Stanley Street
Residential Development

[12-24 Stanley Street, Kogarah, NSW]

ADG CHECKLIST

scott carver

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ADG CHECK LIST

Apartment Design Guide checklist **12-24 Stanley Street, Kogarah NSW** **Prepared by Scott Carver**			**Date: 03/05/2017**
ADG Ref.	**Item description**	**Notes**	**Proposal Complies**
Part 3	**SITING THE DEVELOPMENT**		
3A (P44)	**Site Analysis (Appendix 1)**		
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.		Y
	Site Location Plan		Y
	Aerial Photograph		Y
	Location Context Plan		Y
	Site context and Survey Plan		Y
	Streetscape elevations and sections		Y
	Analysis		Y
3B (p48)	**Orientation**		
3B-1	Building types and layouts respond to the streetscape and site while optimising solar access within the development.		Y
	Buildings along the street frontage define the street, by facing it and incorporating direct access from the street.	Main building entrances and courtyards address both Stanley Street and Stanley lane	Y
	Where the street frontage is to the east or west, rear buildings are orientated to the north.		NA
	Where the street frontage is to the north or south, overshadowing to the south should be minimised and buildings behind the street frontage should be orientated to the east and west.	Stepping building heights which responds to the topography of the site minimise the overshadowing impact to the proposed neighbouring dwellings to the south.	Y
3B-2	Overshadowing of neighbouring properties is minimised during mid winter.		
	Living areas, private open space and communal areas receive solar access in accordance with sections '*3D-Communal and public open space*' , '*4L-Solar and daylight access*' .	The proposal complies with the 70% solar access requirement.	Y
	Solar access to living rooms, balconies and private open spaces of neighbours should be considered.	As mentioned above, the proposal is responsive to the topography of the site in relation to the allowable height to minimise overshadowing. Further to this the articulation of the form in the building split and building splay aims to allow light and vetilation to the proposed rear neighbouring dwellings and lane	Y
	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%.	The proposal does not overshadow dwellings to the south beyond the impact of the allowable DCP envelope for development on site	Y
	If the proposal will reduce the solar access of neighbours, building separation is increased beyond minimums contained in section *'3F-Visual privacy'* .	ADG building separation is applied to the south façade measured from the centreline of the lane.	Y
	Overshadowing should be minimised to the south or down hill by increased upper level setbacks.	The stepping building heights of the proposal minimises overshadowing to the neighbouring developments.	Y
	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.		Y

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	A minimum of 4 hours of solar access should be retained to solar collectors on neighbouring buildings.		NA
3C (p50)	**Public domain interface**		
3C-1	Transition between private and public domain is achieved without compromising safety and security.		Y
	Terraces, balconies and courtyard apartments have direct street entry, where appropriate.	All ground floor apartments have access to the street.	Y
	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.		Y
	Upper level balconies and windows should overlook the public domain.	Upper level balconies overlook and keep surveillance over the communal open space at the building entry and towards Stanley Street and Stanley Lane	Y
	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.	Solid fences along street frontages are maintained at 1m with visually permeable planting screening to private courtyards	Y
	Length of solid walls should be limited along street frontages.	Ground level facades have been articulated with a finer grain,blade walls framing the double height townouses to the street frontages and a range of material treatments to help mitigate long stretches of façade. See Stanley Street and Stanley Lane elevations for details.	Y
	z	The "sky bridges" between the buildings allow for moments of casual interaction between residents and will accommodate seating elements. Mailboxes are to be co-located alongside lobby entries and clearly as belonging to the development. Their design intends to permit ease-of-access for delivery and also maintain surveillance of the mail area from public and private (lobby) areas.	Y
	In developments with multiple buildings and/or entries, pedestrian entries and spaces associated with individual buildings/entries should be differentiated to improve legibility for residents, using a number of the following design solutions: - architectural detailing - changes in materials - plant species - colours	Building entries are located on different street frontages. The proposal incorporates awnings, signage and considered visual elements to highlight building entry points as separate to private courtyards.	Y
	Opportunities for people to be concealed should be minimised.	Refer to the SEE	Y
3C-2	Amenity of the public domain is retained and enhanced		y
	Planting softens the edges of any raised terraces to the street, for example above sub-basement car parking.	Planting is proposed for the raised terraces to the street to soften the edges of the development	Y
	Mail boxes should be located in lobbies, perpendicular to the street alignment or integrated into front fences where individual street entries are provided.	Mailbox' are to be co-located alongside lobby entries and clearly as belonging to the development. Their design intends to permit ease-of-access for delivery and also maintain surveillance of the mail area from public and private (lobby) areas.	Y
	The visual prominence of underground car park vents should be minimised and located at a low level where possible.	Carpark vents are located entirely on the Stanley Lane frontage and are co-located above the carpark entry	Y
	Substations, pump rooms, garbage storage areas and other service requirements should be located in basement car parks or out of view.	Garbage room, pump rooms are located at basement 1 and basement 2.	Y

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	Ramping for accessibility should be minimised by building entry location and setting ground floor levels in relation to footpath levels.	Minor ramp (1:40 Grade) is required for residential building entry from Stanley Street due to the change of footpath level.	
	Durable, graffiti resistant and easily cleanable materials should be used.		Y
	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	The development is adjacent to a proposed through site link on the neighbouring property. The proposal positively addresses this space through setting back to the through site link and by locating the deep soil planting zone adjacent to the link to soften the impact of the development. The proposed planting deliniates public throughfare and the private development.	Y
	On sloping sites protrusion of car parking above ground level should be minimised by using split levels to step underground car parking.	Car park protrusion is mitigated and softened by the use of planting and through the incorporation of a deep soil zone on the north eastern corner of the site. See Stanley Street elevation	N

