SEPP 65 Design Statement And ADG Compliance Summary

71 Park Avenue, Kingswood

February 2017

Document to be read in conjunction with
Development Application for the above address

Prepared by

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1.0 DESIGN VERIFICATION STATEMENT

Prepared to accompany Development Application for 50 units, 90 place childcare centre and associated car parking and landscaping submitted for 71 Park Avenue, Kingwood.

Verification of Qualifications

Stephen John Bowers is a Registered Architect of New South Wales and Principal of Stephen Bowers Architects Pty Ltd and is enrolled in the Division of Chartered Architects in the register of Architects pursuant to the Architect's Act 1921. Stephen Bowers is registered with the NSW Architects Registration Board with registration number 5810.

Design Statement

The assessment of the proposal is in accordance with the Design Quality Principles as set out in SEPP 65- Design Quality Principles. Stephen Bowers verifies that the design quality principles as set out in the SEPP 65 Part 2 are achieved for the proposed development as stated below. The 9 Principles and compliance are as address within the following tables.

The Proposal

We have prepared the architectural drawings to accompany a development application for the development of the site above. The application is for the construction of a mixed use development comprising of a residential apartment building of 50 units, a 90 place child care centre, two level basement parking for 66 vehicles and associated landscaping and rooftop communal open space area. Features of the proposal include:

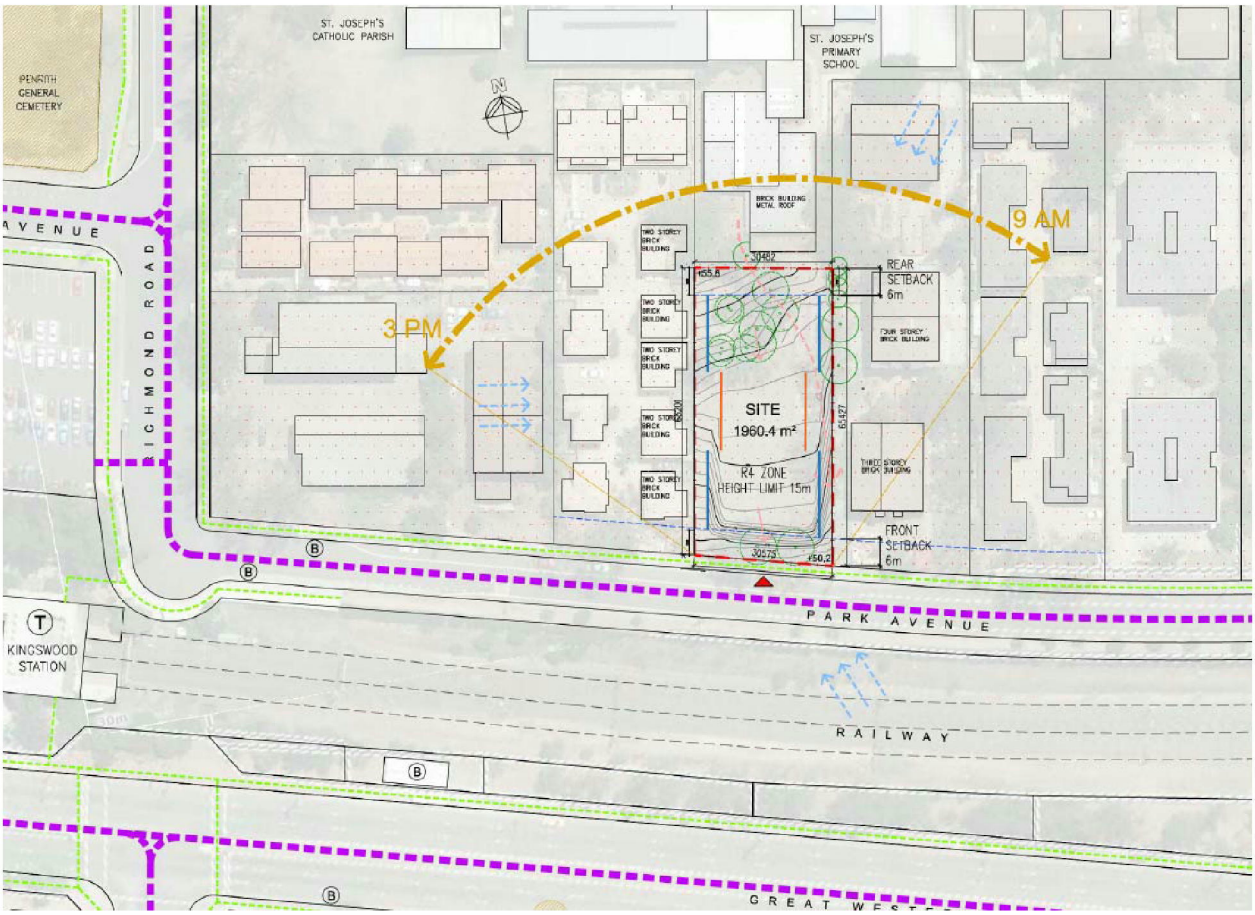
- 50 residential dwellings over 5 levels
- 2 level basement car parking accessed from Park Avenue
- Rooftop landscaped communal open space

