NORDON · JAGO
ARCHITECTS

SEPP 65 Design Verification Statement

Pemulwuy Project, Redfern

State Environmental Planning Policy No.65 - Design Quality of Residential Flat Development, (SEPP 65), which was made on 26 July 2002, applies to this proposal.

The aim of SEPP 65 is to improve the design quality of residential flat development in NSW.

This report should be read in conjunction with the Architectural Drawings provided in the Environmental Assessment Report.

This Report responds to the SEPP 65 Design Quality Principles and the 'Rules of Thumb' contained in the Residential Flat Design Code for the Residential Apartments associated with Precinct 1 and Student Housing Portion of Precinct 3.

Design Verification

I, Stephen Nordon, of Nordon Jago Architects, verify that I contributed to the design of the Residential Apartments And Student Housing within the development, and that the design quality principles set out in Part 2 of SEPP No. 65 - Design Quality of Residential Flat Development are achieved for the redevelopment of the Pemulwuy site.

Name:

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NSW Registration No. 4704

Date. 12th December 2011

DESIGN PRINCIPLES

	CONSISTENCY	COMMENTS
PRINCIPLE 1 : CONTEXT		
Good design responds and contributes to its context. Context can be defined as the key natural and built features of an area. Responding to context involves identifying the desirable elements of a location's current character or, in the case of precincts undergoing a transition, the desired future character as stated in planning and design policies. New buildings will thereby contribute to the quality and identity of the area.	Yes	The design responds to the desired future character of this precinct as envisaged by the Major Development SEPP. This planning framework was adopted following an extensive community consultation process which included the local community, relevant public authorities and landowners. The proposal represents one of the early elements in the redevelopment in this section of Redfern-Waterloo in accordance with these plans. The proposal will not lead to the removal of any natural or landscape features
PRINCIPLE 2 : SCALE		
Good design provides an appropriate scale in terms of the bulk and height that suits the scale of the street and the surrounding buildings. Establishing an appropriate scale requires a considered response to the scale of existing development. In precincts undergoing a transition, proposed bulk and height needs to achieve the scale identified for the desired future character of the area.	Yes	The height, bulk and scale of the development is consistent with the desired future character of the area as expressed in the Major Development SEPP and represents a satisfactory design response to the opportunities and constraints offered by the site and its setting. In particular, the proposal provides a desirable streetscape elements in the various streets which it fronts and an attractive element in this section of Redfern.
PRINCIPLE 3 : BUILT FORM		
Good design achieves an appropriate built form for a site and the building's purpose, in terms of building alignments, proportions, building type and the manipulation of building elements. Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.	Yes	The design represents an appropriate built form in terms of building alignments, modulation and articulation. The development will significantly improve the streetscapes in this locality and will provide an interesting and attractive environment. The built form will provide a desirable level of amenity for the prospective residents of dwellings to be established in the complex
PRINCIPLE 4 : DENSITY		
Good design has a density appropriate for a site and its context, in terms of floor space yields (or number of units or residents). Appropriate densities are sustainable and consistent with the existing density in an area or, in precincts undergoing a transition, are consistent with the stated desired future density. Sustainable densities respond to the regional context, availability of infrastructure, public transport, community facilities and environmental quality.	Yes	The proposed density of the development responds to: • the desire to increase development densities in this locality to create vitality and encourage the use of public transport; • the availability of the required utility infrastructure to support the development; • the site's convenient location relative to public transport facilities, shopping, service and community facilities; and • the environmental quality of this locality

PRINCIPLE 5 : RESOURCE, ENERGY + WATER EFFICIENCY

Good design makes efficient use of natural resources, energy and water throughout its full life cycle, including construction. Sustainability is integral to the design process. Aspects include demolition of existing structures, recycling of materials, selection of appropriate and sustainable materials, adaptability and reuse of buildings, layouts and built form, passive solar design principles, efficient appliances and mechanical services, soil zones for vegetation and reuse of water.	Yes	The proposal will embrace best practice for resource conservation in the construction of the building. The design optimises solar access, through flow ventilation and the extent of open space on the site. The development is to incorporate ecologically sustainable design features in accordance with contemporary building design practice

