

**STATEMENT OF  
ENVIRONMENTAL EFFECTS**

Proposed Mixed Use Development

**38 – 40 ORTH STREET &  
1 – 5 HARGRAVE STREET  
KINGSWOOD**



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# Statement of Environmental Effects

## PROPOSED MIXED USE DEVELOPMENT

38 – 40 ORTH & 1 – 5 HARGRAVE STREET, KINGSWOOD

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## 1.0 INTRODUCTION

This document forms a component of a development application that proposes the demolition of the existing dwelling houses and associated site structures and the construction of a 7 storey mixed use development containing a ground floor commercial tenancy, 121 apartments and 3 levels of basement parking for 156 vehicles. The application also proposes the implementation of an integrated site landscape regime and the strata subdivision of the completed development.

The architect has responded to the client brief to provide for a contextually responsive residential development of exceptional design quality which provides superior levels of amenity to future occupants whilst maintaining good levels of amenity to the adjoining and nearby residential properties. The site specific built form outcome is highly articulated and modulation with the building maintaining an appropriate spatial relationship to all adjoining property development. The integrated site landscape regime will ensure that the building sits within a landscape setting.

Given the design and orientation of the development, and its location within a high density mixed use environment, the proposal will not result in any unacceptable or non-compliant residential amenity impacts in terms of privacy, overshadowing or view loss. The design and setbacks provide for a complimentary and compatible streetscape outcome and establishes an appropriate streetscape rhythm for future development along both Orth and Hargrave Streets.

The final design is responsive to minutes arising from formal a formal Urban Design Review Panel meeting on 13<sup>th</sup> July and a formal pre-Lodgement meeting of 26<sup>th</sup> July 2016 with a number of significant design changes adopted to address issues raised in relation to building typology, adaptive reuse of ground floor level and garbage collection.

We note that Development Application DA16/0597 has been submitted to Council for the construction of a mixed use development at No. 28 – 32 Somerset Street being the majority of properties directly to the west of the subject site. Council has raised concern that this adjoining development leaves No. 26 Somerset Street as an isolated site unless consolidation is achieved with the development the subject of this report. The established subdivision pattern dictates that the orderly and economic development of No. 26 Somerset Street is as a component of DA16/0597 and to that extent we rely on the concept plans accompanying that application showing the ability for No. 26 Somerset Street to be developed in isolation.

Notwithstanding, the application is accompanied by advice confirming that the adjoining property owner has, on numerous occasions, rejected above market offers for purchase of their site. We note that even were this adjoining property purchased it would not, to any significant extent, alter the above ground design of the development with a detached pavilion form on No. 26 Somerset Street facilitating the maintenance of a consistent streetscape rhythm to the Orth Street frontage and a generous through site landscaped buffer between building forms. The correspondence obtained in relation to the attempted consolidation of the adjoining property is at ANNEXURE 1.

In the preparation of this document consideration has been given to the following statutory planning regime:

- Environmental Planning and Assessment Act, 1979 (“the Act”);
- Penrith Local Environmental Plan 2010 (“the LEP”);
- Penrith Development Control Plan (“the DCP”);
- Sydney Regional Environmental Plan No. 20 – Hawkesbury Nepean River;
- State Environmental Planning Policy No. 55 – Remediation of Land;
- State Environmental Planning Policy No.65 – Design Quality of Residential Flat Development;
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004; and
- The Apartment Design Guide (“ADG”).

Architectural drawings including floor plans, elevations and sections have been prepared in relation to the development proposed. The application is also accompanied by a survey plan, SEPP 65 Architect Design Verification, shadow diagrams, traffic impact and parking assessment, arboricultural assessment, access report, landscape plan, waste management plan, stormwater management plans, erosion and sediment control plan, perspective, schedule of finishes, BASIX certificate and BCA Section J report.

The proposal is permissible and generally in conformity with the development standards and controls applicable to this form of development on this particular site. The height and density of the development proposed are contextually appropriate with the generous ground floor ceiling heights providing for the future adaptive re-use of these apartments for commercial purposes as necessary.

The consent authority can be satisfied that the height non-compliance proposed does not defeat the objectives of either the clause 4.3(2) and clause 7.11(3) height standards and accordingly strict compliance is both unreasonable and unnecessary under the circumstances. We have also formed the considered opinion that there are sufficient site specific environmental planning grounds to justify contravening the development standard including the sites location within a Hospital Precinct where carefully designed and considered development is capable of accommodating additional height without adverse streetscape and residential amenity consequences.

Strict compliance would require the deletion of a full level of accommodation which would otherwise be available as either owner occupied or rental accommodation for health care related employees working with the hospital precinct. Such outcome would not, in our opinion, be in the public interest given the nature of the variation when considered against the zone objectives, the DFC height anticipated by the clause 7.11(3) numerical standard, the future adaptability of both the ground and first floor levels and the developments compliance with the objectives of the clause 4.3(2) and 7.11(3) height standards. In this regard, the accompanying clause 4.6 variation request is well founded.

The development satisfies the Design Principles prescribed by State Environmental Planning Policy No. 65, the associated Clause 30 standards and the objectives specified in the Apartment Design Guide for the relevant design criteria. The identified non-compliances with the side boundary setback provisions have been acknowledged, and appropriately justified, having regard to the associated objectives. Such variations succeed pursuant to section 79C(3A)(b) of the Act which requires Council to be flexible in applying such provisions and allow reasonable alternative solutions that achieve the objects of standards/ controls for dealing with that aspect of the development.

The proposal succeeds when assessed against the Heads of Consideration pursuant to section 79C of the Environmental Planning and Assessment Act, 1979 as amended. It is considered that the application, the subject of this document succeeds on merit and is worthy of the granting of development consent.





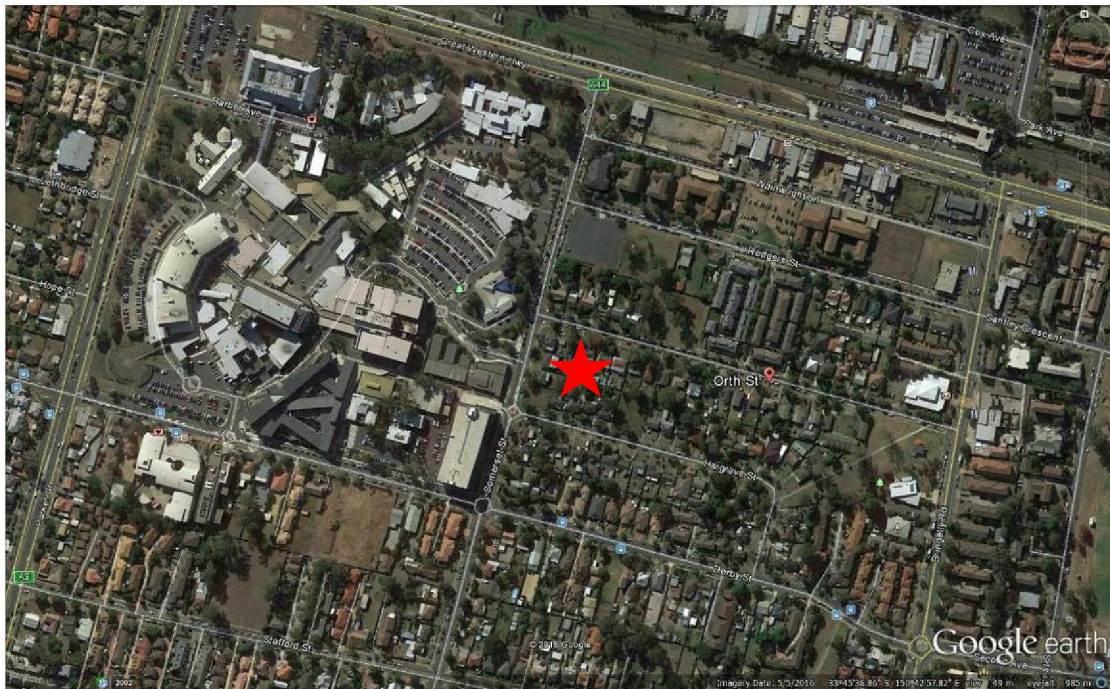


The properties are occupied by single storey detached dwellings with pitched and tile roofs and detached garage accommodation accessed from the property frontages. The properties are unremarkable in form and have no historical significance. Aerial photograph depicting the established built form circumstance and the sites immediate built form context is at Figure 2 and 3 below.



Source: Google Maps

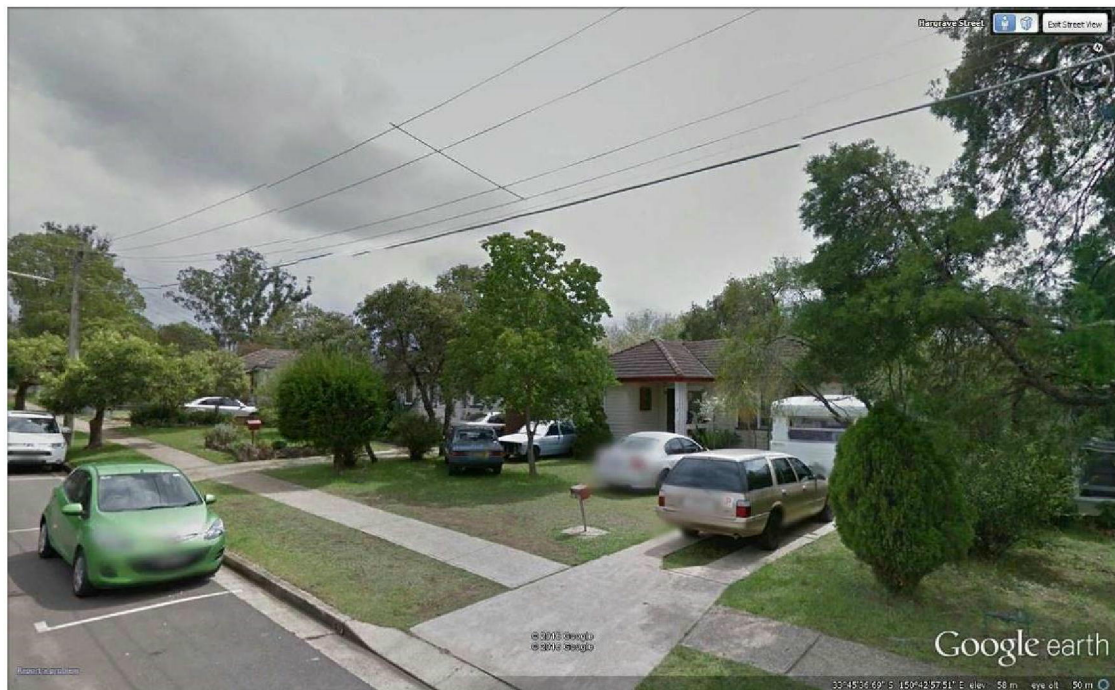
**Figure 2 – Aerial site photograph**



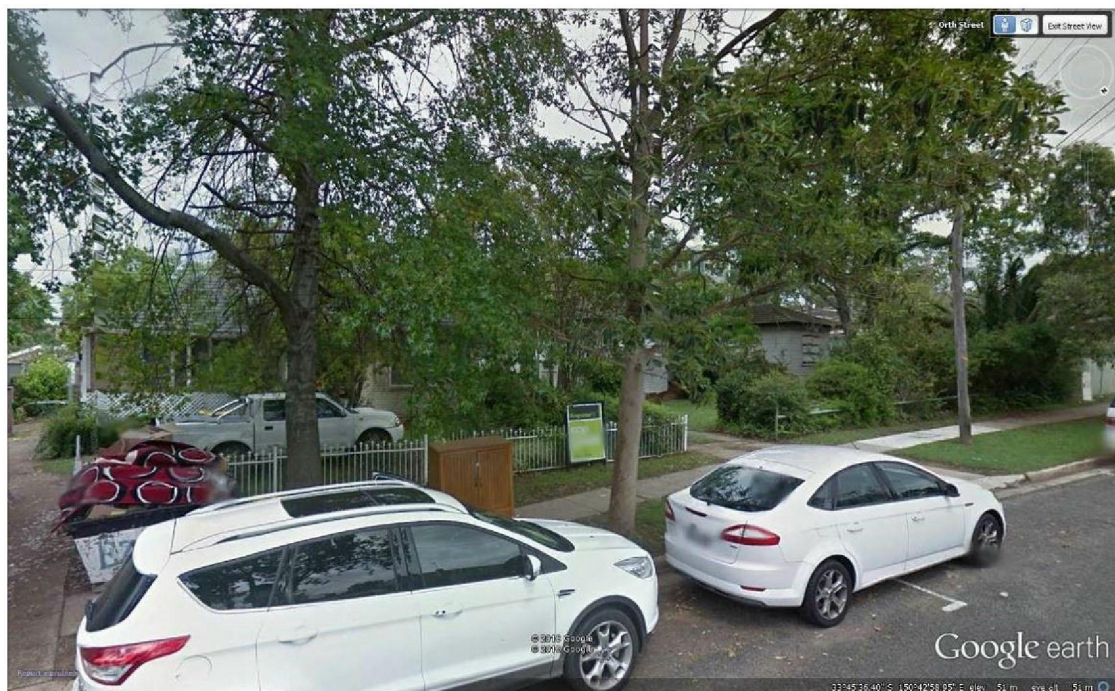
Source: Google Maps

**Figure 3 - Aerial location/ context photograph**



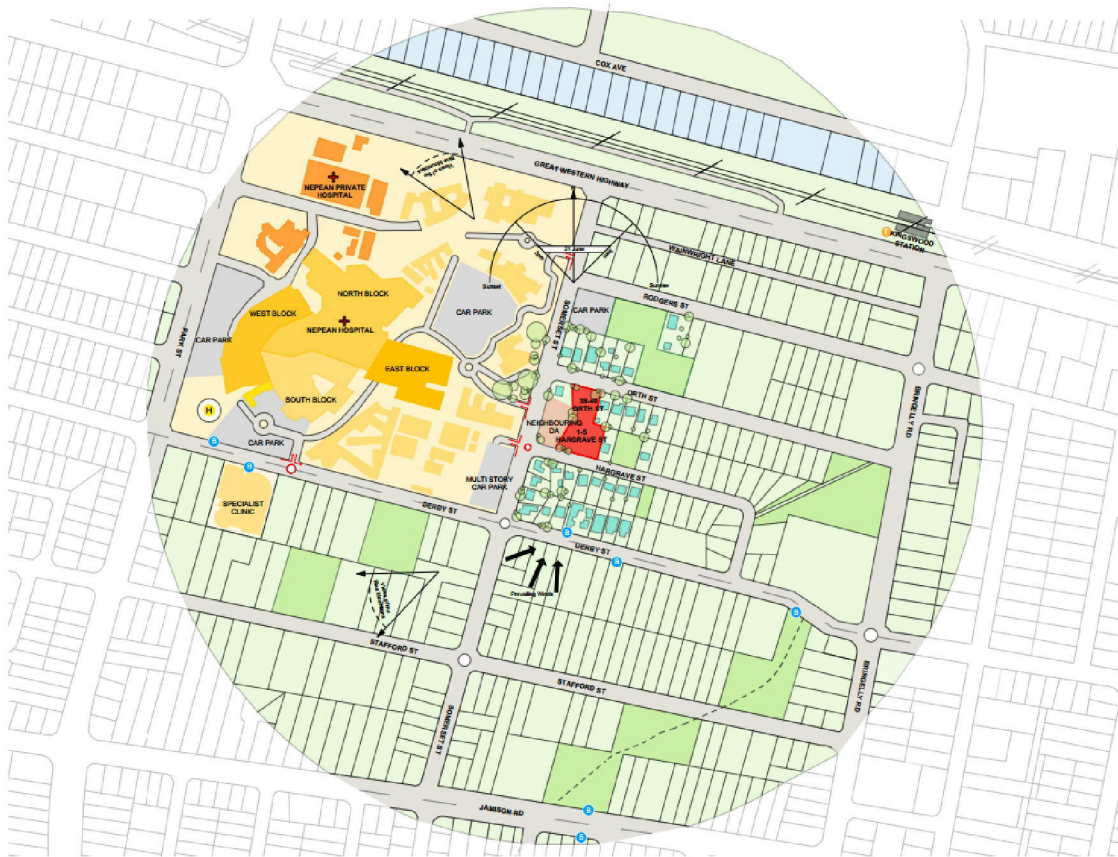


**Figure 4** – Subject properties as viewed from Hargrave Street frontage



**Figure 5** – Subject properties as viewed from Orth Street frontage

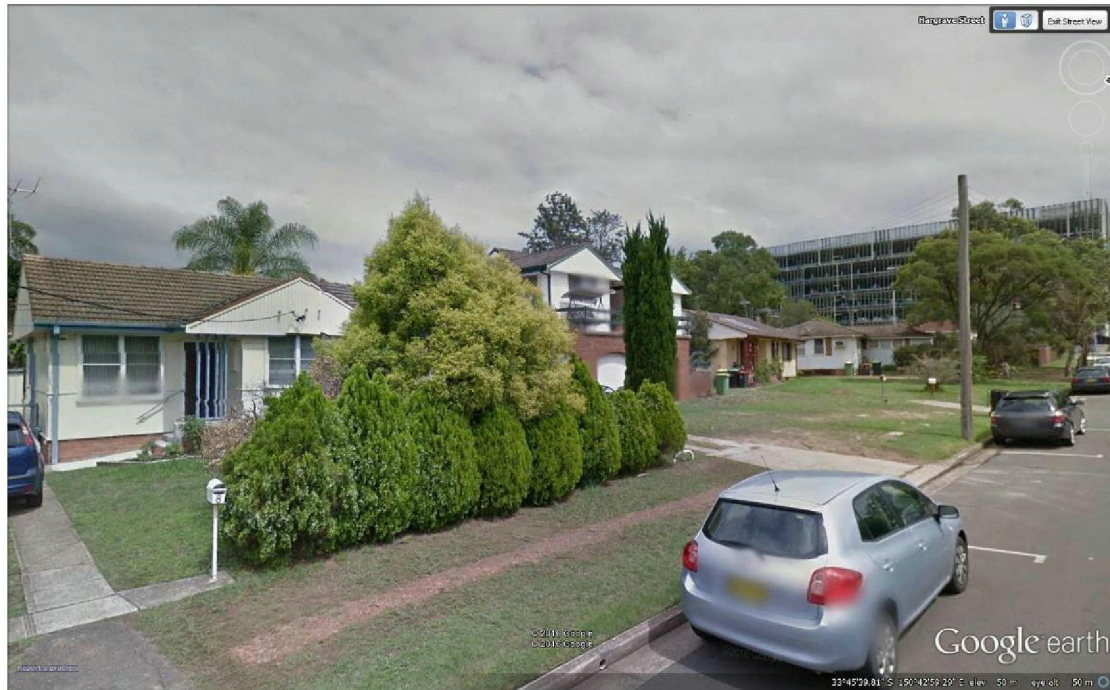
The development site is located within the Penrith Health and Education Precinct, and specifically, within the Medical Mixed Use character zone of the Hospital Precinct, and within immediate proximity of the Nepean Hospital campus and associated medical support services and facilities. The site is also located within Short walking distance of Kingswood railway station as depicted in Figure 6 below.



**Figure 6** – Immediate land use context diagram

The recently constructed multi-storey hospital carpark located on the corner of Derby and Somerset Street is clearly visible from the Hargrave Street frontage of the site as depicted in Figure 7 over page.





**Figure 7** – View from the Hargrave Street frontage towards the recently constructed multi-storey hospital carpark located on the corner of Derby and Somerset Street.

