Residential Apartment Development
Design Verification Statement

Proposed Mixed Use Development
including Infill Affordable Housing
1 Veno Street
Heathcote NSW 2233

Project 23-049
03 July 2024
Rev A

Prepared by Dickson Rothschild
Level 5, Suite 1 & 2, Grafton Bond Building
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A	Design Statement for DA	08/07/2024	AV/IC/LF	KM

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1 Qualification and Introduction

My full name is Robert Nigel Dickson. I am the Managing Director of Dickson Rothschild, a firm that specialises in Architecture, Urban Design and Planning. I have been Managing Director of this firm since 1993.

I have been instructed by DK Heathcote Pty to prepare a Design Verification Statement dealing with the urban design and architecture of the proposed development.

I hold the following qualifications:

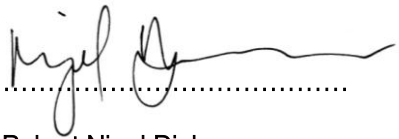
- Bachelor of Architecture (1st Class Hons.);
- Masters in City Planning; and
- Masters in Architecture.

I am an Associate of the Australian Institute of Architects and Member of the Planning Institute of Australia. I have 30 years practical experience in architecture, planning and urban design. I am also visiting professorial fellow at the University of New South Wales, Sydney in the Master of Urban Development and Design program. I am a Registered Architect in NSW (NSW ARB# 5364).

A copy of my Curriculum Vitae is provided within this design verification statement ('Statement').

I verify that:

- I directed the design of the development;
- that the nine design principles for residential apartment development set out at Schedule 9 of SEPP (Housing) 2021 are achieved (and are addressed in this document); and
- the objectives in Parts 3 and 4 of the Apartment Design Guide are achieved (and this document demonstrates how this has been done).



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Robert Nigel Dickson

08/07/2024

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Date

2 SEPP (Housing) 2021 Assessment – Residential Apartment Development

2.1 Introduction

Dickson Rothschild has prepared the architectural drawings and is satisfied that the drawings meet the intent of the design principles for residential development as set out in Schedule 9 of State Environmental Planning Policy (Housing) 2021 ('SEPP Housing').

This assessment of the proposal is made in accordance with Parts 3 and 4 of the *Apartment Design Guide – Tools for improving the design of residential apartment development* ('ADG'), which has been published to support the objectives and design principles of SEPP Housing.

This assessment seeks to take into account these guiding principles, objectives, criteria and guidance in determining the quality of the design proposed.

2.2 Aims of the SEPP Chapter 4

The proposed development's consistency with the aims of Chapter 4 of the SEPP are provided in the table below. The proposed development meets each of the relevant aims of the Chapter.

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(1) The aim of this chapter is to improve the design of residential apartment development in New South Wales for the following purposes—

(a) to ensure residential apartment development contributes to the sustainable development of New South Wales by—

(i) providing socially and environmentally sustainable housing, and

(ii) being a long-term asset to the neighbourhood, and

(iii) achieving the urban planning policies for local and regional areas,

(b) to achieve better built form and aesthetics of buildings, streetscapes and public spaces,

(c) to maximise the amenity, safety and security of the residents of residential apartment development and the community,

(d) to better satisfy the increasing demand for residential apartment development, considering—

(i) the changing social and demographic profile of the community, and

(ii) the needs of a wide range of people, including persons with disability, children and seniors,

(e) to contribute to the provision of a variety of dwelling types to meet population growth,

(f) to support housing affordability,

(g) to minimise the consumption of energy from non-renewable resources, to conserve the environment and to reduce greenhouse gas emissions,

(h) to facilitate the timely and efficient assessment of development applications to which this chapter applies.

(2) This chapter recognises that the design of residential apartment development is significant because of the economic, environmental, cultural and social benefits of high quality design.

Comment

The proposed development satisfies the aim of the SEPP Chapter 4 due to the following:

- The proposed use is consistent with the zone, and the residential density is appropriate given the site's location in the local centre within walking distance of a railway station.
- The proposed development is comprised of good quality durable materials.
- The proposed development achieves a good degree of residential amenity.
- The proposed development achieves compatibility with the emerging context of its streetscape and improves and enhances the streetscape in comparison to the existing condition.
- The proposed development provides a diversity of dwelling sizes.
- The proposal is accessible: adaptable and silver living units are proposed as well as disabled parking.
- The proposed development provides efficient, open plan layouts.
- Passive solar design principles have been utilised; and
- The proposal is accompanies by a BASIX certificate. Solar panels are proposed.

2.3 Design Quality Principles (SEPP Schedule 9)

Principle 1 – Context and neighbourhood character

(1) Good design responds and contributes to its context, which is the key natural and built features of an area, their relationship and the character they create when combined and also includes social, economic, health and environmental conditions.

(2) Responding to context involves identifying the desirable elements of an area's existing or future character.

(3) Well designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood.

(4) Consideration of local context is important for all sites, including sites in the following areas—

(a) established areas,

(b) areas undergoing change,

(c) areas identified for change.

Comment

The proposed development responds well to its context, providing a mixed-use development, comprising three buildings (A, B and C) in an E1 Local Centre Zone, that complies with the objectives of this zone as set out in the Sutherland Shire Local Environmental Plan (LEP) 2015.

The subject site provides residential development, retail space and a space for a future pub in a suitable location, as it is permissible in its zone and is in an accessible location within 300m walking distance of Heathcote Railway Station and comfortable walking distance of the local shops and services along Princes Highway, community infrastructure including Heathcote Public School, a kindergarten and medical service, as well as public open space.

The proposed development fits within the existing and emerging streetscape context of the area.

First and foremost, the siting of the buildings is a direct response to the shape of the site and existing lot and building arrangements along both Veno St and Strickland St. Buildings A and B have a north-south orientation, sitting parallel to their adjacent buildings, with frontages to Strickland St and Veno St respectively. The length of these buildings is approximately 50m, which is similar to length of the townhouse/terrace developments adjacent to the site along Strickland St and some of the residential apartment buildings on the same block as the site. Building C is sited to align with Princes Hwy, resulting in a more north-east to south-west, or rather 'diagonal' orientation, which is considered a good design response as it actives this Princes Hwy frontage as described below.

While some of the existing, more traditional development in the area is 1-2 storeys in height, comprising single dwellings, terraces and townhouses, more recent developments in the area includes residential flat buildings. For example, the large residential flat building on the corner of Princes Hwy and Strickland St adjacent to the site and the two residential flat buildings on the corner of Roseberry St and Veno St to the west of the site. The latter residential flat buildings mentioned are four storeys in height with flat roofs. The proposed development, which is approximately 60m east of these buildings along Veno St, responds to this built form by providing a four-storey street wall height along Veno St and Princes Hwy with a horizontal banding above and by setting the additional two levels above this further back from the street. This provides consistency with the existing four storey residential flat buildings, adopting an appropriate design response to accommodate two more upper levels.

In terms of setbacks and street alignment, at ground level, the proposed development has a nil setback to the Veno St and Princes Hwy boundary, this is in keeping with the alignment of the existing retail and commercial units to the south of the site on the other side of Veno St, also facing Princes Hwy, creating greater continuity of the local centre along Princes Hwy. It is also an improvement to the site's current boundary treatment in this location which comprises a low fence and shrub with hardstand car parking at a lower level to the street behind it. The proposed development will produce an improved outcome: a building that sits at street level, with direct access from the building to the pedestrian path in front,

activating this frontage. The proposed northern building, building A, also has a front setback that relates to its neighbours, with the Strickland Street setback being 7.5m in line with the setbacks of adjacent sites.

In terms of responding to the desired future character of the area, it is clear from Chapter 15 of the Sutherland Shire Development Control Plan, *'B2 Local Centre Heathcote'*, that the subject site is recognised as an area with great potential for redevelopment, with one of the aims for the centre being to 'encourage residential development in and in close proximity to the centre'. The proposed development meets this aim, providing residential accommodation with an affordable component, *in* the centre. While potential future residents will benefit from their proximity to transport links, shops and services as outlined above, the town centre will benefit from having potential customers and clients close by.

Finaly, given the site's prominent location on a street corner along Princes Hwy, the proposed development can play a role in reinforcing the identity of this area as the local centre. As stated in the DCP, the area's retail and commercial sites benefit from their visibility along Princes Hwy. Due to the site's topography, the building's most prominent point will be at its south-western corner Veno St and Princes Hwy, enhancing the visibility of the site and in turn Heathcote centre.

The proposed development is consistent with the design principle.

Principle 2 – Built form and scale

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

(2) Good design also achieves an appropriate built form for a site and the building's purpose in terms of the following—

(a) building alignments and proportions,

(b) building type,

(c) building articulation,

(d) the manipulation of building elements.

(3) Appropriate built form—

(a) defines the public domain, and

(b) contributes to the character of streetscapes and parks, including their views and vistas, and

(c) provides internal amenity and outlook.

Comment

The proposed development achieves a scale, bulk and height appropriate to its location. As mentioned in Principle 1, the proposed development is broken up into three buildings, the siting and front setbacks of which are a direct response to the existing context of the site.

While each building reaches six storeys, a number of design choices have been made to ensure the bulk and scale of these buildings remains acceptable. In each building the upper levels are set back from the levels below, in buildings B and C this is the upper two levels (4 & 5) and in building A this the upper level only (5). This is considered acceptable as given the site topography, the upper level of building A sits below the upper level of buildings B and C. Additionally, the upper level of building A has a significant setback of over 20m from the level below, reducing its visibility from the street. In each building lift overruns are located centrally to mitigate their visual impact. Another design choice which reduces the perceived bulk and scale of the buildings, is the inclusion of indented lobby areas within each building. In the case of building A and B, the indented lobby creates a separation of 3m between the northern and southern portion of the building, giving it a more modular appearance, breaking up its overall bulk. In building C, the lobby is indented on the western side from level 2 upwards breaking up the bulk of the building when viewed from within the development. Along Princes Hwy, the façade of building C generally presents as a continuous street wall to this thoroughfare, however, features an indented lobby from levels 1-3 and recessed balconies on levels 4-5, to subtly break up the bulk of this façade and provide an appropriate scale to the street. Building B and C are also separated from each other by over 10m at levels 4 and 5 facing Veno St. This reduces the bulk and scale of the building when viewed from Veno St, allowing additional daylight to fall through this gap.

The proposed buildings are also highly articulated. A face brick is used a ground level for the retail and future pub portion of the development, which anchors the lighter weight and lighter colour elements from level 1-3 of buildings B and C. The top floors (level 4 and 5) of building B and C are darker in colour and setback from the levels below, reducing their perceived scale. Projecting horizontal slabs and vertical cladding, together with recessed balconies with glass balustrades and louvre screens along some elevations add articulation and visual interest to all buildings and contribute to the quality of the built form.

As mentioned above, the proposed development interacts well with the public domain through the careful design of the retail and future pub space. The choice of materials at ground level differentiate this portion of the building from the residential levels above, while the glazing allows for interaction between the internal area and the public domain, creating passive surveillance to the street as well. The awning proposed contributes positively to the public domain by providing shelter and shade to the pedestrian path.

The chosen building form and layout provide a good level of internal amenity. At ground level a generous communal open space is provided, with the siting of buildings B and C allowing for such space between these buildings, providing separation between blocks and enhancing the outlook of these buildings. Additionally, when viewing these buildings from Princes Hwy looking south, the landscaped communal open space will be visible, softening the view of the buildings and contributing to the amenity of the public domain. As the main building line of building A is set back over 7m from Strickland St, this frontage is able to contribute positively to the streetscape by providing trees and shrubs along this frontage. The upper level communal open space in building A which also faces Strickland St, will be surrounded by landscaping softening the built form.

The proposed development is consistent with the design principle.

Principle 3 – Density

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

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

(3) Appropriate densities are sustained by the following—

(a) existing or proposed infrastructure,

(b) public transport,

(c) access to jobs,

(d) community facilities,

(e) the environment.

Comment

The subject site is located within a designated local centre area and is adjoined by a medium density residential area on the same block and is approximately a 5 minute walk (300m) from Heathcote Railway Station. Development on the site will be adjoined by a retail space and pub in future, and is within immediate walking distances of the shops and services within Heathcote's local centre, as well as a school, kindergarten and other community infrastructure. As such the site will be able to accommodate the proposed density.

This has also been recognised in the Sutherland Shire DCP which states that within the local centre there are opportunities to increase the residential capacity within walking distance to the centre and train station, with the Heathcote Hotel site described as having significant potential to redevelop. The proposed development provides this increased density on a highly accessible site.

The density proposed on the site will also afford an appropriate level of amenity to units across the development, this is discussed further in Principle 6.

Required car parking and waste collection is achieved on site while maintaining areas of deep soil that meet the ADG criteria. The proposed development also provides bicycle and motorcycle spaces for residents and visitors.

The proposed density is thus appropriate to the site and the proposed development meets the design principle.

Principle 4 – Sustainability

(1) Good design combines positive environmental, social and economic outcomes.

(2) Good sustainable design includes—

(a) use of natural cross ventilation and sunlight for the amenity and liveability of residents, and

(b) passive thermal design for ventilation, heating and cooling, which reduces reliance on technology and operation costs.

(3) Good sustainable design also includes the following—

(a) recycling and reuse of materials and waste,

(b) use of sustainable materials,

(c) deep soil zones for groundwater recharge and vegetation.

Comment

The proposed development will have a positive environmental, social and economic outcome. It will have a positive social and economic impact in that it will maintain a retail and pub use on the site, maintaining a part of the site that generates business but also acts an area where the community can meet, interact and socialise. Additionally, it will provide a mix of 1-, 2- and 3-bedroom apartments, some of which will be affordable units, catering to a range of the population, providing them opportunity to live in this accessible location.

Economic outcomes will be positive in that employment will be generated during construction and in future when the development is completed through the retail and pub uses at ground floor. Reciprocally, the increased density and in turn population on the site will likely increase footfall and in turn business for local shops and services.

In terms of environmental outcomes, a BASIX Certificate forms part of this application, and the proposed development achieves a BASIX certification. Solar panels are proposed on the roof and electric vehicle (EV) is proposed in the basement. A general waste chute will be installed in each building core with access provided to all residents on each residential level, while a separate recycling bin area will be provided in a compartment adjacent to the general waste chute for the storage of recycling, this to maximise the convenience of waste disposal. Each building will be provided with a communal FOGO bin room, providing just one FOGO room ensure hygiene is preserved and odours limited. A Waste Management Plan with further details on the sustainable disposal of residential waste accompanies this DA, as well as a Construction Management Plan, which provides a strategy for limiting waste generation during demolition and construction.

The proposed development performs well in terms of natural cross ventilation and daylighting, with building A achieving cross ventilation to 67% of units and 2+ sunlight to 70% of units and buildings B and C combined achieving cross ventilation to 60% of units and 2+ hours sunlight to 77.7% of units. Overall, and 62.5% of units are cross ventilated and 75% of units receive 2 hours solar access at midwinter.

Provision of shade has also been considered with projecting horizontal slabs and vertical screens proposed in the building design. The north facing units have been designed in accordance with passive solar design with living rooms set behind balconies where possible.