PRINCIPLE 6 : LANDSCAPE

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in greater aesthetic quality and amenity for both occupants and the adjoining public domain. Landscape design builds on the existing site's natural and cultural features in responsible and creative ways. It enhances the development's natural environmental performance by co-ordinating water and soil management, solar access, micro-climate, tree canopy and habitat values. It contributes to the positive image and contextual fit of development through respect for streetscape and neighbourhood character, or desired future character. Landscape design should optimise useability, privacy and social opportunity, equitable access and respect for neighbours' amenity, and provide for practical establishment and long term management.	Yes	The public domain areas surrounding the site are to be improved in accordance with the report and plan prepared by SCAPE, Landscape Architects, to significantly enhance the visual setting of the area. A landscape plan prepared by SCAPE of private domain areas is to accompany the application. The proposed landscape design is commensurate with the site's location in the RWA Sites and its setting.

PRINCIPLE 7 : AMENITY

Good design provides amenity through the physical, spatial and environmental quality of a development. Optimising amenity requires appropriate room dimensions and shapes, access to sunlight, natural ventilation, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas, outlook and ease of access for all age groups and degrees of mobility.	Yes	The design will provide a satisfactory level of amenity for the prospective residents dwellings to be established in the complex with the optimisation of solar access, natural ventilation and privacy throughout the site

PRINCIPLE 8 : SAFETY + SECURITY

Good design optimises safety and security, both internal to the development and for the public domain. This is achieved by maximising overlooking of public and communal spaces while maintaining internal privacy, avoiding dark and non-visible areas, maximising activity on streets, providing clear, safe access points, providing quality public spaces that cater for desired recreational uses, providing lighting appropriate to the location and desired activities, and clear definition between public and private spaces.	Yes	The proposal has been designed to optimise safety and security both internally within the development and in the public domain by the casual surveillance that would be available of those areas from dwellings within the development. This section is addressed in more detail within the Environmental Assessment Report Submitted with the Development Application.

PRINCIPLE 9 : SOCIAL DIMENSIONS AND HOUSING AFFORDABILITY

Good design responds to the social context and needs of the local community in terms of lifestyles, affordability, and access to social facilities. New developments should optimise the provision of housing to suit the social mix and needs in the neighbourhood or, in the case of precincts undergoing transition, provide for the desired future community. New developments should address housing affordability by optimising the provision of economic housing choices and providing a mix of housing types to cater for different budgets and housing needs.	Yes	The proposal will: • provide affordable housing opportunities for the local ATSI community; • provide a suitable mix of uses that satisfy the needs of the local ATSI community; • facilitate the development of the land by the AHC in an economically viable manner; • ensure that it is fundable and deliverable by the AHC; • establish an ongoing source of revenue to enable the AHC to maintain and enhance the quality, nature and range of services and facilities it provides to the local community; • create employment opportunities during the construction phase of the development; and • increase residential densities in proximity of services, facilities and public transport. The proposal will achieve these desirable social outcomes without any adverse environmental impact.

PRINCIPLE 10 : AESTHETICS

Quality aesthetics require the appropriate composition of building elements, textures, materials and colours and reflect the use, internal design and structure of the development. Aesthetics should respond to the environment and context, particularly to desirable elements of the existing streetscape or, in precincts undergoing transition, contribute to the desired future character of the area.	Yes	Consideration has been given to the interactive role the aesthetics of the building play with the desired future character of Precincts 1, 2 and 3. Significant Architectural features such as column treatments, provision for public art work in the facades, entry canopy's, articulated roof form and a strong colouring with deeply articulated facades have been included to enhance the quality of the street scape with which the building will connect. Information regarding the composition of building elements, textures, materials and colours have been submitted with the application Photomontages of the proposal are contained within the Environmenta Assessment Report.

