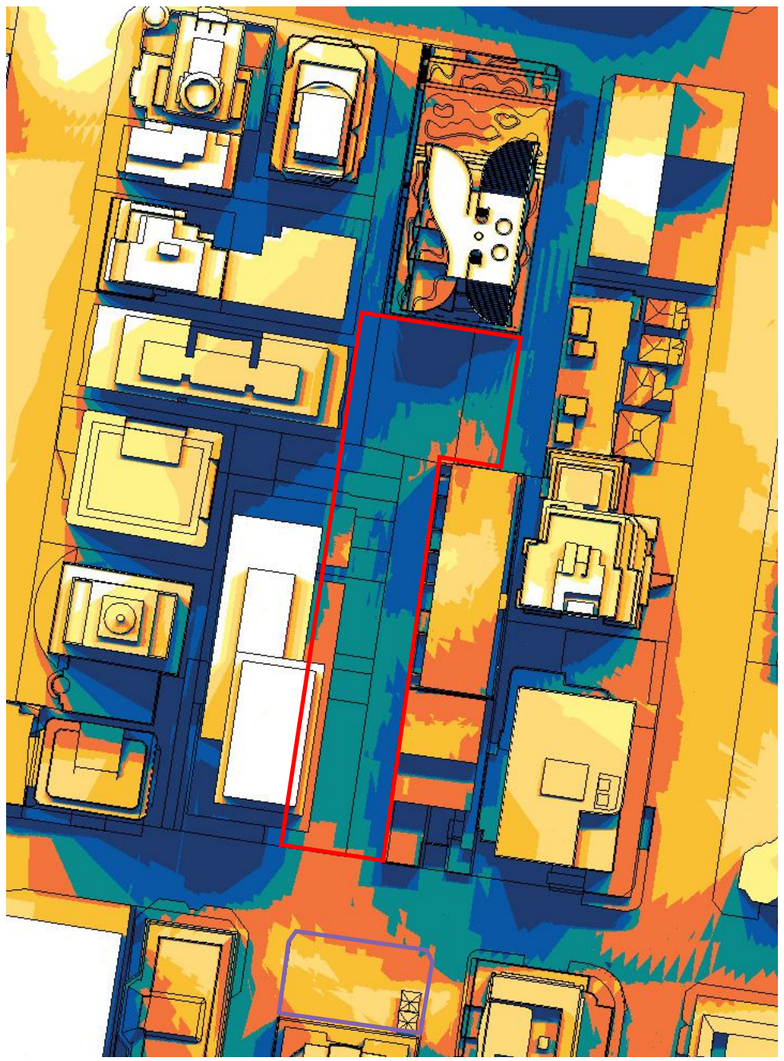
A.1.14 Hours of solar access to key open spaces - midwinter 21 June

Solar access to key open spaces - hours of solar access (equinox 23 September)

Ward Street Precinct Draft Master Plan



Alternative Master Plan



Visionary Master Plan

0 0-1 1-2 2-3 3-4 4-5 5-6

Number of hours of solar access between 9am-15pm (September 23)

N 1 0 5 10 25 50M

Proposed N.O.C Square

Berry Square

A.1.15 Hours of solar access to key open spaces - equinox 23 September

A.2

Solar access assessment - existing residential

architectus™

The adjacent table provides an overview of sun access to neighbouring buildings within the Draft Ward St Precinct Master Plan, Alternative Master Plan and Visionary Master Plan.

It is compared against the SEPP65 standard of 2 hours sun access 9am-3pm. Typical floor plans for relevant buildings are included on the previous page and have been used to understand the number of affected apartments.

Even under the draft Ward St Precinct Master Plan, 221 and 229 Miller St do not achieve the SEPP65 Apartment Design Guide guideline of 2 hours sun access for 70% of apartments. This is typical of dense urban centres such as North Sydney. Both the Alternative and Visionary Master Plans will increase the number of apartments receiving below 2 hours by 9% for 229 Miller St, 16% for 221 Miller St and 4% for 126-140 Walker St.

A reduction of this nature is reasonable for development in dense urban centres and will be comparable to the effects of other recently approved developments (e.g. 229 Miller St upon 221 Miller St).

Also, reduction in solar access amenity should be balanced with the amenity and activities of an improving and expanding North Sydney Centre.

		Apartments receiving below 2 hours solar access - mid winter)			
Street Address	Total no. of apartments	Draft Ward Street Precinct Master Plan (%)	Alternative (%)	Visionary (%)	Change (%)
1. 229 Miller Street	99	54%	63%	63%	9%
2. 221 Miller Street	283	55%	71%	71%	16%
3. 136-140 Walker Street	195	27%	31%	31%	4%

A.2.1 Summary table - solar access to key residential buildings

Location Map N 0 20 50 100 250M

1 229 Miller St
2 221 Miller St
3 136-140 Walker St

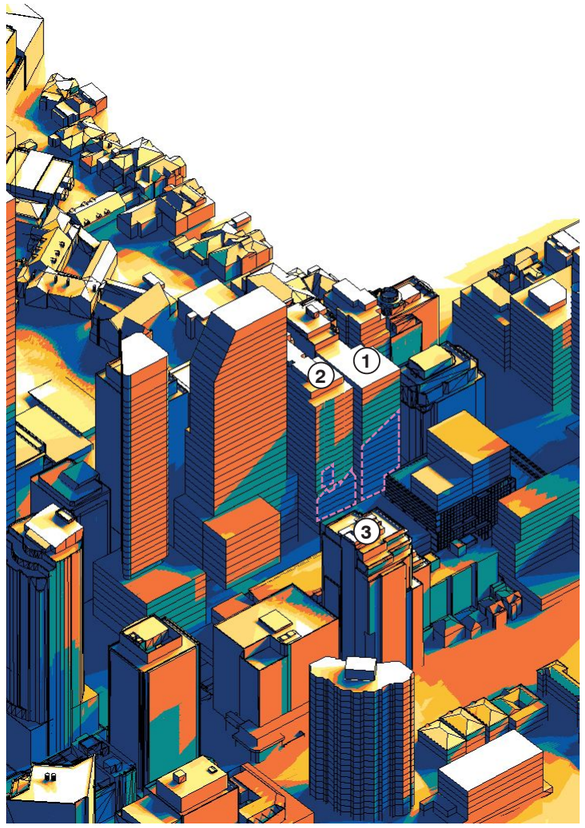
Areas receiving less than 2 hours solar between 9am-3pm (Draft Ward Street Precinct Master Plan)