### 3.0 DEVELOPMENT PROPOSAL

This document forms a component of a development application that proposes the demolition of the existing dwelling houses and associated site structures and the construction of a 7 storey mixed use development containing a ground floor commercial tenancy, 121 apartments and 3 levels of basement parking for 156 vehicles. The detail of the development is depicted on architectural the following architectural plans prepared by Eeles Trelease Architects:

DA-000-A COVER SHEET.pdf  
DA-001-A-SITE PLAN.pdf  
DA-002-A-SITE SURVEY PLAN.pdf  
DA-003-A-SITE ANALYSIS PLAN.pdf  
DA-004-A-CONTEXT PLAN.pdf  
DA-100-A-BASEMENT LEVEL THREE PLAN.pdf  
DA-101-A-BASEMENT LEVEL TWO PLAN.pdf  
DA-102-A-BASEMENT LEVEL ONE PLAN.pdf  
DA-103-A-GROUND FLOOR PLAN.pdf  
DA-104-A-FIRST FLOOR PLAN.pdf  
DA-105-A-SECOND FLOOR TO FIFTH FLOOR PLAN.pdf  
DA-106-A-SIXTH FLOOR PLAN.pdf  
DA-107-A-GROUND FLOOR PLAN - ADAPTABLE MODE.pdf  
DA-108-A-FIRST FLOOR PLAN - ADAPTABLE MODE.pdf  
DA-109-A-SECOND FLOOR...LAN - ADAPTABLE MODE.pdf  
DA-110-A-SIXTH FLOOR PLAN - ADAPTABLE MODE.pdf  
DA-111-A-ROOF PLAN.pdf  
DA-200-A-SECTION AA.pdf  
DA-201-A-SECTION BB.pdf  
DA-300-A-WEST ELEVATION.pdf  
DA-301-A-SOUTH ELEVATION .pdf  
DA-302-A-NORTH ELEVATION .pdf  
DA-303-A-EAST ELEVATION.pdf  
DA-400-A-SOLAR ACCESS ANALYSIS.pdf  
DA-401-A-OVERSHADOWING ANALYSIS - 21 JUNE.pdf  
DA-402-A-CROSS VENTILATION ANALYSIS.pdf  
DA-403-A-COMMUNAL OPEN SPACE DIAGRAM.pdf  
DA-404-A-DEEP SOIL DIAGRAM.pdf  
DA-405-A-LANDSCAPE DIAGRAM.pdf  
DA-406-A-MATERIALS AND FINISHES SCHEDULE.pdf  
DA-407-A-TYPICAL APARTMENT DETAIL PLAN.pdf  
DA-408-A-ADAPTED TOILET DIAGRAM.pdf  
DA-409-A-CONDENSER SCREEN DETAIL.pdf

The development provides for the following apartment mix of which 49 are adaptable:

- 2 x studio apartments
- 56 x 1 bedroom apartments
- 62 x 2 bedroom apartments
- 1 x 3 bedroom apartment

Specifically, the development displays the following built form characteristics:

### **Basement Floor Plans RL 36.82, 39.82, 42.82 AHD**

The development incorporates 3 levels of basement parking for a total of 156 vehicles comprising 122 residential spaces, 25 visitor spaces, 3 commercial spaces, 3 service vehicle spaces and 3 car wash bay. A total of 12 adaptable and 1 disabled car space are provided with vehicular entry to the basement via a one-way driveway from Hargrave Street with vehicles exiting onto Orth Street.

Each basement level has residential storage and lift and stair access to the levels above and below with basement level 1 containing all visitor spaces, bicycle storage and locker facilities, waste compaction/ collection rooms, caretaker facilities and a bulky goods waste room.

### **Ground Floor Plan – RL 47.32 AHD**

This floor plate includes a 74 square metre commercial tenancy adjacent the Hargrave Street frontage with a direct line of sight to the multi-level Nepean Hospital carpark. The application provides 3 x Hargrave Street facing apartments with 3.2 metre high ceilings to enable their future conversion to commercial suites should demand make such outcome viable. A well-defined and centrally located residential entrance and foyer provides access to 5 additional ground floor apartments and the southern lift core which services the Hargrave Street portion of the development.

The Orth Street frontage contains a Porte Cochere with functions not only as an entrance forecourt to the northern portion of the development but also facilitates garbage collection from the conveniently located and accessed waste collection room which is architecturally integrated into the front façade of the development and accordingly not discernible in a streetscape context. This innovative waste collection design outcome was adopted due to the inability to accommodate waste collection from within the basement area of the development due to site geometry and the depth of the sewer mains which traverses the property.

A ground floor apartment is also orientated towards this frontage again enabling its future conversion to a commercial suite. A well-defined and centrally located residential entrance and foyer provides access to 7 additional ground floor apartments and the northern lift core which services the Orth Street portion of the development. An electrical kiosk will be located within the western side boundary setback adjacent to the waste collection room.

### **Level 1 Floor Plan – RL 51.12 AHD**

This floor plate incorporates 18 apartments of varying size and configuration accessed via northern and southern access cores. All apartments have access to balcony areas and garbage chute facilities. Internal lift and stair access is provided to the levels above and below.

### **Levels 2 to 5 Floor Plan – RL 54.12 to 63.12. 126.400 AHD**

These floor plates incorporate 18 apartments of varying size and configuration accessed via northern and southern access cores. All apartments have access to balcony areas and garbage chute facilities. Internal lift and stair access is provided to the levels above and below.

### **Level 6 Floor Plan – RL 66.12 AHD**

This floor plate incorporates 8 apartments accessed via the southern lift core and 7 apartments accessed via the northern lift core. Access is provided from the common circulation spaces to a centrally located communal open space area with shade structures and integrated landscaping. The roof top condensers will be obscured from view by architectural screens.

The application requires the removal of 12 trees as identified in the accompanying arborist report prepared by Angophora Consulting Arborist with the balance of the trees able to be protected and retained. Such tree removal is appropriately compensated for through the implementation of the site landscape regime as depicted on plans prepared by David Loudon. The integrated landscape regime incorporates perimeter landscape plantings which will soften the edges of the development and ensure the development sits within a relatively informal landscape setting.

The application is accompanied by a schedule of materials and finishes which provide for a visual interesting facade presentation and detailing with the use of both vertical and horizontal wall cladding and ground floor level ceramic wall tiles. The development will set a benchmark for built form quality and finish as the area transitions from low density residential to high density mixed use development within the Hospital Precinct.



All stormwater will be directed to the existing Council stormwater main in Orth Street as outlined within the stormwater concept drainage report prepared by JHA. The stormwater runoff from the roof areas will discharge to a pollution control treatment plant via a 120 m<sup>3</sup> rainwater reuse tank. Generally, rainfall runoff from all other paved and landscaped areas will be collected via a system of surface inlet pits and discharge to Council main via the treatment plant.

## 4.0 STATUTORY PLANNING FRAMEWORK

The following section of the report will assess the proposed development having regard to the statutory planning framework and matters for consideration pursuant to Section 79C of the Environmental Planning & Assessment Act, 1979 as amended. Those matters which are required to be addressed are outlined, and any steps to mitigate against any potential adverse environmental impacts are discussed below.

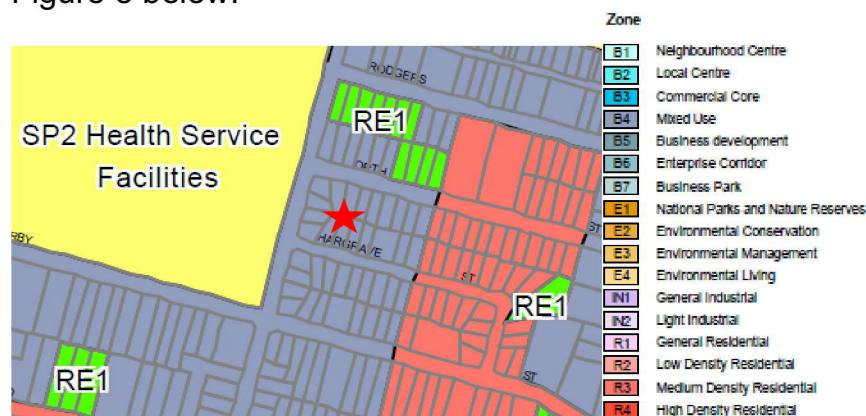
### 4.1 Environmental Planning and Assessment Act 1979

Pursuant to Division 3 and Schedule 4A (6)(b) of the Environmental Planning and Assessment Act 1979 (The Act) residential/ mixed use development having a capital Investment value (CIV) in excess of \$20 million are to be determined by a Joint Regional Planning Panel. The proposal has a CIV in excess \$20 million and is therefore to be referred to the Sydney East Joint Regional Planning Panel (JRPP) for determination.

### 4.2 Penrith Local Environmental Plan 2014

#### 4.2.1 Zone and zone objectives

The subject site is zoned B4 Mixed Use pursuant to Penrith Local Environmental Plan 2010 (PLEP 2010) as depicted in Figure 8 below.



**Figure 8** – Zoning map extract PLEP 2010

Residential flat buildings, commercial premises and shop top housing are permissible uses in the zone with consent with the development appropriately defined as a mixed use incorporating a residential flat building and commercial tenancy. Such uses are individually and collectively permissible with consent.

Clause 2.3 of PLEP 2010 requires the consent authority to have regard to the objectives of the zone in the assessment and determination of the development application. The stated objectives of the zone area as follows:

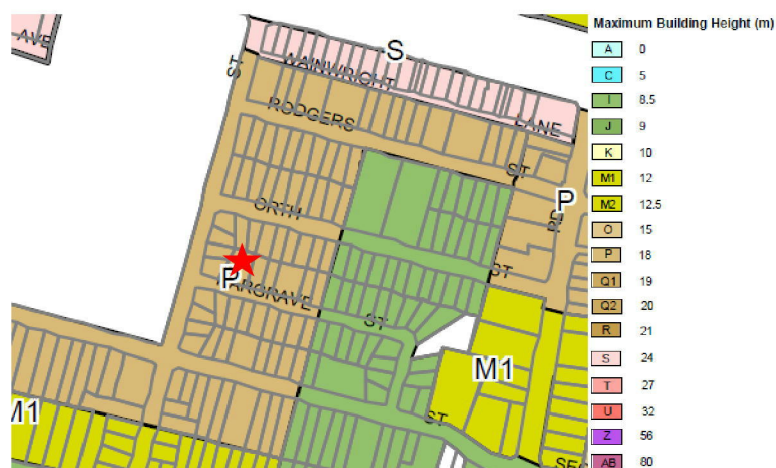
- *To provide a mixture of compatible land uses.*
- *To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling.*
- *To minimise conflict between land uses within the zone and land uses within adjoining zones.*
- *To create opportunities to improve public amenity.*
- *To provide a wide range of retail, business, office, residential, community and other suitable land uses.*

The subject application proposes the construction of a 7 storey mixed use development the ground floor of which incorporates both residential and commercial uses. The ground floor apartments have been designed with increased ceiling heights to enable their future adaption for commercial uses should demand make such outcome economically viable. The development is within short walking distance of bus and rail transportation and accordingly is ideally suited to high density residential/ mixed use development.

Council can be satisfied that the proposed development is permissible with consent and consistent with the objectives of the B4 Mixed Use zone as outlined. Accordingly, there is no statutory impediment to the granting of consent.

### 4.2.2 Height of buildings – Clause 4.6 variation

Pursuant clause 4.3(2) PLEP 2010 a maximum building height of 18 metres applies to development on the subject site. An extract of the height of buildings map is depicted in Figure 9 below.



**Figure 9** – Building height map extract PLEP 2010

The stated objectives of this clause are as follows:

- (a) *to ensure that buildings are compatible with the height, bulk and scale of the existing and desired future character of the locality,*
- (b) *to minimise visual impact, disruption of views, loss of privacy and loss of solar access to existing development and to public areas, including parks, streets and lanes,*
- (c) *to minimise the adverse impact of development on heritage items, heritage conservation areas and areas of scenic or visual importance,*
- (d) *to nominate heights that will provide a high quality urban form for all buildings and a transition in built form and land use intensity.*



Despite these provisions clause (Penrith Health and Education Precinct) applies to the land and prescribes the following:

- (3) *Despite clause 4.3, development consent may be granted to development on land that exceeds the maximum height shown for that land on the Height of Buildings Map by up to 20% if the floor to ceiling height of both the ground and first floors are equal to or greater than 3.5 metres.*

The stated objectives of this clause are as follows:

- (a) *to encourage a built form that is suitable for both residential and health services facilities,*
- (b) *to encourage adaptive reuse of residential buildings for health services facilities in the Penrith Health and Education Precinct where the residential use within the building ceases in the future.*

This clause provides for a maximum building height of 21.6 metres provided floor to ceiling height of both the ground and first floors are equal to or greater than 3.5 metres. The proposal incorporates ground floor ceiling heights of 3.6 metres and 2.7 metre ceiling heights to the first floor.

During formal pre-Da discussions with Council it was agreed that in terms of economic viability that it was unlikely that both ground and first floor apartments would be converted to commercial floor space in the future and accordingly it was reasonable to focus on the adaptability of ground floor tenancies only. Notwithstanding, whilst ground floor retail premises may require increased ceiling heights in terms of future adaptation the 2.7 metre ceiling heights proposed to the first floor apartments could comfortably accommodate professional consulting rooms/ offices should the demand arise.

The proposed development has a maximum parapet height to Hargrave Street of between 21.5 and 22.6 metres and a parapet height to Orth Street of between 22.1 and 22.6 metres as depicted in Figures 10 and 11 over page. The lift overruns and roof top condenser screens have maximum heights of 23 and 22.9 metres respectively.

These heights are consistent with the overall building heights anticipated by clause 7.11(3) of PLEP 2010 for development which provides appropriately for the potential future adaptive reuse of the ground and first floor levels of the building with such heights some 3.6 metre above those anticipated by the clause 4.3(2) height standard.



**Figure 10** - Plan showing building height along Hargrave Street frontage



**Figure 11** – Plan showing building height along Orth Street frontage

Whilst the development does not strictly comply with the clause 7.11(3) concessional height provisions in terms of increased ceiling heights at both ground and first floor level, and overall building height, the objectives associated with these provisions are clearly achieved in terms of the provision of adaptable ground floor apartments, addressing both street frontages, and the potential for professional consulting rooms/offices/ short term accommodation at first floor level should the demand arise.

Clause 4.6 of PLEP 2010 provides a mechanism by which a development standard can be varied. The objectives of this clause are:

- (a) *to provide an appropriate degree of flexibility in applying certain development standards to particular development, and*
- (b) *to achieve better outcomes for and from development by allowing flexibility in particular circumstances.*

Pursuant to clause 4.6(2) consent may, subject to this clause, be granted for development even though the development would contravene a development standard imposed by this or any other environmental planning instrument. However, this clause does not apply to a development standard that is expressly excluded from the operation of this clause.

This clause applies to both the clause 4.3(2) Height of Buildings and clause 7.11(3) Penrith Health and Education Precinct Development Standards.

Clause 4.6(3) states that consent must not be granted for development that contravenes a development standard unless the consent authority has considered a written request from the applicant that seeks to justify the contravention of the development standard by demonstrating:

- (a) *that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, and*
- (b) *that there are sufficient environmental planning grounds to justify contravening the development standard.*

Clause 4.6(4) states consent must not be granted for development that contravenes a development standard unless:

- (a) *the consent authority is satisfied that:*
  - (i) *the applicant's written request has adequately addressed the matters required to be demonstrated by subclause (3), and*

- (ii) *the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out, and*
- (b) *the concurrence of the Director-General has been obtained.*

Clause 4.6(5) states that in deciding whether to grant concurrence, the Director-General must consider:

- (a) *whether contravention of the development standard raises any matter of significance for State or regional environmental planning, and*
- (b) *the public benefit of maintaining the development standard, and*
- (c) *any other matters required to be taken into consideration by the Director-General before granting concurrence.*

### **Claim for Variation**

#### **Zone and Zone Objectives**

The developments permissibility and consistency with the zone objectives have been addressed in section 4.2.1 of this report. Council can be satisfied that the proposed development is permissible with consent and consistent with the objectives of the B4 Mixed Use zone as outlined. Accordingly, there is no statutory impediment to the granting of consent.

#### **Height of Buildings Standards and Objectives**

As the proposal does not strictly comply with the clause 7.11(3) building height provisions, this variation request has been prepared in relation to the clause 4.3(2) maximum 18 metre building height standard.

Notwithstanding, consideration has also been given to the objectives of the clause 7.11(3) concessional height standard given the proposal does facilitate the future adaption of the ground and first floor apartments and on the basis that such provisions clearly establish an alternate desired future building height for the Penrith Health and Education Precinct.

The clause 4.3(2) “Height of buildings” and clause 7.11(3) “Penrith Health and Education Precinct” concessional height standards and associated objectives have been previously identified.

We have formed the considered opinion that the variation proposed to the clause 4.3(2) height of buildings standard does not defeat the objectives of the standard, or those associated with the clause 7.11(3) concessional height standard as outlined below.

#### Objectives of clause 4.3 PLEP 2010

- (a) to ensure that buildings are compatible with the height, bulk and scale of the existing and desired future character of the locality,*

Comment: Part E12 of Penrith DCP 2014 (the DCP) identifies the site as located within the Penrith Health and Education Precinct and specifically, the Medical Mixed Use character area. This character area and its desired future character (DFC) is described at clause 12.1.4 of the DCP as follows:

*This precinct is adjacent to the Nepean Hospital and offers the most dynamic environment to further develop the Hospital Precinct into a specialised medical precinct. This precinct encourages development that would support the operation of the hospital, such as medical offices, pharmacies, short-term accommodation, convenience stores and other forms of retail that will meet the needs of visitors and people using the medical services offered within the precinct.*

*Medium to high density development will be developed in a similar nature to the existing institutional scale development present within the precinct. Building heights will be 4-6 storeys and will incorporate ground floor active uses with commercial and residential uses located above. The western vista will be a key consideration when designing development within this Precinct.*

*Development along Somerset and Derby Street is encouraged to take advantage of the potential for these streets to offer a high quality entrance to the Hospital Precinct, with continuous landscaped themes and high quality architectural design. A high quality public realm will be achieved by providing generous pedestrian zones and activating ground floor frontages.*

*Orth Street should be treated as a major connector between the hospital and the main area of local community space located on Bringelly Road to the east. This connection will accommodate pedestrians and cyclists with a generous, landscaped southern verge.*

We note that desired future character is also reflected by the applicable development standards and built form controls with clause 7.11(3) establishing a desired future height within the precinct of up to 21.6 metres.

We have formed the opinion that the development is consistent with the DFC in that it provides for a building height and form which is consistent with the clause 7.11(3) provisions and the institutional scale of development present within the precinct including the 7 storey hospital car park located within the sites visual catchment.

The proposal provides a ground floor commercial tenancy with the ground and first floor ceiling heights providing tenancies capable of accommodating future commercial uses, by way of adaptation. Such uses would support the operation of the hospital and potentially include medical offices (ground or first floor), pharmacies and convenience stores (ground floor), short-term accommodation (first floor), and other forms of ground floor retail. Such uses would also meet the needs of visitors and people using the medical services offered within the precinct consistent with the DFC.

The height and scale of the development will not impact the existing western vista towards the Blue Mountains with the generous, landscaped southern verge along Orth Street maintained and enhanced through the provision of a public footpath and street trees. The FSR is significantly below that anticipated on the site as discussed in section 4.1.3 of this report.

We also note that the height of the proposal is consistent with that of the proposed mixed use development currently being considered by Council (Development Application DA16/0597) for the construction of a mixed use development at No. 28 – 32 Somerset Street being the majority of properties directly to the south of the subject site.

This objective is satisfied.

*(b) to minimise visual impact, disruption of views, loss of privacy and loss of solar access to existing development and to public areas, including parks, streets and lanes,*

Comment: Having inspected the site and its surrounds to determine the juxtaposition of adjoining development and obtain an understanding of available view lines we have formed the opinion that the proposal will not give rise to any adverse public or private view affectation.

