D11 Penrith

Contents

Part A – Penrith City Centre 5

1. Preliminary 5

1.1 Area included within the Penrith City Centre 5

1.2 Aims and objectives within the Penrith city centre 6

1.3 Penrith city centre precincts and character areas 6

2. Building form 12

2.1 Introduction 12

2.2 Building to street alignment and street setbacks 13

2.3 Street frontage heights 16

2.4 Building depth and bulk 21

2.5 Boundary setbacks and building separation 23

2.6 Mixed use buildings 28

2.7 Site cover and deep soil zones 30

2.8 Landscape design 31

2.9 Planting on structures 33

3. Pedestrian amenity 35

3.1 Permeability 35

3.2 Active street frontages and address 39

3.3 Awnings 40

3.4 Vehicle footpath crossings 43

3.5 Pedestrian access and mobility 47

3.6 Building exteriors 48
4. Access, parking and servicing 49
4.1 Pedestrian access and mobility 50
4.2 On-site parking options 51
4.3 Site facilities and services 53
5. Sustainable development 56
5.1 Reflectivity 56
5.2 Maximising liveability and longevity 56
5.3 Reduce resource consumption 57
6. Controls for residential development 58
6.1 Housing choice and mix 59
7. Controls for special areas 61
7.1 Precinct controls 61
Part B – North Penrith 69
8. Preliminary 69
8.1 Purpose of this section 69
8.2 Land to which this section applies 69
8.3 Relationship with other planning documents 70
9. Concept plan 70
9.1 Vision 70
9.2 Outcomes 72
10. Residential development 74
10.1 Housing density and diversity 74
10.2 Subdivision 75
10.3 Building envelopes 77
10.4 Building design and articulation 83
10.5 Private open space and landscaping 84
10.6 Fencing 86

10.7 Garages, site access and parking 87
10.8 Visual and acoustic amenity 90
10.9 Specific provisions – key sites 92
10.10 Specific provisions – residential flat buildings 94
10.11 Specific provisions – ancillary dwellings 98
11. The village centre 100
11.1 Built form controls 100
11.2 Access, parking and servicing 108
12. Thornton hall 111
12.1 Built form controls 111
13. Industrial Development 114
13.1 Built form controls 114
Appendix A – Example of building envelope plan 116
Appendix B – Residential design palette 117
Part C – 164 Station Street, Penrith 118
14. Site analysis and local context 118
14.1 Land and purpose to which this section applies 118
14.2 Site vision 118
14.3 Site objectives 118
14.4 Local context 119
15. Structure plan 120
15.1 Urban structure 120
15.2 Landscape structure 122
15.3 Character areas and urban precincts 128
15.3.1 Key urban building form 129
15.3.2 Urban Precinct: Station Street and Entry Boulevarde 130
15.3.3 Urban precinct: Jamison Road 131
15.3.4 Urban Precinct: Woodriff and Park Edge 132

15.4 Dwelling density....133
15.5 Indicative development staging....134
16. The public domain....135
16.1 Street network and design....135
16.2 Pedestrian and cyclist networks....135
16.3 Public open space and landscape network....136
16.4 Above ground basements....138
17. Residential development....138
17.1 Key design principles....138
17.2 Building height, massing and siting....139
17.3 Building setbacks....141
17.4 Private open space....142
17.5 Mixed use buildings....143
17.6 Housing diversity....145
18. Environmental and residential amenity....145
18.1 Visual privacy and acoustic amenity....145
18.2 View corridors....146
19. Access, parking and servicing....147
19.1 Vehicle access....147
19.2 Pedestrian access and mobility....147
19.3 On-street parking options....148
19.4 Parking requirements for residential apartments....149
19.5 Service roads and emergency vehicles....149

Part A – Penrith City Centre

1. Preliminary

1.1 Area included within the Penrith City Centre

This Section applies to development on land covered by the Penrith City Centre as shown in Figure 1. This part of the Section provides specific controls for the Penrith City Centre in addition to the general controls elsewhere in Penrith DCP.

Figure 1: Penrith city centre



FIGURE 1.1: DCP AREA

Area covered by Penrith City Centre

1.2 Aims and objectives within the Penrith city centre

The aim of this Section is to provide more detailed provisions for development in the Penrith Centre that will:

a) Contribute to the growth and character of Penrith

b) Deliver a balanced social, economic and environmental outcome.

c) Protect and enhance the public domain.

The general objectives of this Section are:

d) To facilitate the revitalisation of Penrith City Centre by promoting redevelopment and urban sustainability

e) To promote high quality urban design and environmental sustainability in the planning, development and management of the City Centre

f) To provide for mixed use, commercial and residential development within the Town Centre which provides high levels of amenity for occupants

g) To provide high levels of accessibility within the City Centre, connecting significant activity nodes, public open space and surrounding residential areas

h) To encourage development within Penrith City Centre that gives primacy to the public domain and creates an attractive and vibrant centre

i) To encourage integration of the residential and non-residential land uses and improved access to transport facilities

j) To achieve an attractive and sustainable Penrith City Centre

k) To ensure that development in the Penrith City Centre is consistent with the desired future character of each precinct as described in the following section.

1.3 Penrith city centre precincts and character areas

The Penrith City Centre developed along a section of The Great Western Highway that was also the transport stop on The Great Western Rail Line. Its reliance on transport links for its development is evident in its elongated, east-west pattern. The City Centre has a distinctive heart in High Street.

There are eight precincts in the Penrith City Centre, all comprising their own distinct characteristics and is illustrated in Figure 2. The intended character of these precincts is identified below and will be used to inform and guide future development.

Figure 2: Penrith city centre character areas

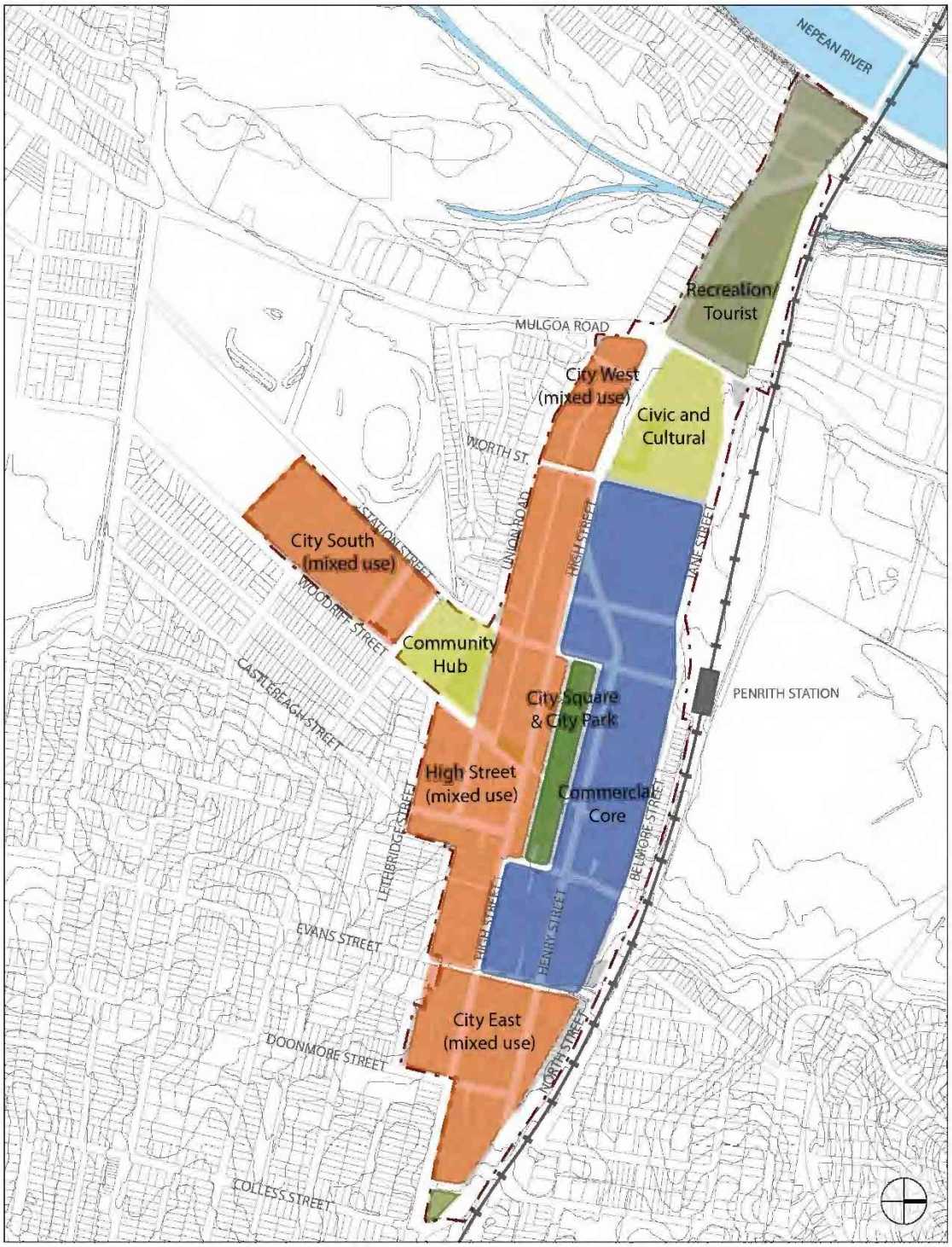


FIGURE 1.2: PENRITH CITY CENTRE CHARACTER AREAS

Area covered by this plan

High Street Mixed Use

High Street is the historic heart of Penrith and is the focus of the City Centre activities with its central spine of 2.5km that is segmented into sub-precincts. The street has many low-rise, small scale retail shops, and a concentration of civic and cultural functions.

High Street is a focus of pedestrian activities with its wider, covered footpath areas which already encourage alfresco dining. The street will continue to be the hub for pedestrian street life in the City Centre, accompanied by central city 'greening'. Mixed use developments will encourage a diversity of uses locating in the centre to further activate the street, whilst the residential development aligning the southern edge of the street will engage pedestrian activities into the city centre.

Views of the Blue Mountains escarpment are available along sections of High Street, particularly the eastern half of High Street up to mid-block past Station Street, and should be retained at street level.

This precinct offers the new City Park and City Square, which will be located in what is currently the Allen Place parking area. These public space areas are intended to be a series of linked areas, each expressing its own character to entice residents and workers to visit and enjoy these spaces. The City Park and City Square will be connected to High Street and surrounding streets via laneways and arcades.

The buildings surrounding City Park and City Square will need to have active street frontages and uses fronting these public spaces. Memory Park, located at the corner of High Street and Woodriff Street, is a significant public space in the City Centre that needs to be preserved. It is at this space where ANZAC Day remembrance ceremonies are celebrated.

The concentration of public spaces in this precinct means that development will need to address any potential impacts on these spaces as buildings get higher.

Tree-lined streets provide shade to pedestrians. Other public domain improvements are proposed in the precinct such as continuing the awnings along the street frontage, high quality paving, street furniture and pedestrian lighting.

Commercial Core

This area is the 'gateway' to Penrith on arrival by rail, and given this status, needs to be a focus for the highest quality developments.

The Commercial Core precinct is dominated by the Westfield Penrith (Penrith Plaza) shopping centre. The interface of the shopping centre with the city and the 'street life' activity along High and Station Streets needs to be strengthened.

The eastern side of Station Street contains a mixture of commercial uses with some fringe retail and car parking. Council has significant land assets in this area. The TAFE College brings student life and activity into the area, and its presence should be strengthened. The government office development consolidates State Government activities in one building, opposite the station. This area, close to the station, has the potential to significantly intensify as a location for high quality commercial development, supported by some ground level retail.

This precinct will form the northern boundary of the new City Square and City Park. Both public spaces will be located in what is currently the Allen Place parking area, and are intended to be a haven for workers and residents in the City Centre. It is envisaged that the City Square and City Park will become the focus of City activities.

City East / Mixed Use

This is the eastern gateway into the city centre area and should be enhanced.

The area east of Evans Street currently contains a mix of fringe retail and residential development. It can develop in the future as a mixed use precinct with a village character of its own, including mixed use buildings containing retail, commercial and residential uses and a small retail hub with emphasis on access and walkability. It is envisaged for this area to develop a live-work character.

High rise commercial development should be restricted in this area to minimise leakage from the Commercial Core area. Links through this area to Nepean Hospital need to be protected and strengthened.

City South / Mixed Use

This area comprises the single storey Nepean Village shopping centre, surrounded by a large surface car park. It enjoys street frontages aligning its eastern and western boundaries that provide very distinct characteristics either side. Immediately adjoining the southern boundary is a former industrial property that will be redeveloped into a high density residential precinct.

It is envisaged this area will redevelop into a mixed use precinct with its own identity with clear connections to and synergies with the adjoining high density residential precinct and act as the shopping and service hub for the surrounding and intensifying residential area. There needs to be further emphasis on the land uses and activities located at, as well as the design and utility of urban spaces at the common boundary with that precinct. Future development should reduce the impact of surface car parks on local streets.

Its redevelopment opportunities will need to consider the interface with different environments aligning its boundaries, being residential (to its east) and sporting facilities (in the west).

The precinct can be redeveloped as a mixed use precinct with its own identity through better connectivity to the city centre at the northern end.

City West (Mixed Use)

The precinct comprises the southern side of High Street, between Worth Street and the intersection to Mulgoa Road. This area is presently underdeveloped, with a number of apartment buildings having been approved or under construction immediately behind High Street.

This area should be redeveloped, primarily as a high density residential precinct that will complement and bring additional activity to the adjoining civic and cultural precinct. It is envisaged that this area develop a live-work environment, which is promoted through the design and layout of residential buildings, and the location of compatible commercial and retail uses at the street level of such buildings.

This precinct currently enjoys unobstructed views of the Blue Mountains escarpment. It is acknowledged that redevelopment will result in loss of such views however, where view corridors can be reasonably maintained from High Street, then the views should be retained.

There is an opportunity to locate an urban space in this precinct that affords an "eat street" environment with connection to the adjoining civic and cultural precinct.

Civic and Cultural Precinct

Penrith's Civic Centre, comprising the council's offices and library, as well as the Joan Sutherland Performing Arts Centre comprise the civic and cultural precinct. It is located at the north-eastern corner of the High Street and Mulgoa Road intersection, enjoying unobstructed views of the Blue Mountains escarpment.

The precinct contains green public spaces which can be redeveloped to enliven this precinct, making it attractive and vibrant after hours.

Community Hub

A number of community facilities are already sited in the city centre and there is an opportunity to amalgamate these facilities in a central precinct at the heart of the city centre, between Station Street and Woodriff Street. There is opportunity to enhance the existing public space with landscaped and shaded spaces for community groups to meet and gather.

Its central location is ideal in ensuring that the precinct is easily accessible from adjoining residential areas, and greatly enhances the precinct's focus for community functions.

Recreation / Tourist

The precinct between the Nepean River and the Commercial Core is critical to creating Penrith as a true river city. The sports facilities at Woodriff Gardens and the rowing club along the river provide recreation opportunities for the local residents and workers. The area has low scale development, with some tourist facilities already located along the river (such as a hotel and function centre).

Creating a recreational link between the city centre and the river is a priority in this area. The landscape extension of High Street to the riverfront will be the priority to reconnect the city with the river and to create attractive and legible pedestrian links.

There is a potential to improve pedestrian and cycle connections across the river in this area. Opportunities for outdoor restaurants and cafes along the river should be examined, with the riverfront being landscaped as links to the

Great River Walk are established, and improved pedestrian/ cycle paths provide 'bridge to bridge' recreational opportunities.

2. Building form

2.1 Introduction

Building form and character refers to the individual elements of building design that collectively contribute to the character and appearance of the built environment.

The development provisions in this Section of the DCP are intended to encourage high quality design for buildings in the Penrith City Centre, balancing the character of Penrith with innovation and creativity. The resulting built form and character of development should contribute to an attractive public domain in central Penrith and produce a desirable setting for its intended uses.

The controls in this section aim to:

a) Establish the scale, dimensions, form and separation of buildings appropriate for the setting in the city centre.

b) Achieve an attractive and sustainable Penrith city form within the City Centre context.

c) Provide a strong definition of the public domain. Achieve active street frontages with good physical and visual connections between buildings and the street.

d) Ensure there is consistency in the main street frontages of buildings having a common alignment to improve accessibility.

e) Provide for pedestrian comfort and protection from weather conditions.

f) Define the public street to provide spaces that are clear in terms of public accessibility and safety, and are easy to maintain. Ensure building depth and bulk is appropriate to the environmental setting and landform by providing for view sharing and good internal building amenity.

g) Ensure building separation is adequate to protect amenity, daylight penetration and privacy between adjoining developments.

h) Encourage mixed use development with residential components that achieve active street fronts and maintain good residential amenity.

i) Achieve an articulation and finish of building exteriors that contribute to a high quality of design excellence.

j) Provide for high quality landscape to contribute to the amenity of the City Centre and a sustainable urban environment.

k) Maintain and enhance important views from the City Centre to surrounding natural landscape features.

l) Contribute to the legibility of the City.

m) Ensure that buildings are responsive to the character and heritage values of the Penrith City Centre.

2.2 Building to street alignment and street setbacks

Background

Street setbacks and building alignments establish the front building line. They help to create the proportions of the street and can contribute to the public domain by enhancing streetscape character and continuity of street facades.

Street setbacks can also be used to enhance the setting and address for the building. They provide for landscape areas, entries to ground floor apartments and deep soil zones.

Buildings should be built up to the street alignment to reinforce the urban character and improve pedestrian accessibility, amenity and activity at street level. Above street frontage height, buildings are to be set back to provide sunlight access to streets, pedestrian areas and lower levels of other buildings. These setbacks offer comfortable wind conditions, view corridors, an appropriate building scale for pedestrians, and good growing conditions for street trees.

Towards the edges of the city centre, buildings are setback to provide amenity in predominantly residential areas, including entries to ground floor apartments, landscaping and deep soil zones.

Objectives

a) To establish consistent building alignments to the street.

b) To provide street setbacks appropriate to building function and character.

c) To establish the desired spatial proportions of the street and define the street edge.

d) To create a transition between public and private space.

e) To locate active uses, such as shopfronts, closer to pedestrian activity areas.

f) To allow for street landscape character, where appropriate.

g) To maintain sun access to the public domain.

h) To protect important views to the Blue Mountains escarpment.

Controls

1. Street building alignment and street setbacks are specified in Figure 3.

2. Balconies may project up to 600mm into front building setbacks, provided the cumulative width of all balconies at that particular level totals no more than 50% of the horizontal width of the building façade, measured at that level.

3. Minor projections into front building lines and setbacks for sun shading devices, entry awnings and cornices are permissible.