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3D (p54)	**Communal and public open space**		
3D-1	An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping.		
	Communal open space has a minimum area equal to 25% of the site.	The development proposes numerous varied communal open spaces which total to 45% of the site area. They are as follows: Rooftop communal garden: 344sqm Skybridge zones: 392sqm Ground Floor Landscaped entries: 162sqm Total common open space provided: 898sqm (37% of site area)	Y
	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).	The rooftop communal open space area recieves direct sunlight throughout the day on the 21st of June. (See sun eye view diagram, sheet DA901)	Y
	Communal open space should be consolidated into a well designed, easily identified and usable area.	The rooftop communal open space has been very well considered, and provides seating & meeting areas. The proportions of the lawns, green space are proposed to open up to sunlight and northern views and to create a buffer to neighbouring devlopements to the south. Refer to Landscape plans	Y
	Communal open space should have a minimum dimension of 3m, and larger developments should consider greater dimensions.	Proposed communal podium dimensions are generous; 344 sqm at the rooftop with dimensions of 20m depth and 19m width.	Y
	Communal open space should be co-located with deep soil areas.	Communal open space is not co-located with deep soil zones however deep planter boxes can be provided to promote the healthy growth of mature, significant plants.(Refer to landscape plans)	N
	Direct, equitable access should be provided to communal open space areas from common circulation areas, entries and lobbies.	Direct and equitable access is provided from building entry and each residential level through lift access.	Y
	Where communal open space cannot be provided at ground level, it should be provided on a podium or roof.	In addition to the rooftop communal open space, there are communal open gardens provided at the building entries to Stanley Street and Stanley Lane which provide planting, seating areas and facilitate casual interaction between residents.	Y
	Where developments are unable to achieve the design criteria, such as on small lots, sites within business zones, or in a dense urban area, they should: - provide communal spaces elsewhere such as a landscaped roof top terrace or a common room - provide larger balconies or increased private open space for apartments - demonstrate good proximity to public open space and facilities and/or provide contributions to public open space	As mentioned above, the proposal provides rooftop communal open space and varied alternative areas of communal open areas throughout the developement. The site is also well served by public open space (Hogben park) within a distance of 500m.	NA
3D-2	Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting.		
	Facilities are provided within communal open spaces and common spaces for a range of age groups (see also '4F Common circulation and spaces'), incorporating some of the following elements: - seating for individuals or groups - barbecue areas - play equipment or play areas - swimming pools, gyms, tennis courts or common rooms	Communal open space has been well considered: Provides seating, meeting areas a BBQ and a fire pit/seating area. Also lawn, tree zones are provided for shade and visual amenity. Refer to Landscape plans.	Y

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	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.	Position of taller buildings to the west in relation the the communal open spaces allow winter sunlight to central open spaces and provide shade in summer. Communal open design has been well considered.	Y
	Visual impacts of services should be minimised, including location of ventilation duct outlets from basement car parks, electrical substations and detention tanks.	Service risers have been reviewed and incorporated into the landscape to minimise their visual impact. See Landscape plans	Y
3D-3	Communal open space is designed to maximise safety.		
	Communal open space and the public domain should be readily visible from habitable rooms and private open space areas while maintaining visual privacy. Design solutions may include: - bay windows - corner windows - balconies	Communal open spaces at ground floor are visible from habitable rooms and balconies over looking these spaces. However the nature of the rooftop communal open space prohibits visibility from within the apartments	Y
	Communal open space should be well lit.	Refer to Landscape plan & report.	Y
	Where communal open space/facilities are provided for children and young people they are safe and contained.	Refer to Landscape plan & report.	NA
3D-4	Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood.		
	The public open space should be well connected with public streets along at least one edge.	No public space provided in proposal	NA
	The public open space should be connected with nearby parks and other landscape elements.	No public space provided in proposal	NA
	Public open space should be linked through view lines, pedestrian desire paths, termination points and the wider street grid.	No public space provided in proposal	NA
	Solar access should be provided year round along with protection from strong winds.	No public space provided in proposal	NA
	Opportunities for a range of recreational activities should be provided for people of all ages.	No public space provided in proposal	NA
	A positive address and active frontages should be provided adjacent to public open space.	No public space provided in proposal	NA
	Boundaries should be clearly defined between public open space and private areas.	As mentioned above, the proposed development is adjacent to a proposed through site link on the neighbouring property. The proposal positively addresses this space through setting back to the through site link and by locating the deep soil planting zone adjacent to the link to soften the impact of the development. The proposed planting deliniates public throughfare and the private development.	Y
3E (p60)	**Deep soil zones**		
3E-1	Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality.		

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	Deep soil zones are to meet the following minimum requirements: Site Area = <650sqm | no minimum dimension | DSZ is 7% of site area Site Area = 650sqm - 1,500sqm | 3m minimum dimension | DSZ is 7% of site area Site Area = >1,500sqm | 6m minimum dimension | DSZ is 7% of site area	The scheme proposes 2 x deep soil areas, one in the south west corner at an area of 120sqm and one in the north east corner at an area of 37sqm. In total 157sqm which is equivalent to 6.4% of the site area. Due to the constrained nature of the site with regards to its depth, urban character and dual frontages it is difficult to achieve wholly compliant deep soil areas. The DCP required laneway dedication of 1200mmto the rear boundary, which is equivalent to 3.6% of the site area, has impacted the ability to achieve ADG compliant deep soil zone depth across the entire site. The zones proposed, from a performance perspective ultimately achieve the objectives of ADG deep soil in that they support tree growth (south western deep soil zone) and promote management of water and drainage (north eastern zone).	N
	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		NOTE
	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	Refer to Landscape plan and report.	NOTE
	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.	The design cirteria is difficult to achieve on site given the proposed residential density and vision for Kogarah North as a medium to high density urban area. This ability to achieve the deep soil requirement is further impacted by the DCP requirement for a 1200mm dedication along the southern bounday.As mentioned the scheme proposes 2 x deep soil areas which total 157sqm which is equivalent to 6.4% of the site area. Additional planting is proposed throughout the scheme on the sky bridge, rootop and at the ground floor entries.	

