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Housing SEPP / ADG report and Verification Statement

PROPOSED MIXED USE DEVELOPMENT

138 Maroubra Road, Maroubra

Revision	Date	Detail
A	06/01/23	INITIAL ISSUE FOR REVIEW
B	23/02/23	DA ISSUE
C	22/02/24	AMENDED DA ISSUE
D	08/08/24	Report updated to cite Housing SEPP in lieu of repealed SEPP65 / Commentary now on the amended DA design
E	21/08/24	Issued for submission
F	17/02/25	Issued for SSD review
G	18/07/25	Issued for SSD review
H	19/09/25	Data updated / Issued for SSD submission

State Environmental Planning Policy (Housing) 2021
Architect's Verification Statement

The Policy applies to residential flat building developments of three or more storeys comprising 4 or more self-contained dwellings. The policy is a matter for consideration in assessment of development applications for residential flat buildings, which fit those criteria, under the EPA Act, 1979. Chapter 4 of the Policy aims 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,
(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.

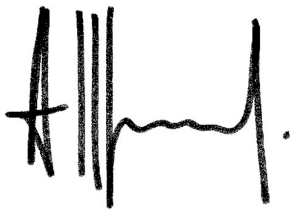
It is considered that this multi-unit housing development is fully consistent with the aims of the policy. It exhibits design excellence, responds to the urban context in terms of alignment, form and scale, enhances the streetscape, and contributes to the public safety.

Design Verification Statement

Referring to Section 29 of the EPA Regulations 2021, I am a qualified designer and have been responsible for the preparation of the residential scheme that is the subject of this development application. I have done so in the context and full knowledge of the Housing SEPP and the Apartment Design Guide.

I have prepared the following Table "A" assessment against the objectives in Parts 3 and 4 of the Apartment Design Guide. This together with the site analysis, plans and photomontages that have also been prepared lead me to conclude that the proposal complies with the nine (9) design quality principles of the Housing SEPP. This is summarised in Table "B".

Accordingly, I verify that the scheme complies with the requirements and intentions of the Housing SEPP and where any non-compliances are involved, they do not change my views as expressed above.



Andrew Hipwell
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NSW Registered Design Practitioner DEP0000251
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Date 19/09/2025

Table A – Apartment Design Guide compliance table

ITEM No.	ITEM	Notes
	PART 3 SITING THE DEVELOPMENT	
	This part provides guidance on the design and configuration of apartment development at a site scale. It outlines how to relate to the immediate context, consider the interface to neighbours and the public domain, achieve quality open spaces and maximise residential amenity. It is to be used during the design process and in the preparation and assessment of development applications.	
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 analysis plan DA0.153 demonstrates the overwhelming influence of the adjacent development in terms of envelope plate proportion and density. Primary characteristics are the build to boundary street wall form and “carved out” interstitial spaces between buildings that permit a high density while optimising privacy, natural light access and ventilation. The subject site is half of the remaining development zone that would complete the broader block precinct. To the west is a site supporting an existing Police station that has three street frontages. A future mixed use development on that site would ideally adopt the build to boundary street wall form. A nominal 18m deep plate would be pushed to the Bruce Bennetts Place frontage. An opportunity exists to repeat the existing “Pacific Place” (140 Maroubra Road) western form on the subject site. The resulting would be a “T” shape with the shaft extending into the site. By shifting the shaft slightly west off the centre of the site, compliant interbuilding separation to Pacific Square and future Police site can be achieved. Analysis of that site is on drawing DA0.151 North light will be admitted deep into the site which will benefit all existing and proposed west facing Living areas. The “T” form has superior ADG headline results compared to east/west oriented buildings that the DCP prescribes and those with a central courtyard.

3B Orientation	***Objective 3B-1*** Building types and layouts respond to the streetscape and site while optimising solar access within the development ***Design guidance*** Buildings along the street frontage define the street, by facing it and incorporating direct access from the street (see figure 3B.1) Where the street frontage is to the east or west, rear buildings should be orientated to the north Where the street frontage is to the north or south, overshadowing to the south should be minimised and buildings behind the street frontage should be orientated to the east and west (see figure 3B.2)	A strong precedent has been set for the presentation of adjacent developments to the street. It is "build to boundary" with upper level setbacks. It is proposed to continue this precedent. The relatively narrow, elongated proportion of the site and close proximity to the eastern neighbour limits the options for building orientation. The plates are aligned north/south accordingly. The ADG solar and vent outcomes are maximised with this configuration.
	Objective 3B-2 Overshadowing of neighbouring properties is minimised during mid winter ***Design guidance*** Living areas, private open space and communal open space should receive solar access in accordance with sections 3D Communal and public open space and 4A Solar and daylight access Solar access to living rooms, balconies and private open spaces of neighbours should be considered Where an adjoining property does not currently receive the required hours of solar access, the proposed building ensures solar access to neighbouring properties is not reduced by more than 20% If the proposal will significantly reduce the solar access of neighbours, building separation should be increased beyond minimums contained in section 3F Visual privacy Overshadowing should be minimised to the south or down hill by increased upper level setbacks It is optimal to orientate buildings at 90 degrees to the boundary with neighbouring properties to minimise overshadowing and privacy impacts, particularly where minimum setbacks are used and where buildings are higher than the adjoining development A minimum of 4 hours of solar access should be retained to solar collectors on neighbouring buildings	A comprehensive process of shadow impact analysis in 2D, elevation and 3D has been undertaken. - It is understood that the western wing of Pacific Square contains 74 dwellings facing either east or west - It is estimated that 62 dwellings (83%) currently receive 2 hours of midwinter light. - The proposed development would cast shadow on 6 of those dwellings reducing their mid-winter light to 1.5 hours. - The result is that 56 (75%) of dwellings in the building will receive 2 hours - A reduction of 8%. All dwellings in the building across the street at 165 Maroubra Road will continue to receive at least 2 hours mid winter light. Apartment A on Level 1 might be reduced to 1:45. The apartments on Levels 1 and 2 of 167 Maroubra Road will be reduced to 1:30. Floor plans of this building cannot be obtained so the ADG 3B-2 compliance cannot be confirmed.
3C Public Domain Interface	***Objective 3C-1*** Transition between private and public domain is achieved without compromising safety and security ***Design guidance*** Terraces, balconies and courtyard apartments should have direct street entry, where appropriate Changes in level between private terraces, front gardens and dwelling entries above the street level provide surveillance and improve visual privacy for ground level dwellings (see figure 3C.1) Upper level balconies and windows should overlook the public domain Front fences and walls along street frontages should use visually permeable materials and treatments. The height of solid fences or walls should be limited to 1m Length of solid walls should be limited along street frontages Opportunities should be provided for casual interaction between residents and the public domain. Design solutions may include seating at building entries, near letter boxes and in private courtyards adjacent to streets In developments with multiple buildings and/or entries, pedestrian entries and spaces associated with individual	Residential entry is via a recessed porch with open gates. The porch is seen as a transitional space to the glass door security line. Mail boxes are in the porch. Surveillance is provided for residents for safe entry and exit. Concern has been raised about existing traffic density. Vehicle entry to the subject site is at the rear of the building on Piccadilly Place. A one-way through building circulation is created to avoid queueing in the public domain. The vehicle exit is to Maroubra Road and positioned on