4. Notwithstanding the setback controls, where development must be built to the street alignment (as identified in Figure 3) it must also be built to the side boundaries (0m setback) where fronting the street. The minimum height of development built to the side boundary must comply with the minimum street frontage height requirement.

5. Buildings along High Street must demonstrate that views to the Blue Mountains escarpment are maintained through the provision of perspectives.

Figure 3: Front setbacks

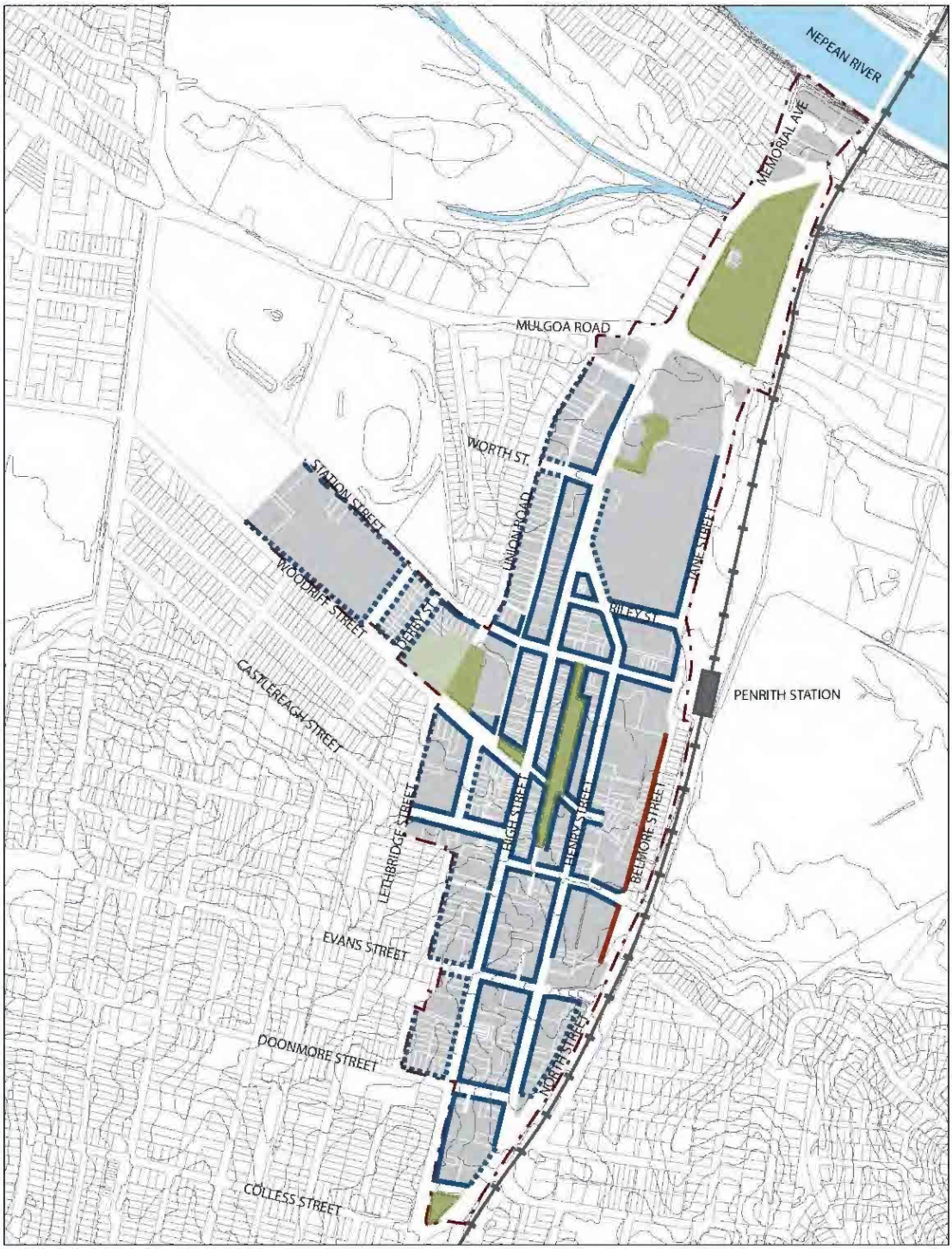


FIGURE 2.1: FRONT SETBACKS

- Built to street alignment
- 2.0 - 3.0 m average front setback
- 5.0 m minimum front setback
- 12.0 m minimum setback
- DCP Area

2.3 Street frontage heights

Background

Well framed streets are an important characteristic of a City Centre. It is important that buildings within Penrith City Centre contribute to a strong definition of the street and public domain and reflect the City's status as a Regional City, and the function and character of different parts of the City.

The desired street frontage heights are specified in this section to ensure a sense of street enclosure that is appropriate to Penrith's natural setting and status as a regional city.

Street frontage heights refer to the height of the building at the street alignment and directly address the public street. Street sections specify required street frontage height and setbacks for development above street frontage height.

Objectives

a) To provide consistent streetscapes through control of the built form visible from the public domain.

b) To achieve comfortable street environments for pedestrians in terms of daylight, scale, sense of enclosure and wind mitigation as well as healthy environments for street trees.

c) To allow sunlight access to new and existing significant public spaces in the city centre.

d) To provide for an appropriate transition in building heights from key public spaces.

e) To provide well sealed enclosure to the significant public spaces.

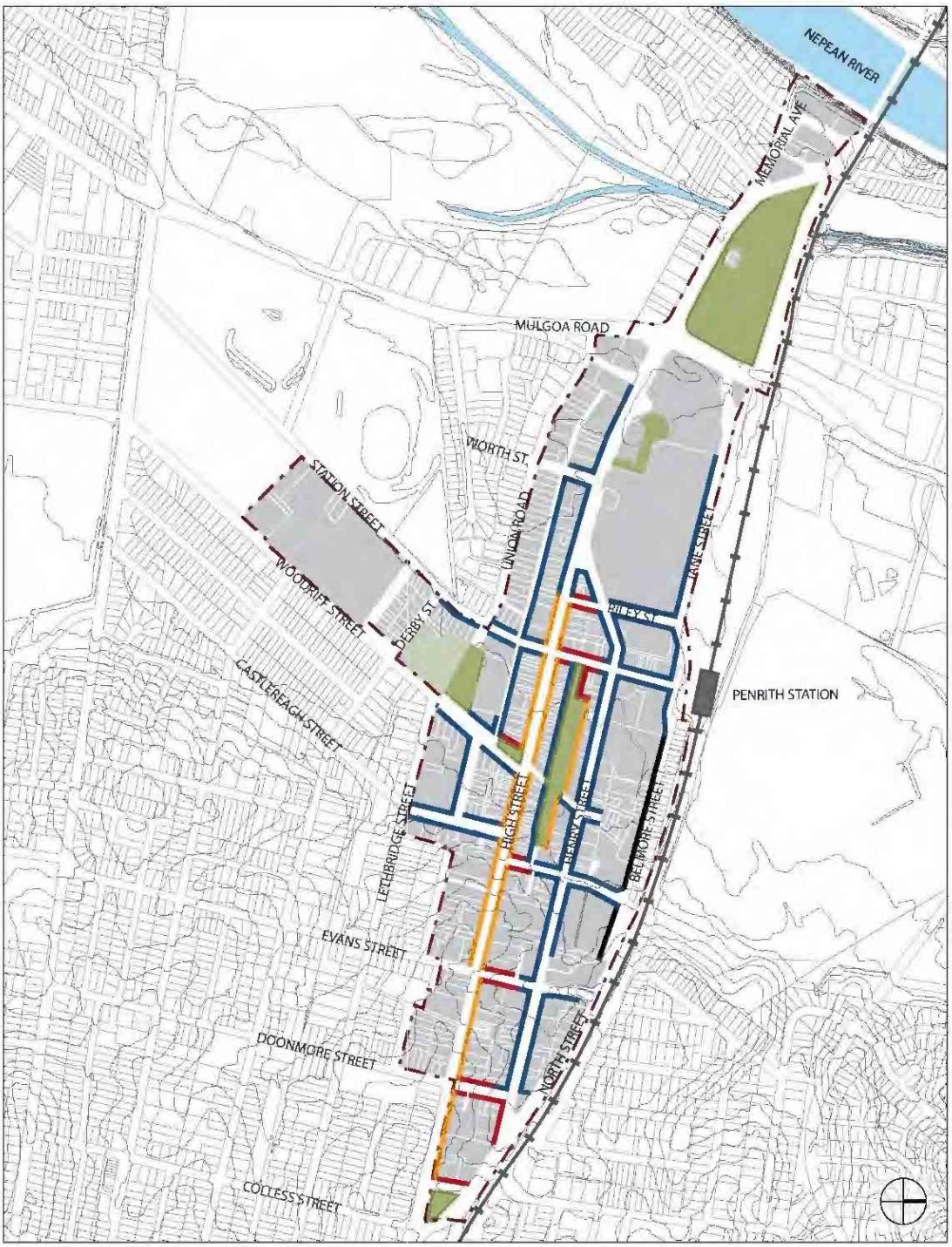
f) To protect important views to the Blue Mountains escarpment.

Controls

1. Buildings must comply with the relevant street frontage heights as shown in Figure 4 and illustrated in Figure 5 to Figure 10.

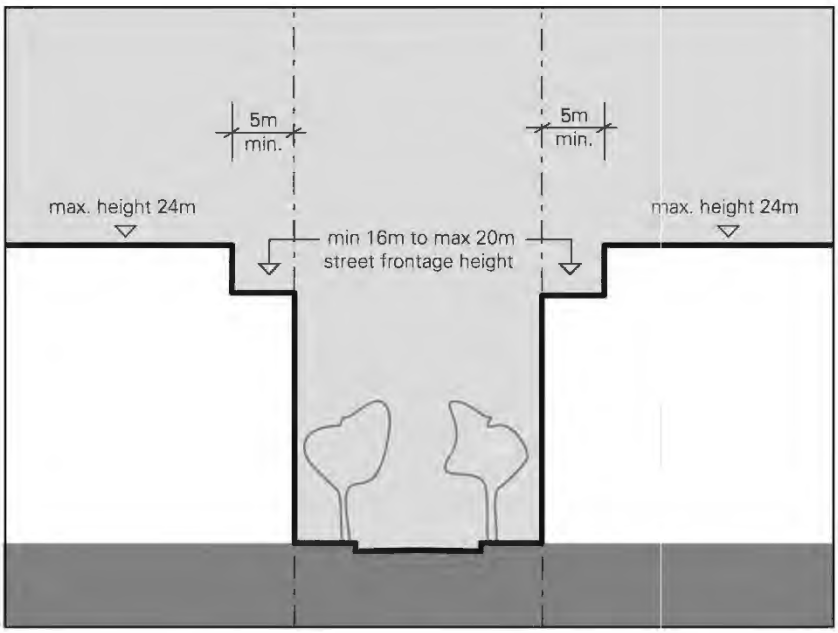
2. Development of land in the vicinity of Allen Place, Memory Park and Judges Park the development must demonstrate that it does not adversely overshadow the adjoining public places.

Figure 4: Street frontage heights



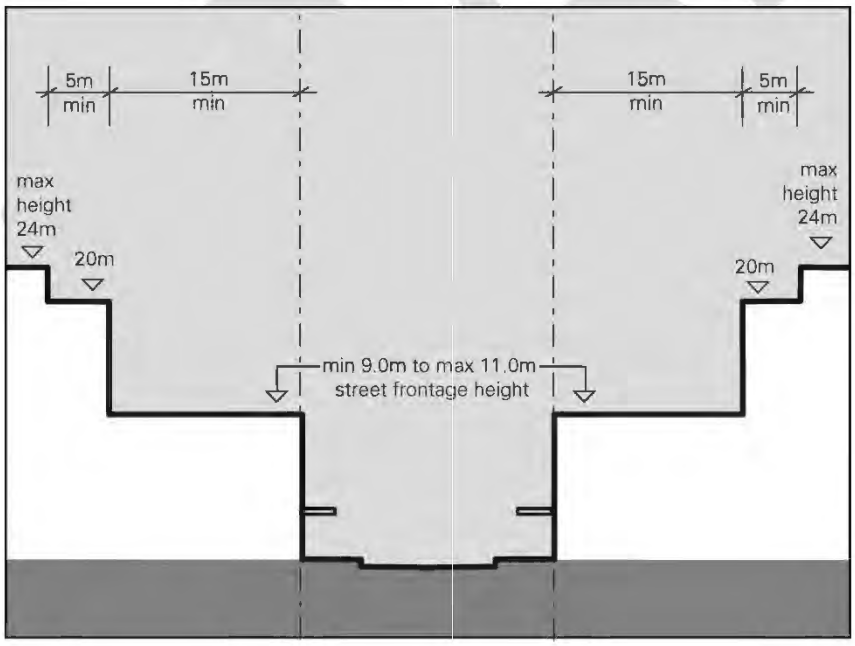
Street frontage height A applies - refer to figure E11.5
Street frontage height B applies - refer to figure E11.6
Street frontage height C applies - refer to figure E11.7
Street section D applies - refer to figure E11.8
Special section through Allen Place - refer to figure E11.9
Front setback applies as specific in figure E11.3
DCP Area

Figure 5: Street Frontage Height Type A



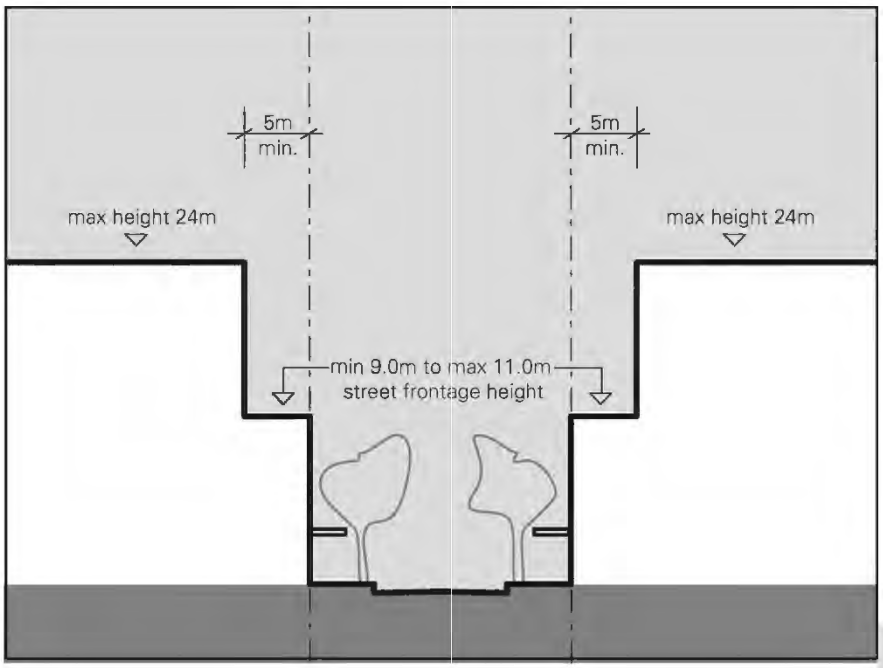
STREET FRONTAGE HEIGHT TYPE A

Figure 6: Street Frontage Height Type B



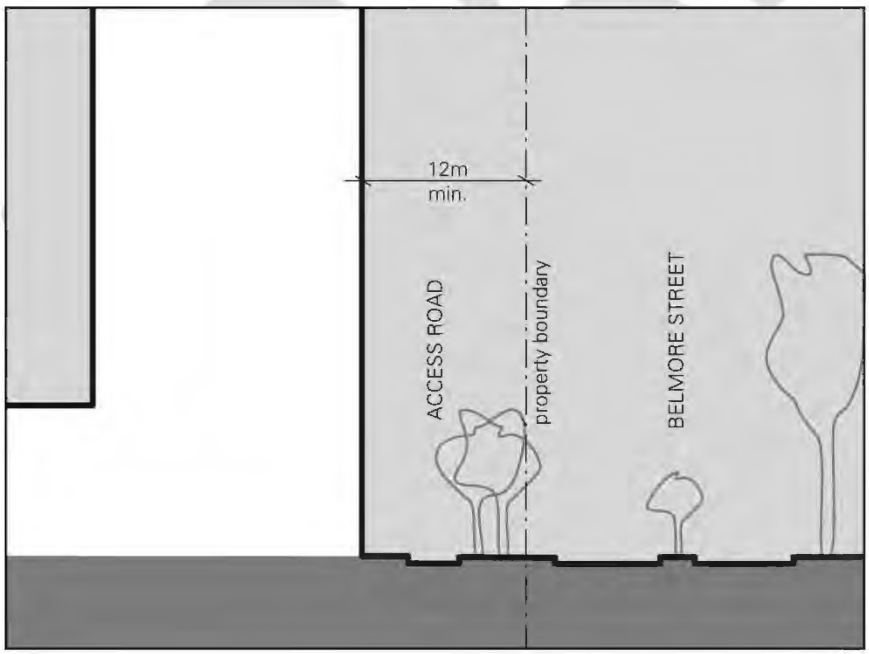
STREET FRONTAGE HEIGHT TYPE B

Figure 7: Street Frontage Height Type C



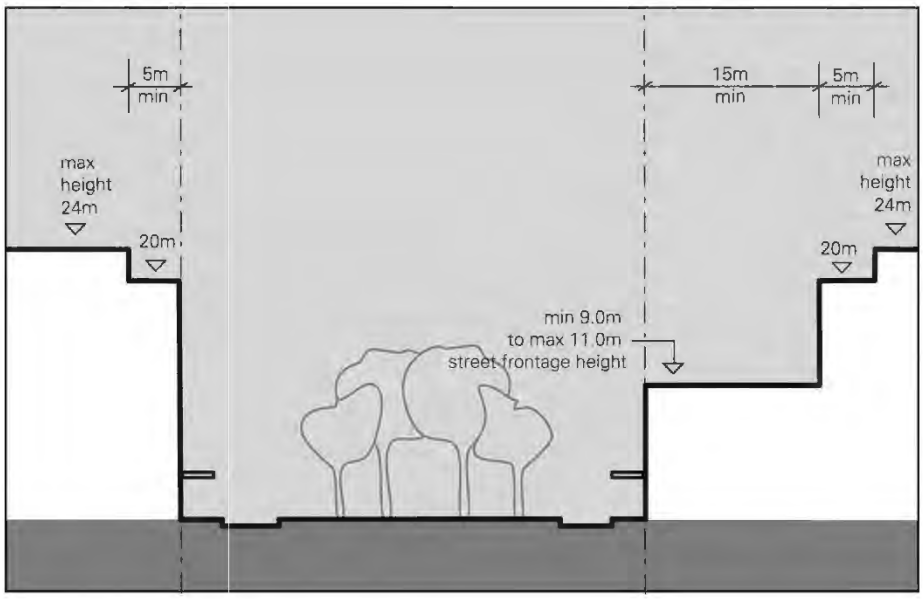
STREET FRONTAGE HEIGHT TYPE C

Figure 8: Street Frontage Height Type D



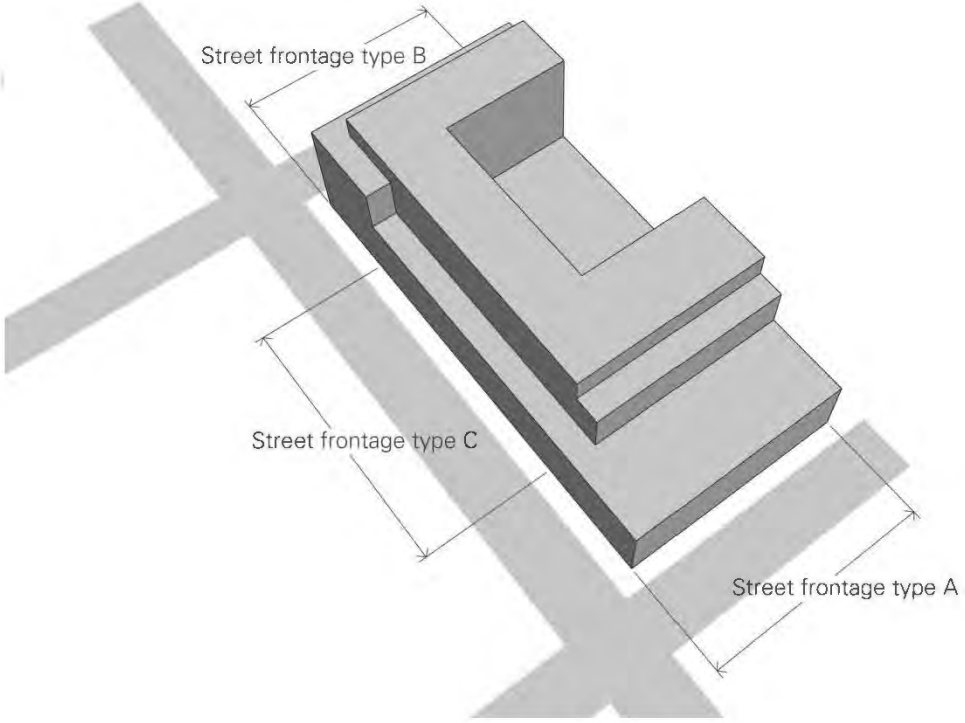
STREET SECTION TYPE D

Figure 9: Section through Allen Place (looking west)



