SEPP 65 DESIGN VERIFICATION STATEMENT

PREPARED TO ACCOMPANY A SECTION 96 APPLICATION SUBMITTED TO THE DEPARTMENT OF PLANNING & INFRASTRUCTURE

Project Site Address

1 LAWSON SQUARE, REDFERN

Project Job Number

5578

Prepared on behalf of

LAWSON SQUARE PTY LTD.

Date

18 SEPTEMBER 2015

Prepared by

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SECTION 1.0 SUMMARY

This Design Verification Statement has been prepared on behalf of Lawson Square Pty Limited in support of a Section 96 Application to the Department of Planning & Infrastructure for the redevelopment of the site at 1 Lawson Square, Redfern.

The development involves:

- The redevelopment of the existing Tower 1 building to provide 1 storey of retail use and 17 storeys of residential apartments
- The redevelopment of the existing Tower 2 building to provide 5 storeys of commercial use and 13 storeys of residential apartments
- A mixture of studio units, one bed units, one bed + study units and two bed units, providing a total of 157 residential units
- Basement car parking for 20 cars, and the use of 80 car spaces at a nearby site
- Public domain landscaping works to all frontages

The following Council Codes and Planning Instruments provided the controls for the proposal:

- State Environmental Planning Policy No 55 – Remediation of Land;
- State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development and Apartment Design Guide (2015);
- State Environmental Planning Policy (Infrastructure) 2007;
- State Environmental Planning Policy (Major Development) 2005;
- State Environmental Planning Policy (State and Regional Development) 2011;
- Draft Redfern Centre Urban Design Guidelines;
- NSW Police Safer by Design Code; and
- Section 79C of the *Environmental Planning and Assessment Act 1979.*

This report is intended to be read in conjunction with the architectural plans prepared by Candalepas Associates Pty Limited and Wendy Lewin, Architect, as well as the following associated reports:

- Environmental Impact Statement prepared by JBA
- BASIX Report prepared by SLR Consulting

We confirm that Mr Angelo Candalepas of Candalepas Associates directed the design of the enclosed Section 96 application, which is represented by drawings (S96 1101-1105, 1201-1202, 1301-1304, 1401, 1851) and that Mr Candalepas is registered as an architect in accordance with the NSW Architects Act 2003.

We confirm that the enclosed documentation achieves the design principles set out in *State Environmental Planning Policy 65 - Design Quality of Residential Apartment Development* and has been designed with regards to the *Apartment Design Guide.*

SECTION 2.0 DESIGN EXCELLENCE

State Environmental Planning Policy (Major Development) 2005 includes the following requirements for design excellence under Schedule 3, Part 5 - The Redfern–Waterloo Authority Sites, Clause 22:

> *(2) In considering whether proposed development exhibits design excellence, the consent authority must have regard to the following matters:*
>
> *(a) whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved,*
>
> *(b) whether the form and external appearance of the building will improve the quality and amenity of the public domain,*
>
> *(c) whether the building meets sustainable design principles in terms of sunlight, natural ventilation, wind, reflectivity, visual and acoustic privacy, safety and security and resource, energy and water efficiency,*
>
> *(d) if a competition is held as referred to in subclause (3) in relation to the development, the results of the competition.*

These provisions are have been considered in conjunction with those of SEPP 65, and this report is intended to be read in the context of both SEPP controls.

Design Excellence through Architectural Collaboration

As a design competition was not deemed necessary in the Director General's Requirements for the proposed development, design excellence has instead been addressed through a collaborative between Candalepas Associates and Wendy Lewin. Wendy Lewin, Architect, is a highly respected professional, and was awarded the Royal Australian Institute of Architecture's 2007 Marion Mahoney Griffin Prize for her contribution to the architectural profession over twenty seven years.

The role of Wendy Lewin in the architectural design process allows an additional level of peer-review, and has introduced further detailed development of planning strategies and building systems that have benefitted the proposal over the course of its development.

The Design Development Option Studies that resulted from the above process have been included in Appendix B if this report.

SECTION 3.0 DESIGN QUALITY PRINCIPLES

PRINCIPLE NO. 1: CONTEXT AND NEIGHBOURHOOD CHARACTER

Good design responds and contributes to its context. Context is the key natural and built features of the area, their relationship and the character they create when combined.

The site of the proposed development is located at 1 Lawson Square, Redfern and can be identified as Lot 1 DP 1125312 and Lot 1 DP 396677.

The site has an area of 1,696.5 m² and is irregular in shape as it follows the road alignment of Lawson Square and Regent Street. The site has frontages to Lawson Square and Redfern Streets of approximately 60m and frontages to Gibbons Street and Regent Street of approximately 26m.

Two 12-storey towers of commercial uses currently occupy the site, with a shared single-level basement.

To the west, on the opposite side of Gibbons Street, is the Redfern Train Station and its associated rail corridor. The Redfern Railway Station building is an identified Heritage Item under the State Significant site listing in Schedule 3 of SEPP (Master Development) 2005, and the Redfern Station Group is listed under the NSW Heritage Act 1977.

To the north, on the opposite side of Lawson Square, is a 2 storey commercial building and a 7 storey mixed-use residential and commercial building. Neighbouring buildings to the east, and south of the site along Regent Street have predominate retail/commercial street frontages and are generally between 1 and 3 storeys high.

The development proposes to extensively renovate the existing towers, with the addition of a further 6 storeys. The proposed 18 storey development will provide commercial use, ground level retail space, and a total of 157 studio, one and two bedroom residential units.

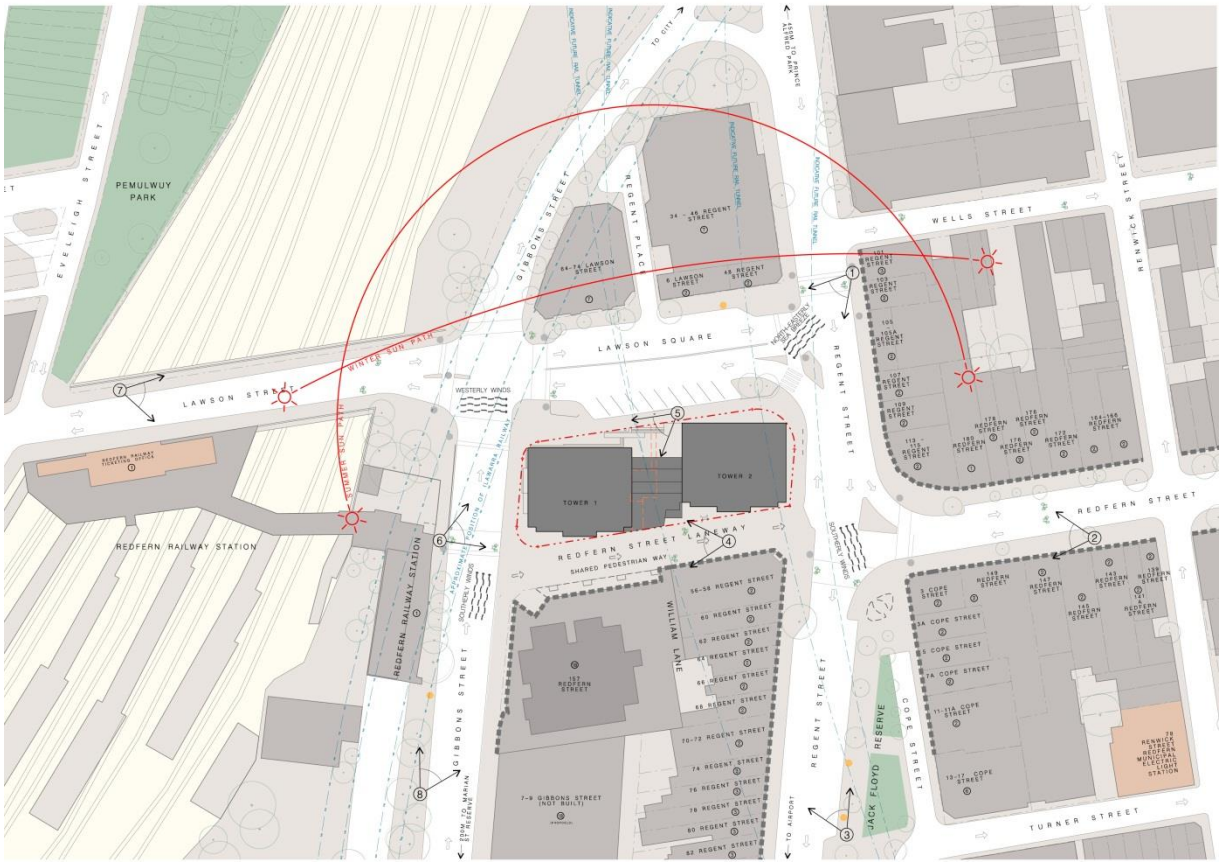


Figure (i). Site Plan & Context

The subject site falls within the Business Zone E – Commercial Core under the Major Development SEPP. The SEPP states that any use not prohibited in the zone is permitted with consent. The proposal for mixed commercial/residential uses is not listed as a prohibited use and is therefore acceptable.

The maximum Floor Space Ratio applied to the subject site is 7:1 with a central maximum height of 18 storeys and perimeter heights of 5 and two 2 storeys.

The proposal seeks to be a precedent for future development of the area. The development will help define a new context which is envisioned for the area and within which other residential development of a similar scale and height will be built. The proposed mixed use development seeks to make a positive contribution to the current and future character of the area and to set the standard for future high density residential building developments.

PRINCIPLE NO. 2: BUILT FORM & SCALE

Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and surrounding buildings.

Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements.