Background and Objectives

The Development Application responds to Perth Local Environmental Plan 2010 and Development Control Plan to provide a residential development as permitted on the subject land.
The proposal achieves the objectives of the zone by:

- Providing for the community's housing needs in an emerging high density residential environment
- Proposing other land uses such as a Child Care Centre that will provide facilities and services needed to meet the day-to-day needs of residents
- Supporting the evolution of building styles through the introduction of well-designed contemporary building that respond to the local context and environmental conditions
- Ensuring a built form that defines the public domain and the private sector of the development
- Ensuring spaces within the building are functional and offer high level of amenity and quality
- Ensuring buildings are flexible and adaptable and able to accommodate changes of use to meet demands
- Protecting the amenity of existing and future neighboring residential uses

Site Analysis



2.0 SEPP65 DESIGN STATEMENT

STATE ENVIRONMENTAL PLANNING POLICY NO 65 DESIGN STATEMENT 71 PARK AVENUE, KINGSWOOD NSW 2747		
SEPP 65 PRINCIPAL	**DESIGN RESPONSE**	**COMPLIES**
Principle 1: Context and neighbourhood character *Good design responds and contributes to its context. Context is 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 identity 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.*	The proposal consists of 50 residential units comprising of a mix of studio, 1, 2 and 3 bedroom units spread over 5 storey. The subject site is located within 400m from Kingwood Railway Station on land that was zoned to R4 High Density Residential in 2014. The area is currently characterized by the Railway Station, Local Centre, 3 storey residential flat building, townhouses and older low density housing. However it is undergoing transition with surrounding sites along Park Avenue, which has been rezoned R4, permitting development up to a height of 15m. There is no floor space ratio restrictions. Land adjacent to the railway line on the opposite side of the station are also zoned R4 and areas around the Local Centre and local hospital is zoned B4. This will allow for opportunities of mixed use development that could meet the growing demands of an emerging high density residential area in its transition from its current lower density environment into a denser sustainable environment. The desired future character is that which responds to context and is consistent with the guidelines and controls set out the Penrtih LEP 2010. Its objectives are: - To provide for the housing needs of the community within a high density residential environment. - To provide a variety of housing types within a high density residential environment. - To enable other land uses that provide facilities or services to meet the day to day needs of residents. - To ensure that a high level of residential amenity is achieved and maintained. - To encourage the provision of affordable housing. - To ensure that development reflects the desired future character and dwelling densities of the area. To meet the above objectives, an architectural enrichment of the building façade was required to harmonise the bulk and scale of the proposed building with its neighboring buildings.	Yes

	The basement car park is over two levels to ensure that it sits within the building footprint and therefore maximizing the deep soil planting around the building to facilitate planting of large trees to complement its context.	
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 domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.*	The proposal responds to its existing and desired future character of the street by adopting a built form envelope that steps down the site and sits within the height plane and setbacks responding to the desired future character of the site relative to its controls, setting, topography, and surrounding buildings. The proposal, in responding to context, will positively contribute to the desired future character sought by the Perth LEP/DCP. The proposed design has been developed in keeping with the requirements of the ADG and DCP requirements in relation to building alignment, setbacks and building type to ensure that the development maintains an appropriate built form. The proposed built form consists of 50 residential units comprising of a mix of studio, 1 , 2 and 3 bedroom units spread over 5 storeys. The proposed bulk and height achieves the scale identified for the desired future character of the precinct by variations in setback within the building envelop along the eastern and western facades. By adopting suitable indentations to create opportunities for additional window opening, outlook onto communal open spaces and cross ventilation, the bulk is further reduced. Strong integrated projection of vertical and horizontal frame elements creates frames to also ameliorate the buildings bulk and introduce a scale to produce a residential character that is sympathetic to the architectural character of the 2 and 3 storey adjoining properties. The combination of proposed landscape treatment and built form response defines the public domain and provides transition area to the private domain. The private domain is defined by private open spaces and window openings in the front façade to provide views to the street while ensuring visual privacy to adjacent development.	Yes
Principle 3: Density *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*	The proposed design incorporates interior layouts that achieves good levels of solar access, natural ventilation, room sizes, planning efficiencies, zoning, views and outlook that ensures a high level of amenity for future residents. The proposed density will therefore be appropriate for the site.	Yes