SECTION THROUGH ALLEN PLACE
(looking west)

Figure 10: Example of possible transition between lower street frontage (Type A) to higher street frontage height (Type B) with the use of street frontage Type C



2.4 Building depth and bulk

Background

Controlling the size of upper level floor plates of taller buildings allows for good internal amenity, access to natural light and ventilation and reduces potential adverse effects that tall and bulky buildings may have on the public domain.

Building depth is related to building use. Typically, mixed use buildings have larger commercial floor plates combined with smaller residential floors.

Objectives

a) To promote the design and development of sustainable buildings.

b) To achieve the development of living and working environments with good internal amenity and minimise the need for artificial heating, cooling and lighting.

c) To provide viable and useable commercial floor space.

d) To achieve usable and pleasant streets and public domain at ground level. To achieve a city skyline sympathetic to the topography and context.

e) To allow for view sharing and view corridors.

f) To reduce the apparent bulk and scale of buildings by breaking up expanses of building wall with modulation of form.

Controls

1. The maximum floorplate sizes and depth of buildings are specified in the table below (also refer to Figure 11).

2. Notwithstanding the above, no building above 24m in height is to have a building length in excess of 50m.

3. All points of an office floor should be no more than 10m from a source of daylight (e.g. window, atria, or light wells) in buildings less than 24m in height, and no more than 12.5m from a window in buildings over 24m in height.

4. Use atria, light wells and courtyards to improve internal building amenity and achieve cross ventilation and/or stack effect ventilation. (Refer to Figure 12 and Figure 13)

The controls for building depth and height are outlined in Table 1.

Table 1: Controls for building depth and height

Land Use	Building Use	Condition	Maximum Floorplate	Maximum Building Depth (excludes balconies)
Commercial Core	All	Above 24m height	1,200m^2	25m
Mixed Use	Non-Residential	Above 20m height	900m^2	20m
All other zones	All	Above 12m height	750m^2	18m

Figure 11: In the Commercial Core, the floor plates of commercial buildings above 24m are limited to 1,200m2

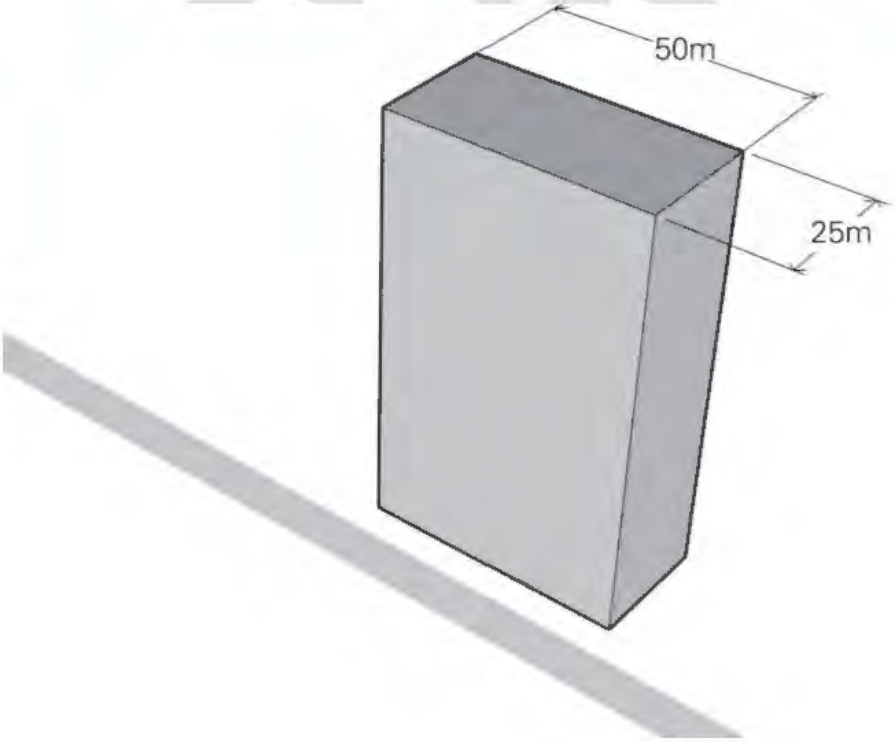


Figure 12: Atria type buildings allow good light penetration and ventilation, and can provide large flexible building floor plates

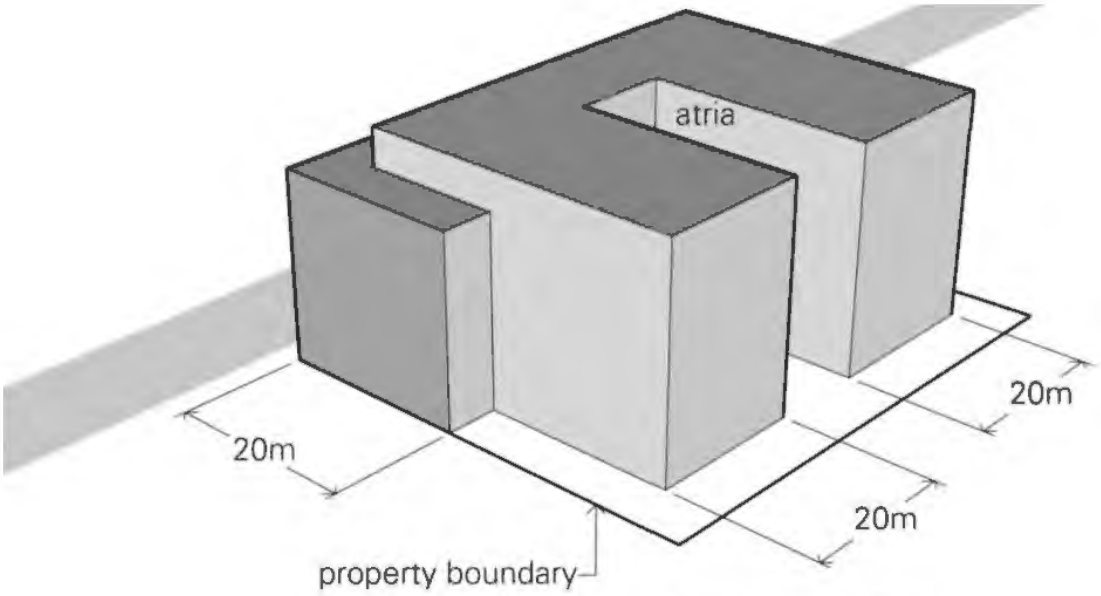
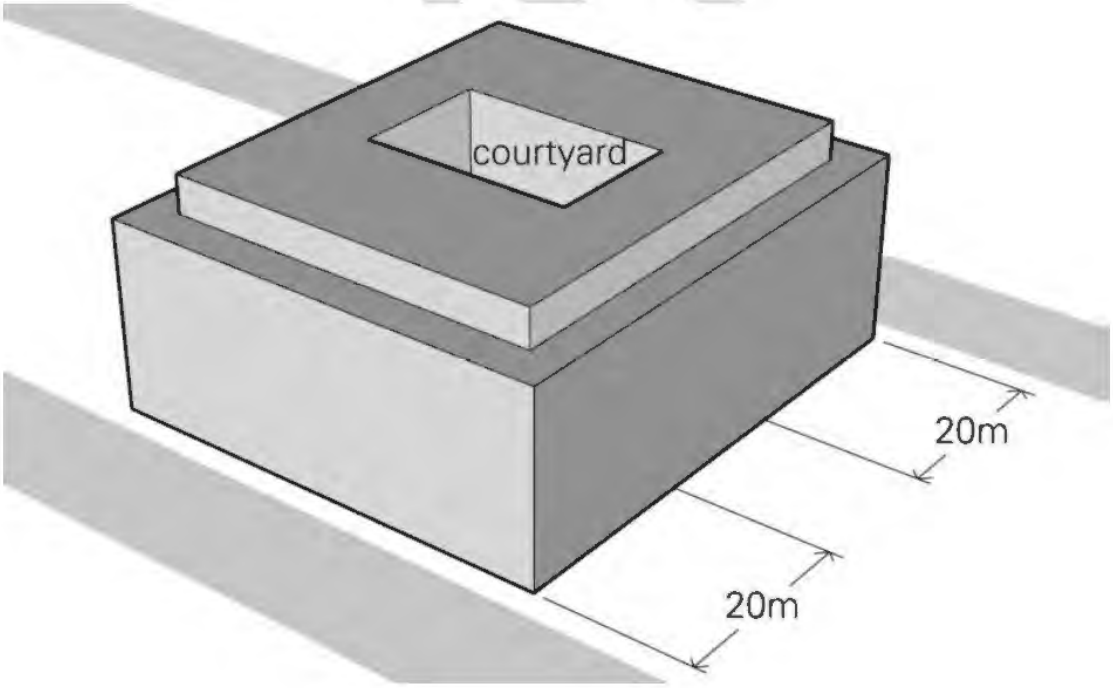


Figure 13: Courtyard type buildings allow good light penetration and well suited to sites with two street frontages



2.5 Boundary setbacks and building separation

Background

Setbacks allow ventilation, daylight access and view sharing and increase privacy. In residential buildings and serviced apartments, separation

between windows on side and rear facades and other buildings is particularly important for privacy, acoustic amenity and view sharing.

For commercial buildings, separation distances are smaller due to reduced requirement for visual and acoustic privacy.

Separation for mixed use buildings containing residential and commercial uses is to be in accordance with specified distances for each component use.

Objectives

a) To ensure an appropriate level of amenity for building occupants in terms of daylight access, outlook, view sharing, ventilation, wind mitigation, and privacy.

b) To achieve usable and pleasant streets and public domain areas in terms of wind mitigation and daylight access.

Controls

1. The minimum building setbacks from the side and rear property boundaries are specified in

2. Table 2 and illustrated in Figure 14 to Figure 16.

3. Notwithstanding the setback controls, where development must be built to the street alignment (as identified in Figure 3) it must also be built to the side boundaries (0m setback) in the vicinity of the street.

4. Where 0m side and rear boundary setbacks are permissible, and where it can be demonstrated that 0m setbacks cannot be achieved, Council may consider buildings that are setback from the boundary providing they are setback at least 5m to provide amenity in terms of day light access, useable outdoor space and landscaping. (Refer to Figure 14 or Figure 15)

5. If the specified setback distances cannot be achieved when an existing building is being refurbished or converted to another use, appropriate visual privacy levels are to be achieved through other means.

Table 2: Minimum side and rear setback distance from property boundary

Zone	Building Height and Use	Minimum Setback
Commercial Core	Up to a height of 20m	0m

Zone	Building Height and Use	Minimum Setback
	Above 20m	5m
	Above 24m	12m
Mixed Use	**Non-Residential Uses**	
	Up to 20m	0m
	Above 20m	5m
	Above 24m	9m
	Residential uses up to 12m height:	
	Non-habitable rooms	3m
	Habitable rooms	6m
	Residential uses up to 24m height:	
	Non-habitable rooms	4.5m
	Habitable rooms	9m
	Residential uses above 24m height:	
	Non-habitable rooms	6m
	Habitable rooms	12m
All other zones	**Non-residential uses:**	
	Up to 12m	3m
	Above 12m	6m
	Residential uses up to 12m height:	
	Non-habitable rooms	3m
	Habitable rooms	6m
	Residential uses above 24m height:	
	Non-habitable rooms	6m
	Habitable rooms	12m

Figure 14: Minimum side and rear setbacks in the Commercial Core. Generally, prefer lower levels to be built to the boundary or set back at least 5m.

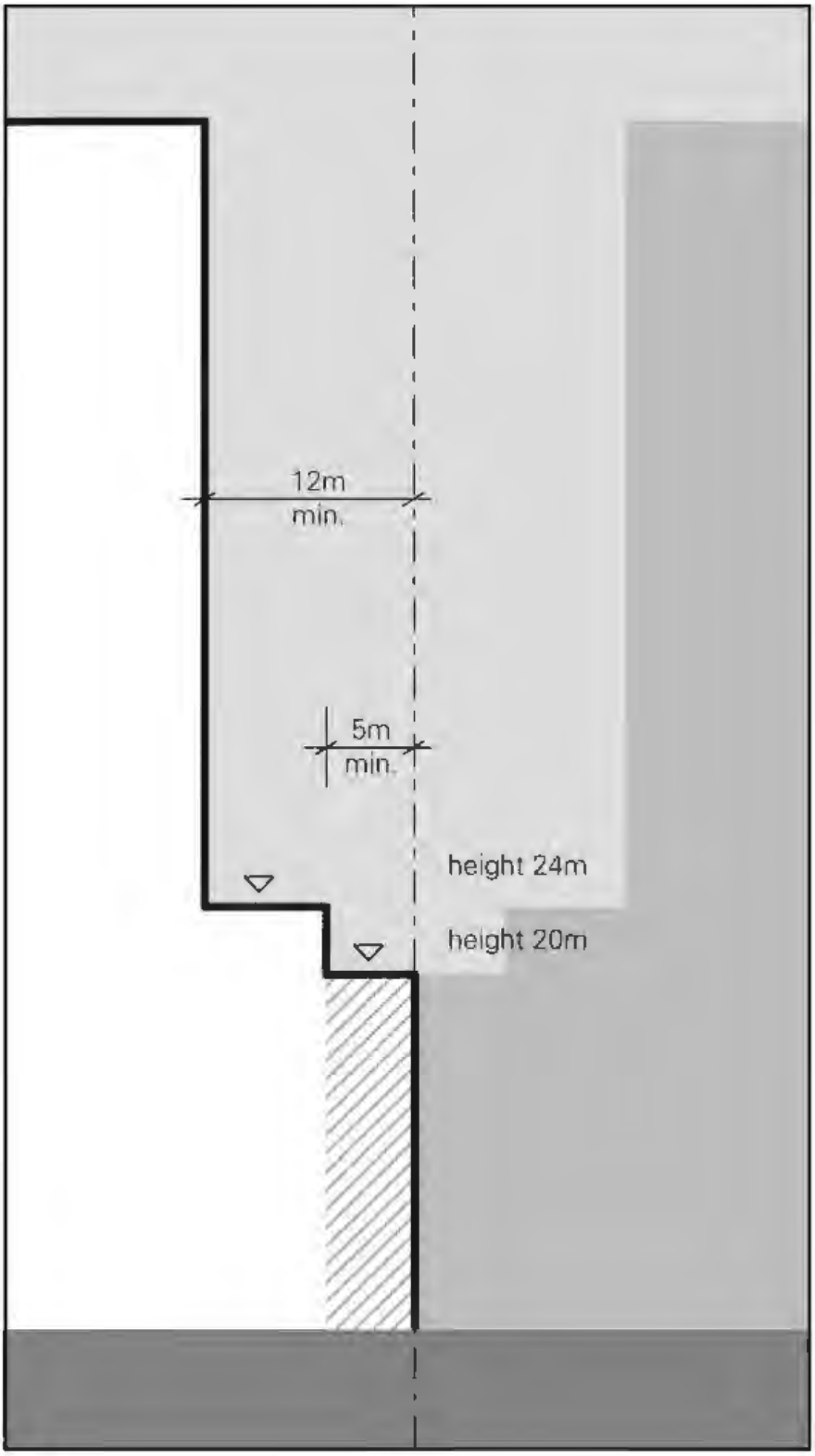


Figure 15: Minimum side and rear setbacks for non-residential development in the Mixed Use zone. Generally prefer lower levels to be built to be built to the boundary or set back at least 5m.

