8 FOREST ROAD,
WARRIEWOOD NSW 2102

SEPP65 DESIGN VERIFICATION REPORT

ADS STAFF RESPONSIBLE FOR THIS REPORT WERE:

Director	Pavlo Doroch
	Registered Architect no. 9170 in NSW
	Master of Architecture UTS
Company	Architecture Design Studio Pty Ltd

TABLE OF CONTENTS:

1. INTRODUCTION

1. PURPOSE

This report should be read in conjunction with the Architectural Drawings provided in the Pre-development application. It responds to the SEPP 65 Design Quality Principles and the 'Rules of Thumb' contained within the Apartment Design Guide (ADG).

1.2. DESIGN VERIFICATION

21th January 2022

RE:	**Residential Development Incorporating 66 dwellings**
	Design Verification Statement – SEPP 65
SUBJECT PREMISES:	**8 Forest Road, Warriewood NSW 2102**

Pursuant to the provisions of **State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Development,** I hereby confirm that I am a qualified designer within the meaning of clause 3 of the Environmental Planning & Assessment Regulation 2000.

I verify that:

(a) I directed the design amendments for the Pre-Development Application of 8 Forest Road, Warriewood NSW 2102.

and

(b) that the design quality principles set out in Part 2 of State Environmental Planning Policy No 65--Design Quality of Residential Flat Development are achieved for the above residential flat development.

FULL NAME OF ARCHITECT:	Pavlo Doroch
QUALIFICATIONS:	Registered Architect no. 9170 in NSW
	Master of Architecture UTS

NAME OF EMPLOYER: Architecture Design Studio Pty. Limited

Signature,

Pavlo Doroch

2. SEPP65 COMPLIANCE ANALYSIS

2.1 RULES OF THUMB

The following section outlines ADG recommendations, how each of the minimum standards of the ADG ("rules of thumb") are applied to the proposed development, and how each of the standards are achieved in relation to the design objectives of the ADG.

UNITS: 66

ADAPTABLE UNITS: 16

LIVABLE: 24%

CAR PARKING: 195

CROSS VENTILATED UNITS: 66 - 100%

SOLAR ACCESS: 49 -74%

LANDSCAPE AREA: 15,331 m^2

2.1 COMPLIANCE ANALYSIS

PART 1 IDENTIFYING THE CONTEXT		
ITEM	**OBJECTIVE / CONTROL**	**COMMENT**
1A Apartment Building Types	Building types can be adapted to fit specific urban context.	The allotment is located in R3 Medium Density Residential in the suburb of Warriewood, adjoining other R3 zoned land and C2 Environmental Conservation. The proposed development comprises of a mix of townhouses and apartments. The building envelopes have been designed in accordance with ADG setbacks.
1B Local Character and Context	Undertake a local context analysis.	The proposed changes in the S4.56 Modification do not have any impact on context and character.
1C Precincts and Individual Sites	Residential apartment developments are generally developed on individual sites or within precincts.	The orientation of buildings, entries and navigation around the site is not impacted by the S4.56 Modification

PART 2 DEVELOPING THE CONTROLS		
ITEM	**OBJECTIVE / CONTROL**	**COMMENT**
2B Building Envelopes	Establish the allowable bulk, height and location of a development on a site.	The bult of the apartment buildings remains unchanged from the approved DA and is in accordance with the allowable bulk for the site. Lofts have been re-introduced to the townhouses which is consistent with the additional DA approval
2C Building Height	The maximum building height needs to be achievable within the building height set in the LEP. Check LEP for height allowances for articulated roof plans, architectural roof features. Building height in renewal areas should reflect the desired future character of the streetscape.	The building height of the development generally remains unchanged. The re-introduction of lofts to the townhouses increased overall building height by approx. 3m and is in compliance with the maximum 10.5 LEP building height. The building height for the apartments is only impacted with the introduction of roof plant areas for AC units which do not beach the maximum height of 10.5m. The plant area is centralised and screened ensuring there is no shadow or visual impact and is lower than the lift overrun and roof light boxes. By locating AC Units on the roof, amenity is maintained on POS balconies and Ground Floor common areas.
2D Floor Space Ratio	Height, setbacks, FSR, building footprint, building envelop and open space requirements are to be consist to support the desired built form and urban outcome.	The site is not subject to a FSR control. Increase of floor area by the re-introduction of the lofts does not pose any adverse impact to the urban outcome of the development

