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Thursday 1st June 2023

Verification of Qualifications

Tai Ropiha is registered as an Architect in New South Wales and enrolled in the Division of Chartered Architects in the register of Architects pursuant to the Architects Act 1921. Tai Ropiha's registration number with the New South Wales Registration Board is 6568.

Statement of Design

CHROFI have been responsible for leading the design team for each project phase leading up to the lodgement of this Development Application. The phases of work completed to dated include Concept Design and Design Development. The design has been progressed with a team of specialist consultants to provide a design that addresses the relevant planning and design controls while responding to the design principles set out in SEPP No 65.

CHROFI verify that the intent of the design principles set out in Part 2 of State Environment Planning Policy No. 65 - Design Quality of Residential Flat Development are achieved for the proposed mixed-use development as stated below.

Tai Ropiha
DIRECTOR

DEMONSTRATION OF HOW PROPOSED DESIGN RESPONDS TO THE SEPP 65 DESIGN QUALITY PRINCIPLES AND THE OBJECTIVES OF PARTS 3 AND 4 OF THE APARTMENT DESIGN GUIDE

DESIGN QUALITY PRINCIPLES

Principle 1: Context and neighbourhood character

"Good design responds and contributes to its context. Context is the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions. Responding to context involves identifying the desirable elements of an area's existing or future character. Well designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood. Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change."

The context is a mix of residential, recreational and industrial uses at a range of scales. The layout of the proposal and the design of the buildings responding sensitively to the context and especially to the neighbouring residential buildings:

- The proposal transitions from 6 storey mixed-use built form on Balmain Road to fine grained residential buildings along Fred Street at 2 storeys with a third floor set back to further reduce the building scale.
- The light industrial podium matches the height datum formed by the retained Character Buildings.
- The proposed residential buildings addressing Fred Street have an appropriate scale and expression for the street's residential character.
- Two character buildings will be adaptively re-used with creative and light-industrial uses.

Additional pedestrian links descale the built form, making the area more walkable, and creating a public domain network that invites occupation, socialisation and underpins the future of this Proposal as a self-sustaining employment and lifestyle precinct with positive impacts on future character of the local area. The active frontages on the ground floor promote a lively atmosphere with opportunity for activities to spill out into the public realm. Baker's Square, the courtyard behind the Character Buildings and a key public space offering, provides a place for residents, workers, neighbours and visitors to come together in a manner that strengthens the community. Enhancement of the existing employment and creative spaces will support the long-term sustainability of creative and light industrial businesses in the area, increasing popularity and activation of the area and passive surveillance of public space.

Principle 2: Built form and 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.

Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook."

Site Massing: The design features a built form that integrates the Character Buildings and a strong urban edge to Balmain Road. The built-form tapers in scale to a finer-grain residential edge along the south-eastern boundary to transition scale to the surrounding established neighbourhoods. The site massing achieves:

- Compliance with the LEP controls of FSR and Building Height
- Appropriate transitions to existing residential areas
- Setbacks to improve the pedestrian experience on surrounding streets
- New through-site links, public spaces and integrated landscaping

Mid-Rise Residential Buildings: The proposed residential buildings A, B, C employ vertical articulation and open corners to minimise visual bulk. The built-form of residential Building C is carefully conceived to create an interesting composition that is integrated with and dynamically complimentary to the Character Buildings below.

Fred Street: The Proposal introduces low-scale residential buildings along the south-eastern boundary of the Site, addressing Fred Street. These buildings include two storey terrace style apartments, with third-storey apartments setback from the street to match and enhance the scale and quality of Fred Street. This move contains the transition between light industrial to residential within the Site and significantly improves amenity for existing and future residents of Fred Street.

Principle 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.

Appropriate densities are consistent with the area's existing or projected population.

Appropriate densities can be sustained by existing or proposed infrastructure, public transport, access to jobs, community facilities and the environment."

Residential dwellings on the Site will help to diversify housing choice in the area. This increase in residential density is supported by existing bus routes, cycle lanes, arterial roads and the nearby future metro station as well as the provision of communal open space, public outdoor space, private open space and access to Callan Park. A high level of amenity is achieved for the future residents through carefully conceived building separations as well as direct solar access and ventilation that exceeds requirements set out in the ADG. The proposed apartments are oriented to benefit from significant views and vistas whilst achieving visual and acoustic privacy.
The buildings, balconies and communal open space are designed to minimize undesirable impacts on the local neighbourhood such as overlooking and overshadowing. This is achieved through secondary setbacks, articulation, and the strategic location and orientation of private and communal open space.

The total amount of light industrial employment floor space will be maintained on the Site. The design of the employment spaces ensures economic viability with floor-plates that can be subdivided into smaller tenancies to suit market demand. The design allows for the curation of an ecosystem of businesses that are connected as a precinct or campus to drive synergies and a collegiate environment.

Principle 4: Sustainability

"Good design combines positive environmental, social and economic outcomes. Good sustainable design includes use of natural cross ventilation and sunlight for the amenity and liveability of residents and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs. Other elements include recycling and reuse of materials and waste, use of sustainable materials and deep soil zone or groundwater recharge and vegetation."

The Proposal incorporates the following sustainability measures:

- The proposed apartments exceed ADG requirements for access to direct sunlight and passive cross ventilation. This supports passive heating and cooling, reducing operational energy loads.
- The adaptive re-use of existing buildings reduces construction waste and embodied energy of the project.
- Gas is not nominated in the residential areas
- Minimise pedestrian exposure to surface parking lots
- Green roofs and vegetated public realm to mitigate urban heat island effect
- The Proposal increases the deep soil on the site from practically $0m^2$ to $310m^2$, helping to improve rainwater drainage and supporting the growth of trees to a mature size.
- Buildings can be adapted readily to alternative and different future uses
- Spaces are designed to foster interaction, community identity and sense of connectedness
- The proposal is accessible by pedestrian routes and bicycle support ways
- Accessible spaces for all members of the community are designed to respond to need

Importantly, the Proposal has successfully completed registration with the Green Building Council of Australia (GBCA). The registration demonstrates a strong sustainability commitment to the Project.

Principle 5: Landscape

"Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in attractive developments with good amenity. A positive image and contextual fit of well-designed developments is achieved by contributing to the landscape character of the streetscape and neighbourhood.
Good landscape design enhances the development's environmental performance by retaining positive natural features which contribute to the local context, co-ordinating water and soil management, solar access, micro-climate, tree canopy, habitat values and preserving green networks.
Good landscape design optimises useability, privacy and opportunities for social interaction, equitable access, and respect for neighbours' amenity and provides for practical establishment and long term management."

The Proposal contributes to the landscape character of the streetscape with large street trees along Balmain Road, Alberto Street, Fred Street and parts of Cecily Street, integrated planting along all frontages, and spill-over planting on the top of the 2-storey podium. This frontage landscaping provides shade to the footpaths, softens the appearance of the built form, and enhances the green networks of the area. Within the site, landscaping is integrated along pedestrian links and new public and communal open space, where it can be easily maintained and provides amenity to all residents, workers and visitors to the site.

The development allows for 1008m2 of green roofs (where roof space is not used for solar photo-voltaic, paved communal open spaces or roof services), much of which is integrated into communal open space which can be accessed for residents' recreational use and maintenance. Furthermore, the Proposal offers 775m2 of green facades which will be planted and maintained from ground level. The planting will soften the built form and help improve air quality, amenity, habitat and air temperature for the residents, employees and visitors to the Site.

Each landscaped area is uniquely designed with consideration of context, neighbours, use and management to optimise useability, privacy, equitable access, amenity, management and environmental sustainability. The Proposal's 1678m2 of canopy, 1000m2 of green roof, 775m2 of green walls, and 310m2 of deep soil will greatly benefit the biodiversity and ecology of the area, adding to the established green network of neighbouring Callan Park. The increase in greenery will reduce the urban heat island effect, offering high thermal and visual amenity and supporting wellbeing for the Site's residents, workers, visitors and neighbours.

Principle 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.

Good amenity combines appropriate room dimensions and shapes, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas and ease of access for all age groups and degrees of mobility."

At the core of this new community will be a vibrant mix of artists, start-ups, independent market traders, creative industries, and residents that enjoy an urban lifestyle. The outcome will be an engaging blend of residential and industrial spaces that fosters a community where people can live, work and recreate in close proximity. The Proposal has been carefully designed to allow all users, residents and locals to benefit from the shared activation, amenity and infrastructure of the integrated precinct, whilst creating sufficient acoustic, visual and architectural separation between the residential and employment uses to ensure residents are not negatively impacted by the employment uses.

Through building articulation, the reduction of floorplates and introduction of through-site links and secondary setbacks, the Site's massing is reduced in bulk and scale, the resulting built form is sensitive to neighbours and minimizes overshadowing. The Site massing and the orientation of apartments and balconies also ensures residents have sufficient solar access and natural daylight, in accordance with ADG requirements. The orientation of apartments and private open space also minimises overlooking of within the development and across neighbouring residences. The apartments within the 3 residential mid-rise buildings are oriented either northwest towards Callan Park or east towards the city and harbour vista. This arrangement provides desirable outlooks for residents and reduces overlooking concerns between buildings. The apartments within the low-scale buildings addressing Fred Street have a leafy green outlook towards the quiet residential cul-de-sac. To the rear of these apartments, private outdoor spaces are veiled by architectural brick screens and strategic planting, which provide amenity, privacy and security.

All apartments comply with the minimum ADG size requirements and requirements for the dimensions of bedrooms and living rooms. Storage is also provided in accordance with ADG requirements, conveniently located both within the apartments and adjacent to resident's parking in the basement.

In addition to private open space, the Proposal provides a variety of communal outdoor spaces. Each of which is designed to be used flexibly with integrated planting and shared amenities such as group seating, BBQs, and flexible recreational space. Extensive planting, including large street trees, green walls and podium spill-over planting softens the appearance of the built form and offers shade and visual amenity to local area.

Acoustic amenity of the area will be protected and improved, with space provided in the basement for parking, loading and collection of waste.