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.	The proposal is also considered sustainable given the proximity of current infrastructure and services including the nearby Nepean Hospital, University and primary school which are all within a 2km radius. The density of the proposed development fits in with the objectives of the Penrith LEP planning instruments which aim to provide for an increase in population through the provision of high density housing and mixed use development near the Railway Station.	
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.*	The proposal reduces reliance on energy and artificial heating, cooling and lighting through arranging living areas to adjoin the external wall and maintaining habitable room depths of not more than 8m. Less than 15% of units are single aspect south oriented units. The proposal incorporates internal layouts responsive to passive solar design principles, energy and water efficient appliances, fittings and mechanical systems. Rainwater reuse is also proposed. Building layout incorporates corner units thus more than 60% of units have cross flow ventilation. Window opening sizes are incorporated into the unit design to ensure natural ventilation for each unit which reduces the burden of artificial heating and cooling. To optimize the responsiveness of the development to the demand for change over time, the building is proposed as a concrete framed structure with non-load bearing partition walls. The building therefore has flexibility for change and adaption response needs. Rainwater retention is provided for reuse on gardens and in the loading/carwash bay. 34% of the ground area is landscaped area while deep soil zones are maintained around the perimeter of the building for ground water recharge and significant vegetation.	Yes

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 and provides for practical establishment and long term management.*	The proposed landscape scheme is integral to the proposal's built form and spatial outcomes particularly regarding solar access, microclimate, privacy, amenity and the coordinated aesthetic resulting from complimentary landscaping and built form. The rooftop landscape communal open space forms an outlook amenity for the residents of the units. The communal open space on ground is directly visible and from both lift lobbies and are accessible to all residents thus affording usability, privacy and social opportunity in a landscaped setting enjoying a landscaped outlook. 34% of the site on ground level is utilized for landscaped area and 9.4% of which is deep soil with a minimum dimension of 6m adequate for planting of mature trees. The distribution of the communal landscape area optimizes the opportunity for usability, social interaction, privacy and perambulation. The landscape design is integral to the proposal, providing privacy and amenity to the occupants and integrating the building with its surroundings. In keeping with the sustainable goals of the development, the landscaping proposed improves the amount of trees and vegetation on the site and establishes a positive benchmark for the transitioning of the area. The common landscaped areas will be embellished with, seating areas, play areas and BBQ facility, native planting and turfed areas.	Yes
Principle 6: Amenity *"Good design provides amenity through the physical, spatial and environmental quality of a development. Optimizing 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."*	Internal building layouts respond to the ADG, market expectations and Council requirements. The units are designed to comply with unit size and dimensions, room size, layout, ventilation, day lighting, balcony size, solar access, circulation, privacy safety and security noise reduction, and access. Open space have been considered along with all the above to achieve high standards of residential amenity and housing mix. Living areas are oriented toward landscape areas. Internal areas are laid out to accommodate use by various age groups and all apartments are accessed via graded access paths and lifts. 10% of the apartments are designed to provide for adaption to be accessible. 50% of storage space is provided within the unit with the balance in the storage room on ground level and basement storage cages. Balcony sizes or private open space all adhere to the minimum sizes as recommended in the ADG. All apartments have direct access to the basement via centrally located lifts and stairs, where parking for residents and visitors will be provided. Waste chutes are provided close to lifts and are easily accessible to all apartments.	Yes

Principle 7: Safety *Good design optimises 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.*	The configuration of units within the building and the relationship of the units to the communal open spaces and access ways within the site are such that safety and security of resident and visitors is optimized. Resident and visitor pedestrian access into the building is safe and secure because the pedestrian routes are clearly defined and through security doors. Movement sensors will activate security lighting in the car parking areas and front door at night. Natural daylight is available to lift lobbies on each floor and provides no recess for concealment. Separation between the resident and visitor parking space has been achieved though their location and physical barriers proposed in the basement carpark.	Yes
Principle 8: Housing diversity and social interaction *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 and providing opportunities for social interaction among residents.*	The proposal consists of 50 residential units comprising of a mix of studio, 1 , 2 and 3 bedroom units spread over 5 storey. The proposal comprises residential units with associated parking, landscape, private open space, communal open space and facilities for visitors. The proposed mix of residential accommodation is based on advice from local real estate agents, the needs of family buyers and first home buyers and rental accommodation. The proposal is close to public transport and community facilities. Unit layouts are thus designed to respond to the needs of the desired future community with a range of sizes, configurations and adaptability. Studio – 2% - 41m^2 1 bed – 6% - 50m^2 2 bed – 88% - 71 - 83m^2 3 bed – 4% - 95m^2 The communal open space areas, supplemented by recreational facilities, are located so as to provide opportunity for social interaction. The nature of the development demands a high level of security for the occupants. Physical and visual barriers provide a clear separation between public and private domain.	Yes