2E Building Depth	Ensure building depths support apartment layouts, building circulation and daylight access.	The proposed development comprises of one building with a varying building depth due to the layout of habitable and non-habitable room throughout the building. The building complies with the maximum 18m building depth from window to window. The broken up built form is well situated on the site promoting good design and building performance The apartment layouts complies with ADG requirements with 100% of units achieving natural ventilation and 74% receiving more than two hours of solar access during mid-winter.
2F Building Separation	Minimum separation distances for buildings are: *Up to four storeys/12 metres:* • 12 metres between habitable rooms/balconies • 9 metres between habitable and non-habitable rooms • 6 metres between non-habitable rooms *Five to eight storeys/ 25 metres:* • 8 metres between habitable rooms/balconies • 12 metres between habitable and non-habitable rooms • 9 metres between non-habitable rooms At the boundary between a change in zone from apartment buildings to a lower density area, increase the building setback from the boundary by 3m.	The development complies with building separation. The proposed amendments of the S4.56 do not seek to modify building separation
2G Street Setbacks	Street setbacks should be consistent with existing setback patterns in the street or setbacks that achieve the desired future character of the area. Consider articulation zones accommodating balconies and landscaping within the setback.	The proposal achieves compliant setbacks The proposed amendments of the S4.56 do not seek to modify building setbacks
2H Side and Rear Setbacks	To retain or create rhythm or pattern of development that positively defines the streetscape so that space is not just what is left over around the building form.	The proposal achieves compliant setbacks The proposed amendments of the S4.56 do not seek to modify building setbacks

	Consider building separation, open space and soil zones. Maximize the opportunity to retain and reinforce mature vegetation. Optimise use of land at the rear and surveillance of the street at the front. Relate setbacks to existing streetscape pattern.	

PART 3 SITING THE DEVELOPMENT

ITEM	OBJECTIVE / DESIGN CRITERIA	COMPLY	COMMENT
Site Analysis	**Objective 3A-1** Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context.	Yes	The application is accompanied by detailed a site analysis plan and associated commentary with the design and siting of the development a result of further detailed constraints and opportunities analysis. We noted that the development is consistent with the Master Plan previously prepared for the Sector with the dwelling density below that anticipated by the initial Warriewood Valley Strategic Consultant Review. Such documentation contained detailed constraints an opportunities analysis upon which this application also relies upon. SEPP 65 and the ADG only apply to the 3 storey residential flat buildings
Orientation	**Objective 3B-1** Building types and layouts respond to the streetscape and site while optimising solar access within the Development.	Yes	All buildings address the proposed internal private road with direct access from the street frontage. The communal open space areas break the massing of the building forms.
	Objective 3B-2 Overshadowing of neighbouring properties is minimised during mid-winter.	Yes	The orientation of the building enables the balconies and landscaping areas of the site to receive adequate solar access throughout the year. The site setbacks minimise overshadowing onto neighbouring allotments.
Public Domain Interface	**Objective 3C-1** Transition between private and public domain is achieved without compromising safety and security.	Yes	Landscaping and pedestrian footpaths have been designed to provide a transition between the health service and residential components whilst maintaining a visual connection from the residential lobby to the street footpaths.
	Objective 3C-2 Amenity of the public domain is retained and enhanced.	Yes	A variety of plants (including trees, low shrubs and covers) along the site boundaries and street setbacks soften the visual appearance of the development and the amenity of the public domain. There is minimal protrusion of the underground car park above the natural ground level. The residential footpath leading to the building entrance is of an appropriate slope to comply with accessibility standards.

<table>
<tr><td rowspan="5">Communal and Public Open Space</td><td>Objective 3D-1 An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping.

1. Communal open space has a minimum area equal to 25% of the site (see figure 3D.3).</td><td>Yes</td><td>All communal open space areas are well dimensioned and have sufficient soil depth to support extensive landscaping including shade/ canopy trees. Clearly the development satisfies the design criteria and associated design guidance requirements.</td></tr>
<tr><td>2. Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid-winter).</td><td>N/A</td><td>The location of both communal open spaces enables at least 50% of the principle useable part including seating areas receive more than 2 hours of direct sunlight during mid-winter.</td></tr>
<tr><td>Objective 3D-2 Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting.</td><td>Yes</td><td>The accompanying landscape plans incorporate informal seating areas within the central communal open space courtyard area.</td></tr>
<tr><td>Objective 3D-3 Communal open space is designed to maximise safety.</td><td>Yes</td><td>A balance has been struck between casual surveillance opportunities from adjacent living and private open space areas and the maintenance of privacy.</td></tr>
<tr><td>Objective 3D-4 Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood.</td><td>N/A</td><td>The proposed creek line corridor public open space is well connected to the public and private roads proposed.
The public creek line bicycle pathway is extended onto the site.
Vast majority of public open space is north facing.
All buildings address the adjacent public open space.</td></tr>
<tr><td>Deep Soil Zones</td><td>Objective 3E-1 Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality.