0 0-1 1-2 2-3 3-4 4-5 5-6

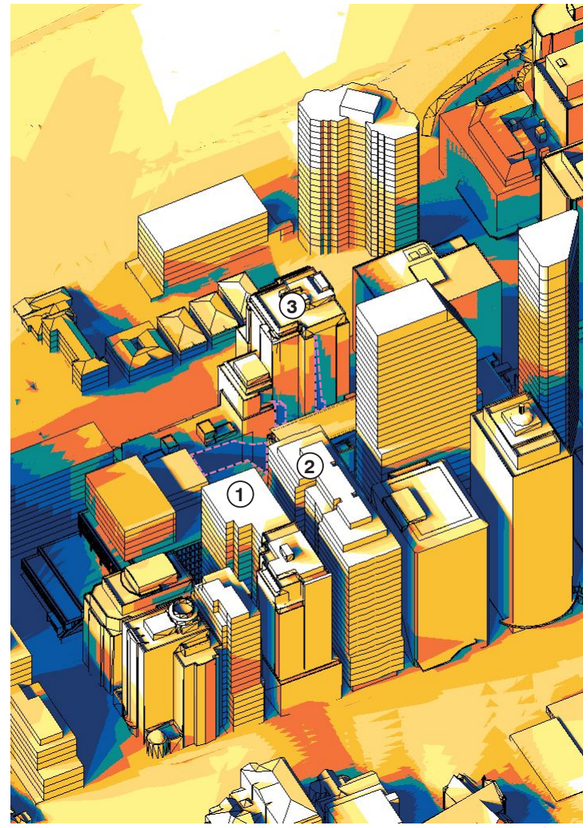
Number of hours of solar access between 9am-3pm (midwinter)

A.2.2 Hours of solar access to apartments

Draft Ward Street Precinct Master Plan



Hours of solar access midwinter (21 June) - view northwest



Hours of solar access midwinter (21 June) - view southeast

architectus™

1 229 Miller St
2 221 Miller St
3 136-140 Walker St

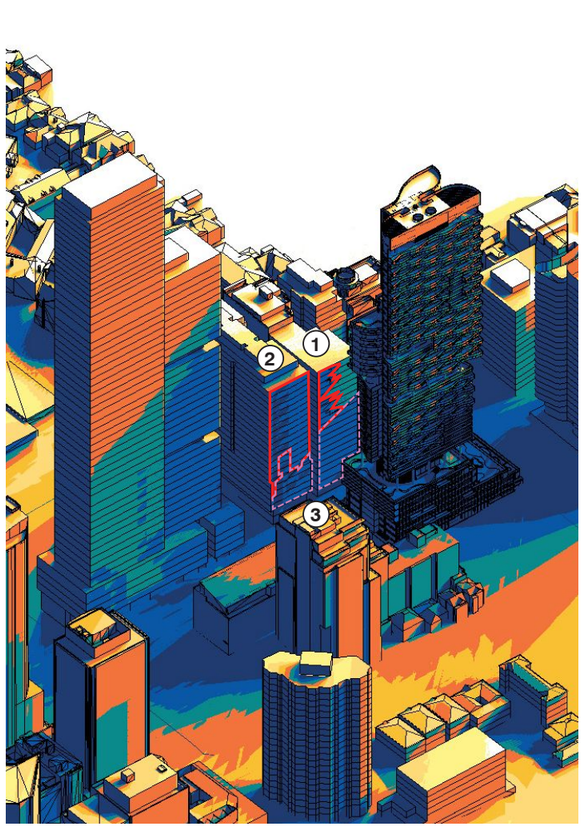
Additional areas receiving less than 2 hours solar access between 9am-3pm

Areas receiving less than 2 hours solar between 9am-3pm (Draft Ward Street Precinct Master Plan)

0 0-1 1-2 2-3 3-4 4-5 5-6

Number of hours of solar access between 9am-3pm (midwinter)