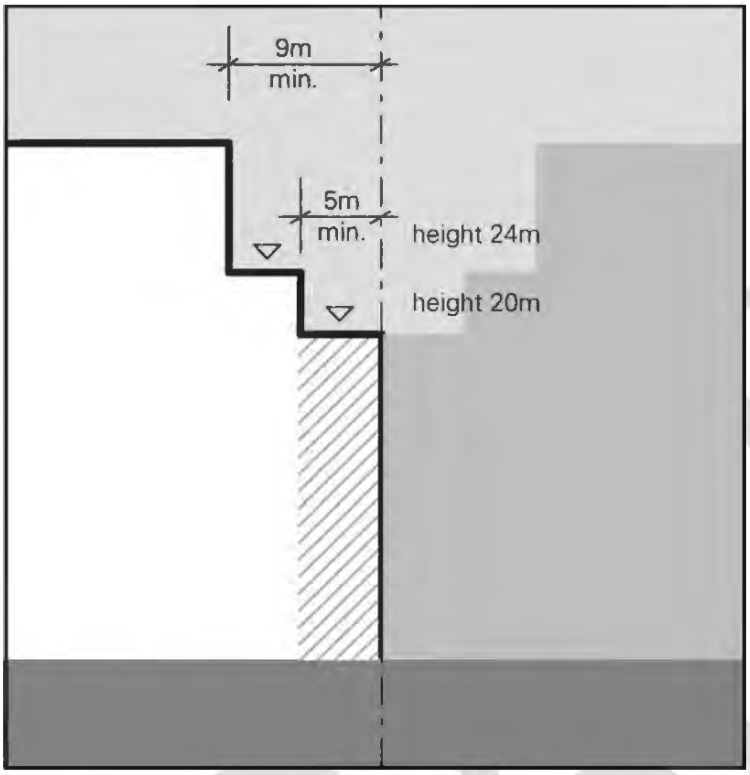
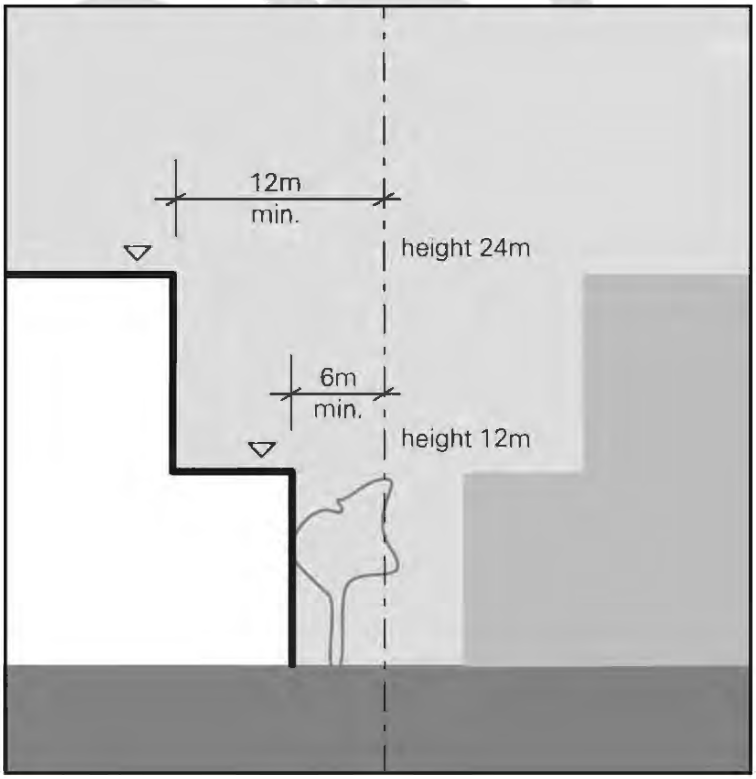


Figure 16: Minimum side and rear setbacks for habitable rooms of residential development in the Mixed Use zone.



2.6 Mixed use buildings

Background

Typically, different land uses and activities that are permitted in the same zone may be located in the same building and known as "mixed use developments".

Mixed-use developments provide a variety of uses and activities within city centres, encouraging use of the City outside the working day, adding vibrancy and life to the city streets. Different uses within the same building are best located to a pattern and layout suitable to the mix of uses, with retail and business activity at ground level to assist street activation, and residential uses, requiring privacy and noise mitigation, located above street level.

Mixed use development within the City Centre is supported in sustainable locations, close to transport nodes, city parks and recreational areas and along central pedestrian locations.

Objectives

a) To encourage a variety of mixed-use developments in the City Centre.

b) To create lively streets and public spaces in the City Centre.

c) To increase the diversity and range of shopping and recreational activities for workers, residents and visitors.

d) To enhance public safety by increasing activity in the public domain on week nights and on weekends.

e) To minimise potential conflicts and achieve compatibility between different uses.

f) To minimise conflicts between permitted land use and heritage buildings.

g) To ensure that the design of mixed-use buildings addresses residential amenity.

h) To create legible and safe access and circulation in mixed use buildings.

i) To ensure that mixed use buildings address the public domain and the street.

Controls

1. Provide flexible building layouts which allow greater adaptability of the floor area of, or tenancies on, the first floor of a building above the ground floor.

2. Ground floor of all mixed-use buildings is to have a minimum floor to ceiling height of 3.6m in order to provide for flexibility of future use. Above ground level, minimum floor to ceiling heights are 3.3m for commercial office, 3.6m for active public uses, such as retail and restaurants, and 2.7m for residential.

3. The commercial and residential activities of the building are to have separate service provision, such as loading docks, from residential access, servicing needs and primary outlook.

4. Locate clearly demarcated residential entries directly from the public street. Clearly separate and distinguish commercial and residential entries and vertical circulation.

5. Provide security access controls to all entrances into private areas, including car parks and internal courtyards.

6. Provide safe pedestrian routes through the site.

7. Front buildings onto major streets with active uses.

8. Avoid the use of blank building walls at the ground level.

Figure 17: Mixed Use buildings in High Street



DRAFT

2.7 Site cover and deep soil zones

Background

Limiting site cover provides separation between buildings. This space may be public (accessible and useable by the general public), communal (shared by all occupants of a development) or private (for the exclusive use of a single dwelling or tenancy). Limiting site cover improves amenity by providing daylight access, visual privacy and opportunities for recreation and social activities. Site coverage is greater closer to the city core where wall-to-wall development is allowable.

Deep soil zones are areas of natural ground retained within a development, uninhibited by artificial structures and with relatively natural soil profiles. Deep soil zones have important environmental benefits, including:

a) Promoting healthy growth of large trees with large canopies

b) Protecting existing mature trees

c) Allowing infiltration of rainwater to the water table and reduction of stormwater runoff.

Objectives

d) To provide an area on sites that enables soft landscaping and deep soil planting, permitting the retention and/or planting of trees that will grow to a large or medium size.

e) To limit building bulk on a site and improve the amenity of developments, allowing for good daylight access, ventilation, and improved visual privacy.

f) To provide passive and active recreational opportunities.

Controls

1. The maximum site cover and minimum deep soil area for development is specified in Table 3 below:

Table 3: Maximum site cover & minimum deep soil for development

Zone/Area	Maximum Site Cover	Minimum Deep Soil Area
Commercial Core	100%	0%
Mixed Use (Other)	100%	0%

Mixed Use (City East)	70%	10%
All Other Zones	70%	10%

2. Deep soil area is provided in one continuous block. In multiple deep soil areas are provided they must have a minimum dimension (in any direction) of 6m.

3. Where non-residential developments result in full site coverage and there is no capacity for water infiltration, the deep soil component must be provided on structure, in accordance with the provisions of Section 11.2.9 Planting on Structures. In such cases, compensatory stormwater management measures must be integrated within the development to minimise stormwater runoff.

4. Where deep soil zones are provided, they must accommodate existing mature trees as well as allowing for the planting of trees/ shrubs that will grow to be mature trees.

5. No structures, works or excavations that may restrict vegetation growth are permitted in this zone (including but not limited to car parking, hard paving, patios, decks and drying areas).

2.8 Landscape design

Background

Landscape design includes the planning, design, construction and maintenance of all utility, open space and garden areas. Good landscaping provides breathing space, passive and active recreational opportunities and enhances air quality in city centres. It is fundamental to the amenity and quality of outside space for residential flats and multi-dwelling housing.

Objectives

a) To ensure that the use of potable water for landscaping irrigation is minimised.

b) To ensure landscaping is integrated into the design of development.

c) To add value and quality of life for residents and occupants within a development in terms of privacy, outlook, views and recreational opportunities.

d) To improve stormwater quality and control run-off.

e) To improve the microclimate and solar performance within the development.

f) To improve urban air quality and contribute to biodiversity.

Figure 18: Communal public space with deep soil zone allows for tree planting and high quality landscape



Controls

1. Recycled water should be used to irrigate landscaped areas.
2. Commercial and retail developments are to incorporate planting into accessible outdoor spaces.
3. Remnant vegetation must be maintained throughout the site wherever practicable.
4. A long-term landscape concept plan must be provided for all landscaped areas including the deep soil landscape zone, in accordance with the Landscape Design Section of this DCP. The plan must outline how landscaped areas are to be maintained for the life of the development.

2.9 Planting on structures

Background

The following controls apply in the Commercial Core and Mixed Use zones for planting on roof tops or over car park structures, particular for communal open space required as a component of mixed use residential development, and in non-residential developments where the landscaping proposed is not on natural ground.

Constraints on the location of car parking structures due to water table conditions may mean that open spaces and courtyards might need to be provided over parking structures. The plants in these areas are grown in total containment with artificial soils, drainage and irrigation and are subject to a range of environmental stresses that affect their health, and ultimately their survival. Quality landscape design and open space amenity relies in part on the quality and health of plants.

Objectives

a) To contribute to the quality and amenity of open space on roof tops and internal courtyards.

b) To encourage the establishment and healthy growth of greening in urban areas.

c) To minimise the use of potable water for irrigating planting on structures.

Controls

1. Recycled water should be used to irrigate in areas with planting on structures.

2. Design for optimum conditions for plant growth by:

    i. Providing soil depth, soil volume and soil area appropriate to the size of the plants to be established.

    ii. Providing appropriate soil conditions and irrigation methods, and

    iii. Providing appropriate drainage.

3. Design planters to support the appropriate soil depth and plant selection by:

i. Ensuring planter proportions accommodate the largest volume of soil possible and soil depths to ensure tree growth, and

ii. Providing square or rectangular planting areas rather than narrow linear areas.

4. Increase minimum soil depths in accordance with:

   i. The mix of plants in a planter for example where trees are planted in association with shrubs, groundcovers and grass.

   ii. The level of landscape management, particularly the frequency of irrigation.

   iii. Anchorage requirements of large and medium trees.

   iv. Soil type and quality.

5. A long-term landscape concept plan is to be submitted with a development application. The plan is to be prepared in accordance with the requirements of the Landscape Design section within the Environmental Chapter of Penrith DCP. The plan must outline how the planting on structures are to be maintained for the life of the development.

Figure 19: Encourage high quality landscape on structures and internal communal courtyards



3. Pedestrian amenity

Background

The pedestrian amenity provisions are intended to achieve a high quality of urban design and pedestrian comfort in the public spaces of the City Centre. The pedestrian environment is to be characterised by excellence of design, high quality materials and a standard of finish appropriate to a regional city centre. The City's lanes, arcades and through site links should form an integrated pedestrian network providing choice of routes at ground level for pedestrians.

In addition to the objectives and controls outlined in the introduction of this Section, the objectives of this section aim to increase the vitality, safety, security and amenity of the public domain by:

- Encouraging future through site links at ground level.
- Ensuring active street frontages and positive building address to the street.
- Ensuring provision of awnings along the commercial core street frontages and other retail and tourist areas.
- Mitigating adverse impacts on the street arising from driveway access crossings, advertising signage and selection of building finishes and materials.
- Protecting significant views and vistas along streets.

3.1 Permeability

Background

Site links provide access connections between long sides of street blocks for pedestrian and vehicular access at street level. These links provide an important permeability function in the form of lanes, shared zones, arcades and pedestrian ways.

Objectives

a) To improve access in the city centre by providing through site links as redevelopment occurs.

b) To retain and enhance existing through site links as redevelopment occurs.

c) To encourage active streets fronts along the length of through site links where possible.

d) To provide for pedestrian amenity and safety.

e) To encourage removal of vehicular entries from primary street frontages.

f) To retain and develop lanes as useful and interesting pedestrian connections as well as for service access.

g) To improve the permeability of large sites when they are redeveloped for more intensive uses.

Controls

1. Through site links are to be provided as shown in Figure 20.

2. Existing dead end lanes are to be extended through to the next street as redevelopment occurs.

3. New through site links should be connected with existing and proposed through block lanes, shared zones, arcades and pedestrian ways and opposite other through site links.

4. Existing publicly and privately owned links are to be retained.

5. The redevelopment of sites with an extra area of 5 hectares or more are to include new streets, lanes and/or site links to ensure permeability and encourage public access throughout the site.

6. Signage is to be located at street entries indicating public access through the site as well as the street to which the link connects.

<u>Pedestrian links</u>

7. Through site links for pedestrians are to be provided as shown in Figure 20 with accessible paths of travel that are:

    i. A minimum width of 4m for its full length and clear of all obstructions including columns, stairs, etc.

    ii. Direct and publicly accessible thoroughfares for pedestrians; and

iii. Open-air for its full length and have active frontages or a street address.

8. Arcades are to:

i. Have a minimum width of 4m for its full length and clear of all obstructions including columns, stairs, etc.

ii. Direct and publicly accessible for pedestrians during business trading hours.

iii. Be designed as an accessible path of travel for persons with a disability and incorporate the 'safer by design' principles.

iv. Have active frontages on either side for its full length.

v. Where practical, have access to natural light for at least 30% of its length.

vi. Where enclosed, have clear glazed entry doors to at least 50% of the entrance.

Lanes

9. Lanes are to be designated pedestrian routes that are:

i. Accessible paths of travel, with a minimum width of 6m for its full length clear of all obstructions

ii. Designed, paved and lit in accordance with the lighting provisions of this Plan and any technical documents applying to the city centre. The Penrith City Centre Public Domain Masterplan should be referred to for further design details.

iii. Appropriately signposted indicating the street(s) to which the lane connects.

Figure 20: Existing and desired Links

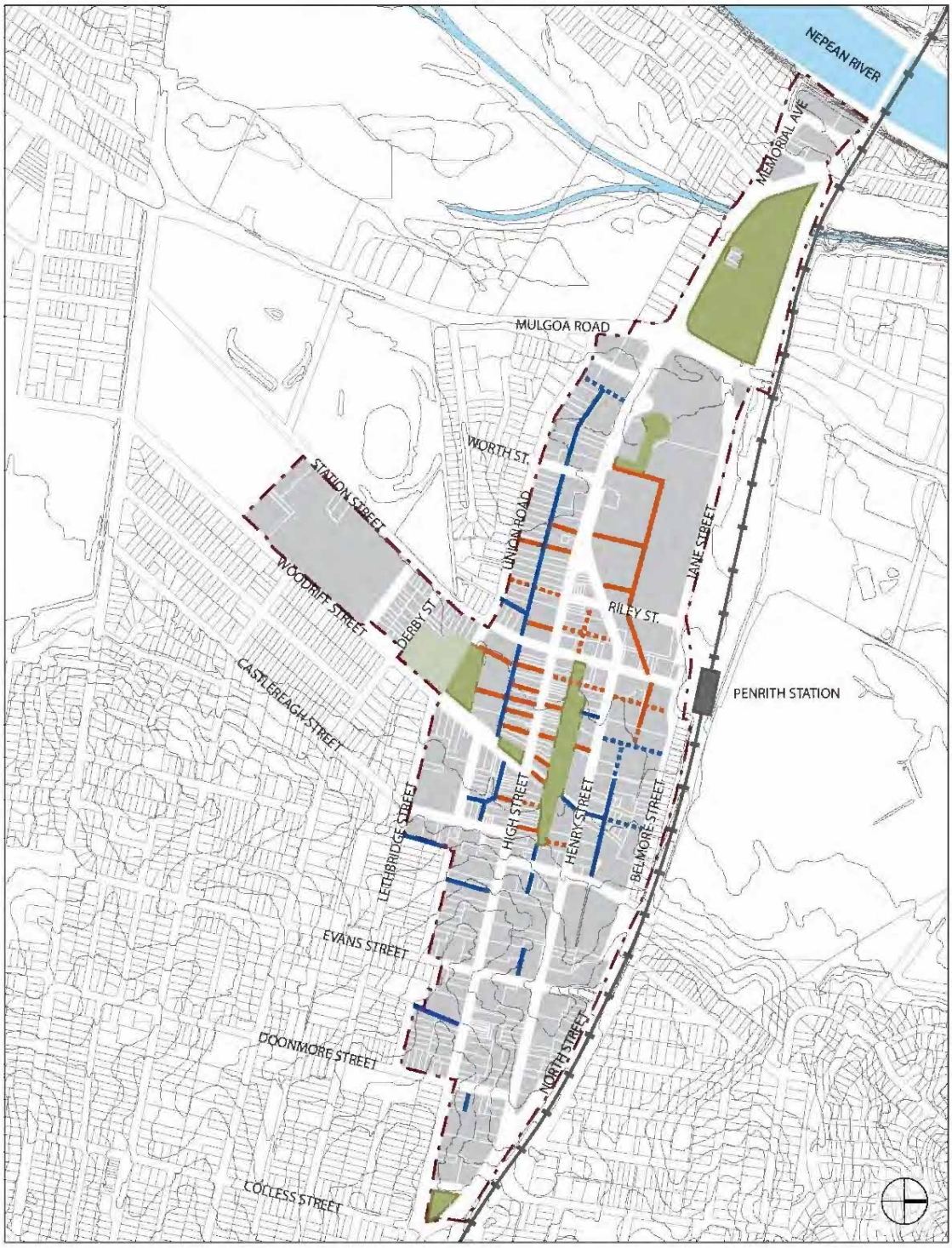


FIGURE 3.1: EXISTING AND DESIRED LINKS

- Existing lanes to be retained
- Desired new lanes
- Existing pedestrian links to be retained
- Desired new pedestrian links
- DCP Area

3.2 Active street frontages and address

Background

Active street frontages promote an interesting and safe pedestrian environment. Busy pedestrian areas and non-residential uses such as shops, studios, offices, cafes, recreation and promenade opportunities promote the most active street fronts. Residential buildings contribute positively to the street by providing a clear street address, direct access from the street and direct outlook over the street.

Objectives

a) To promote pedestrian activity and safety in the public domain.

b) To maximise active street fronts in Penrith City Centre.

c) To define areas where active streets are required or are desirable.

d) To encourage an address to the street outside of areas where active street frontages are required.

Controls

Active Street Frontages

1. Active frontage uses are defined as one or a combination of the following at street level:
    i. Entrance to retail.
    ii. Shop front.
    iii. Glazed entries to commercial and residential lobbies occupying less than 50% of the street frontage, to a maximum of 12m frontage.
    iv. Café or restaurant if accompanied by an entry from the street.
    v. Active office uses, such as reception, if visible from the street.
    vi. Public building if accompanied by an entry.
2. Active street fronts are to be located at the ground level of all buildings located in those areas as shown in the Active Street Frontages map of Penrith LEP 2010.

3. Ground floor active street frontage uses are to be at the same level as the adjoining footpath and must be directly accessible from the street.

4. Restaurants, cafes and the like are to consider providing openable shop fronts.

5. Only open grill or transparent security shutters are permitted to retail frontages.

Street Address

6. Street address is defined as entries, lobbies, and habitable rooms with clear glazing to the street not more than 1.2m above street level and does not include car parking areas.