Principle 9: 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."*	The design incorporates architectural features and framing to modulate the building's scale, engage the residential rhythm of adjoining developments and reduce the bulk of the building within the future streetscape. The bulk of the building is also ameliorated by articulation in the façade and vertical elements of the privacy screens and portals which break the façade length and add interest to the façade. The uses of a harmonious palette of opaque and transparent glazed walls rendered and painted portals and batten screens are consistent with its surroundings and ensure that the building responds to its setting and context thus contributing to the desired future character of the area. Photomontage which demonstrate the buildings colours and finishes companies this DA.	Yes

3.0 ADG COMPLIANCE TABLES

PART 3 – SITING THE DEVELOPMENT	
OBJECTIVES	**COMMENTS**
3A – Site Analysis	
Objective 3A-1 Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context	- A site analysis accompanies this DA. The proposed design responds to the opportunities and constraints identified in the site analysis. - In relation to context, the site is located within close proximity of Kingwood Railway Station. - The zoning of the land will facilitate redevelopment from lower density housing into a desirable urban community reflecting the need for increased housing in the area. - The proposed development proposes a high quality design that is appropriate to the desired future urban character of the locality.
3B – Orientation	
Objective 3B-1 Building types and layouts respond to the streetscape and site while optimizing solar access within the development	- The proposed development is setback 5.5m from its front Boundary facing Park Avenue. It defines the street by building parallel to the boundaries of the site, incorporating units with balconies and windows which overlook Park Avenue and open deep soil planting areas along the side. - The architectural form of the development is contemporary and utilizes scaling devices to ensure that the scale of the building, despite its bulk, related appropriately to adjacent lower scale development. The completed building will provide an attractive appearance to the streetscape. - The building layout has been designed to optimize solar access, with majority of living room of units having a window opening to the north. Communal open space is located so as to receive solar access.
Objective 3B-2 Overshadowing of neighbouring properties is minimised during mid-winter	- Solar access to living rooms, balconies and private open spaces of neighbours has been considered and the proposal does not result in overshadowing of adjacent properties for more than 3 hours between 9am – 3pm at winter solstice - From a review of the solar access diagrams prepared, of the site and adjoining properties, it would appear that the proposed development will not overshadow any solar collectors on neighboring buildings

3C – Public Domain Interface	
Objective 3C-1 Transition between private and public domain is achieved without compromising safety and security	- The upper level balconies and windows overlook Park Avenue and provide passive surveillance to the public domain located in the front of the building. - The landscape design improves pedestrian amenity along street frontage. - The architecture of the building ensures that the pedestrian entries to the development are clearly visible and identifiable from the street - Active frontages are provided at the ground level of the building to ensure a safe public domain, whilst protecting the residential amenity of dwellings at the upper levels of the development by setting back windows to living areas behind balcony areas. - The building's frontage has been designed to address the street and to enhance the quality of the public domain.
Objective 3C-2 Amenity of the public domain is retained and enhanced	- Street access, pedestrian paths and building entries are clearly defined - The proposal includes planting to soften the edges of the development from the street along with a low sandstone wall
3D – Communal and Public Open Space	
Objective 3D-1 An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping Design Criteria Communal open space has a minimum area equal to 25% of the site 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 communal open space should have a min dimension of 3m.	- The proposal provides communal open space equal to 25% of the site at both ground and roof level - The communal open spaces are well designed, easily identified and are usable areas - The communal open space receives a minimum of 50% solar access between 9am and 3pm as shown on the shadow diagrams prepared by Stephen Bowers Architects. - Communal open spaces exceed the minimum dimension of 3m
Objective 3D-2 Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting	- The communal open space has been designed for a range of activities with facilities including: a) Provision for seating for individuals or groups b) BBQ area c) The location of the facilities responds to microclimate and site conditions with access to sun in winter