Although the precinct is in transition from single storey detached housing forms to multi storey mixed use buildings the height and form proposed will not be perceived as inappropriate or jarring in a streetscape or urban design context having regard to the DFC.

The shadow diagrams demonstrate that the site orientation will ensure that no unacceptable shadowing impact will occur to any adjoining property nor will such shadowing impact the development potential of any adjoining site. The proposal does not overshadow any public parks with public domain overshadowing otherwise acceptable.

This objective is satisfied.

*(c) to minimise the adverse impact of development on heritage items, heritage conservation areas and areas of scenic or visual importance,*

Comment: The site is not heritage listed, is not located within a conservation area and is not located within proximity of a heritage item.

This objective is satisfied.

- (d) to nominate heights that will provide a high quality urban form for all buildings and a transition in built form and land use intensity.*

Comment: The site is not located at a land use or height zone interface with the proposed height and massing providing for a complimentary and compatible building form within this precinct. The development displays exceptional design quality with the materials and finishes proposed ensuring an attractive and high quality building presentation.

This objective is satisfied.

Objectives of clause 7.11 PLEP 2010

- (a) to encourage a built form that is suitable for both residential and health services facilities,*

Comment: As previously indicated the proposal provides a ground floor commercial tenancy with the ground and first floor ceiling heights (3.6 and 2.7 metres respectively) providing tenancies capable of accommodating future commercial uses, by way of adaptation. Such uses would support the operation of the hospital and potentially include medical offices (ground or first floor), pharmacies and convenience stores (ground floor), short-term accommodation (first floor), and other forms of ground floor retail. Such uses would also meet the needs of visitors and people using the medical services offered within the precinct consistent with the DFC.

This objective is satisfied.

- (b) to encourage adaptive reuse of residential buildings for health services facilities in the Penrith Health and Education Precinct where the residential use within the building ceases in the future.*

Comment: Further to the above comments, the ground floor apartments have been designed to address both street frontages with 3.6 metre ceiling heights facilitating their future adaption for health service facilities should demand make such outcome economically viable.

This objective is satisfied.



Further, consistent with the conclusions reached by Senior Commissioner Roseth in the matter of *Project Venture Developments v Pittwater Council* (2005) NSW LEC 191 I have formed the considered opinion that most observers would not find the proposed development, by virtue of its height and scale, offensive, jarring or unsympathetic in a streetscape context nor having regard to the built form characteristics of development both established and anticipated within this precinct. Accordingly, it can be reasonably concluded that the proposal is compatible with its surroundings.

Having regard to the matter of *Veloshin v Randwick City Council* [2007] NSWLEC 428 this is not a case where the difference between compliance and non-compliance is the difference between good and bad design.

The consent authority can be satisfied that the height non-compliance proposed does not defeat the objectives of either the clause 4.3(2) and clause 7.11(3) height standards and accordingly strict compliance is both unreasonable and unnecessary under the circumstances.

We have also formed the considered opinion that there are sufficient site specific environmental planning grounds to justify contravening the development standard including the sites location within a Hospital Precinct where carefully designed and considered development is capable of accommodating additional height without adverse streetscape and residential amenity consequences.

Strict compliance would require the deletion of a full level of accommodation which would otherwise be available as either owner occupied or rental accommodation for health care related employees working with the hospital precinct. Such outcome would not, in our opinion, be in the public interest given the nature of the variation when considered against the zone objectives, the DFC height anticipated by the clause 7.11(3) numerical standard, the future adaptability of both the ground and first floor levels and the developments compliance with the objectives of the clause 4.3(2) and 7.11(3) height standards.

## **Conclusions**

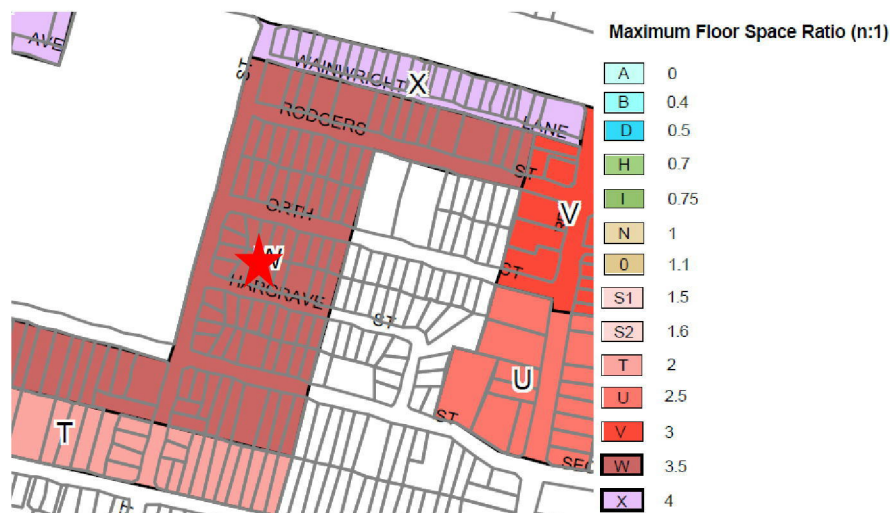
Having regard to the clause 4.6 variation provisions we have formed the considered opinion:

- (a) that the contextually responsive development is consistent with the zone objectives, and
- (b) that the contextually responsive development is consistent with the objectives of the height of buildings standard, and
- (c) that there are sufficient environmental planning grounds to justify contravening the development standard, and
- (d) that having regard to (a), (b) and (c) above that compliance with the building height development standard is unreasonable or unnecessary in the circumstances of the case, and
- (e) that given the developments ability to comply with the zone and height of buildings standard objectives that approval would not be antipathetic to the public interest, and
- (g) that contravention of the development standard does not raise any matter of significance for State or regional environmental planning.

As such we have formed the highly considered opinion that there is no statutory or environmental planning impediment to the granting of a height of buildings variation in this instance.

### 4.2.3 Floor space ratio

Pursuant clause 4.4(2) PLEP 2010 a maximum floor space ratio of 3.5:1 applies to development on the subject site as depicted in Figure 12 below.



**Figure 12 – FSR map extract PLEP 2010**

The stated objectives of this clause are as follows:

- (a) *to ensure that buildings are compatible with the bulk and scale of the existing and desired future character of the locality,*
- (b) *to minimise the adverse impact of development on heritage conservation areas and heritage items,*
- (c) *to regulate density of development and generation of vehicular and pedestrian traffic,*
- (d) *to provide sufficient floor space for high quality development.*

The proposed development has a gross floor area of 9547.4 square metres representing an FSR of 3.18:1 is strict accordance with the standard. We note that compliance with the numerical control assumes compliance with the underlying objectives.

Council can be satisfied that the development complies with the FSR standard and its associated objectives and accordingly there is no statutory or environmental planning impediment to the granting of consent.

#### **4.2.4 Earthworks**

Pursuant to clause 7.1(3) of KLCLEP 2012 before granting development consent for earthworks, the consent authority must consider the following matters:

- a) the likely disruption of, or any detrimental effect on, drainage patterns and soil stability in the locality of the development,*
- b) the effect of the development on the likely future use or redevelopment of the land,*
- c) the quality of the fill or the soil to be excavated, or both,*
- d) the effect of the development on the existing and likely amenity of adjoining properties,*
- e) the source of any fill material and the destination of any excavated material,*
- f) the likelihood of disturbing relics,*
- g) the proximity to, and potential for adverse impacts on, any waterway, drinking water catchment or environmentally sensitive area.*
- h) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development,*
- i) the proximity to and potential for adverse impacts on any heritage item, archaeological site, or heritage conservation area*

We confirm that no fill material is required to be imported to the site with all excavated material appropriately re-used or disposed to landfill. Given the location of the site and its historical residential use the likelihood of encountering relics is considered extremely low. Subject to dilapidation reporting for adjoining properties, appropriate excavation methodology and engineering and the implementation of erosion and sediment control measures as detailed on the plans prepared by JHA these statutory considerations are satisfied.

These matters can be dealt with by way of appropriately worded conditions of development consent.

### 4.3 Penrith Development Control Plan 2014 – Compliance Tables

This DCP supports the provisions of Penrith LEP and Penrith Health and Education Precinct specific controls. The following compliance tables detail the performance of the development when assessed against the applicable controls.

#### 4.3.1 Part C: City Wide Controls

Control	Response	Compliance
<b>C1 Site Planning and Design Principles</b>		
1.1 Site Planning	Refer to site analysis plan and Architect Design Statement	Yes
1.2 Design Principles		
a) To ensure that development is undertaken in a sustainable manner, demonstrating this through the application of the Building Sustainability Index (BASIX), Green Star and/or Australian Buildings Greenhouse Ratings certification system, where appropriate;	BASIX Certificate and Section J report provided	Yes
b) To ensure that development is designed on a 'whole of building' approach by:		
i) responding to the site's context, the desired scale and character of an area, and minimising impacts on key views, scenic values and where applicable, rural character;	Refer to Architect Design Statement and accompanying plans	Yes
ii) responding to climatic and contemporary environmental conditions by: encouraging passive solar building design;	Refer to Architect Design Statement and accompanying plans	Yes

<p>allowing reasonable daylight access to all developments and the public domain;  reducing the necessity for, or improve the control of, mechanical heating and cooling;  reducing the energy consumed by installed appliances and equipment;  improving the indoor environmental quality of occupants;  minimising greenhouse gas emissions;</p>		
<p>iii) minimising likely bulk and scale impacts of a building;</p>	Refer to Architect Design Statement and accompanying plans	Yes
<p>iv) considering the natural topography and landform and minimise excavation and likely visual impacts of the development;</p>		Yes
<p>v) ensuring that the development (including the public domain):  has incorporated the Crime Prevention Through Environmental Design (CPTED) principles of surveillance, access control, territorial management and space management into its design; and  is accessible and useable for all members of the community.</p>	<p>The Crime Prevention Through Environmental Design (CPTED) guidelines were prepared by the NSW Police in conjunction with the Department of Planning. CPTED provides a clear approach to crime prevention and focuses on the '<i>planning, design and structure of cities and neighbourhoods</i>'.</p> <p><b>Principle 1 - Surveillance:</b></p> <p>The attractiveness of crime targets can be reduced by providing opportunities for effective surveillance, both natural and technical.</p> <p>➤ The proposed building facades and balconies are oriented in order to provide natural surveillance of the communal open space areas and the roadway.</p>	Yes



	<p>➤ The proposed landscaping design and plant species will afford surveillance within the communal areas and along the street frontages.</p> <p><b>Principle 2 - Access Control:</b></p> <p>Access Control can be defined as physical and symbolic barriers that are used to <i>'attract, channel or restrict the movement of people'</i>.</p> <p>➤ Secure basement car parking will be provided for residents with safe, direct lift access between to residential levels.</p> <p><b>Principle 3 - Territorial Reinforcement:</b></p> <p>Community ownership of public space sends positive signals. People often feel comfortable in, and are more likely to visit, places which feel owned and cared for. Well used places also reduce opportunities for crime and increase risk to criminals.</p> <p>➤ The provision of security-controlled entrances to the building will emphasise the separation between the private and public domain.</p> <p>➤ Landscaping around the buildings will differentiate the public areas from the private.</p> <p>➤ Well maintained planters, gardens and pavers will indicate the development is well-used and cared for to reduce criminal activity.</p>	
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	<p><b>Principle 4 - Space Management:</b></p> <p>Space management strategies include activity coordination, site cleanliness, rapid repair of vandalism and graffiti and the replacement of decayed physical elements.</p> <p>➤ Landscaping will be well maintained by a landscape contractor. Likewise, the buildings will be maintained by Management. Continued repairs and maintenance will discourage vandalism.</p> <p>➤ High quality materials, varied façade treatments and landscaping along boundaries will assist in discouraging vandalism and graffiti.</p> <p>The proposal will provide a high level of security and design elements will deter criminal behaviour. Secure pedestrian entries to the building will maintain safety and security. Casual surveillance is also available over the private open space and entry areas from units and common areas. The proposal is therefore consistent with CPTED principles.</p>	
<b>C2 Vegetation Management</b>		
2.1 Preservation of Trees and Vegetation	<p>The application requires the removal of 12 trees as identified in the accompanying arborist report prepared by Angophora Consulting Arborist with the balance of the trees able to be protected and retained. Such tree removal is</p>	Yes

	appropriately compensated for through the implementation of the site landscape regime as depicted on plans prepared by David Loudon. The integrated landscape regime incorporates perimeter landscape plantings which will soften the edges of the development and ensure the development sits within a relatively informal landscape setting.	
2.2 Biodiversity Corridors ...Non-Urban Areas	N/A	N/A
2.3 Bushfire Management	N/A	N/A
<b>C3 Water Management</b>		
3.1 The Water Cycle/ Water Conservation	N/A	N/A
3.2 Catchment Management and Water Quality	N/A	N/A
3.3 watercourses, Wetlands and Riparian Corridors	N/A	N/A
3.4 Groundwater	The basement excavation will not impact the water table.	Yes
3.5 Flooding	The site is not flood effected	N/A
3.6 Stormwater Management and Drainage/ 3.8 Rainwater/ Storage Tanks	All stormwater will be directed to the existing Council stormwater main in Orth Street as outlined within the stormwater concept drainage report prepared by JHA. The stormwater runoff from the roof areas will discharge to a pollution control treatment plant via a 120 m3 rainwater reuse tank. Generally, rainfall runoff from all other paved and landscaped areas will be collected via a system of surface inlet pits and discharge to Council main via the treatment plant.	Yes

<b>C4 Land Management</b>		
4.1 Site Stability and Earthworks	N/A	N/A
4.2 Land Fill	No fill is proposed	N/A
4.3 Erosion and Sedimentation	Refer to accompanying erosion and sediment control plans prepared by JHA.	Yes
4.4 Contaminated Lands	Refer to section 4.5 of this report	Yes
4.5 Salinity	N/A	N/A
<b>C5 Waste Management</b>		
5.1 Waste Management Plans	Complies – Refer to accompanying Waste Management Plan	Yes
5.2 General Controls	Complies – Refer to accompanying Waste Management Plan	Yes
5.3 Development Specific Controls	Complies – Refer to accompanying Waste Management Plan	Yes
5.4 hazardous Waste Management	N/A	N/A
5.5 On-site Sewerage Management	N/A	N/A
<b>C6 Landscape Design</b>		
6.1 Controls	Complies – Refer to accompanying landscape plans	Yes
<b>C7 Cultural Heritage</b>		
7.1 European Heritage	The site has no identified heritage significance	Yes
7.2 Aboriginal Cultural and Heritage	N/A	N/A
7.3 Significant Trees and Gardens	N/A	N/A

<b>C8 Public Domain</b>		
8.1 Pedestrian Amenity	The development appropriately addresses and activates both street frontages with a commercial tenancy provided in the south western corner of the development.	Yes
8.2 Street Furniture	N/A	N/A
8.3 Lighting	Both street entrances and communal circulation spaces, including the basement parking areas, will be appropriately lit at night.	Yes
8.4 Outdoor Dining and Trading Hours	N/A	N/A
8.5 Public Art	N/A	N/A
<b>C9 Advertising and Signage</b>		
9.1 General Requirements for Signs	No signage proposed	N/A
9.4 Commercial, Mixed Use and Industrial Zones	No signage proposed	N/A
<b>C10 Transport, Access and Parking</b>		
10.1 Transport and Land Use	Complies – Refer to accompanying Traffic Impact and Parking Assessment	Yes
10.2 Traffic Management and Safety	Complies – Refer to accompanying Traffic Impact and Parking Assessment	Yes
10.3 Key Transport Corridors	N/A	N/A
10.4 Roads	N/A	N/A
10.5 Parking, Access and Driveways	Complies – Refer to accompanying Traffic Impact and Parking Assessment	Yes
10.6 Pedestrian Connections	Complies - Refer to Accessibility Report	Yes
10.7 Bicycle Facilities	Complies – Refer to accompanying Traffic Impact and Parking Assessment	Yes

<b>C11 – Subdivision</b>		
<b>N/A</b>		
<b>C12 – Noise and Vibration</b>		
12.1 Road Traffic Noise	SEPP Infrastructure does not apply	N/A
12.2 Rail Traffic Noise and Vibration	SEPP Infrastructure does not apply	N/A
12.3 Aircraft Noise	N/A	N/A
<b>C13 Infrastructure and Services</b>		
13.1 Location of Easements for Infrastructure	The site is not burdened by any existing or proposed easements.	Yes

#### 4.3.2 Part D: Land Use Controls

<b>D2 Residential Development</b>		
<b>2.5 Residential Flat Buildings</b>		
2.5.1 Residential Character	This has been addressed in detail in Section 4.1.2 of this report and the Architect Design Statement	Yes
2.5.2 Preferred Configuration	The development appropriately addresses both street frontages with a complimentary and compatible building typology proposed.	Yes
2.5.3 The Development Site	N/A	N/A
2.5.4 Urban Form	N/A	N/A
2.5.5 Landscaped Area	Complies. Refer to ADG compliance table ANBNEXURE 3	Yes
2.5.6 Front and Rear Setbacks	N/A. Front setback controls applying to the site are contained within the E12 Penrith Health and Education Precinct, Part A - Hospital Precinct controls. Side setbacks governed by Apartment Design Guide.	Yes



2.5.7 Side Setbacks	N/A as above.	N/A
2.5.8 Visual and Acoustic Privacy and Outlook	An appropriate level of visual and acoustic privacy is maintained through a combination of building setbacks, adjustable privacy screens to balconies and secondary intervening landscape treatments.	Yes
2.5.9 Solar Access	Refer to ADG compliance table ANNEXURE 3	Yes
2.5.10 Significant Townscapes and landscaped	N/A	N/A
2.5.11 Corner Sites and Park Frontages	N/A	N/A
2.5.12 Building Design	Building design has been addressed in detailed in response to the SEPP 65 Design Quality principles and the ADG requirements as detailed at section 4.6 and ANNEXURE 3 of this report.	Yes
2.5.13 Energy Efficiency	Refer to accompanying BASIX Certificate, Section J report and ADG compliance table.	Yes
2.5.14 Design of Dwellings and Private Courtyards	Refer to ADG compliance table ANNEXURE 3	Yes
2.5.15 Garages	Basement car parking proposed. Refer to accompanying Traffic Impact and Parking Assessment	Yes
2.5.16 Garden Design	Communal open space areas, landscaped side boundaries and side pathways are proposed in accordance with Councils requirements as detailed on the accompanying landscape plan.	Yes
2.5.17 Paving Design	Complies. Refer to landscape plan.	Yes
2.5.18 Fences and Retaining Walls	All fencing and retaining walls are integrated elements of the overall landscape design	Yes
2.5.19 Safety and Security	Complies. This has been previously addressed in detail.	Yes

2.5.20 Accessibility and Adaptability	Complies. Refer to accompanying accessibility report.	Yes
2.5.21 Storage and Services	Complies. Refer to ADG Compliance Table and plans.	Yes

### 4.3.3 Part E: Key Precincts - Hospital Precinct

<b>Part A - Hospital Precinct</b>		
12.1.3 General Objectives	Complies. The proposed mixed use development satisfies these objectives through the provision of a high quality mixed use building which will contribute to the creation of an attractive and vibrant hospital precinct.	Yes
12.1.4 Character Area: Medical Mixed Use	Complies. The matter of compatibility with the Medical Mixed Use Desired Future Character Statement has been addressed in detail in section 4.1.2 of this report.	Yes
12.2.1 Mixed Use Development Controls	Complies with intent. Adaptability of the ground and first floor levels has been addressed in detail in section 4.1.2 of this report.	Yes
12.3.1 Street Alignment, Building Height and Setbacks	A 4 metre setback is nominated by the DCP to Orth Street with a minimum 4 metre setback provided to the building facade in strict accordance with the control.  Building height and setbacks have been dealt with elsewhere in the report.	Yes
12.3.2 Building Depth and Bulk	N/A as SEPP 65 and the ADG apply. Refer to accompanying SEPP 65/ ADG assessments.	N/A
12.3.3 Boundary Setbacks and Building Separation	N/A as SEPP 65 and the ADG apply. Refer to accompanying SEPP 65/ ADG assessments.	N/A
12.3.4 Site Coverage and Deep Soil Zones	The proposal complies with the max 75 site coverage and min 10% deep soil zone requirements.	Yes

12.3.5 Building Exteriors	Refer the accompanying schedule and Architectural Design Statement.	Yes
12.3.6 Landscape Design	The accompanying landscape plans have been prepared in accordance with these provisions and provide for the appropriate screening and softening of the development. The proposal will sit within an informal landscaped setting.	Yes
12.3.7 Planting on Structures	The accompanying landscape plans have been prepared in accordance with these provisions.	Yes
12.4.1 Public Domain	N/A	N/A
12.4.2.1 Permeability	N/A	N/A
12.4.2.2. Active Street Frontages and address	N/A. Site not identified on active street frontage map.	N/A
12.4.2.3 Safety and Security	Complies as previously addressed	Yes
12.4.2.4 Awnings	N/A	N/A
12.4.2.5 Vehicular Footpath Crossings	Complies. Refer to accompanying Traffic Impact and Parking Assessment	Yes
12.4.3 Car Parking	Complies. Refer to accompanying Traffic Impact and Parking Assessment	Yes
12.4.4 Site Facilities and Services	Complies. Site facilities provided in strict accordance with Council requirements	Yes

#### **4.4 State Regional Environmental Plan No. 20 – Hawkesbury Nepean River Catchment**

The site is located within the catchment of the Hawkesbury – Nepean Rivers. As such, the land is subject to the SREP No. 20. Part 2 of this Plan contains general planning consideration and strategies requiring Council to consider the impacts of this proposal on water quality, scenic quality, aquaculture, recreation and tourism. The aim of the plan is to protect the environment of the Hawkesbury – Nepean Rivers system including its water quality.