Deep soil zones are to meet the following minimum requirements:

<table>
<tr><td>Site Area</td><td>Min. Dimension</td><td>Deep soil zone (% of site area)</td></tr>
<tr><td>Less than 650m^2</td><td>-</td><td rowspan="4">7%</td></tr>
<tr><td>650m^2 – 1500m^2</td><td>3m</td></tr>
<tr><td>Greater than 1500m^2</td><td>6m</td></tr>
<tr><td>Greater than 1500m^2 with significant tree cover</td><td>6m</td></tr>
</table></td><td>Yes</td><td>Over 60% of the site is available for deep soil landscaping as detailed on the landscape plan. Such are is well in excess of the 15% site area guide. The amended basement design increases overall deep soil landscaping</td></tr>
<tr><td>Visual Privacy</td><td>Objective 3F-1 Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy.</td><td>Yes</td><td>Apartments orientated to north, east and west to maximise solar access and natural cross ventilation. Compliant separation distances are provided</td></tr>
</table>

<table>
<tr><td></td><td>Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room.

Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows:
<table><tr><td>Building height</td><td>Habitable rooms and balconies</td><td>Non- habitable rooms</td></tr><tr><td>Up to 12m (4 storeys)</td><td>6m</td><td>3m</td></tr><tr><td>Up to 25m (5-8 storeys)</td><td>9m</td><td>4.5m</td></tr><tr><td>Over 25m (9+ storeys)</td><td>12m</td><td>6m</td></tr></table></td><td></td><td>The minor changes to the overall built form in the S4.56 application do not impact setbacks.</td></tr>
<tr><td></td><td>Objective 3F-2 Site and building design elements increase privacy without compromising access to light and air and balance outlook and views from habitable rooms and private open space.</td><td>Yes</td><td>Noted and satisfied. Refer to accompanying landscape plan.</td></tr>
<tr><td>Pedestrian Access and Entries</td><td>Objective 3G-1 Building entries and pedestrian access connects to and addresses the public domain.</td><td>Yes</td><td>Pedestrian access provided from both street frontages.</td></tr>
<tr><td></td><td>Objective 3G-2 Access, entries and pathways are accessible and easy to identify.</td><td>Yes</td><td>Noted and satisfied.</td></tr>
<tr><td></td><td>Objective 3G-3 Large sites provide pedestrian links for access to streets and connection to destinations.</td><td>Yes</td><td>Pedestrian links provided between buildings</td></tr>
<tr><td>Vehicle Access</td><td>Objective 3H-1 Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes.</td><td>Yes</td><td>Integrated basement parking proposed.
Access to basement from secondary private road.
All garbage areas are located within the basement and not discernible as viewed from the public domain.</td></tr>
</table>

Bicycle and Car Parking	**Objective 3J-1** Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas. 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.	N/A	Complaint off street parking is provided as detailed in the Traffic Report prepared by MLA Transport Planning The changes to the basement in the S4.56 modification improve overall basement layout by removing all tandem parking and providing lock up garage parking for the townhouses for added security
	Objective 3J-2 Parking and facilities are provided for other modes of transport.	Yes	Bicycle parking spaces located within basement area.
	Objective 3J-3 Car park design and access is safe and secure.		Supporting facilities within car parks, including garbage, plant and switch rooms, storage areas can be accessed without crossing car parking spaces. Direct, clearly visible and well lit access is provided into common circulation areas.
	Objective 3J-4 Visual and environmental impacts of underground car parking are minimised.	Yes	A single basement parking area is proposed with minimal visual impact.
	Objective 3J-5 Visual and environmental impacts of on-grade car parking are minimised.	N/A	
	Objective 3J-6 Visual and environmental impacts of above ground enclosed car parking are minimised.	Yes	Positive street address and active frontages is provided at ground level.