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3F (p62)	**Visual privacy**		
3F-1	Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy.		
	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: - up to 4 levels | 6m (habitable rooms and balconies) | 3m (non-habitable rooms) - 5-8 levels | 9m | 4.5m - 9+ levels | 12m | 6m Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room. Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties.	The proposal is compliant with separation distances from side boundaries through setting back habitable room windows 9m above the fourth level and through the application of blank walls and privacy screening. 7.5m separation from the eastern side boundary and 6m weighted average setback to the western side boundary are applied above Level 4. Privacy screens are provided to bedroom windows facing the side boundaries. Similarly, given that there is no rear setback control in the DCP, the proposal applies ADG building separation measured from the centreline of the laneway, 6m setback to the podium and 9m setback to the tower. This arrangement is to avoid a 'wedding cake' appearance and most importantly to avoid overlooking issues to potential future developments to the north and south.	Y
	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.		NOTE
	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		NOTE
	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	Proposed residential building private open spaces and living area have views to streets and/or communal open spaces. The southern elevation and floorplate has been designed and rotated to orient views of living spaces down Stanley lane rather than into the proposed dwellings to the south	Y
	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		NA
	Direct lines of sight should be avoided for windows and balconies across corners.		NOTE
	No separation is required between blank walls.		NOTE
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.		

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	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	Proposed privacy screen and planter boxes to ground floor terraces close to access paths to the building entry increase visual separation and privacy. In addition to this windows which face into the building split are opaque, allowing light and air to enter however provinding visual privacy.	Y
	Bedrooms, living spaces and other habitable rooms should be separated from gallery access and other open circulation space by the apartment's service areas		Y
	Balconies and private terraces should be located in front of living rooms to increase internal privacy.		Y
	Windows should be offset from the windows of adjacent buildings.		Y
	Recessed balconies and/or vertical fins should be used between adjacent balconies.		Y
3G (p66)	**Pedestrian access and entries**		
3G-1	Building entries and pedestrian access connects to and addresses the public domain		
	Multiple entries (including communal building entries and individual ground floor entries) should be provided to activate the street edge.	Street edges are activated by builing entry points for each respective street frontage and individual ground floor courtyard entries to the lane and street frontages.	Y
	Entry locations relate to the street and subdivision pattern and the existing pedestrian network.	Public entry locations have been designed to break down the streetscape bulk and relate to the pedestrian network. Residents of the building can use the multiple entries to connect to the exiting and future pedestrian networks.	Y
	Building entries should be clearly identifiable and communal entries should be clearly distinguishable from private entries.	Communal entry points are identified through the articulation of the built form in the building split. This is complimented by the proposed landscape gardens leading to the residential lobbies and the sculptural awning structure. This apploes to both the Stanley Street and Stanley Lane frontage.	Y
	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.		NA
3G-2	Access, entries and pathways are accessible and easy to identify		
	Building access areas including lift lobbies, stairwells and hallways should be clearly visible from the public domain and communal spaces.	Glazing treatments and lobby orientation intends to maintain public surveillance and transparency.	Y
	The design of ground floors and underground car parks minimise level changes along pathways and entries.	The ground floor lobby relates to the sloping topography along Stanley Street. There is a 1:40 pathway leading to the lobby level from the street footpath	Y

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	Steps and ramps should be integrated into the overall building and landscape design.	See Landscape Plan and Report.	Y
	For large developments 'way finding' maps should be provided to assist visitors and residents.	Distinctive awning for residential entries are proposed.	Y
	For large developments electronic access and audio/video intercom should be provided to manage access.		Y
3G-3	Large sites provide pedestrian links for access to streets and connection to destinations		
	Pedestrian links through sites facilitate direct connections to open space, main streets, centres and public transport.		NA
	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.		NA

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3H (p68)	**Vehicle access**		
3H-1	Vehicle Access points are deisgned and located to achieve safety, minimise conflicts between pedestrians and vehicles and create a high quality streetscape.		Y
	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.	Roller shutters employed to minimise voids in façade	Y
	Car park entries should be located behind the building line.		Y
	Vehicle entries should be located at the lowest point of the site minimising ramp lengths, excavation and impacts on the building form and layout.		Y
	Car park entry and access should be located on secondary streets or lanes where available.	Car park entry and loading is located on the Stanley lane frontage	Y
	Vehicle standing areas that increase driveway width and encroach into setbacks should be avoided.		NA
	Access point locations should avoid headlight glare to habitable rooms.		Y
	Adequate separation distances should be provided between vehicle entries and street intersections.		NA
	The width and number of vehicle access points should be limited to the minimum		Y
	Visual impact of long driveways should be minimised through changing alignments and screen planting.		NA
	The need for large vehicles to enter or turn around within the site should be avoided.		NA
	Garbage collection, loading and servicing areas are screened.	Proposed garbage room is located in loading dock area	
	Clear sight lines should be provided at pedestrian and vehicle crossings.		Y
	Traffic calming devices such as changes in paving material or textures should be used where appropriate.	Refer to TRAFFIX report	Y
	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		Y
3J (p70)	**Bicycle and car parking**		
3J-1	Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas		