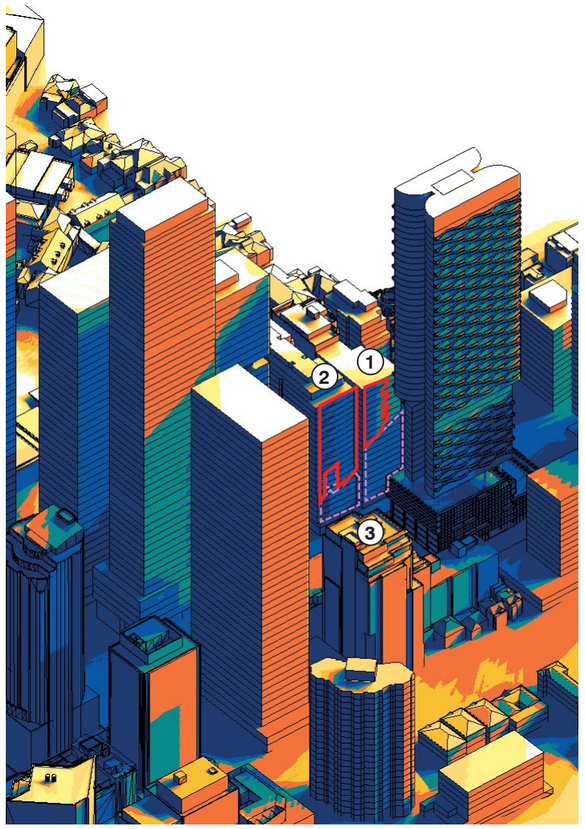
Alternative Master Plan



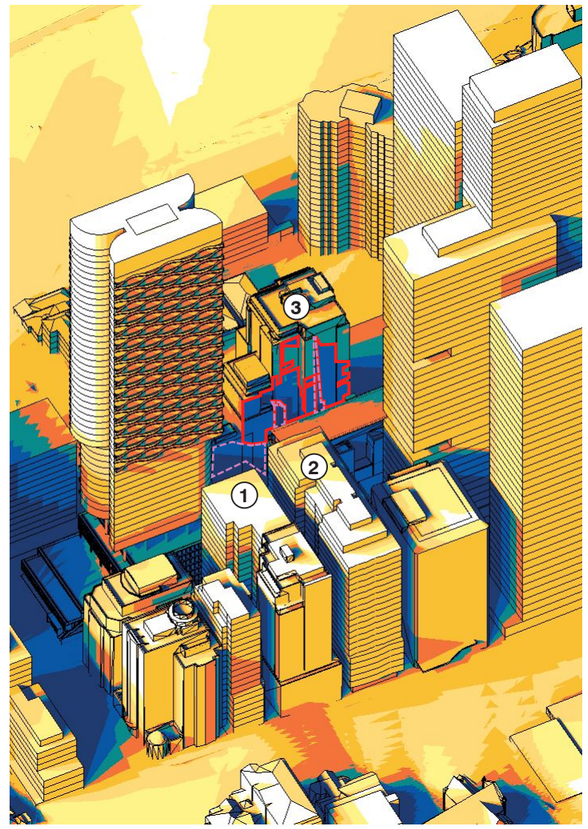
Hours of solar access midwinter (21 June) - view northwest

Hours of solar access midwinter (21 June) - view southeast

Visionary Master Plan



Hours of solar access midwinter (21 June) - view northwest



Hours of solar access midwinter (21 June) - view southeast

No Overshadowing east of Warringah Freeway

The North Sydney Centre Capacity and Land Use Study proposes a no overshadowing control of areas outside of the North Sydney Centre between 10am-2pm midwinter. The Draft Master Plan and the proposed Alternative Master Plan and Visionary Master Plan do not cause any overshadowing east of Warringah Freeway at 2pm. The Visionary Master Plan describes the maximum height possible at 41 McLaren St (RL250) and surrounding opportunity sites, which maximises development potential particularly within the context of the proposed Victoria Cross metro station.

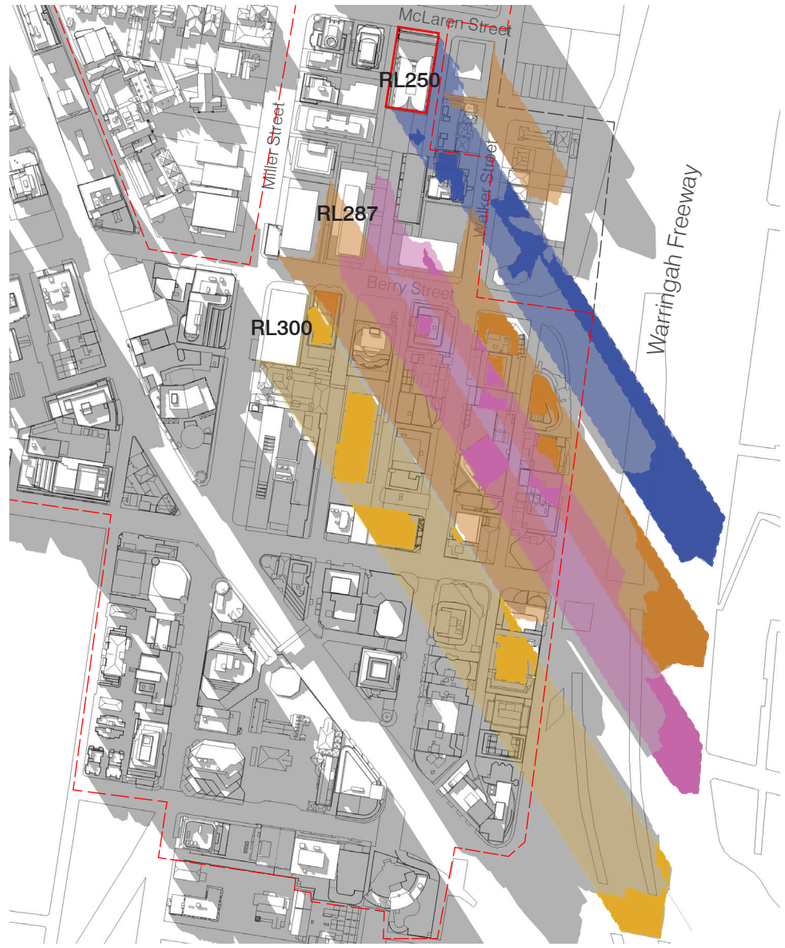
The diagrams below include the proposed widening of the North Sydney Centre boundary to include the area east of the site so that the whole of the Ward Street Precinct is within the North Sydney Centre.

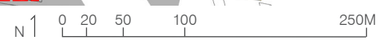
- Site boundary
- North Sydney Centre boundary
- Proposed expansion of North Sydney Centre boundary
- Additional overshadowing of 41 McLaren St
- Additional overshadowing of 20 Ward St, 56 Berry St, 66 Berry St
- Additional overshadowing of proposed buildings in Visionary Master Plan
- Additional overshadowing of Metro Tower

Draft Ward Street Precinct Draft Master Plan

Alternative Master Plan

Visionary Master Plan





A.2.3 Shadow diagram - additional overshadowing at 2pm midwinter 21 June

Summary Schedule (1)

	Existing development sites	Draft Ward Street Precinct Master Plan - from Council documents				Draft Ward Street Precinct Master Plan - Architectus reassessment				Alternative Master Plan			
	GFA	GBA	GFA	NLA	Additional GFA	GBA	GFA	NLA	Additional GFA	GBA	GFA	NLA	Additional GFA
Retail	0	2876	1652	N/A		2822	2523	2144		N/A	2216	1918	
Commercial	22239	19176	29066	N/A	6827	N/A	28784	24123	6545	N/A	56828	51791	34589
Community	0	4328	5101	N/A		5315	4518	3840		N/A	6237	5301	
Hotel	0	10871	10629	N/A		12249	10412	8850		N/A	13274	8022	
Residential	3336	23667	21641	N/A	18305	25307	21512	18285	18176	N/A	32889	26860	29553
Total	25575	60918	68089	N/A	25132	N/A	67749	57242	24721	N/A	111444	93892	64142

Figure 8.11.3 Master Plan summary schedule

		Draft Ward Street Precinct Master Plan - from Council documents		Draft Ward Street Precinct Master Plan - Architectus reassessment		Alternative Master Plan	
	Existing apartments	Proposed apartments	Additional apartments	Proposed apartments	Additional apartments	Proposed apartments	Additional apartments
Apartments	37	240	203	239	202	365	328

Figure 8.11.4 Comparison summary - number of apartments (90sqm GFA / apartment)

(1) General assumptions:
- For existing (56 Berry St, 66 Berry St and 45 McLaren St) calculations based on approximate floor plates and number of levels .
- Average 90sqm GFA (approx. 76.5sqm NSA) average unit size.