	buildings/entries should be differentiated to improve legibility for residents, using a number of the following design solutions: architectural detailing changes in materials plant species colours Opportunities for people to be concealed should be minimised	the east side to pair the driveway with Pacific Square next door and separate it from the retail tenancy entry. It should be noted that despite thorough consultation with Utility Authorities and counter propositions prepared by our design team, services and fire egress doors occupy a large portion of the Maroubra Road frontage. Performance Solutions and other alternatives will continue to be pursued during the next phase of the design.
	Objective 3C-2 Amenity of the public domain is retained and enhanced **Design guidance** Planting softens the edges of any raised terraces to the street, for example above sub-basement car parking Mail boxes should be located in lobbies, perpendicular to the street alignment or integrated into front fences where individual street entries are provided The visual prominence of underground car park vents should be minimised and located at a low level where possible Substations, pump rooms, garbage storage areas and other service requirements should be located in basement car parks or out of view Ramping for accessibility should be minimised by building entry location and setting ground floor levels in relation to footpath levels Durable, graffiti resistant and easily cleanable materials should be used Where development adjoins public parks, open space or bushland, the design positively addresses this interface and uses a number of the following design solutions: • street access, pedestrian paths and building entries which are clearly defined • paths, low fences and planting that clearly delineate between communal/private open space and the adjoining public open space • minimal use of blank walls, fences and ground level parking On sloping sites protrusion of car parking above ground level should be minimised by using split levels to step underground car parking	There is only a narrow frontage to Maroubra Road. The intention is to maximise pedestrian access to retail and residential entries. Every effort has been made to minimise utility infrastructure on this important frontage. The different retail and residential entries are legibly separate and will have different façade treatments.
3D Communal and public open space	***Objective 3D-1*** An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping *Design criteria* Communal open space has a minimum area equal to 25% of the site (see figure 3D.3) Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter) ***Design guidance*** Communal open space should be consolidated into a well designed, easily identified and usable area Communal open space should have a minimum dimension of 3m, and larger developments should consider greater dimensions Communal open space should be co-located with deep soil areas Direct, equitable access should be provided to communal open space areas from common circulation areas, entries and lobbies Where communal open space cannot be provided at ground level, it should be provided on a podium or roof Where developments are unable to achieve the design criteria, such as on small lots, sites within business zones, or in a dense urban area, they should: - provide communal spaces elsewhere such as a landscaped roof top terrace or a common room - provide larger balconies or increased private open space for apartments - demonstrate good proximity to public open space and	Piccadilly Place is a narrow service lane accessing the shopping centre loading area. It has been decided that there is no real benefit in a public through link on the subject site. All “non private” open space will be communal. Communal Open space is provided on podium level 2 and on the roof. These locations provide a variety of scale, landscape, privacy and weather exposed locations. The ADG requires 25% of the site to be COS and 54% is provided. The ADG requirement of 50% of that space to receive 2 hours of mid winter and approximately 74% is provided.

	facilities and/or provide contributions to public open space	The COS will have high quality landscaping, shelter and amenity.
	Objective 3D-2 Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting ***Design guidance*** Facilities are provided within communal open spaces and common spaces for a range of age groups (see also 4F Common circulation and spaces), incorporating some of the following elements: • seating for individuals or groups • barbecue areas • play equipment or play areas • swimming pools, gyms, tennis courts or common rooms The location of facilities responds to microclimate and site conditions with access to sun in winter, shade in summer and shelter from strong winds and down drafts Visual impacts of services should be minimised, including location of ventilation duct outlets from basement car parks, electrical substations and detention tanks	As 3C above. The Design Guidance is satisfied.
	Objective 3D-3 Communal open space is designed to maximise safety ***Design guidance*** Communal open space and the public domain should be readily visible from habitable rooms and private open space areas while maintaining visual privacy. Design solutions may include: • bay windows • corner windows • balconies Communal open space should be well lit Where communal open space/facilities are provided for children and young people they are safe and contained	A balance has been struck between passive surveillance opportunities from habitable rooms and the privacy of residents using the space. The decision to place most of the COS on the roof was influenced by the greater access to sunlight and the fact that the density of existing adjacent buildings presented the possibility of significant over-looking. While this could be considered passive surveillance, those viewers are not common residents. Planting, pergolas and other devices are included to permit privacy when sought. Bedrooms in two apartments at Level 2 face the communal open space and have privacy screens to habitable windows. Following a request from the Police, safety screens are now included on the western edge of the roof and merged with soft landscaping.
	Objective 3D-4 Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood ***Design guidance*** The public open space should be well connected with public streets along at least one edge The public open space should be connected with nearby parks and other landscape elements Public open space should be linked through view lines, pedestrian desire paths, termination points and the wider street grid Solar access should be provided year round along with protection from strong winds Opportunities for a range of recreational activities should be provided for people of all ages A positive address and active frontages should be provided adjacent to public open space Boundaries should be clearly defined between public open space and private areas	No dedicated public open space is provided. However, the public (resident visitors) can access the communal open space.
3E Deep Soil Zones	**Objective 3E-1** Deep soil zones are to meet the following minimum	The existing building has a whole of site

	requirements: Site area / Minimum dimensions / Deep soil zone (% of site area) less than 650m^2 / - / 650m^2 - 1,500m^2 / 3m / greater than 1,500m^2 / 6m / 7% greater than 1,500m^2 with significant existing tree cover / 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 ***Design guidance*** On some sites it may be possible to provide larger deep soil zones, depending on the site area and context: • 10% of the site as deep soil on sites with an area of 650m2 - 1,500m2 • 15% of the site as deep soil on sites greater than 1,500m2 Deep soil zones should be located to retain existing significant trees and to allow for the development of healthy root systems, providing anchorage and stability for mature trees. Design solutions may include: • basement and sub basement car park design that is consolidated beneath building footprints • use of increased front and side setbacks • adequate clearance around trees to ensure long term health • co-location with other deep soil areas on adjacent sites to create larger contiguous areas of deep soil Achieving the design criteria may not be possible on some sites including where: • the location and building typology have limited or no space for deep soil at ground level (e.g. central business district, constrained sites, high density areas, or in centres) • there is 100% site coverage or non-residential uses at ground floor level 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	excavated basement. Rather than introduce deep soil planting, it has been decided to provide substantial “on podium” and “on roof” planting. The area of planting well exceeds the 7% deep soil requirement. Water from the COS paved areas and planters is captured for re-use.
3F Visual Privacy	**Objective 3F-1** Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy **Design criteria** 1. Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows: Building height / Habitable rooms and balconies / Non-habitable rooms up to 12m (4 storeys) / 6m / 3m up to 25m (5-8 storeys) / 9m / 4.5m over 25m (9+ storeys) / 12m / 6m Note: Separation distances between buildings on the same site should combine required building separations depending	Inter-building spacing is as follows: Subject site to future Police site mixed use development is likely to be 18m from subject site balcony edge to non-habitable / screened habitable rooms Subject site to Pacific Square. The edges of the Pacific Square balconies are 15.3m from the nearest habitable windows on the subject site. These bedroom windows on the east side are pop-out windows to orient their view to the north rather than directly across the boundary to provide enhanced privacy.

	on the type of room (see figure 3F.2) Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties ***Design guidance*** Generally one step in the built form as the height increases due to building separations is desirable. Additional steps should be careful not to cause a 'ziggurat' appearance For residential buildings next to commercial buildings, separation distances should be measured as follows: • for retail, office spaces and commercial balconies use the habitable room distances • for service and plant areas use the non-habitable room distances New development should be located and oriented to maximise visual privacy between buildings on site and for neighbouring buildings. Design solutions include: • site layout and building orientation to minimise privacy impacts (see also section 3B Orientation) • on sloping sites, apartments on different levels have appropriate visual separation distances (see figure 3F.4) Apartment buildings should have an increased separation distance of 3m (in addition to the requirements set out in design criteria 1) when adjacent to a different zone that permits lower density residential development to provide for a transition in scale and increased landscaping (figure 3F.5) Direct lines of sight should be avoided for windows and balconies across corners No separation is required between blank walls	
	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 ***Design guidance*** Communal open space, common areas and access paths should be separated from private open space and windows to apartments, particularly habitable room windows. Design solutions may include: • setbacks • solid or partially solid balustrades to balconies at lower levels • fencing and/or trees and vegetation to separate spaces • screening devices • bay windows or pop out windows to provide privacy in one direction and outlook in another • raising apartments/private open space above the public domain or communal open space • planter boxes incorporated into walls and balustrades to increase visual separation • pergolas or shading devices to limit overlooking of lower apartments or private open space • on constrained sites where it can be demonstrated that building layout opportunities are limited, fixed louvres or screen panels to windows and/or balconies Bedrooms, living spaces and other habitable rooms should be separated from gallery access and other open circulation space by the apartment's service areas Balconies and private terraces should be located in front of living rooms to increase internal privacy Windows should be offset from the windows of adjacent buildings Recessed balconies and/or vertical fins should be used between adjacent balconies	Communal Open Space is accessed via stairs and access platforms from each lobby to the roof level. There are no habitable windows adjacent to the roof COS. At Level 2, the podium is accessed from the residential lift lobby. Despite the planting buffer, privacy screens are added to the bedroom windows of apartment 205, 206. Privacy to private open space is preserved.