Communal open space is proposed at roof level in building A and ground level in the centre of development between buildings B and C. As the roof level communal open space is north facing, it will

receive ample sunlight, however, its design also includes a covered BBQ area, seating areas with pergolas above and green elements both surrounding and, on the rooftop, to provide shade and ensue the space is sustainable in terms of use and its amenity. At ground level the communal open space proposed includes another BBQ and seating area with a roof over, as well as a gazebo and children's cubby house and substantial planting, to ensure the sustainable use and amenity of this space as in the case of the space described above.

Proposed landscape is a mix of native and exotic species suitable for the deep soil and the proposed on-structure planting. Canopy planting is proposed. Sufficient deep soil is proposed to allow for water infiltration. The retention of existing mature trees at the north-eastern corner of the site contributes to the environmental quality of the site and provides shade.

The site is within close proximity to public transport, in particular the Railway Station, which provides residents a more sustainable transport choice for accessing larger centres. On a local scale, the site is close to bus services, secure bicycle parking in provided on site and many local shops and services are within walking distance, providing a range of viable alternative uses to the private to residents for their everyday needs.

The proposal is consistent with the design principle.

Principle 5 – Landscape

(1) Good design recognises that landscape and buildings operate together as an integrated and sustainable system, resulting in development with good amenity.

(2) A positive image and contextual fit of well designed development is achieved by contributing to the landscape character of the streetscape and neighbourhood.

(3) Good landscape design enhances the development's environmental performance by retaining positive natural features that contribute to the following—

(a) the local context,

(b) co-ordinating water and soil management,

(c) solar access,

(d) micro-climate,

(e) tree canopy,

(f) habitat values,

(g) preserving green networks.

(4) Good landscape design optimises the following—

(a) usability,

(b) privacy and opportunities for social interaction,

(c) equitable access,

(d) respect for neighbours' amenity.

(5) Good landscape design provides for practical establishment and long term management.

Comment

A landscape plan has been prepared for the DA. Proposed landscape is a mix of native and exotic species suitable for the deep soil and the proposed on-structure planting. Canopy planting is proposed.

The proposed development meets ADG criteria for deep soil. Deep soil areas are concentrated in the Communal Open Space area. Deep soil corridors with canopy tree planting are proposed in the front setback of Strickland Street and between Building B and C to create canopy corridors that support and expand the Ironbark forest remnants that are identified in the relevant planning instruments. This also creates layers of tree planting between buildings that will achieves a tree canopy backdrop for the proposal.

The retention of existing trees in the northeast corner of the site adds to the overall amenity of the proposal and provides much needed shade at the site's northeast corner. The landscape design has been developed in consultation with the project arborist Naturally Trees. While the basement extends near the boundaries towards the western part of the site, the landscape plans provide a clear and achievable planting schedule for achieving a high-quality landscape outcome with screen planting in this location.

Due to the site's orientation, provision of communal open space has been made on the north of level 5 of building A and natural ground level to the north of, and between, buildings B & C. The roof level communal open space of building A is accessible via lift and stairs, and as mentioned above features a covered BBQ area, has a range of seating options, both covered and uncovered, has an accessible bathroom and is surrounded by planting to provide a buffer between this space, the units facing the space and surrounding development. The ground level communal open space is also well designed with a combination of boardwalk and stepping stones style paths linking all three buildings, including an access point along Princes Hwy. The covered BBQ and seating area, gazebo and children's cubby house form key elements if this communal open space, providing opportunity for social interaction within this space.

The privacy of ground level units facing onto this space will be maintained through screen planting along the eastern side of building B. Neighbours' amenity will also be protected through the retention of existing trees on the north-eastern corner of the site as mentioned above, these trees provide a buffer between the site and No. 2 Strickland Street and No. 1317-1321 Princes Hwy.

A mixture of planting is proposed from the development to maximise amenity and includes ground cover, shrub and small tree planting with turpentines and palm trees fronting Strickland Street.

The landscape plan has been coordinated with the stormwater management plans to ensure infrastructure does not adversely impact on existing or proposed trees. On structure planting is located so that it can be easily maintained.

The proposed development meets the design principle.

Principle 6 – Amenity

(1) Good design positively influences internal and external amenity for residents and neighbours.

(2) Good amenity contributes to positive living environments and resident well-being.

(3) Good amenity combines the following—

(a) appropriate room dimensions and shapes,

(b) access to sunlight,

(c) natural ventilation,

(d) outlook,

(e) visual and acoustic privacy,

(f) storage,

(g) indoor and outdoor space,

(h) efficient layouts and service areas,

(i) ease of access for all age groups and degrees of mobility.

Comment

A good level of internal and external amenity is afforded to units across the proposed development with limited impacts on neighbouring development.

All rooms are of a sufficient size with efficient internal layouts and amenity. Private open spaces to the units are designed as an extension of open plan living spaces; at upper levels this is in the form of balconies that are well-proportioned and capable of accommodating furniture, at ground level this is in the form of private terraces, which are generous in size and have fencing and/or landscaping in front which are partly visually permeable to balance privacy, daylighting and outlook. Provision for storage is made within each unit with ancillary storage provided in the basement areas.

As mentioned previously, all buildings achieve the minimum daylight access and natural cross ventilation requirements set out in the Apartment Design Guide.

As building A is on a rectangular lot, with its short side at the northern boundary facing Strickland St and existing development on its eastern and western sides, complicate the building's ability to meet these requirements. However, a number of design responses have been adopted to achieve the best level of amenity possible. As mentioned previously, the building features an indented lobby within the building, which break the building into a northern module and southern module, separated by 3m. This allows a greater number of units to achieve cross ventilation, with a total of 67% of units achieving natural cross ventilation.

Naturally, the north-facing units in building A will receive ample daylight, while units facing east and west will mostly receive daylight in the morning and afternoon respectively. To combat the lack of daylight the

south-facing units would receive, the units adjacent to these are set back further from the side boundaries to allow two of the south-facing units on each level to have a north-facing window to their living spaces, enhancing their solar access. In total, 70% of the units in building A will receive 2+ hours solar access. Additionally, the north-facing communal open space will provide additional amenity to residents.

Building B has a similar built form to building A, with an indented lobby separating north and south elements of the building, which enables more units to achieve natural cross ventilation. As in building A also, the north facing units will receive ample daylight, with the south-facing units also adjoined by units which are further set back from side boundaries, allowing two of the south-facing units on each level north-facing windows to living areas. Due to the design decision to align building C with Princes Hwy to activate this frontage and provide passive surveillance, some of the units in this building are north-west facing which is good for daylight access, while others are south-east facing which is less favourable. Nonetheless, the separation between building B and C at levels 4 and 5 enables an additional unit per floor to achieve appropriate daylight access. Overall within buildings B and C 60% of units are naturally cross ventilated and 79% of units receive 2+ hours solar access.

Side setbacks to adjacent properties are ADG compliant up to level 4. Where side elevations face adjoining development, i.e. on the western and eastern side of buildings A and B and northern side of building B, vertical louvres are proposed to avoid privacy impacts. These also add articulation to these elevations.

In terms of access, pedestrian access to building A is provided at the western side of the site along Strickland St, leading to an entrance to the residential lobby on the western side of the building. Pedestrian access is also provided from the pedestrian entry along Princes Hwy, leading to another lobby entrance on the eastern side of the building. The lobby entrances to buildings B and C are at street level facing Veno St and Princes Hwy respectively. Each building has one main lobby which meets accessibility requirements and each building contains accessible and silver living standard units, this is discussed further in Principle 8.

The proposed development is consistent with the design principle.

Principle 7 – Safety

(1) Good design optimises safety and security within the development and the public domain.

(2) Good design provides for quality public and private spaces that are clearly defined and fit for the intended purpose.

(3) Opportunities to maximise passive surveillance of public and communal areas promote safety.

(4) 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.

Comment

The proposal will result in a development that is safe and secure, with quality private spaces that interact positively with the public domain, while remaining distinguishable from one another.

The proposed development will provide passive surveillance to both public and communal areas. Buildings B and C have a retail space and future pub space at ground level providing active frontage along these streets, with residential apartment units above. The existing boundary treatment of the site along these frontages comprises a low fence with shrub and hardstand parking behind it with the existing building on the site set back significantly from the site boundary at a lower level to the street, offering little to no interaction with the public domain. In contrast, the proposed development with its retail and future pub use at street level, directly adjoining the pedestrian path in front offer a much greater level of interaction with, and passive surveillance to the street. The proposed development will also provide passive surveillance to the Veno St Reserve on the other side of Veno St.

Building A will provide passive surveillance to Strickland St, with units to the north of this building facing towards this street.

In relation to communal open spaces, passive surveillance will be provided to the ground floor communal open space, both buildings B and C have units facing onto this space and south-facing units of building A also face onto this space. This promotes safety for residents using the space. In building A, two units face onto the communal open space. While planting is proposed between these units and the COS, it is likely that a certain amount of passive surveillance will be provided. Additionally, large, ambiguous, ill-defined space is avoided in this area in the interest of safety.

The proposal provides clear, safe access points to the residential component of the development. Both buildings B and C have entrances that address the street. These entrances will be clearly distinguishable from the retail and pub entrances as their façade will be made with vertical wood-look cladding with clear signage above, while the entrances to the retail and pub spaces will comprise glazing and have its own signage. The main pedestrian entrance to building A is along Strickland St, where a secure gate at the north-western corner of the site provides access to a path which leads to a lobby entry that serves the whole building. The ground level units of building A, however, do have their own street-level gated entrances. The setback in front of these private ground level entrances has an open character to avoid concealment areas.

Pedestrian access to the site is also provided via a secure gate at the eastern side of the site along Princes Hwy. Private, accessible access to the lobbies of each building is provided via this entrance.

The ground level façade design along Veno St and Princes Hwy is designed such that it does not allow climbing and minimises opportunities for trespassing. The proposed materials and finishes are of a high quality, with the use of face brick work to the retail and future pub spaces assisting in deterring vandalism and the like. Edge planting along this frontage reinforces safety and security by limiting opportunities for climbing.

The proposal is consistent with the design principle.

Principle 8 – Housing diversity and social interaction

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

(2) Well designed residential apartment development responds to social context by providing housing and facilities to suit the existing and future social mix.

(3) Good design involves practical and flexible features, including—

(a) different types of communal spaces for a broad range of people, and

(b) opportunities for social interaction among residents.

Comment

The proposed development achieves a degree of housing diversity and choice, providing a mix of one-, two- and three-bedroom apartments with varying unit sizes within each category. Of the 168 units proposed, 22% (37 units) will be accessible, with the number of accessible rooms spread relatively evenly across the different buildings on the site. 11.9% of the units (20 units) are liveable units, complying with the requirements of the Liveable Housing Desing Guidelines for Silver Level Housing. Additionally, the development contains an affordable component, with 25 affordable units in building C. This unit mix described provides a range of choices for potential future residents.

A positive social impact arises from the level of accessibility of the site. Access to and through the proposed development has been designed to ensure that all people (regardless of physical ability) are able to traverse the site and access all levels of the development. The design has responded to the sloping topography of the site and ensured accessibility is achieved. Both communal open spaces have an accessible toilet.

The communal open spaces will encourage a variety of recreational uses in a quality landscaped environment, encouraging use and social interaction. The building A level 5 rooftop garden benefits from views, landscape, BBQ areas, different types of seating and shaded and weather protected areas, while the ground level communal open space also features covered BBQ and seating areas, as well as a gazebo area and children's cubby house. Visitor bicycle parking is provided within the car parking areas of both buildings also.

The proposed development achieves the design principle.

Principle 9 – Aesthetics

(1) Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure.

(2) Good design uses a variety of materials, colours and textures.

(3) The visual appearance of well designed residential apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape.

Comment

The proposed development achieves a built form with good proportions and a balanced composition.

Starting with the siting of the three buildings proposed, building A and B are generally rectangular in shape and align with the existing lot pattern with frontages to Strickland St and Veno St respectively. Building C responds to the more triangular shaped eastern portion of the site by providing a building which aligns with the Princes Hwy, opening up an internal area within the site. The built form of each building, as mentioned in Principle 2, is broken up and given improved proportions through the incorporation of

indented lobbies, which separate portions of the buildings, recessed balconies, upper level setbacks and in the case of buildings B and C, complete separation between the upper two levels.

A variety of materials, colours and textures are used in the proposed design to enhance the aesthetics of the development. The proposal uses a face brick at the ground level of buildings B and C, with glazing used for the 'shop fronts' of the retail and future tavern spaces and awnings with painted fibre-cement ceilings above. The upper levels have expressed horizontal slabs which add articulation and visual interest to the façade. Floor to ceiling vertically framed windows and vertical powder-coated aluminium timber look screens also add articulation to the façade, balancing the horizontal elements just mentioned.

In addition to being setback from the levels below, the upper levels will have darker cladding than the rest of the building to give them a more recessive character. The language of the projected horizontal slabs is continued with the roof form. Additionally, the soffits above the balconies at the top level consist of the same painted fibre-cement ceiling material as the soffit of the ground level awning, this provides a sense of enclosure, or 'bookends' the building, limiting its perceived scale from the street. The paint and render colours proposed consist of light to medium greys which soften the appearance of the building at upper levels.

A combination of solid and glass balustrades to balconies is proposed to limit visual clutter and protect privacy, while maximising daylighting and providing outlook. The location of AC units will be screened from the public domain, ensuring they will not impact on the aesthetic quality of the building.

Existing retained and proposed landscaping will screen and soften built form, adding visual amenity and quality to the development.

The proposed development is consistent with the design principle.

2.4 Curriculum Vitae

Nigel Dickson

Nigel is Managing Director of Dickson Rothschild and has over thirty years experience in Australia, Asia and the United States. Nigel acted as project architect on the Chifley Tower from 1988 to 1993 from inception to completion and from 1993-1995 he was the Urban Design Manager for the Homebush Olympic Site. He has served on numerous Urban Design Panels and has offered peer design reviews of important projects in the Sydney region.

As Visiting Professor at the University of New South Wales, Nigel ran the advanced urban design studio component of the Master of Urban Design and Development. Nigel's teaching duties have benefited his growing reputation in providing expert witness advice on local government, planning and environmental matters before the NSW Land and Environment Court.