Efficiency assumptions used are:
- 85% efficiency from GBA to GFA, 85% efficiency from GFA to NLA.
- Efficiencies for 41 Mclaren St in the Alternative Master Plan is based on detailed architectural design by Harry Seidler and Associates.

(2) The development sites identified in the Draft Master Plan are:
- 20 Ward St (Council carpark)
- 56-66 Berry St (two office buildings fronting Berry St)
- 41 McLaren St (existing office building)
- 45 McLaren St (existing residential flat building)
- 70-74 Berry St (redundant Ausgrid substation site)

Summary schedule - assumed existing

	Existing GFA
41 McLaren St	
Commercial	10148
56 Berry St*	
Commercial	7425
66 Berry St*	
Commercial	4666
20 Ward St (Council site)	
Carpark	
70-74 Berry St (Ausgrid)	
Substation site	
45 McLaren St	
Residential	3336
Totals	
Commercial	22239
Residential	3336

Figure 8.11.5 Summary schedule - assumed existing on relevant development sites

*Calculations based on approximate floor plates and number of levels

Efficiency assumptions:
- 85% efficiency from GBA to GFA
- 41 McLaren St based on existing commercial efficiencies

Note: **All figures on this page are based on Architectus' modelling of the Ward Street Precinct Master Plan** (from plans in the Master Plan document). Typical efficiency calculations have been used as described. Council's figures have not been used due to discrepancy in some areas (e.g. GFA figures which are greater than the floor plate area described; upper levels described as having greater floorplate area than lower levels despite not appearing this way in the model)

Draft Ward Street Precinct Master Plan (derived from Council documents)

A. 56/66 Berry St

	GFA	
Total Retail	364	
Total Commercial	5095	
Total Hotel	10629	280 hotel keys dependant on mix

	No. Levels	RL	Height (m)	GBA (m²)	GFA (m²)	NLA (m²)
Basement						
Total						
Ground Retail		67	6	944	364	
Typical commercial podium level	5	73	3.8	944	1018.95	
Commercial		92	19	4720	5094.77	
Conference facilities	1	92	3.1	945	923.93	
Hotel recreation	1	95.1	3.9	262	256.16	
Typical hotel tower level	31	99	3.1	302	320.1	
Hotel Rooms	30	192	93	9060	8857.96	
Penthouse	1	192	7	302	295.27	
Hotel recreation	1	199	7	302	295.27	
Grand Total		**206**	**139**	**16535**	**16087**	

B. 20 Ward St (Council site)

	GFA	
Total (Retail)	463	
Total Community	5101	
Total Commercial	12010	
Total Residential	9850	50-85 apartments dependant on mix

	No. Levels	RL	Height (m)	GBA (m²)	GFA (m²)	NLA (m²)
Basement						
Total						
Ground Retail		68	6	965	463	
Community		74	6	965	1137.35	
Community - separate	4			2444	2880.50	
Typical commercial podium level	7	80	3.8	1195	1135.25	
Commercial		106.6	26.6	8365	7946.75	
Community	1	106.6	4.8	919	1083.13	
Typical commercial tower level	7	111.4	3.8	611	580.45	
Commercial		138	26.6	4277	4063.15	
Plant	1	138	3.1	611		
Typical residential tower level	12	141.1	3.1	689	592.54	
Residential		178.3	37.2	8268	7131.15	
Residential L30		178.3	3.1	689	594.2625	
Residential L31		181.4	3.1	658.7	568.12875	
Residential L32		184.5	3.1	630.1	543.46125	
Residential L33		187.6	3.1	601.5	518.79375	
Residential L34		190.7	3.1	572.9	494.12625	
Plant	1	193.8	6	544.34		
Grand Total		**200**	**132**	**30511**	**27424**	

C. 41 McLaren St

	GFA	
Total Commercial	10148	
Total Residential	3363	30 apartments

	No. Levels	RL	Height (m)	GBA (m²)	GFA (m²)	NSA (m²)
Basement						
Total						
Ground Floor	1	69.5	3.2		1616	
Level 1	1	72.69	3.2		1667	
Level 2	1	75.89	3.2		1454	
Level 3	1	79.09	3.2		1581	
Level 4	1	82.27	3.2		1265	
Level 5	1	85.45	3.2		1265	
Level 6	1	88.65	3.2		1300	
					10148	
Roof	1	91.87	3			
Residential lower typical	3	94.9	3	915	786	
Residential lower		104	9	2745	2357	
Residential upper typical	2	104	3	586	503	
Residential upper		110	6	1172	1006	
Grand Total		**110**	**40**		**13511**	

Note: All figures on this page are derived from the draft Ward St Precinct Master Plan document. Note there are several discrepancies in the figures - e.g. GFA figures are greater than GBA figures in some instances. The next set of tables is Architectus' reassessment of the Draft Master Plan.