Principle 7: Safety

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

It provides for quality public and private spaces that are clearly defined and fit for the intended purpose. Opportunities to maximise passive surveillance of public and communal areas promote safety. A positive relationship between public and private spaces is achieved through clearly defined secure access points and well lit and visible areas that are easily maintained and appropriate to the location and purpose."

The new key public space, Bakers Square, is activated throughout the day by several creative, light industrial and residential uses which border it, and key through-site links which will be used by workers, visitors, residents and the local community. Through-site links and new public spaces are framed by the glazed facades of active light-industrial tenancies. New pedestrian links are linear rather than convoluted and offer line-of-site through from street to street, enhancing passive surveillance. Residential windows and balconies above offer further passive surveillance. The residential buildings benefit from dedicated entry foyers, which can be accessed directly from streets or from new activated public space.

For pedestrian and cyclist safety, vehicle movement is contained to the dedicated vehicle ramp which connects to Alberto Lane. Access to the basements for cyclists and pedestrians is provided by various lifts throughout the Site.

Principle 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.

Well designed apartment developments respond to social context by providing housing and facilities to suit the existing and future social mix.

Good design involves practical and flexible features, including different types of communal spaces for a broad range of people and providing opportunities for social interaction among residents."

The proposal offers a variety of apartment sizes, styles and layouts, providing for individuals, couples and families, and offering flexibility to work from home or age in place.

- The Proposal achieves a mix of apartments types (studios, 1 bed apartments, 2 bed apartments and 3 bed apartments), which meets the requirements of the Inner West LEP.
- With 9 adaptable units and 23 Livable Housing units, the Proposal provides housing for people with a wide variety of accessibility needs and provides opportunities for residents to age in place.
- 5% of residential GFA is provided as affordable housing.
- To the south of the Site are 2 storey 'terrace house' style apartments with individual access to Fred Street, these have set-back single storey apartments above.

A variety of communal open spaces in combination with new public open spaces, provide opportunity for the residents to interact with their neighbours and the broader local community. The spaces are designed with flexibility in mind so that they may benefit all residents.

All entrances to the mid-rise residential buildings and the communal open spaces are accessible and equitable. The main living spaces of the Fred Street 'terrace style' apartments, along with the single storey apartments above are accessible via lifts from the street level and the residential carpark.

Principle 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 visual appearance of a well-designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape."

The architectural resolution follows the urban design principles to create a diverse ensemble of buildings that provide for a variety of employment uses, transition scale to suit the context, activate the public domain, provide for high quality residences, and create architecture to galvanise the Proposal's identity as a vibrant residential, employment and lifestyle precinct.

A key ambition has been to reduce the scale and footprint of buildings so that each building has its own personality according to its use. The overarching theme for the architectural expression is an 'industrial aesthetic' referencing both Character Buildings as well as more contemporary steel framed structures.

The light industrial uses are housed within buildings with tall volumes and clad with grand brick arches whereas the residential components above are clad in lighter steel elements with 'gantry' style balconies.

The residential building which rises above the retained Character Buildings has deep articulations and impressive cantilevers which help to reduce its perceived size. The resulting forms relate in scale to the Character Buildings.

The transitional apartment buildings located along the south-eastern boundary are more domestic in their scale and character to connect with the low-density housing in Fred Street but still finished with industrial details that tie these buildings into the rest of the Proposal.

PARTS 3 AND 4 OF THE APARTMENT DESIGN GUIDE

ISSUE/OBJECTIVE	DESIGN CRITERIA (IF APPLICABLE)	DESIGN GUIDANCE/OUTCOME
Part 3 - SITING THE DEVELOPMENT		
3A Site analysis *Objective 3A-1* *Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relationship to surrounding context*		*"Each element in the Site Analysis Checklist should be addressed"* Complies Each element of the Site Analysis Checklist is addressed. Refer to Urban Design Report, the architectural drawing set (containing Site Analysis Plan and Location Plan), Survey Plan (showing site dimensions and detailed topography) and consultant reports for a detailed site analysis.
3B Orientation *Objective 3B-1* *Building types and layouts respond to the streetscape and site while optimising solar access within the development*		*"Solar access to living rooms, balconies and private open spaces of neighbours should be considered* *Where the street frontage is to the east or west, rear buildings should be orientated to the north* *Where the street frontage is to the north or south, overshadowing to the south should be minimised and buildings behind the street frontage should be orientated to the east and west (see figure 3B.2)"* Complies The architecture of the proposal addresses all four street frontages: Balmain Road to the north west, Cecily Street to the north east, Fred Street to the south east and Alberto Street to the south west employing architectural strategies in all cases to manage street character, orientation, scale, amenity etc. See Urban Design report for detailed information. Most apartments in the proposal are orientated towards the east, north east and north west to optimise solar access, privacy and available outlook. Apartments in buildings D, E and F are primarily orientated south east to face Fred Street and the available views. The two storey apartments on the ground and first floor employ rear balconies that are accessed from the living spaces on the first floor and achieve solar access. The second floor apartments employ sawtooth roof / skylights and windows facing north west are limited and screened to reduce overlooking within the development.

Objective 3B-2 *Overshadowing of neighbouring properties is minimised during mid-winter*		*"Living areas, private open space and communal open space should receive solar access in accordance with sections 3D Communal and public open space and 4A Solar and daylight access* *Solar access to living rooms, balconies and private open spaces of neighbours should be considered* *Where an adjoining property does not currently receive the required hours of solar access, the proposed building ensures solar access to neighbouring properties is not reduced by more than 20%* *If the proposal will significantly reduce the solar access of neighbours, building separation should be increased beyond minimums contained in section 3F Visual privacy* *Overshadowing should be minimised to the south or down hill by increased upper level setbacks* *It is optimal to orientate buildings at 90 degrees to the boundary with neighbouring properties to minimise overshadowing and privacy impacts, particularly where minimum setbacks are used and where buildings are higher than the adjoining development* *A minimum of 4 hours of solar access should be retained to solar collectors on neighbouring buildings"* The proposal increases building height and as such increases overshadowing of some neighbouring buildings on Fred St and Alberto St. Limiting the impact of overshadowing on the living rooms, and private open spaces of neighbours has influenced design of the proposal. For the impacted neighbours, the proposal responds to the Leichardt DCP – C 3.9 C14. *"Where the surrounding allotments side boundary is 45 degrees from true north and therefore the allotment is not orientated north/south or east/west, glazing serving main living room shall retain a minimum of two hours of solar access between 9am and 3pm at winter solstice."* The resulting overshadowing does not reduce the solar access to glazing serving main living rooms to below two hours of solar access between 9am and 3pm on winter solstice.
3C Public Domain Interface *Objective 3C-1* *Transition between private and public domain is achieved without compromising safety and security*		*"Terraces, balconies and courtyard apartments should have direct street entry, where appropriate* *Changes in level between private terraces, front gardens and dwelling entries above the street level provide surveillance and improve visual privacy for ground level dwellings (see figure 3C.1)* *Upper level balconies and windows should overlook the public domain* *Front fences and walls along street frontages should use visually permeable materials and treatments. The height of solid fences or walls should be limited to 1m* *Length of solid walls should be limited along street frontages* *Opportunities should be provided for casual interaction between residents and the public domain.* *Design solutions may include seating at building entries, near letter boxes and in private courtyards adjacent to streets*

		In developments with multiple buildings and/or entries, pedestrian entries and spaces associated with individual buildings/entries should be differentiated to improve legibility for residents, using a number of the following design solutions: *• architectural detailing* *• changes in materials* *• plant species* *• colours* *Opportunities for people to be concealed should be minimised."* Public and private domain are clearly defined by differing entry points into the residential buildings. Ground level access to apartments is either through a private lift lobby or recessed and raised front doors. The public domain is overlooked by numerous apartments. Two storey apartments in buildings D, E and F feature recessed and raised front doors and street facing windows. Planting is employed to further screen these spaces from the street.
Objective 3C-2 *Amenity of the public domain is retained and enhanced*		*"Planting softens the edges of any raised terraces to the street, for example above sub- basement car parking* *Mail boxes should be located in lobbies, perpendicular to the street alignment or integrated into front fences where individual street entries are provided* *The visual prominence of underground car park vents should be minimised and located at a low level where possible* *Substations, pump rooms, garbage storage areas and other service requirements should be located in basement car parks or out of view* *Ramping for accessibility should be minimised by building entry location and setting ground floor levels in relation to footpath levels* *Durable, graffiti resistant and easily cleanable materials should be used* *Where development adjoins public parks, open space or bushland, the design positively addresses this interface and uses a number of the following design solutions:* *• street access, pedestrian paths and building entries which are clearly defined* *• paths, low fences and planting that clearly delineate between communal/private open space and the adjoining public open space* *• minimal use of blank walls, fences and ground level parking* *On sloping sites protrusion of car parking above ground level should be minimised by using split levels to step underground car parking."* Elevating the experience of the public domain has been a focus of the design. The proposal offers widened footpaths, a variety of accessible public laneways, through site links and a public courtyard. The quality of the

		ground floor employment space has also been a focus. Planting, deep soil areas and green walls soften edges, reduce urban heat and improve the public domain throughout the site. Service and plant rooms are kept to a minimum above ground and are predominantly located in the basement levels whilst the site substation is located on the south western edge of the site so it can be screened by planting and accessed from Alberto St.
3D Communal and Public open space *Objective 3D-1* *An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping*	1. *Communal open space has a minimum area equal to 25% of the site (see figure 3D.3)* 2. *Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter*)	*"Communal open space should be consolidated into a well designed, easily identified and usable area* *Communal open space should have a minimum dimension of 3m, and larger developments should consider greater dimensions* *Communal open space should be co-located with deep soil areas* *Direct, equitable access should be provided to communal open space areas from common circulation areas, entries and lobbies* *Where communal open space cannot be provided at ground level, it should be provided on a podium or roof* *Where developments are unable to achieve the design criteria, such as on small lots, sites within business zones, or in a dense urban area, they should:* • *provide communal spaces elsewhere such as a landscaped roof top terrace or a common room* • *provide larger balconies or increased private open space for apartments* • *demonstrate good proximity to public open space and facilities and/or provide contributions to public open space"* Residents will have access to a range of communal open spaces to suit different user groups. Communal open spaces are located on ground floor (one space is co-located with a deep soil area), on podiums and on the top of roofs. The collection of diverse spaces provide outdoor BBQs, seating areas, and planting with various levels of density and shade. The spaces range in scale from intimate spaces for reading or working, larger break out space for gatherings as well as flexible and open spaces for exercise and recreation. The proposal provides a total of 1045m^2 (15.3% of site area) of communal of open space. Most of this space achieves the minimum sunlight requirements. As 60% of the total GFA on the site is used for residential, we propose to proportionally reduce the required area of communal open space. 6824m^2 x 60% x 25% = 1024m^2 The 1045m^2 of communal open space provided is 25.5% of the reduced site area and therefore would comply with the ADG. In addition to communal open space the site offers publicly accessible areas and through site links. The public open space is 1314m^2, 19.3% of site area and offers high-quality space for residents, workers and visitors to inhabit. In addition to these spaces provided on site, just across Balmain Road is Callan Park.