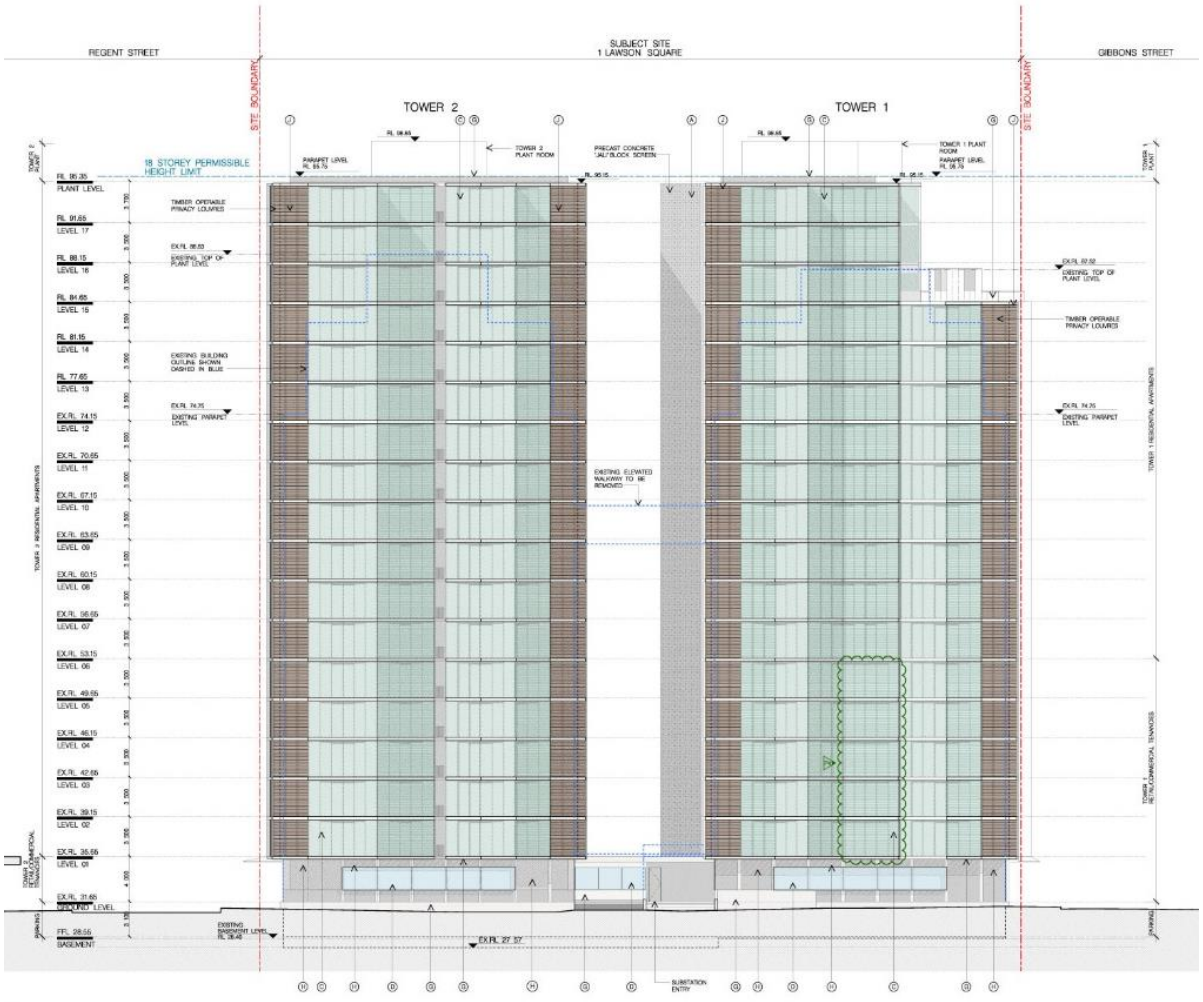


Figure (ii). North Elevation

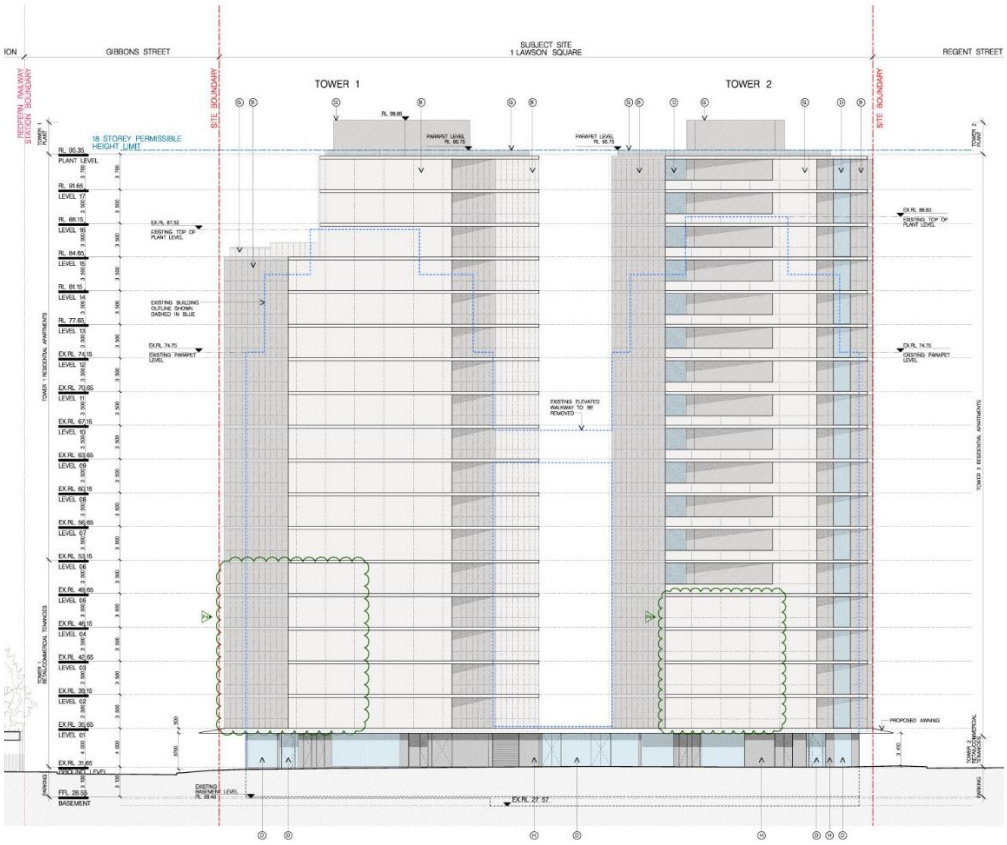


Figure (iii). South Elevation

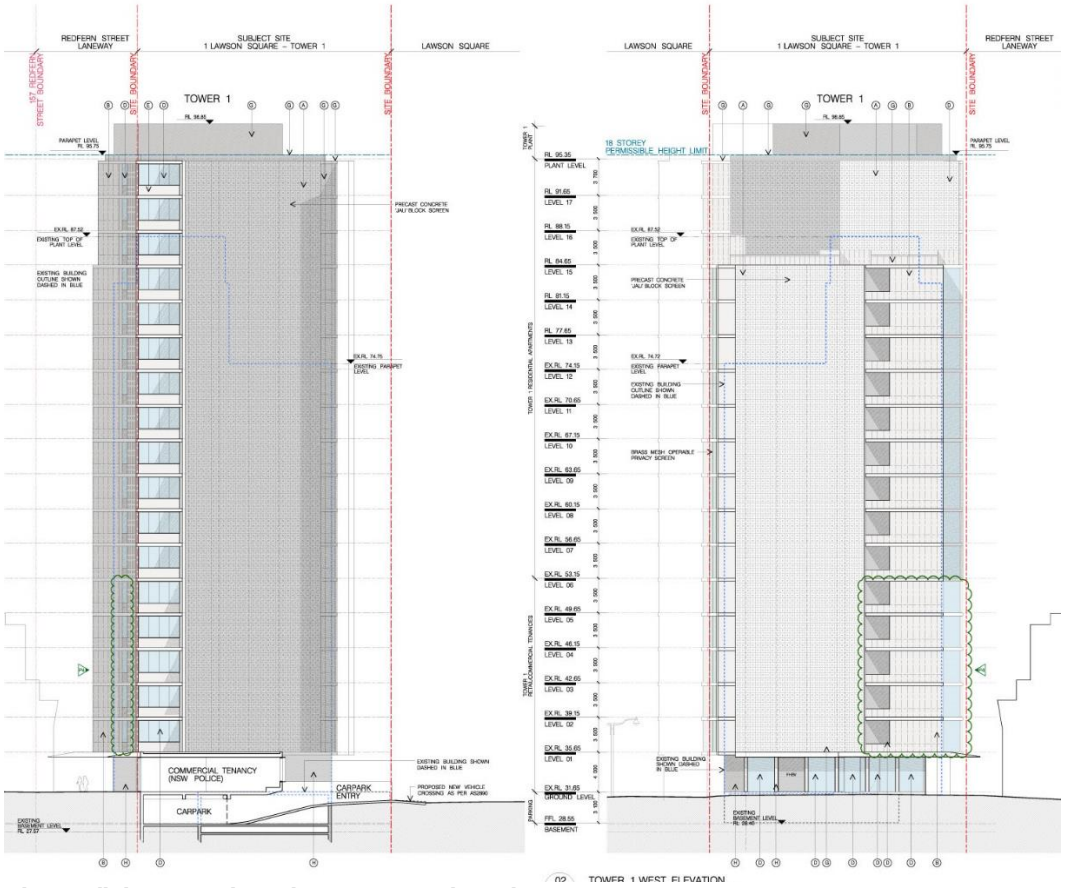


Figure (iv). East Elevation + West Elevation – Tower 1

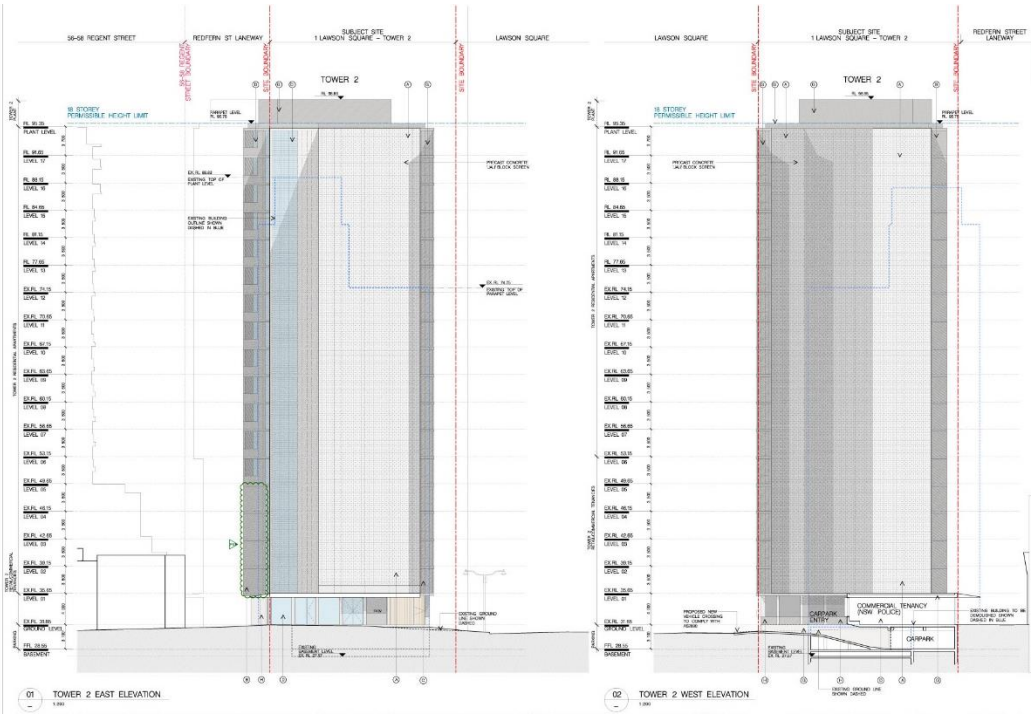


Figure (v). East Elevation + West Elevation – Tower 2

The scale of the proposed development is desired for the future character of development in the vicinity. The scale and massing of the proposed development is consistent with the permissible height limit of 18 storeys as specified within the SEPP (Major Projects) 2005 Height of Buildings Map. The proposed mixed-use development provides an appropriate scale in terms of bulk for the potential skyline of the area.

The project has been designed in order to retain the structure of the existing towers. The proposed façades will be highly articulated, serving to reduce the apparent bulk and provide an appropriate scale for a mixed-use development within the existing and future context.

The built form of the proposed development is designed to afford high quality living and working spaces for its occupants without compromising the amenity of the surrounding streets and residences.

The building's articulated facades reduce its apparent bulk whilst providing excellent levels of amenity to all of the residential units and commercial tenants. It also presents an expressive architectural form that forms a "bookend" to the developments along Gibbons St.

The lowering of the western part of Tower 1 assists in reducing the impact of bulk, and ensures there is no loss of amenity to the neighbouring property at 157 Redfern Street. This enables a more modest proportion facing Redfern Railway Station, one of the more public 'faces' of the proposal. From the north, the façade is also more modulated by the stepping of Tower 1, reducing the mass of the proposal as it perceived from the city.

All primary living spaces and private open spaces of units are provided with an outward aspect from the site. Almost all units have aspects to the north or north east, maximising daylight access and natural ventilation. The use of screens to shelter balconies helps to minimise overlooking from neighbouring properties. The existing separation between the towers is maintained, and the east and west facades have been designed with openings screened by perforated "Jali" blocks in order to maintain ventilation and light, as well as visual and acoustic privacy.

The built form responds to the character of the locality through considered, distinctive architectural forms and a rich natural material palette. Furthermore the proposal has been designed to minimise the impacts on the amenity of the existing adjacent built forms by maintaining the existing built form.

PRINCIPLE NO. 3: DENSITY

Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context.

The renovation of the existing building for residential as well as commercial/retail use is considered consistent with the zone objectives and the aims and objectives of SEPP SRD and SEPP MD. The development will provide housing opportunities within close proximity to employment opportunities and major public transport routes. Due to a higher residential density, employment within the locality to service the residential needs will also be promoted.

The building form is contained within the existing structure whilst providing an additional 6 storeys. The proposed development maintains the permissible 18 storey height limit. Tower 1 includes ground floor retail whilst Tower 2 provides a commercial tenancy from ground floor to Level 4. 157 residential units are provided in total. The development has a total gross floor area of 12,740 m² which equates to a Floor Space Ratio of 7.5:1, given the site area of approximately 1,696.5 m².