Figure 8.11.6 Draft Ward Street Precinct Master Plan schedule (Council)

D. 70-74 Berry St

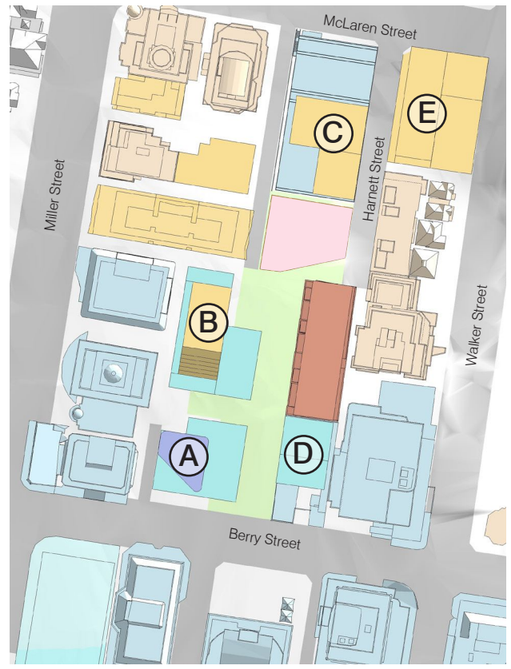
	GFA
Total Retail	825
Total Commercial	1813

	No. Levels	RL	Height (m)	GBA (m²)	GFA (m²)	NLA (m²)
Basement						
Total						
Retail	1	66	13.0		825	
Typical level lower	2	79.8	3.8	563	563	
Commercial		87.4	8.4	1126	1125	
Typical level upper	2	87.4	3.8	344	344	
Commercial		95	7.6	688	688	
Grand Total		**95**	**29**		**1813**	

E. 45 McLaren St

	GFA	
Total Residential	8428	90 apartments

	No. Levels	RL	Height (m)	GBA (m²)	GFA (m²)	NSA (m²)
Basement						
Total						
Lower Ground Floor	1	62	3.1	315	299	
Ground Floor	1	65.1	3.1	843	800	
Typical podium level	6	68.2	3.1	828	786	
Residential		86.8	18.6	4968	4715	
Typical tower level	4	85.45	3.1	551	523	
Residential		97.85	12.4	2204	2092	
Grand Total		**98**	**37**	**8330**	**8428**	



Draft Ward Street Precinct Master Plan

N 1 0 10 20 50 100M

- Existing commercial
- Existing residential
- Future commercial
- Future residential
- Future community facilities
- Future hotel
- Substation site
- Berry Square
- Proposed N.O.C Square

Note: **All figures on this page are based on Architectus' modelling of the Ward Street Precinct Master Plan** (from plans in the Master Plan document). Typical efficiency calculations have been used as described. Council's figures have not been used due to discrepancy in some areas (e.g. GFA figures which are greater than the floor plate area described; upper levels described as having greater floorplate area than lower levels despite not appearing this way in the model)

Draft Ward Street Precinct Master Plan (derived from Architectus reassessment)

A. 56/66 Berry St

	GFA	NLA	
Total Retail	878	746	
Total Commercial	4388	3730	
Total Hotel	10412	8850	255 hotel keys dependant on mix

	No. Levels	RL	Height (m)	GBA (m^2)	GFA (m^2)	NLA (m^2)
Basement	2	58	3	1503		
Total		64	6	3006		
Ground Retail		67	6	1032.57	877.7	746.03
Typical commercial podium level	5	73	3.8	1032.57	877.68	746.03
Commercial		92	19	5162.84	4388.42	3730.15
Conference facilities	1	92	3.1	1032.57	877.68	746.03
Hotel recreation	1	95.1	3.9	265.02	225.27	191.48
Typical hotel tower level	31	99	3.1	342.23	290.9	290.89
Hotel Rooms	30	192	93	10266.852	8726.82	7417.80
Penthouse	1	192	7	342.23	290.89	247.26002
Hotel recreation	1	199	7	342.23	290.89	247.26002
Grand Total		**206**	**139**	**18444**	**15678**	**12580**

Maximum parking rates and expected basement levels

Car parking	rate assumed	sqm GFA	spaces reqd	sqm basement / space	sqm reqd
Retail	1/100sqm GFA**	878	9	36	316
Hotel	1/5 bedrooms	(255 rooms)	51	36	1836
Commercial	1/400sqm GFA	4388	11	36	395
Total		**5266**	**71**		**2547**
Area of basement (sqm)					**1503**
Basement storeys required					**1.7**

** retail rate based on approximation of different uses
- may include food and drink 1 space / 50sqm, commercial 1 space / 400sqm

Note: efficiency assumptions used are:
- 85% efficiency from GBA to GFA
- 85% effficency from GFA to NLA

B. 20 Ward St (Council site)

	GFA	NLA	
Total Retail	820	697	
Total Community	4518	3840	
Total Commercial	12706	10800	
Total Residential	8875	7544	98 apartments

	No. Levels	RL	Height (m)	GBA (m^2)	GFA (m^2)	NLA (m^2)
Basement	3	50	3	1792		
Total		59	9	5376		
Ground Retail		68	6	965	820.25	697.21
Community		74	6	965	820.25	697.21
Community - separate	3			2759.36	2345.45	1993.64
	1			853.40	725.39	616.58
Typical commercial podium level	7	80	3.8	1398.11	1188.40	1010.14
Commercial		106.6	26.6	9786.80	8318.78	7070.97
Community	1	106.6	4.8	737.38	626.77	532.76
Typical commercial tower level	7	111.4	3.8	737.38	626.77	532.76
Commercial		138	26.6	5161.67	4387.42	3729.31
Plant	1	138	3.1	737.38		
Typical residential tower level	12	141.1	3.1	632.68	537.77	457.11
Residential		178.3	37.2	7592.11	6453.30	5485.30
Residential L30		178.3	3.1	623.68	530.12	450.61
Residential L31		181.4	3.1	596.75	507.24	431.15
Residential L32		184.5	3.1	569.82	484.35	411.70
Residential L33		187.6	3.1	542.90	461.46	392.24
Residential L34		190.7	3.1	515.97	438.57	372.79
Plant	1	193.8	6	489.04		
Grand Total		**200**	**132**	**32896**	**26919**	**22184**

Maximum parking rates and expected basement levels

Car parking	Rate assumed	sqm GFA	spaces reqd	sqm basement / space	sqm reqd
Retail	1/100sqm GFA**	820	8	36	295
Community	0 assumed	4518	0	36	0
Commercial	1/400sqm GFA	12706	32	36	1144
Residential	0.95 / 90sqm GFA *	8875	94	42	3935
Total		**26919**	**134**		**5373**
Area of basement (sqm)					**1792**
Basement storeys required					**3**