SEPP 65- Residential Flat Design Code *'Rules of Thumb'*

PRIMARY DEVELOPMENT CONTROLS

Building Height

Objectives		The height, bulk and scale of the development is consistent with the desired future character of the area as expressed in the Major Development SEPP and represents a satisfactory design response to the opportunities and constraints offered by the site and its setting. This section is addressed in detail within the Environmental Assessment Report Submitted with the Development Application.
Response to desired Scale + Character	✓	
Daylight Access	✓	
Control Checklist		
Test against height against FSR		
Test height against ceiling heights	✓	

Building Depth

Objectives		The Residential Apartment floor plate accommodate Six (6) apartments per level with 84% of the Apartments having access to a dual orientation, providing adequate access to daylight and Ventilation The Student Housing floor plate accommodate Twenty one (21) units an a cross over sectional arrangement. 66% of the Apartments have dual orientation. Apartments which have a single aspect have been heavily articulated to promote cross ventilation and provide direct access to sunlight.
Bulk is in scale with context	✓	
Provide light and ventilation	✓	
Provide dual aspect units	✓	
Control Checklist		
Resolve depths in plan and elevation	✓	
Demonstrate daylight + Ventilation above 18m depth		

Building Separation

Objectives		The height, bulk and scale of the development is consistent with the desired future character of the area as expressed in the Major Development SEPP and represents a satisfactory design response to the opportunities and constraints offered by the site and its setting. The proposal incorporates large public open spaces which compliments the scale and massing to Precincts 1, 2 & 3.
Appropriate scale & Massing	✓	
Visual & acoustic privacy	✓	
Control overshadowing	✓	
Provision for open space	✓	
Provide deep soil zones	✓	
Control Checklist		
Test Separation Controls	✓	
Daylight Access	✓	
Urban Form	✓	
Visual & acoustic privacy	✓	

Street Setbacks

Objectives		The setbacks of the development are consistent with the urban fabric of the area. Increased sightlines have been provided across the development to connect the public / private open spaces and promote passive surveillance.
Define street edge and proportions	✓	
Create clear public threshold	✓	
Apartment privacy from street	✓	
Quality Entries	✓	
Street surveillance	✓	
Accommodate street landscape characte	✓	
Control Checklist		
Identify Streetscape Character	✓	
Relate to Street Hierarchy	✓	
Identify Landscaping	✓	
Test setback to envelope	✓	
Test control on facades and massing	✓	

Side + Rear Setbacks		
Objectives		The Student Housing Units have been set back from the Railway corridor to provide a buffer to the development.
Minimise amenity impact on Neighbours		
Maintain rhythm + pattern	✓	
Control Checklist		Given the natural orientation of this site there are no impacts on the amenity or overshadowing of neighbouring sites.
Respect existing street patterns	✓	
Test open space + planting zones	✓	
Test overshadowing	✓	

Floor Space Ratio		
Objectives		The scale of the development is consistent with the desired future character of the area as expressed in the Major Development SEPP and represents a satisfactory design response to the opportunities and constraints offered by the site and its setting.
Ensure optimum capacity	✓	
Define density for optimum development	✓	
provide opportunities for modulation	✓	
Maximise daylight access and ventilation	✓	
Allow generous balconies	✓	The development incorporates a good mixture of dwelling types with large Balcony / Terrace areas.
Control Checklist		This section is addressed in detail within the Environmental Assessment Report Submitted with the Development Application.
FSR to be consistent with height, footprint envelope and open space		
Test lot sizes		

SITE DESIGN

Deep Soil Zones		
Objectives		865sqm of Public Open space has been provided to the front of the Residential Apartment portion of the site defined as Precinct 1. This equates to 12.7% of Precinct 1. Within Precinct 3 private open space has been provided for the Student Housing, Commercial and Gallery elements of the development. In total this area equates to 21% (505sqm) of Precinct 3 for deep planting zones. Although these area fall short of the guidelines for deep planting we note that the development as a whole incorporates a large number of street scape planting. A Public Domain & Landscaping Report has been provided with the Development Application.
Assist with water table management	✓	
Assist with water quality	✓	
Retention of deep planting	✓	
Rules of Thumb		
25% of site to be deep planting	✓	