Objective 3D-2 *Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting*		*"Facilities are provided within communal open spaces and common spaces for a range of age groups (see also 4F Common circulation and spaces), incorporating some of the following elements:* • *seating for individuals or groups* • *barbecue areas* • *play equipment or play areas* • *swimming pools, gyms, tennis courts or common rooms* *The location of facilities responds to microclimate and site conditions with access to sun in winter, shade in summer and shelter from strong winds and down drafts.* *Visual impacts of services should be minimised, including location of ventilation duct outlets from basement car parks, electrical substations and detention tanks."* Complies The communal open spaces are located on ground floor, on top of podiums and on roof tops providing different levels of sunlight, privacy and exposure. The spaces on roof tops and podiums provide outlook and views towards the Sydney CBD, Callan Park, the surrounding suburbs. All spaces allow for accessible access and offer spaces for a wide range of activities and groups.
Objective 3D-3 *Communal open space is designed to maximise safety*		*"Communal open space and the public domain should be readily visible from habitable rooms and private open space areas while maintaining visual privacy. Design solutions may include* • *bay windows* • *corner windows* • *balconies* *Communal open space should be well lit* *Where communal open space/facilities are provided for children and young people they are safe and contained."* Complies Most communal open spaces allow for a balanced level of privacy and exposure to allow for passive surveillance.

<table>
<tr>
<td>Objective 3D-4

Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood</td>
<td></td>
<td>“The public open space should be well connected with public streets along at least one edge

The public open space should be connected with nearby parks and other landscape elements

Public open space should be linked through view lines, pedestrian desire paths, termination points and the wider street grid

Solar access should be provided year round along with protection from strong winds

Opportunities for a range of recreational activities should be provided for people of all ages

A positive address and active frontages should be provided adjacent to public open space

Boundaries should be clearly defined between public open space and private areas.”

Complies

The public open space is connected to the surrounding streets and offers much needed cross-block connections to link parts of the neighbourhood. The network of through site links and the provision of Bakers Square offer good view lines through the site and, in the case of Fred Lane, continue the street grid into the site. These lanes have good passive surveillance.</td>
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<tr>
<td>3E Deep soil zones
Objective 3E-1

Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality</td>
<td>1. Deep soil zones are to meet the following minimum requirements

<table>
<tr><th>Site area</th><th>Minimum dimensions</th><th>Deep soil zone (% of site area)</th></tr>
<tr><td>less than 650m^2</td><td>-</td><td rowspan="4">7%</td></tr>
<tr><td>650m^2 - 1,500m^2</td><td>3m</td></tr>
<tr><td>greater than 1,500m^2</td><td>6m</td></tr>
<tr><td>greater than 1,500m^2 with significant existing tree cover</td><td>6m</td></tr>
</table></td>
<td>“On some sites it may be possible to provide larger deep soil zones, depending on the site area and context:
• 10% of the site as deep soil on sites with an area of 650m2 - 1,500m2
• 15% of the site as deep soil on sites greater than 1,500m2

Deep soil zones should be located to retain existing significant trees and to allow for the development of healthy root systems, providing anchorage and stability for mature trees. Design solutions may include
• basement and sub basement car park design that is consolidated beneath building footprints
• use of increased front and side setbacks
• adequate clearance around trees to ensure long term health
• co-location with other deep soil areas and adjacent sites to create larger contigious areas of deep soil
Achieving the design criteria may not be possible on some sites including where:
• the location and building typology have limited or no space for deep soil at ground level (e.g. central business district, constrained sites, high density areas, or in centres)
• there is 100% site coverage or non-residential uses at ground floor level”

The proposal provides 310m^2 of deep soil zones to comply with the draft site-specific DCP. Minimum dimensions of these zones are narrower that those shown in the ADG but align with the dimensions given in the draft site-specific DCP.</td>
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</table>

3F Visual privacy *Objective 3F-1* *Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy*	1. *Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows:* *Note:* *Separation distance between buildings on the same site should combine required building separations depending on the type of room (see figure 3F.2)* 2. *Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties*	*"Generally one step in the built form as the height increases due to building separations is desirable. Additional steps should be careful not to cause a 'ziggurat' appearance* *For residential buildings next to commercial buildings, separation distances should be measured as follows:* • *for retail, office spaces and commercial balconies use the habitable room distances* • *for service and plant areas use the non-habitable room distances* *New development should be located and oriented to maximise visual privacy between buildings on site and for neighbouring buildings. Design solutions include:* • *site layout and building orientation to minimise privacy impacts (see also section 3B Orientation)* • *on sloping sites, apartments on different levels have appropriate visual separation distances (see figure 3F.4)* *Apartment buildings should have an increased separation distance of 3m (in addition to the requirements set out in design criteria 1) when adjacent to a different zone that permits lower density residential development to provide for a transition in scale and increased landscaping (figure 3F.5)* *Direct lines of sight should be avoided for windows and balconies across corners* *No separation is required between blank walls"* Complies* The proposal largely complies and provides setbacks in a manner consistent with the draft site-specific DCP to provide visual privacy. Buildings have been orientated to maximize visual privacy and outlook whilst offering appropriate transitions in scale and zones for buffer landscape. Internally, within the site, where building separation is not achieved, privacy is achieved through solid walls, screen walls and screening blades. Most apartments in these areas have their primary living room orientated toward the views.

Objective 3F-2 *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*		*"Communal open space, common areas and access paths should be separated from private open space and windows to apartments, particularly habitable room windows. Design solutions may include:* • *setbacks* • *solid or partially solid balustrades to balconies at lower levels* • *fencing and/or trees and vegetation to separate spaces* • *screening devices* • *bay windows or pop out windows to provide privacy in one direction and outlook in another* • *raising apartments/private open space above the public domain or communal open space* • *planter boxes incorporated into walls and balustrades to increase visual separation* • *pergolas or shading devices to limit overlooking of lower apartments or private open space* • *on constrained sites where it can be demonstrated that building layout opportunities are limited, fixed louvres or screen panels to windows and/or balconies* *Bedrooms, living spaces and other habitable rooms should be separated from gallery access and other open circulation space by the apartment's service areas* *Balconies and private terraces should be located in front of living rooms to increase internal privacy* *Windows should be offset from the windows of adjacent buildings. Recessed balconies and/or vertical fins should be used between adjacent balconies."* Complies Buildings and apartments have been orientated to maximize visual privacy and outlook whilst offering appropriate transitions in scale and zones for buffer landscape. Where necessary, design solutions such as setbacks, solid walls and fixed screening devices have been employed to increase privacy. To provide additional visual privacy between apartments in Buildings A and B, angled vertical screens limit any overlooking between habitable rooms in the opposite building. The apartments in buildings D, E and F adjacent to Alberto Lane are visually separated by a planted area and a screen wall surrounding the private balconies. On Level 2 of buildings D, E and F all rooms facing toward the employment spaces are given additional setbacks and fixed privacy screens.

3G Pedestrian access and entries *Objective 3G-1* *Building entries and pedestrian access connects to and addresses the public domain*		*"Multiple entries (including communal building entries and individual ground floor entries) should be provided to activate the street edge* *Entry locations relate to the street and subdivision pattern and the existing pedestrian network* *Building entries should be clearly identifiable and communal entries should be clearly distinguishable from private entries* *Where street frontage is limited and multiple buildings are located on the site, a primary street address should be provided with clear sight lines and pathways to secondary building entries."* Complies The proposal provides dedicated entry lobbies for each building accessed off Alberto Street, Fred Street, Fred Lane extension or the courtyard. Private entries into front doors of ground floor apartments within Buildings D, E and F are clearly distinct from communal entry points. The entry points are mostly undercover, and the lobbies are clearly visible and can easily be distinguished from ground floor employment spaces. Signage will further help with wayfinding.
Objective 3G-2 *Access, entries and pathways are accessible and easy to identify*		*"Building access areas including lift lobbies, stairwells and hallways should be clearly visible from the public domain and communal spaces* *The design of ground floors and underground car parks minimise level changes along pathways and entries* *Steps and ramps should be integrated into the overall building and landscape design* *For large developments 'way finding' maps should be provided to assist visitors and residents (see figure 4T.3)* *For large developments electronic access and audio/video intercom should be provided to manage access."* Complies Residential building entries and lobbies are clearly identified from the street and internal public spaces. These lobbies allow for direct accessible entry.
Objective 3G-3 *Large sites provide pedestrian links for access to streets and connection to destinations*		*"Pedestrian links through sites facilitate direct connections to open space, main streets, centres and public transport* *Pedestrian links should be direct, have clear sight lines, be overlooked by habitable rooms or private open spaces of dwellings, be well lit and contain active uses, where appropriate."* Complies The proposal has a network of accessible public links with clear sightlines and passive surveillance.