Objective 3D-3 Communal open space is designed to maximise safety	- The proposed communal open space and the public domain surrounding the site is readily visible from habitable rooms and private open space areas of the apartments - The proposed communal open space will be appropriately lit
Objective 3D-4 Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood	- Not applicable
3E – Deep Soil Zones	
Objective 3E-1 Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality Design Criteria Deep soil zones are to meet the following minimum requirements: - 7% of site area - <650sqm – no min dimensions - 650sqm-1500sqm – 3m min dimensions - >1500sqm – 6m min dimensions	- The site area is approximately 1960.4m^2 - 9.4% of the site have been provided as a deep soil zone of minimum 6m dimensions to allow for adequate landscaping and planting
3F – Visual Privacy	
Objective 3F-1 Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy Design Criteria 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: - 4 storeys: 6m for habitable rooms and balconies; 3m for non-habitable rooms - 5-8 storeys: 9m for habitable rooms and balconies; 4.5m for non- habitable rooms - 9+storeys: 12m for habitable rooms and balconies; 6m for non-habitable rooms Separation distances between buildings on the same site should combine required building separations depending on the type of room	- Habitable rooms are setback 6m from both the east and west boundaries of the site (6m separation equally shared between neighboring sites). - Where setback is less than 6m, habitable rooms are oriented at 90 degrees to the boundary so that the wall facing the boundary is a blank wall. This way the proposal achieves the ADG building separation distances. - Visual privacy to the adjoining properties has been achieved through a combination of the separation distances and screening devices to prevent overlooking into habitable spaces of adjoining properties. - Fixed vertical privacy screens, primarily made of powder coated metal battens, have been provided on all balconies visible from the east and western boundaries to further increase the amenity and privacy of the residents and adjoining properties.
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	- Landscaping is provided around the perimeter of the building to enhance outlook amenity.

	- Most balconies and private terraces are located in front of living rooms to increase internal privacy and act as an extension of the living space. - Privacy screens are proposed on balconies to increase privacy without compromising access to light, air and outlook.
3G – Pedestrian Access & Entries	
Objective 3G-1 Building entries and pedestrian access connects to and addresses the public domain	- A clearly identifiable building entry from Park Avenue has been provided to activate the street edge and address the public domain. - The building entry will meet the Australian Standards for accessibility
Objective 3G-2 Access, entries and pathways are accessible and easy to identify	- The proposed building access areas including the lift lobby and hallway are clearly visible from the communal spaces. - The ground floor has been designed to minimise level changes along pathways and entry - Ramps have been integrated into the overall building and landscape design
Objective 3G-3 Large sites provide pedestrian links for access to streets and connection to destinations	- Not applicable
3H – Vehicle Access	
Objective 3H-1 Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes	- The car park entry is located off Park Avenue close to south-east corner of the site away from pedestrian entry - The pedestrian and vehicle access are separate - Clear sight lines have been provided at the vehicle crossing
3I – Bicycle and Car Parking	
Objective 3I-1 Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas Design Criteria - 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 site is located within 400m to Kingwood Railway Station - The proposed car parking provision complies with the car parking requirements set out in the Guide to Traffic Generating Developments - Car parking provided off street in 2 level basement car park - The visitor parking is shared with the proposed Child Care 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	
Objective 3I-2 Parking and facilities are provided for other modes of transport	- Not applicable
Objective 3I-3 Car park design and access is safe and secure	- Direct, clearly visible and well lit access is provided into common circulation areas - A clearly defined and visible lobby is provided to lifts
Objective 3I-4 Visual and environmental impacts of underground car parking are minimised	- The proposed car parking layout is well organised, using a logical, efficient structural grid such that excavation has been minimized where possible and limited to 2 levels. The carpark also makes provision for waste to be collected within Basement 1.
Objective 3I-5 Visual and environmental impacts of on grade car parking are minimized	- Not applicable
Objective 3I-6 Visual and environmental impacts of above ground enclosed car parking are minimized	- Not applicable

PART 4 – DESIGNING THE BUILDING

OBJECTIVES	COMMENTS
4A – Solar and Daylight Access	
Objective 4A-1 To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space Design Criteria - 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 - 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 - A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter To maximise the benefit to residents of direct sunlight within living rooms and private open spaces, a minimum of 1sqm of direct sunlight, measured at 1m above floor level, is achieved for at least 15 minutes	- The solar access diagrams demonstrate that 78% of apartments will receive a minimum of 2 hours direct sunlight to its living room and private open space between 9am and 3pm at mid winter
4B – Natural Ventilation	
Objective 4B-1 All habitable rooms are naturally ventilated	- The proposed development provides natural ventilation to all habitable rooms
Objective 4B-2 The layout and design of single aspect apartments maximises natural ventilation	- Greater than 60% of apartments are naturally ventilated - Single aspect apartments are limited in depth
Objective 4B-3 The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents. Design Criteria - At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed - Overall depth of a cross-over or cross through apartment does not exceed 18m, measured glass line to glass line	- Greater than 60% of apartments are naturally ventilated (66%) - No apartment has a depth which exceeds 18 metres (glass line to glass line) - The proposed development provides a minimum of 2.7 metre floor to ceiling heights for habitable rooms within the building. Ceiling heights are maximized in habitable rooms by ensuring that bulkheads do not intrude by the stacking of service rooms from floor to floor where possible.