Nigel Dickson
Managing Director

Qualifications

Master of Architecture 1983
Master of City Planning 1983
University of Pennsylvania

Bachelor of Architecture 1979
(Hons), University of Adelaide

Harvard Kennedy School
Leadership for the 21st
Century Delegate

Registered Architect
Registration No. 5364

AIA, MPIA, CPP

Awards

- Winner Tuanbo Lake Master Plan Competition, Tianjin China, 2004
- Winner Mafeng Mountain Sports Centre (Ping Pong) Masterplan Competition, China 2004
- Winner Xi Gu Park Master Plan Competition, China 2004
- Prize for South Sydney CBD Urban Design Competition, in Australia, 1988
- Winner of Battery Park City, NY USA - Marine & Waterfront Design Limited Competition, 1986
- University of Pennsylvania Travelling Award, 1983
- George Murray Scholarship, University of Adelaide, 1981
- Kenneth and Hazel Milne Scholarship, University of Adelaide, 1981
- The Clive Boyce Fellowship, 1981
- Royal Institute of Architects Scholarship Award, 1978

Major Project Experience

- Delhi International Airport Terminal 3, India 2006-2009
- Tuanbo Lake Master Plan, 170sqkm site, Tianjin China 2004-2010
- Najmat Master Plan, Abu Dhabi, 2007-2009
- Maya Island Master Plan, Abu Dhabi 2005-2007
- Al Khobar Gate Master Plan, Saudi Arabia 2007-2008
- International Broadcast Centre Sydney Olympic Park, NSW 1998-2000
- Homebush Bay Urban Design Plan and Structure Plan, NSW 1993-1995
- Chifley Tower, Sydney NSW 1988-1993
- Newport and Port Liberte, New York USA 1986-1988

Dickson Rothschild Project Experience

Urban Design and Master Planning

- Westfield City Centre Development, Sydney CBD, urban design advisors for major redevelopment of shopping centre.
- Legible Sydney, Wayfinding Strategy Sydney
- Heart of Willoughby, Seniors Housing and RSL redevelopment, North Willoughby
- Peach Tree Road, Macquarie Park, mixed use development
- Pacific Dunes Master Plan and Subdivision, Pacific Dunes, NSW
- Carlingford Precinct Master Plan, Carlingford, NSW
- Tuanbo Islands Masterplan, residential precinct with 1800 units
- South Deebing Creek Residential Community Master Plan and Subdivision, Deebing Creek, Qld.
- Hurstville City Centre Urban Form Study, NSW
- 89 George Street, Parramatta, Urban Design advice for Part 3(a) major project
- The Entrance Peninsula Planning Strategy, Central Coast NSW
- Glendale/Cardiff Town Centre and Urban Structure Plan, Lake Macquarie NSW
- Sandon Point Commission of Enquiry Report, Wollongong NSW
- Rouse Hill Regional Centre, NSW
- Orange Central Business District Strategic Action Plan, Orange NSW
- Morriset Town Centre Master Plan and Urban Design Strategy, Morriset NSW
- Toronto Town Centre Master Plan & Urban Design Strategy, Lake Macquarie NSW
- Rhodes Peninsula Residential Master Plan,
- Wollongong Railway Station Precinct Planning, Wollongong NSW
- Dee Why Town Centre, Dee Why NSW
- Hunter Street Mall Revitalisation, Newcastle
- Randwick Defence Site Master Plan for 1000 Houses, Randwick NSW
- Wolong Lake Residential Master Plan, China
- Shandong Teachers' University Master Plan
- Rouse Hill Golf Course Res. Master Plan

Architecture

- The Archibald, 110-118, Mann St & Donnison St, Gosford, 28 storeys mixed use, 342 units and 167 hotel rooms.
- The Capitol, 20 storey mixed use, Bondi Junction, Sydney
- Brick Lane, St. Peters, mixed use, 58 units
- The One, Hurstville, mixed use, 75 units
- Burwood Hotel, 8000 sqm retail, 20 storeys, 124 units
- 227-231 Victoria Road, Drummoyne, NSW, infill mixed use development
- The Phoenix, Rhodes, NSW, 18-storey mixed use, 201 units
- The Regent, Kogarah NSW, 11-storey residential flat building, 113 units
- Sussex Street, Sydney, adaptive reuse hotel
- Eastwood Central, Eastwood, NSW, mixed use development
- 176 Victoria Road, Potts Point, mixed use infill
- Port Vila Harbour Centre, Vanuatu, mixed use and retail
- Bayview 360, Bexley, NSW, Infill mixed use development, 20 units
- The Pinnacle, Miranda NSW, residential flat buildings, 79 units

- 635 New South Head Road, Rose Bay, infill boutique residential flat building, 5 units
- Hôtel du Gouvernement, Nouméa, New Caledonia, 18,000 sqm commercial tower.
- 211-223 Pacific Highway, North Sydney, mixed use urban infill, 144 units
- Akiriki Resort, 120 units, Port Vila, Vanuatu
- 3 Rawson Street, Wollongong, 5,500 sqm retail/commercial, 65 units, FSR of 5:1
- V601, 10,000 m² retail, 300 units, Abbotsford
- 82-84 Belmore Street, 267-unit residential waterfront development, Meadowbank
- Moss Vale Road and Bowral Street, Bowral, NSW, residential flat buildings,
- 12 Shirley Street, Carlingford, 10-storey residential tower, 72 apartments
- Artiste Apartments, Gymea, NSW, mixed use
- Cliff Road, Epping, NSW, RFBs
- Gardeners Road, Mascot, 13-storey mixed use development, 242 units
- 120 James Ruse Drive, 6-storey, 27-unit residential development, Rosehill NSW
- Belmont Christian College Library, Belmont
- 144 Glenmore Road, Paddington, NSW,
- 25 George Street, Paddington, NSW
- 159 King Street, Newtown, Mixed use infill including shop and affordable housing
- 5 Pacific Street, Wamberal, 5-bedroom beach-side holiday dwelling
- Prouds Jewelers Corporate Headquarters, Sydney NSW
- Cnr King & Howard Street, Warners Bay, NSW
- Crown Street, Wollongong NSW, 620 sqm retail space, 29 units
- Liverpool Road Ashfield NSW
- 2-12 James Street 44 units, Baulkham Hills
- Seaman Ave 26 units and 7 townhouses, Warners Bay NSW
- Benaara Gardens, Castle Hill NSW, 105 units
- Janell Crescent, Carlingford NSW, 236 units
- Avoca Palms, Avoca Beach NSW

Infrastructure

- St. Marys Advance Water Treatment Plant,
- Great Western Highway Detailed Design, Woodford to Hazelbrook NSW
- Windsor Road Upgrade, Boundary Road to Henry, Vineyard NSW
- Windsor Road Upgrade, Mile End Road to Boundary Road, Box Hill NSW
- Windsor Road Upgrade, Acres Road to Old Windsor Road, Kellyville NSW
- Bangor Bypass East West Link and North South Link, Bangor NSW
- Great Western Highway, Widening & Reconstruction, Warrimoo NSW
- Urban Design Evaluation of the Realignment of Castlereagh Highway, Lidsdale NSW
- Urban design Study, Donnybrook Reconstruction, Great Western Highway, Lithgow NSW

Olympics and Sports Facilities Experience

- New Doha Stadium, Doha, Qatar
- OmniSports, Multi-Sport Recreational Facility (architecture and landscape design), Port Vila, New Caledonia
- Paita Master Plan, New Caledonia
- Operational Planning for Homebush Bay, Darling Harbour, Main Press Centre, Sponsor Hospitality and Paralympics, Sydney 2000 Olympics NSW
- International Broadcast Centre Sydney Olympic Park 1998-2000
- Homebush Bay Urban Design Plan and Structure Plan 1993-1995
- Operational Planning for Homebush Bay, Darling Harbour, Press Centre, Sponsor Hospitality and Paralympics Sydney
- Generic Venue Operational Planning Model, Sydney Olympics, Sydney
- University of New South Wales Sports Facilities Masterplan and Devel. Strategy.

Urban Planning

- Crane Road DCP, Castle Hill Town Centre
- Westfield Sydney City Stage 1 and 2 DA, Sydney NSW Westfield Sydney City Stage 1 and 2 DA, Sydney NSW
- Carlingford Precinct DCP and s94 Contributions Plan, Carlingford NSW
- North Willoughby Town Centre Precinct Plan,
- Kuringai Council, Provision of Site Specific Development Controls
- Baulkham Hills Multi Unit Residential DCP,
- Botany Bay Multi Unit DCP, Botany NSW
- Excelsior Avenue DCP, Castle Hill NSW
- Affordable Housing Study, Waverley NSW
- Kogarah Better Home Design Guidelines
- Gosford Multi Unit Residential Code 100
- Holroyd Gardens DCP, Holroyd NSW.
- Sandon Point 'Enquiry by Design' DCP

Urban Design Panel and Advice

- City of Ryde Council 2004-2005
- Lake Macquarie City Council 2003-2004
- Wollongong City Council 2001-2002
- Kogarah Municipal Council 2000-2001
- Baulkham Hills Shire Council 2000-2001
- Olympic Coordination Authority 1993 -1995

Expert Witness

Nigel Dickson has extensive experience as an expert witness in the NSW Land & Environment Court.

Previous Experience

- Yulara, Northern Territory Concept Design.
- North Cove Marina, Battery Park City, New York USA
- Arcorp Properties, New Jersey USA
- Seton Hall University Sports Complex, New Jersey USA

3 ADG Compliance Table

Note:

The objectives, design criteria and design guidance are cited below.

A development needs to demonstrate how it meets the objective and design criteria. The design criteria set a clear measurable benchmark for how the objective can be practically achieved. If it is not possible to satisfy the design criteria, applications must demonstrate what other design responses are used to achieve the objective and the design guidance can be used to assist in this.

Not all sections in the ADG specify design criteria. In these instances the design guidance should be referred to when demonstrating how an objective is being achieved.

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
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 the surrounding context	The proposal is underpinned by site analysis taking into consideration the particular site opportunities and constraints. In particular the bulk, size and setbacks of adjoining buildings on Strickland Street and Veno Street have been considered in determining appropriate departures from Council's DCP, to achieve a building that is compatible with the local context and responds to the particular site constraints which includes an usually shaped site with a corner facing Princes Highway and Veno Street, but that also has a long rectangular portion that has a southern frontage to Veno St and northern frontage to Strickland St, sloping in a south to north direction.	✓
3B Orientation			
Objective 3B-1	Building Types and layouts respond to the streetscape and site while optimising solar access	The proposed development comprises three buildings. A rectangular building, building A, on the northern portion of the site, which responds to the existing shape and layout	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
		along Strickland Street, with a frontage to Strickland St setback from the boundary. Building B sits south of building A, also generally rectangular in shape in response to the existing site conditions. Building B adjoins Building C which aligns with Princes Hwy, which sits at an angle to Veno St. Together buildings B and C form the main frontage of the development, aligning with the street. Each building has its own core, with idented lobbies and building separation at upper levels used to enhance solar access and cross ventilation.	
	Buildings along the street frontage define the street, by facing it and incorporating direct access from the street.	The proposal fronts Veno St and Princes Hwy, with two lobbies, one serving building B and one serving building C, that directly face the street and where sightlines can be maintained from the street into the lift.	✓
	Where the street frontage is to the east or west, rear buildings should be orientated to the north.	Three street frontages.	NA
	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.	Building A has a northern street frontage and building B has a southern street frontage. The overshadowing impacts of Building A to Building B are mitigated by the 12m separation distance between these buildings, as well as the fact that due to the site's topography, building A sits lower than building B. Both buildings A and B had eastern and western facing units which receive daylight. Lastly, the shadow impacts of the south-facing building do not adversely affect any adjoining development.	✓
Objective 3B-2	Overshadowing of neighbouring properties is minimised during mid winter	The worst overshadowing impacts to neighbouring properties to the west occur from 9am to 11am and to neighbouring properties to the east after 2pm. As such,	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
		adjoining properties will still receive at least 4 hours of daylight in during mid-winter. In all buildings upper levels are setback to help minimise overshadowing to adjoining properties.	
	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.	North facing units have been maximised. Communal open space is located on the roof level of building A and ground floor between, and north of, buildings B and C. These spaces are both north facing and receive optimal levels of solar access. The proposal achieves the solar access requirements under the ADG.	✓
	Solar access to living rooms, balconies and private open spaces of neighbours should be considered.	The units are laid out in a way to maximise solar access to private open and living spaces while limiting overlooking of neighbours within the building.	✓
	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%.	N/A	N/A
	If the proposal will significantly reduce the solar access of neighbours, building separation should be increased beyond minimums contained in Section 3F Visual Privacy.	Detail shadow analysis has been carried to understand the shadow impact of the proposed development on the neighbours. The shadow impacts to neighbouring sites are acceptable, with all neighbours receiving at least 3 hours solar access in mid-winter.	✓
	Overshadowing should be minimised to the south or downhill by increased upper level setbacks.	The southern buildings B and C have upper level set back and a separation between them at upper levels to reduce overshadowing.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	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.	Buildings A and B are orientated at 90 degrees to their respective north and south boundaries.	✓
	A minimum of 4 hours of solar access should be retained to solar collectors on neighbouring buildings.	1322A Princes Highway is the only building with solar collectors to near the subject site. This property receives at least 5 hours solar access.	✓
3C Public domain interface			
Objective 3C-1	Transition between private and public domain is achieved without compromising safety and security.	The public and private domain are well defined and casual surveillance is achieved. A transition from public to private domain is also achieved at the various building entry points.	✓
	Terraces, balconies and courtyard apartments should have direct street entry, where appropriate.	The ground floor units in Building A facing Strickland Street have their own direct street entry.	
	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.	Balconies provide surveillance of the public domain. The ground level units in building A have front gardens with a fence design that provides privacy while allowing surveillance with views provided over the top of the fence. Views into these gardens is limited by screen planting that keeps people from walking right up to the courtyard and looking in.	✓
	Upper level balconies and windows should overlook the public domain.	Units facing the street have balconies overlooking 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.	The wall near the street frontage on Strickland Street is low (less than 1m) and does not block sight lines.	✓
	Length of solid walls should be limited along street frontages.	All street façades proposed have a high level of articulation with limited solid walls.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	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.	There are entry lobbies to buildings B and C which face directly onto Veno St and Princes Hwy respectively, i.e. the public domain. Their facades consist of glazing allowing for views between the public and private domain. The buildings can also be accessed via the communal open space, which has an entry point at the east of the site along Princes Hwy. This space will be visible from Princes Hwy, allowing for casual interaction between residents and the public domain.	✓
	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.	The proposed residential entries are easily identifiable and legible through their position and architectural detailing. The entries to buildings B and C along Veno St and Princes Hwy have a different façade treatment and material, with vertical timber look cladding and signage identifying each building above. The pedestrian entries at the eastern side of the site and the north-western corner at Strickland St will have a secure gate, while the ground floor private entries to the units facing Strickland St will each have their own secure gate.	✓
	Opportunities for people to be concealed should be minimised.	The openness of the building entries and choice to use glazing to building entries facing the street avoids opportunities for concealment.	✓
Objective 3C-2	Amenity of the public domain is retained and enhanced	The proposed development enhances the site's interaction with, and contribution to, the public domain. All buildings have a street frontage and address the street, with buildings B and C with a nil setback to the street. Planting proposed in front of building A and C contributes positively to the public domain.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	Planting softens the edges of any raised terraces to the street, for example above sub-basement car parking.	Planting is proposed along Princes Hwy where the site begins to fall and ground level becomes raised from the street, limiting wall height.	✓
	Mail boxes should be located in lobbies, perpendicular to the street alignment or integrated into front fences where individual street entries are provided.	Mailboxes are at the entry of each lobby and visually identified from the public domain.	✓
	The visual prominence of underground car park vents should be minimised and located at a low level where possible.	Car park vents are integrated into the lift core thereby eliminating the visual impact.	✓
	Substations, pump rooms, garbage storage areas and other service requirements should be located in basement car parks or out of view.	Garbage storage areas and services including mechanical and fire services are located out of view at ground floor and in basements, out of view. A substation is proposed at the north of the site, this will be screened by a wall.	✓
	Ramping for accessibility should be minimised by building entry location and setting ground floor levels in relation to footpath levels.	Entries are accessible by ramp.	✓
	Durable, graffiti resistant and easily cleanable materials should be used.	The materiality and colours of the façade are designed to deter graffiti where possible and minimise cleaning on the ground floor.	✓
	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.	N/A	N/A
	On sloping sites protrusion of car parking above ground level should be minimised by using split levels to step underground car parking.	N/A	N/A