PART 4 – DESIGNING THE BUILDING

ITEM	OBJECTIVE / DESIGN CRITERIA	COMPLY	COMMENT
Solar and Daylight Access	**Objective 4A-1** To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space. 1. Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid-winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas.	Yes	Compliant solar access achieved to 49 of the 66 apartments or 74%. There are no single southerly aspect apartments.
	2. In all other areas, living rooms and private open spaces of at least 70% of apartments in a	Yes	

	building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid-winter.			
	3. A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter.		Yes	There are no single southerly aspect apartments.
	Objective 4A-2 Daylight access is maximised where sunlight is limited.		Yes	The low height and separation of apartment buildings ensures solar access is maximised for all buildings
	Objective 4A-3 Design incorporates shading and glare control, particularly for warmer months.		Yes	
Natural Ventilation	**Objective 4B-1** All habitable rooms are naturally ventilated.		Yes	100% of apartments achieve cross ventilation
	Objective 4B-3 The number of apartments with natural cross ventilation is maximized 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.	Yes	100% of apartments achieve cross ventilation
		2. Overall depth of a cross-over or cross- through apartment does not exceed 18m, measured glass line to glass line.	Yes	The building does not exceed 18 metres.
Ceiling Heights	**Objective 4C-1** Ceiling height achieves sufficient natural ventilation and daylight access.	Measured from finished floor level to finished ceiling level, minimum ceiling heights are: Minimum ceiling height for apartment and mixed use buildings	Yes	A ceiling height of 2.7m has been adopted for all apartments.
		Habitable Rooms: 2.7m Non-Habitable: 2.4m If located in mixed use area: 3.3m ground & first floor to promote future flexibility of use		
	Objective 4C-2 Ceiling height increases the sense of space in apartments and provides for well-proportioned rooms.		Yes	All residential units achieve a minimum ceiling height of 2.7
	Objective 4C-3 Ceiling heights contribute to the flexibility of building use over the life of the building.		N/A	
Apartment Size and Layout	**Objective 4D-1** The layout of rooms within an apartment is functional, well organized and	1. Apartments are required to have the following minimum internal areas: Apartment Types: Min Internal Areas	Yes	All apartments satisfy these minimum area requirements as detailed on the Unit Schedule No 0000

	provides a high standard of amenity.	Studio: 35m^2 1 bedroom: 50m^2 2 bedrooms: 70m^2 3 bedrooms: 90m^2 The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m^2 each. A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m^2 each.		
		2. Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms.	Yes	Noted and satisfied.
	Objective 4D-2 Environmental performance of the apartment is maximised.	1. Habitable room depths are limited to a maximum of 2.5 x the ceiling height.	Yes	All Room depths compliant with this guide.
		2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window.	Yes	Bathrooms and ensuites mechanically ventilated. This is considered acceptable noting that apartment design ensures all kitchens have adjacent window. Living areas orientated to north, east and west with no adverse noise sources.
	Objective 4D-3 Apartment layouts are designed to accommodate a variety of household activities and needs.	1. Master bedrooms have a minimum area of 10m^2 and other bedrooms 9m^2 (excluding wardrobe space).	Yes	All master and other bedrooms meet the minimum size requirement.
		2. Bedrooms have a min dimension of 3m (excluding wardrobe space).	Yes	All bedrooms have a minimum dimension of 3 metres (excluding wardrobe space).
		3. Living rooms or combined living/dining rooms have a minimum width of: • 3.6m for studio and 1 bedroom apartments. • 4m for 2 and 3 bedroom apartments.	Yes	All residential units meet the minimum width requirements.
		4. The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts.	N/A	