3G Pedestrian access and entries	**Objective 3G-1** Building entries and pedestrian access connects to and addresses the public domain ***Design guidance*** Multiple entries (including communal building entries and individual ground floor entries) should be provided to activate the street edge Entry locations relate to the street and subdivision pattern and the existing pedestrian network Building entries should be clearly identifiable and communal entries should be clearly distinguishable from private entries Where street frontage is limited and multiple buildings are located on the site, a primary street address should be provided with clear sight lines and pathways to secondary building entries	There is a simple, legible pedestrian entry to the retail and residential components. The façade is designed to have "bays" defined by columns and piers that come to ground. The retail frontage is all glazed for maximum exposure to the street. The residential entry has more three dimensional "depth" with an open gated porch with mail boxes. As noted above, an undue proportion of the Maroubra Road façade is occupied by services and fire egress,
	Objective 3G-2 Access, entries and pathways are accessible and easy to identify ***Design guidance*** Building access areas including lift lobbies, stairwells and hallways should be clearly visible from the public domain and communal spaces The design of ground floors and underground car parks minimise level changes along pathways and entries Steps and ramps should be integrated into the overall building and landscape design For large developments 'way finding' maps should be provided to assist visitors and residents (see figure 4T.3) For large developments electronic access and audio/video intercom should be provided to manage access	All public entries are accessible. Where a security line is encountered, intercom and gate operation will be accessible. Accessible and "adaptable" carspaces are provided. There is barrier free access to lifts and on to apartment entries.
	Objective 3G-3 Large sites provide pedestrian links for access to streets and connection to destinations ***Design guidance*** Pedestrian links through sites facilitate direct connections to open space, main streets, centres and public transport Pedestrian links should be direct, have clear sight lines, be overlooked by habitable rooms or private open spaces of dwellings, be well lit and contain active uses, where appropriate	Piccadilly Place is a heavily vehicle trafficked access road and not considered desirable for the destination of a through site link.
3H Vehicle Access	**Objective 3H-1** Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes ***Design guidance*** Car park access should be integrated with the building's overall facade. 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 facade • where doors are not provided, the visible interior reflects the facade design and the building services, pipes and ducts are concealed Car park entries should be located behind the building line Vehicle entries should be located at the lowest point of the site minimising ramp lengths, excavation and impacts on the building form and layout Car park entry and access should be located on secondary streets or lanes where available Vehicle standing areas that increase driveway width and encroach into setbacks should be avoided Access point locations should avoid headlight glare to habitable rooms Adequate separation distances should be provided between vehicle entries and street intersections The width and number of vehicle access points should be limited to the minimum Visual impact of long driveways should be minimised through changing alignments and screen planting The need for large vehicles to enter or turn around within the	Vehicle access for loading and basement parking is at the rear of the site on Piccadilly Place to take advantage of the established vehicle circulation pattern. Vehicle egress is via the Maroubra Road frontage and being a one-way turn onto a multi lane road, no queuing is anticipated.

	site should be avoided Garbage collection, loading and servicing areas are screened Clear sight lines should be provided at pedestrian and vehicle crossings Traffic calming devices such as changes in paving material or textures should be used where appropriate Pedestrian and vehicle access should be separated and distinguishable. Design solutions may include: • changes in surface materials • level changes • the use of landscaping for separation	
3J Bicycle and Carparking	**Objective 3J-1** Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas ***Design criteria*** 1. For development in the following locations: • on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or • on land zoned, and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre the minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less The car parking needs for a development must be provided off street ***Design guidance*** Where a car share scheme operates locally, provide car share parking spaces within the development. Car share spaces, when provided, should be on site Where less car parking is provided in a development, council should not provide on street resident parking permits	Resident and visitor bicycle parking quantities are in accordance with Council planning controls. For many residences, a storage cage to the size of a class 1 bike locker on the strata titled area is provided. Open racks are provided for the remaining residents and visitors. The lockers are distributed throughout the parking levels behind the security line including the visitor bicycle racks which can then access all lift cores. Carshare spaces are provided on Level 1
	Objective 3J-2 Parking and facilities are provided for other modes of transport ***Design guidance*** Conveniently located and sufficient numbers of parking spaces should be provided for motorbikes and scooters Secure undercover bicycle parking should be provided that is easily accessible from both the public domain and common areas Conveniently located charging stations are provided for electric vehicles, where desirable	Three (3) non-strata titled motorbike spaces are located in the basement for use by any resident or visitor.
	Objective 3J-3 Car park design and access is safe and secure ***Design guidance*** Supporting facilities within car parks, including garbage, plant and switch rooms, storage areas and car wash bays can be accessed without crossing car parking spaces Direct, clearly visible and well lit access should be provided into common circulation areas A clearly defined and visible lobby or waiting area should be provided to lifts and stairs For larger car parks, safe pedestrian access should be clearly defined and circulation areas have good lighting, colour, line marking and/or bollards	The criteria are satisfied. There is a security controlled roller shutter. Refer to the traffic report.
	Objective 3J-4 Visual and environmental impacts of underground car parking are minimised ***Design guidance*** Excavation should be minimised through efficient car park layouts and ramp design Car parking layout should be well organised, using a logical, efficient structural grid and double loaded aisles Protrusion of car parks should not exceed 1m above ground level. Design solutions may include stepping car park levels or using split levels on sloping sites Natural ventilation should be provided to basement and sub basement car parking areas Ventilation grills or screening devices for car parking openings should be integrated into the facade and landscape design	The existing building has an excavated basement built to all boundaries. The existing ground is therefore disturbed. It is preferred to continue with the full perimeter shape and avoid new excavation. The northern ends of Ground and Level 1 are used for parking and vehicle movement.
	Objective 3J-5 Visual and environmental impacts of on-grade car parking are minimised ***Design guidance***	N/A

	On-grade car parking should be avoided Where on-grade car parking is unavoidable, the following design solutions are used: • parking is located on the side or rear of the lot away from 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	
	Objective 3J-6 Visual and environmental impacts of above ground enclosed car parking are minimised ***Design guidance*** Exposed parking should not be located along primary street frontages Screening, landscaping and other design elements including public art should be used to integrate the above ground car parking with the facade. Design solutions may include: • car parking that is concealed behind the facade, with windows integrated into the overall facade design (approach should be limited to developments where a larger floor plate podium is suitable at lower levels) • carparking that is 'wrapped' with other uses, such as retail, commercial or two storey Small Office/Home Office (SOHO) units along the street frontage (see figure 3J.9) Positive street address and active frontages should be provided at ground level	N/A
	PART 4 DESIGNING THE BUILDING	
	This part addresses the design of apartment buildings in more detail. It focuses on building form, layout, functionality, landscape design, environmental performance and residential amenity. It is to be used during the design process and in the preparation and assessment of development applications.	
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 ***Design criteria*** 1. Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas 2. In all other areas, living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid winter 3. A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter ***Design guidance*** The design maximises north aspect and the number of single aspect south facing apartments is minimised Single aspect, single storey apartments should have a northerly or easterly aspect Living areas are best located to the north and service areas to the south and west of apartments To optimise the direct sunlight to habitable rooms and balconies a number of the following design features are used: • dual aspect apartments • shallow apartment layouts • two storey and mezzanine level apartments	Refer to drawing A8.250 The proposed development exceeds the objective criteria for solar access under the ADG for 70% of apartments achieving a minimum of 2 hours at mid winter. 73% provided The limit of 15% of dwellings receiving no mid winter light is not exceeded. 11% indicated. An independent scientific/engineering review has been undertaken by SLR consulting to confirm the DJRD conclusions noted above.