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
3D Communal and public open space			
Objective 3D-1	An adequate area of communal open space is provided to enhance residence amenity and to provide opportunities for landscaping.	Criteria achieved.	✓
Design Criteria	Communal open space has a minimum area equal to 25% of the site.	Communal open space is provided at roof level of building A and ground level and has an area greater than 25% of the site.	✓
	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 9am and 3pm on 21 June (mid winter).	The communal open spaces provided on the roof level of building A facing north will receive optimal, uninterrupted sunlight. The principle usable open space at ground level will achieve a minimum of 2 hours direct sunlight between 9am and 3pm in mid-winter.	✓
	Communal open space should be consolidated into a well designed, easily identified and usable area.	The communal open spaces at ground floor and roof level are easily identifiable and usable and accessible to all residents. These have well defined landscape areas, seating areas, covered barbeque areas, a gazebo and cubby house for kids. The rooftop open space also has an accessible toilet.	✓
	Communal open space should have a minimum dimension of 3m, and larger developments should consider greater dimensions	The proposed communal open space is very generous in size and 3m minimum dimensions are achieved.	✓
	Communal open space should be co-located with deep soil areas	Ground floor communal open space is co-located with deep soil areas, also rooftop planting is proposed with species selected including shrubs and small trees to ensure there is a good landscape outcome on the site and that the landscape can be sustained.	✓
	Direct, equitable access should be provided to communal open space areas from common circulation areas, entries and lobbies.	Accessible access to the ground level communal open space is provided from the lobbies of all three buildings. The	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
		rooftop communal open space also has accessible access from the lobby of building A.	
	Where communal open space cannot be provided at ground level, it should be provided on a podium or roof.	Communal open space is provided at ground level and at roof level.	✓
	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 open 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	NA	NA
Objective 3D-2	Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting.	The communal open spaces are well designed. The roof top space responds to the site by being north-oriented, it will feature a covered BBQ area, covered and uncovered seating options and planting. The ground floor space will also feature a covered BBQ area and seating, a gazebo, children's cubby house and quality landscaping, making both spaces attractive and inviting.	✓
	Facilities are provided within communal open spaces and common spaces for a range of age groups, incorporating some of the following elements: • Seating for individuals or groups • Barbeque areas • Play equipment or play areas • Swimming pools, gyms, tennis courts or common rooms.	As mentioned above, the ground floor communal open space provides attractive landscaping design including a BBQ area, benches, seating, a boardwalk and cubby house for kids. The rooftop open space provides BBQ facilities for residents and different seating options. These spaces, as shown in the landscape plans are well-designed, encourage use by residents of all ages and groups, incorporating a mix of soft edges and equipment that encourages socialisation and relaxation.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	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.	The landscape plans includes open spaces for solar access and covered and/or sheltered spaces for shade and wind protection.	✓
	Visual impacts of services should be minimised, including location of ventilation duct outlets from basement car parks, electrical substations and detention tanks	Services are well concealed. The only exception is the booster valve and substation However, booster valve has been setback from the street frontage to limit its impact, located in a screened cabinet that integrates with the overall building design and substation has been softened by planting around it and it has been oriented with its narrow end facing the street to limit impacts.	✓
Objective 3D-3	Communal open space is designed to maximise safety	Common open space is secure and dark, blind corners avoided.	✓
	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 in ground floor is visible readily from habitable rooms and balconies. Ground floor units facing the communal open space have screen planting in front. The roof garden maintains adequate safety by virtue of its location.	✓
	Communal open space should be well lit.	Communal open space maximises passive light (solar) and will be lit at night, while considering light spillage into residences facing it.	✓
	Where communal open space/facilities are provided for children and young people they are safe and contained.	The communal open space is secure area only accessible by residents.	✓
Objective 3D-4	Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood	Public open space is not provided.	N/A

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	The public open space should be well connected with public streets along at least one edge.	N/A	N/A
	The public open space should be connected with nearby parks and other landscape elements.	N/A	N/A
	Public open space should be linked through view lines, pedestrian desire paths, termination points and the wider street grid.	N/A	N/A
	Solar access should be provided year round along with protection for people of all ages.	NA	NA
	A positive address and active frontages should be provided adjacent to public open space.	NA	NA
	Boundaries should be clearly defined between public open space and private areas.	NA	NA
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.	1439m^2 of deep soil with a minimum dimension of 6m is achieved. This is 19.86% of the site. An additional 368m^2 of deep soil with a dimension of less than 6m is proposed on site. This is an additional 5% of the site. Deep soil with wide dimensions is concentrated between buildings B and C. Trees on this land are either retained or new trees proposed in this area. The deep soil allows for water infiltration and the proposed landscape plan maximises the landscape in these areas.	✓
Design Criteria	Deep soil zones are to meet the following minimum requirements:	1439m^2 of deep soil with a minimum dimension of 6m is achieved. This is 19.86% of the site area.	✓

<table>
<tr><th></th><th>Design Guidance / Criteria</th><th>Proposed Development</th><th>Comply?</th></tr>
<tr><td></td><td>
<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>An additional 368 m^2 of deep soil with a dimension of less than 6m is proposed on site. This is an additional 5% of the site. Therefore, the total combined deep soil is 24.86%.

A detailed deep soil calculation plan is provided on drawing sheet DA-0-904.</td><td></td></tr>
<tr><td></td><td>On some sites it may be possible to provide larger deep soil zones, depending the site area and context:
10% of the site as deep soil on sites with an area of 650m^2 – 1,500m^2
15% of the site as deep soil on sites greater than 1,500m^2.</td><td>The site is greater than 1,500m^2 and provides more than 15% deep soil as outlined above.</td><td>✓</td></tr>
<tr><td></td><td>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 on adjacent sites to create larger contiguous areas of deeps soil.</td><td>Trees are proposed to be retained on the eastern portion of the site facing Princes Highway by virtue of generous basement and ground level setbacks.

Trees will be lost, in particular where building a is proposed, however, new planting along Strickland Street is proposed, which will contribute to the tree canopy and improve the site’s current boundary treatment.</td><td>✓</td></tr>
<tr><td></td><td>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 (eg central business district, constrained sites, high density areas, or in centres)</td><td>Criteria achieved.</td><td>✓</td></tr>
</table>

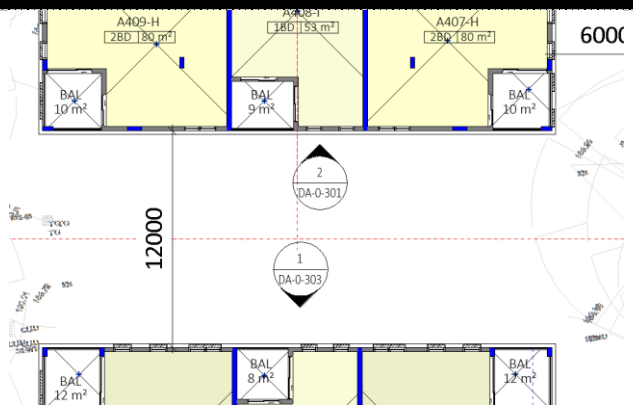
<table>
<tr><th></th><th>Design Guidance / Criteria</th><th>Proposed Development</th><th>Comply?</th></tr>
<tr><td></td><td>• There is 100% site coverage or non-residential uses at ground floor level.

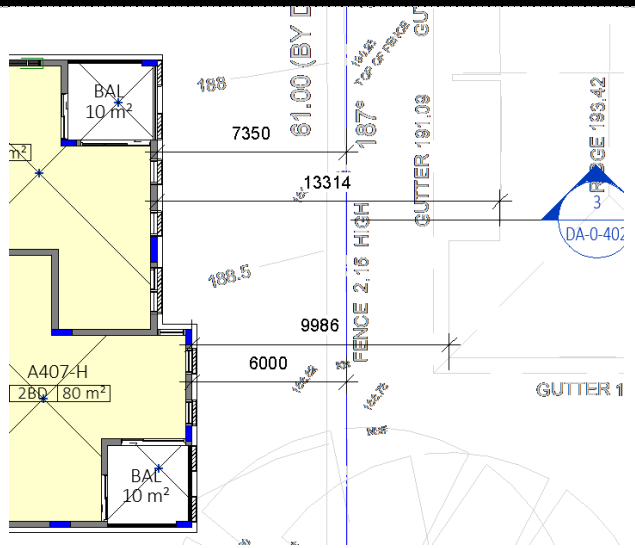
Where a proposal does not achieve deep soil requirements, acceptable stormwater management should be achieved and alternative forms of planting provided such as on structure.</td><td></td><td></td></tr>
<tr><td colspan="4">3F Visual Privacy</td></tr>
<tr><td>Objective 3F-1</td><td>Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy.</td><td>ADG criteria are achieved to the front, rear and side boundary up to the fourth storey. The front setback along Strickland St aligns with the setback of neighbouring properties and the nil front setback along Veno St and Princes Hwy match the front setback of the adjacent property along Veno St and retail/commercial units to the south. Privacy louvres/screens are used on side elevations adjacent to neighbouring sites and on the north elevation of building B to mitigate potential privacy impacts on adjoining residences. This allows for an equitable sharing of privacy and separation between sites.</td><td>✓</td></tr>
<tr><td>Design Criteria</td><td>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:

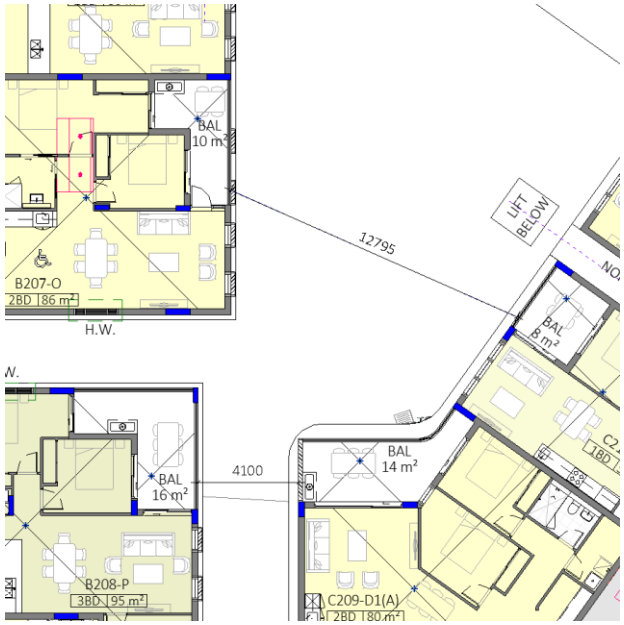
<table>
<tr><th>Building height</th><th>Habitable rooms and balconies</th><th>Non-habitable rooms</th></tr>
<tr><td>Up to 12m (4 storeys)</td><td>6m</td><td>3m</td></tr>
<tr><td>Up to 25m (5-8 storeys)</td><td>9m</td><td>4.5m</td></tr>
<tr><td>Over 25m (9+ storeys)</td><td>12m</td><td>6m</td></tr>
</table>
Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room.</td><td>South of Building A / North of Building B

The separation distance between these buildings is a total of 12m, see figure below. This is a compliant separation for the first four storeys. To mitigate privacy impacts, privacy louvres are used along building B’s northern elevation.</td><td>X

Mitigation measures utilised.</td></tr>
</table>

Design Guidance / Criteria	Proposed Development	Comply?
Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties.	 Figure 1: Tower A&B Level 2-4, privacy screen between building in the same site. **Side Boundaries** **East of Building A (to 2 Strickland St)** All habitable room windows and balconies facing the side boundary are setback at least 6m from the eastern boundary. Privacy louvres are used at along windows facing the eastern boundary in this location (See Fig. 1 below).	

Design Guidance / Criteria		Proposed Development	Comply?
		 Figure 2: Level 2-4 privacy screen (2 Strickland St Boundary) **West of Building A and B (to 12 Strickland St and 5 Veno St)** Windows and balconies that face the side boundary are setback at least 6m from the side boundary. Privacy louvres are used along windows in this elevation.	

	Design Guidance / Criteria	Proposed Development	Comply?
		East of Building A / West of Building C  Figure 3: Tower B&C Level 2-3, privacy screen between building in the same site. Potential cross views arising between buildings B and C. Where the setback between these buildings is narrower and there is a risk of overlooking, privacy louvres are used.	
	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.	The upper level of building A is set back in one step from the levels below, while the top two upper levels in building B and C are set back in step one step from the levels below.	✓
	For residential buildings, next to commercial buildings, separation distances should be measured as follows:	No. 5 Veno St has retail/commercial space at ground level with residential above. From level 1 upwards the proposed	X