PRINCIPLE NO. 4: SUSTAINABILITY

Good design combines positive environmental, social and economic outcomes.

The proposed development has met the targets set out in the Building & Sustainability Index (BASIX). Further, the proposal embodies excellent passive systems of sustainable building design such as:

- Northerly aspect to almost all living spaces in the development to optimise solar access and natural ventilation.
- Daylight penetration to reduce heating and artificial lighting requirements.
- Proposed selection of low embodied-energy materials.
- Excellent passive solar gain and loss properties.
- Sun-screening devices and strong shuttering elements to reduce solar gains and increase control of the internal environment.
- Cross ventilation to habitable rooms, assisted by the buildings' spacious open plan and articulated exterior
- Collection and reuse of rainwater for irrigation of planted areas.

PRINCIPLE NO. 5: LANDSCAPE

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in attractive developments with good amenity.

The landscape proposal has been designed to improve the amenity of the site, both within the property boundary and in the public domain. The site has been identified as experiencing high winds at street level, and mitigation of these effects by tree planting recommended in the Wind Effects report prepared by SLR Consulting. London Plane trees are proposed for the north, east and west site boundaries of the site, in accordance with the City of Sydney's street tree planting guide. These trees will shade the public domain and also ameliorate street noise for building occupants.

The two palm trees currently standing in the public domain in Lawson Square are proposed to be retained and a number of mature palms of a similar species will be planted to the north of the site to extend the current visual character of the site.

To further enhance the existing streetscape, all proposed paving is proposed to match the existing paving used within the recently renovated Redfern Street Laneway. This same paving will be carried through to the public domain of the site's north, east and west boundaries in order to maintain consistency.

Figure (vi). Landscape and Public Domain Plan prepared by Teresa Moller & Asociados

The public domain proposal includes the use of concrete pots containing the species commonly known as the Japanese Maple along the site's southern boundary within the Redfern Street Laneway and into the ground floor paved courtyard between the towers. The colour of the Japanese Maple leaf changes with the seasons, providing varying displays of reds and greens, rich in contrast to the neutral tones of the existing laneway.

Additional bicycle parking and the placement of shaded seating in areas that are easily accessible and under passive surveillance increases the amenity for both the development's occupants and the local public.

PRINCIPLE NO. 6: AMENITY

Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident well being.

The 157 residential dwellings include 26 studio units (17%), 30 one bedroom units (19%), 44 one bedroom + study units (28%) and 57 two bedroom units (36%). The proposed development has been designed to provide the maximum amenity to a majority of the dwellings, with most having a direct north-easterly aspect. 114 out of 157 apartments (>70%) in the development receive a minimum of two hours of solar access to the living areas and private open spaces during mid-winter. Cross-ventilation is also available to over 60% of the apartments. The design maximises the daylight and natural ventilation available to each unit, and affords high levels of privacy for occupants and future neighbouring developments.