	• bay windows To maximise the benefit to residents of direct sunlight within living rooms and private open spaces, a minimum of 1m2 of direct sunlight, measured at 1m above floor level, is achieved for at least 15 minutes Achieving the design criteria may not be possible on some sites. This includes: • where greater residential amenity can be achieved along a busy road or rail line by orientating the living rooms away from the noise source • on south facing sloping sites • where significant views are oriented away from the desired aspect for direct sunlight Design drawings need to demonstrate how site constraints and orientation preclude meeting the design criteria and how the development meets the objective	
	Objective 4A-2 Daylight access is maximised where sunlight is limited ***Design guidance*** Courtyards, skylights and high level windows (with sills of 1,500mm or greater) are used only as a secondary light source in habitable rooms Where courtyards are used : • use is restricted to kitchens, bathrooms and service areas • building services are concealed with appropriate detailing and materials to visible walls • courtyards are fully open to the sky • access is provided to the light well from a communal area for cleaning and maintenance • acoustic privacy, fire safety and minimum privacy separation distances (see section 3F Visual privacy) are achieved Opportunities for reflected light into apartments are optimised through: • reflective exterior surfaces on buildings opposite south facing windows • positioning windows to face other buildings or surfaces (on neighbouring sites or within the site) that will reflect light • integrating light shelves into the design • light coloured internal finishes	Refer 4A-1 Apartments that address Maroubra Road are south facing and receive little mid winter light. These apartments have district views and good separation to buildings across the street and this compensating amenity is considered satisfactory. Two of the three south facing apartments on each plate have secondary balconies and windows facing north for through ventilation and direct sunlight to secondary Living spaces.
	Objective 4A-3 Design incorporates shading and glare control, particularly for warmer months ***Design guidance*** A number of the following design features are used: • balconies or sun shading that extend far enough to shade summer sun, but allow winter sun to penetrate living areas • shading devices such as eaves, awnings, balconies, pergolas, external louvres and planting • horizontal shading to north facing windows • vertical shading to east and particularly west facing windows • operable shading to allow adjustment and choice • high performance glass that minimises external glare off windows, with consideration given to reduced tint glass or glass with a reflectance level below 20% (reflective films are avoided)	A lot of balconies and Living Rooms face west and operable glazed wintergardens have been included for both solar control and privacy. The glazing will be high performance.
4B Natural ventilation	**Objective 4B-1** All habitable rooms are naturally ventilated ***Design guidance*** The building's orientation maximises capture and use of prevailing breezes for natural ventilation in habitable rooms Depths of habitable rooms support natural ventilation The area of unobstructed window openings should be equal to at least 5% of the floor area served Light wells are not the primary air source for habitable rooms Doors and openable windows maximise natural ventilation opportunities by using the following design solutions: • adjustable windows with large effective openable areas • a variety of window types that provide safety and flexibility such as awnings and louvres • windows which the occupants can reconfigure to funnel breezes into the apartment such as vertical louvres, casement windows and externally opening doors	The criteria are satisfied.
	Objective 4B-2 The layout and design of single aspect apartments maximises natural ventilation ***Design guidance***	The criteria are satisfied.

	Apartment depths are limited to maximise ventilation and airflow (see also figure 4D.3) Natural ventilation to single aspect apartments is achieved with the following design solutions: • primary windows are augmented with plenums and light wells (generally not suitable for cross ventilation) • stack effect ventilation / solar chimneys or similar to naturally ventilate internal building areas or rooms such as bathrooms and laundries • courtyards or building indentations have a width to depth ratio of 2:1 or 3:1 to ensure effective air circulation and avoid trapped smells	
	Objective 4B-3 The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents ***Design criteria*** 1. At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed 2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line ***Design guidance*** The building should include dual aspect apartments, cross through apartments and corner apartments and limit apartment depths In cross-through apartments external window and door opening sizes/areas on one side of an apartment (inlet side) are approximately equal to the external window and door opening sizes/areas on the other side of the apartment (outlet side) (see figure 4B.4) Apartments are designed to minimise the number of corners, doors and rooms that might obstruct airflow Apartment depths, combined with appropriate ceiling heights, maximise cross ventilation and airflow	The criteria are satisfied. 66% of dwellings have through or cross ventilation.
4C Ceiling heights	**Objective 4C-1** Ceiling height achieves sufficient natural ventilation and daylight access ***Design criteria*** 1. Measured from finished floor level to finished ceiling level, minimum ceiling heights are: Habitable rooms 2.7m Non-habitable 2.4m For 2 storey apartments 2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area Attic spaces 1.8m at edge of room with a 30 degree minimum ceiling slope If located in mixed used areas 3.3m for ground and first floor to promote future flexibility of use These minimums do not preclude higher ceilings if desired ***Design guidance*** Ceiling height can accommodate use of ceiling fans for cooling and heat distribution	The criteria are satisfied. It has been established that Level 1 is not a desirable location for commercial tenancies. Residential use is proposed and a floor to floor of 3200 is proposed. A ceiling height of 2700 with surface mounted fittings is possible.
	Objective 4C-2 Ceiling height increases the sense of space in apartments and provides for well proportioned rooms ***Design guidance*** A number of the following design solutions can be used: • the hierarchy of rooms in an apartment is defined using changes in ceiling heights and alternatives such as raked or curved ceilings, or double height spaces • well proportioned rooms are provided, for example, smaller rooms feel larger and more spacious with higher ceilings • ceiling heights are maximised in habitable rooms by ensuring that bulkheads do not intrude. The stacking of service rooms from floor to floor and coordination of bulkhead location above non-habitable areas, such as robes or storage, can assist	The criteria are satisfied.
	Objective 4C-3 Ceiling heights contribute to the flexibility of building use over the life of the building	Refer to 4C-1

	De***sign guidance*** Ceiling heights of lower level apartments in centres should be greater than the minimum required by the design criteria allowing flexibility and conversion to non-residential uses (see figure 4C.1)	
4D Apartment size and layout	**Objective 4D-1** The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity ***Design criteria*** 1. Apartments are required to have the following minimum internal areas: Studio 35sqm 1 bed 50sqm 2 bed 70sqm 3 bed 90sqm The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m2 each A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m2 each 2. Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms ***Design guidance*** Kitchens should not be located as part of the main circulation space in larger apartments (such as hallway or entry space) A window should be visible from any point in a habitable room Where minimum areas or room dimensions are not met apartments need to demonstrate that they are well designed and demonstrate the usability and functionality of the space with realistically scaled furniture layouts and circulation areas. These circumstances would be assessed on their merits	The criteria are satisfied.
	Objective 4D-2 Environmental performance of the apartment is maximised ***Design criteria*** Habitable room depths are limited to a maximum of 2.5 x the ceiling height In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window ***Design guidance*** Greater than minimum ceiling heights can allow for proportional increases in room depth up to the permitted maximum depths All living areas and bedrooms should be located on the external face of the building Where possible: bathrooms and laundries should have an external openable window main living spaces should be oriented toward the primary outlook and aspect and away from noise sources	The criteria are satisfied. The exceptions are where only part of the kitchen is within 8m from the balcony glazing. This deficiency is offset by these apartments being through ventilating and having natural light available from a second outlook. They are not single aspect apartments.
	Objective 4D-3 Apartment layouts are designed to accommodate a variety of household activities and needs ***Design criteria*** Master bedrooms have a minimum area of 10m2 and other bedrooms 9m2 (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 The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts ***Design guidance*** Access to bedrooms, bathrooms and laundries is separated from living areas minimising direct openings between living and service areas All bedrooms allow a minimum length of 1.5m for robes The main bedroom of an apartment or a studio apartment should be provided with a wardrobe of a minimum 1.8m long, 0.6m deep and 2.1m high Apartment	The criteria are satisfied.