<table>
<tr><td rowspan="8">Private Open Space and Balconies</td><td rowspan="8">Objective 4E-1 Apartments provide appropriately sized private open space and balconies to enhance residential amenity.</td><td>1. All apartments are required to have primary balconies as follows:
<table><tr><td>Dwelling type</td><td>Min Area</td><td>Min Depth</td></tr><tr><td>Studio</td><td>4m^2</td><td>-</td></tr><tr><td>1 bed</td><td>8m^2</td><td>2m</td></tr><tr><td>2 bed</td><td>10m^2</td><td>2m</td></tr><tr><td>3 bed</td><td>12m^2</td><td>2.4m</td></tr></table>The minimum balcony depth to be counted as contributing to the balcony area is 1m.</td><td>Yes</td><td>All balconies satisfy minimum depth and area</td></tr>
<tr><td>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 15m^2 and a minimum depth of 3m.</td><td>Yes</td><td>All ground level apartments have private open space areas beyond the minimum requirement</td></tr>
<tr><td colspan="2">Objective 4E-2 Primary private open space and balconies are appropriately located to enhance liveability for residents.</td><td>Yes</td><td>All primary balconies and terraces are directly accessible via the living room to function as an extension of the living areas.</td></tr>
<tr><td colspan="2">Objective 4E-3 Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building.</td><td>Yes</td><td>The balconies form an integral part of the building design. Variation between solid and glazed balconies has been pursued to articulate the building form and façade.</td></tr>
<tr><td colspan="2">Objective 4E-4 Private open space and balcony design maximizes safety.</td><td>Yes</td><td>All balconies can meet the minimum safety requirements.</td></tr>
<tr><td rowspan="3">Common Circulation and Spaces</td><td rowspan="2">Objective 4F-1 Common circulation spaces achieve good amenity and properly service the number of apartments.</td><td>1. The maximum number of apartments off a circulation core on a single level is eight.</td><td>yes</td><td>The maximum number of units off a single core on any level is 6.</td></tr>
<tr><td>2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40.</td><td>N/A</td><td></td></tr>
<tr><td colspan="2">Objective 4F-2 Common circulation spaces promote safety and provide for social interaction between residents.</td><td>Yes</td><td>Noted and achieved.</td></tr>
<tr><td>Storage</td><td>Objective 4G-1 Adequate, well designed storage is provided in each apartment.

At least 50% of the required</td><td>In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:
<table><tr><td>Dwelling Type</td><td>Storage size</td></tr><tr><td>Studio</td><td>4m^3</td></tr></table></td><td>No</td><td>At least 50% of the required storage is located within the apartment.</td></tr>
</table>

	storage is to be located within the apartment. 1 bedroom: 6m3 2 bedrooms: 8m3 3+ bedroom: 10m3		
	Objective 4G-2 Additional storage is conveniently located, accessible and nominated for individual apartments.	Yes	Noted and achieved.
Acoustic Privacy	**Objective 4H-1** Noise transfer is minimized through the siting of buildings and building layout.	Yes	Adequate building separation is provided within the development and from neighbouring buildings/adjacent uses. There is No significant noise sources. All party walls are appropriately insulted.
	Objective 4H-2 Noise impacts are mitigated within apartments through layout and acoustic treatments.	Yes	Rooms with similar noise requirements are grouped together. Doors separate different use zones. Wardrobes in bedrooms are co-located to act as sound buffers.
Noise and Pollution	**Objective 4J-1** In noisy or hostile environments the impacts of external noise and pollution are minimized through the careful siting and layout of buildings.	N/A	To minimise the noise, apartments are located perpendicular to the noise source and where possible buffered by other uses.
	Objective 4J-2 Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission.	Yes	
Apartment Mix	**Objective 4K-1** A range of apartment types and sizes is provided to cater for different household types now and into the future.	Yes	2 and 3 bedroom apartments provided with limited demand for studio and 1 bedroom apartments in this particular area of Warriewood Valley. The following apartments have been changed from a 2 Bedroom Unit to a 3 Bedroom: Building A: Units 03, 06, 09, 12, 18 Building D: Unit 53
	Objective 4K-2 The apartment mix is distributed to suitable locations within the building.	Yes	The apartment mix has been distributed to exceed natural solar access and natural ventilation requirements.
Ground Floor Apartments	**Objective 4L-1** Street frontage activity is maximized where ground floor apartments are located.	Yes	Direct street access is provided to most of the ground floor apartments.
	Objective 4L-2 Design of ground floor apartments delivers amenity and safety for residents.	Yes	Noted and satisfied with Good levels of causal surveillance opportunity.
Facades	**Objective 4M-1** Building facades provide visual interest along the street while respecting the character of the local area.	Yes	Noted and satisfied. Refer to schedule of finishes and design statement.
	Objective 4M-2 Building functions are expressed by the façade.	Yes	Primary entrances readily identifiable.