The proposed development will have minimal potential to impact on the water quality of the catchment subject to the imposition of appropriate conditions in relation to the installation of sediment and erosion control measures prior to and during construction.

#### **4.5 State Environmental Planning Policy No. 55 – Remediation of Land**

Pursuant to clause B3.6 Council shall not consent to the carrying out of any development on land unless it has considered the provisions of SEPP No. 55 – Remediation of Land (“SEPP 55”). In this regard, the likelihood of encountering contaminated soils on the subject site is extremely low given the following:

- Council’s records indicate that site has only been used for residential uses.
- The subject site and surrounding land are not currently zoned to allow for any uses or activities listed in Table 1 of the contaminated land planning guidelines of SEPP 55.
- The subject site does not constitute land declared to be an investigation area by a declaration of force under Division 2 of Part 3 of the Contaminated Land Management Act 1997.

Given the above factors no further investigation of land contamination is warranted. The site is suitable in its present state for the proposed mixed use development. Therefore, pursuant to the provisions of SEPP 55, Council can consent to the carrying out of development on the land.



#### **4.6 State Environmental Planning Policy No. 65 Design Quality of Residential Flat Development**

State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development (SEPP 65) aims to improve the design quality of residential flat developments to provide sustainable housing in social and environmental terms that is a long-term asset to the community and presents a better built form within the streetscape.

It also aims to better provide for a range of residents, provide safety, amenity and satisfy ecologically sustainable development principles. In order to satisfy these aims the plan sets design principles in relation to context, scale, built form, density, resources, energy and water efficiency, landscaping, amenity, safety and security, social dimensions and aesthetics to improve the design quality of residential flat building in the State.

SEPP 65 applies to new residential flat buildings, the substantial redevelopment/refurbishment of existing residential flat buildings and conversion of an existing building to a residential flat building. Clause 4(1) of SEPP 65 This Policy applies to development for the purpose of a residential flat building, shop top housing or mixed use development with a residential accommodation component if:

- (a) the development consists of any of the following:*
  - (i) the erection of a new building,*
  - (ii) the substantial redevelopment or the substantial refurbishment of an existing building,*
  - (iii) the conversion of an existing building, and*
- (b) the building concerned is at least 3 or more storeys (not including levels below ground level (existing) or levels that are less than 1.2 metres above ground level (existing) that provide for car parking), and*
- (c) the building concerned contains at least 4 or more dwellings.*

The proposed development is for the construction of a 7 storey mixed use development comprising 121 apartments and accordingly the provisions of SEPP 65 are applicable to the proposed development.

SEPP 65 requires any development application for residential apartment development to be assessed against the 9 Design Quality Principles contained within Schedule 1 of the SEPP. The proposal's acceptability when assessed against the design quality principles is detailed in the Architectural Design Statement below.

The required Architectural design verification statement is attached and marked **ANNEXURE 2**.

Pursuant to clause 28(2)(c) of SEPP 65 in determining a development application for consent to carry out residential apartment development the consent authority is required to take into consideration the Apartment Design Guide (ADG). An assessment of the development's performance when assessed against the ADG is at **ANNEXURE 3**.

### Design Quality Principles

The Architectural Design Statement prepared by the project Architect responds to the Design Quality Principles as follows:

Principle	Response
<p><i>Principle 1: Context and Neighbourhood Character</i></p> <p>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.</p> <p>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.</p>	<p>This proposal for a high density development with a high level of amenity is consistent with the character objectives of the Medical Mixed Use area of Penrith City. Building height will be six storeys above the ground floor which will have a high floor to ceiling height suitable for commercial use.</p> <p>The Orth Street frontage has been carefully treated to present a fully-paved porte cochere to the public domain at street level. The waste collection room has been treated to be invisible from the street by the use of a side access path. All ground floor exterior walls will be clad in ceramic tiles to avoid painting and to acknowledge the public domain.</p> <p>The Hargrave street frontage will have a commercial suite visually filtered by trees and accessible by ramp from a shared entry with the residents to signify its mixed-use nature.</p> <p>Along with generous tree and screen planting both façades will contribute positively to this streetscape with its layered use of sunshading screens and articulated balconies.</p>
<p><i>Principle 2: Built Form and Scale</i></p> <p>Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and surrounding buildings.</p> <p>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.</p>	<p>This building has been articulated in plan such that each apartment's individuality is expressed by balconies of sizes and shapes that reflect the apartment layout within.</p> <p>The building is further articulated in elevation with the generous use of vertical louvre privacy screens to the balconies and vertical louvres to the bedrooms. These devices address privacy and glare as well as giving a smaller grain scale to the building mass.</p> <p>A large communal open space is dedicated on the top floor and is expressed from the western and eastern facades with a pergola that links the two apartment ends. This "view-slot" provides a sense of space to the top of the building and reduces the apparent visual mass. This communal open space facing north will be a popular outlook to the Penrith environs and provides great internal amenity.</p>

<p><i>Principle 3: Density</i></p> <p>Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context.</p> <p>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.</p>	<p>A high level of density is provided that reflects the Medical Mixed Use area objectives for a dynamic environment with a growing population.</p> <p>The impact of the density of the development on the surrounding traffic has been minimised by the provision of resident car parking spaces that well exceed the minimum requirements.</p> <p>The population density has been addressed by a high level of amenity in the provision of generously-sized communal areas and highly developed landscaped garden areas.</p>
<p><i>Principle 4: Sustainability</i></p> <p>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.</p>	<p>The project has been designed to capture a high level of daylight entry as well as achieving a high level of cross ventilation, minimising heating, cooling and artificial lighting costs.</p> <p>The basement parking has been configured to provide a continuous and significantly sized deep soil area on the western side and to also form a communal parkland for the residents.</p> <p>A comprehensive recycling system is integrated into the waste management system using two dedicated chutes and two recycling bin cupboards on each floor.</p>
<p><i>Principle 5: Landscape</i></p> <p>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.</p>	<p>The landscape design for this development is based on maximising the environmental and spatial potential of the courtyards for residents.</p> <p>Plant and tree species have been chosen based on low maintenance and low water usage characteristics, and to provide privacy between dwellings and private open space.</p> <p>Selection criteria has also been based on ability to attract native birds as well as assisting in the percolation of rainwater and stormwater run-off.</p>



<p><i>Principle 6: Amenity</i></p> <p>Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident well being.</p> <p>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.</p>	<p>The project provides a high level of internal and external amenity.</p> <p>Internally the rooms are positioned to provide privacy from the living /dining areas and proportioned to allow for high levels of natural lighting to each habitable room. Service areas such as bathrooms and laundries are located along the rear wall of the apartments to allow for efficient services layouts while balconies include bedrooms where possible to increase amenity.</p> <p>Ease of access for all age groups is excellent with a significantly higher percentage of adaptable units provided over the number required.</p>
<p><i>Principle 7: Safety</i></p> <p>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.</p> <p>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.</p>	<p>A high level of passive surveillance is afforded by nature of the building being set back at all boundaries. This allows residents to survey the surrounding communal areas directly below at ground level.</p> <p>The sixth floor communal area is readily accessed from either lift/stair core while its centralised planting design allows for good surveillance within the space.</p>
<p><i>Principle 8: Housing Diversity and Social Interaction</i></p> <p>Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets.</p> <p>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.</p>	<p>A wide choice of housing environments has been created using a mix of apartment types and sizes with varying orientation.</p> <p>With 40% of the apartments designed to be adaptable, far exceeding the minimum requirements, this project acknowledges the potential of the medical mixed-use precinct to provide for aging in-place and accessibility.</p> <p>The development offers a choice of communal open spaces between walkways and gardens at ground level and a top floor terrace deck with shading and district views.</p>

<p><b>Principle 9: Aesthetics</b></p> <p>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.</p> <p>The visual appearance of well designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape.</p>	<p>The scale and mass of this high density mixed use development has been carefully addressed with the use of sunshading and privacy screens and strongly articulated balconies.</p> <p>A select palette of materials has been deployed to visually quieten the building, using a grey for the vertical metal cladding, enlivened by a paperbark-coloured metal louvres and horizontal metal cladding to spandrels.</p> <p>Ceramic wall tiles will be used for the ground floor external walls for durability, low maintenance and texture.</p> <p>Fixed vertical louvres will be used at bedroom and living room windows and sliding vertical louvres will be installed on balconies to address privacy, solar heat and glare.</p> <p>The overall effect of using vertical and horizontal elements with mobile screens will be to provide a restrained building form with legible internal layouts and distinct entries, at a suitable scale to both street frontages.</p>
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We also confirm that the development complies with the clause 30(a), (b) and (c) standards pertaining to car parking, internal area and ceiling heights and to that extent these matters cannot be used as grounds for refusal.

#### **4.7 State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004**

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 applies to the residential component of the development and aims to encourage sustainable residential development.

A BASIX certificate accompanies the development application and demonstrates that the proposal exceeds compliance with the BASIX water, energy and thermal efficiency targets.

#### **4.8 Section 79C(1) EP&A Act Considerations**

Following is an assessment pursuant to guidelines prepared by the former Department of Urban Affairs and Planning. Relevant matters nominated for consideration are:

##### **The provision of any planning instrument, draft environmental planning instrument, development control plan or regulations.**

The proposal is permissible and generally in conformity with the development standards and controls applicable to this form of development on this particular site. The height and density of the development proposed are contextually appropriate with the generous ground floor ceiling heights providing for the future adaptive re-use of these apartments for commercial purposes as necessary.

The development satisfies the Design Principles prescribed by State Environmental Planning Policy No. 65, the associated Clause 30 standards and the objectives specified in the Apartment Design Guide for the relevant design criteria. The identified non-compliances with the side boundary setback and ground and first floor adaptable use provisions have been acknowledged, and appropriately justified, having regard to the associated objectives.

Such variations succeed pursuant to section 79C(3A)(b) of the Act which requires Council to be flexible in applying such provisions and allow reasonable alternative solutions that achieve the objects of standards/ controls for dealing with that aspect of the development.



**The likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economical impacts in the locality.**

*Context and Setting*

i) *What is the relationship to the region and local context on terms of:*

- *the scenic qualities and features of the landscape?*
- *the character and amenity of the locality and streetscape?*
- *the scale, bulk, height, mass, form, character, density and design of development in the locality?*
- *the previous and existing land uses and activities in the locality?*

These matters are addressed in detail in the body of this report. The proposed development is contextually appropriate, will afford a high level of amenity to future occupants and will not give rise to any unacceptable residential amenity or streetscape consequences.

ii) *What are the potential impacts on adjacent properties in terms of:*

- *relationship and compatibility of adjacent land uses?*
- *sunlight access (overshadowing)?*
- *visual and acoustic privacy?*
- *views and vistas?*
- *edge conditions such as boundary treatments and fencing?*

There is no unreasonable impact apparent with respect to any of these matters as detailed within this report.

- *Access, transport and traffic*

*Would the development provide accessibility and transport management measures for vehicles, pedestrians, bicycles and the disabled within the development and locality, and what impacts would occur on:*

- *travel demand?*
- *dependency on motor vehicles?*
- *traffic generation and the capacity of the local and arterial road network?*
- *public transport availability and use (including freight rail where relevant)?*
- *conflicts within and between transport modes?*
- *traffic management schemes?*

- *vehicular parking spaces?*

The proposed development has good access to services and facilities with bus and rail transport within immediate proximity of the site. The application is accompanied by a Traffic Impact and Parking Assessment prepared by Greenview Consulting which contains the following conclusions:

- *We do not believe that the proposed development will have a significant impact on traffic in the local network.*
- *We do not believe the development will have a significant effect on traffic in terms of the traffic efficiency, amenity, safety, or road pavement life.*
- *The proposed development achieves the required number of parking spaces as per the parking requirements outlined in Table 3.1.*
- *A construction traffic management plan (CTMP) and traffic control plans*

- *Public domain*

The proposed development will have no adverse impact on the public domain and addresses the design recommendations of the DCP.

- *Utilities*

Existing utility services will adequately service the development subject to the installation of an electrical kiosk as nominated on the plans.

- *Flora and fauna*

The application requires the removal of 12 trees as identified in the accompanying arborist report prepared by Angophora Consulting Arborist with the balance of the trees able to be protected and retained. Such tree removal is appropriately compensated for through the implementation of the site landscape regime as depicted on plans prepared by David Loudon. landscape Jane Britt Design. The integrated landscape regime incorporates perimeter landscape plantings which will soften the edges of the development and ensure the development sits within a relatively informal landscape setting.

- *Waste*

The application is accompanied by a detailed waste management plan prepared by the project architect detailing the waste management aspects of the development.

- *Natural hazards*

We are unaware of any natural hazards affecting the site.

- *Economic impact in the locality*

There will be an economic benefit derived during the construction phase and through the ongoing use of the commercial tenancy.

- *Site design and internal design*

i) *Is the development design sensitive to environmental conditions and site attributes including:*

- *size, shape and design of allotments?*
- *the proportion of site covered by buildings?*
- *the position of buildings?*
- *the size (bulk, height, mass), form, appearance and design of buildings?*
- *the amount, location, design, use and management of private and communal open space?*
- *landscaping?*

I refer to the detailed considerations in the report and the accompanying material which covers matters related to design, building location, height, visual impact, landscaping and open space.

ii) *How would the development affect the health and safety of the occupants in terms of:*

- *lighting, ventilation and insulation?*
- *building fire risk – prevention and suppression/*
- *building materials and finishes?*
- *a common wall structure and design?*
- *access and facilities for the disabled?*
- *likely compliance with the Building Code of Australia?*

Compliance with the Provisions of the BCA can be achieved without difficulty with detailed assessment at Construction Certificate stage.

*Construction*

i) *What would be the impacts of construction activities in terms of:*

- *the environmental planning issues listed above?*
- *site safety?*

Normal site safety measures as required by Council will ensure that no site safety or environmental impacts will arise during construction. It is envisaged that appropriate conditions of consent will be applied.

### **The suitability of the site for the development.**

*Does the proposal fit in the locality?*

- *are the constraints posed by adjacent developments prohibitive?*
- *would development lead to unmanageable transport demands and are there adequate transport facilities in the area?*
- *are utilities and services available to the site adequate for the development?*

The site is very well located with regards to public transport. The development will not cause an excessive or unmanageable level of transport demand. The site being of moderate grade and unconstrained is suitable for the development proposed.

- *Are the site attributes conducive to development?*

The site has no special physical or engineering constraints that preclude its development and as such the site is suitable for the proposed development.

### **Any submissions received in accordance with this Act or the regulations.**

It is envisaged that Council will appropriately regard any submissions made in relation to the proposed development.

### **The public interest.**

The architect has responded to the client brief to provide for a contextually responsive residential development of exceptional design quality which provides superior levels of amenity to future occupants whilst maintaining good levels of amenity to the adjoining and nearby residential properties. The site specific built form outcome is highly articulated and modulation with the building maintaining an appropriate spatial relationship to all adjoining property development. The integrated site landscape regime will ensure that the building sits within a landscape setting.

Given the design and orientation of the development, and its location within a high density mixed use environment, the proposal will not result in any unacceptable or non-compliant residential amenity impacts in terms of privacy, overshadowing or view loss.

The design and setbacks provide for a complimentary and compatible streetscape outcome and establishes an appropriate streetscape rhythm for future development along both Orth and Hargrave Streets.

It is considered that the public interest is best served in providing certainty in the planning process through encouraging development of good design that satisfies the outcomes and controls contained within the adopted legislative framework. Accordingly approval of the development would be in the public interest.

## **5.0 CONCLUSION**

The proposal is permissible and generally in conformity with the development standards and controls applicable to this form of development on this particular site. The height and density of the development proposed are contextually appropriate with the generous ground floor ceiling heights providing for the future adaptive re-use of these apartments for commercial purposes as necessary.

The consent authority can be satisfied that the height non-compliance proposed does not defeat the objectives of either the clause 4.3(2) and clause 7.11(3) height standards and accordingly strict compliance is both unreasonable and unnecessary under the circumstances. We have also formed the considered opinion that there are sufficient site specific environmental planning grounds to justify contravening the development standard including the sites location within a Hospital Precinct where carefully designed and considered development is capable of accommodating additional height without adverse streetscape and residential amenity consequences.

Strict compliance would require the deletion of a full level of accommodation which would otherwise be available as either owner occupied or rental accommodation for health care related employees working with the hospital precinct. Such outcome would not, in our opinion, be in the public interest given the nature of the variation when considered against the zone objectives, the DFC height anticipated by the clause 7.11(3) numerical standard, the future adaptability of both the ground and first floor levels and the developments compliance with the objectives of the clause 4.3(2) and 7.11(3) height standards. In this regard, the accompanying clause 4.6 variation request is well founded.

The development satisfies the Design Principles prescribed by State Environmental Planning Policy No. 65, the associated Clause 30 standards and the objectives specified in the Apartment Design Guide for the relevant design criteria. The identified non-compliances with the side boundary setback provisions have been acknowledged, and appropriately justified, having regard to the associated objectives. Such variations succeed pursuant to section 79C(3A)(b) of the Act which requires Council to be flexible in applying such provisions and allow reasonable alternative solutions that achieve the objects of standards/ controls for dealing with that aspect of the development.

Having given due consideration to the relevant considerations pursuant to S.79C of the Environmental Planning & Assessment Act 1979 (as amended) it has been demonstrated that the proposed development is appropriate for approval.



**Greg Boston**  
**Director**



## **ANNEXURE 1**

### **Evidence of consolidation attempts**

On 29 Jul 2016, at 12:26, Harry Ahmad <[harry@strathfieldpartners.com.au](mailto:harry@strathfieldpartners.com.au)> wrote:

Dear Edward

further to your request I have approached the owners of 26 Somerset Street Kingswood on several occasions to make an offer on your behalf to purchase the site as part of your amalgamated development site. The owner has informed me that, even at a price that would be greater than its current market value, they have no interest in selling. My apologies for not being able to procure this site for you in this instance, however the owner appeared quite adamant about his position. I have tried to talk to them more than 5 times and I even threw ridiculous offers at them, they just simply won't sell and I gathered money is not the issue for them.