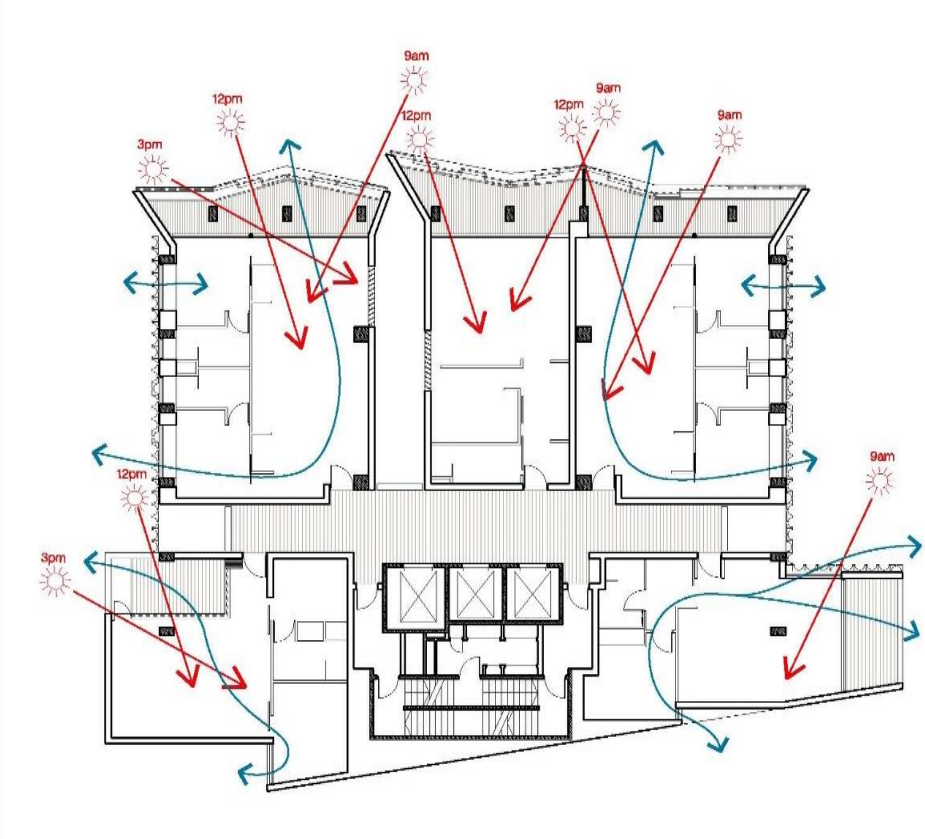


Figure (vii). Solar Access and Ventilation for June 21 – Tower 1

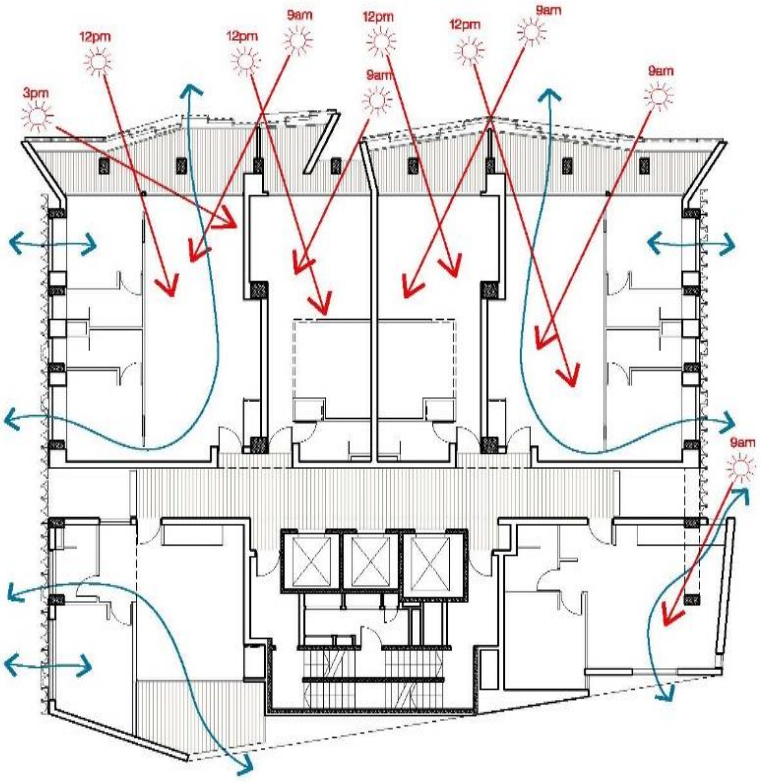


Figure (viii). Solar Access and Ventilation for June 21 – Tower 2

The units have an open plan and a narrow floor plate, which in conjunction with the high 'wall surface-area to floor-area ratio' facilitates good cross ventilation to all habitable rooms. The units will enjoy a considered approach to materiality and detailed design, with elements such as operable screens and multi-function doors allowing for various opportunities to close or open each unit as determined by the occupant. The internal layouts of the units have also been designed to ensure acoustic privacy between units and future neighbouring residential development.

All of the north-facing units have north-facing balconies, protected from sun and wind by sliding brass mesh screens and operable timber louvres. Units with southern orientations are minimised, and are typically provided with a semi-enclosed, sheltered balcony. The one-bedroom unit at the south-east corner of Tower 2 has been designed without a balcony, as the exposed location is not suitable for usable outdoor space.

In lowering the western part of Tower 1, there was an opportunity to introduce a communal open space at Level 15. The plausibility of this roof terrace rests in the fact that there is also programme and usable space at the same level. This offers a sense of internal self-surveillance to ensure the area is not redundant. In addition, the terrace provides a buffer and outlook to the west for the upper apartments.

Overlooking opportunities between the units and neighbouring residents have been minimised through the design of partition walls that act to exclude views to neighbouring residences, whilst allowing solar access and views to the city.

The development proposes to renovate the existing building and maintain the existing building separation between the towers. This will ensure that privacy and amenity issues are acceptable both within the proposed buildings and to the surrounding properties and infrastructure.

PRINCIPLE NO. 7: SAFETY

Good design optimises safety and security, within the development and the public domain.

The design proposes the following security measures to restrict and control communal access around the proposal:

- The residential access to Tower 1 from Gibbons Street and Tower 2 from Regent Street is direct and highly visible allowing passive surveillance to occur.
- A video entry system at residential entry points linked to the units allows access through the external security point upon confirmation from inside.
- A FOB (Free On Board) key is supplied to occupants; this allows access through the entry security points and controls lift entry and exit, dependant on pre-programmed access allocations. The FOB can be kept inside a wallet, unlocking the security points upon approach.
- The residential mail boxes are located within the site boundary and close to the main entry.
- Wide common circulation areas with clear sight lines are provided at all levels with no obscured corners within the main public spaces.
- High quality architectural lighting through the development assists to secure the area at night.
- Generous windows and balconies provide passive surveillance to the neighbouring residential and commercial areas.

PRINCIPLE NO. 8: HOUSING DIVERSITY AND SOCIAL INTERACTION

Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets.

The site is located close to facilities such as retail shops, health and veterinary care, sports facilities, recreational reserves, schools, restaurants and cafes. The site provides good local and regional connectivity via Redfern Railway Station and is well serviced by public bus routes.

The development comprises a mix of 26 x studio units (45m²), 30 x 1 bedroom units (ranging from 51 m² - 57 m²), 44 x 1 bedroom + study units (ranging from 59 m² – 63 m²) and 57 x 2 bedroom units (ranging from 76 m² - 83 m²) residential units. The varied unit mix and sizes are considered appropriate for the locality and correspond to the future vision for the area in terms of density and built form. This also provides for a healthy unit mix in social terms enabling varying types of occupants of varying age groups to co-exist in the development.

PRINCIPLE NO. 9: AESTHETICS

Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure. Good design uses a variety of materials, colours and textures.

The proposed development has been carefully considered with respect to the surrounding built environment. Materials such as precast, coloured and off-form concrete, rendered brickwork, Jali concrete blockwork, natural timbers and weathered brass reflect the colours of the surrounding city area. The materials are considered appropriate for the local climate, while ensuring a high standard of aesthetics and will provide a standard for future high density multi residential developments.

The north façade of the proposal has a vertical character expressed by the proportions of the brass balcony screens and the timber louvres to either side. This verticality is considered an improvement over the existing towers, which have a heavy appearance caused by their exposed square grid structure. The verdigris colour of the oxidised brass mash screens offers a soft, delicate appearance that is given depth by the undulations of the articulated balconies, punctuated by the irregular variations caused by open and closed screens.

The development proposal is considered a positive improvement over the existing view from this location, as the façades display more elegant proportions and the subtle use of colour is complementary to the surroundings.