Roof Design	**Objective 4N-1** Roof treatments are integrated into the building design and positively respond to the street.	Yes	Noted and achieved. Refer to design statement.
	Objective 4N-2 Opportunities to use roof space for residential accommodation and open space are maximized.	Yes	Noted and achieved to top floor apartments.
	Objective 4N-3 Roof design incorporates sustainability features.	Yes	Roof design maximises solar access to apartments during winter and provides shade during summer.
Landscape Design	**Objective 4O-1** Landscape design is viable and sustainable.	Yes	A variety of plants and trees have been incorporated into the landscape design including shading trees over the seating areas in the communal open space and public open space. Refer to landscape plan. Noted and achieved
	Objective 4O-2 Landscape design contributes to the streetscape and amenity.	Yes	Noted and achieved. Refer to arboricultural report tree protection recommendations & landscape plan.
Planting on Structures	**Objective 4P-1** Appropriate soil profiles are provided.	Yes	Refer to landscape plan.
	Objective 4P-2 Plant growth is optimized with appropriate selection and maintenance.	Yes	Refer to landscape plan.
	Objective 4P-3 Planting on structures contributes to the quality and amenity of communal and public open spaces.	Yes	Refer to landscape plan.
Universal Design	**Objective 4Q-1** Universal design features are included in apartment design to promote flexible housing for all community members.	Yes	Development achieve a benchmark of 20% of the total apartments incorporating the Liveable Housing Guideline's silver level universal design features
	Objective 4Q-2 A variety of apartments with adaptable designs are provided.	Yes	Pittwater DCP requires 20% of apartments to be adaptable. The application proposes 16 of 66 apartments as adaptable representing 24% of apartments. Compliance achieved.
	Objective 4Q-3 Apartment layouts are flexible and accommodate a range of lifestyle needs.	Yes	Appropriate flexibility achieved.
Adaptive Reuse	**Objective 4R-1** New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place.	N/A	
Mixed Use	**Objective 4R-2** Adapted buildings provide residential amenity while not precluding future adaptive reuse.	N/A	
	Objective 4S-1 Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement.	N/A	
	Objective 4S-2 Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents.	N/A	

Awnings and Signage	**Objective 4T-1** Awnings are well located and complement and integrate with the building design.	N/A	
	Objective 4T-2 Signage responds to the context and desired streetscape character.	N/A	No signage proposed..
Energy Efficiency	**Objective 4U-1** Development incorporates passive environmental design.	Yes	Adequate natural light is provided to habitable Rooms.
	Objective 4U-2 Development incorporates passive solar design to optimize heat storage in winter and reduce heat transfer in summer.	Yes	Refer to design statement. Basement plant room provided.
	Objective 4U-3 Adequate natural ventilation minimizes the need for mechanical ventilation.	Yes	All apartments are natural cross ventilated.
Water Management and Conservation	**Objective 4V-1** Potable water use is minimized.	Yes	Refer to BASIX certificate
	Objective 4V-2 Urban storm water is treated on site before being discharged to receiving waters.	Yes	Refer to accompanying stormwater plans.
	Objective 4V-3 Flood management systems are integrated into site design.	Yes	
Waste Management	**Objective 4W-1** Waste storage facilities are designed to minimize impacts on the streetscape, building entry and amenity of residents.	Yes	Noted and achieved.
	Objective 4W-2 Domestic waste is minimized by providing safe and convenient source separation and recycling.	Yes	A central waste facility is provided with clear indication of recycling vs waste bins
Building Maintenance	**Objective 4X-1** Building design detail provides protection from weathering.	Yes	Noted and generally achieved.
	Objective 4X-2 Systems and access enable ease of maintenance.	Yes	Noted and achieved.
	Objective 4X-3 Material selection reduces ongoing maintenance costs.	Yes	Noted and adopted. Refer to schedule of materials and finishes.

3. SEPP65 DESIGN QUALITY PRINCIPLES AND COMPLIANCE ANALYSIS

SEPP 65 DESIGN QUALITY PRINCIPLES

PRINCIPLE 1

CONTEXT AND NEIGHBOURHOOD CHARACTER

Good design responds and contributes to its context. Context can be defined as the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions.

Responding to context involves identifying the desirable elements of an area's existing or future character. Well-designed buildings respond to and enhance the qualities and identify of the area including the adjacent sites, streetscape and neighbourhood. Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change.

STATEMENT OF COMPLIANCE

The buildings respond and contribute to its context. This project is located in one of the last precincts to be developed in the Warriewood Valley and the proposed building is consistent with the desired future character stated in the relevant planning and design policies of Council and recent similar developments in the area. It provides a choice of housing types and responds to the market preferences that have been demonstrated over recent years.