If there is anything else I can do, please let me know. looking forward to working with pamada again in the future.

Kind Regards,

Harry Ahmad  
**Project Marketing Director, LREA**

m 0498 088 888

p 02 9763 2277

f 02 9764 3260

e [harry@strathfieldpartners.com.au](mailto:harry@strathfieldpartners.com.au)



**ANNEXURE 2**  
SEPP 65 Design Verification Statement

1

**Eeles Trelease**

pty ltd architects  
level 1  
17-20 federation road  
newtown nsw 2042  
ph 02 9550 1644  
fax 02 9550 6044  
studio@eelestrelease.com

20 September 2016

Our ref: 1609

**SECTION 3 – VERIFICATION OF A REGISTERED ARCHITECT**

My name is Bruce Eeles and I am a founding director of Eeles Trelease Pty Ltd architects.

Eeles Trelease Pty Ltd is an architectural firm with over 30 years experience and has an established reputation in residential design and master planning. It has received numerous awards from the Australian Institute of Architects and other recognised organisations associated with architecture, design and property.

I confirm that I hold the following qualifications:

Bachelor of Architecture, University of New South Wales, 1968

Registered Architect NSW, Board of Architects Registration No. 2866

Life Fellow of the Australian Institute of Architects 2010

I verify that:

[a] I directed the design of the 'Hargrave Apartments', 1-5 Hargrave Street and 38-40 Orth Street, Kingswood leading to Development Application.

[b] The design quality and principles as specified by Part 2 of State Environmental Planning Policy No.65 – Design Quality of Residential Flat Design Development, generally have been achieved within the design - refer Statement of Environmental Effects.

[c] The proposed development addresses the Design Quality Principles as set out in the Apartment Design Guide – refer Statement of Environmental Effects Annexure 2 Architect's Design Quality Principles Statement.

[d] The objectives in Parts 3 and 4 of the Apartment Design Guide have generally being achieved - refer Statement of Environmental Effects Annexure 3 Apartment Design Guide Compliance Table.

Bruce Eeles Director arb 2866

**Eeles Trelease** pty ltd

Bruce Eeles arb 2866

abn 81 003 374 178

acn 003 374 178

www.eelestrelease.com

**ANNEXURE 3**  
Apartment Design Guide compliance table

The following is a response to section 30(2)(b) State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development. The proposal has considered and responded to the relevant design criteria having regard to the site's context and the characteristics of the location.

This report provides an assessment of the proposal's design response to the objectives specified in the Apartment Design Guide and its relevant design criteria. The report is structured into 2 parts:

- The first part responds to Part 3 – Siting the Development
- The first part responds to Part 4 – Designing the Building

### Part 3 - Siting the Development

3A Site Analysis
<p><i>Objective 3A-1</i></p> <ul style="list-style-type: none"> <li>■ Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context</li> </ul>
<p><b>Design Criteria</b></p> <ul style="list-style-type: none"> <li>■ Each element in the Site Analysis Checklist should be addressed (see Appendix 1)</li> </ul>
<p>Response: The application is accompanied by detailed a site analysis plan and associated commentary with the design and siting of the development a result of constraints and opportunities analysis.</p>

3B Orientation
<p><i>Objective 3B-1</i></p> <ul style="list-style-type: none"> <li>■ Building types and layouts respond to the streetscape and site while optimising solar access within the development</li> </ul>
<p><b>Design Criteria</b></p> <ul style="list-style-type: none"> <li>■ Buildings along the street frontage define the street, by facing it and incorporating direct access from the street (see figure 3B.1)</li> <li>■ Where the street frontage is to the east or west, rear buildings should be orientated to the north</li> <li>■ Where the street frontage is to the north or south, overshadowing to the south should be minimised and buildings behind the street frontage should be orientated to the east and west (see figure 3B.2)</li> </ul>
<p>Response: The development appropriately addresses both street frontages.</p>



### 3D Communal and Public Open Space

#### Objective 3D-1

- An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping

#### Design Criteria

- Communal open space has a minimum area equal to 25% of the site (see figure 3D.3)
- Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter)

**Response:** The development benefits from extensive formally and informally landscaped communal open space areas both within the centrally located roof terrace and around the perimeter of the building. The communal open space diagram DA402B confirms a total communal open space area of 750 square metres representing 25% of the site area in strict accordance with the provision. All communal open space areas will receive exceptional levels of sunlight throughout the day given their orientation.

Design Guidance	Response
<ul style="list-style-type: none"> <li>Communal open space should be consolidated into a well-designed, easily identifiable and usable area.</li> <li>Communal open space should have a minimum dimension of 3m, and larger developments should consider greater dimensions</li> <li>Communal open space should be co-located with deep soil areas</li> <li>Direct, equitable access should be provided to communal open space areas from common circulation areas, entries and lobbies</li> <li>Where communal open space cannot be provided at ground level, it should be provided on a podium or roof</li> <li>Where developments are unable to achieve the design criteria, such as on small lots, sites within business zones, or in a dense urban area, they should: <ul style="list-style-type: none"> <li>- provide communal spaces elsewhere such as a landscaped roof top terrace or a common room</li> <li>- provide larger balconies or increased private open space for apartments</li> <li>- demonstrate good proximity to public open space and facilities and/or provide contributions to public open space</li> </ul> </li> </ul>	<p>All communal open space areas are well dimensioned with all areas having sufficient soil depth to support extensive landscaping including shade/ canopy trees. Clearly the development satisfies the design criteria and associated design guidance requirements.</p> <p>Strict Compliance achieved.</p> <p>N/A</p>

**Objective 3D-2**

- Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting

**Design Criteria**

Nil

Design Guidance	Response
<ul style="list-style-type: none"> <li>▪ Facilities are provided within communal open spaces and common spaces for a range of age groups (see also 4F Common circulation and spaces), incorporating some of the following elements:               <ul style="list-style-type: none"> <li>○ Seating for individuals or groups</li> <li>○ Barbecue areas</li> <li>○ Play equipment or play areas</li> <li>○ Swimming pools, gyms, tennis courts or common rooms</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ The accompanying landscape plans incorporate informal seating areas within the communal open space areas with roof top communal BBQ area also provided.</li> </ul>
<ul style="list-style-type: none"> <li>▪ The location of facilities responds to microclimate and site conditions with access to sun in winter, shade in summer and shelter from strong winds and down drafts</li> </ul>	<ul style="list-style-type: none"> <li>▪ Noted and achieved.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Visual impacts of services should be minimised, including location of ventilation duct outlets from basement car parks, electrical substations and detention tanks</li> </ul>	<ul style="list-style-type: none"> <li>▪ Noted and achieved.</li> </ul>

**Objective 3D-3**

- Communal open space is designed to maximise safety

**Design Criteria**

Nil

Design Guidance	Response
<ul style="list-style-type: none"> <li>▪ Communal open space and the public domain should be readily visible from habitable rooms and private open space areas while maintaining visual privacy. Design solutions may include:               <ul style="list-style-type: none"> <li>▪ Bay windows</li> <li>▪ Corner windows</li> <li>▪ balconies</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ A balance has been struck between casual surveillance opportunities from adjacent living and private open space areas and the maintenance of privacy.</li> </ul>

<ul style="list-style-type: none"> <li>Communal open space should be well lit</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied.</li> </ul>
<ul style="list-style-type: none"> <li>Where communal open space/facilities are provided for children and young people they are safe and contained</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>

**Objective 3D-4**

- Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood

**Design Criteria**

Nil

**Response:**

<b>Design Guidance</b>	<b>Response</b>
<ul style="list-style-type: none"> <li>The public open space should be well connected with public streets along at least one edge</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<ul style="list-style-type: none"> <li>The public open space should be connected with nearby parks and other landscape elements</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<ul style="list-style-type: none"> <li>Public open space should be linked through view lines, pedestrian desire paths, termination points and the wider street grid</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<ul style="list-style-type: none"> <li>Solar access should be provided year round along with protection from strong winds</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<ul style="list-style-type: none"> <li>Opportunities for a range of recreational activities should be provided for people of all ages</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<ul style="list-style-type: none"> <li>A positive address and active frontages should be provided adjacent to public open space</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<ul style="list-style-type: none"> <li>Boundaries should be clearly defined between public open space and private areas</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>

**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**

1. Deep soil zones are to meet the following minimum requirements:

Site area	Minimum dimensions	Deep soil zone (% of site area)
less than 650m <sup>2</sup>	-	7%
650m <sup>2</sup> - 1,500m <sup>2</sup>	3m	
greater than 1,500m <sup>2</sup>	6m	
greater than 1,500m <sup>2</sup> with significant existing tree cover	6m	

Response: The development benefits from perimeter deep soil zones as depicted on plan DA403B. This diagram confirms that 7% of the site area is available for deep soil plantings in strict accordance with the requirement.

Design Guidance	Response
<p>On some sites it may be possible to provide larger deep soil zones, depending on the site area and context:</p> <ul style="list-style-type: none"> <li>10% of the site as deep soil on sites with an area of 650m<sup>2</sup> – 1,500m<sup>2</sup></li> <li>15% of the site as deep soil on sites greater than 1,500m<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<ul style="list-style-type: none"> <li>Deep soil zones should be located to retain existing significant trees and to allow for the development of healthy root systems, providing anchorage and stability for mature trees. Design solutions may include: <ul style="list-style-type: none"> <li>Basement and sub-basement car park design that is consolidated beneath building footprints</li> <li>Use of increased front and side setbacks</li> <li>Adequate clearance around trees to ensure long term health</li> <li>Co-location with other deep soil areas on adjacent sites to create larger contiguous areas of deep soil</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Reference is made to the accompanying landscape plan which proposes extensive deep soil landscaped areas and canopy tree plantings.</li> </ul>
<ul style="list-style-type: none"> <li>Achieving the design criteria may not be possible on some sites including where: <ul style="list-style-type: none"> <li>The location and building typology have limited or no space for deep soil at ground level (e.g. central business district, constrained sites, high density areas, or in centres)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>



<ul style="list-style-type: none"> <li>There is 100% site coverage or non-residential uses at ground floor level</li> </ul>	
<ul style="list-style-type: none"> <li>Where a proposal does not achieve deep soil requirements, acceptable stormwater management should be achieved and alternative forms of planting provided such as on structure</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>

### 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 area as follows:

Building height	Habitable rooms and balconies	Non-habitable rooms
up to 12m (4 storeys)	6m	3m
up to 25m (5-8 storeys)	9m	4.5m
over 25m (9+ storeys)	12m	6m

Response: All building facades maintain a minimum 6 metre setback to side and internalised boundaries with balconies projecting within these setback areas. Such setbacks do not strictly comply with the building separation requirements separation. We note that the objective of this control is to achieve reasonable levels of external and internal visual privacy between properties/ adjoining development. Having regard to the performance of the development when assessed against this objective we note the following:

- Allotment geometry makes strict compliance difficult whilst achieving the orderly and economic use and development of the land.
- All balconies are provided with integrated and adjustable privacy screens to enable the desired level of privacy to be achieved to both internal living and private open space areas; and
- Both visual and acoustic privacy will be consistent with that reasonably anticipated within a high density residential environment with appropriate spatial separation maintained between building facades for the establishment of appropriate deep soil landscaping which will provide secondary visual privacy attenuation.

Design Guidance	Response
<ul style="list-style-type: none"> <li>Generally, one step in the built form as the height increases due to building separations is desirable. Additional steps should be careful not to cause a 'ziggurat' appearance</li> </ul>	<ul style="list-style-type: none"> <li>The upper floor has a small constrained footprint and accommodates a centrally located roof top communal open space area.</li> </ul>
<ul style="list-style-type: none"> <li>For residential buildings next to commercial buildings, separation distances should be</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>

3F Visual Privacy	
<p>measured as follows:</p> <ul style="list-style-type: none"> <li>For retail, office spaces and commercial balconies use the habitable room distances</li> <li>For service and plant areas use the non-habitable room distances</li> </ul>	
<ul style="list-style-type: none"> <li>New development should be located and oriented to maximise visual privacy between buildings on site and for neighbouring buildings. Design solutions include: <ul style="list-style-type: none"> <li>Site layout and building orientation to minimise privacy impacts (see also section 3B Orientation)</li> <li>On sloping sites, apartments on different levels have appropriate visual separation distances (see figure 3F.4)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Apartments orientated primarily to the north, east and west to maximise solar access and natural cross ventilation.</li> </ul>
<ul style="list-style-type: none"> <li>Apartment buildings should have an increased separation distance of 3m (in addition to the requirements set out in design criteria<sup>1</sup>) when adjacent to a different zone that permits lower density residential development to provide for a transition in scale and increased landscaping (figure 3F.5)</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<ul style="list-style-type: none"> <li>Direct lines of sight should be avoided for windows and balconies across corners</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied</li> </ul>
<ul style="list-style-type: none"> <li>No separation is required between blank walls</li> </ul>	<ul style="list-style-type: none"> <li>Noted</li> </ul>

3F Visual Privacy	
<p><b>Objective 3F-2</b></p> <ul style="list-style-type: none"> <li>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</li> </ul>	
Design Guidance	Response
<p>Communal open space, common areas and access paths should be separated from private open space and windows to apartments, particularly habitable room windows. Design solutions may include:</p> <ul style="list-style-type: none"> <li>Setbacks</li> <li>Solid or partially solid balustrades to balconies at lower levels</li> <li>Fencing and/or trees and vegetation to separate spaces</li> <li>Screening devices</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied. Refer to accompanying landscape plan.</li> </ul>

3F Visual Privacy	
<ul style="list-style-type: none"> <li>Bay windows or pop out windows to provide privacy in one direction and outlook in another</li> <li>Raising apartments/private open space above the public domain or communal open space</li> <li>Planter boxes incorporated into walls and balustrades to increase visual separation</li> <li>Pergolas or shading devices to limit overlooking of lower apartments or private open space</li> <li>On constrained sites where it can be demonstrated that building layout opportunities are limited, fixed louvers or screen panels to windows and/or balconies</li> </ul>	
<ul style="list-style-type: none"> <li>Bedrooms, living spaces and other habitable rooms should be separated from gallery access and other open circulation space by the apartment's service areas</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied</li> </ul>
<ul style="list-style-type: none"> <li>Balconies and private terraces should be located in front of living rooms to increase internal privacy</li> <li>Windows should be offset from the windows of adjacent buildings</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied to all apartments.</li> </ul>
<ul style="list-style-type: none"> <li>Recessed balconies and/or vertical fins should be used between adjacent balconies</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied</li> </ul>

3G Pedestrian Access and Entries	
<b>Objective 3G-1</b> <ul style="list-style-type: none"> <li>Building entries and pedestrian access connects to and addresses the public domain</li> </ul>	
<b>Design Criteria</b>  Nil	
Design Guidance	Response
<ul style="list-style-type: none"> <li>Multiple entries (including communal building entries and individual ground floor entries) should be provided to activate the street edge</li> </ul>	<ul style="list-style-type: none"> <li>Pedestrian access provided from both street frontages.</li> </ul>
<ul style="list-style-type: none"> <li>Entry locations relate to the street and subdivision pattern and the existing pedestrian network</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied</li> </ul>
<ul style="list-style-type: none"> <li>Building entries should be clearly identifiable and communal entries should be clearly distinguishable from private entries</li> </ul>	<ul style="list-style-type: none"> <li>Achieved through appropriate building design.</li> </ul>



3G Pedestrian Access and Entries	
<ul style="list-style-type: none"> <li>Where street frontage is limited and multiple buildings are located on the site, a primary street address should be provided with clear sight lines</li> <li>and pathways to secondary building entries</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>

3G Pedestrian Access and Entries	
<i>Objective 3G-2</i>	
<ul style="list-style-type: none"> <li>Access, entries and pathways are accessible and easy to identify</li> </ul>	
Design Guidance	Response
<ul style="list-style-type: none"> <li>Building access areas including lift lobbies, stairwells and hallways should be clearly visible from the public domain and communal spaces</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied</li> </ul>
<ul style="list-style-type: none"> <li>The design of ground floors and underground car parks minimise level changes along pathways and entries</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied</li> </ul>
<ul style="list-style-type: none"> <li>Steps and ramps should be integrated into the overall building and landscape design</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied.</li> </ul>
<ul style="list-style-type: none"> <li>For large developments 'way finding' maps should be provided to assist visitors and residents (see figure 4T.3)</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<ul style="list-style-type: none"> <li>For large developments electronic access and audio/video intercom should be provided to manage access</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>

3G Pedestrian Access and Entries	
<i>Objective 3G-3</i>	
<ul style="list-style-type: none"> <li>Large sites provide pedestrian links for access to streets and connection to destinations</li> </ul>	
Design Guidance	Response
<ul style="list-style-type: none"> <li>Pedestrian links through sites facilitate direct connections to open space, main streets, centres and public transport</li> </ul>	<ul style="list-style-type: none"> <li>An internalised private access link is provided between site frontages.</li> </ul>
<ul style="list-style-type: none"> <li>Pedestrian links should be direct, have clear sight lines, be overlooked by habitable rooms or private open spaces of dwellings, be well lit and contain active uses, where appropriate</li> </ul>	<ul style="list-style-type: none"> <li>Noted</li> </ul>

3H Vehicle Access	
<b>Objective 3H-1</b> <ul style="list-style-type: none"> <li>Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes</li> </ul>	
Design Guidance	Response
<ul style="list-style-type: none"> <li>Car park access should be integrated with the building's overall facade. Design solutions may include:</li> <li>The materials and colour palette to minimise visibility from the street</li> <li>Security doors or gates at entries that minimise voids in the facade</li> <li>Where doors are not provided, the visible interior reflects the facade design and the building services, pipes and ducts are concealed</li> </ul>	<ul style="list-style-type: none"> <li>Integrated basement parking proposed.</li> <li>Noted and satisfied</li> <li>N/A</li> <li>Noted and satisfied.</li> </ul>
<ul style="list-style-type: none"> <li>Car park entries should be located behind the building line</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied.</li> </ul>
<ul style="list-style-type: none"> <li>Vehicle entries should be located at the lowest point of the site minimising ramp lengths, excavation and impacts on the building form and layout</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied.</li> </ul>
<ul style="list-style-type: none"> <li>Car park entry and access should be located on secondary streets or lanes where available</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<ul style="list-style-type: none"> <li>Vehicle standing areas that increase driveway width and encroach into setbacks should be avoided</li> </ul>	<ul style="list-style-type: none"> <li>Noted. Architecturally integrated Porte Cochere to Orth Street facilitates waste removal.</li> </ul>
<ul style="list-style-type: none"> <li>Access point locations should avoid headlight glare to habitable rooms</li> </ul>	<ul style="list-style-type: none"> <li>Noted. No head light glare to any adjoining residential development.</li> </ul>
<ul style="list-style-type: none"> <li>Adequate separation distances should be provided between vehicle entries and street intersections</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied – Refer to Traffic Impact and Parking Assessment prepared by Greenview Consulting.</li> </ul>
<ul style="list-style-type: none"> <li>The width and number of vehicle access points should be limited to the minimum</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied. Single lane access/ egress point to each street frontage.</li> </ul>
<ul style="list-style-type: none"> <li>Vehicle impact of long driveways should be minimised through changing alignments and screen planting</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<ul style="list-style-type: none"> <li>The need for large vehicles to enter or turn around within the site should be avoided</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied. Integrated Porte Cochere to Orth Street facilitates waste removal.</li> </ul>
<ul style="list-style-type: none"> <li>Garbage collection, loading and servicing areas are screened</li> </ul>	<ul style="list-style-type: none"> <li>The waste collection room is integrated into the Orth Street building façade and will not be discernible as viewed from the public domain.</li> </ul>
<ul style="list-style-type: none"> <li>Clear sight lines should be provided at pedestrian and vehicle crossings</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied – Refer to Traffic Impact and Parking Assessment prepared by Greenview Consulting.</li> </ul>
<ul style="list-style-type: none"> <li>Traffic calming devices such as changes in paving material or textures should be used where</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>