7. Street address is required on the ground level of buildings specifically located in areas shown in the Active Street Frontages Map of Penrith LEP 2010.

8. Residential developments are to provide a clear street address and direct pedestrian access off the primary street front and allow for residents to overlook all surrounding streets.

9. Provide multiple entrances for large developments including an entrance on each street frontage.

10. Provide direct 'front door' access from ground floor residential units.

11. Residential buildings are to provide not less than 65% of the lot width as street address.

3.3 Awnings

Background

Awnings increase the useability and amenity of public footpaths by protecting pedestrians from sun and rain. They encourage pedestrian activity along streets and, in conjunction with active edges such as retail frontages, support and enhance the vitality of the local area. Awnings, like building entries, provide a public presence and interface within the public domain and contribute to the identity of a development.

A separate approval to erect an awning over the road reserve including a footpath will be required under the *Roads Act 1993* and the *Local Government Act 1993*.

Objectives

a) To provide shelter from wind and rain for public streets where most pedestrian activity occurs.

b) To address the streetscape by providing a consistent street frontage in the city centre.

Controls

1. Continuous street frontage awnings are to be provided for all new developments as indicated in Figure 21.

2. Awnings dimensions should generally be:

    i. Minimum 2.8m deep where street trees are not required, otherwise minimum 2.4m deep.

    ii. Minimum soffit height of 3.2m and maximum of 4m.

    iii. Steps for design articulation or to accommodate sloping streets are to be integral with the building design and should not exceed 700mm.

    iv. Low profile, with slim vertical fascias or eaves (generally not to exceed 300mm height).

    v. Set back from kerb to allow for clearance of street furniture.

3. Awning design must match building facades and be complementary to those of adjoining buildings.

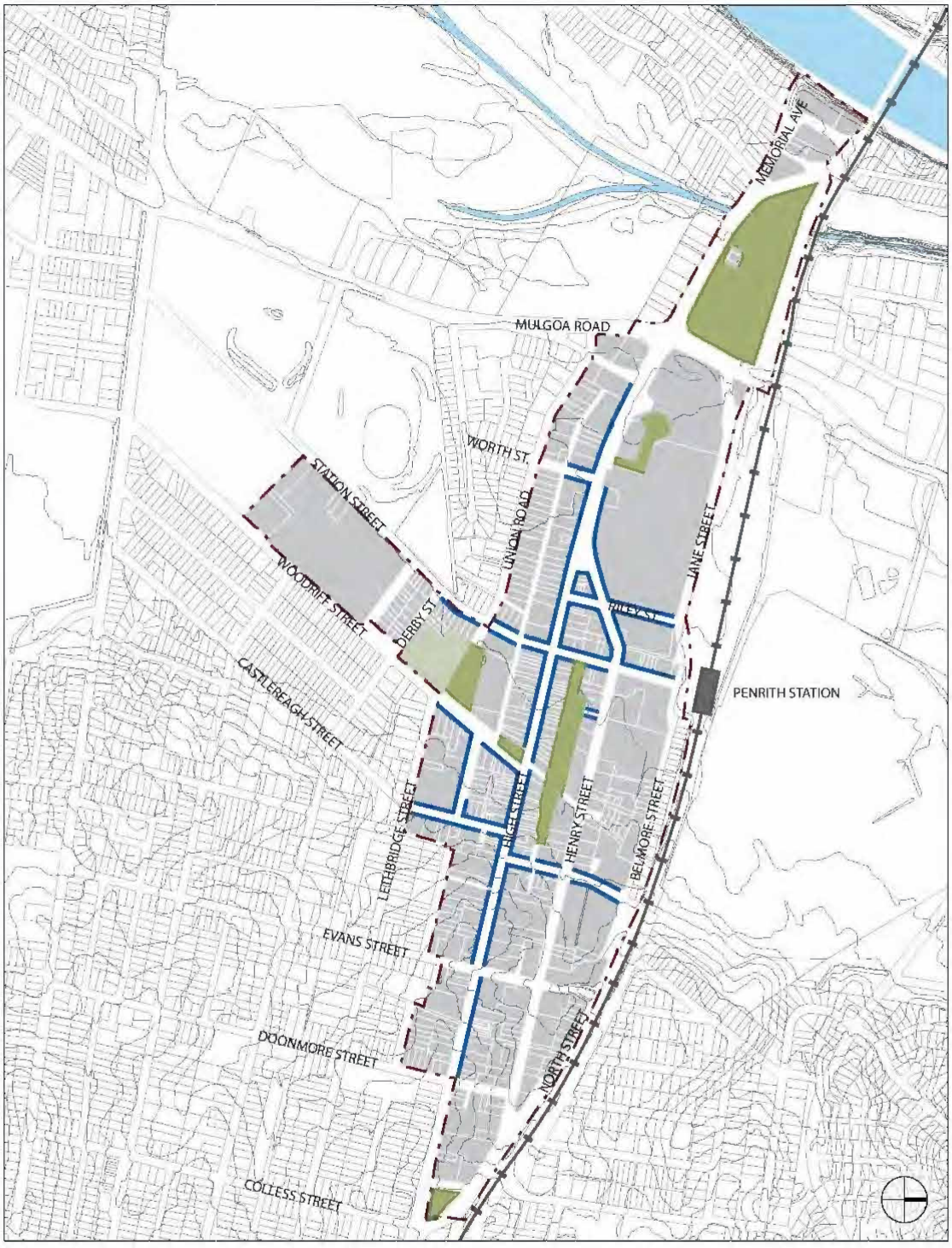
4. Wrap awnings around corners for a minimum 6m from where a building is sited on a street corner.

5. Vertical canvas drop blinds may be used along the outer edge of awnings along north-south streets. These blinds must not carry advertising or signage.

6. Provide under awning lighting recessed into the soffit of the awning or wall mounted onto the building to facilitate night use and to improve public safety.

7. One under-awning sign may be attached to the awning, at intervals of 6m of the awning frontage.

Figure 21: Continuous street frontage awning locations



3.4 Vehicle footpath crossings

Background

Vehicle crossings over footpaths disrupt pedestrian movement and threaten safety. The design of vehicle access to buildings also influences the quality of the public domain. Overly wide and high vehicle access points detract from the streetscape and the active use of street frontages.

The design and location of vehicle access to developments should minimise both conflicts between pedestrians and vehicles on footpaths, particularly along pedestrian priority places, and visual intrusion and disruption of streetscape continuity.

Design of driveways and vehicle access is to be in accordance with the provisions of the Transport, Access and Parking Chapter of Penrith DCP.

Objectives

a) To make vehicle access to buildings more compatible with pedestrian movements.

b) To reduce the impact of vehicular access on the public domain.

c) To ensure vehicle entry points are integrated into building design and contribute to the building design.

Controls

Location of Vehicle Access

1. No additional vehicle entry points will be permitted into the parking or service areas of development along those streets identified as significant pedestrian circulation routes in Figure 23.

2. In all other areas, one vehicle access point only (including the access for service vehicles and parking for non-residential uses within mixed use developments) will be generally permitted.

3. Where practicable, vehicle access is to be from lanes and minor streets rather than primary street fronts or streets with major pedestrian activity.

4. Where practicable, adjoining buildings are to share or amalgamate vehicle access points. Internal on-site signal equipment is to be used to allow shared access. Where appropriate, new buildings should provide

vehicle access points so that they are capable of shared access at a later date.

5. Vehicle access may not be required or may be denied to some heritage buildings.

Design of Vehicle Access

6. Wherever practicable, vehicle access is to be a single lane crossing with a maximum width of 2.7m over the footpath, and perpendicular to the kerb alignment. In exceptional circumstances, a double lane crossing with a maximum width of 5.4m may be permitted for safety reasons (refer to Figure 22). The Penrith City Centre Public Domain Masterplan should be referred to for further design details.

7. Vehicle access ramps parallel to the street frontage will not be permitted.

8. To ensure vehicle entry points are integrated into building design.

9. Doors to vehicle access points are to be roller shutters or tilting doors fitted behind the building facade.

10. Vehicle entries are to have high quality finishes to walls and ceilings as well as high standard detailing. No service ducts or pipes are to be visible from the street.

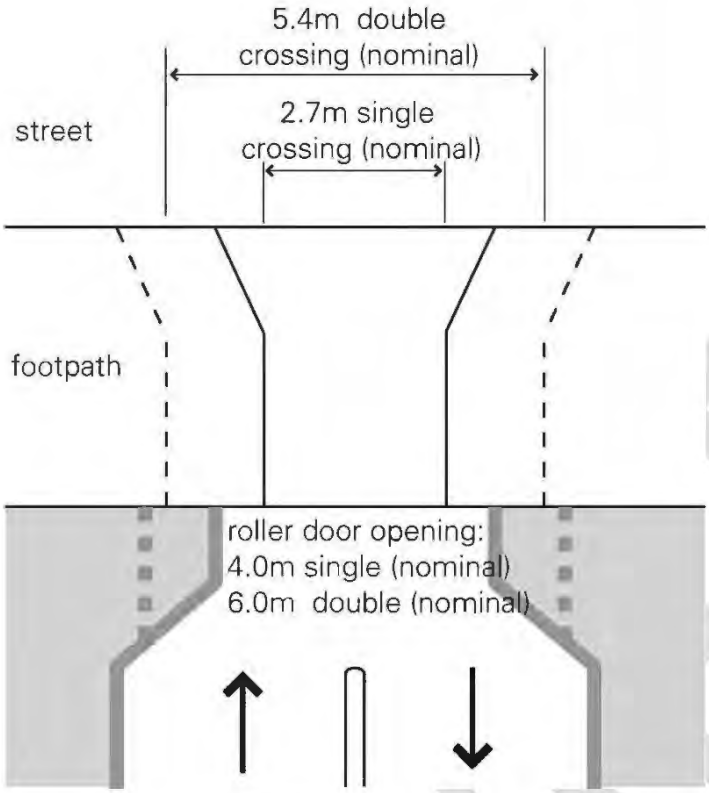
Porte Cocheres

11. Porte cocheres disrupt pedestrian movement and do not contribute to active street frontage. They may only be permitted for hotels and major tourist venues subject to urban design, streetscape, heritage and pedestrian amenity considerations.

12. If justified, porte cocheres are to be internal to the building with one combined vehicle entry and exit point, or one entry and one exit point on two different street fronts of the development.

13. In exceptional circumstances for buildings with one street frontage only, an indented porte cochere with separate entry and exit points across the footpath may be permitted, as long as it is constructed entirely at the footpath level and provides an active frontage at its perimeter and provides for safe and clear pedestrian movement along the street.

Figure 22: Vehicle footpath crossing



DRAFT

Figure 23: Restrictions on vehicular entries

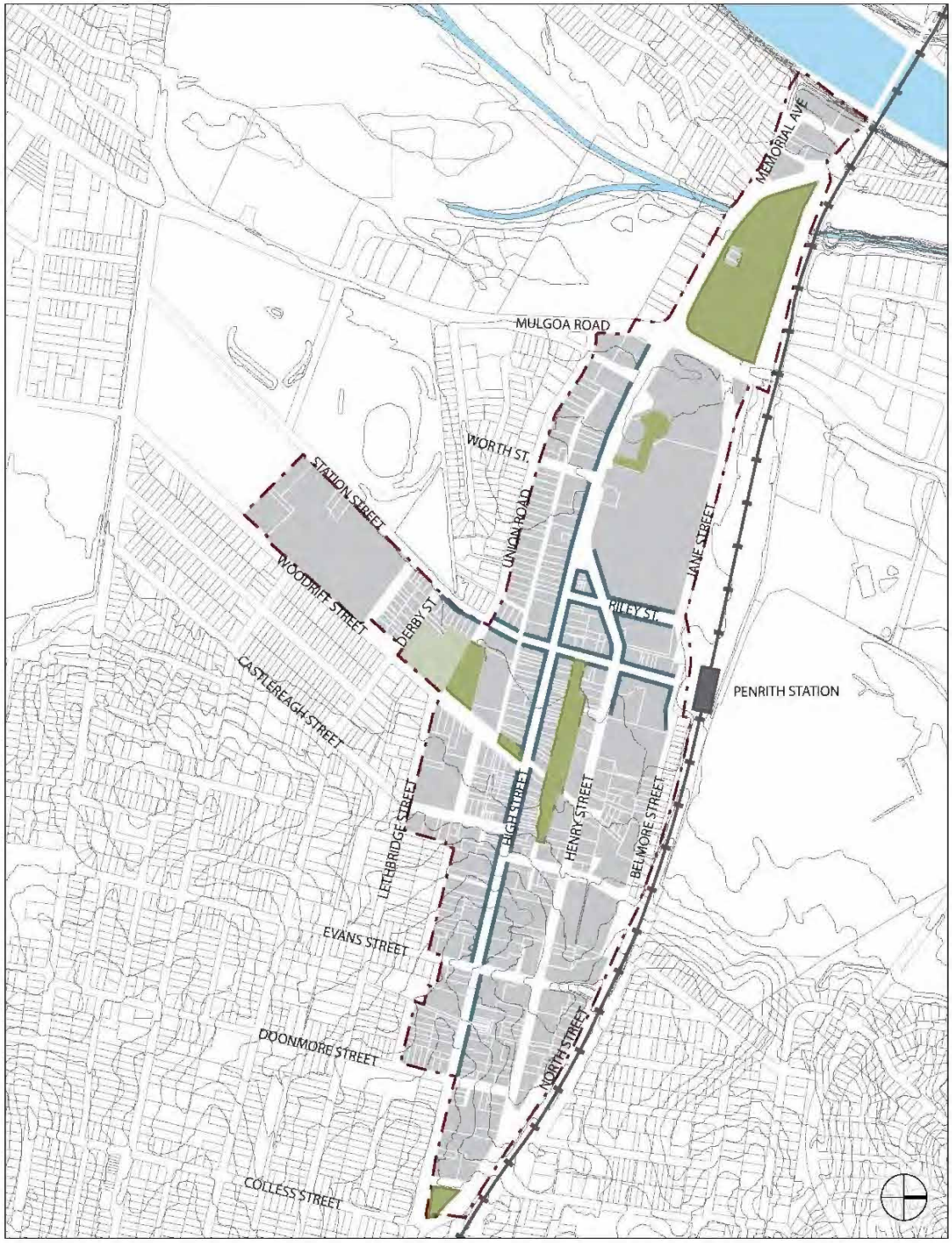


FIGURE 3.4: RESTRICTIONS ON VEHICULAR ENTRIES

Additional vehicular entries not permitted

DCP Area

3.5 Pedestrian access and mobility

Background

Streets represent important components of the public domain and provide the best potential amenity and safety when activated by pedestrians. Streets offer sky exposure, sunlight and air, a sense of orientation and direct access to the main frontages of buildings. Generally, pedestrians should be encouraged to use the street level to enhance and contribute to street life, to promote activity and interest, and to maximise safety and security of the public domain. Penrith's climate does not warrant pedestrian isolation from the street, and any conflicts between pedestrians and vehicles are to be resolved at the street level.

Pedestrian overpasses are discouraged as they have a negative impact on the streetscape quality and on views and vistas along streets. New pedestrian underpasses will only be considered where they would directly connect to major transport nodes such as the railway station and substantially improve pedestrian safety and access.

Objectives

a) To promote pedestrian activation of streets and public places.

b) To promote 'safer by design' and crime prevention principles.

c) To encourage pedestrian circulation at street level.

d) To protect views and vistas along streets.

Controls

1. New overpasses over streets are discouraged. In exceptional circumstances, new overpasses may be considered subject to assessment of impacts on safety and crime prevention, streetscape amenity and activation of the public domain. In such circumstances, overpasses are to be fully glazed, not greater than 6m wide or more than one level high.

2. New pedestrian underpasses are strongly discouraged as they reduce pedestrian accessibility, safety and passive surveillance opportunities. In exceptional circumstances, new underpasses may be considered where it can be demonstrated they would substantially improve pedestrian safety and accessibility, will incorporate active uses for the entire length and

have a minimum width of 4.5m clear of all fixed obstructions and a minimum ceiling height of 4m.

3.6 Building exteriors

Background

Penrith's cityscape and public domain is defined by its buildings, streets and public places. The maintenance and improvement of the public domain is dependent on a consistent approach to the design of new development including the articulation and finish of building exteriors.

Objectives

To ensure that buildings in Penrith:

a) Contribute positively to the streetscape and public domain by means of high quality architecture and robust selection of materials and finishes.

b) Provide richness of detail and architectural interest especially at visually prominent parts of buildings such as lower levels and roof tops.

c) Present appropriate design responses to nearby development that complement the streetscape.

d) Clearly define the adjoining streets, street corners and public spaces and avoid ambiguous external spaces with poor pedestrian amenity and security.

e) Maintain a pedestrian scale in the articulation and detailing of the lower levels of the building.

f) Contribute to a visually interesting skyline.

Controls

1. Adjoining buildings (particularly heritage buildings) are to be considered when designing new buildings and extensions to existing buildings in terms of:

    i. Appropriate alignment and street frontage heights.

    ii. Setbacks above street frontage heights.

    iii. Appropriate materials and finishes selection.

iv. Facade proportions including horizontal or vertical emphasis.

v. The provision of enclosed corners at street intersections.

2. Balconies and terraces should be provided, particularly where buildings overlook parks and on low rise parts of buildings. Gardens on the top of setback areas of buildings and on roofs are encouraged.

3. Articulate façades so that they address the street and add visual interest.

4. External walls should be constructed of high quality and durable materials and finishes with 'self-cleaning' attributes, such as face brickwork, rendered brickwork, stone, concrete and glass.

5. To assist articulation and visual interest, avoid expanses of any single material.

6. Maximise glazing for retail uses, but break glazing into sections to avoid large expanses of glass.

7. Highly reflective finishes and curtain wall glazing are not permitted above ground floor level

8. A materials sample board and schedule is required to be submitted with applications for development over $1 million or for that part of any development built to the street edge.

9. The design of roof plant rooms and lift overruns is to be integrated into the overall architecture of the building, and in residential buildings may be screened by roof pergolas.

4. Access, parking and servicing

Background

In addition to controls contained in the Transport, Access and Parking Chapter of Penrith DCP, this section contains more detailed objectives and controls on pedestrian access, on-site parking and site facilities, and site facilities and services for the City Centre.

General objectives

a) To facilitate the development of building design excellence appropriate to a regional city.

b) To improve non-vehicular access to the city centre, including but not limited to bicycle, pedestrian and mass transit options.

c) To require parking and servicing provisions to be contained within development sites to an amount and rate adequate for the economic and sustainable growth of the city centre.

d) To provide for safe and secure access.

e) To minimise impacts on city amenity, the public domain and streetscape.

f) To ensure that access is provided for persons with a disability.