Fences + Walls		
Objectives		Extensive Landscaping has be proposed across the development to both private and public zones to define specific areas of use. A Public Domain & Landscaping Report has been provided with the Development Application.
Define ownership and function	✓	
Provide security	✓	
contribute to public domain	✓	

Landscape Design		
Objectives		Extensive Landscaping has be proposed across the development to both private and public zones. A Public Domain & Landscaping Report has been provided with the Development Application.
Enhance outlook and views	✓	
Provide habitat for native plants and animals	✓	
Improve stormwater quality	✓	
Improve microclimate	✓	
Improve air quality	✓	
Contribute to biodiversity	✓	

Open Space		
Objectives		
Provide active and passive recreation areas	✓	Generous private open space in the form of large terraces and balconies are proposed for the Residential Apartments. A large communal open space landscaped area has been proposed for the Student Housing Units.
Provide deep planting	✓	
Ensure communal space is consolidated	✓	
Provide outlook	✓	
Rules of Thumb		
Communal open space to be 25 - 30% of site	✓	865sqm of Public Open space has been provided to the front of the Residential Apartment portion of the site defined as Precinct 1. This equates to 12.7% of Precinct 1. It is noted that the majority of this Precinct comprises of Town Houses not associated with this Report. All of the Residential Apartments have large Balcony areas ranging from 15sqm to 22sqm and Terraces areas from 26sqm to 137sqm. The Student Housing as been provided with a secure communal open space area of 215sqm located as a landscaped open space buffer to the Railway corridor. Private open space has also been provided for the Commercial and Gallery elements of the development. In total this area equates to 21% (505sqm) of Precinct 3. Given the intended use for the site this slight reduction in the open space is considered acceptable.
Where communal space is unavailable, amenity to private open space to be enhanced	✓	
Minimum Private space to ground floor apartments	✓	

Orientation		
Objectives		The proposed apartments have been located to optimise thermal performance, and to take advantage of the views towards the City Skyline and overlooking the public domain area.
Optimise Solar Access	✓	
Contribute to Streetscape character	✓	
Support landscape design	✓	
Protect amenity of existing development	✓	
Improve Thermal efficiency of building	✓	

Planting on Structures		
Objectives		Extensive Landscaping has be proposed across the development to both private and public zones. A Public Domain & Landscaping Report has been provided with the Development Application.
Contribute to amenity	✓	
Contribute to tree plantings in urban areas	✓	
Rules of Thumb		
Appropriate soil depths	✓	

Stormwater Managemen		
Objectives		There are no existing waterways adjoining the site. There is no impact on the existing topography. As each precinct will be fully developed boundary to boundary, all stormwater will be intercepted by a stormwater detention system. A Concept Stormwater plan has been provided with the Development Application.
Minimise impact on waterways	✓	
Preserve existing topography	✓	
Minimise discharge sediment	✓	

Safety		
Objectives		All principal living spaces and entrances for both the Residential Apartments and the Student Housing Units are oriented to both the primary and secondary street frontages, providing passive surveillance for both the public open spaces and streets. The proposal will incorporate well lit routes through the development.
Ensure safety of residents and visitors	✓	
contribute to public domain safety	✓	
Rules of Thumb		
Carry our risk assessment	✓	

Visual Privacy		
Objectives		All principal living spaces of the Residential Apartments are oriented to the East and West where they will not affect the amenity of adjoining dwellings and will accommodate the best outlook and views from the site.
Provide privacy	✓	
Maximise outlook and views	✓	
Rules of Thumb		
Building separation	✓	