	layouts allow flexibility over time, design solutions may include: - dimensions that facilitate a variety of furniture arrangements and removal - spaces for a range of activities and privacy levels between different spaces within the apartment - dual master apartments - dual key apartments *Note: dual key apartments which are separate but on the same title are regarded as two sole occupancy units for the purposes of the Building Code of Australia and for calculating the mix of apartments* - room sizes and proportions or open plans (rectangular spaces (2:3) are more easily furnished than square spaces (1:1)) - efficient planning of circulation by stairs, corridors and through rooms to maximise the amount of usable floor space in rooms	
4E Private Open Space and Balconies	**Objective 4E-1** Apartments provide appropriately sized private open space and balconies to enhance residential amenity ***Design criteria*** 1. All apartments are required to have primary balconies as follows: Dwelling type - Minimum Area / Minimum depth Studio apartments 4sqm / - 1 bedroom apartments 8sqm / 2m 2 bedroom apartments 10sqm / 2m 3+ bedroom apartments 12sqm / 2.4m The minimum balcony depth 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 15m2 and a minimum depth of 3m ***Design guidance*** Increased communal open space should be provided where the number or size of balconies are reduced Storage areas on balconies is additional to the minimum balcony size Balcony use may be limited in some proposals by: consistently high wind speeds at 10 storeys and above close proximity to road, rail or other noise sources exposure to significant levels of aircraft noise heritage and adaptive reuse of existing buildings In these situations, juliet balconies, operable walls, enclosed wintergardens or bay windows may be appropriate, and other amenity benefits for occupants should also be provided in the apartments or in the development or both. Natural ventilation also needs to be demonstrated	The criteria are satisfied.
	Objective 4E-2 Primary private open space and balconies are appropriately located to enhance liveability for residents ***Design guidance*** Primary open space and balconies should be located adjacent to the living room, dining room or kitchen to extend the living space Private open spaces and balconies predominantly face north, east or west Primary open space and balconies should be orientated with the longer side facing outwards or be open to the sky to optimise daylight access into adjacent rooms	The criteria are satisfied. A number of apartments have balconies facing south, but most have windows with other orientations and secondary balconies to admit natural light.
	Objective 4E-3 Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building ***Design guidance*** Solid, partially solid or transparent fences and balustrades are selected to respond to the location. They are designed to allow views and passive surveillance of the street while maintaining visual privacy and allowing for a range of uses on the balcony. Solid and partially solid balustrades are preferred	The criteria are satisfied. West facing balconies have wintergardens. Their facades are made up of transluscent balustrades with clear glazed operable louvres above. This design responds to a project specific request from the Police for

	Full width full height glass balustrades alone are generally not desirable Projecting balconies should be integrated into the building design and the design of soffits considered Operable screens, shutters, hoods and pergolas are used to control sunlight and wind Balustrades are set back from the building or balcony edge where overlooking or safety is an issue Downpipes and balcony drainage are integrated with the overall façade and building design Air-conditioning units should be located on roofs, in basements, or fully integrated into the building design Where clothes drying, storage or air conditioning units are located on balconies, they should be screened and integrated in the building design Ceilings of apartments below terraces should be insulated to avoid heat loss Water and gas outlets should be provided for primary balconies and private open space	privacy and security between the balcony and the Police yard. Residents still receive natural light and ventilation. Electricity point and light fitting only to balconies.
	Objective 4E-4 Private open space and balcony design maximises safety ***Design guidance*** Changes in ground levels or landscaping are minimized Design and detailing of balconies avoids opportunities for climbing and falls	The criteria are satisfied
4F Common circulation and spaces	**Objective 4F-1** Common circulation spaces achieve good amenity and properly service the number of apartments ***Design criteria*** 1. The maximum number of apartments off a circulation core on a single level is eight 2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40 ***Design guidance*** Greater than minimum requirements for corridor widths and/ or ceiling heights allow comfortable movement and access particularly in entry lobbies, outside lifts and at apartment entry doors Daylight and natural ventilation should be provided to all common circulation spaces that are above ground Windows should be provided in common circulation spaces and should be adjacent to the stair or lift core or at the ends of corridors Longer corridors greater than 12m in length from the lift core should be articulated. Design solutions may include: • a series of foyer areas with windows and spaces for seating • wider areas at apartment entry doors and varied ceiling heights Design common circulation spaces to maximise opportunities for dual aspect apartments, including multiple core apartment buildings and cross over apartments Achieving the design criteria for the number of apartments off a circulation core may not be possible. Where a development is unable to achieve the design criteria, a high level of amenity for common lobbies, corridors and apartments should be demonstrated, including: • sunlight and natural cross ventilation in apartments • access to ample daylight and natural ventilation in common circulation spaces • common areas for seating and gathering • generous corridors with greater than minimum ceiling heights • other innovative design solutions that provide high levels of amenity Where design criteria 1 is not achieved, no more than 12 apartments should be provided off a circulation core on a single level Primary living room or bedroom windows should not open directly onto common circulation spaces, whether open or enclosed. Visual and acoustic privacy from common circulation spaces to any other rooms should be carefully controlled	There are no residential lobbies serving more than eight apartments. All have access to natural light and openable windows.
	Objective 4F-2 Common circulation spaces promote safety and provide for	

	social interaction between residents ***Design guidance*** Direct and legible access should be provided between vertical circulation points and apartment entries by minimising corridor or gallery length to give short, straight, clear sight lines Tight corners and spaces are avoided Circulation spaces should be well lit at night Legible signage should be provided for apartment numbers, common areas and general wayfinding Incidental spaces, for example space for seating in a corridor, at a stair landing, or near a window are provided In larger developments, community rooms for activities such as owners corporation meetings or resident use should be provided and are ideally co-located with communal open space Where external galleries are provided, they are more open than closed above the balustrade along their length	There is a simple, legible access strategy to the development to each entry and the communal open space. There are opportunities for passive surveillance.
4G Storage	**Objective 4G-1** Adequate, well designed storage is provided in each apartment ***Design criteria*** 1. In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided: At least 50% of the required storage is to be located within the apartment Dwelling type Storage size volume Studio apartments 4m3 1 bedroom apartments 6m3 2 bedroom apartments 8m3 3+ bedroom apartments 10m3 ***Design guidance*** Storage is accessible from either 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 Left over space such as under stairs is used for storage	The criteria are satisfied. Refer A8.250. Non apartment storage will be in defined, strata titled resident storage enclosures.
	Objective 4G-2 Additional storage is conveniently located, accessible and nominated for individual apartments ***Design guidance*** Storage not located in apartments is secure and clearly allocated to specific apartments Storage is provided for larger and less frequently accessed items Storage space in internal or basement car parks is provided at the rear or side of car spaces or in cages so that allocated car parking remains accessible If communal storage rooms are provided they should be accessible from common circulation areas of the building Storage not located in an apartment is integrated into the overall building design and is not visible from the public domain	The criteria are satisfied
4H Acoustic privacy	**Objective 4H-1** Noise transfer is minimised through the siting of buildings and building layout ***Design guidance*** Adequate building separation is provided within the development and from neighbouring buildings/adjacent uses (see also section 2F Building separation and section 3F Visual privacy) Window and door openings are generally orientated away from noise sources Noisy areas within buildings including building entries and corridors should be located next to or above each other and quieter areas next to or above quieter areas Storage, circulation areas and non-habitable rooms should be located to buffer noise from external sources The number of party walls (walls shared with other apartments) are limited and are appropriately insulated	Environmental acoustic load from outside the site is the primary noise source. Inter tenancy noise transfer will be attenuated via standard acoustic rated partitioning to suit BCA/NCC requirements. As noted above, windows and screening are placed to minimize inter-site privacy impacts.