Figure (ix). Materials Sample Board

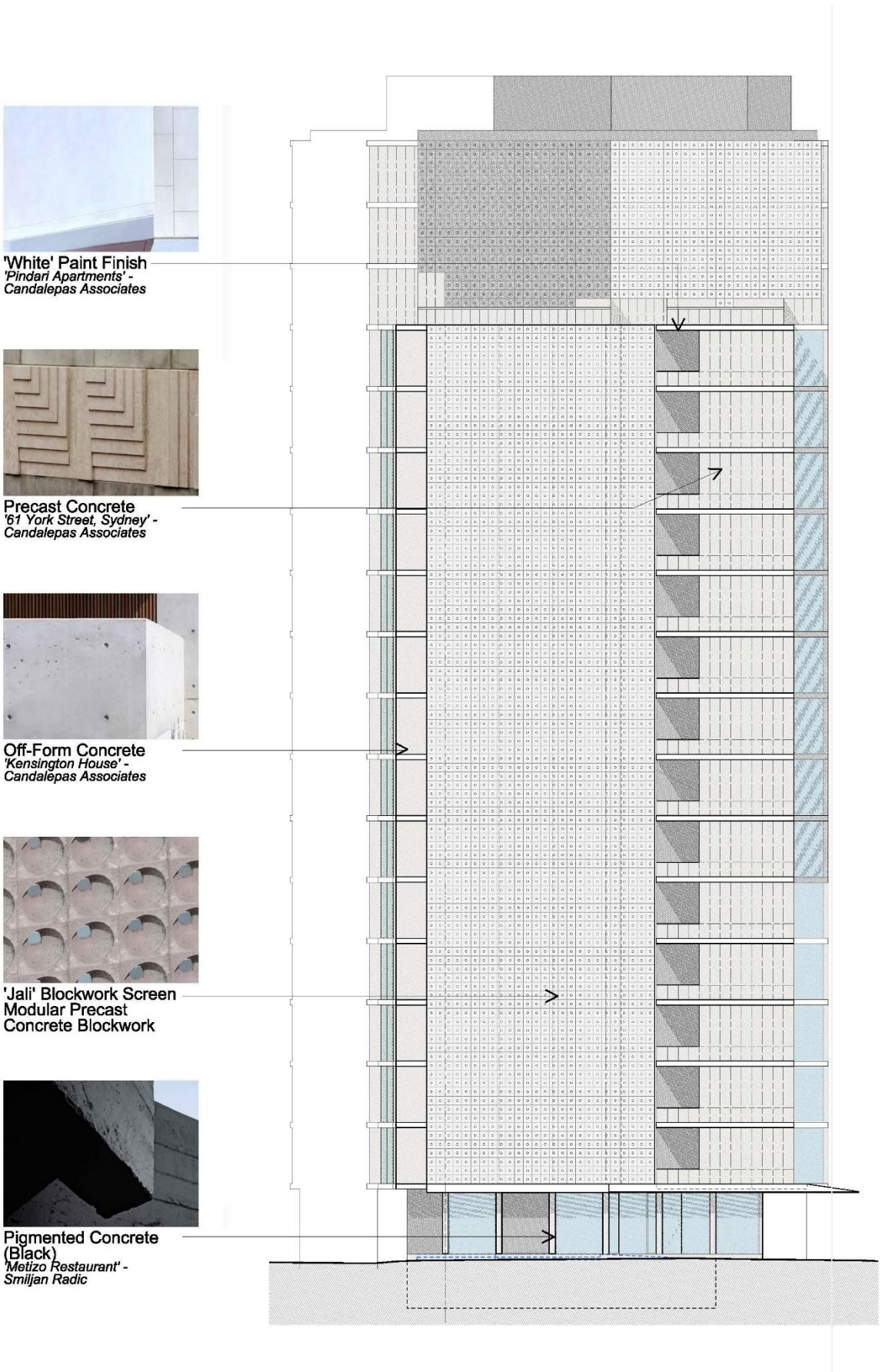


Figure (x). Materials

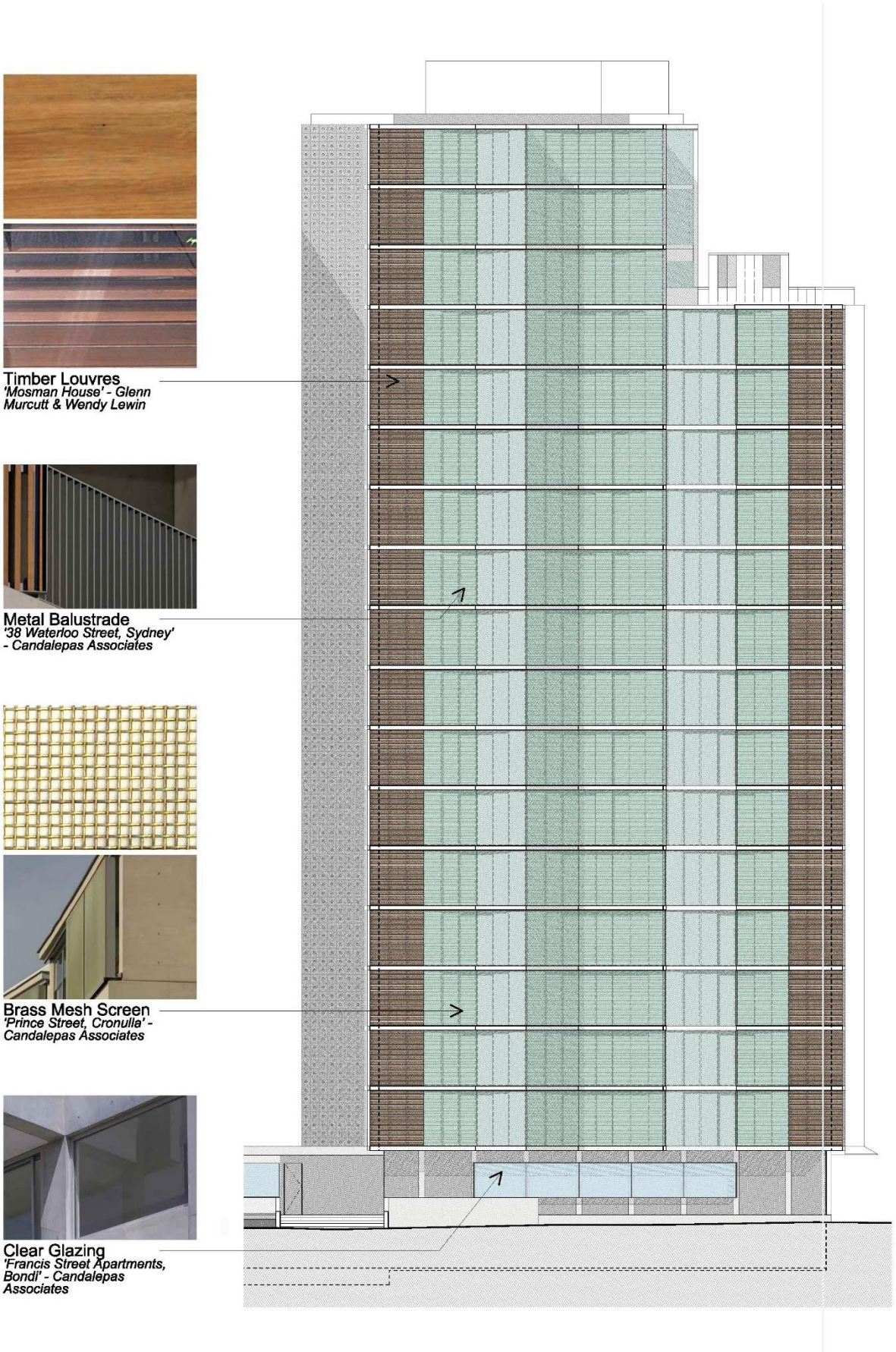


Figure (xi). Materials

The use of materials and textures such as precast and off-form concrete, timber and weathered brass screening, perforated Jali blockwork and glass provide a rich character for the benefit of the occupants and the community, with high levels of refinement and longevity. Through its material palette and largely rectilinear geometry, the development seeks to encourage a sense of the domestic as well as commercial qualities found in the locality.

Figure (xii). Materials

The materials used throughout are robust and designed to withstand the elements whilst maintaining the original appearance of the building. The north façade is highly articulated and enhances the development's prominence within the urban skyline. Coloured concrete at ground level provides a contrasting base to the towers that distinguishes the retail/commercial component from the residential.

The development proposal has been designed with the amenity requirements of the Apartment Design Guide as an inherent part of the design considerations, and the building's contribution to the site will provide an example of design excellence for the benefit of the residents and general public alike.

CANDALEPAS ASSOCIATES
SEPTEMBER 2015

SECTION 4.0 APPENDIX

APPENDIX A: Compliance Table – Apartment Design Guide – SEPP 65

Relevant Sections of SEPP 65 Design Code	Compliance
Part 1: IDENTIFYING THE CONTEXT	
1A Apartment building types	The proposal complies. The 'tower apartment' building type is suited to the prominent location along the rail corridor, creating a landmark scheme.
1B Local character and context	The proposal complies. The proposed development has been pursued in recognition of the prominence of the building in the urban skyline. All facades of the development are highly articulated and integrated within the existing building structure. The proposal makes a positive contribution to the further character of the area and sets the standard for other high density mixed-use developments within the locality.
PART 2: DEVELOPING THE CONTROLS	
2C Building Height • *Ensure development responds to the desired future scale and character of the street and local area.* • *Ensure adequate daylight and solar access is facilitated to apartments, common open space, adjoining properties and the public domain.*	The proposal complies. The site is subject to a maximum central height of 18 storeys, with perimeter heights of 5 and two 2 storeys as stipulated in the SEPP (Major Projects) 2005 Height of Buildings Map. The proposal complies with the 18 storey building height standard for the centre of the site. By retaining the existing building footprint the physical separation of the towers is retained and 'urban plaza' has been created at ground level. The proposal breaches the 2 and 5 storey height limit across, but does not propose to fully develop the central area of the site that could accommodate 18 storeys.
2D Floor Space Ratio • *Ensure that development aligns with the optimum capacity of the site and the desired density of the local area.*	The proposal complies. The site is subject to a maximum floor space ratio (FSR) of 7:1 with a site area of approximately 1,696.5m^2. The development has a total gross floor area of 12,740m^2 which equates to an FSR of 7.5:1. This proposal reflects the opportunity to increase density and maximise area on such a prominent site, setting a precedent for future development in the locality.
2E Building Depth • *Maximum internal plan depth should be 18 metres from glass line to glass line.*	The proposal complies. The maximum internal plan depth of the deepest unit is 10.6 metres.
2F Building Separation • *Minimum separation distances for buildings nine storeys and above (over 25m) are:* - *24 metres between habitable rooms/balconies* - *18 metres between habitable rooms/balconies and non-habitable rooms* - *12 metres between non-habitable rooms.*	The proposal doesn't comply, due to the reuse of the existing building footprint. Great efforts have been made to maintain the existing distance between the towers. This distance between the towers is proposed at approximately 11.78 metres.

2G Street Setbacks • *Establish the desired spatial proportions of the street and define the street edge.*	The proposal complies. No street setbacks are stipulated within the legislation relevant to the site. The retention of the existing buildings requires a site specific response, due to the idiosyncratic location and streets to all four sides. The proposal creates a strong urban form that addresses the site's prominent position in the street pattern.
2H Side and Rear Setbacks • *Provide access to light, air and outlook for neighbouring properties and future buildings.* • *Retain or create a rhythm or pattern of spaces between buildings that define and add character to the streetscape.*	The proposal complies. By retaining the existing building footprint, there are no proposed changes to the existing spacing between buildings.
Part 3: SITING THE DEVELOPMENT	
3B Orientation • *Building types and layouts respond to the streetscape and site while optimising solar access within the development.* • *Overshadowing of neighbouring properties is minimised during mid-winter.*	The proposal complies. The proposed development has been designed to provide maximum amenity to the majority of dwellings, with the majority of units facing North East. 114 out of the 157 apartments in the development (>70%) receive solar access to the living areas and private open spaces for more than 2 hours between the 9am – 3pm in mid-winter. Some overshadowing will occur as a result of the additional 6 storeys to the existing building. As shown in the shadow diagrams for the original development application, the proposal results in some shading of existing commercial/retail properties to the south east of the site. This is limited to certain times in the morning during midwinter. The level of overshadowing of these adjoining properties is relatively minor and still allows for these properties to receive at least 2 hours of direct sunlight between 9am and 3pm throughout the year.
3C Public Domain Interface • *Transition between private and public domain is achieved without compromising safety and security.* • *Amenity of the public domain is retained and enhanced.*	The proposal complies. The Public Domain works include additional planting to all street frontages, improving the amenity of the site and mitigating the impact of wind. Additional bicycle parking and shaded seating is proposed in areas that are easily accessible and under passive surveillance. The same paving from the rear laneway is proposed for this development, ensuring continuity across the site. Please refer to the landscape plan prepared by Teresa Moller & Asociados for more information.
3D Communal and Public Open Space • *An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping.* • *Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting.* • *Communal open space is designed to maximise safety.* • *Public open space is responsive to the existing pattern and uses of the neighbourhood.*	The proposal complies. Communal open space has been incorporated into the ground floor pedestrian/retail environment, in addition to the terrace at Level 15 of Tower 1 for exclusive use of the residents. As this space shares a level with apartments, self-surveillance is offered to ensure the communal area is safe and usable. In addition, the terrace helps to provide a buffer and outlook to the west for the top-most units. Public open space is also available within the Public Domain works, providing amenity and an active street frontage for the locality.
3E Deep Soil Zones • *Provide areas on the site that allow for and support healthy plant and tree growth.* • *Improve residential amenity and promote management of water and air quality.*	Not applicable. Given the urban setting of the site and the level of basement below, the current development does not provide deep soil zones. As the proposed development is contained with the exiting building footprint at ground level, this condition will be maintained. The proposed development will provide a number of potted plants along the rear laneway, and street trees within the Public Domain works.