3H Vehicle Access	
appropriate	
<ul style="list-style-type: none"> <li>Pedestrian and vehicle access should be separated and distinguishable. Design solutions may include:</li> <li>Changes in surface materials</li> <li>Level changes</li> <li>The use of landscaping for separation</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied. No conflict.</li> </ul>

3J Bicycle and Car Parking	
<p><i>Objective 3J-1</i></p> <ul style="list-style-type: none"> <li>Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas</li> </ul> <p><b>Design Criteria</b></p> <p>1. For development in the following locations:</p> <p>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</p> <p>The car parking needs for a development must be provided off street</p>	
Response: Compliant off street parking is provided as detailed in the Traffic Impact and Parking Assessment prepared by Greenview Consulting.	
Design Guidance	Response
<ul style="list-style-type: none"> <li>Where a car share scheme operates locally, provide car share parking spaces within the development. Car share spaces, when provided, should be on site</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<ul style="list-style-type: none"> <li>Where less car parking is provided in a development council should not provide on street resident parking permits</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
3J Bicycle and Car Parking	
<p><i>Objective 3J-2</i></p> <ul style="list-style-type: none"> <li>Parking and facilities are provided for other modes of transport</li> </ul>	
Design Guidance	Response
<ul style="list-style-type: none"> <li>Conveniently located and sufficient numbers of parking spaces should be provided for motorbikes and scooters</li> </ul>	<ul style="list-style-type: none"> <li>Informal motorbike and scooter parking is available throughout the basement areas.</li> </ul>

3J Bicycle and Car Parking	
<ul style="list-style-type: none"> <li>Secure undercover bicycle parking should be provided that is easily accessible from both the public domain and common areas</li> </ul>	<ul style="list-style-type: none"> <li>Bicycle spaces and lockers located within the basement area.</li> </ul>
<ul style="list-style-type: none"> <li>Conveniently located charging stations are provided for electric vehicles, where desirable</li> </ul>	<ul style="list-style-type: none"> <li>Noted</li> </ul>
Objective 3J-3	
<ul style="list-style-type: none"> <li>Car park design and access is safe and secure</li> </ul>	
Design Guidance	Response
<ul style="list-style-type: none"> <li>Supporting facilities within car parks, including garbage, plant and switch rooms, storage areas and car wash bays can be accessed without crossing car parking spaces</li> </ul>	<ul style="list-style-type: none"> <li>Noted and achieved</li> </ul>
<ul style="list-style-type: none"> <li>Direct, clearly visible and well-lit access should be provided into common circulation areas</li> </ul>	<ul style="list-style-type: none"> <li>Noted and achieved</li> </ul>
<ul style="list-style-type: none"> <li>A clearly defined and visible lobby or waiting area should be provided to lifts and stairs</li> </ul>	<ul style="list-style-type: none"> <li>Noted and achieved to both cores.</li> </ul>
<ul style="list-style-type: none"> <li>For larger car parks, safe pedestrian access should be clearly defined and circulation areas have good lighting, colour, line marking and/or bollards</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
3J Bicycle and Car Parking	
Objective 3J-4	
<ul style="list-style-type: none"> <li>Visual and environmental impacts of underground car parking are minimised</li> </ul>	
Design Guidance	Response
<ul style="list-style-type: none"> <li>Excavation should be minimised through efficient car park layouts and ramp design</li> </ul>	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
<ul style="list-style-type: none"> <li>Car parking layout should be well organised, using a logical, efficient structural grid and double loaded aisles</li> </ul>	<ul style="list-style-type: none"> <li>Noted and achieved</li> </ul>
<ul style="list-style-type: none"> <li>Protrusion of car parks should not exceed 1m above ground level. Design solutions may include stepping car park levels or using split levels on sloping sites</li> </ul>	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
<ul style="list-style-type: none"> <li>Natural ventilation should be provided to basement and sub-basement car parking areas</li> </ul>	<ul style="list-style-type: none"> <li>Noted. Combination of natural and mechanical proposed.</li> </ul>
<ul style="list-style-type: none"> <li>Ventilation grills or screening devices for car parking openings should be integrated into the facade and landscape design</li> </ul>	<ul style="list-style-type: none"> <li>N/A.</li> </ul>



3J Bicycle and Car Parking	
<b>Objective 3J-5</b> <ul style="list-style-type: none"> <li>Visual and environmental impacts of on-grade car parking are minimised</li> </ul>	
Design Guidance	Response
<ul style="list-style-type: none"> <li>On-grade car parking should be avoided</li> </ul>	<ul style="list-style-type: none"> <li>Noted and achieved</li> </ul>
<ul style="list-style-type: none"> <li>Where on-grade car parking is unavoidable, the following design solutions are used: <ul style="list-style-type: none"> <li>Parking is located on the side or rear of the lot away from the primary street frontage</li> <li>Cars are screened from view of streets, buildings, communal and private open space areas</li> <li>Safe and direct access to building entry points is provided</li> <li>Parking is incorporated into the landscape design of the site, by extending planting and materials into the car park space</li> <li>Stormwater run-off is managed appropriately from car parking surfaces</li> <li>Bio-swales, rain gardens or on site detention tanks are provided, where appropriate</li> <li>Light coloured paving materials or permeable paving systems are used and shade trees are planted between every 4-5 parking spaces to reduce increased surface temperatures from large areas of paving</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
3J Bicycle and Car Parking	
<b>Objective 3J-6</b> <ul style="list-style-type: none"> <li>Visual and environmental impacts of above ground enclosed car parking are minimised</li> </ul>	
Design Guidance	Response
<ul style="list-style-type: none"> <li>Exposed parking should not be located along primary street frontages</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<ul style="list-style-type: none"> <li>Screening, landscaping and other design elements including public art should be used to integrate the above ground car parking with the facade. Design solutions may include: <ul style="list-style-type: none"> <li>Car parking that is concealed behind the facade, with windows integrated into the overall facade design (approach should be limited to developments where a large floor plate podium is suitable at lower levels)</li> <li>Car parking that is 'wrapped' with other uses, such as retail, commercial or two storey Small Office/Home Office (SOHO) units along the street</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>

3J Bicycle and Car Parking	
frontage (see figure 3.J.9)	
<ul style="list-style-type: none"><li>Positive street address and active frontages should be provided at ground level</li></ul>	<ul style="list-style-type: none"><li>Noted and achieved</li></ul>

## Part 4 – Designing the Building

4A Solar and Daylight Access	
<b>Objective 4A-1</b> <ul style="list-style-type: none"> <li>To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space</li> </ul>	
<b>Design Criteria</b> <ol style="list-style-type: none"> <li>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</li> <li>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</li> <li>A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter</li> </ol>	
<p>Response: We confirm that 85 of 121 (70%) of apartments received 2 hours of solar access to living and private open space areas between 8:00am and 3:00pm on 21<sup>st</sup> June with reliance on the additional hour in the morning between 8:00am and 9:00am an outcome consistently accepted by Council's and the Court on long north-south running blocks. There are 14 single southerly aspect apartments which will received no solar access between 9:00am and 3:00pm in mid-winter representing 11.5% of apartments. Such quantum satisfies the design criteria.</p> <p>The application is accompanied by solar access diagram DA-400A.</p>	
<ul style="list-style-type: none"> <li>The design minimises south facing single aspect apartments</li> </ul>	<ul style="list-style-type: none"> <li>Noted and achieved. No single aspect south facing apartments</li> </ul>
<ul style="list-style-type: none"> <li>Single aspect, single storey apartments should have a northerly or easterly aspect</li> </ul>	<ul style="list-style-type: none"> <li>Noted.</li> </ul>
<ul style="list-style-type: none"> <li>Living areas are best located to the north and service areas to the south and west of apartments</li> </ul>	<ul style="list-style-type: none"> <li>Noted and achieved</li> </ul>
<ul style="list-style-type: none"> <li>To optimise the direct sunlight to habitable rooms and balconies a number of the following design features are used: <ul style="list-style-type: none"> <li>Dual aspect apartments</li> <li>Shallow apartment layouts</li> <li>Two storey and mezzanine level apartments</li> <li>Bay windows</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Noted. Compliant solar access achieved to 70% of apartments.</li> </ul>
<ul style="list-style-type: none"> <li>To maximise the benefit to residents of direct sunlight within living rooms and private open spaces, a minimum of 1m<sup>2</sup> of direct sunlight, measured at 1m above floor level, is achieved for at least 15 minutes</li> </ul>	<ul style="list-style-type: none"> <li>Noted. Compliant solar access achieved to 70% of apartments.</li> </ul>
<ul style="list-style-type: none"> <li>Achieving the design criteria may not be possible on some sites. This includes: <ul style="list-style-type: none"> <li>Where greater residential amenity can be achieved along a busy road or rail line by orientating the</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Noted. The development relies on solar access between 8:00am and 3:00pm in mid-winter.</li> </ul>



4A Solar and Daylight Access	
<p>living rooms away from the noise source</p> <ul style="list-style-type: none"> <li>On south facing sloping sites</li> <li>Where significant views are orientated away from the desired aspect for direct sunlight</li> <li>Design drawings need to demonstrate how site constraints and orientation preclude meeting the design criteria and how the development meets the objectives</li> </ul>	
<p><b>Objective 4A-2</b></p> <p>Daylight access is maximised where sunlight is limited</p>	
Design Guidance	Response
Courtyards, skylights and high level windows (with sills of 1,500mm or greater) are used only as a secondary light source in habitable rooms	<ul style="list-style-type: none"> <li>Noted.</li> </ul>
<p>Where courtyards are used:</p> <ul style="list-style-type: none"> <li>Used restricted to kitchens, bathrooms and service areas</li> <li>Building services are concealed with appropriate detailing and materials to visible walls</li> <li>Courtyards are fully open to the sky</li> <li>Access is provided to the light well from a communal area for cleaning and maintenance</li> <li>Acoustic privacy, fire safety and minimum privacy separation distances (see section 3F Visual privacy) are achieved</li> </ul>	<ul style="list-style-type: none"> <li>Ground floor apartments have compliant courtyard areas.</li> </ul>
<p>Opportunities for reflected light into apartments are optimised through:</p> <ul style="list-style-type: none"> <li>Reflective exterior surfaces on buildings opposite south facing windows</li> <li>Positioning windows to face other buildings or surfaces (on neighbouring sites or within the site) that will reflect light</li> <li>Integrating light shelves into the design</li> <li>Light coloured internal finishes</li> </ul>	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>

**Objective 4A-3**

Design incorporates shading and glare control, particularly for warmer months

Design Guidance	Response
A number of the following design features are used:	
<ul style="list-style-type: none"> <li>Balconies or sun shading that extend far enough to shade summer sun, but allow winter sun to penetrate living areas</li> <li>Shading devices such as eaves, awnings, balconies, pergolas, external louvers and planting</li> <li>Horizontal shading to north facing windows</li> <li>Vertical shading to east and particularly west facing windows</li> <li>Operable shading to allow adjustment and choice</li> <li>High performance glass that minimises external glare off windows, with consideration given to reduce tint glass or glass with a reflectance level below 20% (reflective films are avoided)</li> </ul>	<ul style="list-style-type: none"> <li>Noted</li> <li>Noted</li> <li>N/A</li> <li>Noted</li> <li>Noted</li> <li>Noted</li> </ul>

**4B Natural Ventilation****Objective 4B-1**

All habitable rooms are naturally ventilated

Response: We confirm that 100% of apartments are naturally ventilated

Design Guidance	Response
The building's orientation maximises capture and use of prevailing breezes for natural ventilation in habitable rooms	<ul style="list-style-type: none"> <li>Noted and achieved to all living, kitchen and bedroom areas. Bathrooms and ensuites are mechanically ventilated.</li> </ul>
Depths of habitable rooms support natural ventilation	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
The area of unobstructed window openings should be equal to at least 5% of the floor area served	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
Light wells are not the primary air source for habitable rooms	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
Doors and openable windows maximise natural ventilation opportunities by using the following design solutions:	<ul style="list-style-type: none"> <li>Noted and achieved</li> </ul>

4B Natural Ventilation	
<ul style="list-style-type: none"> <li>Adjustable windows with large effective openable areas</li> <li>A variety of window types that provide safety and flexibility such as awnings and louvers</li> <li>Windows which the occupants can reconfigure to funnel breezes into the apartment such as vertical louvers, casement windows</li> </ul>	

4B Natural Ventilation	
<b>Objective 4B-2</b>  The layout and design of single aspect apartments maximises natural ventilation	
Design Guidance	Response
Apartment depths are limited to maximise ventilation and airflow (see also figure 4D.3)	<ul style="list-style-type: none"> <li>Noted and satisfied.</li> </ul>
Natural ventilation to single aspect apartments is achieved with the following design solutions: <ul style="list-style-type: none"> <li>Primary windows are augmented with plenums and light wells (generally not suitable for cross ventilation)</li> <li>Stack effect ventilation / solar chimneys or similar to naturally ventilate internal building areas or rooms such as bathrooms and laundries</li> <li>Courtyards or building indentations have a width to depth ratio of 2:1 or 3:1 to ensure effective air circulation and avoid trapped smells</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<b>Objective 4B-3</b>  The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents	
<b>Design Criteria</b>  1. At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allow adequate natural ventilation and cannot be fully enclosed  Comment: 76 of 121 apartments are naturally cross ventilated as indicated on plan DA0402A.  2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line  Comment: Noted and achieved	

4B Natural Ventilation													
Design Guidance	Response												
The building should include dual aspect apartments, cross through apartments and corner apartments and limit apartment depths	<ul style="list-style-type: none"> <li>Compliant natural ventilation achieved.</li> </ul>												
In cross-through apartments external window and door opening sizes/areas on one side of an apartment (inlet side) are approximately equal to the external window and door opening sizes areas on the other side of the apartment (outlet side) (see figure 4B.4)	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>												
Apartments are designed to minimise the number of corners, doors and rooms that might obstruct airflow	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>												
Apartment depths, combined with appropriate ceiling heights, maximise cross ventilation and airflow	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>												
4C Ceiling Heights													
Objective 4C-1													
Ceiling height achieves sufficient natural ventilation and daylight access													
<p>Design Criteria</p> <p>Measured from finished floor level to finished ceiling level, minimum ceiling heights are:</p> <table border="1"> <thead> <tr> <th colspan="2">Minimum ceiling height for apartment and mixed use buildings</th></tr> </thead> <tbody> <tr> <td>Habitable rooms</td><td>2.7m</td></tr> <tr> <td>Non-habitable</td><td>2.4m</td></tr> <tr> <td>For 2 storey apartments</td><td>2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area</td></tr> <tr> <td>Attic spaces</td><td>1.8m at edge of room with a 30 degree minimum ceiling slope</td></tr> <tr> <td>If located in mixed used areas</td><td>3.3m for ground and first floor to promote future flexibility of use</td></tr> </tbody> </table> <p>These minimums do not preclude higher ceilings if desired</p> <p>Comment: We confirm 3.6 metre ceiling height provided to ground floor and 2.7 to all residential floors above. The 2.7 metre first floor ceiling height does not preclude this levels future adaptive reuse as medical consulting rooms or offices.</p>		Minimum ceiling height for apartment and mixed use buildings		Habitable rooms	2.7m	Non-habitable	2.4m	For 2 storey apartments	2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area	Attic spaces	1.8m at edge of room with a 30 degree minimum ceiling slope	If located in mixed used areas	3.3m for ground and first floor to promote future flexibility of use
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If located in mixed used areas	3.3m for ground and first floor to promote future flexibility of use												
Design Guidance	Response												
Ceiling height can accommodate use of ceiling fans for cooling and heat distribution	<ul style="list-style-type: none"> <li>Noted and achieved. Min 2.7m ceiling heights to all apartments</li> </ul>												

4C Ceiling Heights	
<p><i>Objective 4C-2</i></p> <p>Ceiling height increases the sense of space in apartments and provides for well proportioned rooms</p>	
Design Guidance	Response
<p>A number of the following design solutions can be used:</p> <ul style="list-style-type: none"> <li>▪ The hierarchy of rooms in an apartment is defined using changes in ceiling heights and alternatives such as raked or curved ceilings, or double height spaces</li> <li>▪ Well proportioned rooms are provided, for example, smaller rooms feel larger and more spacious with higher ceilings</li> <li>▪ Ceiling heights are maximised in habitable rooms by ensuring that bulkheads do not intrude. The stacking of service rooms from floor to floor and coordination of bulkhead location above non-habitable areas, such as robes or storage, can assist</li> </ul>	<ul style="list-style-type: none"> <li>▪ Noted and achieved.</li> </ul>
<p><i>Objective 4C-3</i></p> <p>Ceiling heights contribute to the flexibility of building use over the life of the building</p>	
Design Guidance	Response
<p>Ceiling heights of lower level apartments in centres should be greater than the minimum required by the design criteria allowing flexibility and conversion to non-residential uses (see figure 4C.1)</p>	<ul style="list-style-type: none"> <li>▪ This has been previously addressed.</li> </ul>



#### 4D Apartment Size and Layout

##### Objective 4D-1

The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity

##### Design Criteria

1. Apartments are required to have the following minimum internal areas:

Apartment type	Minimum internal area
Studio	35m <sup>2</sup>
1 bedroom	50m <sup>2</sup>
2 bedroom	70m <sup>2</sup>
3 bedroom	90m <sup>2</sup>

The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m<sup>2</sup> each

A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m<sup>2</sup> each

Comment: All apartments satisfy these area requirements as detailed on the accompanying apartment area schedule

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

Comment: Noted and satisfied

Design Guidance	Response
Kitchens should not be located as part of the main circulation space in larger apartments (such as hallway or entry space)	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
A window should be visible from any point in a habitable room	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
<p>Where minimum areas or room dimensions are not met apartments need to demonstrate that they are well designed and demonstrate the usability and functionality of the space with realistically scaled furniture layouts and circulation areas.</p> <p>These circumstances would be assessed on their merits</p>	<ul style="list-style-type: none"> <li>N/A</li> </ul>

4D Apartment Size and Layout	
<b>Objective 4D-2</b>  Environmental performance of the apartment is maximised	
Design Criteria  1. Habitable room depths are limited to a maximum of 2.5 x the ceiling height  Comment: Room depths are 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  Comment: Noted and satisfied.	
Design Guidance	Response
Greater than minimum ceiling heights can allow for proportional increases in room depth up to the permitted maximum depths	<ul style="list-style-type: none"> <li>Noted.</li> </ul>
All living areas and bedrooms should be located on the external face of the building	<ul style="list-style-type: none"> <li>Noted and satisfied.</li> </ul>
Where possible: <ul style="list-style-type: none"> <li>Bathrooms and laundries should have an external openable window</li> <li>Main living spaces should be oriented toward the primary outlook and aspect and away from noise sources</li> </ul>	<ul style="list-style-type: none"> <li>Noted. Bathrooms and ensuites mechanically ventilated. This is considered acceptable noting that apartment design ensures all kitchens have adjacent window.</li> <li>Majority of living areas orientated to north, east and west with no adverse noise sources</li> </ul>
<b>Objective 4D-3</b>  Apartment layouts are designed to accommodate a variety of household activities and needs	
Design Criteria  1. Master bedrooms have a minimum area of 10m <sup>2</sup> and other bedrooms 9m <sup>2</sup> (excluding wardrobe space)  Comment: Noted and satisfied.  2. Bedrooms have a minimum dimension of 3m (excluding wardrobe space)  Comment: Noted and satisfied.  3. Living rooms or combined living/dining rooms have a minimum width of: <ul style="list-style-type: none"> <li>3.6m for studio and 1 bedroom apartments</li> <li>4m for 2 and 3 bedroom apartments</li> </ul> Comment: Noted and satisfied.  4. The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts.  Comment: Noted and satisfied.	