	Noise sources such as garage doors, driveways, service areas, plant rooms, building services, mechanical equipment, active communal open spaces and circulation areas should be located at least 3m away from bedrooms	
	Objective 4H-2 Noise impacts are mitigated within apartments through layout and acoustic treatments ***Design guidance*** Internal apartment layout separates noisy spaces from quiet spaces, using a number of the following design solutions: • rooms with similar noise requirements are grouped together • doors separate different use zones • wardrobes in bedrooms are co-located to act as sound buffers Where physical separation cannot be achieved noise conflicts are resolved using the following design solutions: • double or acoustic glazing • acoustic seals • use of materials with low noise penetration properties • continuous walls to ground level courtyards where they do not conflict with streetscape or other amenity requirements	The criteria are satisfied The apartment layouts are driven by outlook, privacy etc. Inter-tenancy acoustic attenuation/isolation is provided by code compliant construction.
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 ***Design guidance*** 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 the underside of residential floor levels should increase relative to traffic volumes and other noise sources • buildings should respond to both solar access and noise. Where solar access is away from the noise source, non-habitable rooms can provide a buffer • where solar access is in the same direction as the noise source, dual aspect apartments with shallow building depths are preferable (see figure 4J.4) • landscape design reduces the perception of noise and acts as a filter for air pollution generated by traffic and industry Achieving the design criteria in this Apartment Design Guide may not be possible in some situations due to noise and pollution. Where developments are unable to achieve the design criteria, alternatives may be considered in the following areas: • solar and daylight access • private open space and balconies • natural cross ventilation	Refer 4H-1
	Objective 4J-2 Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission ***Design guidance*** Design solutions to mitigate noise include: • limiting the number and size of openings facing noise sources • providing seals to prevent noise transfer through gaps • using double or acoustic glazing, acoustic louvres or enclosed balconies (wintergardens) • using materials with mass and/or sound insulation or absorption properties e.g. solid balcony balustrades, external screens and soffits	Refer 4H-1 The west facing apartments have wintergardens with operable glazed louvres. The louvres can be oriented by the occupant to deflect or exclude noise.
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 ***Design guidance*** A variety of apartment types is provided The apartment mix is appropriate, taking into consideration: • the distance to public transport, employment and education	The mix is considered appropriate for the precinct demographic. The building structure will be load bearing

	centres • the current market demands and projected future demographic trends • the demand for social and affordable housing • different cultural and socioeconomic groups Flexible apartment configurations are provided to support diverse household types and stages of life including single person households, families, multi-generational families and group households	concrete with non-loadbearing party walls that permit a number of apartments to be combined should future residents require that amenity.
	Objective 4K-2 The apartment mix is distributed to suitable locations within the building ***Design guidance*** Different apartment types are located to achieve successful facade composition and to optimise solar access (see figure 4K.3) Larger apartment types are located on the ground or roof level where there is potential for more open space and on corners where more building frontage is available	There is an appropriate mix of 1, 2 and 3 bed apartments evenly distributed.
4L Ground floor apartments	**Objective 4L-1** Street frontage activity is maximised where ground floor apartments are located ***Design guidance*** Direct street access should be provided to ground floor apartments Activity is achieved through front gardens, terraces and the facade of the building. Design solutions may include: both street, foyer and other common internal circulation entrances to ground floor apartments private open space is next to the street doors and windows face the street Retail or home office spaces should be located along street frontages Ground floor apartment layouts support small office home office (SOHO) use to provide future opportunities for conversion into commercial or retail areas. In these cases provide higher floor to ceiling heights and ground floor amenities for easy conversion	There are no Ground Floor apartments
	Objective 4L-2 Design of ground floor apartments delivers amenity and safety for residents ***Design guidance*** Privacy and safety should be provided without obstructing casual surveillance. Design solutions may include: - elevation of private gardens and terraces above the street level by 1-1.5m (see figure 4L.4) - landscaping and private courtyards - window sill heights that minimise sight lines into apartments - integrating balustrades, safety bars or screens with the exterior design Solar access should be maximised through: - high ceilings and tall windows - trees and shrubs that allow solar access in winter and shade in summer	There are no Ground Floor apartments
4M Facades	**Objective 4M-1** Building facades provide visual interest along the street while respecting the character of the local area ***Design guidance*** Design solutions for front building facades may include: • a composition of varied building elements • a defined base, middle and top of buildings • revealing and concealing certain elements • changes in texture, material, detail and colour to modify the prominence of elements Building services should be integrated within the overall facade Building facades should be well resolved with an appropriate scale and proportion to the streetscape and human scale. Design solutions 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 Building facades relate to key datum lines of adjacent buildings through upper level setbacks, parapets, cornices, awnings or colonnade heights	The design intent is to respond positively to the scale, massing, height and density of the existing adjacent buildings. The proposed project seeks to exhibit a subtle point of difference in texture and colour by utilising brick and sheet cladding. We believe the location can tolerate simply expressed and well detailed forms. Subtle patterning variations in the sheet cladding combined with metal blades and screens and planting will provide adequate variety and articulation to the simple form. The Ground and Level 1 component will be subtly expressed as a podium with an alternate expression for the residential use

	Shadow is created on the facade throughout the day with building articulation, balconies and deeper window reveals	above. “Apartment sized” façade bays express the internal planning.
	Objective 4M-2 Building functions are expressed by the facade ***Design guidance*** Building entries should be clearly defined Important corners are given visual prominence through a change in articulation, materials or colour, roof expression or changes in height The apartment layout should be expressed externally through facade features such as party walls and floor slabs	The criteria are satisfied
4N Roof design	**Objective 4N-1** Roof treatments are integrated into the building design and positively respond to the street ***Design guidance*** Roof design relates to the street. Design solutions may include: • special roof features and strong corners • use of skillion or very low pitch hipped roofs • breaking down the massing of the roof by using smaller elements to avoid bulk • using materials or a pitched form complementary to adjacent buildings Roof treatments should be integrated with the building design. Design solutions may include: • roof design proportionate to the overall building size, scale and form • roof materials compliment the building • service elements are integrated	As noted above, the proposal continues the street wall, parapet form of the adjacent buildings and “build to boundary” Council planning objective. To Maroubra Road, the upper level is setback to match a cornice line on the adjacent building. The roof level has been kept as low as possible to minimize shadow casting. The parapets are integral with the main façade language to keep the expression simple. Rooftop plant and lift overruns are screened and will appear (if seen) as forms that are integral to the massing
	Objective 4N-2 Opportunities to use roof space for residential accommodation and open space are maximised ***Design guidance*** Habitable roof space should be provided with good levels of amenity. Design solutions may include: • penthouse apartments • dormer or clerestory windows • openable skylights Open space is provided on roof tops subject to acceptable visual and acoustic privacy, comfort levels, safety and security considerations	The opportunity to provide Communal Open Space on the roof has been maximised.
	Objective 4N-3 Roof design incorporates sustainability features ***Design guidance*** Roof design maximises solar access to apartments during winter and provides shade during summer. Design solutions may include: • the roof lifts to the north • eaves and overhangs shade walls and windows from summer sun Skylights and ventilation systems should be integrated into the roof design	The roof is substantially covered by either insulated paving or soft landscaping. Energy consumption for the upper level apartments is reduced. Water is captured from roof areas for re-use.
4O Landscape design	**Objective 4O-1** Landscape design is viable and sustainable ***Design guidance*** Landscape design should be environmentally sustainable and can enhance environmental performance by incorporating: • diverse and appropriate planting • bio-filtration gardens • appropriately planted shading trees • areas for residents to plant vegetables and herbs • composting • green roofs or walls Ongoing maintenance plans should be prepared Microclimate is enhanced by: • appropriately scaled trees near the eastern and western elevations for shade • a balance of evergreen and deciduous trees to provide	The landscape design maximises available open space planting opportunities. Paving and sheltered BBQ areas in the communal space are arranged to encourage gatherings and a wide range of activities. Refer to the Landscape Architect’s drawings.