3H Vehicle access *Objective 3H-1* *Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes*		*"Car park access should be integrated with the building's overall facade. Design solutions may include:* • *the materials and colour palette to minimize visibility from the street* • *security doors or gates at entries that minimize voids in the façade* • *where doors are not provided, the visible interior reflects the façade design and the building services, pipes and ducts are concealed* *Car park entries should be located behind the building line* *Vehicle entries should be located at the lowest point of the site minimising ramp lengths, excavation and impacts on the building form and layout* *Car park entry and access should be located on secondary streets or lanes where available* *Vehicle standing areas that increase driveway width and encroach into setbacks should be avoided* *Access point locations should avoid headlight glare to habitable rooms* *Adequate separation distances should be provided between vehicle entries and street intersections* *The width and number of vehicle access points should be limited to the minimum* *Visual impact of long driveways should be minimised through changing alignments and screen planting* *The need for large vehicles to enter or turn around within the site should be avoided* *Garbage collection, loading and servicing areas are screened* *Clear sight lines should be provided at pedestrian and vehicle crossings* *Traffic calming devices such as changes in paving material or textures should be used where appropriate* *Pedestrian and vehicle access should be separated and distinguishable. Design solutions may include:* • *changes in surface materials* • *level changes* • *the use of landscaping for separation"* Complies All vehicle movement, in and out of the Site, has been consolidated to a single convenient location in Alberto St via Alberto Lane directly into the basement. The Alberto Lane entry ramp is designed to bring light and air to the basement and provides the opportunity to establish a green roof for communal use, and a green edge to enhance the visual amenity of the laneway.

3J Bicycle and car parking *Objective 3J-1* *Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas*	1. *for development in the following locations:* • *on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan area; or* • *on land zoned , and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed use or equivalent in a nominated regional centre* *The minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less* *The car parking needs for a development must be provided off street*	*"Where a car share scheme operates locally, provide car share parking spaces within the development. Car share spaces, when provided, should be on site* *Where less car parking is provided in a development, council should not provide on street resident parking permits."* Complies A total of 95 car parking spaces have been provided for residents and visitors, following the guidelines of Leichhardt DCP 2013 – Part C, Section 1 Table C4 Rates. Car share spaces have also been provided. Refer to the traffic report for more information.
Objective 3J-2 *Parking and facilities are provided for other modes of transport*		*"Conveniently located and sufficient numbers of parking spaces should be provided for motorbikes and scooters* *Secure undercover bicycle parking should be provided that is easily accessible from both the public domain and common areas* *Conveniently located charging stations are provided for electric vehicles, where desirable."* Complies Refer to the traffic report for more information regarding motorbike and scooter parking as well as provisions for bicycle parking.
Objective 3J-3 *Car park design and access is safe and secure*		*"Supporting facilities within car parks, including garbage, plant and switch rooms, storage areas and car wash bays can be accessed without crossing car parking spaces* *Direct, clearly visible and well lit access should be provided into common circulation areas* *A clearly defined and visible lobby or waiting area should be provided to lifts and stairs* *For larger car parks, safe pedestrian access should be clearly defined and circulation areas have good lighting, colour, line marking and/or bollards"*

		Complies The basement design prioritises legibility with commercial vehicles having direct access into an enclosed secure loading dock while cars are directed into a simple clockwise circulation system to access parking provided over two basement levels. This ensures that impacts between larger vehicles, pedestrians, cyclists, and cars is minimised. The loading dock is designed to contain noise, enable efficient loading and unloading to good lifts and waste containment areas, and sized to enable these vehicles to enter and exit safely in a forward direction.
Objective 3J-4 *Visual and environmental impacts of underground car parking are minimised*		*Excavation should be minimised through efficient car park layouts and ramp design* *Car parking layout should be well organised, using a logical, efficient structural grid and double loaded aisles* *Protrusion of car parks should not exceed 1m above ground level. Design solutions may include stepping car park levels or using split levels on sloping sites* *Natural ventilation should be provided to basement and sub basement car parking areas* *Ventilation grills or screening devices for car parking openings should be integrated into the facade and landscape design* Complies The two-level basement does not extend under the retained buildings or deep soil zones. Mechanical ventilation points are integrated into the architectural design.
Objective 3J-5 *Visual and environmental impacts of on-grade car parking are minimised*		*On-grade car parking should be avoided* *Where on-grade car parking is unavoidable, the following design solutions are used:* • *Parking is located on the side or rear of the lot away from primary street frontage* • *Cars are screened from view of streets, buildings, communal and private open space areas* • *Safe and direct access to building entry points is provided* • *Parking is incorporated into the landscape design of the site, by extending planting and materials into the car park space* • *Stormwater run-off is managed appropriately from car parking surfaces* • *Bio-swales, rain gardens or on site detention tanks are provided, where appropriate* • *Light coloured paving materials or permeable paving systems are used and shade trees are planted between every 4-5 parking spaces to reduce increased surface temperatures from large areas of paving* Complies. No on-grade car parking is proposed.

Objective 3J-6 *Visual and environmental impacts of above ground enclosed car parking are minimised*		*Exposed parking should not be located along primary street frontages* *Screening, landscaping and other design elements including public art should be used to integrate the above ground car parking with the facade. Design solutions may include:* • *car parking that is concealed behind the facade, with windows integrated into the overall facade design (approach should be limited to developments where a larger floor plate podium is suitable at lower levels)* • *car parking that is 'wrapped' with other uses, such as retail, commercial or two storey Small Office/Home Office (SOHO) units along the street frontage (see figure 3J.9)* *Positive street address and active frontages should be provided at ground level* Complies. No on-grade car parking is proposed.
PART 4 - DESIGNING THE BUILDING		
4A Solar and daylight access *Objective 4A-1* *To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space*	1. *Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas* 2. *In all other areas, living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid-winter* 3. *maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter*	*The design maximises north aspect and the number of single aspect south facing apartments is minimised* *Single aspect, single storey apartments should have a northerly or easterly aspect* *Living areas are best located to the north and service areas to the south and west of apartments* *To optimise the direct sunlight to habitable rooms and balconies a number of the following design features are used:* • *dual aspect apartments* • *shallow apartment layouts* • *two storey and mezzanine level apartments* • *bay windows* *To maximise the benefit to residents of direct sunlight within living rooms and private open spaces, a minimum of 1m2 of direct sunlight, measured at 1m above floor level, is achieved for at least 15 minutes* *Achieving the design criteria may not be possible on some sites. This includes:* • *where greater residential amenity can be achieved along a busy road or rail line by orientating the living rooms away from the noise source* • *on south facing sloping sites* • *where significant views are oriented away from the desired aspect for direct sunlight* *Design drawings need to demonstrate how site constraints and orientation preclude meeting the design criteria and how the development meets the objective* *Complies*

		74% of apartments (66 of the total 89) achieve at least 2 hours of solar access between 9am and 3pm mid-winter. 13.5% (12 apartments) receive less than 2 hours of solar access. 12.5% (11 apartments) receive no of solar access. Apartments F201, A502 & B502 rely upon skylights and high-level windows as a primary way of achieving 2 hours of solar access between 9am and 3pm in mid-winter, however the proposal does not rely upon these 3 apartments to achieve a minimum level of compliance.
Objective 4A-2 *Daylight access is maximized where sunlight is limited*		*Courtyards, skylights and high-level windows (with sills of 1,500mm or greater) are used only as a secondary light source in habitable rooms.* *Where courtyards are used:* • *use is restricted to kitchens, bathrooms and service areas* • *building services are concealed with appropriate detailing and materials to visible walls* • *courtyards are fully open to the sky* • *access is provided to the light well from a communal area for cleaning and maintenance* • *acoustic privacy, fire safety and minimum privacy separation distances (see section 3F Visual privacy) are achieved* *Opportunities for reflected light into apartments are optimised through:* • *reflective exterior surfaces on buildings opposite south facing windows* • *positioning windows to face other buildings or surfaces (on neighbouring sites or within the site) that will reflect light* • *integrating light shelves into the design* • *light coloured internal finishes* *Complies** Apartments F201, A502 & B502 rely upon skylights and high-level windows as a primary way of achieving 2 hours of solar access between 9am and 3pm in mid-winter, however the proposal does not rely upon these 3 apartments to achieve a minimum level of compliance. Apartments D002, D003, D004, E001 & E004 each have one bedroom that will rely upon a private lightwell garden (fully open to the sky) for light and ventilation.

Objective 4A-3 *Design incorporates shading and glare control, particularly for warmer months*		*A number of the following design features are used:* • *balconies or sun shading that extend far enough to shade summer sun, but allow winter sun to penetrate living areas* • *shading devices such as eaves, awnings, balconies, pergolas, external louvres and planting* • *horizontal shading to north facing windows* • *vertical shading to east and particularly west facing windows* • *operable shading to allow adjustment and choice* • *high performance glass that minimises external glare off windows, with consideration given to reduced tint glass or glass with a reflectance level below 20% (reflective films are avoided)* Complies The windows in the development are generally designed to be recessed and shaded by the gridded articulation of the façades. Apartments with rooms facing north-west have a 1m deep balcony/awning, recessed balconies, and vertical screens to provide adequate shading during warmer months.
4B Natural ventilation *Objective 4B-1* *All habitable rooms are naturally ventilated*		*The building's orientation maximises capture and use of prevailing breezes for natural ventilation in habitable rooms* *Depths of habitable rooms support natural ventilation* *The area of unobstructed window openings should be equal to at least 5% of the floor area served* *Light wells are not the primary air source for habitable rooms* *Doors and openable windows maximise natural ventilation opportunities by using the following design solutions:* • *adjustable windows with large effective openable areas* • *a variety of window types that provide safety and flexibility such as awnings and louvres* • *windows which the occupants can reconfigure to funnel breezes into the apartment such as vertical louvres, casement windows and externally opening doors* Stacking sliding doors maximise operability of living rooms onto balconies and are protected from the element via balcony overhangs and sliding screens. Awning windows are provided in areas where limited overhangs are provided to ensure windows can be opened during inclement weather. Some windows on Buildings A & B have sliding windows behind fixed, perforated ventilation panels. In these instances, windows can be opened without restriction and during inclement weather. Apartments D002, D003, D004, E001 & E004 each have one bedroom that will rely upon a private lightwell garden (fully open to the sky) for light and ventilation.