4D Apartment Size and Layout	
Design Guidance	Response
Access to bedrooms, bathrooms and laundries is separated from living areas minimising direct openings between living and service areas	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
All bedrooms allow a minimum length of 1.5m for robes	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
The main bedroom of an apartment or a studio apartment should be provided with a wardrobe of a minimum 1.8m long, 0.6m deep and 2.1m high	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
<p>Apartment layouts allow flexibility over time, design solutions may include:</p> <ul style="list-style-type: none"> <li>Dimensions that facilitate a variety of furniture arrangements and removal</li> <li>Spaces for a range of activities and privacy levels between different spaces within the apartment</li> <li>Dual master apartments</li> <li>Dual key apartments</li> </ul> <p><i>Note: dual key apartments which are separate but on the same title are regarded as two sole occupancy units for the purposes of the Building Code of Australia and for calculating the mix of apartments</i></p> <ul style="list-style-type: none"> <li>Room sizes and proportions or open plans (rectangular spaces (2:3) are more easily furnished than square spaces (1:1))</li> <li>Efficient planning of circulation by stairs, corridors and through rooms to maximise the amount of usable floor space in rooms</li> </ul>	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>

**4E Private Open Space and Balconies****Objective 4E-1**

Apartments provide appropriately sized private open space and balconies to enhance residential amenity

**Design Criteria**

1. All apartments are required to have primary balconies as follows:

Dwelling type	Minimum area	Minimum depth
Studio apartments	4m <sup>2</sup>	-
1 bedroom apartments	8m <sup>2</sup>	2m
2 bedroom apartments	10m <sup>2</sup>	2m
3+ bedroom apartments	12m <sup>2</sup>	2.4m

The minimum balcony depth to be counted as contributing to the balcony area is 1m

Comment: All balconies satisfy this criterion.

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<sup>2</sup> and a minimum depth of 3m.

Comment: All ground level apartments have private open space areas that satisfy these criteria.

Design Guidance	Response
Increased communal open space should be provided where the number or size of balconies are reduced	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Storage areas on balconies is additional to the minimum balcony size	<ul style="list-style-type: none"> <li>Noted. Not formally proposed.</li> </ul>
<p>Balcony use may be limited in some proposals by:</p> <ul style="list-style-type: none"> <li>Consistently high wind speeds at 10 storeys and above               <ul style="list-style-type: none"> <li>Close proximity to road, rail or other noise sources</li> <li>Exposure to significant levels of aircraft noise</li> <li>Heritage and adaptive reuse of existing buildings</li> </ul> </li> </ul> <p>In these situations, Juliet balconies, operable walls enclosed wintergardens or bay windows may be appropriate, and other amenity benefits for occupants should also be provided in the apartments or in the development or both. Natural ventilation also needs to be demonstrated</p>	<ul style="list-style-type: none"> <li>Good amenity to balconies afforded.</li> </ul>

**Objective 4E-2**

Primary private open space and balconies are appropriately located to enhance liveability for residents

Design Guidance	Response
Primary open space and balconies should be located adjacent to the living room, dining room or kitchen to extend the living space	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
Private open spaces and balconies predominantly face north, east or west	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
Primary open space and balconies should be orientated with the longer side facing outwards or be open to the sky to optimise daylight access into adjacent rooms	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>

**4E Private Open Space and Balconies****Objective 4E-3**

Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building

Design Guidance	Response
Solid, partially solid or transparent fences and balustrades are selected to respond to the location. They are designed to allow views and passive surveillance of the street while maintaining visual privacy and allowing for a range of uses on the balcony. Solid and partially solid balustrades are preferred	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
Full width full height glass balustrades alone are generally not desirable	<ul style="list-style-type: none"> <li>Glass balustrades provided but acceptable given façade composition and paucity of adverse privacy impacts.</li> </ul>
Projecting balconies should be integrated into the building design and the design of soffits considered	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
Operable screens, shutters, hoods and pergolas are used to control sunlight and wind	<ul style="list-style-type: none"> <li>Noted and provided.</li> </ul>
Balustrades are set back from the building or balcony edge where overlooking or safety is an issue	<ul style="list-style-type: none"> <li>Noted and provided to roof top communal open space.</li> </ul>

4E Private Open Space and Balconies	
Downpipes and balcony drainage are integrated with the overall facade and building design	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
Air conditioning units should be located on roofs, in basements, or fully integrated into the building design	<ul style="list-style-type: none"> <li>Noted and provided on roof with integrated screening.</li> </ul>
Where clothes drying, storage or air conditioning units are located on balconies, they should be screened and integrated in the building design	<ul style="list-style-type: none"> <li>Noted.</li> </ul>
Ceiling of apartments below terraces should be insulated to avoid heat loss	<ul style="list-style-type: none"> <li>Noted</li> </ul>
Water and gas outlets should be provided for primary balconies and private open space	<ul style="list-style-type: none"> <li>Noted</li> </ul>
<b>Objective 4E-4</b>  Private open space and balcony design maximises safety	
Design Guidance	Response
Changes in ground levels or landscaping are minimised	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
Design and detailing of balconies avoids opportunities for climbing and falls	<ul style="list-style-type: none"> <li>Noted</li> </ul>

4F Common Circulation and Spaces
<b>Objective 4F-1</b>  Common circulation spaces achieve good amenity and properly service the number of apartments
Design Criteria  1. The maximum number of apartments off a circulation core on a single level is eight  Comment: The proposal provides for a maximum of 9 apartments of each core however 2 lifts are provided within each core to ensure servicing frequency is not an issue.  2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40  Comment: N/A.

4F Common Circulation and Spaces	
Design Guidance	Response
Greater than minimum requirements for corridor widths and/or ceiling heights allow comfortable movement and access particularly in entry lobbies, outside lifts and at apartment entry doors	<ul style="list-style-type: none"> <li>Noted</li> </ul>
Daylight and natural ventilation should be provided to all common circulation spaces that are above ground	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
Windows should be provided in common circulation spaces and should be adjacent to the stair or lift core or at the ends of corridors	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
<p>Longer corridors greater than 12m in length from the lift core should be articulated. Design solutions may include:</p> <ul style="list-style-type: none"> <li>A series of foyer areas with windows and spaces for seating</li> <li>Wider areas at apartment entry doors and varied ceiling heights</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied.</li> </ul>
Design common circulation spaces to maximise opportunities for dual aspect apartments, including multiple core apartment buildings and cross over apartments	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
<p>Achieving the design criteria for the number of apartments off a circulation core may not be possible. Where a development is unable to achieve the design criteria, a high level of amenity for common lobbies, corridors and apartments should be demonstrated, including:</p> <ul style="list-style-type: none"> <li>Sunlight and natural cross ventilation in apartments</li> <li>Access to ample daylight and natural ventilation in common circulation spaces</li> <li>Common areas for seating and gathering</li> <li>Generous corridors with greater than minimum ceiling heights</li> <li>Other innovative design solutions that provide high levels of amenity</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Where design criteria 1 is not achieved, no more than 12 apartments should be provided off a circulation core on a single level	<ul style="list-style-type: none"> <li>N/A</li> </ul>



4F Common Circulation and Spaces	
Primary living room or bedroom windows should not open directly onto common circulation spaces, whether open or enclosed. Visual and acoustic privacy from common circulation spaces to any other rooms should be carefully controlled	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>

4F Common Circulation and Spaces	
Objective 4F-2	
Common circulation spaces promote safety and provide for social interaction between residents	
Design Guidance	Response
Direct and legible access should be provided between vertical circulation points and apartments entries by minimising corridor or gallery length to give short, straight, clear sight lines	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
Tight corners and spaces are avoided	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
Circulation spaces should be well lit at night	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
Legible signage should be provided for apartment numbers, common areas and general wayfinding	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
Incidental spaces, for example space for seating in a corridor, at a stair landing, or near a window are provided	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
In large developments, community rooms for activities such as owners corporation meetings or resident use should be provided and are ideally co-located with communal open space	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Where external galleries are provided, they are more open than closed above the balustrade along their length	<ul style="list-style-type: none"> <li>N/A</li> </ul>

**4G Storage***Objective 4G-1*

Adequate well designed storage is provided in each apartment

**Design Criteria**

1. In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:

Dwelling type	Storage size volume
Studio apartments	4m <sup>3</sup>
1 bedroom apartments	6m <sup>3</sup>
2 bedroom apartments	8m <sup>3</sup>
3+ bedroom apartments	10m <sup>3</sup>

At least 50% of the required storage is to be located within the apartment

Comment: Noted and achieved for all apartments through a combination of in-apartment and basement storage spaces.

Design Guidance	Response
Storage not located in apartments is secure and clearly allocated to specific apartments	<ul style="list-style-type: none"> <li>Noted and achieved (subject to condition).</li> </ul>
Storage is provided for larger and less frequently accessed items	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
Storage space in internal or basement car parks is provided at the rear or side of car spaces or in cages so that allocated car parking remains accessible	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
If communal storage rooms are provided they should be accessible from common circulation areas of the building	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Storage not located in an apartment is integrated into the overall building design and is not visible from the public domain	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>



4H Acoustic Privacy	
Objective 4H-1	
Noise transfer is minimised through the siting of buildings and building layout	
Design Guidance	Response
Adequate building separation is provided within the development and from neighbouring buildings/adjacent uses (see also section 2F Building separation and section 3F Visual privacy)	<ul style="list-style-type: none"> <li>▪ This has been previously addressed.</li> </ul>
Window and door openings are generally orientated away from noise sources	<ul style="list-style-type: none"> <li>▪ No significant noise sources.</li> </ul>
Noisy areas within buildings including building entries and corridors should be located next to or above each other and quieter areas next to or above quieter areas	<ul style="list-style-type: none"> <li>▪ Noted and achieved.</li> </ul>
Storage, circulation areas and non-habitable rooms should be located to buffer noise from external sources	<ul style="list-style-type: none"> <li>▪ Noted and generally achieved.</li> </ul>
The number of party walls (walls shared with other apartments) are limited and are appropriately insulated	<ul style="list-style-type: none"> <li>▪ Noted and achieved.</li> </ul>
Noise sources such as garage doors, driveways, service areas, plant rooms, building services, mechanical equipment, active communal open spaces and circulation areas should be located at least 3m away from bedrooms	<ul style="list-style-type: none"> <li>▪ Noted and achieved.</li> </ul>

Objective 4H-2	
Noise impacts are mitigated within apartments through layout and acoustic treatments	
Design Guidance	Response
<p>Internal apartment layout separates noisy spaces from quiet spaces, using a number of the following design solutions:</p> <ul style="list-style-type: none"> <li>▪ Rooms with similar noise requirements are grouped together</li> <li>▪ Doors separate different use zones</li> <li>▪ Wardrobes in bedrooms are co-located to act as sound buffers</li> </ul>	<ul style="list-style-type: none"> <li>▪ Noted and achieved.</li> </ul>

<p>Where physical separation cannot be achieved noise conflicts are resolved using the following design solutions:</p> <ul style="list-style-type: none"> <li>▪ Double or acoustic glazing</li> <li>▪ Acoustic seals</li> <li>▪ Use of materials with low noise penetration properties</li> <li>▪ Continuous walls to ground level courtyards where they do not conflict with streetscape or other amenity requirements</li> </ul>	<ul style="list-style-type: none"> <li>▪ N/A</li> </ul>
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#### 4J Noise and Pollution

##### Objective 4J-1

In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings

Design Guidance	Response
<p>To minimise impacts the following design solutions may be used:</p> <ul style="list-style-type: none"> <li>▪ Physical separation between buildings and the noise or pollution source</li> <li>▪ Residential uses are located perpendicular to the noise source and where possible buffered by other uses</li> <li>▪ Non-residential buildings are sited to be parallel with the noise source to provide a continuous building that shields residential uses and communal open spaces</li> <li>▪ Non-residential uses are located at lower levels vertically separating the residential component from the noise or pollution source. Setbacks to the underside of residential floor levels should increase relative to traffic volumes and other noise sources</li> <li>▪ Building should respond to both solar access and noise. Where solar access is away from the noise source, non-habitable rooms can provide a buffer</li> <li>▪ Where solar access is in the same direction as the noise source, dual aspect apartments with shallow building depths are preferable (see figure 4J.4)</li> <li>▪ Landscape design reduces the perception of noise and acts as a filter for air pollution generated by traffic and industry</li> </ul>	<ul style="list-style-type: none"> <li>▪ Noted and achieved in all circumstances.</li> </ul>
<p>Achieving the design criteria in this Apartment Design Guide may not be possible in some situation due to noise and pollution. Whee</p>	<ul style="list-style-type: none"> <li>▪ N/A</li> </ul>

4J Noise and Pollution	
<p>developments are unable to achieve the design criteria, alternatives may be considered in the following areas:</p> <ul style="list-style-type: none"> <li>▪ Solar and daylight access</li> <li>▪ Private open space and balconies</li> <li>▪ Natural cross ventilation</li> </ul>	

4J Noise and Pollution	
<p><i>Objective 4J-2</i></p> <p>Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission</p>	
Design Guidance	Response
<p>Design solutions to mitigate noise include:</p> <ul style="list-style-type: none"> <li>▪ Limiting the number and size of openings facing noise sources</li> <li>▪ Providing seals to prevent noise transfer through gaps</li> <li>▪ Using double or acoustic glazing, acoustic louvers or enclosed balconies (wintergardens)</li> <li>▪ Using materials with mass and/or sound insulation or absorption properties e.g. solid balcony balustrades, external screens and soffits</li> </ul>	<ul style="list-style-type: none"> <li>▪ Noted. Acceptable noise attenuation achieved through building design.</li> </ul>

4K Apartment Mix	
<p><i>Objective 4K-1</i></p> <p>A range of apartment types and sizes is provided to cater for different household types now and into the future</p>	
Design Guidance	Response
A variety of apartment types is provided	<ul style="list-style-type: none"> <li>▪ 1, 2 and 3 bedroom apartments provided of various sizes and configurations.</li> </ul>
<p>The apartment mix is appropriate, taking into consideration:</p> <ul style="list-style-type: none"> <li>▪ The distance to public transport, employment and education centres</li> </ul>	<ul style="list-style-type: none"> <li>▪ Apartment mix to meet market demand.</li> </ul>

4K Apartment Mix	
<ul style="list-style-type: none"> <li>▪ The current market demands and projected future demographic trends</li> <li>▪ The demand for social and affordable housing</li> <li>▪ Different cultural and socioeconomic groups</li> </ul>	
Flexible apartment configurations are provided to support diverse household types and stages of life including single person households, families, multi-generational families and group households	<ul style="list-style-type: none"> <li>▪ Noted and achieved.</li> </ul>
Objective 4K-2	
The apartment mix is distributed to suitable locations within the building	
Design Guidance	Response
Different apartment types are located to achieve successful facade composition and to optimise solar access (see figure 4K.3)	<ul style="list-style-type: none"> <li>▪ Noted and achieved.</li> </ul>
Larger apartment types are located on the ground or roof level where there is potential for more open space and on corners where more building frontage is available	<ul style="list-style-type: none"> <li>▪ Noted.</li> </ul>

4L Ground Floor Apartments	
Objective 4L-1	
Street frontage activity is maximised where ground floor apartments are located	
Design Guidance	Response
Direct street access should be provided to ground floor apartments	<ul style="list-style-type: none"> <li>▪ Noted and achieved where practical.</li> </ul>
<p>Activity is achieved through front gardens, terraces and the facade of the building. Design solutions may include:</p> <ul style="list-style-type: none"> <li>▪ Both street, foyer and other common internal circulation entrances to ground floor apartments</li> <li>▪ Private open space is next to the street</li> <li>▪ Doors and windows face the street</li> </ul>	<ul style="list-style-type: none"> <li>▪ Noted and satisfied</li> </ul>
Retail or home office spaces should be located along street frontages	<ul style="list-style-type: none"> <li>▪ N/A</li> </ul>

**4L Ground Floor Apartments**

Ground floor apartment layouts support small office home office (SOHO) use to provide future opportunities for conversion into commercial or retail areas. In these cases provide higher floor to ceiling heights and ground floor amenities for easy conversion	<ul style="list-style-type: none"> <li>N/A</li> </ul>
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**Objective 4L-2**

Design of ground floor apartments delivers amenity and safety for residents

Design Guidance	Response
<p>Privacy and safety should be provided without obstructing casual surveillance. Design solutions may include:</p> <ul style="list-style-type: none"> <li>Elevation of private gardens and terraces above the street level by 1-1.5m (see figure 4L.4)</li> <li>Landscaping and private courtyards</li> <li>Windows sill heights that minimise sight lines into apartments</li> <li>Integrating balustrades, safety bars or screens with the exterior design</li> </ul>	<ul style="list-style-type: none"> <li>Noted and achieved. Good levels of casual surveillance opportunity.</li> </ul>
<p>Solar access should be maximised through:</p> <ul style="list-style-type: none"> <li>High ceilings and tall windows</li> <li>Trees and shrubs that allow solar access in winter and shade in summer</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied</li> </ul>

**4M Facades****Objective 4M-1**

Buildings facades provide visual interest along the street while respecting the character of the local area

Design Guidance	Response
<p>Design solutions for front building facades may include:</p> <ul style="list-style-type: none"> <li>A composition of varied building elements</li> <li>A defined base, middle and top of buildings</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied. Refer to schedule of finishes and design statement.</li> </ul>



4M Facades	
<ul style="list-style-type: none"> <li>Revealing and concealing certain elements</li> </ul> <p>Changes in texture, material, detail and colour to modify the prominence of elements</p>	
Building services should be integrated within the overall facade	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
<p>Building facades should be well resolved with an appropriate scale and proportion to the streetscape and human scale. Design solutions may include:</p> <ul style="list-style-type: none"> <li>Well composed horizontal and vertical elements</li> <li>Variation in floor heights to enhance the human scale</li> <li>Elements that are proportional and arranged in patterns</li> <li>Public artwork or treatments to exterior blank walls</li> <li>Grouping of floors or elements such as balconies and windows on taller buildings</li> </ul>	<ul style="list-style-type: none"> <li>Noted and achieved. Refer to design statement</li> </ul>
Building facades relate to key datum lines of adjacent buildings through upper level setbacks, parapets, cornices, awnings or colonnade heights	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Shadow is created on the facade throughout the day with building articulation, balconies and deeper window reveals	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>

4M Facades	
Objective 4M-2	
Buildings functions are expressed by the façade	
Design Guidance	Response
Building entries should be clearly defined	<ul style="list-style-type: none"> <li>Primary entrances readily identifiable.</li> </ul>
Important corners are given visual prominence through a change in articulation, materials or colour, roof expression or changes in height	<ul style="list-style-type: none"> <li>N/A</li> </ul>
The apartment layout should be expressed externally through facade features such as party walls and floor slabs	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>



4N Roof Design	
Objective 4N-1	
Roof treatments are integrated into the building design and positively respond to the street	
Design Guidance	Response
<p>Roof design relates to the street. Design solutions may include:</p> <ul style="list-style-type: none"> <li>▪ Special roof features and strong corners</li> <li>▪ Use of skillion or very low pitch hipped roofs</li> <li>▪ Breaking down the massing of the roof by using smaller elements to avoid bulk</li> <li>▪ Using materials or a pitched form complementary to adjacent buildings</li> </ul>	<p>Noted and achieved. Refer to design statement.</p>
<p>Roof treatments should be integrated with the building design. Design solutions may include:</p> <ul style="list-style-type: none"> <li>▪ Roof design proportionate to the overall building size, scale and form</li> <li>▪ Roof materials compliment the building</li> <li>▪ Service elements are integrated</li> </ul>	<ul style="list-style-type: none"> <li>▪ Noted and achieved.</li> </ul>