	shading in summer and sunlight access in winter • shade structures such as pergolas for balconies and courtyards Tree and shrub selection considers size at maturity and the potential for roots to compete (see Table 4)	
	Objective 4O-2 Landscape design contributes to the streetscape and amenity ***Design guidance*** Landscape design responds to the existing site conditions including: • changes of levels • views • significant landscape features including trees and rock outcrops Significant landscape features should be protected by: • tree protection zones(seefigure4O.5) • appropriate signage and fencing during construction Plants selected should be endemic to the region and reflect the local ecology	As noted above, the existing building is built to boundary with no deep soil planting. The proposal has substantial rooftop planting that will be visible from the public domain and soften the silhouette of the building.
4P Planting on structures	**Objective 4P-1** Appropriate soil profiles are provided ***Design guidance*** Structures are reinforced for additional saturated soil weight Soil volume is appropriate for plant growth, considerations include: • modifying depths and widths according to the planting mix and irrigation frequency • free draining and long soil life span • tree anchorage Minimum soil standards for plant sizes should be provided in accordance with Table 5	Refer to the Landscape Architect's drawing.
	Objective 4P-2 Plant growth is optimised with appropriate selection and maintenance ***Design guidance*** 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 A landscape maintenance plan is prepared Irrigation and drainage systems respond to: • changing site conditions • soil profile and the planting regime • whether rainwater, stormwater or recycled grey water is used	Refer to the Landscape Architect's drawing.
	Objective 4P-3 Planting on structures contributes to the quality and amenity of communal and public open spaces ***Design guidance*** Building design incorporates opportunities for planting on structures. Design solutions may include: • green walls with specialised lighting for indoor green walls • wall design that incorporates planting • green roofs, particularly where roofs are visible from the public domain • planter boxes Note: structures designed to accommodate green walls should be integrated into the building facade and consider the ability of the facade to change over time	Refer 4P-1 above. All opportunities have been taken to introduce planting over podium and roof slabs.
4Q Universal design	**Objective 4Q-1** Universal design features are included in apartment design to promote flexible housing for all community members ***Design guidance*** Developments achieve a benchmark of 20% of the total apartments incorporating the Livable Housing Guideline's silver level universal design features	The 7 core design elements to achieve the Silver level are required to be provided to at least 20% of dwellings. Refer to drawings A8.200 and A8.201. The criteria are satisfied.
	Objective 4Q-2 A variety of apartments with adaptable designs are provided ***Design guidance*** Adaptable housing should be provided in accordance with the relevant council policy Design solutions for adaptable apartments include: • convenient access to communal and public areas • high level of solar access • minimal structural change and residential amenity loss when adapted	20% of dwellings are capable of adaptation in accordance with AS4299 and Randwick Council requirements. Refer to drawings A8.200 and A8.201. The criteria are satisfied.

	• larger car parking spaces for accessibility • parking titled separately from apartments or shared car parking arrangements	
	Objective 4Q-3 Apartment layouts are flexible and accommodate a range of lifestyle needs ***Design guidance*** 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	The building structure will be primarily concrete column and slab with non-loadbearing internal party walls. These knock out panels can be used to join adjacent apartments in the future without structural implication. This feature will permit multiple future configurations of bedroom, bedroom/office, bedroom/Living.
4R Adaptive reuse	**Objective 4R-1** New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place ***Design guidance*** Design solutions may include: • new elements to align with the existing building • 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 New additions allow for the interpretation and future evolution of the building	N/A
	Objective 4R-2 Adapted buildings provide residential amenity while not precluding future adaptive reuse ***Design guidance*** 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 Some proposals that adapt existing buildings may not be able to achieve all of the design criteria in this Apartment Design Guide. Where developments are unable to achieve the design criteria, alternatives could be considered in the following areas: • where there are existing higher ceilings, depths of habitable rooms could increase subject to demonstrating access to natural ventilation, cross ventilation (when applicable) and solar and daylight access (see also sections 4A Solar and daylight access and 4B Natural ventilation) • alternatives to providing deep soil where less than the minimum requirement is currently available on the site • building and visual separation–subject to demonstrating alternative design approaches to achieving privacy • common circulation • car parking • alternative approaches to private open space and balconies	N/A
4S Mixed use	**Objective 4S-1** Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement ***Design guidance*** Mixed use development should be concentrated around public transport and centres Mixed use developments positively contribute to the public domain. Design solutions may include: • development addresses the street • active frontages are provided • diverse activities and uses • avoiding blank walls at the ground level • live/work apartments on the ground floor level, rather than commercial	The objectives are satisfied
	Objective 4S-2 Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents	The objectives are satisfied

	Design guidance Residential circulation areas should be clearly defined. Design solutions may include: • residential entries are separated from commercial entries and directly accessible from the street • commercial service areas are separated from residential components • residential car parking and communal facilities are separated or secured • security at entries and safe pedestrian routes are provided • concealment opportunities are avoided Landscaped communal open space should be provided at podium or roof levels	
4T Awnings and signage	**Objective 4T-1** Awnings are well located and complement and integrate with the building design ***Design guidance*** Awnings should be located along streets with high pedestrian activity and active frontages A number of the following design solutions are used: • continuous awnings are maintained and provided in areas with an existing pattern • height, depth, material and form complements the existing street character • protection from the sun and rain is provided • awnings are wrapped around the secondary frontages of corner sites • awnings are retractable in areas without an established pattern Awnings should be located over building entries for building address and public domain amenity Awnings relate to residential windows, balconies, street tree planting, power poles and street infrastructure Gutters and down pipes should be integrated and concealed Lighting under awnings should be provided for pedestrian safety	The objectives are satisfied. The awning is proposed to be predominantly solid to visually separate the different façade rhythms of Level 1 and Ground that are generated by different uses.
	Objective 4T-2 Signage responds to the context and desired streetscape character ***Design guidance*** Signage should be integrated into the building design and respond to the scale, proportion and detailing of the development Legible and discrete way finding should be provided for larger developments Signage is limited to being on and below awnings and a single facade sign on the primary street frontage	The objectives can be satisfied
4U Energy efficiency	**Objective 4U-1** Development incorporates passive environmental design ***Design guidance*** Adequate natural light is provided to habitable rooms (see 4A Solar and daylight access) Well located, screened outdoor areas should be provided for clothes drying	Refer to 4A above
	Objective 4U-2 Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer ***Design guidance*** A number of the following design solutions are used: • the use of smart glass or other technologies on north and west elevations • thermal mass in the floors and walls of north facing rooms is maximised • polished concrete floors, tiles or timber rather than carpet • insulated roofs, walls and floors and seals on window and door openings • overhangs and shading devices such as awnings, blinds and screens Provision of consolidated heating and cooling infrastructure should be located in a centralised location (e.g. the basement)	Major residential glazing is protected by balcony overhangs. Concrete thermal mass and bulk insulation in non-loadbearing walls and roof will provide high thermal performance of the building fabric. Contemporary NCC requirements are onerous, but readily satisfied with conventional building materials. The performance of the envelope will be high and minimise energy consumption. Operable balcony and window louvres allow solar access and ventilation control.
	Objective 4U-3 Adequate natural ventilation minimises the need for mechanical ventilation	All habitable rooms are naturally ventilated. Cross ventilation is optimized as noted