<table>
<tr>
<td>Objective 4B-2

The layout and design of single aspect apartments maximises natural ventilation</td>
<td></td>
<td>“Apartment depths are limited to maximise ventilation and airflow (see also figure 4D.3)

Natural ventilation to single aspect apartments is achieved with the following design solutions:
• primary windows are augmented with plenums and light wells (generally not suitable for cross ventilation)
• stack effect ventilation / solar chimneys or similar to naturally ventilate internal building areas or rooms such as bathrooms and laundries
• courtyards or building indentations have a width to depth ratio of 2:1 or 3:1 to ensure effective air circulation and avoid trapped smells.”

83% of the apartments allow for natural cross ventilation.
Single aspect apartment depths are a maximum 3x ceiling height and have generous operable frontages are provided to maximise access to natural ventilation.</td>
</tr>
<tr>
<td>Objective 4B-3

The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents</td>
<td>1. At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed
2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line</td>
<td>“The building should include dual aspect apartments, cross through apartments and corner apartments and limit apartment depths

In cross-through apartments external window and door opening sizes/areas on one side of an apartment (inlet side) are approximately equal to the external window and door opening sizes/areas on the other side of the apartment (outlet side) (see figure 4B.4)

Apartments are designed to minimise the number of corners, doors and rooms that might obstruct airflow

Apartment depths, combined with appropriate ceiling heights, maximise cross ventilation and airflow.”

Complies

83% of apartments allow for access to natural cross ventilation.</td>
</tr>
<tr>
<td>4C Ceiling heights
Objective 4C-1

Ceiling height achieves sufficient natural ventilation and daylight access</td>
<td>1. Measured from finished floor level to finished
<table><tr><th colspan="2">Minimum ceiling height
for apartment and mixed use buildings</th></tr><tr><td>Habitable rooms</td><td>2.7m</td></tr><tr><td>Non-habitable</td><td>2.4m</td></tr><tr><td>For 2 storey apartments</td><td>2.7m for main living area floor
2.4m for second floor, where its area does not exceed 50% of the apartment area</td></tr><tr><td>Attic spaces</td><td>1.8m at edge of room with a 30 degree minimum ceiling slope</td></tr><tr><td>If located in mixed used areas</td><td>3.3m for ground and first floor to promote future flexibility of use</td></tr></table>
These minimums do not preclude higher ceilings if desired</td>
<td>“Ceiling height can accommodate use of ceiling fans for cooling and heat distribution.”

Complies

Typical floor to floor heights for the residential floors is 3.1m - 3.2m. Residential apartments will typically have min. 2.7m ceiling heights. Some apartments with raked ceilings to high level windows with ceiling heights up to 4.1m.</td>
</tr>
</table>

<table>
<tr>
<td>Objective 4C-2

Ceiling height increases the sense of space in apartments and provides for well proportioned rooms</td>
<td></td>
<td>A number of the following design solutions can be used:
• the hierarchy of rooms in an apartment is defined using changes in ceiling heights and alternatives such as raked or curved ceilings, or double height spaces
• well proportioned rooms are provided, for example, smaller rooms feel larger and more spacious with higher ceilings
• ceiling heights are maximised in habitable rooms by ensuring that bulkheads do not intrude. The stacking of service rooms from floor to floor and coordination of bulkhead location above non-habitable areas, such as robes or storage, can assist

Complies

The stacking of service rooms and kitchens from floor to floor allows for maximum ceiling height in key habitable rooms such as living and bedrooms. Some apartments have raked ceilings to high level windows which increase the sense of space within the apartments.</td>
</tr>
<tr>
<td>Objective 4C-3

Ceiling heights contribute to the flexibility of building use over the life of the building</td>
<td></td>
<td>Ceiling heights of lower level apartments in centres should be greater than the minimum required by the design criteria allowing flexibility and conversion to non-residential uses (see figure 4C.1)

N/A</td>
</tr>
<tr>
<td>4D Apartment size and layout
Objective 4D-1

The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity</td>
<td>1. Apartments are required to have the following minimum internal areas:
<table><tr><th>Apartment type</th><th>Minimum internal area</th></tr><tr><td>Studio</td><td>35m²</td></tr><tr><td>1 bedroom</td><td>50m²</td></tr><tr><td>2 bedroom</td><td>70m²</td></tr><tr><td>3 bedroom</td><td>90m²</td></tr></table>The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m2 each
A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m2 each
2. Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms</td>
<td>Kitchens should not be located as part of the main circulation space in larger apartments (such as hallway or entry space)

A window should be visible from any point in a habitable room

Where minimum areas or room dimensions are not met apartments need to demonstrate that they are well designed and demonstrate the usability and functionality of the space with realistically scaled furniture layouts and circulation areas. These circumstances would be assessed on their merits

Complies*

Apartment have been designed to comply with the minimum numeric requirements:
Studio: 35 sqm
1 bed: 50 sqm
2 bed: 70 sqm
3 bed: 90 sqm

D201, D202, E201, E202 are 3-bedroom, 2-bathroom apartments larger than 90sqm, however these apartments do not achieve the 95sqm requirement required for the additional bathroom.

Every habitable room has an external window of not less than 10% of floor area of room.</td>
</tr>
</table>

Objective 4D-2 *Environmental performance of the apartment is maximised*	1. *Habitable room depths are limited to a maximum of 2.5 x the ceiling height* 2. *In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window*	*Greater than minimum ceiling heights can allow for proportional increases in room depth up to the permitted maximum depths* *All living areas and bedrooms should be located on the external face of the building* *Where possible:* • *bathrooms and laundries should have an external openable window* • *main living spaces should be oriented toward the primary outlook and aspect and away from noise sources* *Complies** • 87 out of 89 apartments are compliant with 4D-2.1, in the 2 apartments that do not comply (A204 and B204), the living and dining spaces are fully compliant with floor to ceiling glazing to a balcony. In these apartments, only a small section of the kitchen extends past the maximum depth. • All apartments comply with 4D-2.2 • Every apartment has the primary living spaces located on the external face of the building oriented toward the primary aspect. • 77 out of 89 apartments have every bedroom located against the external face of the building. The apartments which do not satisfy this criteria are studios and 1 bed apartments. The bedrooms in these apartments have sliding door panels which can be opened wide onto studies or the living room. These doors always open in the direction of the primary aspect to bring natural light and outlook to the bedrooms.
Objective 4D-3 *Apartment layouts are designed to accommodate a variety of household activities and needs*	1. *Master bedrooms have a minimum area of 10m2 and other bedrooms 9m2 (excluding wardrobe space)* 2. *Bedrooms have a minimum dimension of 3m (excluding wardrobe space)* 3. *Living rooms or combined living/dining rooms have a minimum width of:* • *3.6m for studio and 1 bedroom apartments* • *4m for 2 and 3 bedroom apartments* *The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts*	*Access to bedrooms, bathrooms and laundries is separated from living areas minimising direct openings between living and service areas* *All bedrooms allow a minimum length of 1.5m for robes* *The main bedroom of an apartment or a studio apartment should be provided with a wardrobe of a minimum 1.8m long, 0.6m deep and 2.1m high* *Apartment layouts allow flexibility over time, design solutions may include:* • *dimension that facilitate a variety of furniture arrangements and removal* • *spaces for a range of activities and privacy levels between different spaces within the apartment* • *dual master apartments* • *dual key apartments Note: dual key apartments which are separate but on the same title are regarded as two sole occupancy units for the purposes of the Building Code of Australia and for calculating the mix of apartments* • *room sizes and proportions or open plans (rectangular spaces (2:3) are more easily furnished than square spaces (1:1))* • *efficient planning and circulation by stairs, corridors and through rooms to maximize the amount of usable floor space in rooms* *Complies*

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All bedrooms and main bedrooms meet the dimension requirements of 4D-3.1 and 4D-3.2
87 out of 89 apartments comply with 4D-3.3. The two apartments that don't comply are 2 bedroom apartments (C304, C404) with a living room width of 3.6m. These living rooms have great outlook with large areas of glazing and generous balconies.
Across all apartments, access to bathrooms and bedrooms are separated from main living areas.
All apartments provide robes which comply with or exceed requirements.
The apartments allow for flexibility over time. Many apartments have studies or study nooks. All apartments have efficient circulation planning and living spaces designed for easy furnishing.

</td>
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<tr>
<td>4E Private open spaces and balconies
Objective 4E-1

Apartments provide appropriately sized private open space and balconies to enhance residential amenity</td>
<td>1. All apartments are required to have primary balconies as follows
<table>
<tr><th>Dwelling type</th><th>Minimum area</th><th>Minimum depth</th></tr>
<tr><td>Studio apartments</td><td>4m²</td><td>-</td></tr>
<tr><td>1 bedroom apartments</td><td>8m²</td><td>2m</td></tr>
<tr><td>2 bedroom apartments</td><td>10m²</td><td>2m</td></tr>
<tr><td>3+ bedroom apartments</td><td>12m²</td><td>2.4m</td></tr>
</table>
The minimum balcony depth to be counted as contributing to the balcony area is 1m
2. For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15m2 and a minimum depth of 3m</td>
<td>Increased communal open space should be provided where the number or size of balconies are reduced

Storage areas on balconies is additional to the minimum balcony size

Balcony use may be limited in some proposals by:

Consistently high wind speeds at 10 storeys and above
Close proximity to road, rail or other noise sources
Exposure to significant levels of aircraft noise
Heritage and adaptive reuse of existing buildings

In these situations, juliet balconies, operable walls, enclosed wintergardens or bay windows may be appropriate, and other amenity benefits for occupants should also be provided in the apartments or in the development or both. Natural ventilation also needs to be demonstrated

Complies*

Each apartment in the proposal has private open space, in the form of a balcony, and/or terrace.
Balcony minimum depth is 2000mm and in many cases areas exceed the minimum requirements.
All apartments comply with design criteria 1, but not all ground floor apartments and apartments on podiums comply with the increased private open space areas required under criteria 2.</td>
</tr>
<tr>
<td>Objective 4E-2

Primary private open space and balconies are appropriately located to enhance liveability for residents</td>
<td></td>
<td>"Primary open space and balconies should be located adjacent to the living room, dining room or kitchen to extend the living space

Private open spaces and balconies predominantly face north, east or west

Primary open space and balconies should be orientated with the longer side facing outwards or be open to the sky to optimise daylight access into adjacent rooms."