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	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.	Refer to Traffic and carparking report by TRAFFIX.	
	Where a car share scheme operates locally, provide car share parking spaces within the development. Car share spaces, when provided, should be on site.		NA
	Where less car parking is provided in a development, council should not provide on street resident parking permits.		NA
3J-2	Parking and facilities are provided for other modes of transport.		
	Conveniently located and sufficient numbers of parking spaces should be provided for motorbikes and scooters.		Y
	Secure undercover bicycle parking should be provided that is easily accessible from both the public domain and common areas.		Y
	Conveniently located charging stations are provided for electric vehicles, where desirable.		NA
3J-3	Car park design and access is safe and secure		
	Supporting facilities within car parks, including garbage, plant and switch rooms, storage areas and car wash bays can be accessed without crossing car parking spaces.	Garbage, plant and switch rooms, storage areas, Bicycle zones can be accessed without crossing car parking spaces.	Y
	Direct, clearly visible and well lit access should be provided into common circulation areas.		Y
	A clearly defined and visible lobby or waiting area should be provided to lifts and stairs.		Y
	For larger car parks, safe pedestrian access should be clearly defined and circulation areas have good lighting, colour, line marking and/or bollards.		Y
3J-4	Visual and environmental impacts of underground car parking are minimised.		
	Excavation should be minimised through efficient car park layouts and ramp design.		
	Car parking layout should be well organised, using a logical, efficient structural grid and double loaded aisles.		Y
	Protrusion of car parks should not exceed 1m above ground level. Design solutions may include stepping car park levels or using split levels on sloping sites.	Car park protrusion is not more than 1m and it mitigated by planting screening and deep soil zones	Y
	Natural ventilation should be provided to basement and sub basement car parking areas.	Basement carparking levels will be mechanical ventilated.	
	Ventilation grills or screening devices for car parking openings should be integrated into the facade and landscape design.	Carpark ventilation rooms and vents to be incorporated into podium design and landscape.	Y
3J-5	Visual and environmental impacts of on-grade car parking are minimised		
	On-grade car parking should be avoided.	No open on grade carparking to be provided.	Y

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	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		NA
3J-6	Visual and environmental impacts of above ground enclosed car parking are minimised.		
	Exposed parking should not be located along primary street frontages.	NA	NA
	Screening, landscaping and other design elements including public art should be used to integrate the above ground car parking with the facade. Design solutions may include: - car parking that is concealed behind the facade, with windows integrated into the overall facade design (approach should be limited to developments where a larger floor plate podium is suitable at lower levels) - car parking that is 'wrapped' with other uses, such as retail, commercial or two storey Small Office/Home Office (SOHO) units along the street frontage	NA	NA
	Positive street address and active frontages should be provided at ground level		Y
Part 4	**DESIGNING THE BUILDING**		
4A (p78)	**Solar and daylight access**		
4A-1	To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space.		
	Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9am and 3pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas.	Complies. 73% of apartments receive 2 hours solar from 9-3pm on June 21st	Y
	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.		NOTE

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	A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter.	Does not comply. Due to the orientation of the site to the north and being an infill development alongside two other proposals of the same urban scale, 23% of dwellings (predominately on the southern façade) do not receive direct sunlight. This southern frontage also faces privacy and overlooking issues, further constraining solar access. The amount of dwellings recieving no sun had been minimised through orienting dwellings on the east and west boundaries and corner apartments to the northern aspect. It is important to note that the apartments have broad extent of glazing to mximise daylight opportunities. In addition to this, residents have access to communal rooftop, in order to gain access to sunlight. Futhermore the apartments in question in the main have a primary orientation of glazing to the south-west of the living room with additional glazing to the south for ambient light.	N
	The design maximises north aspect and the number of single aspect south facing apartments is minimised.	Complies	Y
	Single aspect, single storey apartments should have a northerly or easterly aspect.	This has been considered and proposed where possible though the overall development achieves the required solar amenity outcomes.	
	Living areas are best located to the north and service areas to the south and west of apartments.		Y
	To optimise the direct sunlight to habitable rooms and balconies a number of the following design features are used: - dual aspect apartments - shallow apartment layouts - two storey and mezzanine level apartments - bay windows	Proposed apartments have been orientated to maximise sunlight and natural light. Dual aspect, corner apartments and two storey apartments are incorportated to the development.	
	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.		Y
	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.		NA
4A-2	Daylight access is maximised where sunlight is limited.		
	Courtyards, skylights and high level windows (with sills of 1,500mm or greater) are used only as a secondary light source in habitable rooms.		NOTE

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	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		NA
	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	Due to potential privacy issues given the proposed neighbouring dwellings to the south opaque glazing has been employed to increase reflected light into apartment living spaces while mitigating privacy and overlooking issues.	Y
4A-3	Design incorporates shading and glare control, particularly for warmer months.		
	A number of the following design features are used: - balconies or sun shading that extend far enough to shade summer sun, but allow winter sun to penetrate living areas - shading devices such as eaves, awnings, balconies, pergolas, external louvres and planting - horizontal shading to north facing windows - vertical shading to east and particularly west facing windows - operable shading to allow adjustment and choice - high performance glass that minimises external glare off windows, with consideration given to reduced tint glass or glass with a reflectance level below 20% (reflective films are avoided)		Y
4B (p82)	**Natural ventilation**		
4B-1	All habitable rooms are naturally ventilated		
	The building's orientation maximises capture and use of prevailing breezes for natural ventilation in habitable rooms		Y
	Depths of habitable rooms support natural ventilation	Habitable rooms have been designed in accordance with ADG. Habitable rooms are no more than 8m from the glass line. In addition to this secondary windows are provided to kitchen areas of some apartments.	Y
	The area of unobstructed window openings should be equal to at least 5% of the floor area served		Y
	Light wells are not the primary air source for habitable rooms		Y
	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	Adequate cross ventilation of apartments and habitable rooms is achieved through providing two points of operable openings which allow an opening area that is greater than 5% of the overall floor area for each apartment.	Y

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4B-2	The layout and design of single aspect apartments maximises natural ventilation.		
	Apartment depths are limited to maximise ventilation and airflow	Apartments depths have been kept to a minimum to provide for optimal cross ventilation. The primary living areas all remain within close proximity to openings.	Y
	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	Apart from the corner cross ventilation units on the podiun level, there are 12 single aspect - 2 Storey dwellings to the north on ground and first floor, which through their two storey nature provide a stack effect.	N