PRINCIPLE 2

BUILT FORM AND SCALE

Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and surrounding buildings. Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements. Appropriate built form defines the public domains, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.

STATEMENT OF COMPLIANCE

The proposal is appropriate in terms of its bulk and scale when compared to similar developments in the vicinity. The townhouse component is generally two-storey in character and reflects the scale of the adjoining residential developments. The townhouse component of this development is located adjacent to the adjoining residential dwellings and acts as a transition between these dwellings and the proposed residential flat buildings located in the centre of the site. The proposed amendments in the S4.56 application propose minor changes to the building envelope which do not pose negative impacts with relation to building scale

PRINCIPLE 3

DENSITY

SEPP 65 DESIGN QUALITY PRINCIPLES

Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context. Appropriate densities are consistent with the area's existing or projected population. Appropriate densities can be sustained by existing or proposed infrastructure, public transport, access to jobs, community facilities and the environment.

STATEMENT OF COMPLIANCE

The density is appropriate for the site and its context, in terms of development mix, floor space and the number of residential apartments and residents. The densities are sustainable and consistent with the stated desired future densities in the relevant planning and design policies of Council. The densities respond to the regional context, availability of infrastructure, public transport, community facilities and environmental quality. The proposed amendments in the S4.56 do not pose any adverse changes to the density of the development

PRINCIPLE 4

SUSTAINABILITY

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

STATEMENT OF COMPLIANCE

Efficient use is made of natural resources, energy and water throughout the full life-cycle of the building, including its construction. Ecologically sustainable principles will be followed by way of appropriate recycling of demolition materials, selection of appropriate and sustainable materials for construction, passive solar design principles, use of efficient appliances and mechanical services, soil zones for vegetation and reuse of water where appropriate. The S4.56 proposes solar panels on the roof to increase the energy performance of the development

PRINCIPLE 5

LANDSCAPE

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in attractive developments with good amenity. A positive image and contextual fit of well-designed developments is achieved by contributing to the landscape character of the streetscape and neighbourhood.

Good landscape design enhances the development's environmental performance by retaining positive natural features which contribute to the local context, co-ordinating water and soil management, solar access, micro-climate, tree canopy, habitat values, and preserving green networks. Good landscape design optimises usability, privacy and opportunities for social interaction, equitable access, respect for neighbours' amenity, provides for practical establishment and long term management.

STATEMENT OF COMPLIANCE

The buildings and landscaping are designed to operate together as an integrated and sustainable system, resulting in greater aesthetic quality and amenity for both occupants and the adjoining public domain. The landscaping has been designed to respond to the site's features in responsible and creative ways – in particular, the landscape response to the Riparian zone of the Narrabeen Creek boundary at the northern perimeter of the site. It enhances the development's natural environmental performance by co-

SEPP 65 DESIGN QUALITY PRINCIPLES

ordinating water and soil management, solar access, micro- climate, tree canopy and habitat values. It contributes to the positive image and contextual fit of the development through respect for streetscape and the desired future character of the neighbourhood.

PRINCIPLE 6

AMENITY

Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident wellbeing.

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

STATEMENT OF COMPLIANCE

Good amenity is provided through the physical, spatial and environmental quality of the development. The amenity is optimised by 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.

PRINCIPLE 7

SAFETY

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

STATEMENT OF COMPLIANCE

The building 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, providing clear, safe access points, providing quality communal spaces that cater for desired recreational uses, providing lighting appropriate to the location and desired activities, and clear definition between public and private spaces.

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PRINCIPLE 8

Housing Diversity and Social Interaction Social dimensions

Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets. Well designed apartment developments respond to social context by providing housing and facilities to suit the existing and future social mix. Good design involves practical and flexible features, including different types of communal spaces for a broad range of people, providing opportunities for social interaction amongst residents.

STATEMENT OF COMPLIANCE

The development responds to the social context and needs of the local community in terms of lifestyles, affordability and access to social facilities. The development optimises the provision of housing to suit the social mix and needs of the desired future community.

PRINCIPLE 9

Aesthetics

Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure. Good design uses a variety of materials, colours and textures. The visual appearance of well-designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape.

STATEMENT OF COMPLIANCE

The building provides an appropriate composition of building elements, textures, materials and colours and reflects the use, internal design and structure of the development. The building's aesthetics respond to the environment and context, particularly to the desirable elements of the desired future character of the area.