3F Visual Privacy • *Minimum required separation distance between habitable rooms and balconies over 9+ storeys is 12m.* • *Site and building design elements increase privacy without compromising access to light and air and balance outlook and views from habitable rooms and private open space.*	The proposal complies. The proposed development has a minimum of 11.78 metres separation between the neighbouring habitable windows of each tower. All habitable windows have been extensively screened with a range of quality materials and have been located predominately in the north and north east minimising the overlooking of neighbouring units and properties.
3G Pedestrian Access and Entry • *Building entries and pedestrian access connects to and addresses the public domain.* • *Access, entries and pathways are accessible and easy to identify.*	The proposal complies. Each tower contains accessible paths of travel and lift access to all units. Stair and lift access is provided from the basement car park level as well as ramp access to the ground floor of Tower 1. Residential access to Tower 1 from Gibbons Street and Tower 2 from Regent Street is direct yet highly visible. Orientating these entries to the street frontages providing a visual connection between the street and the development.
3H Vehicle Access • *Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes.*	The proposal complies. Entry to the basement car parking of the development is proposed off Lawson Square. High walls are provided to prevent pedestrian obstruction to driveway entry. The entry is well integrated into the design of the proposed north façade and Public Domain works, with minimal disturbance to the street.
3J Bicycle and Car Parking • *Parking and facilities are provided for other modes of transport.* • *Car park design and access is safe and secure.* • *Visual and environmental impacts of underground car parking are minimised.*	The proposal complies. 7 on street car spaces of the existing development will be retained. 20 car spaces have been provided within the basement level of the proposed development whilst 80 car spaces have been provided in agreement with an adjacent development. Please refer to the Traffic report prepared by Traffix for more information. As the proposed car parking facilities are contained within the existing basement, there will be minimal visual and environmental impact. Bicycle spaces are also located within the basement, with additional provisions proposed for the Public Domain works.
Part 4: DESIGNING THE BUILDING	
AMENITY	
4A Solar and Daylight Access • *Optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space.* • *Daylight access is maximised where sunlight is limited.* • *Design incorporates shading and glare control, particularly for warmer months.*	The proposal complies. 114 out of 157 apartments (over 70%) receive a minimum of 2 hours of sunlight to the living areas and private open space between 9am and 3pm mid-winter. The brass screens and timber louvres proposed along the northern façade provide shelter to the balconies and living areas. Blade walls between balconies also assist in offering shade and glare control for apartments.
4B Natural Ventilation • *All habitable rooms are naturally ventilated.* • *The layout and design of single aspect apartments maximises natural ventilation.* • *The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents.*	The proposal complies. All unit depths range from 6-10 metres, with operable glazing to all habitable rooms offering natural ventilation. Over 60% of the apartments are naturally cross ventilated. More than 25% of kitchens have direct access to natural ventilation.

<table>
<tr><td>4C Ceiling Heights
• Ceiling height achieves sufficient natural ventilation and daylight access.</td><td>The proposal complies with the 2.7 metre minimum ceiling height requirement. The finished floor level to finished ceiling level is 2.8 metres</td></tr>
<tr><td>4D Apartment Size and Layout
• Minimum internal areas for apartments are:
Studio 35m^2
1 Bedroom 50m^2
2 Bedroom 70m^2
• Maximum habitable room depth is 8m from a window.
• Bedrooms to have a minimum dimension of 3m.
• Living rooms to have a minmum dimension of 3.6m (studio/1 bedroom) or 4m (2 bedrooms).</td><td>The proposal complies. The following areas have been provided in the development:
<table><tr><td>Unit Type</td><td>Unit Area</td></tr><tr><td>Studio</td><td>45 sqm</td></tr><tr><td>1 bed</td><td>51- 57 sqm</td></tr><tr><td>1 bed + study</td><td>59 – 63 sqm</td></tr><tr><td>2 bedroom</td><td>76 – 83 sqm</td></tr></table>
Single aspect units and units over 15 meters deep are not provided. All bedrooms have a minimum dimension of 3m, and all living rooms have a minimum dimension of 4m.</td></tr>
<tr><td>4E Private Open Space and Balconies
• All apartments are required to have primary balconies as follows:
Studio 4m^2
1 Bedroom 8m^2 2m min. depth
2 Bedroom 10m^2 2m min. depth
• Private open space and balconies are appropriately located to enhance liveability for residents.
• Design is integrated into and contributes to the overall architectural form and detail of the building.
• Design maximises safety.</td><td>Of the eleven different unit designs, ten are provided with balconies. The one-bedroom unit at the south-east corner of Tower 2 has been designed without a balcony, as the exposed location is not suitable for usable outdoor space.

The north-facing balconies are an essential part of the building’s expression. The brass screens and timber louvres provide shelter to the balconies, whilst also transforming the existing building’s grid-like appearance into a more sensitive and refined composition. These balconies have varying dimensions in order to accommodate the existing building structure and to provide the multi-faceted façade that characterises the design.

The few balconies that do not face north are protected by blade walls that reflect sunlight and prevent overlooking to and from neighbouring residences.</td></tr>
<tr><td>4F Common Circulation and Spaces
• The maximum number of apartments off a circulation core on a single level is 8.
• For buildings over 10 storeys, the maximum number of apartments sharing a single lift is 40.
• Common circulation spaces promote safety and provide for social interaction between residents.</td><td>The proposal complies. There is a maximum of 6 apartments per floor serviced by a single core, and 6 lifts servicing 157 apartments overall.

The development provides generous corridor widths and ceiling heights within circulation areas. Natural daylight illuminates these areas through openings at either end. Robust materials have been used within these highly trafficked areas for durability.</td></tr>
<tr><td>4G Storage
• In addition to kitchen cupboards and bedroom wardrobes, the following storage is to provided:
Studio 4m^3
1 Bedroom 6m^3
2 Bedroom 8m^3</td><td>Storage has been provided inside units and at basement level.</td></tr>
<tr><td>4H Acoustic Privacy
• Noise transfer is minimised through the siting of buildings and building layout.
• Noise impacts are mitigated within apartments through layout and acoustic treatments.</td><td>The proposal complies. The internal layouts of the apartments have been designed to ensure acoustic privacy between apartments and future residential developments. Appropriate use of glazing and materials as outlined in the Acoustic Report prepared by SLR Consulting, achieves the required level of acoustic privacy between apartments and surrounding streets.</td></tr>
</table>

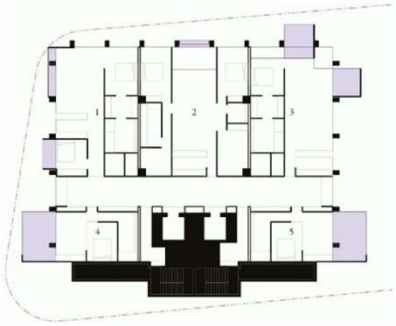
<table>
<tr><td>4J Noise and Pollution
In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings.
Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission.</td><td>The proposal complies. Blockwork screens are proposed along areas of glazing adjacent to the rail corridor, providing acoustic and visual screening from the source of external noise and pollution. Blade walls to the northern balconies also assist in offering noise shielding to private open space. Please refer to the Acoustic Report prepared by SLR Consulting for further information.</td></tr>
<tr><td>CONFIGURATION</td><td></td></tr>
<tr><td>4K Apartment Mix
A range of apartment types and sizes is provided to cater for different household types now and into the future.
The apartment mix is distributed to suitable locations within the building.</td><td>The proposal complies. The development provides a varied unit mix across different areas of the building.

<table><tr><th>Unit Type</th><th>Total Units</th><th>Unit Mix</th></tr><tr><td>Studio</td><td>26</td><td>17%</td></tr><tr><td>1 bed</td><td>30</td><td>19%</td></tr><tr><td>1 bed + study</td><td>44</td><td>28%</td></tr><tr><td>2 bedroom</td><td>57</td><td>36%</td></tr></table></td></tr>
<tr><td>4L Ground Floor Apartments
Street frontage activity is maximised where ground floor apartments are located.
Design of ground floor apartments delivers amenity and safety for residents.</td><td>Not Applicable. The proposal does not provide ground floor apartments.</td></tr>
<tr><td>4M Facades
Building facades provide visual interest along the street while respecting the character of the local area.
Building functions are expressed by the façade.</td><td>The proposed facades are of high architectural quality as outlined above in Principle No. 2.
A range of robust materials offer durability as well as aesthetic quality. The north façade is highly articulated, expressing the balcony areas beyond and enhancing the development’s prominence within the urban skyline.</td></tr>
<tr><td>4N Roof Design
Roof treatments are integrated into the building design and positively respond to the street.
Opportunities to use roof space for residential accommodation and open space are maximised.</td><td>The proposal complies. The roof form of the proposed development consists of a flat concrete roof with a parapet. This style of roof is in keeping with the roof structure of the existing building and enhances the overall aesthetic quality of the proposed façade.

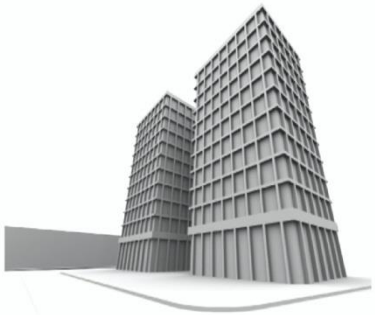
The Level 15 terrace maximises the roof’s potential for usable communal area for residents.</td></tr>
<tr><td>4O Landscape Design
Landscape design is viable and sustainable.
Landscape design contributes to the streetscape and amenity.</td><td>The proposal complies. The landscaping plan prepared by Teresa Moller & Asociados and proposed public domain works offer a lively streetscape through the use of street trees, planter boxes and shaded seating areas. The proposal seeks to enhance the amenity of the site.</td></tr>
<tr><td>4P Planting on Structures
Plant growth is optimised with appropriate selection and maintenance.
Planting on structures contributes to the quality and amenity of communal and public open spaces.</td><td>The proposal complies. Podium planting of small to medium sized vegetation has been proposed at ground level between the two towers. This landscaping will contribute to the quality and amenity of communal open area as well as the adjoining retail space.</td></tr>
</table>