** Retail rate based on approximation of different uses
- may include food and drink 1 space / 50sqm, commercial 1 space / 400sqm

* Assumes:
- 10% studio/1 bed (0.5 space / dw), 90% 2 bed (1 space / dw) - average 0.95 spaces / dwelling
- average 90sqm GFA (approx. 76.5sqm NSA) average unit size

Note: efficiency assumptions used are:
- 85% efficiency from GBA to GFA
- 85% effficency from GFA to NLA

Note: **All figures on this page are based on Architectus' modelling of the Ward Street Precinct Master Plan** (from plans in the Master Plan document). Typical efficiency calculations have been used as described. Council's figures have not been used due to discrepancy in some areas (e.g. GFA figures which are greater than the floor plate area described; upper levels described as having greater floorplate area than lower levels despite not appearing this way in the model)

Figure 8.11.7 Draft Ward Street Precinct Master Plan schedule (Architectus reassessment)

C. 41 McLaren St

	GFA	NSA	
Total Commercial	10148	8282	
Total Residential	3385	2877	37 apartments

	No. Levels	RL	Height (m)	GBA (m²)	GFA (m²)	NSA (m²)
Basement						
Total						
Ground Floor	1	69.5	3.2		1616	1216
Level 1	1	72.69	3.2		1667	1637
Level 2	1	75.89	3.2		1454	1454
Level 3	1	79.09	3.2		1581	1011
Level 4	1	82.27	3.2		1265	1016
Level 5	1	85.45	3.2		1265	1046
Level 6	1	88.65	3.2		1300	902
					10148	
Roof	1	91.87	3			
Residential lower typical	3	94.9	3	927.86	789	670.38
Residential lower		104	9	2783.58	2366	2011.14
Residential upper typical	2	104	3	599.16	509	432.89
Residential upper		110	6	1198.32	1019	865.79
Grand Total		110	40		10148	8282

Maximum parking rates and expected basement levels

Car parking	Rate assumed	sqm GFA	spaces reqd	sqm basement / space	sqm reqd
Commercial	As existing	10148	91	36	3276
Residential	0.95 / 90sqm GFA *	3385	36	42	1501
Total		13533	127		4777
Area of basement (sqm)					2377
Basement storeys required					2.01

* Assumes:
- 10% studio/1 bed (0.5 space / dw), 90% 2 bed (1 space / dw) - average 0.95 spaces / dwelling
- average 90sqm GFA (approx. 76.5sqm NSA) average unit size

Note: efficiency assumptions used are:
- For commercial, existing commercial efficiencies are used
- For residential; 85% efficiency from GBA to GFA, 85% effficency from GFA to NLA

D. 70-74 Berry St

	GFA	NLA
Total Retail	825	701
Total Commercial	1542	1311

	No. Levels	RL	Height (m)	GBA (m²)	GFA (m²)	NLA (m²)
Basement						
Total						
Retail	1	66	13.0		825	701.25
Typical level lower	2	79.8	3.8	563	479	406.77
Commercial		87.4	8.4	1126	957	813.54
Typical level upper	2	87.4	3.8	344	292	248.54
Commercial		95	7.6	688	585	497.08
Grand Total		95	29	1814	1542	1311

Maximum parking rates and expected basement levels

Car parking	rate assumed	sqm GFA	spaces reqd	sqm basement / sqm reqd	
Retail	1/100sqm GFA**	825	8	36	297
Commercial	1/400sqm GFA	1542	4	36	139
Total		2367	12		436
Area of basement (sqm)					967
Basement storeys required					0.5

** retail rate based on approximation of different uses
- may include food and drink 1 space / 50sqm, commercial 1 space / 400sqm

Note: efficiency assumptions used are:
- 85% efficiency from GBA to GFA
- 85% effficency from GFA to NLA

E. 45 McLaren St

	GFA	NSA	
Total Residential	9252	7864	102 apartments

	No. Levels	RL	Height (m)	GBA (m²)	GFA (m²)	NSA (m²)
Basement						
Total						
Lower Ground Floor	1	62	3.1	528	449	381.48
Ground Floor	1	65.1	3.1	1393	1184	1006.44
Typical podium level	6	68.2	3.1	1038	882	749.96
Residential		86.8	18.6	6228	5294	4499.73
Typical tower level	4	85.45	3.1	684	581	494.05
Residential		97.85	12.4	2735.2	2325	1976.18
Grand Total		98	37	10884	9252	7864

Maximum parking rates and expected basement levels

Car parking	Rate assumed	sqm GFA	spaces reqd	sqm basement / space	sqm reqd
Residential	0.95 / 90sqm GFA *	9252	98	42	4102
Area of basement (sqm)					1709
Basement storeys required					2.40

* Assumes:
- 10% studio/1 bed (0.5 space / dw), 90% 2 bed (1 space / dw) - average 0.95 spaces / dwelling
- average 90sqm GFA (approx. 76.5sqm NSA) average unit size

Note: efficiency assumptions used are:
- For residential; 85% efficiency from GBA to GFA, 85% effficency from GFA to NSA

Note: **All figures on this page are based on Architectus' modelling of the Ward Street Precinct Master Plan** (from plans in the Master Plan document). Typical efficiency calculations have been used as described. Council's figures have not been used due to discrepancy in some areas (e.g. GFA figures which are greater than the floor plate area described; upper levels described as having greater floorplate area than lower levels despite not appearing this way in the model)

Alternative Master Plan

A. 20 Ward St/56 Berry St/66 Berry St

	GFA	NLA		
Total Retail	**1391**	**1217**		
Total Community	**6237**			
Total Commercial	**48001**	**44006**		
Total Hotel	**13274**		224	Keys