4C – Ceiling Heights	
Objective 4C-1 Ceiling height achieves sufficient natural ventilation and daylight access. Design Criteria - Measured from finished floor level to finished ceiling level, minimum ceiling heights are: - Habitable rooms: 2.7m - Non-habitable: 2.4m - 2 storey apartments: 2.7m for main living area floor; 2.4m for second floor where it's area does not exceed 50% of the apartment area - Attic spaces: 1.8m at the end with a 30 degree min slope If located in mixed use area: 3.3m for ground and first floor to promote flexibility	- The proposed development provides a minimum of 2.7m floor to ceiling heights for habitable rooms within the building.
Objective 4C-2 Ceiling heights increases the sense of space in apartments and provides for well-proportioned rooms	- Ceiling heights are maximised in habitable rooms by ensuring that bulkheads do not intrude by the stacking of service rooms from floor to floor where possible
Objective 4C-3 Ceiling heights contribute to the flexibility of building use over the life of the building	- Floor to floor height is 3000mm for added flexibility over the life of the building
4D – Apartment Size and Layout	
Objective 4D-1 The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity Design Criteria - Apartments are required to have the following minimum internal areas: - Studio: 35sqm - 1 bedroom: 50sqm - 2 bedroom: 70sqm - 3 bedroom: 90sqm The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m2 each. A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m2 each - 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 A window should be visible from any point in a habitable room	- All apartments meet the minimum required apartment sizes as shown on the floor plans prepared by Stephen Bowers Architects - Every habitable room has a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room - All windows in habitable rooms are visible from any point in the room
Objective 4D-2 Environmental performance of the apartment is maximized Habitable room depths are limited to a maximum of 2.5 x the ceiling height. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window	- Where possible the depth of all habitable rooms within the proposed development are limited to a maximum of 2.5 metres x the ceiling height - Living areas are located on the external face of the building and orientated toward the primary outlook and aspect

	- In the open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window.
Objective 4D-3 Apartment layouts are designed to accommodate a variety of household activities and needs - Master bedrooms have a minimum area of 10m2 and other bedrooms 9m2 (excluding wardrobe space) - Bedrooms have a minimum dimension of 3m (excluding wardrobe space) - Living rooms or combined living/dining rooms have a minimum width of: - 3.6m for studio and 1 bedroom apartments - 4m for 2 and 3 bedroom apartments The width of cross-over or cross- through apartments are at least 4m internally to avoid deep narrow apartment layouts.	- The master bedrooms within the apartments all have a minimum area of 10sqm and all other bedrooms are at least 9sqm - All living rooms have a minimum width of 4 metres for 2 and 3 bedroom apartments and 3.6m for 1 bedroom apartments
4E – Private Open Space and Balconies	
Objective 4E-1 Apartments provide appropriately sized private open space and balconies to enhance residential amenity Design Criteria - All apartments are required to have primary balconies as follows: - Studio: 4sqm min - 1 bed: 8sqm min and 2m depth - 2 bed: 10sqm min and 2m depth - 3 bed: 12sqm min and 2.4m depth The minimum balcony depth to be counted as contributing to the balcony area is 1m. For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15sqm and a minimum depth of 3m.	- The proposed development provides primary balconies which meet the minimum size and depth requirements as outlined in the architect's apartment schedule which accompanies this application - The private open space for 1 and 2 bedroom ground floor apartments comply with the minimum 15 square metre area standard - All apartments above ground floor comply with the minimum area requirements of the ADG
Objective 4E-2 Primary private open space and balconies are appropriately located to enhance livability for residents	- To extend the living area, primary open space and balconies within the proposal are located adjacent to the combined living, dining room and kitchen areas
Objective 4E-3 Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building	- The proposed balconies are integrated into the design of the building
Objective 4E-4 Private open space and balcony design maximises safety	- The proposed development has minimised changes in ground levels and landscaping where possible

	- The design and detailing of the proposed balconies avoids opportunities for climbing and falls
4F – Common Circulation and Spaces	
Objective 4F-1 Common circulation spaces achieve good amenity and properly service the number of apartments Design Criteria - The maximum number of apartments off a circulation core on a single level is eight - For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40 Where design criteria 1 is not achieved, no more than 12 apartments should be provided off a circulation core on a single level	- The proposed development provides no more than 6 units to each core and associated corridor - Common corridors and communal facilities have been designed to promote interaction. Direct and legible corridors are provided with clear sightlines to apartments and access to natural light and ventilation
Objective 4F-2 Common circulation spaces promote safety and provide for social interaction between residents	- Direct and legible access is provided between vertical circulation points and apartment entries by minimising corridor length to give short, straight, clear sight lines and opportunities for interaction
4G – Storage	

Objectives 4G-1
Adequate, well designed storage is provided in each apartment
 	
Design Criteria
- In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:
  - Studio 4m3
  - 1 bed: 6m3
  - 2 bed: 8m3
  - 3 bed: 10m3
At least 50% of the required storage is to be located within the apartment
	- Sufficient area for storage is provided within each apartment. External storage areas are also provided for each apartment in the form of storage cages in basement carpark and also in a secure storage room on ground level accessible via lift or stairs.