4N Roof Design	
Objective 4N-2	
Opportunities to use roof space for residential accommodation and open space are maximised	
Design Guidance	Response
<p>Habitable roof space should be provided with good levels of amenity. Design solutions may include:</p> <ul style="list-style-type: none"> <li>▪ Penthouse apartments</li> <li>▪ Dormer or clerestory windows</li> <li>▪ Openable skylights</li> </ul>	<ul style="list-style-type: none"> <li>▪ Noted and achieved to top floor apartments.</li> </ul>
<p>Open space is provided on roof tops subject to acceptable visual and acoustic privacy, comfort levels, safety and security considerations</p>	<ul style="list-style-type: none"> <li>▪ Noted and achieved.</li> </ul>

**Objective 4N-3**

Roof design incorporates sustainability features

Design Guidance	Response
<p>Roof design maximises solar access to apartments during winter and provides shade during summer. Design solutions may include:</p> <ul style="list-style-type: none"> <li>the roof lifts to the north</li> <li>eaves and overhangs shade walls and windows from summer sun</li> </ul>	<ul style="list-style-type: none"> <li>Noted and satisfied.</li> </ul>
<p>Skylights and ventilation systems should be integrated into the roof design</p>	<ul style="list-style-type: none"> <li>Noted.</li> </ul>

**4O Landscape Design****Objective 4O-1**

Landscape design is viable and sustainable

Design Guidance	Response
<p>Landscape design should be environmentally sustainable and can enhance environmental performance by incorporating:</p> <ul style="list-style-type: none"> <li>diverse and appropriate planting</li> <li>bio-filtration gardens</li> <li>appropriately planted shading trees</li> <li>areas for residents to plant vegetables and herbs</li> <li>composting</li> <li>green roofs or walls</li> </ul>	<ul style="list-style-type: none"> <li>Refer to landscape plan. Noted and achieved.</li> </ul>
<p>Ongoing maintenance plans should be prepared</p>	<ul style="list-style-type: none"> <li>Refer to landscape plan/ condition</li> </ul>
<p>Microclimate is enhanced by:</p> <ul style="list-style-type: none"> <li>appropriately scaled trees near the eastern and western elevations for shade</li> <li>a balance of evergreen and deciduous trees to provide shading in summer and sunlight access in winter</li> <li>shade structures such as pergolas for balconies and courtyards</li> </ul>	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>

4O Landscape Design	
Trees and shrub selection considers size at maturity and the potential for roots to compete (see Table 4)	<ul style="list-style-type: none"> <li>Refer to landscape plan. Satisfied.</li> </ul>
<b>Objective 4O-2</b> Landscape design contributes to the streetscape and amenity	
Design Guidance	Response
Landscape design responds to the existing site conditions including: <ul style="list-style-type: none"> <li>Changes of levels</li> <li>Views</li> <li>Significant landscape features including trees and rock outcrops</li> </ul>	<ul style="list-style-type: none"> <li>Refer to landscape plan. Satisfied.</li> </ul>
Significant landscape features should be protected by: <ul style="list-style-type: none"> <li>Tree protection zones (see figure 4O.5)</li> <li>Appropriate signage and fencing during construction</li> </ul>	<ul style="list-style-type: none"> <li>Noted. Refer to arboricultural report tree protection recommendations.</li> </ul>
Plants selected should be endemic to the region and reflect the local ecology	<ul style="list-style-type: none"> <li>Refer to landscape plan and certification.</li> </ul>

4P Planting on Structures	
<b>Objective 4P-1</b> Appropriate soil profiles are provided	
Design Guidance	Response
Structures are reinforced for additional saturated soil weight	<ul style="list-style-type: none"> <li>Noted and to engineer details.</li> </ul>
Soil volume is appropriate for plant growth, considerations include: <ul style="list-style-type: none"> <li>Modifying depths and widths according to the planting mix and irrigation frequency</li> <li>Free draining and long soil life span</li> <li>Tree anchorage</li> </ul>	<ul style="list-style-type: none"> <li>Refer to landscape plan/ condition.</li> </ul>

4P Planting on Structures	
Minimum soil standards for plant sizes should be provided in accordance with Table 5	<ul style="list-style-type: none"> <li>Refer to landscape plan/ condition.</li> </ul>

4P Planting on Structures	
<i>Objective 4P-2</i>	
Plant growth is optimised with appropriate selection and maintenance	
Design Guidance	Response
Plants are suited to site conditions considerations include: <ul style="list-style-type: none"> <li>Drought and wind tolerance</li> <li>Seasonal changes in solar access</li> <li>Modified substrate depths for a diverse range of plants</li> <li>Plant longevity</li> </ul>	<ul style="list-style-type: none"> <li>Refer to landscape plan/ condition.</li> </ul>
A landscape maintenance plan is prepared	<ul style="list-style-type: none"> <li>Refer to landscape plan/ condition.</li> </ul>
Irrigation and drainage systems respond to: <ul style="list-style-type: none"> <li>Changing site conditions</li> <li>Soil profile and the planting regime</li> </ul> Whether rainwater, stormwater or recycled grey water is used	<ul style="list-style-type: none"> <li>Refer to landscape plan/ condition.</li> </ul>
4P Planting on Structures	
<i>Objective 4P-3</i>	
Planting on structures contributes to the quality and amenity of communal and public open spaces	
Design Guidance	Response
Building design incorporates opportunities for planting on structures. Design solutions may include: <ul style="list-style-type: none"> <li>Green walls with specialised lighting for indoor green walls</li> <li>Wall design that incorporates planting</li> <li>Green roofs, particularly where roofs are visible from the public domain</li> </ul>	<ul style="list-style-type: none"> <li>Refer to landscape plan. Satisfied.</li> </ul>

4P Planting on Structures	
<ul style="list-style-type: none"> <li>Planter boxes</li> </ul> <p>Notes: structures designed to accommodate green walls should be integrated into the building facade and consider the ability of the facade to change over time</p>	

4Q Universal Design	
<b>Objective 4Q-1</b> <p>Universal design features are included in apartment design to promote flexible housing for all community members</p>	
Design Guidance	Response
Developments achieved a benchmark of 20% of the total apartments incorporating the Liveable Housing Guideline's silver level universal design features	<ul style="list-style-type: none"> <li>Noted and 40% achieved.</li> </ul>
<b>Objective 4Q-2</b> <p>A variety of apartments with adaptable designs are provided</p>	
Design Guidance	Response
Adaptable housing should be provided in accordance with the relevant council policy	<ul style="list-style-type: none"> <li>The requirements of SEPP 65 and the Penrith DCP 2014 (C1, 1.2.6 Maximising Access and Adaptability) have been met, in that Adaptable Dwellings have been provided for 40% of the total dwellings (well in excess of the typical minimum required 10%) and this same 40% will also achieve Liveable Housing Design Guidelines - Silver Level (again in excess of the minimum 20% called up by SEPP 65 and the Apartment Design Guide).</li> </ul>
<p>Design solutions for adaptable apartments include:</p> <ul style="list-style-type: none"> <li>Convenient access to communal and public areas</li> <li>High level of solar access</li> <li>Minimal structural change and residential amenity loss when adapted</li> <li>Larger car parking spaces for accessibility</li> <li>Parking titled separately from apartments or shared car parking arrangements</li> </ul>	<ul style="list-style-type: none"> <li>Noted and achieved</li> </ul>

**Objective 4Q-3**

Apartment layouts are flexible and accommodate a range of lifestyle needs

Design Guidance	Response
<p>Apartment design incorporates flexible design solutions which may include:</p> <ul style="list-style-type: none"> <li>▪ Rooms with multiple functions</li> <li>▪ Dual master bedroom apartments with separate bathrooms</li> <li>▪ Larger apartments with various living space options</li> <li>▪ Open plan 'loft' style apartments with only a fixed kitchen, laundry and bathroom</li> </ul>	<ul style="list-style-type: none"> <li>▪ Appropriate flexibility achieved.</li> </ul>

**4R Adaptive Reuse****Objective 4R-1**

New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place

Design Guidance	Response
<p>Design solutions may include:</p> <ul style="list-style-type: none"> <li>▪ New elements to align with the existing building</li> <li>▪ Additions that complement the existing character, siting, scale, proportion, pattern, form and detailing</li> <li>▪ Use of contemporary and complementary materials, finishes, textures and colours</li> </ul>	<ul style="list-style-type: none"> <li>▪ N/A</li> </ul>
<p>Additions to heritage items should be clearly identifiable from the original building</p>	<ul style="list-style-type: none"> <li>▪ N/A</li> </ul>
<p>New additions allow for the interpretation and future evolution of the building</p>	<ul style="list-style-type: none"> <li>▪ N/A</li> </ul>



4R Adaptive Reuse	
Objective 4R-2	
Adapted buildings provide residential amenity while not precluding future adaptive reuse	
Design Guidance	Response
<p>Design features should be incorporated sensitively into adapted buildings to make up for any physical limitations, to ensure residential amenity is achieved. Design solutions may include:</p> <ul style="list-style-type: none"> <li>▪ Generously sized voids in deeper buildings</li> <li>▪ Alternative apartment types when orientation is poor</li> <li>▪ Using additions to expand the existing building envelope</li> </ul>	<ul style="list-style-type: none"> <li>▪ This has been addressed in detail previously. An appropriate level of future adaptability achieved.</li> </ul>
<p>Some proposals that adapt existing buildings may not be able to achieve all of the design criteria in this Apartment Design Guide. Where developments are unable to achieve the design criteria, alternatives could be considered in the following areas:</p> <ul style="list-style-type: none"> <li>▪ Where there are existing higher ceilings, depths of habitable rooms could increase subject to demonstrating access to natural ventilation, cross ventilation (when applicable) and solar and daylight access (see also sections 4A Solar and daylight access and 4B Natural ventilation)</li> <li>▪ Alternatives to providing deep soil where less than the minimum requirement is currently available on the site</li> <li>▪ Building and visual separation – subject to demonstrating alternative design approaches to achieving privacy</li> <li>▪ Common circulation</li> <li>▪ Car parking</li> <li>▪ Alternative approaches to private open space and balconies</li> </ul>	<ul style="list-style-type: none"> <li>▪ N/A</li> </ul>

**4S Mixed Use***Objective 4S-1*

Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement

Design Guidance	Response
Mixed use development should be concentrated around public transport and centres	<ul style="list-style-type: none"> <li>Noted and satisfied.</li> </ul>
<p>Mixed use developments positively contribute to the public domain. Design solutions may include:</p> <ul style="list-style-type: none"> <li>Development addresses the street</li> <li>Active frontages are provided</li> <li>Diverse activities and uses</li> <li>Avoiding blank walls at the ground level</li> <li>Live/work apartments on the ground floor level, rather than commercial</li> </ul>	Noted and satisfied.

*Objective 4S-2*

Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents

Design Guidance	Response
<p>Residential circulation areas should be clearly defined. Design solutions may include:</p> <ul style="list-style-type: none"> <li>Residential entries are separated from commercial entries and directly accessible from the street</li> <li>Commercial service areas are separated from residential components</li> <li>Residential car parking and communal facilities are separated or secured</li> <li>Security at entries and safe pedestrian routes are provided</li> <li>Concealment opportunities are provided</li> </ul>	Noted and satisfied.
Landscaped communal open space should be provided at podium or roof levels	Noted and satisfied.

4T Awnings and Signage	
Objective 4T-1	
Awnings are well located and complement and integrate with the building design	
Design Guidance	Response
Awnings should be located along streets with high pedestrian activity and active frontages	■ N/A
<p>A number of the following design solutions are used:</p> <ul style="list-style-type: none"> <li>■ Continuous awnings are maintained and provided in areas with an existing pattern</li> <li>■ Height, depth, material and form complements the existing street character</li> <li>■ Protection from the sun and rain is provided</li> <li>■ Awnings are wrapped around the secondary frontages of corner sites</li> <li>■ Awnings are retractable in areas without an established pattern</li> </ul>	■ N/A
Awnings should be located over building entries for building address and public domain amenity	■ N/A
Awnings relate to residential windows, balconies, street tree planting, power poles and street infrastructure	■ N/A
Gutters and down pipes should be integrated and concealed	■ N/A
Lighting under awnings should be provided for pedestrian safety	■ N/A

**Objective 4T-2**

Signage responds to the context and desired streetscape character

Design Guidance	Response
Signage should be integrated into the building design and respond to the scale, proportion and detailing of the development	<ul style="list-style-type: none"> <li>No signage proposed.</li> </ul>
Legible and discrete way finding should be provided for larger developments	
Signage is limited to being on and below awnings and a single facade sign on the primary street frontage	

**4U Energy Efficiency****Objective 4U-1**

Development incorporates passive environmental design

Design Guidance	Response
Adequate natural light is provided to habitable rooms (see 4A Solar and daylight access)	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
Well located, screened outdoor areas should be provided for clothes drying	<ul style="list-style-type: none"> <li>Noted</li> </ul>

**4U Energy Efficiency****Objective 4U-2**

Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer

Design Guidance	Response
<p>A number of the following design solutions are used:</p> <ul style="list-style-type: none"> <li>The use of smart glass or other technologies on north and west elevations</li> <li>Thermal mass in the floors and walls of north facing rooms is maximised</li> </ul>	<ul style="list-style-type: none"> <li>Noted. Refer to design statement</li> </ul>

4U Energy Efficiency	
<ul style="list-style-type: none"> <li>Polished concrete floors, tiles or timber rather than carpet</li> <li>Insulated roofs, walls and floors and seals on window and door openings</li> <li>Overhangs and shading devices such as awnings, blinds and screens</li> </ul>	
Provision of consolidated heating and cooling infrastructure should be located in a centralised location(e.g. the basement)	<ul style="list-style-type: none"> <li>Basement plant room provided.</li> </ul>
<b>Objective 4U-3</b>  Adequate natural ventilation minimises the need for mechanical ventilation	
Design Guidance	Response
A number of the following design solutions are used: <ul style="list-style-type: none"> <li>Rooms with similar usage are grouped together</li> <li>Natural cross ventilation for apartments is optimised</li> <li>Natural ventilation is provided to all habitable rooms and as many non-habitable rooms, common areas and circulation spaces as possible</li> </ul>	<ul style="list-style-type: none"> <li>Noted and achieved. 100% of apartment naturally ventilated and 63% of apartments are natural cross ventilated.</li> </ul>

4V Water Management and Conservation	
<b>Objective 4V-1</b>  Portable water use is minimised	
Design Guidance	Response
Water efficient fittings, appliances and wastewater reuse should be incorporated	<ul style="list-style-type: none"> <li>Refer to BASIX certificate</li> </ul>
Apartments should be individually metered	<ul style="list-style-type: none"> <li>As above</li> </ul>
Rainwater should be collected, stored and reused on site	<ul style="list-style-type: none"> <li>As above</li> </ul>
Drought tolerant, low water use plants should be used within landscaped areas	<ul style="list-style-type: none"> <li>As above</li> </ul>

4V Water Management and Conservation	
<b>Objective 4V-2</b>  Urban stormwater is treated on site before being discharged to receiving waters	
Design Guidance	Response
Water sensitive urban design systems are designed by a suitably qualified professional	<ul style="list-style-type: none"> <li>Refer to accompanying stormwater plans.</li> </ul>
A number of the following design solutions are used: <ul style="list-style-type: none"> <li>Runoff is collected from roofs and balconies in water tanks and plumbed into toilets, laundry and irrigation</li> <li>Porous and open paving materials is maximised</li> <li>On site stormwater and infiltration, including bio-retention systems such as rain gardens or street tree pits</li> </ul>	<ul style="list-style-type: none"> <li>As above</li> </ul>
<b>Objective 4V-3</b>  Flood management systems are integrated into site design	
Design Guidance	Response
Detention tanks should be located under paved areas, driveways or in basement car parks	<ul style="list-style-type: none"> <li>Refer to stormwater management plan. Satisfied.</li> </ul>
On large sites parks or open spaces are designed to provide temporary on site detention basins	<ul style="list-style-type: none"> <li>N/A</li> </ul>

4W Waste Management	
<b>Objective 4W-1</b>  Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents	
Design Guidance	Response
Adequately sized storage areas for rubbish bins should be located discreetly away from the front of the development or in the basement car park	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
Waste and recycling storage areas should be well ventilated	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>



4W Waste Management	
Circulation design allows bins to be easily manoeuvred between storage and collection points	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
Temporary storage should be provided for large bulk items such as mattresses	<ul style="list-style-type: none"> <li>Noted and provided.</li> </ul>
A waste management plan should be prepared	<ul style="list-style-type: none"> <li>Noted and provided.</li> </ul>
<b>Objective 4W-2</b> Domestic waste is minimised by providing safe and convenient source separation and recycling	
Design Guidance	Response
All dwellings should have a waste and recycling cupboard or temporary storage area of sufficient size to hold two days worth of waste and recycling	<ul style="list-style-type: none"> <li>Noted. Conditioned.</li> </ul>
Communal waste and recycling rooms are in convenient and accessible locations related to each vertical core	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
For mixed use developments, residential waste and recycling storage areas and access should be separate and secure from other uses	<ul style="list-style-type: none"> <li>Noted and achieved.</li> </ul>
Alternative waste disposal methods such as composting should be provided	<ul style="list-style-type: none"> <li>Noted. Matter for body corporate for above ground level apartments.</li> </ul>

4X Building Maintenance	
Objective 4X-1	
Building design detail provides protection from weathering	
Design Guidance	Response
<p>A number of the following design solutions are used:</p> <ul style="list-style-type: none"> <li>▪ Roof overhangs to protect walls</li> <li>▪ Hoods over windows and doors to protect openings</li> <li>▪ Detailing horizontal edges with drip lines to avoid staining of surfaces</li> <li>▪ Methods to eliminate or reduce planter box leaching</li> <li>▪ Appropriate design and material selection for hostile locations</li> </ul>	<ul style="list-style-type: none"> <li>▪ Noted and generally achieved.</li> </ul>
Objective 4X-2	
Systems and access enable ease of maintenance	
Design Guidance	Response
Window design enables cleaning from the inside of the building	<ul style="list-style-type: none"> <li>▪ Noted and achieved.</li> </ul>
Building maintenance systems should be incorporated and integrated into the design of the building form, roof and facade	<ul style="list-style-type: none"> <li>▪ Noted and achieved.</li> </ul>
Design solutions do not require external scaffolding for maintenance access	<ul style="list-style-type: none"> <li>▪ Noted and achieved.</li> </ul>
Manually operated systems such as blinds, sunshades and curtains are used in preference to mechanical systems	<ul style="list-style-type: none"> <li>▪ Noted and achieved.</li> </ul>
Centralised maintenance, services and storage should be provided for communal open space areas within the building	<ul style="list-style-type: none"> <li>▪ Noted and achieved.</li> </ul>

4X Building Maintenance	
Objective 4X-3	
Material selection reduces ongoing maintenance costs	
Design Guidance	Response
<p>A number of the following design solutions are used:</p> <ul style="list-style-type: none"> <li>▪ Sensors to control artificial lighting in common circulation and spaces</li> <li>▪ Natural materials that weather well and improve with time such as face brickwork</li> <li>▪ Easily cleaned surfaces that are graffiti resistant</li> <li>▪ Robust and durable materials and finishes are used in locations which receive heavy wear and tear, such as common circulation areas and lift interiors</li> </ul>	<ul style="list-style-type: none"> <li>▪ Noted and adopted. Refer to schedule of materials and finishes.</li> </ul>