	No. Levels	RL	Height (m)	GBA (m^2)	GFA (m^2)	NLA/NSA (m^2)	Typical King 32m^2	Junior Suites 48m^2	Assessable 32m^2
Basment									
Total									
Ground Hotel Lobby	1	67	6.7	1478	301				
Ground Commercial Lobby					395				
Community Facilities Lobby					36				
Ground Retail					465	465			
Mezzanine Retail	1	73.7	4	1295	926	752			
Mezzanine Hotel					88				
Typical Podium Level	3	77.7	3.7	2397	2067				
Total			11.1	7191	6201				
Plant Level	1	88.8	5.5	2506					
Typical Low Rise Level	10	94.3	3.7	1735	1454	1344			
Total			37	17350	14540	13440			
Transfer 1	1	131.3	4.5	1489	1210	1071			
Plant Level	1	135.8	5.5	2506					
Typical Mid Rise Level	10	141.3	3.7	1735	1507	1395			
Total			37	17350	15070	13950			
Transfer 2	1	178.3	4.5	1472	1246	1105			
Typical High Rise Level	10	182.8	3.7	1735	1554	1444			
Total			37	17350	15540	14440			
Plant Level	1	219.8	5.5	1735					
Hotel Facilities (Pool Deck)	1	225.3	4	1103	977				
Hotel Restaurant & Bar	1	229.3	4	836	720				
Hotel Function Space	1	233.3	4.5	836	716				
Typical Hotel Levels	14	237.8	3.1	840	748	573	14	1	1
Total			43.4	11760	10472		196	14	14
Plant Level	1	281.2	5.8	750					
Grand Total	**58**	**287**	**220**	**87007**	**68903**				

Maximum parking rates and expected basement levels

Car parking	rate assumed	sqm GFA	spaces reqd	sqm basement / space	sqm reqd
Retail	1/100sqm GFA*	1391	14	36	501
Community	0 assumed	6201	0	0	0
Hotel	1/5 bedrooms	(224 rooms)	45	36	1613
Commercial	1/400sqm GFA	47606	119	36	4285
Total		**55198**	**178**		**6398**
Area of basement (sqm)					**4862**
Basement storeys required					**1.3**

* Retail rate based on approximation of different uses
- may include food and drink 1 space / 50sqm, commercial 1 space / 400sqm

B. 41 McLaren St

	GFA	NLA	
Total Commercial	7285	6474	
Total Residential	23637	19496	224 apartments
Carpark			219 spaces

	No. Levels	RL	Height (m)	GBA (m^2)	GFA (m^2)	NLA (m^2)	studio	1bed	2bed	3bed	4bed
Basement	5										
Total											
Ground Floor	1	69.5	3.2		819	664					
Ground Floor	1	69.5	3.2		372						
Level 1	1	72.69	3.2		799	773					
Level 1	1	72.69	3.2		142						
Level 2	1	75.89	3.2		1536	1410					
Level 3	1	79.09	3.2		1057	931					
Level 4	1	82.27	3.2		1073	947					
Level 5	1	85.45	3.2		1073	947					
Level 6	1	88.65	3.2		928	802					
Roof (Level 7)	1	92	5		221						
Plant room Level 8	1	97.4	4.1		0.0						
Typical tower level A	11	101.9	3.2		683.0	579					
Levels 9-19		101.9	35.2		7469.0	6325.0	22	21	38	6	
Typical tower level B	2	137.1	3.2		540.0	445					
Level 20-21 (Penthouse)		137.1	6.7		958.0	773					4
Typical tower level C	5	143.8	3.2		763.0	655					
Levels 22-26		143.8	16.0		3817.0	3280		20	15	5	
Typical tower level D	2	159.8	3.2		722.0	619					
Levels 27-28 (Penthouse)		159.8	6.4		1412.0	1208		6	4	2	1
Typical tower level E	6	166.2	3.2		500.0	207					
Levels 29-34		166.2	19.2		3537.0	2990		15	12	7	
Typical tower level F	8	185.4	3.2		569.0	489					
Levels 35-42		185.4	25.6		4532.0	3894.0		16	16	8	
Typical tower level G	1	211.0	3.2		473.0	399					
Level 43 (Penthouse)		211.0	3.2		473.0	399			1	2	
Typical tower level H	2	214.2	3.2								
Level 44-45 (Penthouse)		214.2	6.9		704	627				2	1
Plant room	1	221.1	3.5								
Roof		225	1.2								
Residential tower											
Grand Total		**225.80**	**156**		**30922**	**25970**	**22**	**78**	**86**	**32**	**6**

C. 70-74 Berry St

	GFA	NLA
Total Retail	**825**	**701**
Total Commercial	**1542**	**1311**

	No. Levels	RL	Height (m)	GBA (m²)	GFA (m²)	NLA (m²)
Basement						
Total						
Retail	1	66	13.0		825	701.25
Typical level lower	2	79.8	3.8	563	479	406.77
Commercial		87.4	8.4	1126	957	813.54
Typical level upper	2	87.4	3.8	344	292	248.54
Commercial		95	7.6	688	585	497.08
Grand Total		**95**	**29**	**1814**	**1542**	**1311**

Maximum parking rates and expected basement levels

Car parking	rate assumed	sqm GFA	spaces reqd	sqm basement / sqm reqd
Retail	1/100sqm GFA**	825	8	36 297
Commercial	1/400sqm GFA	1542	4	36 139
Total		**2367**	**12**	**436**
Area of basement (sqm)				**967**
Basement storeys required				**0.5**

** retail rate based on approximation of different uses
- may include food and drink 1 space / 50sqm, commercial 1 space / 400sqm

Note: efficiency assumptions used are:
- 85% efficiency from GBA to GFA
- 85% effficency from GFA to NLA