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	• For retail, office spaces and commercial balconies use the habitable room distances • For service and plant areas use the non-habitable room distances.	development is set back 6m from this boundary. 5 Veno Street's commercial use has a blank end wall adjoining the subject site so impacts are negligible closer to Veno Street.	
	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 • On sloping sites, apartments on different levels have appropriate visual separation distances.	The proposal has compliant building separation with neighbouring properties for the first four storeys. Privacy screens are used on all levels on all elevations facing neighbouring properties to mitigate privacy impacts.	X
	Apartment buildings should have an increased separation distance of 3m (in addition to the requirements set out in design criteria) when adjacent to a different zone that permits lower density residential development to provide for a transition in scale and increased landscaping.	The proposed development is adjacent to a different zone along the western boundary of building A. While no increased setback is provided, landscaping is proposed and privacy screens are used to mitigate privacy impacts.	X
	Direct lines of sight should be avoided for windows and balconies across corners.	The proposal avoids direct lines of sight between private open spaces and windows across corners by using unit orientation and privacy louvres.	✓
	No separation is required between blank walls.	NA	N/A
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.	Acceptable privacy is achieved while maintaining acceptable access to light and air across units and providing adequate views and outlook.	✓
	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	Two communal open spaces are provided, one is located at ground level between buildings B and C, a planter box is provided in front of the private open space of the west facing ground level units of building B to add separation between these spaces. The roof top communal open space is surrounded by planting to separate it from the north facing units on level 5.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	• 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.	Generally, bedrooms, living spaces and other habitable rooms are separated from open circulation space. However, there are few exceptions. In building A, unit AG01-A and AG05-C adjoin the pedestrian entrance from Strickland St to the building, blank walls and landscaping are used to separate these areas from one another. Additionally, Unit A105-F and A106-G adjoin the pedestrian access to building A at the eastern side of the building, here high level windows and planting are used to provide separation between these areas. In building B, unit BG07-M is adjacent to the pedestrian entry to the building from the communal open space, a solid wall is provided on the side of the unit that adjoins this space with planting in front to provide separation.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	Balconies and private terraces should be located in front of living rooms to increase internal privacy.	Balconies adjoin living rooms.	✓
	Windows should be offset from the windows of adjacent buildings.	Proposed windows are offset from neighbouring windows.	✓
	Recessed balconies and/or vertical fins should be used between adjacent balconies.	Recessed balconies with fins between used between adjacent balconies.	✓
3G Pedestrian access and entries			
Objective 3G-1	Building entries and pedestrian access connects to and addresses the public domain.	Two lobbies immediately connect to and address the public domain, while the other two pedestrian access points which lead to access to lobbies within the site also connect to and address the public domain.	✓
	Multiple entries (including communal building entries and individual ground floor entries) should be provided to activate the street edge.	As above.	✓
	Entry locations relate to the street and subdivision pattern and the existing pedestrian network.	Entries to buildings B and C immediately address the street. Entry to building A is also provided from the street to an internal path which leads to the lobby.	✓
	Building entries should be clearly identifiable and communal entries should be clearly distinguishable from private entries.	Along Veno St and Princes Hwy private entries are differentiated from the retail and future pub use by different façade materials and signage. Access to the communal open space and at Strickland St will have secure gates.	✓
	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.	N/A	N/A
Objective 3G-2	Access, entries and pathways are accessible and easy to identify	Residential entries are signalled through façade design and directly address the street. Paths within the development are simple and easy to identify.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	Building access areas including lift lobbies, stairwells and hallways should be clearly visible from the public domain and communal spaces.	The street fronting residential entries are clearly identifiable through materiality and design, they feature a timber look facade which includes the relevant building letter above, inviting people towards the building entry. They also have clear sightlines to the public domain. Internal entries are clearly visible from communal open space.	✓
	The design of ground floors and underground car parks minimise level changes along pathways and entries.	The proposed loading dock is at ground level avoiding level changes along pathways and entries. Pathways are easily identifiable. The landscape design of the communal open space negotiates level changes and allows for sightlines and navigation through the space. The buildings step with topography.	✓
	Steps and ramps should be integrated into the overall building and landscape design.	Steps and ramps are integrated into the design. The eastern pedestrian entry slopes down from the street and the entry to building A from the communal open space includes a ramp in response to the site's topography.	✓
	For large developments 'way finding' maps should be provided to assist visitors and residents.	Any necessary way finding can be provided.	✓
	For large developments electronic access and audio/video intercom should be provided to manage access.	The proposal will provide electronic access for security and building management.	✓
Objective 3G-3	Large sites provide pedestrian links for access to streets and connection to destinations	Connections are provided throughout the site	✓
	Pedestrian links through sites facilitate direct connections to open space, main streets, centres and public transport.	Pedestrian links provide direct connections to open space, main streets.	✓
	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.	Pedestrian links proposed are direct and maintain clear sightlines. Casual surveillance is also provided to these links.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
Objective 3H-1	Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes.	Vehicle access points have been designed to minimise potential conflicts with traffic patterns, street landscape and pedestrian safety. One access is at the low point of Veno Street in the position of an existing driveway. The driveway is long and dives deep to achieve HRV access for waste collection. The other driveway is along Strickland St also in the general location of an existing driveway. To achieve safety and minimise conflict between pedestrian and vehicles Lobby entry is separate from driveway.	✓
	Car park access should be integrated with the building's overall façade. Design solutions may include: • The materials and colour palette to minimise visibility from the street • Security doors or gates at entries that minimise 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.	The proposed materials to the driveway entry are recessive in colour and character. The car park access is not visually dominant on either Veno Street or Strickland Street and instead has a recessive character.	✓
	Car park entries should be located behind the building line.	The car parking entries are located behind the front 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.	Driveway is located as far from the Princes Highway intersection as possible responding to the particular site constraints. The driveway entry at Strickland Street is not at the low point but the site is relatively level at the frontage. The driveway is positioned to avoid conflict with sewer infrastructure .	✓
	Car park entry and access should be located on secondary streets or lanes where available.	Car park entries are located in Veno street and Strickland Street, avoiding Princes Highway.	✓
	Vehicle standing areas that increase driveway width and encroach into setbacks should be avoided.	No vehicle standing areas are proposed.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	Access point locations should avoid headlight glare to habitable rooms.	Habitable room windows are screened from headlight glare.	✓
	Adequate separation distances should be provided between vehicle entries and street intersections.	Proposed driveways are in the genera location of existing driveways and avoid major intersections.	✓
	The width and number of vehicle access points should be limited to the minimum.	There is one access point along Veno St and one access point along Strickland St, their widths meet the relevant standards for vehicle access.	✓
	Visual impact of long driveways should be minimised through changing alignments and screen planting.	Driveways are relatively short.	✓
	The need for large vehicles to enter or turn around within the site should be avoided.	The proposal seeks to use an HRV within the Ground floor as per Council requirements.	✓
	Garbage collection, loading and servicing areas are screened.	Waste collection proposed to be from basement and ground floor and fully screened.	✓
	Clear sight lines should be provided at pedestrian and vehicle crossings.	Sightlines are provided at the vehicle crossing as per the Australian Standard.	✓
	Traffic calming devices such as changes in paving material or textures should be used where appropriate.	The driveway is a standard width.	N/A
	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.	See responses above. The vehicle access to the car parking and pedestrian access into the building are clearly separated.	✓
3J Bicycle and car parking			

<table>
<tr><th></th><th>Design Guidance / Criteria</th><th>Proposed Development</th><th>Comply?</th></tr>
<tr><td>Objective 3J-1</td><td>Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas.</td><td>Parking requirements are determined in relation to the site context and meet ADG requirements. Bicycle parking is also provided on site for visitors and residents.</td><td>✓</td></tr>
<tr><td>Design Criteria</td><td>For development in the following locations:
On sites that are within 800m of a railway station or light rail stop in the Sydney Metropolitan Area, or
On land zoned, and sites within 400m of land zoned, B3 Commercial Core, B4 Mixed Use or equipment 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.</td><td>The site is within 800m of a metropolitan railway station. Please refer Traffic Impact Assessment Report as part of the DA. As such, the RMS Metropolitan Sub-regional Centres rates would be applied. However, since this is Infill Affordable housing, the SEPP (Housing) 2021 rates have been applied instead.

TABLE 3: SEPP (HOUSING) 2021 CAR PARKING REQUIREMENTS<table><tr><th>Category</th><th>Sub-Category</th><th>Scale</th><th>Parking Rate</th><th>Parking Required</th></tr><tr><td rowspan="3">Affordable Housing</td><td>1-bed</td><td>20</td><td>0.4 per unit</td><td>8</td></tr><tr><td>2-bed</td><td>5</td><td>0.5 per unit</td><td>2.5</td></tr><tr><td>3-bed</td><td>0</td><td>1 per unit</td><td>0</td></tr><tr><td colspan="4">Subtotal</td><td>10.5</td></tr><tr><td rowspan="3">Residential</td><td>1-bed</td><td>30</td><td>0.5 per unit</td><td>15</td></tr><tr><td>2-bed</td><td>72</td><td>1 per unit</td><td>72</td></tr><tr><td>3-bed</td><td>41</td><td>1.5 per unit</td><td>61.5</td></tr><tr><td colspan="4">Subtotal</td><td>148.5</td></tr><tr><td colspan="4">Total</td><td>159</td></tr></table>TABLE 4: REQUIRED PARKING RATES<table><tr><th>Land Use</th><th>Scale</th><th>Rate</th><th>Spaces Required</th><th>Spaces Provided</th></tr><tr><td>Retail</td><td>190m² GFA</td><td>1 per 30m² GFA(1)</td><td>6.3</td><td rowspan="3">89</td></tr><tr><td>Tavern</td><td>1,109m² GFA</td><td>6.9 per 100m² GFA(2)</td><td>76.5</td></tr><tr><td>Tavern Staff</td><td>14</td><td>1 per 2 staff(3)</td><td>7</td></tr><tr><td>Residential (Affordable Housing)</td><td>25 units</td><td>See Table 3 (4)</td><td>10.5</td><td rowspan="2">160</td></tr><tr><td>Residential (Other)</td><td>143 units</td><td>See Table 3 (4)</td><td>148.5</td></tr><tr><td colspan="3">Car Parking Total</td><td>249</td><td>249</td></tr></table></td><td>✓</td></tr>
</table>

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
		A total of 249 parking spaces are provided meeting the overall number of car parking spaces required. The proposal also provides 9 motor cycle parking spaces for residential and 3 motor cycle parking spaces for commercial to meet needs although this is more than what is required by the DCP which requires only 4 motor cycle parking space for residential. EV charging for cars and bikes is proposed on commercial carparking.	
	Where a car share scheme operates locally, provide car share parking spaces within the development Car share spaces, when provided, should be on site.	N/A	N/A
	Where less parking is provided in a development, council should not provide on street resident parking permits.	The proposal meets car parking requirements.	N/A
Objective 3J-2	Parking and facilities are provided for other modes of transport	Car parking, motorcycle parking and bicycle parking are provided. The site is within very short walking distance of the railway station and bus service.	✓
	Conveniently located and sufficient numbers of parking spaces should be provided for motorbikes and scooters.	12 Motorbike parking provided on this project, 5 extra spaces to what the DCP requires.	✓
	Secure undercover bicycle parking should be provided that is easily accessible from both the public domain and common areas.	Bicycle parking is proposed in basement levels.	✓
	Conveniently located charging stations are provided for electric vehicles, where desirable.	EV charging can be provided by means of a condition of consent.	✓
Objective 3J-3	Car park design and access is safe and secure	Car parking is secured. Concealment areas are avoided. Sufficient manoeuvring areas and aisle widths are provided. Access corridors are provided with direct sightlines.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	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.	When supporting facilities, plant rooms and storage areas are located close to parking space, access corridor are provided to avoid crossing car parking spaces.	✓
	Direct, clearly visible and well lit access should be provided into common circulation areas.	See responses above. The access areas are visible and corridors/lobby will be lit after sun down.	✓
	A clearly defined and visible lobby or waiting area should be provided to lifts and stairs.	See responses above. Clearly defined lobby space is provided in parking areas adjacent to the lifts.	✓
	For larger car parks, safe pedestrian access should be clearly defined and circulation areas have good lighting, colour, line marking and/or bollards.	The car parking layout is well designed and circulation is simple to avoid pedestrian and vehicle conflict. The lifts are easily located with safe waiting spaces.	✓
Objective 3J-4	Visual and environmental impacts of underground car parking are minimised	Underground parking is well concealed within the building design and with only the driveways visible within the streetscape.	✓
	Excavation should be minimised through efficient car park layouts and ramp design.	Excavation is minimised taking into consideration that an HRV is to access the ground floor and that basement parking is desirable given the site zoning, the proposed mixed use character of the building and the density proposed. The swept path is shown on the plan to demonstrate additional area needed. The car parking layout allows for waste storage, parking and ancillary storage space.	✓
	Car parking layout should be well organised, using a logical, efficient structural grid and double loaded aisles.	Car parking area provides double loaded aisles where possible and provides for two-way movement and is arranged in an efficient manner for logical circulation.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	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.	Car park protrusion is limited and only arises to achieve the minimum headroom. The protrusion is fully screened from view and imperceptible.	✓
	Natural ventilation should be provided to basement and sub basement car parking areas.	Mechanical ventilation is proposed due location, site depth and nature of development.	Variation, objective met
	Ventilation grills or screening devices for car parking openings should be integrated into the façade and landscape design.	Ventilation is via lift core and imperceptible.	✓
Objective 3J-5	Visual and environmental impacts of on-grade car parking are minimised	On-grade parking not proposed.	N/A
	On-grade car parking should be avoided.	The proposal provides car parking in basement.	✓
	Where on-grade parking is unavoidable, the following design solutions are used: • Parking is located on the side or rear of the lot away from the 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.	N/A	N/A

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
Objective 3J-6	Visual and environmental impacts of above ground enclosed car parking are minimised	On-grade parking not proposed.	N/A
	Exposed parking should not be located along primary street frontages.	See responses above. Car parking is not exposed.	N/A
	Screening, landscaping and other design elements including public art should be used to integrate the above ground car parking with the façade. Design solutions may include: • Car parking that is concealed behind the façade, with windows integrated into the overall façade 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 responses above. Car parking is not exposed.	N/A
	Positive street address and active frontages should be provided at ground level.	Positive street address and active frontages are provided.	✓
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.	The proposal provides adequate solar access for habitable rooms and private open space. South facing units are limited.	✓
Design Criteria	Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9am and 3pm at mid winter in the Sydney Metropolitan Area	The proposal achieves more than the minimum required criterion of 70%. In Building A 70% of units achieve at least 2+ hours solar access. In Buildings B and C 77.7% of units achieve 2+ hours of solar access. An average of approximately 74% solar access is achieved across the site.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	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 of direct sunlight between 9am and 3pm at mind winter.	N/A	N/A
	A maximum of 15% of apartments in a building receive no direct sunlight between 9am and 3pm at mid winter.	15 out of 168 units (8.9%) receive no sunlight at mid-winter.	✓
	The design maximises north aspect and the number of single aspect south facing apartments is minimised.	It is noted that the solar access criteria are met and thus this guidance is of lower order consideration. Nonetheless, the number of single aspect south-facing units was kept as minimal as possible within the site constraints. A limited number of apartments are south facing single aspect. The unit depth is limited for these apartments and generous length of glazing is proposed.	✓
	Single aspect, single storey apartments should have a northerly or easterly aspect.	The design achieves a very high proportion of units with a northern aspect. There are limited south facing single aspect apartments/units. Where units have a westerly aspect they are provided with louvres to screen hot summer sun and allow solar access at midwinter.	✓
	Living areas are best located to the north and service areas to the south and west of apartments.	Noted that applicable criteria met and thus guidance is of lower order consideration. Living areas are located to the north where possible. See responses above.	✓
	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	It is noted that as the design criteria are met, this guidance is of lower order. Nonetheless, apartments have been designed to be dual aspect where possible, with limited depths to optimise sunlight to habitable areas.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	• 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.	See responses above. Detailed solar access diagrams are provided as part of the DA.	✓
	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.	Buildings B and C are sited to activate the street frontage o Veno St and Princes Hwy in line with the character of Heathcote Local Centre. The chosen layout has resulted in some south-facing units due to this decision. However, as stated above applicable criteria for solar access have been met across the development and met and thus guidance is of lower order consideration. Nonetheless, design elements have been incorporated to limit the number of exclusively south-facing units See also responses above. A detailed site analysis in accordance with ADG criteria is provided as part of the DA.	✓
Objective 4A-2	Daylight access is maximised where sunlight is limited	All units have extensive glazing. Where units face south the unit are shallow with generous lengths of glazing. Skylights are also proposed to the living room of some units located on level 5 of building B and C to maximise daylight, these are B507-O, C505-H1(A) and C504-G1(A) .	✓
	Courtyards, skylights and high level windows (with sills of 1,500mm or greater) are used only as secondary light source in habitable rooms.	Skylights and high level windows that are proposed are only secondary light sources to habitable rooms.	✓
	Where courtyards are used: • Use is restricted to kitchen, bathrooms and service areas	N/A	N/A