4Q Universal Design • *Promote flexible housing for all community members.* • *A variety of apartments with adaptable designs are provided.*	The proposal complies. The number of accessible and visitable apartments is optimised whilst superior pedestrian mobility and access is provided.
4R Adaptive Reuse • *New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place.* • *Adapted buildings provide residential amenity while not precluding future adaptive reuse.*	The proposal complies. The scheme involves the conversion of an existing commercial building to a mixed-use development, utilising sturdy and hard wearing quality materials. The proposed facades are highly articulated and integrated within the existing building structure. The proposal makes a positive contribution to the area and acts as a precedent for other developments within the locality.
4S Mixed Use • *Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement.* • *Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents.*	The proposal complies. Significant retail area is provided on the ground floor of Tower 1. It sits on a prominent corner of the site and has clear entry and exit points, separate from the residential lobby. The proposed development also offers commercial tenancy over 5 floors with flexible floor plans in order to accommodate a variety of occupancies. The residential floors are located on the upper levels of the building, offering enhanced safety and amenity away from street level and the rail corridor.
4T Awnings and Signage • *Awnings are well located and complement and integrate with the building design.*	The proposal complies. An awning is proposed along the rear laneway as part of the Public Domain works. This awning will be designed as an extension of the building, not merely an 'add-on'. The proposal will also help to mitigate the impact of wind along the laneway.
PERFORMANCE	
4U Energy Efficiency • *Development incorporates passive environmental design.*	The proposal complies as outlined above in *Principle No. 6* of this report. Natural ventilation and passive solar design is offered for all apartments.
4V Water Management and Conservation • *Potable water use is minimised.* • *Flood management systems are integrated into site design.*	The proposal complies. Please refer to the BASIX report prepared by SLR Consulting for further information regarding water efficient fittings and appliances. A rainwater tank of 2,000L capacity is also proposed in the basement, to be used for irrigation of planted landscaped areas.
4W Waste Management • *Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents.* • *Domestic waste is minimised by providing safe and convenient source separation and recycling.*	The proposal complies. The proposal meets the waste generation rates of the local Redfern area as stipulated by City of Sydney. The waste storage facilities are located in the basement, minimising the impact on the streetscape while still being in a convenient area for residents. The use of garbage chutes in the building also offers a safe and convenient method of waste disposal.
4X Building Maintenance • *Building design detail provides protection from weathering.* • *Systems and access enable ease of maintenance.* • *Material selection reduces ongoing maintenance costs.*	The proposal complies. Robust materials selected for the façades are low maintenance and will not require re-painting. The use of blade walls and screens along the northern façade offer protection from the elements for glazed areas beyond. Glazing behind blockwork screens along the east and west facades are proposed to be openable to allow for cleaning.

APPENDIX B: Design Development Option Studies



BLADE WALL TO CANTILEVERS TYPICAL FLOOR PLAN



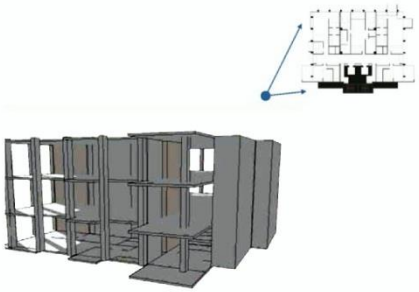
VIEW FROM CORNER OF LAWSON SQUARE & GIBBONS ST EXISTING

VIEW FROM CORNER OF LAWSON SQUARE & GIBBONS ST OPTION 1

DIRECT SOLAR ACCESS 2B APARTMENT TYPE

VIEW FROM CORNER OF LAWSON SQUARE & GIBBONS ST OPTION 2

VIEW FROM CORNER OF LAWSON SQUARE & GIBBONS ST OPTION 3

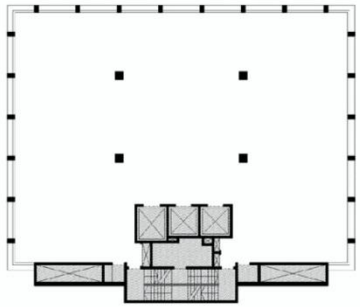


DIRECT SOLAR ACCESS APARTMENT 1 & 4 9AM–5PM WINTER

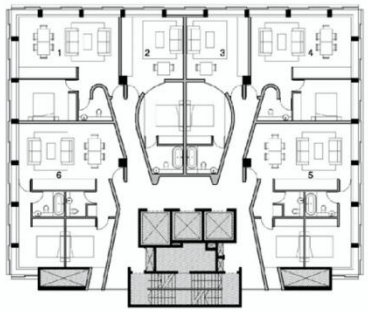
VIEW FROM CORNER OF LAWSON SQUARE & GIBBONS ST OPTION 4

VIEW FROM CORNER OF LAWSON SQUARE & GIBBONS ST OPTION 5

DESIGN DEVELOPMENT OPTION 01 – 05



EXISTING FLOOR PLAN



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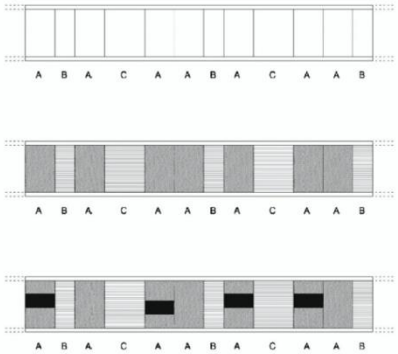
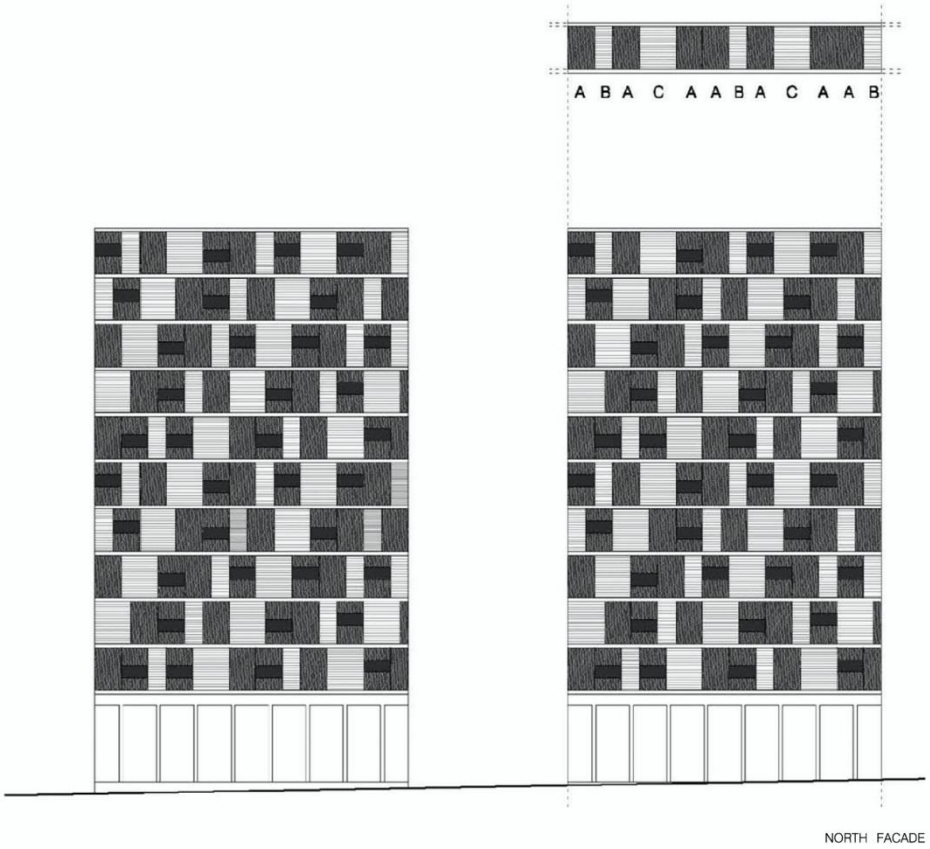
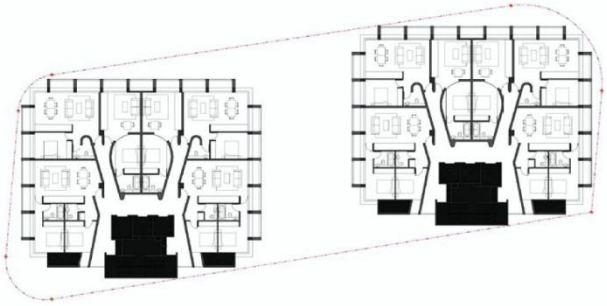


FACADE ARTICULATION



NORTH FACADE

DESIGN DEVELOPMENT OPTION 06



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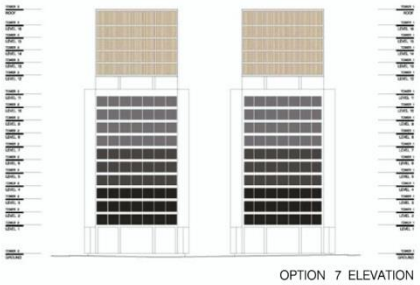
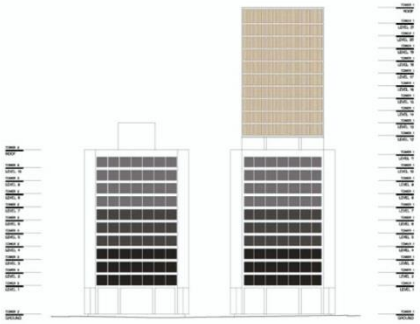