Building Entry		
Objectives		The Residential Apartment entry foyer connects directly to a public open space fronting Precinct 1 adjacent to Caroline Street. The Ground floor facade will interface with the fabric and form of the public open space creating identity and orientation. The Student Housing entry connects to Eveleigh street over which a feature canopy structure is proposed with building signage identify the entry and contribute to the street scape.
Create desirable residential entry	✓	
Orient the visitor	✓	
contribute positively to the streetscape	✓	

Parking		
Objectives		A secure private car park is located in the basement area of Precinct 1 and will not be visible from public domain areas. The Car park is for the use of the Residential apartments and townhouses only. Provision has been made in the basement plan for Residential bicycle storage . A zone for Student bicycle storage has been provide at the basement mezzanine level of Precinct 1 via a secure access point located off Eveleigh Street adjacent to the Student Housing Main Entry.
Minimise car dependency	✓	
Provide adequate parking	✓	
Integrate parking with building design	✓	

Pedestrian Access

Objectives		
Promote access point connected to street	✓	The principle access to the Residential Apartments connects at grade to the public open space adjacent to Caroline Street. The path of travel to the main entry point of all Residential Apartments is barrier free via lift access to all levels and paving gradients compatible with access requirements.
Provide equity access to entries	✓	
Rules of Thumb	✓	
Identify access points		
Address AS 1428	✓	
Barrier free access to 20% of dwellings	✓	The principle access to the Student Housing Units connects at grade to Eveleigh Street. The path of travel to the main entry point of all Student Housing Unit is barrier free via lift access to all levels and paving gradients compatible with access requirements.

Vehicle Access

Objectives		
Integrate access without compromising streetscape	✓	The secure access driveway is located off Vine Street from the with the required set backs and sight lines. A Traffic Report has been submitted with the Development Application.
Encourage active street frontage	✓	
Rules of Thumb		
Limit widths of driveways	✓	
locate vehicle entries away from pedestrian entries	✓	

BUILDING DESIGN

Apartment Layou

Objectives		
Functional spatial arrangement	✓	All Residential Apartments and Student Housing Units are easily furnished, and have clear entrance areas and minimised circulation area.
Layout enjoy high amenity	✓	All Residential Apartments and Student Housing Units have good outlooks, access to sun and ventilation.
maximise environmental performance	✓	A full BASIX report and energy assessment has been provided with the Development Application. Extensive use of balconies and screening has been made to passively moderate the temperature of the apartments.
accommodate a variety of household activities	✓	All Residential Apartments and Student Housing Units accommodate a variety of accommodation and will afford privacy between occupants within apartments
Rules of Thumb		
Single aspect units depth limit	✓	84% of the Residential Apartments have dual aspect, either located at corners or articulated to achieve a second orientation. The depth of all units have been limited to achieve adequate daylight penetration. 66% of the Student Housing Units have dual aspect. Where single aspect apartments are proposed heavy articulation of the facade has been provided to enable cross ventilation through the unit. The depth of all units have been limited to achieve adequate daylight penetration.
Kitchen location	✓	All Kitchens to both the Residential Apartments and Student Housing Units are within 8m from an operable window to satisfy the requirement for naturally ventilating.
Crossover dwelling width	✓	
Access to light + Ventilation	✓	Minimum standards listed above are achieved.
Apartment Sizes	✓	All minimum areas For the Residential Apartments are exceeded. 2 Bed Apartments: 83m² min / 109m² 3 Bed Apartments: 95m² min / 125m² Student Housing Units 2 Bed Units: 52sqm 4 Bed Units: 126sqm 6 Bed Units: 179.8sqm

Apartment Mix

Objectives		
Provide a diversity of apartment types	✓	A range of apartment types and sizes have been provided to cater for different household types and maintain the social mix of the area.
Equity access apartments	✓	The Residential Apartments comprise a mix of 2 and 3 Bed Units. All Apartments have provisions in the design to be adaptable. The Student Housing mix comprises of 2, 4 and 6 bed units. 7% (3 Units), have provisions in the design to be adaptable