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	• 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		
	Opportunities for reflected light into apartments are optimised through: • Reflective exterior surfaces on building opposite south facing windows • Positioning windows to face other buildings or surfaces (on neighbouring sites or within the site) that will reflect • Integrating light shelves into the design • Light coloured internal finishes.	Noted. South facing units are limited in number. Just few units are facing other building surfaces within the site. Light colour finishes will be used within the balcony.	✓
Objective 4A-3	Design incorporates shading and glare control, particularly for warmer months	The design incorporates shading and glare control for the 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	A number of design features are used to achieve shade and glare control. Projecting horizontal slabs, screens, louvres and window framing elements are proposed to provide shading and this responds to the element orientation. Existing larges trees retained at northeast corner of site will provide shade for some apartments.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	• 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).		
4B Natural ventilation			
Objective 4B-1	All habitable rooms are naturally ventilated.	Natural ventilation is achieved by all apartments and all habitable rooms are provided with operable windows. A high proportion of units achieve natural cross ventilation at 60%. Where units are impacted by road noise, passive wall ventilation boxes are proposed to allow natural ventilation without unacceptable acoustic effects.	✓
	The building's orientation maximises capture and use of prevailing breezes for natural ventilation in habitable rooms.	The proposed development has an acceptable number of dual aspect units. Balconies of units adjoin living areas and are accessible through large operable doors to maximise ventilation.	✓
	Depths of habitable rooms support natural ventilation.	Building and habitable room depths are appropriate for the development, consistent with ADG criteria and guidance achieve natural ventilation.	✓
	The area of unobstructed window openings should be equal to at least 5% of the floor area served.	Each room has a window opening which is at least 5% of room size. Operable glazing is maximised in the proposed open plan living room/kitchen/dining room spaces.	✓
	Light wells are not the primary air source for habitable rooms.	Light wells are not proposed.	N/A
	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	Doors and windows are designed to be large and operable, in particular to living rooms and bedrooms. All units have living rooms adjoining balcony/terrace areas, with many bedrooms also having direct access to private open space.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	• Windows which the occupants can reconfigure to funnel breezes into the apartment such as vertical louvres, casement windows and externally opening doors.		
Objective 4B-2	The layout and design of single aspect apartments maximises natural ventilation	Single aspect apartments have articulated glass lines and limited unit depth. Window openings are generous to allow ventilation.	✓
	Apartment depths are limited to maximise ventilation and airflow.	Building and habitable room depths are appropriate for the development and maximises natural ventilation and airflow opportunities. Units are designed so that deeper parts of the units are used for non-habitable spaces such as bathrooms, laundries and storage. This pushes habitable areas towards windows.	✓
	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.	The habitable room depths and overall building depth is minimised as much as possible while considering internal amenity needs. Building indentations are used to promote airflow and maximise opportunities for airflow through the apartment. Each single aspect unit is sufficiently wide and the length of glazing is maximised. Single aspect apartments are generally limited in depth and non-habitable areas located at the deeper parts of the apartment.	✓
Objective 4B-3	The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents	Criteria is met. The number of units off a core is limited. Corner units are maximised. Unit depths are limited.	✓
Design Criteria	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.	The proposal meets this criterion. 105 units (62.5%) of the apartment building achieves cross ventilation.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line.	Complies.	✓
	The building should include dual aspect apartments, cross through apartments and corner apartments and limit apartment depths.	The proposed development includes a mix of these apartment types to achieve ventilation.	✓
	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).	Proposed operable windows are adjustable.	✓
	Apartments are designed to minimise the number of corners, doors and rooms that might obstruct airflow.	The proposal provides plan layout in each unit combining kitchen dining and living areas into an open plan and avoids corners and doors where possible, allowing airflow paths. Bathroom and laundry areas are carefully positioned in suitable locations.	✓
	Apartment depths, combined with appropriate ceiling heights, maximise cross ventilation and airflow.	Building and habitable room depths are appropriate for the development and maximises natural cross ventilation opportunities where possible. Floor to floor heights at residential levels of at least 3.2 m allow for sufficient ceiling heights and service areas.	✓
4C Ceiling heights			
Objective 4C-1	Ceiling height achieves sufficient natural ventilation and daylight access.	The ceiling height is designed at greater than 2.7m for all habitable rooms. A minimum 3.2 m floor-to-floor height is proposed. This is specifically selected to match with fire stair riser requirements and allows for sufficient area for slabs, insulation and services and achieving a minimum 2.7m ceiling height in habitable rooms.	✓
Design Criteria	Measured from finish floor level to finished floor level, minimum ceiling heights are:	The proposed floor-to-floor levels are a minimum of 3.2m which provides tolerance to ensure a 2.7 m floor to ceiling	✓

<table>
<tr><th></th><th>Design Guidance / Criteria</th><th>Proposed Development</th><th>Comply?</th></tr>
<tr><td></td><td>Minimum ceiling height (for apartment and mixed use buildings)
<table><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 use 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>height can be achieved for habitable rooms under the latest NCC. 3.1 m is the floor-to-floor height recommended in the ADG diagrams accompanying this section of the ADG. Increase floor-to-floor height is achieved at ground level, to achieve transfer slabs, ceiling fans, roof insultation and the like.</td><td></td></tr>
<tr><td></td><td>Ceiling height can accommodate use of ceiling fans for cooling and heat distribution.</td><td>Ceiling fans are proposed. The 3.2m floor-to-floor height allows for this.</td><td>✓</td></tr>
<tr><td>Objective 4C-2</td><td>Ceiling height increases the sense of space in apartments and provides for well proportioned rooms.</td><td>The proposal meets ceiling height criteria. The ground level has an increased ceiling height.</td><td>✓</td></tr>
<tr><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 to not intrude. The stacking of service rooms from floor to floor and coordination of</td><td>Minimum 2.7 m floor to ceiling heights are provided for habitable rooms. Service areas (wet areas, kitchens) are generally located towards the rear of the unit to minimise need for reduced ceiling heights in living areas. Service risers are indicated on plan. The design has been developed with buildability in mind and layouts stack uses.</td><td>✓</td></tr>
</table>

<table>
<tr><th></th><th>Design Guidance / Criteria</th><th>Proposed Development</th><th>Comply?</th></tr>
<tr><td></td><td>bulkhead location above non-habitable areas, such as robes or storage, can assist.</td><td></td><td></td></tr>
<tr><td>Objective 4C-3</td><td>Ceiling heights contribute to the flexibility of building use over the life of the building</td><td>The minimum 3.2m ceiling height will allow for flexibility of the building in future.</td><td>✓</td></tr>
<tr><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.</td><td>Ceiling heights at lower levels are greater than minimum.</td><td>✓</td></tr>
<tr><td colspan="4">4D Apartment size and layout</td></tr>
<tr><td>Objective 4D-1</td><td>The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity.</td><td>The design of apartment layout is an integration of reasonable function, location and dimension as well as amenity.</td><td>✓</td></tr>
<tr><td>Design Criteria</td><td>Apartments are required to have the following minimum internal areas:
<table><tr><td>Apartment type</td><td>Minimum internal area</td></tr><tr><td>Studio</td><td>35m^2</td></tr><tr><td>1 bedroom</td><td>50m^2</td></tr><tr><td>2 bedroom</td><td>70m^2</td></tr><tr><td>3 bedroom</td><td>90m^2</td></tr></table>The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 12m^2 each.
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>All apartments meet minimum internal areas corresponding to number of bedrooms (and any additional bathrooms).
Large windows will be provided in each habitable room being min 10% of the floor area of the room.</td><td>✓</td></tr>
<tr><td></td><td>Kitchens should not be located as part of the main circulation space in larger apartments (such as hallway or entry space).</td><td>Kitchens in larger units (2-3 bedroom) avoid circulation areas and are integrated as part of open plan living and dining spaces.</td><td>✓</td></tr>
</table>

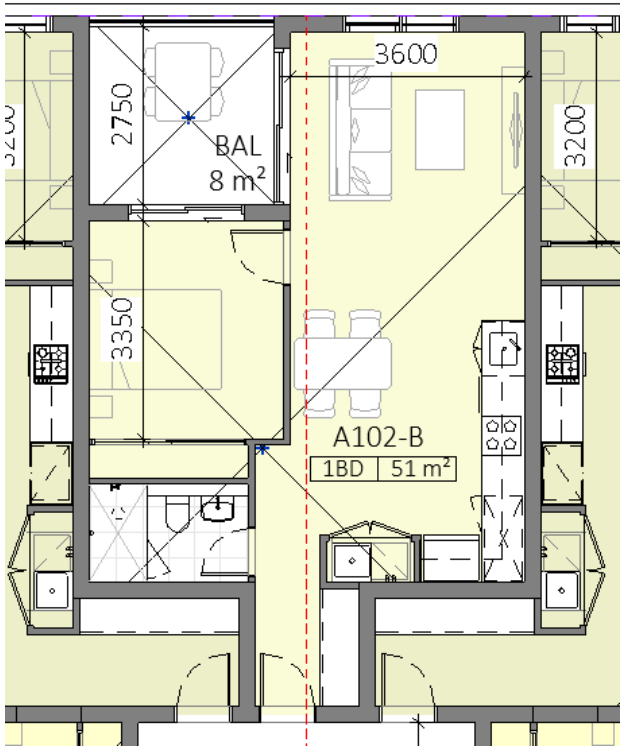
	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	A window should be visible from any point in a habitable room.	The proposal complies. The bedrooms incorporate large windows or operable doors to balconies.	✓
	Where minimum area or room dimensions are not met apartments need to demonstrate 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.	N/A	N/A
Objective 4D-2	Environmental performance of the apartment is maximised	Criteria met. The proposal is designed in accordance with passive design principles.	✓
Design Criteria	Habitable room depths are limited to a maximum of 2.5 x the ceiling height.	The proposal complies with maximum habitable room depth except in open plan areas as permitted below. In this regard, it should be noted that the units integrate an open plan living, dining and kitchen layout and have generous floor to finished floor level heights on residential levels. The proposed floor-to-floor heights at a minimum of 3.2m provide the opportunity for increased ceiling heights.	✓
	In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window.	The internal areas are generous and combine kitchen, living and dining areas adjoining large private open space for solar access and natural ventilation.	✓
	Greater than minimum ceiling heights can allow for proportional increases in room depth up to the permitted maximum depths.	Increased ceiling heights are proposed in the development.	✓
	All living areas and bedrooms should be located on the external face of the building.	All habitable rooms on are external face of building. Many of the bedrooms also adjoin private open spaces with direct access.	✓
	Where possible: • Bathrooms and laundries should have an external openable window.	Bathrooms and laundries are generally located away from external walls and in turn windows to maximise the amenity of bedrooms and bathrooms. Appropriate ventilation will be provided to these spaces.	X

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	• Main living spaces should be oriented toward the primary outlook and aspect and away from noise sources.		
Objective 4D-3	Apartment layouts are designed to accommodate a variety of household activities and needs	Criteria met. The proposed apartment layout is open plan and accommodates a variety of household activities and needs.	✓
Design Criteria	Master bedrooms have a minimum area of 10m^2 and other bedrooms 9m^2 (excluding wardrobe space).	Master bedrooms have a minimum area of 10m^2 and other bedrooms 9m^2 (excluding wardrobe space).	✓
	Bedrooms have a minimum dimension of 3m (excluding wardrobe space).	Bedrooms have a minimum dimension of 3m (excluding wardrobe space).	✓
	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.	Living rooms or combined living/dining rooms have a minimum width of: • 3.6m for studio and 1 bedroom apartments • 4m for 2, 3 and 4 bedroom apartments.	✓
	The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts.	Minimum width of cross through units is 4 m.	✓
	Access to bedrooms, bathrooms and laundries is separated from living areas minimising direct openings between living and service areas.	The proposal avoids direct access to bathrooms and laundries from living areas. There are limited instances where bedrooms open into the open plan living/dining area. Where this occurs, the door does not impact on furniture layouts or circulation space within the living room. Furniture layouts are provided on plan to demonstrate the doors are located in a reasonable position and the room can still be furnished.	✓
	All bedrooms allow a minimum length of 1.5m for robes.	The proposal complies with most bedrooms having wardrobe lengths much greater than 1.5m.	✓

<table>
<tr><th></th><th>Design Guidance / Criteria</th><th>Proposed Development</th><th>Comply?</th></tr>
<tr><td></td><td>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.</td><td>The proposal complies with most main bedrooms having wardrobe lengths of at least 1.8m.</td><td>✓</td></tr>
<tr><td></td><td>Apartment layouts allow flexibility over time, design solutions may include:
Dimensions that facilitate a variety of future 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 of circulation by stairs, corridors and through rooms to maximise the amount of usable floor space in rooms.</td><td>Dimensions facilitate a variety of future arrangements and removal, providing open plans and rectangular spaces.</td><td>✓</td></tr>
<tr><td colspan="4">4E Private open space and balconies</td></tr>
<tr><td>Objective 4E-1</td><td>Apartments provide appropriately sized private open space and balconies to enhance residential amenity.</td><td>The proposal provides balconies and terraces to enhance the amenity for residents. These spaces meet criteria for minimum size and depth most A/C units are proposed on balconies.</td><td>✓</td></tr>
<tr><td>Design Criteria</td><td>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>4m^2</td><td>-</td></tr><tr><td>1 bedroom apartments</td><td>8m^2</td><td>2m</td></tr></table></td><td>The proposal complies with min. apartment sizes. It is noted that where balconies are larger than the min. area required where A/Cs are proposed on balconies, so that units meet minimum area excluding A/C zone. Only 1 unit within the whole development does not meet the minimum POS size</td><td>✓</td></tr>
</table>

	Design Guidance / Criteria			*Proposed Development*	*Comply?*
	2 bedroom apartments	$10m^2$	2m	and in that case the 2 bedroom unit has a balcony size of 9sqm a 1 sqm shortfall. The balcony is well proportioned and can accommodate furniture. The layout indicates a 6 seater table can be accommodated. This is unit C506-I1	
	3+ bedroom apartments	$12m^2$	2.4m		
	The minimum balcony depths to be counted as contributing to the balcony area is 1m.				
	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 $15m^2$ and a minimum depth of 3m.			Each ground floor unit has a private open space larger than 15m with a minimum dimension of 3m.	✓
	Increased communal open space should be provided where the number or size of balconies are reduced.			Balconies comply with min. area requirements.	N/A
	Storage areas on balconies is additional to the minimum balcony size.			Storage is not provided on balconies.	N/A
	Balcony use may be limited in some proposals by: • Consistently high wind speeds at 10 storeys and above • Close proximity to road, rail and 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.			N/A Balconies that meet the minimum area requirements are proposed for each apartment.	N/A
Objective 4E-2	Primary private open space and balconies are appropriately located to enhance liveability for residents			Private open space is directly accessible from each living room. Where possible balconies are north, east or west facing with the number of balconies facing south limited.	✓
	Primary open space and balconies should be located adjacent to the living room, dining room or kitchen in the living space.			POS is located directly accessible from each living room/dining room/kitchen open plan layout.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	Private open spaces and balconies predominantly face north, east or west.	The majority of balcony's face north, east or west with only 7.7% facing south.	✓
	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.	The private open space's longer sides face outwards and optimise solar access where possible to maximise capture of natural light to the living space internally. There are some units in which the balcony is equal in depth and width measured from the primary glass line. However, this does not compromise solar access to the living room which is at the primary glass line. It also does not compromise daylight access to the bedroom located behind the balcony, because the units with these dimensions are north facing. Refer to the image below.	✓