	Design guidance 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	above. The ADG suggested minimum of 60% is exceeded (66% achieved)
4V Water management and conservation	**Objective 4V-1** Potable water use is minimised ***Design guidance*** Water efficient fittings, appliances and wastewater reuse should be incorporated Apartments should be individually metered Rainwater should be collected, stored and reused on site Drought tolerant, low water use plants should be used within landscaped areas	The criteria are satisfied and appropriately rated fittings will be specified.
	Objective 4V-2 Urban stormwater is treated on site before being discharged to receiving waters ***Design guidance*** Water sensitive urban design systems are designed by a suitably qualified professional A number of the following design solutions are used: • runoff is collected from roofs and balconies in water tanks and plumbed into toilets, laundry and irrigation • porous and open paving materials is maximised • on site stormwater and infiltration, including bio-retention systems such as rain gardens or street tree pits	The criteria are satisfied. An OSD system is located above the basement.
	Obje**ctive 4V-3** Flood management systems are integrated into site design ***Design guidance*** Detention tanks should be located under paved areas, driveways or in basement car parks On large sites parks or open spaces are designed to provide temporary on site detention basins	The criteria are satisfied. An OSD system is located above the basement.
4W Waste management	**Objective 4W-1** Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents ***Design guidance*** Adequately sized storage areas for rubbish bins should be located discreetly away from the front of the development or in the basement car park Waste and recycling storage areas should be well ventilated Circulation design allows bins to be easily manoeuvred between storage and collection points Temporary storage should be provided for large bulk items such as mattresses A waste management plan should be prepared	Refer to waste management report. Centralised bin collection will occur in the Garbage Rooms in the basement. An efficient process of bin transfer to the street for collection has been developed to minimise impact on residents and neighbours.
	Objective 4W-2 Domestic waste is minimised by providing safe and convenient source separation and recycling ***Design guidance*** All dwellings should have a waste and recycling cupboard or temporary storage area of sufficient size to hold two days worth of waste and recycling Communal waste and recycling rooms are in convenient and accessible locations related to each vertical core For mixed use developments, residential waste and recycling storage areas and access should be separate and secure from other uses Alternative waste disposal methods such as composting should be provided	Refer to waste management report.
4X Building maintenance	**Objective 4X-1** Building design detail provides protection from weathering ***Design guidance*** 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	Low maintenance materials have been selected for the facades and exposed roof areas.

	Objective 4X-2 Systems and access enable ease of maintenance ***Design guidance*** Window design enables cleaning from the inside of the building Building maintenance systems should be incorporated and integrated into the design of the building form, roof and facade Design solutions do not require external scaffolding for maintenance access Manually operated systems such as blinds, sunshades and curtains are used in preference to mechanical systems Centralised maintenance, services and storage should be provided for communal open space areas within the building	Current NCC requirements for window opening restriction make it difficult to provide sashes that can be reversed for convenient, safe cleaning. It is likely that abseiling and other specialist cleaners will be engaged to clean the outside of windows.
	Objective 4X-3 Material selection reduces ongoing maintenance costs ***Design guidance*** 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	The criteria are satisfied. Low maintenance materials have been selected

TABLE B: DESIGN QUALITY PRINCIPLES

PRINCIPLE	EVALUATION	CONSISTENCY
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.	The subject site is located on a sizeable precinct identified as Block 6 in the Randwick DCP 2013. Council's objectives are to continue the scale of development already completed. The location is predominately high density mixed use development on a busy main road. A "T" shaped building with the north/south oriented shaft will permit a reasonable density of dwellings and maximise access to light and ventilation. Inter-building separation meeting the ADG objectives can be provided to existing and future neighbouring buildings. The project seeks to be a "good neighbour" in that its scale, massing and general appearance sits well with adjacent developments. Subtle differences in materiality and quality of detailing will set it sightly apart. A substantial and well landscaped rooftop communal open space can be provided. Ample light, views and variety of amenity are available. The site can support a building of this scale.	Yes
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—	As noted above, the envelope and massing of the building directly respond the existing and emerging streetscape character. Subtle differences in materiality and quality of detailing will set it sightly apart. The envelope orientation and slenderness of the proposal will yield a superior ADG outcome than if the Living areas were oriented perpendicular to the proposal. The street wall form is consistent in alignment and scale with the neighbours and contributes to completing the precinct block. The overall height of the proposal is lower than its neighbours.	Yes

(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.	When the Police site is developed, it will have a “build to boundary” form and the street wall vision will be realised. The proposal on the subject site will not prevent that outcome.	
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.	The broader precinct is well served by established retail and commercial activity. The site is in close proximity to ample public transport. The apartments are at the lower end of the size range, meaning more can be accommodated in the envelope. This is seen as necessary in order to provide new housing stock at a reasonable price point. Light, vent and privacy statistics are satisfactory hence the increased density has not come at the expense of resident amenity.	Yes
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.	There is an opportunity to provide much needed new housing stock at reasonable cost. There is a good amenity outcome given the density of accommodation making the project suitable for owner occupiers and tenants. High quality communal open space permits a wide range of recreational use. The required compliment of Adaptable and Silver Living dwellings is provided to satisfy a wider the range of potential occupants. These factors make the project socially sustainable. The objectives of the ADG environmental outcomes are optimised. The narrow and small plates permit a high number of cross ventilated apartments. The constraints of the site dimensions, orientation and proximity to neighbours limit the access to winter light. Notwithstanding, over 70% receive 2 hours while preserving necessary privacy. Modest dwelling size, low maintenance materials and systems are factors that contribute to minimising entry and ongoing operating costs. The proposal is supported by waste management and resource consumption efficiency reports.	Yes

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.	A high quality landscape design is proposed. Having accepted that the site will be built to boundary, maximum use of podium and roof areas will be utilised. Level 2 will have sizeable private open spaces to the apartments at that level. On the east side, podium space will be given to Communal Open space. The L2 landscape creates an "internal view" for the neighbouring residents to the east. Landscaping will cover most of the roof area. There will be a range of open and sheltered spaces to permit a variety of activities. There are good district views from the roof so the resident and visitor amenity will be high.	Yes
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,	The apartments are compact, efficiently planned and take advantage of available light, views and ventilation. Access to generous and well landscaped communal open space is seen as the key amenity in the project to provide an alternative external space for residents. The ADG required amenity, storage and access is provided. Care has been taken to minimise the overshadowing and privacy impacts on neighbouring dwellings. The diversity of dwelling type and opportunity for future amalgamation of	Yes

(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.	dwellings makes the project occupiable by a wide range of residents.	
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.	The façade line fronts the Maroubra Road footpath. The security gate is slightly recessed to permit an identifiable three dimensional entry porch. Surveillance will be from the busy public frontage. Each entry door, lift and basement entry shutter is security intercom controlled.	Yes
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.	The proposed dwelling mix is considered appropriate. Given the small size of the floorplates, only a limited number of apartments can be accessed from each lobby thereby limiting the opportunity for casual interaction. The communal open space is where residents are encouraged to gather. The building structure will be concrete frame with non-loadbearing internal partitions. These partitions can be modified to join adjacent apartments in the future without structural implication, permitting multiple future configurations of bedroom, bedroom/office, bedroom/Living.	Yes

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.	Given the tight and relative dense street frontage, the proposal provides a restrained and simply expressed series of forms that are scaled to represent the internal use and fit the streetscape character. A restrained approach has been adopted to material selection so that detailing of the facades can be simple and effective. It is intended there be a similarity with the predominant appearance of the neighbouring developments, but executed in a tidier, better resolved manner. Windows are sized and oriented accordingly to the spaces they serve as well as preserving privacy. That palette consists of: - Textured facebrick to define the volume that fronts Maroubra Road façade. The surface pattern of the masonry units will offer subtle animation of the broad areas of masonry. Some hit/miss type brick detailing will add interest on the western façade and main entries. The western façade is seen as an art opportunity and whether it uses patterned brick or other material as the medium is to be determined. The northern wing will be clad in prefinished lightweight sheet. The punched windows and metal and glass louvre wintergarden balcony facades will make the whole wing read as a simple and crisply detailed form.	Yes