Complies

All apartments are arranged with the main living spaces adjacent to the primary private open space. All balconies and terraces face north west, north east, east or south east.
Wherever possible, balconies are situated with the wider edge facing outwards, to optimize daylight access to living areas. In some cases, living rooms are located against façade of the building to maximise amenity, with the balcony acting as an extension of the living space to one side.</td>
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</table>

Objective 4E-3 *Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building*		*Solid, partially solid or transparent fences and balustrades are selected to respond to the location. They are designed to allow views and passive surveillance of the street while maintaining visual privacy and allowing for a range of uses on the balcony. Solid and partially solid balustrades are preferred* *Full width full height glass balustrades alone are generally not desirable* *Projecting balconies should be integrated into the building design and the design of soffits considered* *Operable screens, shutters, hoods and pergolas are used to control sunlight and wind* *Balustrades are set back from the building or balcony edge where overlooking or safety is an issue* *Downpipes and balcony drainage are integrated with the overall facade and building design* *Air-conditioning units should be located on roofs, in basements, or fully integrated into the building design* *Where clothes drying, storage or air conditioning units are located on balconies, they should be screened and integrated in the building design* *Ceilings of apartments below terraces should be insulated to avoid heat loss* *Water and gas outlets should be provided for primary balconies and private open space* *Complies* Balconies enhance the articulation of façade design and are integrated into the building. Air conditioning units are located on the roofs. Vertical louvers provide privacy to the private open spaces, where required.
Objective 4E-4 *Private open space and balcony design maximises safety*		*"Changes in ground levels or landscaping are minimised* *Design and detailing of balconies avoids opportunities for climbing and falls."* *Complies* Balcony and terrace balustrades comply with the NCC controls to protect from falls.
4F Common circulation and spaces *Objective 4F-1* *Common circulation spaces achieve good amenity and properly service the number of apartments*	1. *The maximum number of apartments off a circulation core on a single level is eight* 2. *For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40*	*Greater than minimum requirements for corridor widths and/ or ceiling heights allow comfortable movement and access particularly in entry lobbies, outside lifts and at apartment entry doors* *Daylight and natural ventilation should be provided to all common circulation spaces that are above ground* *Windows should be provided in common circulation spaces and should be adjacent to the stair or lift core or at the ends of corridors* *Longer corridors greater than 12m in length from the lift core should be articulated. Design solutions may*

		include: • *a series of foyer areas with windows and spaces for seating* • *wider areas at apartment entry doors and varied ceiling heights* *Design common circulation spaces to maximise opportunities for dual aspect apartments, including multiple core apartment buildings and cross over apartments* *Achieving the design criteria for the number of apartments off a circulation core may not be possible. Where a development is unable to achieve the design criteria, a high level of amenity for common lobbies, corridors and apartments should be demonstrated, including:* • *sunlight and natural cross ventilation in apartments* • *access to ample daylight and natural ventilation in common circulation spaces* • *common areas for seating and gathering* • *generous corridors with greater than minimum ceiling heights* • *other innovative design solutions that provide high levels of amenity* *Where design criteria 1 is not achieved, no more than 12 apartments should be provided off a circulation core on a single level* *Primary living room or bedroom windows should not open directly onto common circulation spaces, whether open or enclosed. Visual and acoustic privacy from common circulation spaces to any other rooms should be carefully controlled* *Complies* A maximum of 7 apartments are accessed off the circulation spaces in Buildings A & B. Common circulation spaces are afforded high amenity through greater than minimum corridor widths and a window or door to communal open space.

Objective 4F-2 *Common circulation spaces promote safety and provide for social interaction between residents*		*Direct and legible access should be provided between vertical circulation points and apartment entries by minimising corridor or gallery length to give short, straight, clear sight lines* *Tight corners and spaces are avoided* *Circulation spaces should be well lit at night* *Legible signage should be provided for apartment numbers, common areas and general wayfinding* *Incidental spaces, for example space for seating in a corridor, at a stair landing, or near a window are provided In larger developments, community rooms for activities such as owners corporation meetings or resident use should be provided and are ideally co-located with communal open space* *Where external galleries are provided, they are more open than closed above the balustrade along their length* *Complies* Direct and legible access is provided between lift core and apartment entries in all cases.
4G Storage *Objective 4G-1* *Adequate, well designed storage is provided in each apartment*	1. *In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:* | Dwelling type	Storage size volume | |---|---| | Studio apartments | 4m³ | | 1 bedroom apartments | 6m³ | | 2 bedroom apartments | 8m³ | | 3+ bedroom apartments | 10m³ | *At least 50% of the required storage is to be located within the apartment.*	*Storage is provided within the circulation spaces, living rooms, laundry rooms and in some instances in the bedrooms.* *Storage provided on balconies (in addition to the minimum balcony size) is integrated into the balcony design, weather proof and screened from view from the street Left over space such as under stairs is used for storage* *Complies* All apartments exceed the min. of 50% of storage located within the apartments. For 74 apartments, all required storage is located within the apartment. 15 apartments have the remainder of their required storage located within the basement in secure storage cages. There is an additional 453m3 of storage available in the residential basement in secure storage cages adjacent to individual carparks.

Objective 4G-2 *Additional storage is conveniently located, accessible and nominated for individual apartments*		*Storage not located in apartments is secure and clearly allocated to specific apartments* *Storage is provided for larger and less frequently accessed items* *Storage space in internal or basement car parks is provided at the rear or side of car spaces or in cages so that allocated car parking remains accessible* *If communal storage rooms are provided they should be accessible from common circulation areas of the building* *Storage not located in an apartment is integrated into the overall building design and is not visible from the public domain* *Complies* The storage provided in each apartment is maximised, with 74 out of 89 apartments achieving 100% of their storage requirements within the apartment. The remainder of required storage is located in the residential basement, in the form of storage cages adjacent to carparking spaces.
4H Acoustic Privacy *Objective 4H-1* *Noise transfer is minimised through the siting of buildings and building layout*		*Adequate building separation is provided within the development and from neighbouring buildings/adjacent uses (see also section 2F Building separation and section 3F Visual privacy)* *Window and door openings are generally orientated away from noise sources* *Noisy areas within buildings including building entries and corridors should be located next to or above each other and quieter areas next to or above quieter areas* *Storage, circulation areas and non-habitable rooms should be located to buffer noise from external sources* *The number of party walls (walls shared with other apartments) are limited and are appropriately insulated* *Noise sources such as garage doors, driveways, service areas, plant rooms, building services, mechanical equipment, active communal open spaces and circulation areas should be located at least 3m away from bedrooms* *Complies** The proposal largely complies and provides building separation and setbacks in a manner consistent with the draft site-specific DCP to provide acoustic privacy. Internally, within the site, where building separation is not achieved, acoustic privacy is achieved through solid walls, screen walls and screening blades. Most apartments in these areas have their primary living room orientated toward the views.

		The car park ramp is covered to reduce noise impacts from vehicles entering and exiting the site. In the case of apartments D001, D002, & D003, bedrooms are within 3m from the carpark driveway, but are separated from the noise source by a solid wall. A thickened concrete slab between Level 1 and Level 2 as well as set-backs from the podium edge will reduces noise transfer from public spaces and employment spaces to residential apartments. See acoustic report for more information.
Objective 4H-2 *Noise impacts are mitigated within apartments through layout and acoustic treatments*		*Internal apartment layout separates noisy spaces from quiet spaces, using a number of the following design solutions:* • *rooms with similar noise requirements are grouped together* • *doors separate different use zones* • *wardrobes in bedrooms are co-located to act as sound buffers* *Where physical separation cannot be achieved noise conflicts are resolved using the following design solutions:* • *double or acoustic glazing* • *acoustic seals* • *use of materials with low noise penetration properties* • *continuous walls to ground level courtyards where they do not conflict with streetscape or other amenity requirements* *Complies* Bedrooms are grouped together and separated from main living spaces. Wherever possible, robes are located to buffer sound between bedrooms.
4J Noise and Pollution *Objective 4J-1* *In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings*		*To minimise impacts the following design solutions may be used:* • *physical separation between buildings and the noise or pollution source* • *residential uses are located perpendicular to the noise source and where possible buffered by other uses* • *non-residential buildings are sited to be parallel with the noise source to provide a continuous building that shields residential uses and common property spaces* • *non-residential uses are located to lower levels vertically separating the residential component from the noise or pollution source. Setbacks to the underside of residential floor levels should increase relative to traffic volumes and other noise sources* • *buildings should respond to both solar access and noise. Where solar access is away from the noise source, non-habitable rooms can provide a buffer* • *where solar access is in the same direction as the noise source, dual aspect apartments with shallow building depths are preferable (see figure 4J.4)* • *Landscape design reduces the perception of noise and acts as a filter for air pollution generated by traffic and industry* *Achieving the design criteria in this Apartment Design Guide may not be possible in some situations due to noise and pollution. Where developments are unable to achieve the design criteria, alternatives may be considered in the following areas:* • *solar and daylight access* • *private open space and balconies*

		• *natural cross ventilation* *Complies* A thickened concrete slab between Level 1 and Level 2 as well as setbacks from the podium edge will reduces noise transfer from public spaces and employment spaces to residential apartments. See acoustic report for more information.
Objective 4J-2 *Appropriate noise shielding or attenuation techniques for the building design construction and choice of materials are used to mitigate noise transmission*		*Design solutions to mitigate noise include:* • *limiting the number and size of openings facing noise sources* • *providing seals to prevent noise transfer through gaps* • *using double or acoustic glazing, acoustic louvres or enclosed balconies (wintergardens)* • *using materials with mass and/or sound insulation or absorption properties e.g. solid balcony balustrades, external screens and soffits* *Complies* See acoustic report.
4K Apartment mix *Objective 4K-1* *A range of apartment types and sizes is provided to cater for different household types now and into the future*		*A variety of apartment types is provided* *The apartment mix is appropriate, taking into consideration:* • *the distance to public transport, employment and education centres* • *the current market demands and projected future demographic trends* • *the demand for social and affordable housing* • *different cultural and socioeconomic groups* *Flexible apartment configurations are provided to support diverse household types and stages of life including single person households, families, multi-generational families and group households* *Complies* The apartment mix complies with the Leichhardt LEP. Livable and adaptable units are equally distributed through the different apartment types provided.