	Design Guidance / Criteria	Proposed Development	Comply?
		 Figure 4: Example of unit with equal width & depth: A102-B The balcony configuration also achieves a usable balcony space.	
Objective 4E-3	Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building	The balcony and open space design are integrated into the overall building form and add to its composition and articulation.	✓
	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	The balconies are proposed primarily as frosted glass. Most of the balconies closest to the road are half solid and half	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	maintaining visual privacy and allowing for a range of uses on the balcony. Solid and partially solid balustrades are preferred.	frosted glazing to optimise privacy but also maximise daylighting. This also limits visual clutter and reduces building bulk. The private open spaces are generous in proportion, depth and width and shall not impact on privacy of the internal areas of the units. The glass balustrades assist in casual surveillance and provide a feeling of openness for the development.	
	Full width full height glass balustrades alone are generally not desirable.	Full width glass balustrades are used strategically in some balconies to maximise daylighting and enhance the visual recession of the building indentation.	✓
	Projecting balconies should be integrated into the building design and the design of soffits considered.	No projecting balconies are proposed.	✓
	Operable screens, shutters, hoods and pergolas are used to control sunlight and wind.	Operable screens are proposed on eastern and western facades, and some operable screens are proposed on northern facades.	✓
	Balustrades are set back from the building or balcony edge where overlooking or safety is an issue.	Each balcony meets ADG visual privacy setback criteria.	✓
	Downpipes and balcony drainage are integrated with the overall façade and building design.	Downpipes are not visible.	✓
	Air-conditioning units should be located on roofs, in basements, or full integrated into the building design.	1/3 of A/C is proposed to be centralised and masked in plant areas, away from site boundary.	
	Where clothes drying, storage or air conditioning units are located on balconies, they should be screened and integrated in the building design.	Design allows for these items to be screened.	✓
	Ceilings of apartments below terraces should be insulated to avoid heat loss.	BASIX requirements cover this. Although for the majority of levels, floor plans are the same so the only instances of this	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
		occur at the uppermost level, where increased insulation can be provided to the roof.	
	Water and gas outlets should be provided for primary balconies and private open space.	Noted, to be addressed at CC stage.	
Objective 4E-4	Private open space and balcony design maximises safety	Balustrade design avoids footholds and balustrade heights suitable to meet safety standards. Site levels have been considered in the design of ground level POS to manage topography changes and retention of existing trees while achieving usable safe POS.	✓
	Changes in ground levels or landscaping are minimised.	The design responds to the site sloping topography. Retaining walls have been carefully positioned to allow for landscape, existing tree retention and new tree planting and to maximise the usability of private open spaces where the retaining walls occur.	✓
	Design and detailing of balconies avoids opportunities for climbing and falls.	The balustrades are of appropriate height to discourage climbing and are designed to avoid footholds.	Note/to be addressed at CC stage.
4F Common circulation and spaces			
Objective 4F-1	Common circulation spaces achieve good amenity and properly service the number of apartments.	Common circulation space including lobby, internal corridors and vertical circulation have considered safety, amenity and usability. The maximum number of units off a single core is 12. Natural light and ventilation are provided to each core.	✓
Design Criteria	1. The maximum number of apartments off a circulation core on a single level is eight.	The maximum number of apartments served by off a circulation core is 12. It is noted that this exceeds the maximum number of 8 as stated in the design criteria, however, to mitigate any adverse impacts of this, the circulation spaces have been designed with indents on both	X

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
		sides to allow for lighting and ventilation and ensuring a good level of amenity in circulation spaces.	
	2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40.	N/A	N/A
	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.	The corridor width is appropriate for circulation, allowing disabled access.	✓
	Daylight and natural ventilation should be provided to all common circulation spaces that are above ground.	As mentioned above, portions of the lobbies are indented from the rest of the building to allow for daylight and ventilation into these spaces.	✓
	Windows should be provided in common circulation spaces and should be adjacent to the stair or lift core or at the ends of corridors.	Windows are provided in corridor next to or near the lift on all residential apartment levels.	✓
	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.	Corridors are greater than 12m, but as mentioned above, due to indentation in the buildings have glazing to the outside to allow for light and ventilation.	✓
	Design common circulation spaces to maximise opportunities for dual aspect apartments, including multiple core apartment buildings and cross over apartments.	The idented lobby design allows for more apartments to be dual aspect.	✓
	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	As mentioned above, more than 8 units are provided per circulation core. However, lobbies feature windows to enhance amenity and break up the bulk of the building, improving overall design.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	• 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.	Max. 12 apartments are provided 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.	The proposal has maximised the efficiency of the layout. The living, bedroom and balcony areas are generally located away from common circulation areas.	✓
Objective 4F-2	Common circulation spaces promote safety and provide for social interaction between residents	Lobbies are well proportioned with direct sightlines between the lobby and the public domain. The entry lobbies allow for social interaction.	✓
	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.	The path from lobby entries to vertical circulation points is short and legible.	✓
	Tight corners and spaces are avoided.	This has been avoided where possible.	✓
	Circulation spaces should be well lit at night.	Adequate lighting is provided to circulation areas at night.	✓
	Legible signage should be provided for apartment numbers, common areas and general wayfinding.	Signage will be provided to signalise apartment direction from core area, each unit and from ground floor lobby. To be detailed at CC.	✓
	Incidental spaces, for example space for seating in a corridor, at a stair landing, or near a window are provided.	There are opportunities to provide these on the ground floor lobby.	✓
	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.	N/A	N/A

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	Where external galleries are provided, they are more open than closed above the balustrade along their length.	N/A	N/A
4G Storage			
Objective 4G-1	Adequate, well designed storage is provided in each apartment.	Adequate storage is provided to all apartments and applicable criteria is met. Ancillary storage is also provided in the basement/parking levels.	✓
Design Criteria	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.	The proposal complies with this criterion. Units have at least 50% storage located within the apartment and units have storage in the car parking levels.	✓
	Storage is accessible from either circulation or living areas.	Storage areas are accessible from circulation or living areas.	✓
	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.	N/A	N/A
	Left over space such as under stairs is used for storage.	N/A	✓
Objective 4G-2	Additional storage is conveniently located, accessible and nominated for individual apartments	Generous additional storage is located in the basement and easily accessible from the car parking areas. The design shows individual storage areas that can be allocated to each apartment.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	Storage not located in apartments is secure and clearly allocated to specific apartments.	These are securely located in a designated area in the car parking levels. The storage space is shown as individual portions and can be allocated at CC.	✓
	Storage is provided for larger and less frequently accessed items.	See response above.	✓
	Storage space in internal or basement car parks is provided at the rear or side of the car spaces or in cages so that allocated car parking remains accessible.	Storage in basement is at the rear of car parks or in other areas easily accessible.	✓
	If communal storage rooms are provided they should be accessible from common circulation areas of the building.	N/A	N/A
	Storage not located in an apartment is integrated into the overall building design and is not visible from the public domain.	Storage is inside units with ancillary in basement.	✓
4H Acoustic privacy			
Objective 4H-1	Noise transfer is minimised through the siting of buildings and building layout.	Acoustic privacy has been protected through the arrangement of apartment layout and setbacks.	✓
	Adequate building separation is provided within the development and from neighbouring buildings/adjacent uses.	Adequate building separation is achieved to neighbouring buildings consistent with ADG criteria for the first four storeys. Upper levels are still set back 6m from neighbouring sites and as such, though non-compliant, the noise transfer that will occur from these levels is considered acceptable.	X
	Window and door openings are generally orientated away from noise sources.	Many of the windows and doors are setback from the street. An acoustic report accompanies the application setting out additional noise mitigation measures.	✓
	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.	Most internal living and bedroom areas are located away from the corridor and service areas to maximise acoustic privacy to sensitive parts within each unit. Unit layouts are	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
		generally similar at each level to limit noise transfer between levels.	
	Storage and circulation areas and non-habitable rooms should be located to buffer noise from external sources.	Storage and circulation as well as non-habitable rooms are located to buffer noise.	✓
	The number of party walls (walls shared with other apartments) are limited and are appropriately insulated.	The proposal provides sufficient wall thickness to achieve acoustic privacy between apartments.	✓
	Noise sources such as garbage 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.	Most of noise sources are located at least 3m away from bedrooms, except unit AG03-A where acoustic and privacy screen is provided to reduce the noise impact from driveway.	✓
Objective 4H-2	Noise impacts are mitigated within apartments through layout and acoustic treatments	The proposed development limits acoustic impacts by providing sufficient intertenancy wall thicknesses. Unit layouts group like rooms and use non-habitable spaces as buffers between higher and lower activity zones within apartments.	✓
	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.	Like rooms are generally grouped and 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	Design solutions are proposed to enhance acoustic privacy.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	• Continuous walls to ground level courtyards where they do not conflict with streetscape or other amenity requirements.		
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.	The siting have been used to minimise noise pollution impacts from the road via setbacks. An acoustic report also accompanies this report describing noise mitigation measures.	✓
	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 communal open spaces • Non-residential uses are located at lower levels vertically separating the residential component from the noise or pollution source. Setbacks to be 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 • Landscape design reduces the perception of noise and acts as a filter for air pollution generated by traffic and industry.	As above.	✓
	Achieving the design criteria in this ADG 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:	The site does not have an orientation where solar and daylight access is constrained.	N/A

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	• Solar and daylight access • Private open space and balconies • Natural cross ventilation.		
Objective 4J-2	Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission	The design provides sufficient wall and slab thickness to limit transmission between apartments. Like rooms are generally grouped to limit noise impacts.	✓
	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 eg solid balcony balustrades, external screens and soffits.	As above.	✓
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	The proposal provides a range of 1 , 2, 3 bedroom units which are considered appropriate for the area/demography. Adaptable and liveable units are included.	✓
	A variety of apartment types is provided.	1, 2, 3 bedroom units proposed.	✓
	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.	See response above. This has been fully taken into the design consideration and is considered appropriate for the locality.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	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.	Apartment mix and configurations are varied and flexible to support diverse demographic types and living arrangements.	✓
	Different apartment types are located to achieve successful façade composition and to optimise solar access.	Unit type location achieves successful façade composition with a clear base, middle and top to the building. Solar access is optimised by maximising the number of units with a northern or eastern aspect.	✓
	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.	The proposed 3 bedroom units are located on corners in every floor.	✓
4L Ground floor apartments			
Objective 4L-1	Street frontage activity is maximised where ground floor apartments are located	The proposed ground floor apartments have individual entries from the private terraces, providing street address	✓
	Direct street access should be provided to ground floor apartments.	The proposed ground floor apartments have individual entries from the private terraces, providing street address.	✓
	Activity is achieved through front gardens, terraces and the façade 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.	3 apartments at ground level face the street providing a sense of address. Courtyard fence design is visually permeable at the upper portion to balance privacy and surveillance.	✓
	Retail or home office spaces should be located along street frontages.	Retail and commercial is provided along street frontage of building B and C.	
	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.	Noted.	

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
Objective 4L-2	Design of ground floor apartments delivers amenity and safety for residents	Ground floor apartment design, particularly the fence design balances privacy and casual surveillance.	✓
	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 • Landscaping and private courtyards • Window sill heights that minimise sight lines into apartments • Integrating balustrades, safety bars or screens with the exterior design.	Privacy and safety are provided by integrating courtyard fence design and landscape.	✓
	Solar access should be maximised through: • High ceilings and tall windows • Trees and shrubs that allow solar access in winter and shade in summer.	Residential ceilings meet ADG criteria to achieve solar access. Planting is proposed around ground floor units that will allow solar access but also shade.	✓
4M Facades			
Objective 4M-1	Building facades provide visual interest along the street while respecting the character of the local area	The proposed façade design to the street is of a high quality, creating visual interest along the street. It respects the character of the local area by providing continuation of retail/commercial space along Princes Hwy and reflecting the emerging pattern of development of residential apartment buildings in the area. The proposed facades are highly articulated to create visual interest and proposed materials fit with 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	Refer to photomontage. The building façade comprises a series of vertical and horizontal elements to break down bulk and scale, and a serious of finishes, materiality and colours to compliment and enhance the existing streetscape.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	• Changes in texture, material, detail and colour to modify the prominence of elements.		
	Building services should be integrated within the overall façade.	Services are integrated.	✓
	Building facades should be well resolved with an appropriate scale and proportion to the streetscape and human scale. Design solutions may 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.	Refer to photomontage. The proposal achieves to soften the corner with a curve façade connecting visually these 2 streets. Horizontal and vertical elements help to breaks the bulk and scale of built form in the streetscape. The retail and future tavern space located at ground floor facing the street maintains a human scale within the streetscape which is also in keeping with the established scale of built form in the street. Front setback planting also contributes to the human scale. Blank walls are limited. Façade elements are grouped in a deliberate and composed manner to achieve a high quality, unified design outcome.	✓
	Building facades relate to key datum lines of adjacent buildings through upper level setbacks, parapets, cornices, awnings or colonnade heights.	The awnings above level one provide consistency with single storey retail units to the south along Princes Hwy and Veno Street. The upper levels being setback provides consistency with the four storey residential apartment building to the west of the site along Veno St.	✓
	Shadow is created on the façade throughout the day with building articulation, balconies and deeper window results.	The proposal employs façade elements and awnings that create shadow across the façade.	✓
Objective 4M-2	Building functions are expressed by the facade	The building function and unit layouts are clearly expressed by the façade. “Faux” façade elements are not proposed.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	Building entries should be clearly defined.	The building entries are clearly defined, direct address the street.	✓
	Important corners are given visual prominence through a change in articulation, materials or colour, roof expression or changes in height.	The façade design wraps around the corners of the building in the streetscape to create a high quality outcome and a building that is viewed in 3 dimensions. The corner of Veno St and Princes Hwy is given prominence in the design.	✓
	The apartment layout should be expressed externally through façade features such as part walls and floor slabs.	The building articulation reflects the internal layout and floor levels are clearly identifiable.	✓
4N Roof design			
Objective 4N-1	Roof treatments are integrated into the building design and positively respond to the street	The flat roof is consistent with other roof forms in the area. The overruns read as an extension of the forms below, although setback in accordance with the uppermost storey.	✓
	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.	The flat parapet roof line to the street is consistent with the general character of apartment rooflines in the locality. The lift overruns are integrated building design formed.	✓
	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.	The flat parapet roof line to the street is consistent with the general character of rooflines within the immediate vicinity. The overruns are integrated with the proposed roof top communal open space as shade structures. The lift overruns are integrated building design.	✓
Objective 4N-2	Opportunities to use roof space for residential accommodation and open space are maximised.	Communal open space at roof is proposed.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	Habitable roof space should be provided with good levels of amenity. Design solutions may include: • Penthouse apartments • Dormer or clerestory windows • Openable skylights.	N/A	N/A
	Open space is provided on roof tops subject to acceptable visual and acoustic privacy, comfort levels, safety and security considerations.	The roof top garden proposed provides residential amenity. They will create a space for relaxation and socialisation for residents.	✓
	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.	The proposed roof design allows for solar access in winter and overhangs provide shade in summer.	✓
	Skylights and ventilation systems should be integrated into the roof design.	Building systems are integrated into the roof and will not be visible from the street. Proposed skylights are also integrated into the roof design.	✓
4O Landscape design			
Objective 40-1	Landscape design is viable and sustainable	A landscape plan accompanies this report. The landscape design is environmentally sound and sustainable. The design includes low maintenance and low water demand species and maintenance guidelines are included with the DA. The landscape reduces hard, radiant surfaces on the site by incorporating roof top garden, having an environmental benefit. Species are selected depending on the orientation and level of solar access.	✓
	Landscape design should be environmentally sustainable and can enhance environmental performance by incorporating:	The landscape design is appropriate for the climate, the setting, the suggested demographics and usage needs. It	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	• Diverse and appropriate planting • Bio-filtration gardens • Appropriately planted shading trees • Areas for residents to plant vegetables and herbs • Composting • Green roofs or walls.	incorporates a number of elements including on structure landscape and recreation areas that are suitable for the locality and in accordance with Council policies. The plant species is responsive to the area and minimises ongoing care and appropriate for soil area/depth for on structure planting.	
	Ongoing maintenance plans should be prepared.	Maintenance notes are provided as part of the Landscape Plan accompanying this DA.	✓
	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.	The retention of the existing trees at the north east corner of the site facing Princes Highway shall provide shade. New trees planting are proposed to provide sufficient screening and shade to the site. Shade structures are proposed where appropriate to maximise amenity.	✓
	Tree and shrub selection considers size at maturity and the potential for roots to compete.	The landscape plans have considered these elements.	✓
Objective 40-2	Landscape design contributes to the streetscape and amenity	The proposed landscape plan represents a significant improvement from the existing streetscape. Key trees are proposed to be retained and a trees replacement and enhancement is also proposed to add to the urban tree canopy and maximise amenity. The Strickland St front setback is deep soil and proposed planting in this location creates a leafy and pleasant environment.	✓
	Landscape design responds to the existing site conditions including: • Changes of levels • Views	Landscape design has considered the site conditions for views and levels.	✓