Balconies

Objectives		
All apartment with private open space	✓	The proposal features extensive terrace / balcony areas from primary living spaces that vary in size ranging from 15sqm to 22sqm, as well as balconies from bedroom in some areas. These balconies contribute to the passive solar design of the building and to the Architectural treatment of the building positively articulating the facades and providing a variety of different balustrade treatments and geometries.
functional and responsive balconies	✓	
balconies integrated into architectural form	✓	
Provide surveillance	✓	
Rules of Thumb		
Minimum 2m depth	✓	All apartments are provided with balconies that adjoin living spaces and exceed 2 metres in depth.
Furnished plan when above not achieved	NA	

Ceiling Heights		
Objectives		To both the Residential Apartments and Student Housing it is proposed that all apartments / units will have ceiling heights within habitable rooms of 2.5 - 2.7m. Non-habitable rooms will have ceiling heights between 2.3m - 2.40m to allow for service co-ordination. With large glazed openings and generous window proportions proposed for the Residential Units this is considered sufficient in terms of provision of natural light.
Increase the sense of space	✓	
Promote daylight penetration	✓	
Contribute to flexibility	✓	
Quality interiors	✓	
Rules of Thumb		
Minimum Heights	✓	
Demonstration if above not achieved	NA	

Flexibility		
Objectives		The building will be constructed from a concrete frame, and light weight walling systems will be used to internally divide the building where acoustic and fire rating are not required. Load bearing walls are not proposed. This construction system will allow the easy re-configuration of all parts of the building and will minimise the embodied energy that is expended in the production of masonry blocks and bricks.
Range of Occupant needs	✓	
Promotion of change of use	✓	
Encourage adaptive re-use	✓	
Save embodied energy	✓	

Ground Floor Apartments		
Objectives		A secure entry foyer located of an open public space is proposed for al the Residential Apartments. Large Terrace and Balcony areas has been provided off all primary living spaces. Access to the Student Housing Units is via the controlled Reception / common space area. A large open landscaped zone off the GF common area has been provided to the Students.
Contribute to desired streetscape	✓	
Increase Lifestyle choice	✓	
Rules of Thumb		
Separate entries	✓	
Access to private open space	✓	

Internal Circulation		
Objectives		Six (6) Residential Apartments are accessed at each level from a double loaded lobby. A generous corridor width with large glazing areas to both ends combined with articulation to the walls has been provided in the lobby area. Twenty one (21) Student Housing Units are access from a single lobby / corridor. A generous corridor width is provided with articulation to the walls around the entry points to promote identification. A large naturally lit circulation core and lift lobby serves one end
Create safe and pleasant lobbies	✓	
Facilitate dual aspect apartments	✓	
Contribute to articulation	✓	
Encourage recognition between occupants	✓	
Rules of Thumb		
Maximum units accessed from a lobby	✓	

Mixed Use		
Objectives		Retail areas and a public Gym hare proposed at ground floor level around the Residential Apartment foyer, providing activation to the public open space adjacent to Caroline Street. Commercial Units and a larger Gallery space are proposed for the Ground floor area of the Student Housing, providing activation to the Pemulwuy Place and along Eveleigh Street.
Support integration of retail + commercial activities	✓	
Activate Streets	✓	
Preservation of residential amenity	✓	

Storage		
Objectives		Provisions have been made in the design for basement storage areas that will be available the Residential Apartments. The Student Housing Units have adequate storage located within the individual Units. The provision of these facilities is appropriate given the use.
Provide adequate storage for household items	✓	
Provide storage for leisure equipment	✓	
Rules of Thumb		
Volume requirements	✓	

Acoustic Privacy		
Objectives		An Acoustic Report is attached to the proposal, demonstrating that acoustic standards will be met.
Ensure amenity levels	✓	