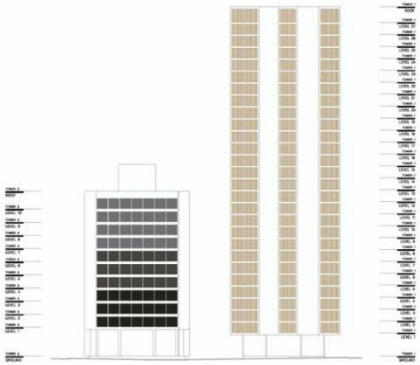
OPTION 7 ELEVATION

OPTION 7



OPTION 8 ELEVATION

OPTION 8

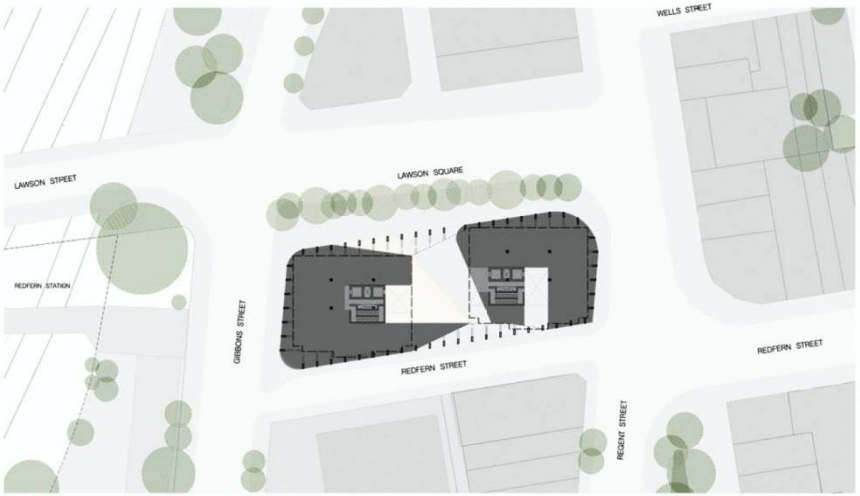


OPTION 9 ELEVATION

OPTION 9

DESIGN DEVELOPMENT OPTION 07 – 09

TYPICAL FLOOR PLAN



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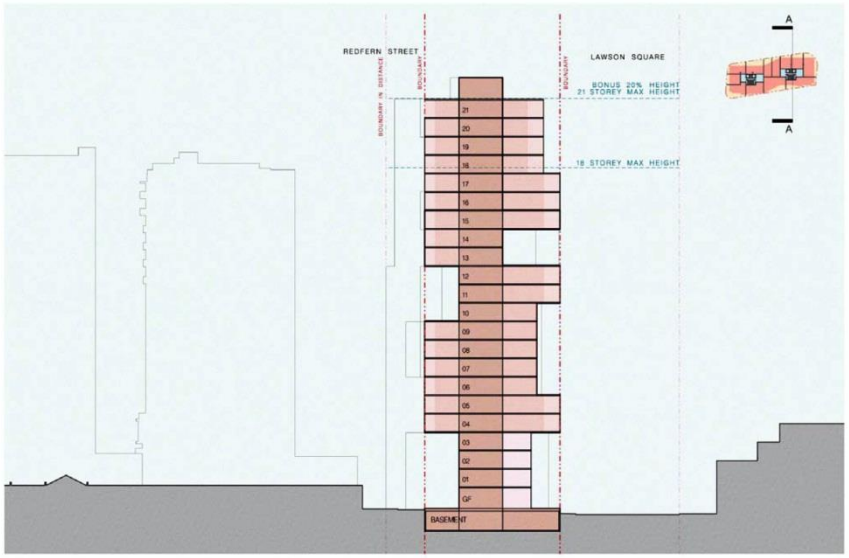
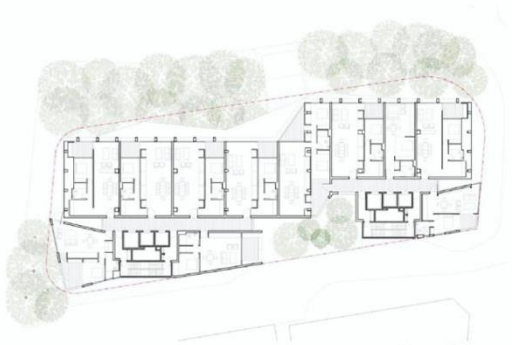


TYPICAL SECTION

DESIGN DEVELOPMENT OPTION 10



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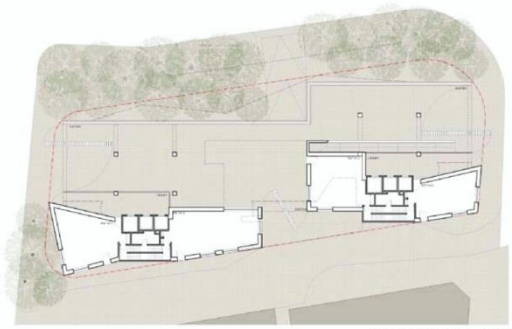
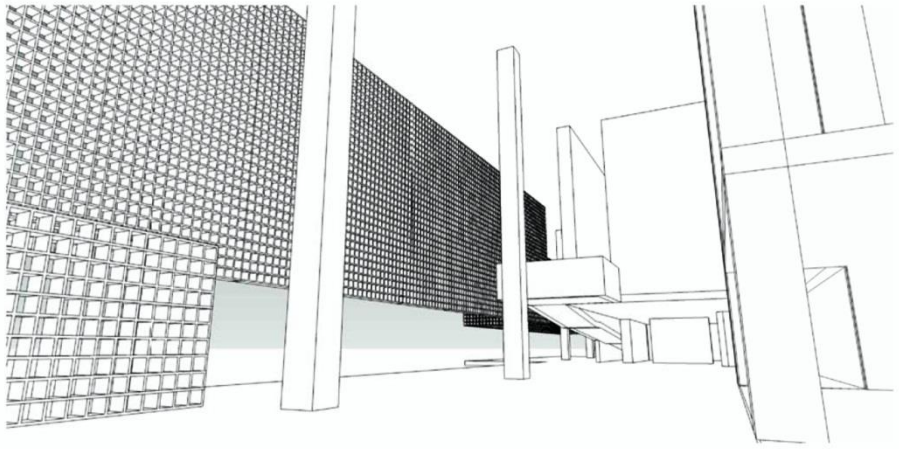


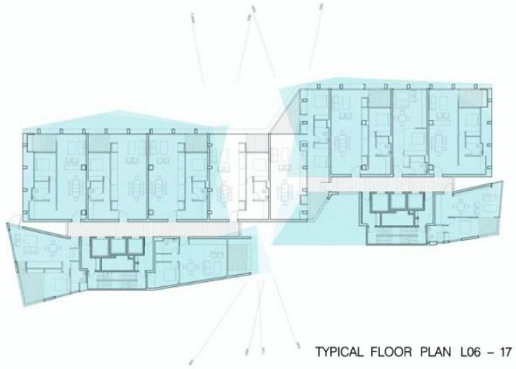
GROUND FLOOR PLAN

TYPICAL SECTION

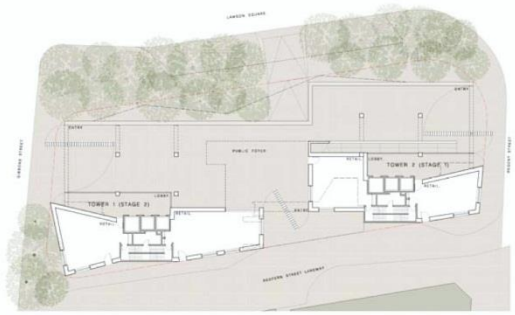


PERSPECTIVE GROUND FLOOR LOBBY

DESIGN DEVELOPMENT OPTION 11

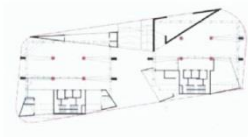


TYPICAL FLOOR PLAN L06 – 17

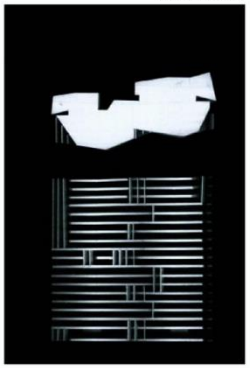


GROUND FLOOR PLAN

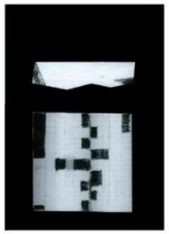
TYPICAL SECTION



ITERATION 05



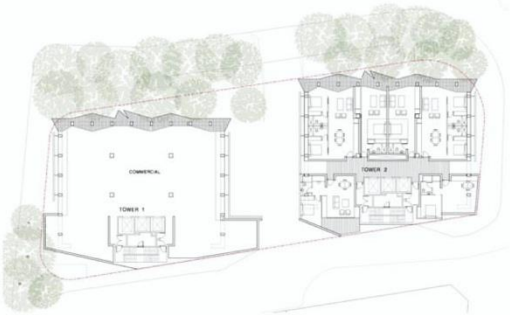
BUILDING FACADE MODEL STUDIES 01



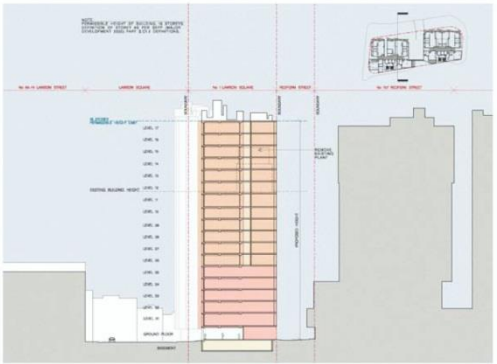
BUILDING FACADE MODEL STUDIES 02

DESIGN DEVELOPMENT OPTION 12

TYPICAL FLOOR PLAN 06 – 07



TYPICAL FLOOR PLAN 01 – 05



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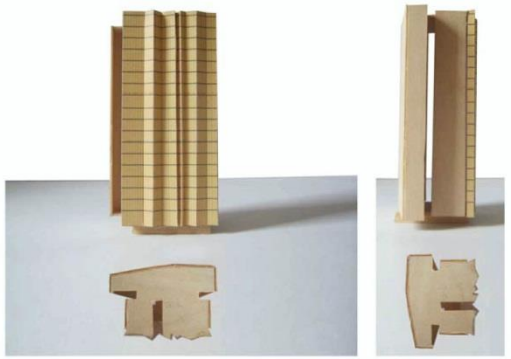
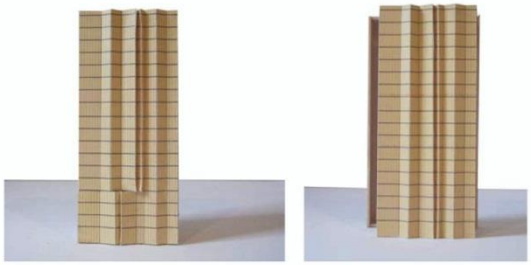


NORTH FACADE MODEL STUDIES 01



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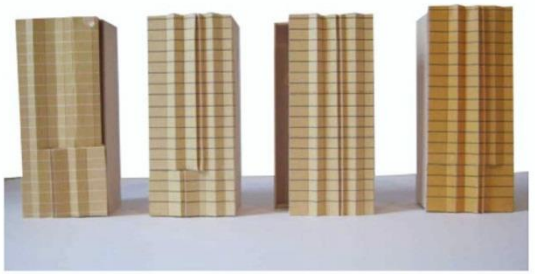

NORTH FACADE MODEL STUDIES 03

DESIGN DEVELOPMENT OPTION 14