Objective 4K-2 *The apartment mix is distributed to suitable locations within the building*		*Different apartment types are located to achieve successful facade composition and to optimise solar access (see figure 4K.3)* *Larger apartment types are located on the ground or roof level where there is potential for more open space and on corners where more building frontage is available* *Complies* Large apartments are located at roof level where they have access to more open space in the form of generous private balconies. Apartments are distributed throughout the buildings to achieve balanced façade compositions and provide optimal solar access to apartments.
4L Ground floor apartments *Objective 4L-1* *Street frontage activity is maximised where ground floor apartments are located*		*Direct street access should be provided to ground floor apartments* *Activity is achieved through front gardens, terraces and the facade of the building. Design solutions may include:* • *both street, foyer and other common internal circulation entrances to ground floor apartments* • *private open space is next to the street* • *doors and windows face the street* *Retail or home office spaces should be located along street frontages* *Ground floor apartment layouts support small office home office (SOHO) use to provide future opportunities for conversion into commercial or retail areas. In these cases provide higher floor to ceiling heights and ground floor amenities for easy conversion* *Complies* Ground floor apartments are provided in Buildings D, E & F. Each apartment has a front garden and a recessed front door that faces Fred Street. The ground floor FFL is elevated above the street to provide privacy.

Objective 4L-2 *Design of ground floor apartments delivers amenity and safety for residents*		*Privacy and safety should be provided without obstructing casual surveillance. Design solutions may include: elevation of private gardens and terraces above the street level by 1-1.5m (see figure 4L.4)* • *landscaping and private courtyards* • *window sill heights that minimise sight lines into apartments* • *integrating balustrades, safety bars or screens with the exterior design* *Solar access should be maximised through:* • *high ceilings and tall windows* • *trees and shrubs that allow solar access in winter and shade in summer* *Complies* Ground floor apartments are elevated from the public domain to a varying degree. Windows facing the street have privacy screens and planting to allow for casual surveillance and privacy.
4M Facades *Objective 4M-1* *Building facades provide visual interest along the street while respecting the character of the local area*		*Design solutions for front building facades may include:* • *a composition of varied building elements* • *a defined base, middle and top of buildings* • *revealing and concealing certain elements* • *changes in texture, material, detail and colour to modify the prominence of elements* *Building services should be integrated within the overall facade* *Building facades should be well resolved with an appropriate scale and proportion to the streetscape and human scale. Design solutions include:* • *well composed horizontal and vertical elements* • *variation in floor heights to enhance the human scale* • *elements that are proportional and arranged in patterns* • *public artwork or treatments to exterior blank walls* • *grouping of floors or elements such as balconies and windows on taller buildings* *Building facades relate to key datum lines of adjacent buildings through upper level setbacks, parapets, cornices, awnings or colonnade heights* *Shadow is created on the facade throughout the day with building articulation, balconies and deeper window reveals* *Complies* Residential Buildings D, E and F are designed in the style of contemporary terrace housing to bring a domestic scale to the Proposal where it addresses Fred Street and the established residential neighbourhoods to the south and east of the Site. In section, these buildings have a two-storey street edge with a third level setback and are finished in a recessive colour to further diminish the scale of the development when viewed from these established areas.

		The brick facades and human-scale articulation of buildings D, E and F contribute to the domestic external expression. The set-back upper floor apartment features a recessive metal cladding which diminishes the visual scale and ties into the character of Buildings A and B.
Objective 4M-2 *Building functions are expressed by the façade*		*Building entries should be clearly defined* *Important corners are given visual prominence through a change in articulation, materials or colour, roof expression or changes in height* *The apartment layout should be expressed externally through facade features such as party walls and floor slabs* *Complies* The building facades express the internal layouts via their strong gridded expression and in set balconies. Building entries are clearly defined through deep vertical articulations and changes in the rhythm of the façade. The corner of Cecily Street and Balmain Road is defined by the retained Character Buildings.
4N Roof design *Objective 4N-1*		*Roof design relates to the street. Design solutions may include:* • *special roof features and strong corners* • *use of skillion or very low pitch hipped roofs* • *breaking down the massing of the roof by using smaller elements to avoid bulk* • *using materials or a pitched form complementary to adjacent buildings* *Roof treatments should be integrated with the building design. Design solutions may include:* • *roof design proportionate to the overall building size, scale and form* • *roof materials compliment the building* • *service elements are integrated* *Complies* Flat roofs are proposed and incorporate various architectural treatments such as sawtooth style high level windows and recessive/open corners at the upper level.

Objective 4N-2 *Opportunities to use roof space for residential accommodation and open space are maximised*		*Habitable roof space should be provided with good levels of amenity. Design solutions may include:* • *penthouse apartments* • *dormer or clerestory windows* • *openable skylights* *Open space is provided on roof tops subject to acceptable visual and acoustic privacy, comfort levels, safety and security considerations* *Complies* A collection of rooftop gardens offers flexible and functional green open space to the residential community and their guests. Each garden is situated to maximise access to natural light, views, and amenity without infringing on the privacy of near-by apartments. For the residents, these gardens will provide shared spaces to gather, play, celebrate, stay active and enjoy being outside amongst lush plantings. In addition, some apartments enjoy private open space located on the roof of the level below.
Objective 4N-3 *Roof design incorporates sustainability features*		*Roof design maximises solar access to apartments during winter and provides shade during summer. Design solutions may include:* • *the roof lifts to the north* • *eaves and overhangs shade walls and windows from summer sun* *Skylights and ventilation systems should be integrated into the roof design* *Complies* The proposal incorporates sawtooth style high level windows to maximise solar access.
4O Landscape design *Objective 4O-1* *Landscape design is viable and sustainable*		*Landscape design should be environmentally sustainable and can enhance environmental performance by incorporating:* • *diverse and appropriate planting* • *bio-filtration gardens* • *appropriately planted shading trees* • *areas for residents to plant vegetables and herbs* • *composting* • *green roofs or walls* *Ongoing maintenance plans should be prepared* *Microclimate is enhanced by:* • *appropriately scaled trees near the eastern and western elevations for shade* • *a balance of evergreen and deciduous trees to provide shading in summer and sunlight access in winter* • *shade structures such as pergolas for balconies and courtyards* *Tree and shrub selection considers size at maturity and the potential for roots to compete (see Table 4)*

		Complies See Landscape Documentation. The landscape scheme incorporates diverse planting solutions, including planter boxes, significant shading trees, areas of lawn, and climbing green walls.
Objective 4O-2 *Landscape design contributes to the streetscape and amenity*		*Landscape design responds to the existing site conditions including:* • *changes of levels* • *views* • *significant landscape features including trees and rock outcrops* *Significant landscape features should be protected by:* • *tree protection zones (see figure 4O.5)* • *appropriate signage and fencing during construction* *Plants selected should be endemic to the region and reflect the local ecology* *Complies* See Landscape Documentation. The landscape scheme responds to the Site context and local ecologies.
4P Planting on structures *Objective 4P-1* *Appropriate soil profiles are provided*		*Structures are reinforced for additional saturated soil weight* *Soil volume is appropriate for plant growth, considerations include:* • *modifying depths and widths according to the planting mix and irrigation frequency* • *free draining and long soil life span* • *tree anchorage* *Minimum soil standards for plant sizes should be provided in accordance with Table 5* *Complies* See Landscape Documentation. The landscape design including planter dimensions and soil standards, are bespoke and suited to each location.

Objective 4P-2 *Plant growth is optimised with appropriate selection and maintenance*		*Plants are suited to site conditions, considerations include:* • *drought and wind tolerance* • *seasonal changes in solar access* • *modified substrate depths for a diverse range of plants* • *plant longevity* *Irrigation and drainage systems respond to:* • *changing site conditions* • *soil profile and the planting regime* • *whether rainwater, stormwater or recycled grey water is used* *Complies* See Landscape Documentation. The landscape is designed specifically for the conditions of the Site. Planting has been selected with longevity and ease of maintenance in mind.
Objective 4P-3 *Planting on structures contributes to the quality and amenity of communal and public open spaces*		*Building design incorporates opportunities for planting on structures. Design solutions may include:* • *green walls with specialised lighting for indoor green walls* • *wall design that incorporates planting* • *green roofs, particularly where roofs are visible from the public domain* • *planter boxes* *Note: structures designed to accommodate green walls should be integrated into the building facade and consider the ability of the facade to change over time* *Complies* A suite of plants on structures, green walls and rooftop gardens offer flexible and functional green open space to the public, residential community and their guests.
4Q Universal Design *Objective 4Q-1* *Universal design features are included in apartment design to promote flexible housing for all community members*		*Developments achieve a benchmark of 20% of the total apartments incorporating the Livable Housing Guideline's silver level universal design features* *Complies* The proposal is designed to accommodate 23 Livable Housing apartments.