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4B-3	The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents.		
	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	Complies. Proposed 62% cross ventilated apartments in the first 9 levels. (61/98)	Y
	2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line		NA
	The building should include dual aspect apartments, cross through apartments and corner apartments and limit apartment depths	The proposal employs corner apartments to provide adequate natural ventilation. The building split helps facilitate natural cross ventilation to dwellings.	Y
	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)		NA
	Apartments are designed to minimise the number of corners, doors and rooms that might obstruct airflow		Y
	Apartment depths, combined with appropriate ceiling heights, maximise cross ventilation and airflow		Y
4C (p86)	**Ceiling heights**		
4C-1	Ceiling height achieves sufficient natural ventilation and daylight access		
	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	Complies.	
	Ceiling height can accommodate use of ceiling fans for cooling and heat distribution		NA
4C-2	Ceiling height increases the sense of space in apartments and provides for well proportioned rooms		
	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		NOTE
4C-3	Ceiling heights contribute to the flexibility of building use over the life of the building		
	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		NA

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4D (p88)	**Apartment size and layout**		
4D-1	The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity		
	1. Apartments are required to have the following minimum internal areas: Apartment type / Minimum internal area Studio / 35m2 1 bedroom / 50m2 2 bedroom / 70m2 3 bedroom / 90m2 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	Complies.	Y
	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	Complies.	Y
	Kitchens should not be located as part of the main circulation space in larger apartments (such as hallway or entry space)	Complies.	Y
	A window should be visible from any point in a habitable room	Complies.	Y
	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		NA
4D-2	Environmental performance of the apartment is maximised		
	1. Habitable room depths are limited to a maximum of 2.5 x the ceiling height *(in the case of a 2.7m ceiling height, this would be 2.7x2.5 = 6.75m)*	Complies.	
	2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window	Complies.	
	Greater than minimum ceiling heights can allow for proportional increases in room depth up to the permitted maximum depths *(in the case of open plan layouts this would be up to 3x the ceiling height, 2.7x3 = 8.1m)*		NOTE
	All living areas and bedrooms should be located on the external face of the building	All living areas and bedrooms have access to the exterior face of the building.	Y

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4D-3	Apartment layouts are designed to accommodate a variety of household activities and needs		
	1. Master bedrooms have a minimum area of 10m2 and other bedrooms 9m2 (excluding wardrobe space)	Complies.	Y
	2. Bedrooms have a minimum dimension of 3m (excluding wardrobe space)	Complies.	Y
	3. Living rooms or combined living/dining rooms have a minimum width of: • 3.6m for studio and 1 bedroom apartments • 4m for 2 and 3 bedroom apartments	Complies.	Y
	4. The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts		NA
	Access to bedrooms, bathrooms and laundries is separated from living areas minimising direct openings between living and service areas	Where possible this has been taken into consideration.	Y
	All bedrooms allow a minimum length of 1.5m for robes		Y
	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		Y
	Apartment 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		Y
4E (p92)	**Private open space and balconies**		
4E-1	Apartments provide appropriately sized private open space and balconies to enhance residential amenity		
	1. All apartments are required to have primary balconies as follows: Dwelling type/Minimum area/Minimum depth Studio apartments/4m2/na 1 bedroom apartments/8m2/2m 2 bedroom apartments/10m2/2m 3+ bedroom apartments/12m2/2.4m The minimum balcony depth to be counted as contributing to the balcony area is 1m	Complies.	Y
	2. For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15m² and a minimum depth of 3m	Complies.	Y
	Increased communal open space should be provided where the number or size of balconies are reduced		Y

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	Storage areas on balconies is additional to the minimum balcony size		NOTE
	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 proposal presents all of the units at or below 10 storeys. Those apartments proposed above 10 storeys are East facing. The wind report prepared by "Windtech' consultants indicates NE, W & SSW as the predominate directions for wind consideration.	NOTE
4E-2	Primary private open space and balconies are appropriately located to enhance liveability for residents		
	Primary open space and balconies should be located adjacent to the living room, dining room or kitchen to extend the living space	Complies.	Y
	Private open spaces and balconies predominantly face north, east or west	Majority apartments have primary open space and balconies to the west, east and north.	Y
	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		
4E-3	Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building		
	Solid, partially solid or transparent fences and balustrades are selected to respond to the location. They are designed to allow views and passive surveillance of the street while maintaining visual privacy and allowing for a range of uses on the balcony. Solid and partially solid balustrades are preferred	The proposal presents several balustrade typologies to suit different conditions. Balustrades are tuned to issues of privacy, solar access and façade articulation. See elevation for detail	Y
	Full width full height glass balustrades alone are generally not desirable		NA
	Projecting balconies should be integrated into the building design and the design of soffits considered		NA
	Operable screens, shutters, hoods and pergolas are used to control sunlight and wind	High performance glazing, façade screening elements and façade forms are intended to act as shading devices.	Y
	Balustrades are set back from the building or balcony edge where overlooking or safety is an issue		Y
	Downpipes and balcony drainage are integrated with the overall facade and building design		Y
	Air-conditioning units should be located on roofs, in basements, or fully integrated into the building design	AC units are located on roof	Y
	Where clothes drying, storage or air conditioning units are located on balconies, they should be screened and integrated in the building design	Solid upstand balconies and expanded metal mesh balustrades screeen clothes drying and remove clutter	Y
	Ceilings of apartments below terraces should be insulated to avoid heat loss		Y
	Water and gas outlets should be provided for primary balconies and private open space		Y
4E-4	Private open space and balcony design maximises safety		
	Changes in ground levels or landscaping are minimised	Refer to Landscape Plan and Report.	
	Design and detailing of balconies avoids opportunities for climbing and falls	Refer to Landscape Plan and Report.	