4.1 Pedestrian access and mobility

Background

Any new developments must be designed to ensure that safe and equitable access is provided to all, including people with a disability.

Objectives

a) To provide safe and easy access to buildings to enable better use and enjoyment by people regardless of age and physical condition, whilst also contributing to the vitality and vibrancy of the public domain.

b) To ensure buildings and places are accessible to people with a disability.

c) To provide a safe and accessible public domain.

Controls

1. Main building entry points should be clearly visible from primary street frontages and enhanced as appropriate with awnings, building signage or high quality architectural features that improve clarity of building address and contribute to visitor and occupant amenity.

2. The design and provision of facilities for persons with a disability including car parking must comply with Australian Standard 1428 Parts 1 and 2 (or as amended) and the *Commonwealth Disability Discrimination Act 1992* (as amended). The *Penrith City Centre Public Domain Masterplan* should be referred to for further design details for access through and from public places.

3. Barrier free access is to be provided to not less than 20% of dwellings in each development and associated common areas.

4. The development must provide at least one main pedestrian entrance with convenient barrier free access to the ground floor, and have direct link to an identified accessible path of travel in the adjoining public domain.

5. The development must provide accessible internal access, linking to public streets and building entry points.

6. Pedestrian access ways, entry paths and lobbies must use durable materials commensurate with the standard of the adjoining public domain (street) with appropriate slip resistant materials, tactile surfaces and contrasting colours.

7. A report from an accredited access consultant is to be submitted with development application, indicating the proposal's compliance with AS1428. If approved, Council may impose a condition on the development consent requiring the submission of a compliance certificate (or other such document) from an accredited access consultant attesting to the development's compliance with AS1428, and that a person with a disability can access the development.

4.2 On-site parking options

Background

On-site parking includes underground (basement), surface (at-grade) and above ground parking, including parking stations.

There are particular constraints in certain areas of Penrith city centre on the provision of car parking in underground structures. Due to the high water table, excavation on certain sites may become difficult beyond one level of basement parking. This may necessitate site design which locates the parking above ground. In these cases, minimising the impacts of above ground parking on the public domain is important.

Objectives

a) To encourage economic growth in the City Centre.

b) To enable the conversion of above ground parking to other future uses.

c) To support the complementary use and benefit of public transport and non-motorised modes of transport such as bicycles and walking.

Controls

1. In addition to the parking requirements outlined in the Transport, Access and Parking Chapter of Penrith DCP, Figure 24 and Figure 25 contains additional options for car parking at Penrith City Centre.

2. On-site parking is to be accommodated in basement parking except in the blocks between Belmore and Henry Streets where above ground car parking may be permissible in the form illustrated in Figure 26 below.

Figure 24: Aboveground parking must be screened by an active edge to the public domain

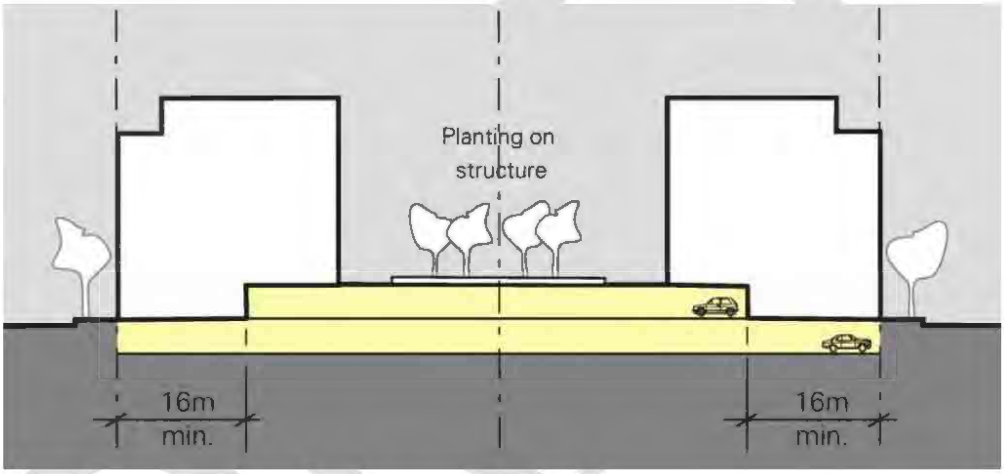


Figure 25: Above ground parking may be located adjacent to a lane, as illustrated above, with appropriate screening to reduce the impact on the public domain.

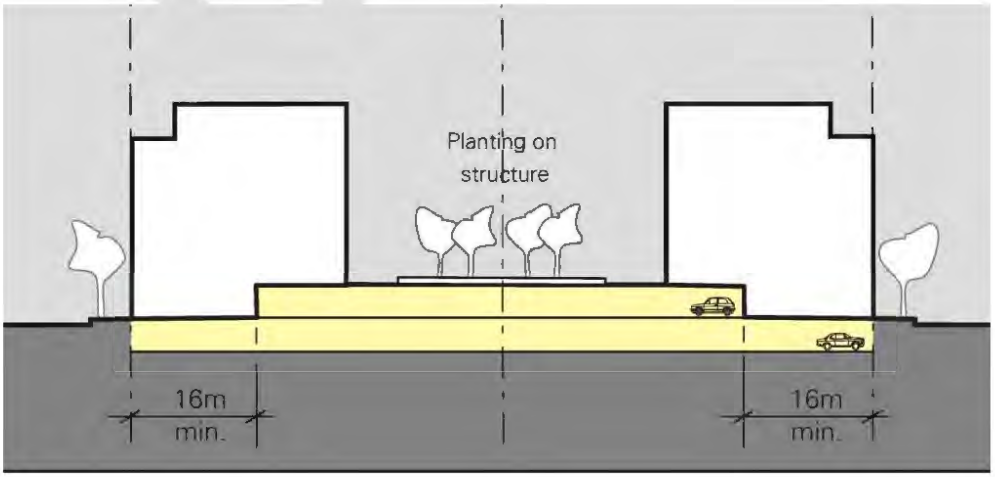
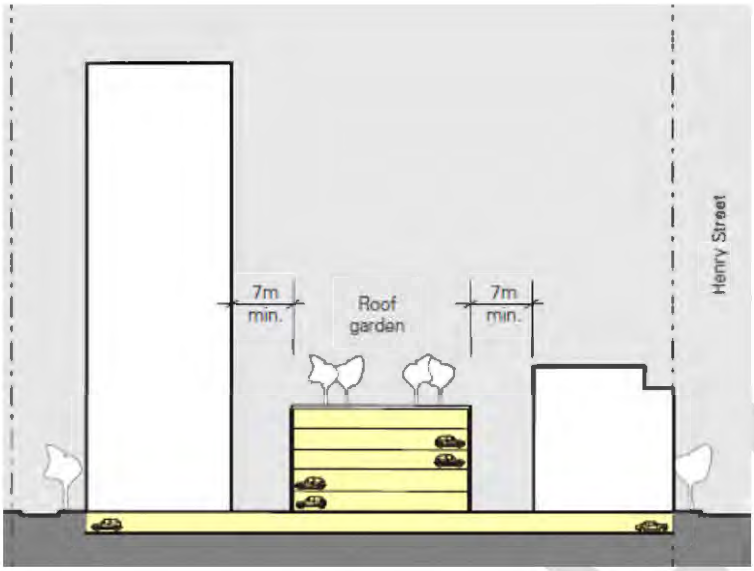


Figure 26: In the blocks between Belmore and Henry Streets, above-ground car parking may be permissible in the middle of the block where buildings ensure that it is not visible from surrounding streets or public spaces.



4.3 Site facilities and services

Objectives

a) To ensure that the design and location of site facilities (such as clothes drying areas, mail boxes, recycling and garbage disposal units/ areas, screens, lighting, storage areas, air conditioning units, rainwater tanks/ hot water systems, solar panels and other such devices and communication systems) are integrated within the development and are unobtrusive.

b) To ensure that site services and facilities are adequate for the nature and quantum of development.

c) To establish appropriate access and location requirements for servicing.

d) To ensure service requirements do not have adverse amenity impacts.

Controls

Mailboxes

1. Letterboxes should be integrated into a wall immediately adjacent the building entrance(s). Where there are a number of entrances into the building, the letterboxes located at each entrance should service the tenancies that will utilise that building entrance.

2. Letterboxes shall be secure and large enough to accommodate articles such as newspapers.

Communication facilities/networks

3. Telecommunication infrastructure should be built into the development and predominantly below ground, incorporating the following services fundamental in the effective operation of businesses, home businesses and dwellings:

    i. Multiple telecom services including high speed internet (including broadband), voice and data systems,

    ii. Cabling from all telephone lines, cable TV, internet is built into the building from the outset,

    iii. Consider centralised (C.A.T.V.) system is provided.

4. Where a master antenna is provided, the antennae must be sited in a location that does intrude into, or is less visible from, surrounding public spaces/ open areas.

Service Infrastructure

5. Infrastructure attributed to the servicing of the development, including associated cabling, should be located below ground.

Air conditioning units, service vents and other associated structures

6. Such structures should be:

    i. Located away from street frontages and lanes.

    ii. Located in a position where the likely impact is minimised.

    iii. Adequately setback from the perimeter wall or roof edge of buildings.

7. Where it is to be located on the roof, it should be integrated into the roofscape design and in a position where such facilities do not become a feature in the skyline at the top of building(s).

8. Refer to the Water Management Section within the Environmental Management Chapter of Penrith DCP for locational and connection requirements.

Loading/Unloading Areas

9. Loading/ unloading areas are to be:
    i. Integrated into the design of developments.
    ii. Separated from car parking and waste storage and collection areas.
    iii. Located away from the circulation path of other vehicles.
    iv. Designed for commercial vehicle circulation and access complying with AS2890.2.
10. For mixed use developments, separate loading/unloading areas should be provided for commercial/retail and residential uses.
11. Vehicular access to the loading/unloading area(s) is preferred off rear lanes, side streets and right of ways. Where appropriate, consider a single vehicular access point for the loading/unloading area(s) and waste collection area(s).

Fire service and emergency vehicles

12. Generally, provision must be made for all emergency vehicles to enter and leave the site in a forward direction, particularly the NSW Fire Brigade vehicles where:
    i. NSW Fire Brigade cannot park their vehicles within the road reserve due to the distance of hydrants from the building or restricted vehicular access to hydrants or
    ii. Otherwise required by the NSW Fire Brigade's Code of Practice – Building Construction – NSWFB Vehicle Requirements.
13. For developments where NSW Fire Brigade vehicle(s) is required to enter the site, the circulation path and access/egress provision is to comply with NSW Fire Brigade's Code of Practice – Building Construction – NSWFB Vehicle Requirements.

5. Sustainable development

5.1 Reflectivity

Background

Reflective materials used on the exterior of building can result in undesirable glare for pedestrians and potentially hazardous glare for motorists. Reflective materials can also impose additional heat load on other buildings. The excessive use of highly reflective glass should be discouraged. Buildings with a glazed roof, façade or awning should be designed to minimise hazardous or uncomfortable glare arising from reflected sunlight.

Objective

a) To restrict the reflection of sunlight from buildings to surrounding areas and buildings.

Controls

1. New buildings and facades should not result in glare that causes discomfort or threatens safety of pedestrians or drivers.

2. Visible light reflectivity from building materials used on the facades of new buildings should not exceed 20%.

3. Subject to the extent and nature of glazing and reflective materials used, a Reflectivity Report that analyses potential solar glare from the proposed development on pedestrians and motorists may be required.

5.2 Maximising liveability and longevity

Background

Developments should be designed and constructed beyond its initial/first use to ensure that building stock is durable and capable for adaptability in the future. This 'whole of building' approach should also consider how the building design, finishes and materials used in the construction phase affect the amenity and safety of future occupants of the building(s).

Objectives

a) To encourage the design of developments based on a 'whole of building' approach.

b) To reduce the occurrence of 'sick building' syndrome on occupants.

c) To ensure that community safety and crime prevention measures are incorporated in the design of the development, including the public domain.

Controls

1. Demonstrate how the passive and active environmental design features of the building design and proposed construction achieves ESD criteria and the 'whole of building' approach. Elements include, but not limited to:

    i. Adaptability of buildings and floor levels within buildings to accommodate a range of uses over time.

    ii. Occupant comfort and amenity.

    iii. Fulfilling the Ecospecifier's Assessment criteria; and

    iv. Incorporation of safety and crime prevention measures in the design of buildings and public domain as well as the siting of activities in the building.

    A report, prepared by a suitably qualified environmental design expert, may be required with the development application and application for Construction Certificate.

2. Development proposals may require referral to the NSW Police for crime prevention and safety considerations, in accordance with the community safety protocol.

5.3 Reduce resource consumption

Background

All materials have environmental and health consequences in extraction, manufacture, transport, storage and eventually, use in a development. Some materials have significant impacts for maintenance and disposal and should be carefully considered as part of the material selection at the design and specification stages of a development.

Objectives

a) To encourage the selection and use of construction materials with low environmental impact over the lifecycle of the building.

b) To reduce the health problems associated with the solvent content of finishes and fittings.

c) To reduce the health problems associated with the high formaldehyde emission from composite wood products.

Controls

1. Materials with low embodied energy properties and/or materials that have been salvaged/ recycled are to be selected for the construction and fi tout of the development.

2. Avoid using high environmental/high impact materials, such as volatile organic compounds (VOC's) and hydrofluoro-carbons (HCFC's) as these materials can become volatile at room temperature contributing to poor indoor air quality and affecting the health of occupants.

6. Controls for residential development

Background

In addition to the controls in the Residential Development Chapter of Penrith DCP, the provisions in *State Environmental Planning Policy (Housing) 2021* and supporting *Apartment Design Guide* apply to residential development in the Penrith City Centre. This includes residential flat buildings, any residential flat component of a mixed use development, and serviced apartments that are strata titled. The design principles in *State Environmental Planning Policy (Housing) 2021* include:

1. Context and neighbourhood character
2. Built form and scale
3. Density
4. Sustainability
5. Landscape
6. Amenity
7. Safety
8. Housing diversity and social infrastructure
9. Aesthetics

6.1 Housing choice and mix

Background

A choice of apartment types and mix of sizes in the City Centre caters for a variety of socio-economic groups. All residential development in the Penrith City Centre should also comply with the provisions outlined below.

Objectives

a) To ensure that residential development provides a mix of dwelling types and sizes to cater for a range of household types.

b) To ensure that dwelling layout is sufficiently flexible for residents' changing needs over time.

c) To ensure a sufficient proportion of dwellings include accessible layouts and features to accommodate the changing requirements of residents.

d) To ensure the provision of housing that will, in its adaptable features, meet the access and mobility needs of any occupant.

Controls

1. Where residential units are proposed at ground level, a report must be provided with the development application demonstrating how future non-residential uses can be accommodated within the ground level design. The report must address:

    i. Access requirements including access for persons with a disability

    ii. Any upgrading works necessary for compliance with the Building Code of Australia

    iii. Appropriate floor to ceiling heights.

2. For smaller developments comprising up to six dwellings demonstrate how the proposal achieves a mix appropriate to the locality.

3. For developments containing more than six dwellings, a mix of living styles, sizes and layouts is to be achieved by providing:

    i. A mix of bed-sitter/studio, one bedroom, two bedroom and three bedroom apartments.

ii. Bed-sitter apartments and one bedroom apartments must not be greater than 25% and not less than 10% of the total mix of apartments within each development.

iii. Two-bedroom apartments are not to be more than 65% of the total mix of apartments within each development.

4. 10% of all dwellings or a minimum one dwelling, whichever is the greater, must be designed to be capable of adaptation for disabled or elderly residents. Dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995), which includes "pre-adaptation" design details to ensure visitability is achieved.

5. Where possible, adaptable dwellings shall be located on the ground floor, for ease of access. Dwellings located above the ground level of a building may only be provided as adaptable dwellings where lift access is available within the building. The lift access must provide access from the basement to allow access for people with disabilities.

6. The development application must be accompanied by certification from an accredited Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Adaptable Housing Standard (AS 4299-1995).

7. Car parking and garages allocated to adaptable dwellings must comply with the requirements of the relevant Australian Standard as accessible car spaces.

Figure 27: Residential Development in Woodriff Street



7. Controls for special areas

Background

The following controls are additional to the general controls elsewhere in Penrith DCP. Controls for special areas relate to specific sites or precincts in the City Centre.

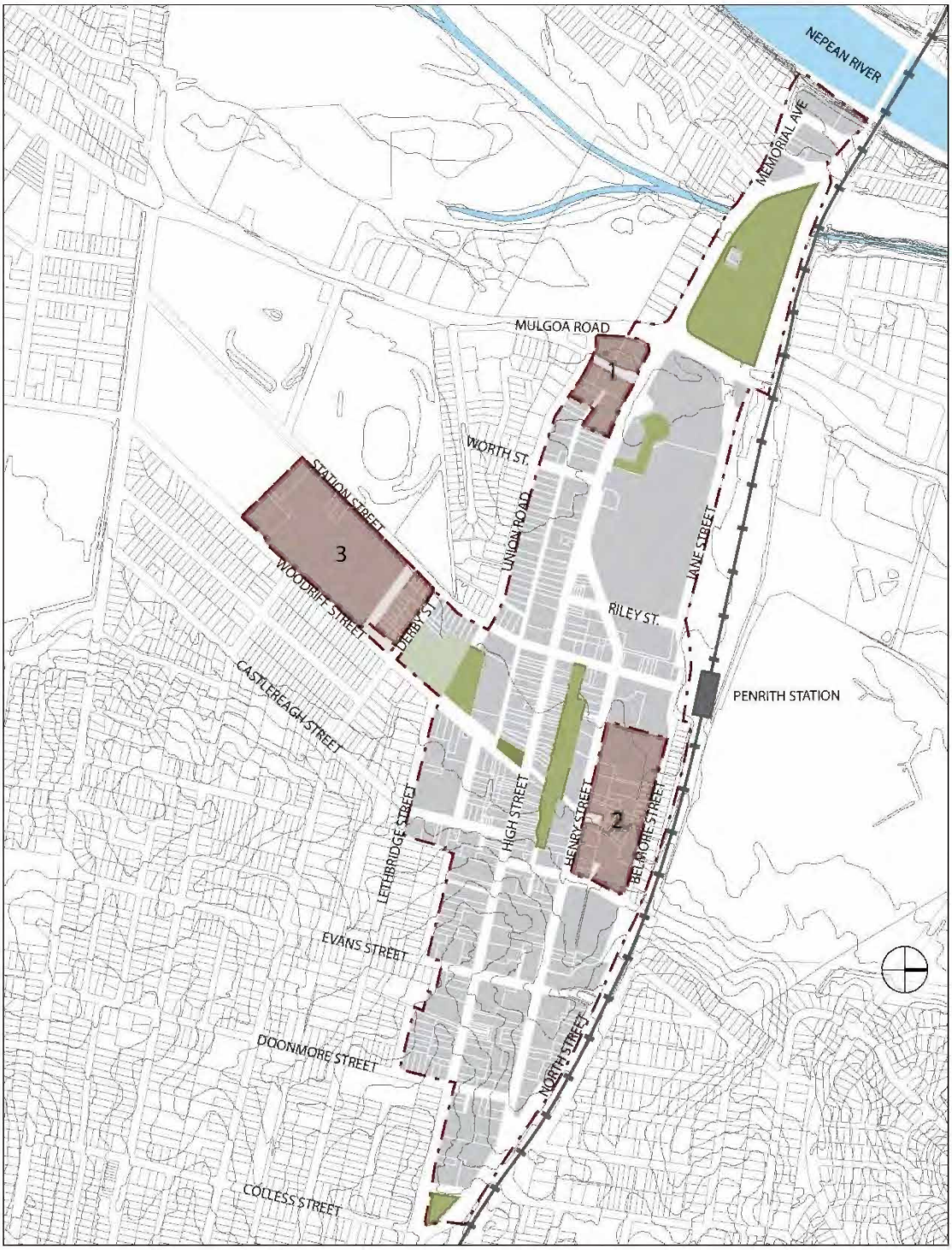
7.1 Precinct controls

Background

Due to their size and/or strategic importance in the City Centre, specific design principles and development outcomes have been identified for the sites identified in Figure E11.25. Redevelopment of these sites should implement design principles and outcomes expressed in the clauses and diagrams that follow.