Objective 4Q-2 ***A variety of apartments with adaptable designs are provided***		*Adaptable housing should be provided in accordance with the relevant council policy* *Design solutions for adaptable apartments include:* • *convenient access to communal and public areas* • *high level of solar access* • *minimal structural change and residential amenity loss when adapted* • *larger car parking spaces for accessibility* • *parking titled separately from apartments or shared car parking arrangements* *Complies* The proposal is designed to accommodate 9 apartments as adaptable.
Objective 4Q-3 *Apartment layouts are flexible and accommodate a range of lifestyle needs*		*Apartment design incorporates flexible design solutions which may include:* • *rooms with multiple functions* • *dual master bedroom apartments with separate bathrooms* • *larger apartments with various living space options* • *open plan 'loft' style apartments with only a fixed kitchen, laundry and bathroom* *Complies* Many apartments include flexible rooms which can be used as studies or for other purposes, many others include study nooks within the bedrooms or living spaces. Open plan living spaces allow for maximum flexibility for the residents.
4R Adaptive reuse *Objective 4R-1* *New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place*		*Design solutions may include:* • *new elements to align with the existing building* • *additions that complement the existing character, siting, scale, proportion, pattern, from and detailing* • *use of contemporary and complementary materials, finishes, textures and colours* *Additions to heritage items should be clearly identifiable from the original building* *New additions allow for the interpretation and future evolution of the building* N/A

Objective 4R-2 *Adapted buildings provide residential amenity while not precluding future adaptive reuse*		*adapted buildings to make up for any physical limitations, to ensure residential amenity is achieved. Design solutions may include:* • *generously sized voids in deeper buildings* • *alternative apartment types when orientation is poor* • *using additions to expand the existing building envelope* *Some proposals that adapt existing buildings may not be able to achieve all of the design criteria in this Apartment Design Guide. Where developments are unable to achieve the design criteria, alternatives could be considered in the following areas:* • *where there are existing higher ceilings, depths of habitable rooms could increase subject to demonstrating access to natural ventilation, cross ventilation (when applicable) and solar and daylight access (see also sections 4A Solar and daylight access and 4B Natural ventilation)* • *alternatives to providing deep soil where less than the minimum requirement is currently available on the site* • *building and visual separation – subject to demonstrating alternative design approaches to achieving privacy* • *common circulation car parking alternative approaches to private open space* N/A
4S Mixed use *Objective 4S-1* *Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement*		*Mixed use development should be concentrated around public transport and centres* *Mixed use developments positively contribute to the public domain. Design solutions may include:* • *development addresses the street* • *active frontages are provided* • *diverse activities and uses* • *avoiding blank walls at the ground level* • *live/work apartments on the ground floor level, rather than commercial* *Complies* The proposal is mixed-use and provides active street frontages where appropriate on ground level to address Balmain Rd, Alberto St and the internal courtyard and laneways.

Objective 4S-2 *Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents*		*Residential circulation areas should be clearly defined. Design solutions may include:* • *residential entries are separated from commercial entries and directly accessible from the street* • *commercial service areas are separated from residential components* • *residential car parking and communal facilities are separated or secured* • *security at entries and safe pedestrian routes are provided* • *concealment opportunities are avoided* *Landscaped communal open space should be provided at podium or roof levels.* *Complies* See above
4T Awnings and signage *Objective 4T-1* *Awnings are well located and complement and integrate with the building design*		*Awnings should be located along streets with high pedestrian activity and active frontages* *A number of the following design solutions are used:* • *continuous awnings are maintained and provided in areas with an existing pattern* • *height, depth, material and form complements the existing street character* • *protection from the sun and rain is provided* • *awnings are wrapped around the secondary frontages of corner sites* • *awnings are retractable in areas without an established pattern* *Awnings should be located over building entries for building address and public domain amenity* *Awnings relate to residential windows, balconies, street tree planting, power poles and street infrastructure* *Gutters and down pipes should be integrated and concealed Lighting under awnings should be provided for pedestrian safety* Complies The facades of the 'Super Shed' feature elegantly proportioned, double-height brick arches with metal clad infills, offering a contemporary and sophisticated detail at the building's interface with the ground plane. The tall arches combined with the brick compliment and reference the retained Character Buildings which also do not have awnings. The depth of the arches and overhanging metal clad infills do offer sun and rain protection on the primary frontage to Balmain Rd. The Super Shed also features overhanging eaves/arches on secondary frontages to the north east and south western façade facing Alberto St. A colonnade along Alberto Lane and covered way through from Cecily St also offer weather protected connections through the proposal.

Objective 4T-2 *Signage responds to the context and desired streetscape character*		*Signage should be integrated into the building design and respond to the scale, proportion and detailing of the development* *Legible and discrete way finding should be provided for larger developments* *Signage is limited to being on and below awnings and a single facade sign on the primary street frontage* Complies Signage will be discretely integrated into facade zones and the awning design.
4U Energy efficiency *Objective 4U-1* *Development incorporates passive environmental design*		*Adequate natural light is provided to habitable rooms (see 4A Solar and daylight access)* *Well located, screened outdoor areas should be provided for clothes drying* Complies The proposal complies with 4A Solar and Daylight Access. All primary living spaces have generous floor to ceiling windows or sliding doors onto balconies, ensuring that even for the apartments that do not receive direct sunlight in midwinter, maximum natural daylighting is achieved. All apartments have private open space suitable for drying clothes.
Objective 4U-2 *Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer*		*A number of the following design solutions are used:* • *the use of smart glass or other technologies on north and west elevations* • *thermal mass in the floors and walls of north facing rooms is maximised* • *polished concrete floors, tiles or timber rather than carpet* • *insulated roofs, walls and floors and seals on window and door openings* • *overhangs and shading devices such as awnings, blinds and screens* *Provision of consolidated heating and cooling infrastructure should be located in a centralised location (e.g. the basement)* Complies The proposal incorporated passive solar design principles in its orientation of apartments, use of insulationg, overhangs and awnings. Centralised plant for air conditioning and hot water (for Buildings A, B and C) is proposed to be located on the roof. Roof plant is concealed behind screening.
Objective 4U-3 *Adequate natural ventilation minimises the need for mechanical ventilation*		*A number of the following design solutions are used:* • *rooms with similar usage are grouped together* • *natural cross ventilation for apartments is optimized* • *natural ventilation is provided to all habitable rooms and as many non-habitable rooms, common areas and circulation spaces as possible*

		Complies Primary living rooms are arranged to have large sliding doors to balconies and openings on 2 different sides wherever possible, optimizing natural ventilation. Rooms with similar uses are grouped together. Bedrooms and other habitable rooms have openable windows to optimize access to natural ventilation.
4V Water management *Objective 4V-1* *Potable water use is minimised*		*Water efficient fittings, appliances and wastewater reuse should be incorporated* *Apartments should be individually metered* *Rainwater should be collected, stored and reused on site* *Drought tolerant, low water use plants should be used within landscaped areas* Complies A rainwater collection tank is proposed and WSUD principles are integrated into parts of the landscape design. Water efficient appliances are proposed throughout the proposal.
Objective 4V-2 *Urban stormwater is treated on site before being discharged to receiving waters*		*Water sensitive urban design systems are designed by a suitably qualified professional* *A number of the following design solutions are used:* • *runoff is collected from roofs and balconies in water tanks and plumbed into toilets, laundry and irrigation* • *porous and open paving materials is maximized* • *on site stormwater and infiltration, including bio-retention systems such as rain gardens or street tree pits* Complies A rainwater collection tank is proposed and WSUD principles are integrated into parts of the landscape design.
Objective 4V-3 *Flood management systems are integrated into site design*		*Detention tanks should be located under paved areas, driveways or in basement car parks* *On large sites parks or open spaces are designed to provide temporary on site detention basins* Complies An OSD tank has been included in the proposal.

4W Waste management *Objective 4W-1* *Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents*		*Adequately sized storage areas for rubbish bins should be located discreetly away from the front of the development or in the basement car park* *Waste and recycling storage areas should be well ventilated* *Circulation design allows bins to be easily manoeuvred between storage and collection points* *Temporary storage should be provided for large bulk items such as mattresses* *A waste management plan should be prepared* Complies Storage areas for rubbish bins near each core and a bulky waste storage area have been located in the basement. A waste management has been prepared. Refer to SEE.
Objective 4W-2 *Domestic waste is minimised by providing safe and convenient source separation and recycling*		*All dwellings should have a waste and recycling cupboard or temporary storage area of sufficient size to hold two days worth of waste and recycling* *Communal waste and recycling rooms are in convenient and accessible locations related to each vertical core* *For mixed use developments, residential waste and recycling storage areas and access should be separate and secure from other uses* *Alternative waste disposal methods such as composting should be provided* Complies See Above
4X Building maintenance *Objective 4X-1* *Building design detail provides protection from weathering*		*A number of the following design solutions are used:* • *roof overhangs to protect walls* • *hoods over windows and doors to protect openings* • *detailing horizontal edges with drip lines to avoid staining of surfaces* • *methods to eliminate or reduce planter box leaching* • *appropriate design and material selection for hostile locations* Complies The façade design for each building incorporates eaves to protect walls and openable windows. Detailed design will include drip lines along horizontal edges to avoid staining. Construction methods will be employed to eliminate planter-box leaching.

Objective 4X-2 *Systems and access enable ease of maintenance*		*Window design enables cleaning from the inside of the building* *Building maintenance systems should be incorporated and integrated into the design of the building form, roof and facade* *Design solutions do not require external scaffolding for maintenance access* *Manually operated systems such as blinds, sunshades and curtains are used in preference to mechanical systems* *Centralised maintenance, services and storage should be provided for communal open space areas within the building* Complies All communal access space can be accessed and maintained via centralised circulation. Building maintenance systems are located on the roofs of building A, B and C, which have stair access.
Objective 4X-3 *Material selection reduces ongoing maintenance costs*		*A number of the following design solutions are used:* • *sensors to control artificial lighting in common circulation and spaces* • *natural materials that weather well and improve with time such as face brickwork* • *easily cleaned surfaces that are graffiti resistant* • *robust and durable materials and finishes are used in locations which receive heavy wear and tear, such as common circulation areas and lift interiors* Complies The proposal incorporates a range of robust and durable masonry and metal materials.