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4F (p96)	**Common circulation and spaces**		
4F-1	Common circulation spaces achieve good amenity and properly service the number of apartments		
	1. The maximum number of apartments off a circulation core on a single level is eight	The proposal has 10 apartments per floor at typical level. Significant daylight and natural ventilation is provided to the common circulation spaces through the open air sky bridge.	
	2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40	As lift consultant advised, 2 lifts provided for each building are sufficient.	
	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	To improve amenity in circulation spaces the development: -Provides wider foyer areas , potential area for seating. -Provides large openings for air and natural light	Y
	Daylight and natural ventilation should be provided to all common circulation spaces that are above ground	Daylight is provided to all common areas and apartment corridor spaces.	Y
	Windows should be provided in common circulation spaces and should be adjacent to the stair or lift core or at the ends of corridors	Complies	Y
	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	Wider areas are proposed at apartment entries	Y
	Design common circulation spaces to maximise opportunities for dual aspect apartments, including multiple core apartment buildings and cross over apartments		NA
	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	Amenity for common circulation spaces has been considered by: Providing daylight, outlook and ventilation to common circulation spaces.	
	Where design criteria 1 is not achieved, no more than 12 apartments should be provided off a circulation core on a single level	Complies	Y
	Primary living room or bedroom windows should not open directly onto common circulation spaces, whether open or enclosed. Visual and acoustic privacy from common circulation spaces to any other rooms should be carefully controlled	Complies. Acoustic treatments to consider the transfer of sound between private and communal zones.	
4F-2	Common circulation spaces promote safety and provide for social interaction between residents		

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	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	Direct and legible access provided between lift lobby and apartment entries. Aparmtent entries are identifies by wider areas at doors and the lift is access from the open sky bridge creating a clear dilineation between vertical circulation and apartments entries.	
	Tight corners and spaces are avoided		NOTE
	Circulation spaces should be well lit at night	Corridor spaces to be well illuminated.	Y
	Legible signage should be provided for apartment numbers, common areas and general wayfinding	All apartments to be clearly indicated with signage highlighting paths of travel and description of areas.	Y
	Incidental spaces, for example space for seating in a corridor, at a stair landing, or near a window are provided		NOTE
	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	Outdoor BBQ picnic areas to be provided in communal open space on rooftop landscaping	Y
	Where external galleries are provided, they are more open than closed above the balustrade along their length		Y
4G (p100)	**Storage**		
4G-1	Adequate, well designed storage is provided in each apartment		NOTE
	1. In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided: Dwelling type /Storage size volume Studio apartments/4m3 1 bedroom apartments/6m3 2 bedroom apartments/8m3 3+ bedroom apartments/10m3 At least 50% of the required storage is to be located within the apartment	Proposed 50% of required storage inside the apartment and other 50% located at basement car parking level.	Y
	Storage is accessible from either circulation or living areas		Y
	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	Storage is internalised in apartments.	Y
	Left over space such as under stairs is used for storage	Two storey units to consider under stair storage.	NOTE
4G-2	Additional storage is conveniently located, accessible and nominated for individual apartments		NA
	Storage not located in apartments is secure and clearly allocated to specific apartments	Storage cages in car park to be located in areas visible and surveilled. Those cages not attached to a unit-specific car spaces will be indicated through signage and located nearest to the corresponding apartments core.	Y
	Storage is provided for larger and less frequently accessed items	Basement storage cages allow for the storage of larger / bulkier items	NOTE
	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	All carparking spaces to remain unimpeded by storage cages.	Y
	If communal storage rooms are provided they should be accessible from common circulation areas of the building		NA
	Storage not located in an apartment is integrated into the overall building design and is not visible from the public domain		Y
4H (p102)	**Acoustic privacy**		

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4H-1	Noise transfer is minimised through the siting of buildings and building layout		Y
	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)	The proposal minimises noise privacy through employing ADG building separation to the side and rear boundaries. Further to this, the planning of the apartment layouts orients living spaces away from neighbouring developments to the south to minimise noise transfer and privacy.	Y
	Window and door openings are generally orientated away from noise sources		Y
	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		Y
	Storage, circulation areas and non-habitable rooms should be located to buffer noise from external sources		NOTE
	The number of party walls (walls shared with other apartments) are limited and are appropriately insulated		Y
	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		Y

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4H-2	Noise impacts are mitigated within apartments through layout and acoustic treatments	See Acoustic Report	Y
	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	Open plan apartment arrangement groups kitchen and living spaces together. Bedrooms and bathroom spaces generally have offset entries and openings with respects to primary living spaces.	Y
	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		Y
4J (p104)	**Noise and Pollution**		
4J-1	In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings	The proposal is not sited adjacent to any major noise sources such as rail corridors or heavy road infrastructure.	NA
	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, nonhabitable rooms can provide a buffer • where solar access is in the same direction as the noise source, dual aspect apartments with shallow building depths are preferable • landscape design reduces the perception of noise and acts as a filter for air pollution generated by traffic and industry	The proposal is not sited adjacent to any major noise sources such as rail corridors or heavy road infrastructure.	NA
	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		-
4J-2	Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission		Y

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	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	Provides solid balustrades on lower levels near vehicle entry points and streets to ameliorate noise level from streets.	Y
4K	**Apartment Mix**		
4K-1	A range of apartment types and sizes is provided to cater for different household types now and into the future		
	A variety of apartment types is provided		Y
	The apartment mix is appropriate, taking into consideration: • the distance to public transport, employment and education centres • the current market demands and projected future demographic trends • the demand for social and affordable housing • different cultural and socioeconomic groups	The apartment mix presents a variety of unit sizes and market offers in varied formats. The proposal sits within 600m of Kogarah train station and is within comfortable walking distance. The mix presents standard units, and adaptable units all of which number the required percentages.	Y
	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	Adaptable apartment typologies are proposed to ensure the development caters for residents in varied stages of mobility and access.	Y
4K-2	The apartment mix is distributed to suitable locations within the building		
	Different apartment types are located to achieve successful facade composition and to optimise solar access	Different apartment types present a range of façade outcomes and articulation. Balcony and balustrade design incorporates a range of forms and material compositions to lend diversity to the façade and amenity to apartments. Precast concrete panels clad key moments of the facade to highlight its form, expressing verticality in the facade	Y
	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	Larger apartments are proposed for the rooftop with expansive district views	Y
4L (p108)	**Ground Floor Apartments**		
4L-1	Street frontage activity is maximised where ground floor apartments are located		
	Direct street access should be provided to ground floor apartments		Y
	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		Y
	Retail or home office spaces should be located along street frontages		Y
	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		NA
4L-2	Design of ground floor apartments delivers amenity and safety for residents		