DRAFT

Figure 28: Areas where Precinct controls apply



Precinct 1

Precinct 1 is the area generally bounded by High Street, Mulgoa Road and Union Road, as shown in Figure 29.

Development of the site must adhere to the following design principles:

1. Rationalise the existing pattern of land ownership.
2. Relocate redundant public street to provide north-south connectivity and active 'eat street' adjoining the Civic and Cultural Precinct.
3. Provide high quality and activity public domain interface with new and existing public streets.

Development of the site should provide the following outcomes:

4. Streets and pedestrian connections:
    i. Closure John Tipping Grove between High Street and Union Road.
    ii. A new public street providing direct connections between High Street and Union Road.
    iii. Replace existing roundabout on High Street with a signalised intersection at junction of High Street and the new street.
    iv. Potential extension of Union Lane to the west to provide access and additional street frontage.
5. Land ownership:
    i. Consolidation of existing land ownership patterns to allow orderly development of land.
6. Public domain interface:
    i. Active frontage/land uses along the new street and High Street.
7. Built form:
    i. Building built to the street alignment of the new street.

Figure 29: Precinct 1 design principles



Precinct 2

Precinct 2 is the area bounded by Henry Street, Lawson Street and Belmore Street, as shown in Figure 30.

Development of the site must adhere to the following design principles:

8. Provide good east-west and north-south connectivity with new streets, new lanes and pedestrian connections.
9. Provide off-street parking that is screened from existing streets.
10. Provide high quality and active public domain interface with all other existing public streets.

Development of the site should provide the following outcomes:

11. Streets and pedestrian connections:
    i. Provide at least two new public streets with direct connections between Belmore Street and Henry Street.
    ii. Provide a new lane with east-west connectivity through the site and access to the rear of properties on Henry Street.
12. Open space:
    i. Design entry plazas as small public spaces to be adjacent to larger commercial buildings on Belmore Street.
13. Public domain interface:
    i. Active frontages to Henry Street, Lawson Street, Belmore Street and the new north-south streets.

Figure 30: Precinct 2 Design Principles



Precinct 3

Precinct 3 is the area bounded by Station Street, Jamison Road, Derby Street and the "Panasonic", as shown in Figure 31.

Development of the site must adhere to the following design principles:

14. Provide good east-west and north-south connectivity with new streets and pedestrian connections.

15. Provide opportunities for residential uses towards Station Street and immediately adjoining the "Panasonic" site, where there is greater potential for appropriate amenity and street address.

16. Consolidate retail uses on remainder of the site.

17. Investigate opportunities for expansion of the shopping centre to the north.

18. Consolidate loading and service access to retail development on Woodriff Street.

19. Provide high quality and active public domain interface with all other existing public streets.

20. Provide sensitive interface with heritage items in the precinct.

Development of the site should provide the following outcomes:

21. Streets and pedestrian connections:

    i. Provide a new public street with direct connections between Station and Woodriff Streets and a buffer between retail and residential development.

    ii. Provide a new pedestrian connection, parallel Station Street, linking with the pedestrian connection proposed on "Panasonic" site as illustrated.

    iii. Additional public streets, lanes and thoroughfare may be required to provide for residential address.

    iv. The closure of Reserve Street may be considered, subject to more detailed traffic analysis, the provision of adequate new public streets between Station and Woodriff Streets, and to provision of retail development with a direct and active frontage to Derby Street.

22. Land uses:

    i. Locate retail, tourist accommodation and residential land uses in Area A.

    ii. Locate retail and commercial land uses only in Area B (as indicated).

23. Public domain interface:

    i. Active frontage to Station Street, Reserve Street and Derby Street.

    ii. Front building setbacks as indicated.

    iii. Distinctive corners treatments at the locations indicated.

iv. A landscaped corridor of mature trees on the northern side of Woodriff Street.

24. Heritage:

i. Integrate heritage listed buildings into the design of the new retail and residential development.

Figure 30: Precinct 3 Design Principles



Part B – North Penrith

8. Preliminary

This Section was adapted from the North Penrith Design Guidelines which were published by Landcom in 2013, and supplements the North Penrith Concept Plan approval issued by the Minister for Planning and Infrastructure on 9 November 2011.

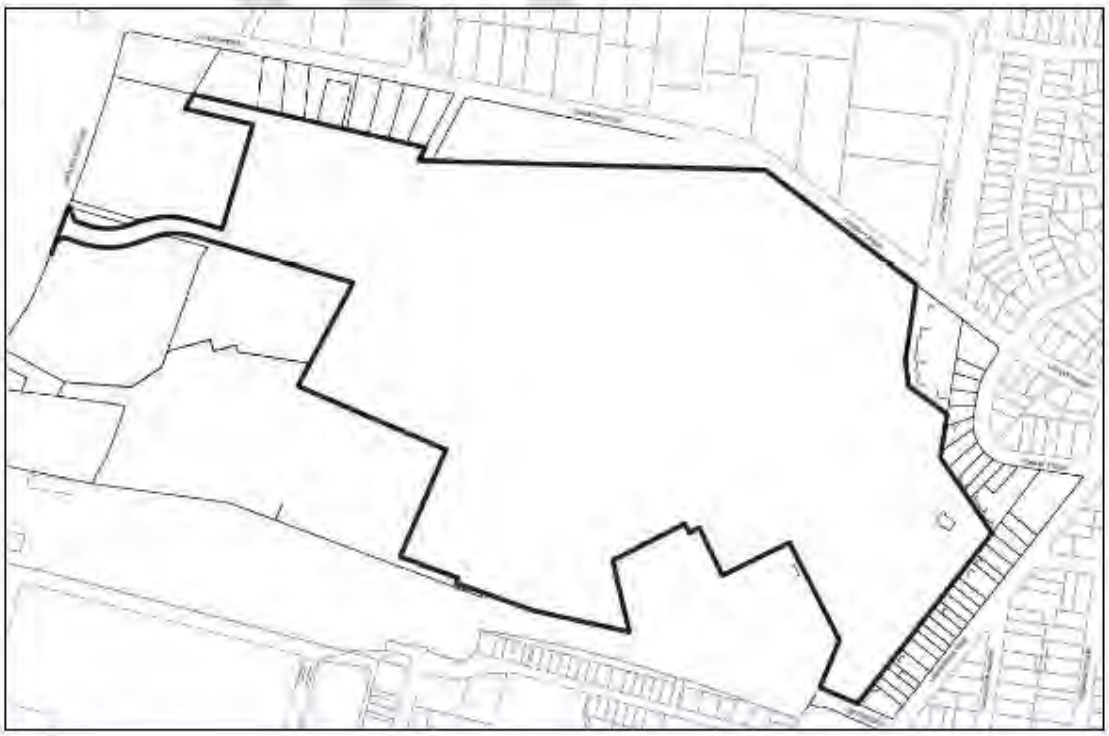
8.1 Purpose of this section

The purpose of this Section is to facilitate the development of retail, commercial, business, residential and light industrial land uses within the North Penrith Precinct in accordance with the North Penrith Concept Plan approval.

8.2 Land to which this section applies

This Section applies to the North Penrith Precinct, as shown at Figure 312. North Penrith comprises approximately 40.6 ha of land that has been identified for a mixed use, transit oriented development.

Figure 312: Land to which this Section applies



8.3 Relationship with other planning documents

This Section must be read in conjunction with any environmental planning instrument which applies to the land, as well as any Planning Agreement for the North Penrith Precinct.

This Section provides specific controls for the North Penrith Precinct in addition to the general controls elsewhere in Penrith DCP. In the event of an inconsistency between this Section and the rest of Penrith DCP, the requirements of this Section prevail.

9. Concept plan

9.1 Vision

The development of North Penrith is to:

a) Create well-designed spaces that engage and activate its community for living and working.

b) Provide well-connected linkages, nodes and destinations that integrates with a significant water body.

c) Create diverse, yet cohesive, housing products that allow capability to ever changing household needs and formations.

d) Provide a business/employment centre that is complementary and an extension to the Penrith CBD.

Figure 32: Illustrative Concept plan



Figure 33: Artist impression of the canal



Figure 34: Artist impression of the oval



Figure 35: Artist impression of the village square



9.2 Outcomes

The expected outcomes of the North Penrith Precinct are:

Transport and Accessibility

1. A residential density, urban structure and parking provision that supports the establishment of a model transit oriented development.

2. An integrated and legible network of open space and pathways to encourage pedestrian and cyclist activity, particularly to and from the train station.

Urban Design

3. A dense and interconnected mixture of land uses which include residential, recreational, employment, retail, office and business services.

4. Create a transit oriented, cohesive development incorporating retail, commercial, business, civic, community, recreation, residential and employment uses.

5. Create a safe and convenient pedestrian network formed by a closely spaced grid of streets interconnected with public open spaces.

Housing and Community

6. A vibrant urban community of around 900 to 1,000 dwellings.
7. Meet the growing and ageing population of Penrith through the provision of a diverse range of housing types and sizes.
8. Around 7ha of open space/canals including a new oval with outdoor recreational facilities, canal edge boardwalk and local parks.

Economic

9. Generate up to 770 direct jobs on the site and over 1,100 flow-on jobs.
10. Deliver a high level of self-containment in terms of employment generation and retail expenditure, reducing the trip generation of residents, workers and commuters visiting North Penrith.
11. Cater for the daily needs and services of the North Penrith community and commuters using Penrith Railway Station.
12. Provide opportunities for employment generating development within a close proximity to public transport services.

Environmental

13. Retention of identified key stands of existing trees.
14. Mitigation and management of existing flooding issues on the site.

Heritage

15. Enhance the heritage characteristics of Thornton Hall.
16. Respect the Coombewood curtilage.
17. Protection of environmental heritage by incorporation of the heritage features and vistas into the road and open space network.

10. Residential development

10.1 Housing density and diversity

Objectives

a) To ensure that a minimum residential density is achieved in the precinct in recognition of its proximity to public transport and the Penrith City Centre.

b) To provide a diverse range of housing forms and densities.

c) To promote a range of dwellings types to meet the needs of a diverse range of age groups and family types.

Controls

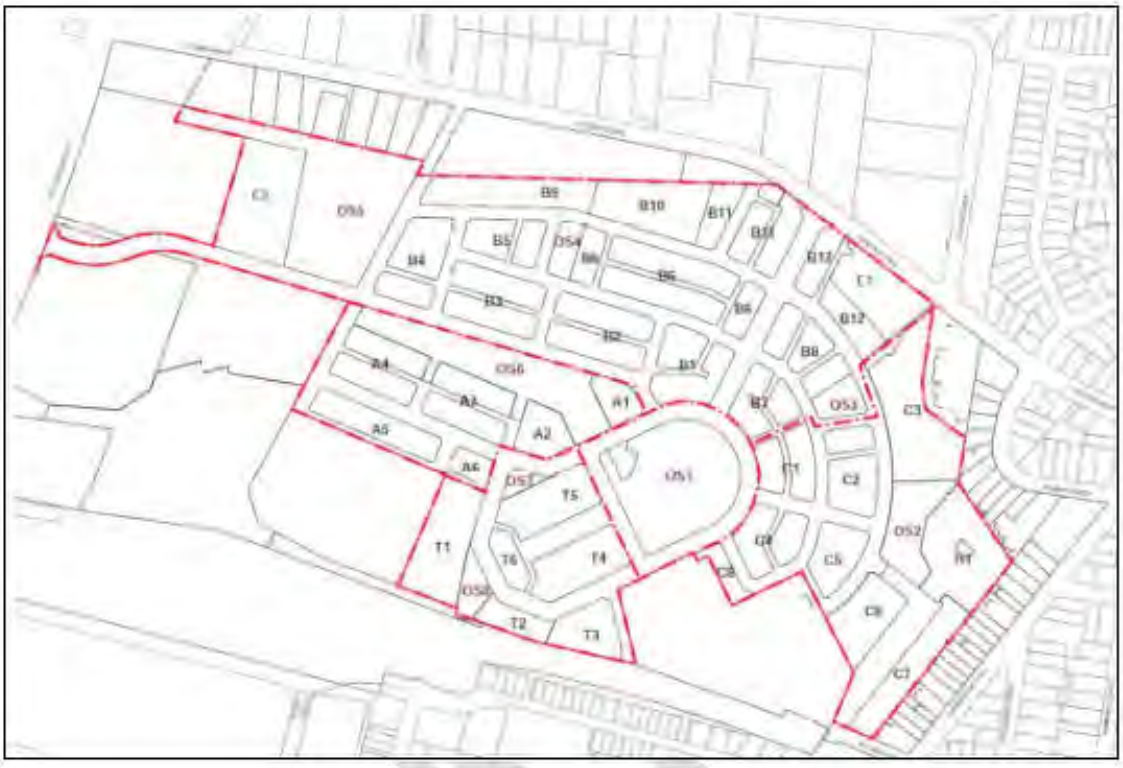
1. Between 900 and 1,000 dwellings are envisaged across the whole precinct. To ensure that a minimum of 900 dwellings is achieved as part of a subdivision application that creates more than 20 lots, the applicant is required to demonstrate that the sub-precinct dwelling target ranges shown in Figure 36 and Table 4 can be achieved.

2. Subject to agreement of Council and consultation with relevant landowners, dwelling yields may be 'traded' between sub-precincts as long as it meets overall targets and objectives of Penrith DCP.

Table 4: Dwelling target ranges

Stage	Dwelling Target
Sub – Precinct A1 – A4	128 – 142
Sub – Precinct B1 – B10	181 – 313
Sub – Precinct C1 – C7	153 – 169

Figure 36: Minimum dwelling target plan



10.2 Subdivision

Objectives

a) To provide a range of densities, lot sizes and dwelling types to foster a diverse community and interesting streetscapes.

b) To ensure that all residential lots achieve a high level of amenity.

c) To ensure that development on smaller lots is undertaken in a coordinated manner.

Controls

1. All applications for Torrens title subdivision proposing residential allotments:

   i. On land identified at Figure 37 or

   ii. With a site area of less than 235m2 and with a lot width of less than 8m (as measured at the front facade line): are to be accompanied by plans for the proposed dwellings on those lots (i.e. an Integrated Housing Development Application). The minimum number of

allotments within an 'integrated housing development' is generally to be 3, except where indicated on Figure 37.

Note: For the purposes of determining the width of an allotment, the front facade line is defined as being 3m from the front, street boundary alignment.

2. For residential allotments with a width greater than or equal to 8m (measured at the front facade line), the subdivision application must include a Building Envelope Plan (see example illustrating guiding principles at Appendix A). The Building Envelope Plan is to:

    i. Demonstrate that an appropriate built form and residential amenity can be delivered on the allotment in compliance with the relevant provisions of Penrith DCP.

    ii. Nominate elements such as front and side building setbacks, the location of zero lot lines, the preferred locations of private open space and garages and specific fencing requirements.

    iii. Nominate the minimum yield required of any 'super-lot' and / or for residual Integrated Housing Development Application sites.

    These restrictions will be approved as part of the subdivision application and are to be complied with by any future application proposing a dwelling on that lot.

3. The location of the zero lot line is to be determined with regard to allotment orientation and the ability to achieve with solar access provisions within Penrith DCP. Where a zero lot line is nominated on allotment on the Building Envelope Plan, the adjoining allotment is to include a 900mm easement for maintenance of the boundary wall (and any services along the side of the dwelling/garage) on the adjoining property. No overhanging eaves or the like will be permitted within the easement. The s88B instrument supporting the easement is to be worded so that Council is removed from any dispute resolution process between adjoining allotments.

4. For residential development within the R1 General Residential zone (except for residential flat buildings):

    i. The lot depth is generally to be between 25m and 30m and

ii. The minimum lot width is 4.5m (for attached dwellings/semi-detached dwellings) and 8m for dwelling houses).

Note: Variations to (4) are permitted where it is part of an 'Integrated Housing Development Application' and the applicant can demonstrate that a good level of residential amenity can be achieved to both the proposed dwellings and adjacent properties.

5. Residential allotments should be rectangular and be oriented to facilitate siting of dwellings and private open space to take advantage of winter solar access and summer sun deflection. The use of battle-axe lots is to be avoided where possible.

Figure 37: Sites that are to be undertaken as Integrated Housing Development Applications



10.3 Building envelopes

Objectives

a) To encourage the efficient use of land and a compact urban environment.

b) To create attractive and cohesive streetscapes.

c) To respect the curtilage of and view corridors associated with Thornton Hall.

d) To manage impacts of development on neighbouring properties in regard to privacy, and overshadowing.

e) To ensure building heights achieve built form outcomes that reinforce quality urban and building design.

Controls

1. The maximum number of storeys for residential development is shown at Figure 38.

2. For all residential development (excluding residential flat buildings), the floor area of the third storey is to be no more than 60% of the second storey.

3. The location and siting of the third storey is to ensure adequate solar access and privacy for the lot and adjacent residential lots.

4. Development adjacent to a laneway (i.e. ancillary dwelling) is to be no more than 2 storeys.

5. A minimum floor to ceiling height of 2.7m is to be provided for all ground floor living spaces.

Figure 38: Maximum building height plan (storeys)



6. The maximum depth of a dwelling (exclusive of roofs and privacy screens etc) is:

    i. 15m for the second storey (identified as L2 on Figure and Figure 39)

    ii. 12m for any third storey component of a dwelling (identified as L3 on Figure and Figure 39).