D. 45 McLaren St

	GFA	NSA	
Total Residential	**9252**	**7864**	102 apartments

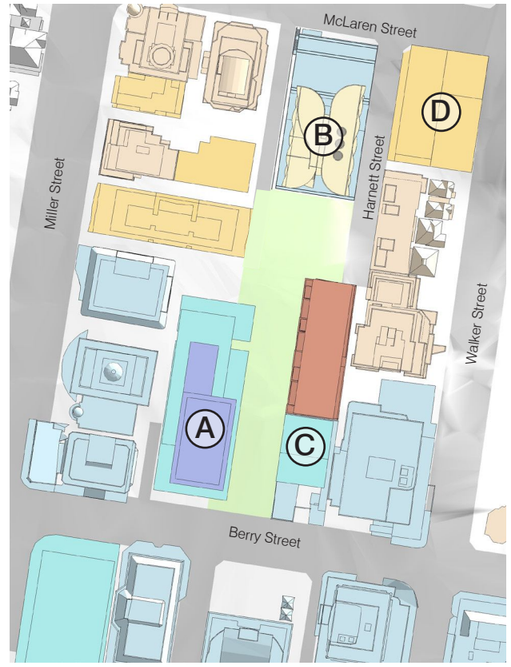
	No. Levels	RL	Height (m)	GBA (m²)	GFA (m²)	NSA (m²)
Basement						
Total						
Lower Ground Floor	1	62	3.1	528	449	381.48
Ground Floor	1	65.1	3.1	1393	1184	1006.44
Typical podium level	6	68.2	3.1	1038	882	749.96
Residential		86.8	18.6	6228	5294	4499.73
Typical tower level	4	85.45	3.1	684	581	494.05
Residential		97.85	12.4	2735.2	2325	1976.18
Grand Total		**98**	**37**	**10884**	**9252**	**7864**

Maximum parking rates and expected basement levels

Car parking	Rate assumed	sqm GFA	spaces reqd	sqm basement / space	sqm reqd
Residential	0.95 / 90sqm GFA *	9252	98	42	4102
Area of basement (sqm)					**1709**
Basement storeys required					**2.40**

* Assumes:
- 10% studio/1 bed (0.5 space / dw), 90% 2 bed (1 space / dw) - average 0.95 spaces / dwelling
- average 90sqm GFA (approx. 76.5sqm NSA) average unit size

Note: efficiency assumptions used are:
- For residential; 85% efficiency from GBA to GFA, 85% effficency from GFA to NSA



Alternative Master Plan

N 1 0 10 20 50 100M

- Proposed on Site
- Existing commercial
- Existing residential
- Future commercial
- Future residential
- Future community facilities
- Future hotel
- Substation site
- Berry Square
- Proposed N.O.C Square

Figure 8.11.8 Alternative Master Plan schedule

A.4 Visual Impact Assessment

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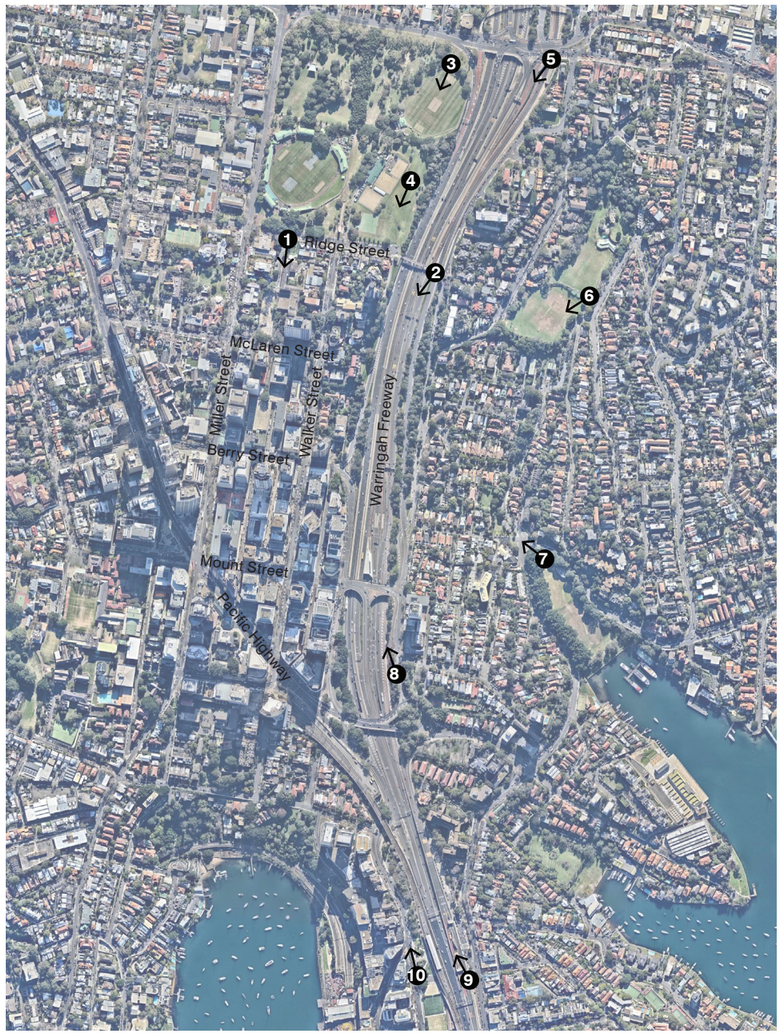
41 McLaren St
Approved DAs
Metro station

The accompanying photomontages show the visual impact of the Alternative Master Plan and the Visionary Master Plan from representative locations in the public domain including development approvals for towers not yet completed. The Seidler design for 41 McLaren St shows a detailed architectural design while the other envelopes provide future context; current approved DA's; a potential tower on the Metro Station and Architectus' recommendation for a potential tower with the amalgamation of 20 Ward St/56 Berry St/66 Berry St.



Location Map

Alternative Master Plan

1 View looking south from Ridge Street

3 View looking south from Bon Andrews Oval

2 View looking southwest from Ridge Street pedestrian bridge

4 View looking south from St Leonards Park

5 View looking southwest from Falcon Street overpass

7 View looking northwest from Anderson Park

9 View looking north from Cahill Expressway pedestrian path

6 View looking southwest from Forsyth Park

8 View looking northwest from Alfred Street North/High Street intersection

10 View looking north from Milsons Point Station forecourt

Visionary Master Plan

4 View looking south from Ridge Street

7 View looking south from Bon Andrews Oval

8 View looking southwest from Falcon Street overpass

5 View looking southwest from Ridge Street pedestrian bridge

6 View looking south from St Leonards Park

9 View looking southwest from Forsyth Park

10 View looking northwest from Anderson Park

9 View looking north from Cahill Expressway pedestrian path

12 View looking northwest from Alfred Street North/High Street intersection

10 View looking north from Milsons Point Station forecourt

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