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	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	All courtyards are landscaped with screening planing and setback 1.6m fron the street boundary along Stanley Street. Apartments on the eastern podium are elevated 1m above street level	Y
	Solar access should be maximised through: • high ceilings and tall windows • trees and shrubs that allow solar access in winter and shade in summer	Majority of ground floor dwellings are double storey terrace apartment typologies	Y

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4M (p110)	**Facades**		
4M-1	Building facades provide visual interest along the street while respecting the character of the local area		
	Design solutions for front building facades may include: • a composition of varied building elements • a defined base, middle and top of buildings • revealing and concealing certain elements • changes in texture, material, detail and colour to modify the prominence of elements	A range of facade treatments have been considered for the proposal. Each tower form is articulated through a different precast concrete panel iteration.A heirarchy of elements is established between the glazing balcony openings, the precast and screening elements on the facade which provide visual interest and contribute to the composition. Furthermore at a fine grain level different textures and patterns are applied to the precast concrete panels. See Elevations and 3D views	
	Building services should be integrated within the overall facade	Building services such as risers, fire stairs and stair pressure shafts, elevator cores have all been incorporated inside the buildings bulk leaving free the façade of building mechanics and services.	Y
	Building facades should be well resolved with an appropriate scale and proportion to the streetscape and human scale. Design solutions may include: • well composed horizontal and vertical elements • variation in floor heights to enhance the human scale • elements that are proportional and arranged in patterns • public artwork or treatments to exterior blank walls • grouping of floors or elements such as balconies and windows on taller buildings	Refer to Elevations and 3D views	Y
	Building facades relate to key datum lines of adjacent buildings through upper level setbacks, parapets, cornices, awnings or colonnade heights	Datum's have been aligned to existing structures on the developments Eastern and Western Boundaries. On the Stanley St elevation the proposals podium is aligned to it's neighbouring podium height. Similarly the tower height along the Stanley Street frontage steps up the topography to follow the DCP height plane and align to the neighbouring tower on Victoria Road	Y
	Shadow is created on the facade throughout the day with building articulation, balconies and deeper window reveals	The vertical podium blade walls, textured precast panels, the building split, balcony forms, shading panels and the rotated floorplate orientation all help to lend a variety of shadow patterns which draw across the facades of the proposal to articulate depth and avoid presenting a 'blank wall' condition.	Y
4M-2	Building functions are expressed by the facade		
	Building entries should be clearly defined	The built form articulation, the landscaping and designed awnings highlight building entry points.	Y
	Important corners are given visual prominence through a change in articulation, materials or colour, roof expression or changes in height	Tower form facing the adjacent Through Site Link pushes our to match the tower alignment established by the neighbour.	Y
	The apartment layout should be expressed externally through facade features such as party walls and floor slabs		Y
4N (p112)	**Roof Design**		
4N-1	Roof treatments are integrated into the building design and positively respond to the street		

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	Roof design relates to the street. Design solutions may include: • special roof features and strong corners • use of skillion or very low pitch hipped roofs • breaking down the massing of the roof by using smaller elements to avoid bulk • using materials or a pitched form complementary to adjacent buildings	The roofs perimeter follows that ofStanley Street and Stanley Lane's line holding the streets form and shape. Surrounding buildings are not of a higher elevation than the proposed developments roof line. Current land-use zoning outlines that future development is to keep in line with the proposal heights preventing the potential issue of overlooking an ill considered roof space.	Y
	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	Roof design is flat and does not increase a proportional bulk above the top level of apartments. A parapet level sits above the top level of apartments to cap the forms appearance.	Y
4N-2	Opportunities to use roof space for residential accommodation and open space are maximised		
	Habitable roof space should be provided with good levels of amenity. Design solutions may include: • penthouse apartments • dormer or clerestory windows • openable skylights		NOTE
	Open space is provided on roof tops subject to acceptable visual and acoustic privacy, comfort levels, safety and security considerations	Refer to Landscape Architect Report	Y
4N-3	Roof design incorporates sustainability features		Y
	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		NA
	Skylights and ventilation systems should be integrated into the roof design		Y
4O (p114)	**Landscape Design**		
4O-1	Landscape design is viable and sustainable	Yes	
	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	Relevant elements provided with exception of bio-filtration gardens. Refer Landscape plan and report.	Y
	Ongoing maintenance plans should be prepared	Yes	Y
	Microclimate is enhanced by: • appropriately scaled trees near the eastern and western elevations for shade • a balance of evergreen and deciduous trees to provide shading in summer and sunlight access in winter • shade structures such as pergolas for balconies and courtyards	Mixed tree species are provided as wind break and shading canopies. Pergola also provided on podium courtyard. Refer Landscape plan and report.	Y
	Tree and shrub selection considers size at maturity and the potential for roots to compete.	Yes. Refer Landscape plan and report.	Y
4O-2	Landscape design contributes to the streetscape and amenity	Yes. Refer Landscape plan and report.	

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	Landscape design responds to the existing site conditions including: • changes of levels • views • significant landscape features including trees and rock outcrops	Yes. Refer Landscape plan and report.	O
	Significant landscape features should be protected by: • tree protection zones • appropriate signage and fencing during construction	Refer arborist report for further information.	Y
	Plants selected should be endemic to the region and reflect the local ecology	Species will be in accordance with DCP requirement. Refer Landscape plan and report.	Y