Objective 4G-2 Additional storage is conveniently located, accessible and nominated for individual apartments	- Storage not located in apartments will be secure in the ground level storage room and basement carpark and clearly allocated to specific apartments
4H – Acoustic Privacy	
Objective 4H-1 Noise transfer is minimised through the siting of buildings and building layout	- Where possible noisy areas within the proposed development including building entries and corridors have been located above each other and quieter areas above quieter areas - The party walls (walls shared with other apartments) will be appropriately insulated and be of discontinuous construction as well as being in accordance with BCA requirements. - Acoustic walls are provided between units

Objective 4H-2 Noise impacts are mitigated within apartments through layout and acoustic treatments	- Internal apartment layout separates noisy spaces from quiet spaces, rooms with similar noise requirements have been grouped together - Noise sources are positioned away from bedrooms - Bathrooms and wardrobes are co-located to act as sound buffers - Doors are located separating different use zones
4J – Noise & Pollution	
Objective 4J-1 In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings	- Not applicable
Objective 4J-2 Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission	- Not applicable
4K – Apartment Mix	
Objectives 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 - The proposed apartment mix is appropriate, taking into consideration the distance to public transport, employment and education centres, as well as the current market demands and projected future demographic trends within the area - Proposed unit mix: 1x Studio – 2% 3x 1 bed – 6% 44x 2 bed – 88% 2x 3 bed – 4%
Objectives 4K-2 The apartment mix is distributed to suitable locations within the building	- Larger apartments have been located to achieve courtyard spaces at ground or roof top level
4L – Ground Floor Apartments	
Objective 4L-1 Street frontage activity is maximised where ground floor apartments are located	- Activity is achieved by proposing doors and private open space to face the street along with the Child Care facing the street - Horizontal battens around private open space will allow for privacy without obstructing casual surveillance to the street - Open layout of studio ground floor apartment facing Park Avenue provides future opportunities for conversion into commercial or retail areas

Objective 4L-2 Design of ground floor apartments delivers amenity and safety for residents	- Privacy and safety is provided to the ground floor apartments through the provision of fencing and landscape around the private open space
4M – Facades	
Objective 4M-1 Building facades provide visual interest along the street while respecting the character of the local area	- The proposed design of the facade of the development incorporates a varied composition achieved through the use of a restrained mix of natural textures, materials, details, earthy colours and a good balance of solid and void - The proposed façade design generates shadow throughout the day as a result of building articulation and recessed balconies
Objective 4M-2 Building functions are expressed by the façade	- The building entry within the proposed development is clearly defined by the architectural expression of these elements - The apartment layouts are also expressed externally through facade features such as party walls, floor slabs and windows
4N – Roof Design	
Objective 4N-1 Roof treatments are integrated into the building design and positively respond to the street	- The roof treatments have been integrated with the building design and roof materials compliment the building
Objective 4N-2 Opportunities to use roof space for residential accommodation and open space are maximised	- Provision is made for high quality roof level area of communal open space and minimise the visual and acoustic impacts of the development on the adjoining properties
Objective 4N-3 Roof design incorporates sustainability features	- The proposed roof design maximises solar access to apartments during winter and provides shade during summer
4O – Landscape Design	
Objective 40-1 Landscape design is viable and sustainable	- The subject application is accompanied by a landscape plan which enhances the environmental performance of the development
Objective 40-2 Landscape design contributes to the streetscape and amenity	- The proposed landscaped design contributes positively to the amenity of the development by providing a pleasant outlook from the apartments within the development and lush presentation to Park Avenue.
4P – Planting on Structures	
Objective 4P-1 Appropriate soil profiles are provided	- The proposed development includes planting at ground and roof level and provides appropriate soil volume to facilitate plant growth around the perimeter of the building