<table>
<tr><th></th><th>Design Guidance / Criteria</th><th>Proposed Development</th><th>Comply?</th></tr>
<tr><td></td><td>• Significant landscape features including trees and rock outcrops.</td><td></td><td></td></tr>
<tr><td></td><td>Significant landscape features should be protected by:
• Tree protection zones
• Appropriate signage and fencing during construction.</td><td>Important trees in the north east corner facing Princes Highway are proposed to be retained. An arborist report forms part of the DA and TPZ have been coordinated between the arborist, landscape architect, stormwater engineer and architect.</td><td>✓</td></tr>
<tr><td></td><td>Plants selected should be endemic to the region and reflect the local ecology.</td><td>The proposed landscape plan responds to the locality and setting.</td><td>✓</td></tr>
<tr><td colspan="4">4P Planting on structures</td></tr>
<tr><td>Objective 4P -1</td><td>Appropriate soil profiles are provided</td><td>Soil profiles are set out in the landscape plans.</td><td>✓</td></tr>
<tr><td></td><td>Structures are reinforced for additional saturated soil weight.</td><td>The proposal has provided increased tolerance at level 5 to be reinforced for soil weight.</td><td>✓</td></tr>
<tr><td></td><td>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.</td><td>The landscape plans considered soil volumes.</td><td>✓</td></tr>
<tr><td></td><td>Minimum soil standards for plant sizes should be provided in accordance with Table 5.
Table 5 – Minimum soil standards for plant types and sizes
<table>
<tr><th>Plant type</th><th>Definition</th><th>Soil volume</th><th>Soil depth</th><th>Soil area</th></tr>
</table></td><td>The proposal satisfies with ADG and DCP requirements.</td><td>✓</td></tr>
</table>

	Design Guidance / Criteria					*Proposed Development*	*Comply?*
	Large trees	12-18m high, up to 16m crown spread at maturity	150m^3	1,200mm	10m x 10m or equivalent		
	Medium trees	8-12m high, up to 8m crown spread at maturity	35m^3	1,000mm	6m x 6m or equivalent		
	Small trees	6-8m high, up to 4m crown spread at maturity	9m^3	800mm	3.5m x 3.5m or equivalent		
	Shrubs			500-600mm			
	Ground			300-450mm			
	Turf			200mm			
	Note: The above has been calculated assuming fortnightly irrigation. Any sub-surface drainage requirements are in addition to the above minimum soil depths.						
Objective 4P-2	Plant growth is optimised with appropriate selection and maintenance					Proposed landscape species are located appropriate to the site orientation with sun loving plants at the northern aspect and shade tolerant plants at the southern façade.	✓
	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.					Noted. As above.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	A landscape maintenance plan is prepared.	Landscape maintenance notes are provided in the landscape package by Habit 8.	
	Irrigation and drainage systems respond to: • Changing site conditions • Soil profile and the planting regime • Whether rainwater, stormwater or recycled grey water is used.	Note.	✓
Objective 4P-3	Planting on structures contributes to the quality and amenity of communal and public open spaces	The proposed planting contributes significantly to and is integral to the amenity of the proposed common open space on level 5 building A	✓
	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 façade and consider the ability of the façade to change over time.*	The proposal incorporates planting on structure including at g round floor in building A and B and level 5 of building A. Planter boxes are proposed in strategic locations above basement to maximise soft landscaping within the streetscape.	✓
4Q Universal design			
Objective 4Q -1	Universal design features are included in apartment design to promote flexible housing for all community members	Adaptable and liveable units are provided.	✓
	Developments achieve a benchmark of 20% of the total apartments incorporating the Liveable Housing Guideline's silver level universal design features.	The proposal is able to achieve this objective with liveable housing silver level design features provided.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
Objective 4Q-2	A variety of apartments with adaptable designs are provided	Adaptable units are provided for 1,2 and 3 bedroom units.	✓
	Adaptable housing should be provided in accordance with the relevant council policy.	The proposal achieves the applicable DCP guideline.	✓
	Design solutions for adaptable apartments include: • Convenient access to communal and public areas • High level of solar access • Minimal structural change or residential amenity loss when adapted • Larger car parking spaces for accessibility • Parking titled separately from apartments or shared car parking arrangements.	Note. The adaptable units meet these requirements. Refer to the adaptable unit plan and carparking area plans that accompany the architectural plans.	✓
Objective 4Q-3	Apartment layouts are flexible and accommodate a range of lifestyle needs	Apartments are open plan	✓
	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.	Each apartment is open plan.	✓
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	N/A	N/A
	Design solutions may include: • New elements to align with existing building	N/A	N/A

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	• Additions that complement the existing character, siting, scale, proportion, pattern, form and detailing • Use of contemporary and complementary materials, finishes, textures and colours.		
	Additions to heritage items should be clearly identifiable from the original building.	N/A	N/A
	New additions allow for the interpretation and future evolution of the building.	N/A	N/A
Objective 4R-2	Adapted buildings provide residential amenity while not precluding future adaptive reuse	N/A	N/A
	Design features should be incorporated sensitively into 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.	N/A	N/A
	Some proposals that adapt existing buildings may not be able to achieve all of the design criteria in this ADG. 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 and Natural Ventilation (as set out in the ADG) • 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	N/A	N/A

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	• Alternative approaches to private open space and balconies.		
4S Mixed use			
Objective 4S-1	Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement.	The retail and future tavern component of the proposed development front Veno St and Princes Hwy, appropriate locations facing the town centre.	✓
	Mixed use development should be concentrated around public transport and centres.	The site is within 300m walking distance of the railway station.	✓
	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.	The proposed development provides active frontage to all Veno St and Princes Hwy which were previously separated from the site by a low fence and shrub.	✓
Objective 4S-2	Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents.	The residential component of buildings B and C sit behind the street facing portion and at upper levels. Entry to lobbies is provided at the street with glazed facades for casual surveillance and safety.	✓
	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	Residential entries are clearly distinguishable from the retail and future tavern entry. These have secure access with concealment opportunities avoided.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	• Concealment opportunities are avoided.		
	Landscaped communal open space should be provided at podium or roof levels.	Landscaped communal open space is provided at rear and roof levels, however, these spaces are only accessible for residents.	✓
4T Awnings and signage			
Objective 4T-1	Awnings are well located and complement and integrate with the building design	The proposal is a residential building with a retail/ commercial ground floor. The ground floor fronting Veno St and Princes Hwy has an awning above for weather protection, complimenting the building design.	✓
	Awnings should be located along streets with high pedestrian activity and active frontages.	Complies.	✓
	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 • Awnings are wrapped around the secondary frontages of corner sites • Awnings are retractable in areas without an established pattern.	Continuous awning provided at ground level.	✓
	Awnings should be located over building entries for building address and public domain amenity.	Awnings are provided above building entries.	✓
	Awnings relate to residential windows, balconies, street tree planting, power poles and street infrastructure.	Awnings respond to these elements.	✓
	Gutters and down pipes should be integrated and concealed.	Note/to be addressed at CC.	✓
	Lighting under awnings should be provided for pedestrian safety.	Lighting will be provided under awning, and this will be addressed at CC.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
Objective 4T-2	Signage responds to the context and desired streetscape character	Signage is not proposed as part of this DA.	✓
	Signage should be integrated into the building design and respond to the scale, proportion and detailing of the development.	Noted	
	Legible and discrete way finding should be provided for larger developments.	N/A	N/A
	Signage is limited to being on and below awnings and a single façade sign on the primary street frontage.	Noted.	
4U Energy efficiency			
Objective 4U-1	Development incorporates passive environmental design	Development performs well with a high proportion of units having direct solar access and being cross ventilated. Unit depths are limited. Facades are well articulated. Ceiling fans are proposed.	✓
	Adequate natural light is provided to habitable rooms (see Solar and daylight access in ADG).	Solar access and daylighting to the development is achieved.	✓
	Well located, screened outdoor areas should be provided for clothes drying.	The majority of balustrades are frosted glass to allow for clothes drying.	✓
Objective 4U-2	Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer	Building will have good thermal mass. Units with direct solar access is 75%. 62.5% of units are naturally cross ventilated. Balconies positioned to contribute to passive solar design. Projecting horizontal slabs and other façade elements contribute to passive solar design. Thermal mass is achieved by proposed materials.	✓
	A number of the following design solutions are used: • The use of smart glass or other technologies on north and west elevations	Noted. BASIX certificate mandate insulation.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	• 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.	Overhangs, screens and frames are proposed.	
	Provision of consolidated heating and cooling infrastructure should be located in a centralised location (eg the basement).	Noted. A/Cs are screened from view in centralised areas except on ground level where they are easily located to not create visual clutter and to be easily accessed for maintenance. Central hot water is proposed.	✓
Objective 4U-3	Adequate natural ventilation minimises the need for mechanical ventilation	Natural ventilation is achieved on the site. 62.5% of units are naturally cross ventilated. Where road noise impacts units acoustic wall boxes are proposed to allow for passive ventilation while limiting acoustic impacts.	✓
	A number of the following design solutions are used: • Rooms with similar usage are grouped together • Natural cross ventilation for apartments is optimised • Natural ventilation is provided to all habitable rooms and as many non-habitable rooms, common areas and circulation spaces as possible.	Noted. The building achieves more than minimum cross ventilation requirements. Rooms with similar usage are grouped together in most of the proposed apartments.	✓
4V Water management and conservation			
Objective 4V-1	Potable water use is minimised	Refer to BASIX, proposal meets water targets. Low water demand species proposed in landscape.	✓
	Water efficient fittings, appliances and wastewater reuse should be incorporated.	Refer to BASIX report with recommendations which will be implemented to achieve energy and water conservation.	✓
	Apartments should be individually metered.	Noted. Can be ensured by condition. Sufficient services areas provided in design to accommodate individual metering.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	Rainwater should be collected, stored and reused on site.	N/A	N/A
	Drought tolerant, low water use plants should be used within landscaped areas.	Lower water demand native species for landscape proposed.	✓
Objective 4V-2	Urban stormwater is treated on site before being discharged to receiving waters	Stormwater management plans form part of the application which include RWT.	✓
	Water sensitive urban design systems are designed by a suitably qualified professional.	See responses above. Lower water demand native species for landscape and stormwater management plan provided.	✓
	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 maximised • On site stormwater and infiltration, including bio-retention systems such as rain gardens or street tree pits.	Large areas of deep soil maintained on site to allow natural water infiltration.	✓
Objective 4V-3	Flood management systems are integrated into site design	OSD is not located in deep soil areas.	✓
	Detention tanks should be located under paved areas, driveways or in basement car parks.	OSD is not located in deep soil areas and is also located so not to conflict with TPZs.	✓
	On large sites parks or open spaces are designed to provide temporary on site detention basins.	N/A	N/A
4W Waste management			
Objective 4W-1	Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents	Waste storage areas are located within the building and do not impact on streetscape, building entry and amenity. Waste disposal, recycling are conveniently located on each level in each core to maximise convenience and amenity.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
		FOGO collection in provided in one location in each building for hygiene. Waste is collected in ground floor.	
	Adequately sized storage areas for rubbish bins should be located discreetly away from the front of the development or in the basement car park.	The proposal provides waste collection bin holding area in ground floor and lower ground and collection via HRV within ground floor level.	✓
	Waste and recycling storage areas should be well ventilated.	These areas will be ventilated. A waste management plan accompanies the DA and recommendations within the report will be adopted.	✓
	Circulation design allows bins to be easily manoeuvred between storage and collection points.	A direct path between the waste room/holding area and the HRV loading area is provided on Ground level.	✓
	Temporary storage should be provided for large bulk items such as mattresses.	Bulky waste area located on Ground level, as are the general waste rooms. An HRV loading bay provided which could collect bulky waste. Should bulky waste need to be placed on kerbside for a council collection, it can be transported easily to the adjacent of the building entry.	✓
	A waste management plan should be prepared.	The DA is accompanied by a waste management plan.	✓
Objective 4W-2	Domestic waste is minimised by providing safe and convenient source separation and recycling	General waste chutes are provided at each residential lobby on each floor maximising convenience. A separate recycle bin is also provided in each core on each floor maximising convenience.	✓
	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.	Each unit has temporary waste storage area in the kitchen which can be mandated by Condition of Consent.	✓
	Communal waste and recycling rooms are in convenient and accessible locations related to each vertical core.	These are easily accessible from each corridor on each floor being a waste chute and separate recycling bins.	✓
	For mixed use developments, residential waste and recycling storage areas and access should be separate and secure from other uses.	Complies.	✓

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	Alternative waste disposal methods such as compositing should be provided.	FOGO bins provided.	✓
4X Building maintenance			
Objective 4X-1	Building design detail provides protection from weathering.	Good quality materials are proposed which are low maintenance, robust and climate-appropriate.	✓
	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.	Noted.	✓
Objective 4X-2	Systems and access enable ease of maintenance	The building design allows for easy maintenance. .	✓
	Window design enables cleaning from the inside of the building.	Windows will be cleanable from the inside. There may be some windows which are unsafe to clean on the outside which will be provided by building management given the BCA significantly limits the extent of opening to a window allowed for safety.	✓
	Building maintenance systems should be incorporated and integrated into the design of the building form, roof and façade.	The stormwater management plan is integrated with the roof form. Overhangs are proposed.	✓
	Design solutions do not require external scaffolding for maintenance access.	See response above.	✓
	Manually operated systems such as blinds, sunshades and curtains are used in preference to mechanical systems.	Note/to be addressed at CC.	

	Design Guidance / Criteria	*Proposed Development*	*Comply?*
	Centralised maintenance, services and storage should be provided for communal open space areas within the building.	Space is provided in basement for maintenance.	✓
Objective 4X-3	Material selection reduces ongoing maintenance costs	Proposed materials are durable and will not require frequent maintenance.	✓
	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.	Noted.	✓

End of Table