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4P (p116)	**Planting on Structures**		
4P-1	Appropriate soil profiles are provided	Yes. Refer Landscape plan and report.	
	Structures are reinforced for additional saturated soil weight	Architects & Structural Engineer to comment	O
	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	Yes. Soil depth in accordance with ADG requirement. Refer Landscape plan and report.	Y
	Minimum soil standards for plant sizes should be provided in accordance with Table 5	Yes. Refer Landscape plan and report.	Y
4P-2	Plant growth is optimised with appropriate selection and maintenance	Yes. Refer Landscape plan and report.	
	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	Yes, planting species are responding to site climate.	y
	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		Y
4P-3	Planting on structures contributes to the quality and amenity of communal and public open spaces		
	Building design incorporates opportunities for planting on structures. Design solutions may include: • green walls with specialised lighting for indoor green walls • wall design that incorporates planting • green roofs, particularly where roofs are visible from the public domain • planter boxes Note: structures designed to accommodate green walls should be integrated into the building facade and consider the ability of the facade to change over time	Refer Landscape plan and report.	Y
4Q (p118)	**Universal Design**		
4Q-1	Universal design features are included in apartment design to promote flexible housing for all community members		
	Developments achieve a benchmark of 20% of the total apartments incorporating the Liveable Housing Guideline's silver level universal design features		
4Q-2	A variety of apartments with adaptable designs are provided		
	Adaptable housing should be provided in accordance with the relevant council policy	The proposal provides the outlined number of adaptable apartments in the DCP.	Y
	Design solutions for adaptable apartments include: • convenient access to communal and public areas • high level of solar access • minimal structural change and residential amenity loss when adapted • larger car parking spaces for accessibility • parking titled separately from apartments or shared car parking arrangements		Y
4Q-3	Apartment layouts are flexible and accommodate a range of lifestyle needs		

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	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		NA
4R (p120)	**Adaptive Reuse**		
4R-1	New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place		
	Design solutions may include: • new elements to align with the existing building • additions that complement the existing character, siting, scale, proportion, pattern, form and detailing • use of contemporary and complementary materials, finishes, textures and colours		NA
	Additions to heritage items should be clearly identifiable from the original building		NA
	New additions allow for the interpretation and future evolution of the building		NA
4R-2	Adapted buildings provide residential amenity while not precluding future adaptive reuse		
	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		NA
	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		NA
4S (p122)	**Mixed Use**		
4S-1	Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement		
	Mixed use development should be concentrated around public transport and centres		NA

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	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		NA

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4S-2	Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents		NA
	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		NA
	Landscaped communal open space should be provided at podium or roof levels		NA
4T (p124)	**Awnings and Signage**		
4T-1	Awnings are well located and complement and integrate with the building design		
	Awnings should be located along streets with high pedestrian activity and active frontages	Awnings are to be provided at building entries.	Y
	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		NA
	Awnings should be located over building entries for building address and public domain amenity	Designed awnings are to be provided over building entry points.	Y
	Awnings relate to residential windows, balconies, street tree planting, power poles and street infrastructure		Y
	Gutters and down pipes should be integrated and concealed		Y
	Lighting under awnings should be provided for pedestrian safety		NA
4T-2	Signage responds to the context and desired streetscape character		
	Signage should be integrated into the building design and respond to the scale, proportion and detailing of the development		Y
	Legible and discrete way finding should be provided for larger developments	To be provided.	Y
	Signage is limited to being on and below awnings and a single facade sign on the primary street frontage		NA
4U (p126)	**Energy Efficiency**		
4U-1	Development incorporates passive environmental design		
	Adequate natural light is provided to habitable rooms (see 4A Solar and daylight access)		Y
	Well located, screened outdoor areas should be provided for clothes drying	Solid and semi solid balcony edges to screen clothes drying to lower levels.	Y
4U-2	Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer		

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	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	Refer to Windtech Basix report re glazing. The built form does evidence balcony overhangs and designed shading devices to mitigate solar impacts upon the apartments.	Y
	Provision of consolidated heating and cooling infrastructure should be located in a centralised location (e.g. The basement)	Proposed apartments have individual stand alone conditioning units.	-
4U-3	Adequate natural ventilation minimises the need for mechanical ventilation		
	A number of the following design solutions are used: • rooms with similar usage are grouped together • natural cross ventilation for apartments is optimised • natural ventilation is provided to all habitable rooms and as many non-habitable rooms, common areas and circulation spaces as possible	The proposal achieves the required 60% of apartments below 9 storey's acting as cross ventilated apartments.	Y
4V (p128)	**Water Management and Conservation**		
4V-1	Potable water use is minimised		Y
	Water efficient fittings, appliances and waste water reuse should be incorporated		Y
	Apartments should be individually metered		Y
	Rainwater should be collected, stored and reused on site	Complies.	Y
	Drought tolerant, low water use plants should be used within landscaped areas		Y
4V-2	Urban stormwater is treated on site before being discharged to receiving waters	Yes, in accordance with Council Policy	Y
	Water sensitive urban design systems are designed by a suitably qualified professional	N/A, only gross pollutants required to be treated in accordance with Council policy	Y
	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	Hydraulic Engineer to comment on water re-use. Infiltration, bio-retention, and rain gardens are N/A	Y
4V-3	Flood management systems are integrated into site design	N/A, site not affected by flooding	
	Detention tanks should be located under paved areas, driveways or in basement car parks	Yes, in accordance with Council Policy	Y
	On large sites parks or open spaces are designed to provide temporary on site detention basins		Y
4W (p130)	**Waste Management**		
4W-1	Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents	Proposed waste storage facilities are located at basement 1. Refr Waste report.	y
	Adequately sized storage areas for rubbish bins should be located discreetly away from the front of the development or in the basement car park	Complies	Y
	Waste and recycling storage areas should be well ventilated	Complies	Y
	Circulation design allows bins to be easily manoeuvred between storage and collection points	Complies	Y

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	Temporary storage should be provided for large bulk items such as mattresses	Complies	Y
	A waste management plan should be prepared	Yes	Y
4W-2	Domestic waste is minimised by providing safe and convenient source separation and recycling		Y
	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	Complies	Y
	Communal waste and recycling rooms are in convenient and accessible locations related to each vertical core	Complies	Y
	For mixed use developments, residential waste and recycling storage areas and access should be separate and secure from other uses	Complies	Y
	Alternative waste disposal methods such as composting should be provided	Note	-