Objective 4P-2 Plant growth is optimised with appropriate selection and maintenance	- The landscape plan which accompanies this proposal provides plants which have been selected to suit the site conditions
Objective 4P-3 Planting on structures contributes to the quality and amenity of communal and public open spaces	- The proposed development incorporates planting all around the perimeter following the sloping ground levels which will contribute positively to the ground floor as well as the higher level apartments which will have a leafy outlook
4Q – Universal Design	
Objective 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 Livable Housing Guideline's silver level universal design features	- The proposed development achieves a benchmark more than 20% of the total apartments incorporating the Livable Housing Guideline's silver level universal design features - For details, please refer to Accessibility report which accompanies this DA.
Objective 4Q-2 A variety of apartments with adaptable designs are provided	- The proposal provides a variety of adaptable apartments which is consistent with the Penrith DCP
Objective 4Q-3 Apartment layouts are flexible and accommodate a range of lifestyle needs	- The proposed development incorporates flexible apartment designs including rooms with multiple functions and various living space options
4R – Adaptive Reuse	
Objective 4R-1 New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place	- Not Applicable
Objective 4R-2 Adapted buildings provide residential amenity while not precluding future adaptive reuse	- Not Applicable
4S – Mixed Use	
Objective 4S-1 Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement	- Active frontages are provided for proposed Child Care Centre on ground floor with clearly identifiable glazed entry, wide footpaths within landscaped area to encourage pedestrian movement and promote social interaction at street frontage.
Objective 4S-2 Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents	- Rooftop open space for residents and Child Care Centre are also separated by privacy screens to ensure safety and amenity is maximized for both types of occupants within this space.
4T – Awning & Signage	
Objective 4T-1 Awnings are well located and complement and integrate with the building design	- Not Applicable
Objective 4T-2 Signage responds to the context and desired streetscape character	- Not Applicable

4U – Energy Efficiency	
Objective 4U-1 Development incorporates passive environmental design	- Adequate natural light, solar access and ventilation is provided to habitable rooms
Objective 4U-2 Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer	- The proposed development incorporates passive solar design measures including overhangs and shading devices, insulated roofs, walls and floors and seals on window and door openings while facilitating solar access during cooler months.
Objective 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 optimized - natural ventilation is provided to all habitable rooms - and as many non-habitable rooms, common areas and circulation spaces as possible	- The proposed development optimises natural cross ventilation for apartments - Natural ventilation is provided to all habitable rooms and as many non-habitable rooms, common areas and circulation spaces as possible - The proposed development will have no significant impact on air or water quality in the locality and is connected to the sewer and not likely to generate any usual liquid waste, odour or fumes - The proposed development will utilise existing infrastructure including electricity, sewer, water and telecommunication services - The building facades have been modeled and composed to respond to the environmental conditions of the site. Screens and privacy walls result in a distinctive appearance - Concrete is used in the floors to maximise thermal mass within the building along with masonry spandrels - Energy efficiency will be enhanced through the selection of appliances with a high-energy efficient usage / rating for their intended use. A BASIX report has been prepared and the proposed development will honor its commitments.
4V – Water Management & Conservation	
Objective 4V-1 Potable water use is minimised	- The proposed development will incorporate water efficient fittings, appliances and wastewater reuse - The proposed development incorporates rainwater collection, storage and reused on site - Drought tolerant, low water use plants are proposed within landscaped areas
Objective 4V-2 Urban stormwater is treated on site before being discharged to receiving waters	- The proposal incorporates water sensitive urban design systems as illustrated in the concept stormwater plan which accompanies the application

Objective 4V-3 Flood management systems are integrated into site design	- The driveway has an elevated weir to prevent flooding into the basement as required by the Penrith DCP - Refer to Stormwater Design Plans accompanying this DA for details
4W – Waste Management	
Objective 4W-1 Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents	- The basement is designed for waste collection within Basement 1 thus avoiding unsightly bins in the street - Adequately sized storage areas for rubbish bins are located discreetly away from the front of the development and in the basement carpark - The circulation design allows bins to be easily maneuvered between the bin rooms and collection area in Basement Level 1 - A waste management plan accompanies the subject DA
Objective 4W-2 Domestic waste is minimised by providing safe and convenient source separation and recycling	- All proposed dwellings have a waste and recycling space of sufficient size to hold two days worth of waste and recycling - Communal waste room is in a convenient and accessible location in the carpark
4X – Building Maintenance	
Objective 4X-1 Building design detail provides protection from weathering	- Appropriate design and material selection is proposed to ensure longevity of the building
Objective 4X-2 Systems and access enable ease of maintenance	- The proposed development provides suitable access for cleaning the building - A cleaner's WC/storage area is provided on ground floor close to the lift

Objective 4X-3
Material selection reduces ongoing maintenance costs
	- The proposed development will incorporate the following measures:
	  - Materials that weather well and improve with time
	  - Robust and durable materials and finishes
	  - Prefinished metal
	  - Glass