Daylight Access		
Objectives		
Daylight access to all habitable rooms	✓	Most of the habitable rooms within the Residential Apartments have windows with direct access to daylight with the exception of Units 41, 47, 53 and 59 All habitable rooms to the Student Housing Units have windows with direct access to daylight
Minimise the need for lighting during daylight hours	✓	
Provide control of daylight	✓	Sunscreen systems or canopy shading devices are proposed where control of direct Western sunlight is necessary
Rules of Thumb		
2-3 Hours sunlight to living rooms at winter solstice	✓	84% of the Residential Apartment living rooms have access to an Eastern or Western orientation. 70% of the Development will achieve the minimum of three hours of direct access to sun light during winter Solstice. All living rooms within the Student Housing have access to an Eastern or Western orientation. 100% of the Development will achieve the minimum of three hours of direct access to sun light during winter Solstice.
Limit southern access units	✓	16% (4no. Units) of the Residential Apartments are limited to a Southern access.
Reference to apartment layout provisions	✓	

Natural Ventilatior		
Objectives		
Provide fresh air to all habitable rooms	✓	All habitable rooms to both the Residential Apartments and Student Housing have operable windows
Promote natural ventilation to non habitable rooms	✓	Most kitchens to both the Residential Apartments and Student Housing are within 8.0m of the window line, satisfying the requirement of being naturally ventilated. Bathrooms where possible have been located to achieve naturally ventilation. All laundries associated to the Residential Apartments have been located on the balcony's and will achieve natural ventilation.
Reduce energy consumption by minimising use of mechanical ventilation	✓	For both the Residential Apartments and Student Housing, passive solar control devices in the form of balconies and/or sun louvers have been proposed to minimise dependence on air conditioning.
Rules of Thumb		
Building depth to support natural ventilation	✓	84% Residential apartments have been configured to promote cross ventilation. All Kitchens satisfy the requirement of being naturally ventilated. 66% of the Student Housing Units achieve cross ventilation. Where single aspect apartments are proposed heavy articulation of the facade has been provided to enable cross ventilation through the unit. All Kitchens satisfy the requirement of being naturally ventilated.
60% cross ventilated	✓	
25% kitchens naturally ventilated	✓	
Demonstrate when standards not met.	NA	

Awning + Signage		
Objectives		A feature awning is proposed to the Entry foyer of the Residential Apartments. An awning is proposed to the Entry area of the Student Housing. Signage will be planned and controlled. General building signage will be incorporated in the application.
Provide shelter to streets	✓	
Ensure signage is appropriate	✓	

Facades		
Objectives		
Promote architectural quality	✓	
Definition and enhancement of public domain	✓	
Integration of building elements	✓	

Roof Design		
Objectives		The roof form to the Residential Apartment building adopts an asymmetrical pitched rook form to help conceal the roof plant area and lift overrun towers. Shadow Line details have been incorporated into the facia treatment to address the facades of the building. The roof will be constructed in the appropriate materials to be durable in the long term.
Quality roof design	✓	
Integration of roof into façade	✓	
Weather protection	✓	

Energy Efficiency		
Objectives		A full BASIX report and energy assessment has been provided with the Development Application.
Reduced mechanical climate control	✓	
Reduction in fossil fuel consumption	✓	
Minimise greenhouse emissions	✓	
Promote renewable energy initiatives	✓	

Maintenance		
Objective		Durable materials are proposed that can be easily maintained and are not prone to rapid deterioration.
Ensure long life and ease of maintenance	✓	

Waste Management		
Objectives		
Avoid generation of waste	✓	Building materials will been chosen for their long term durability. Due to the scale of the structure proposed, it is likely to have a very extended life time.
Plan for waste management during construction	✓	A Construction Management plan will be provided for the Development Application.
Encourage waste minimisation and recycling	✓	Provision for recycling of waste produced by the building will be included in the proposal.
Efficient storage and collection of waste	✓	

Water Conservation		
Objectives		
Reduce consumption of potable water	✓	A full BASIX report has been provided with the Development Application.
Reduce quantity of urban run off.	✓	Water will be collected and re-used on site
Rules of Thumb		
Water not to be collected from lead + bitumen based paints	✓	Rainwater will not be collected from contaminated surfaces.