7. The maximum depth of an ancillary dwelling (exclusive of roofs and privacy screens etc.) from the rear boundary is 8m.

8. Front setbacks for residential development within the R1 General Residential Zone (except for residential flat buildings) are (see Figure and Figure 39):

    i. Between 3m and 4.5m (to the front facade line), except on the western side of H1 (Thornton Hall heritage carriageway) where the front setback from the boundary line is to accommodate tree retention and access driveway

    ii. A minimum 5.5m (and a minimum 1m behind the front facade line) for the garage

    iii. 0m to the secondary street (for a corner allotment) except for the first 7m of allotment which to be setback at 2m to accommodate the articulation zone requirements at Section 10.4 Building Design and Articulation (see Figure and Figure 39).

9. The rear setback for the ground floor level of a dwelling is 0.9m. This does not apply to garages and ancillary dwellings adjacent to a rear lane which may be built to the rear boundary. A rear setback of 3m is required for all allotments that back onto the existing residential allotments fronting Lemongrove Road and for Block C3.

10. The minimum side and rear setback requirements for residential development within the R1 General Residential Zone (except for residential flat buildings) are to be consistent with Table 5 below. Projections permitted into side and rear setback areas include sun hoods, gutters, down pipes flues, light fittings and electricity or gas meters, rainwater tanks and hot water units and the like.

Table 5: Minimum side and rear setbacks

Dwelling Type	Minimum Side and Rear Setbacks

Ancillary Dwellings	0m on both sides 0m to rear lane
Multi-unit housing, attached dwellings	0m on both sides
Semi-detached dwellings	0m to one side 0.9m to one side
Dwelling houses (lots <8m wide)	0m on both sides
Dwelling houses (lots 8m wide and greater	0m to one side 0.9m to one side – except for where permitted by (11) below

11. Despite the requirements of Table 5, dwelling houses on allotments that back onto existing residential allotments fronting Lemongrove Road, shall achieve:

    i. A minimum 4m setback at the ground level

    ii. A minimum 6m setback at the upper level.

12. Despite the requirements of Table 5, zero setbacks on both side boundaries for ancillary dwellings and dwelling houses are permitted where the following conditions apply:

    i. The dwellings are designed in a coordinated manner so as to ensure compliance with the relevant controls within Penrith DCP, in particular, the private open space, privacy and solar access provisions

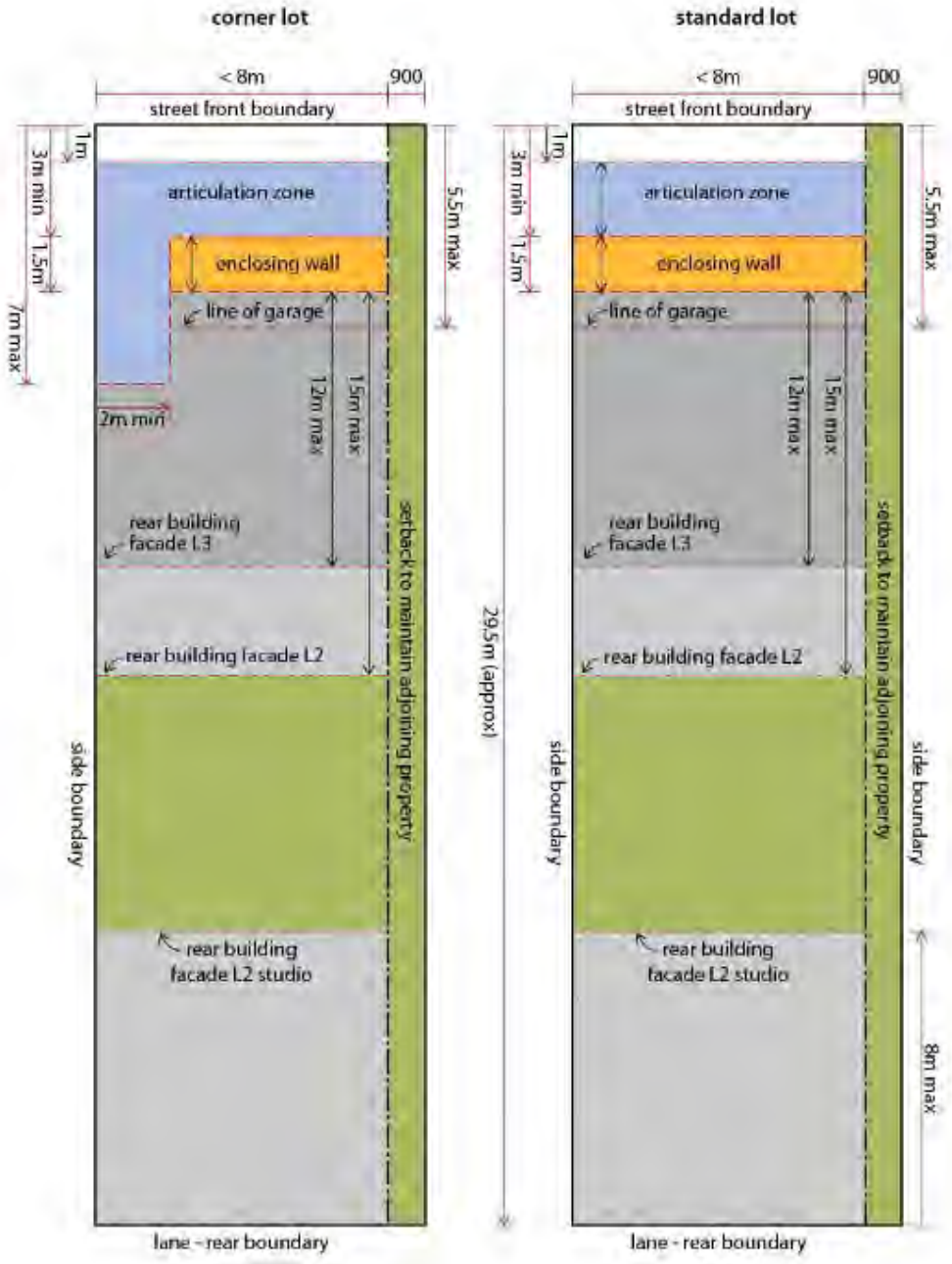
    ii. Construction of adjoining dwellings is undertaken either concurrently or sequentially

    iii. Reciprocal maintenance easements are included on adjoining allotment title (as per control 10.2(3)).

    iv. Compliance with the relevant aspects of the Building Code of Australia.

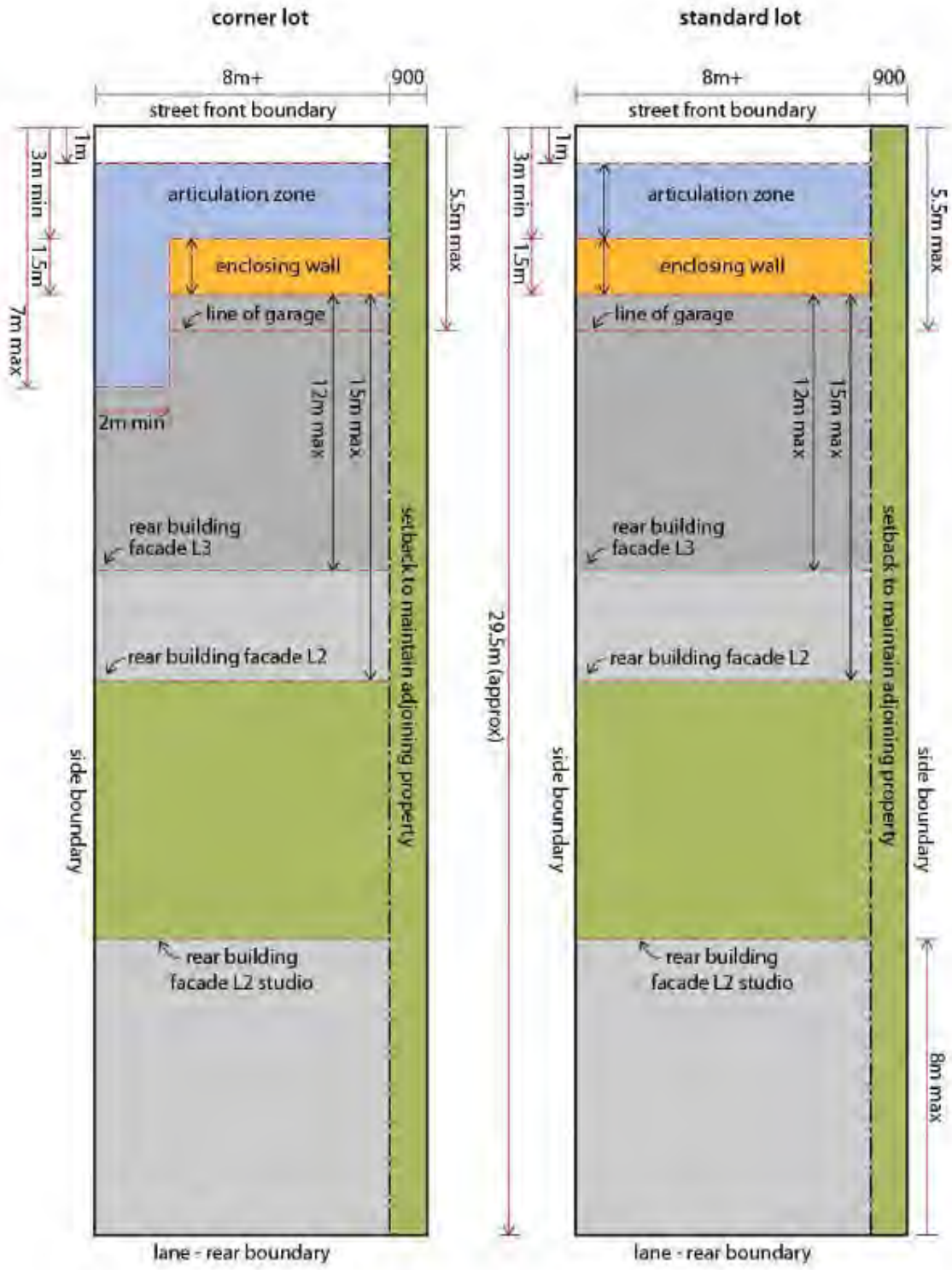
13. Where a studio loft above a garage straddles a property boundary, the central maintenance setback is not required. Appropriate arrangements for maintenance are to be included within the stratum lot title for the studio loft.

Figure 40: Front and rear setback requirements, standard and corner lots (left), less than 8m wide



14. Variations to the building envelope controls contained within Section 10.3 are permitted where it is part of an 'Integrated Housing Development Application' and the applicant can demonstrate that a good level of residential amenity can be achieved to both the proposed dwellings and adjacent properties.

Figure 39: Front and rear setback requirements, standard and corner lots (left), 8m+ wide



10.4 Building design and articulation

Objectives

a) To ensure that buildings are designed to enhance the existing and future desired built form and character of the neighbourhood.

b) To create an attractive and cohesive streetscape through the provision of simple and articulated building and roof forms.

Controls

1. Particular attention is to be paid to the design quality of the front facade of a dwelling. An articulation zone is to be provided in front of the front facade line as illustrated at Figures 40 and 41. The articulation zone:

    i. Is to be setback at least 1m from the front boundary.

    ii. Must extend at least 7m from the front boundary line along the secondary street frontage (for corner allotments).

    iii. May extend over 2 storeys (for 2 and 3 storey development).

2. The front articulation zone should include at least 1 primary element or 2 secondary elements from the list below. The minimum depth for a secondary element is 500mm.

Table 6: List of elements in the front articulation zone

Primary Elements	Secondary Elements
Verandah/Porch	Entry feature or porticos
Balcony (including upper level balcony over garage door)	Awnings or other features over windows
Pergola	Eaves and sun shading
	Window box treatment
	Recessed or projecting architectural elements
	Bay windows

3. For corner allotments the articulation zone is to be a minimum depth of 2m from the primary and secondary frontages and may include either primary and/or secondary elements as listed above.

4. For allotments located on the southern, eastern and western side of a street, the articulation zone may be designed to incorporate private open space, including principal private open space.

5. Consideration should be given to expressing the third storey of a dwelling in a lighter weight manner than the structure below, through the use of material and colours and the like.

6. Eaves are to provide sun shading, to protect windows and doors and provide aesthetic interest. Subject to 10.2(3), eaves should have a minimum of 600mm overhang (measured to the fascia board). Council will consider alternative solutions to eaves so long as they provide appropriate sun shading to windows and display a high level of architectural merit.

7. Building colours, materials and finishes are to be consistent the Residential Design Palette included at Appendix B.

8. Multi-coloured roof tiles are not permitted.

10.5 Private open space and landscaping

Objectives

a) To provide a high level of residential amenity with opportunities for outdoor recreation and relaxation within the property.

b) To enhance the spatial quality, outlook, and usability of private open space.

c) To facilitate solar access to the living areas and private open spaces.

Controls

1. Each dwelling is required to be provided with an area of Private Open Space (POS) and Principal Private Open Space (PPOS) consistent with Table 7 below.

Table 7: Private Open Space requirements

Dwelling Type	Lot Width*	Private open space	Principal private open space
Studio Loft		• Studio and 1 bedroom: 4m^2 and minimum dimension 1m	N/A

		• 2+ bedroom: 8m^2 and minimum dimension 1m	
Multi-unit housing, attached and semi-attached dwellings and dwelling houses	<6m	Minimum 20% of the site area and minimum dimension of 2m	16m^2 and minimum dimension of 3m
	6-10m	Minimum 20% of the site area and minimum dimension of 2m	18m^2 and minimum dimension of 3m
	10m+	Minimum 20% of the site area and minimum dimension of 2m	24m^2 and minimum dimension of 4m

* measured at the Front Facade Line

2. The location of PPOS is to be determined having regard to allotment orientation, dwelling layout, adjoining dwellings, landscape features, and the preferred locations of PPOS illustrated at Figure 42. Where an allotment is located on the southern, eastern and western side of a street, the PPOS must not be provided exclusively within the front of the allotment between the dwelling and the primary street frontage, but may take the form of a garden court, verandah or balcony within the side and/or rear setback. PPOS located in the front of a dwelling must be useable and adjacent to a living space.

3. Where the PPOS is a balcony or roof top area, it must be provided with a fence or landscaped screen at least 1m in height, and be directly accessible from a habitable room.

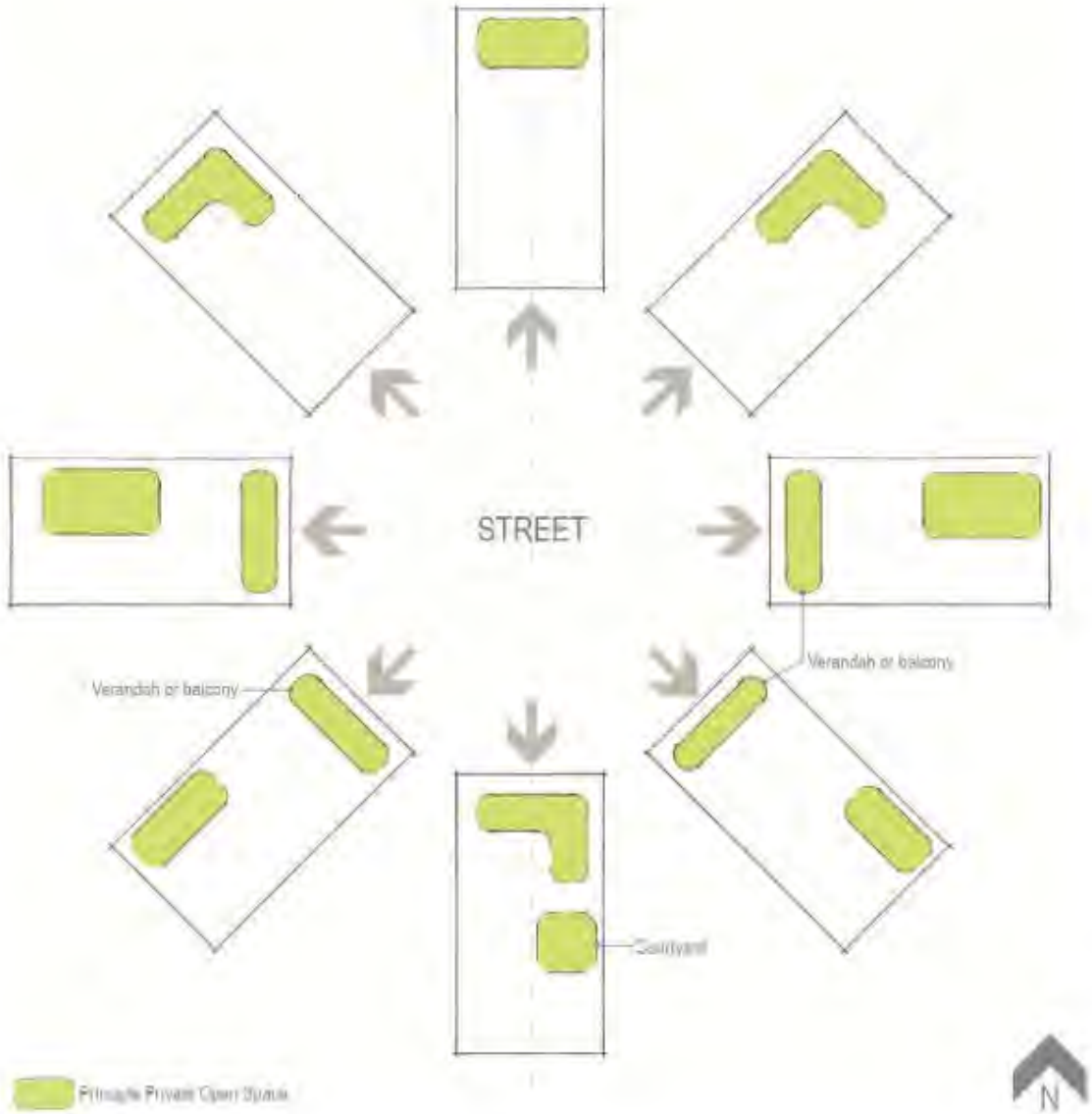
4. The POS of the studio loft is to be located and designed so as to minimise visual and acoustic privacy impacts upon the principal dwelling and its associated POS.

5. The majority of dwellings within any given Development Block should receive at least 2 hours of sunlight between 9am and 3pm at the winter solstice (21 June) to 50% of the required PPOS of both the proposed development and the adjoining properties.

6. Despite control 10.5 (5) above, where an integrated housing development application is proposed, a minimum 70% of the dwellings proposed by that application should receive at least 2 hours of sunlight between 9am and 3pm at the winter solstice (21 June).

7. The first 1m of a site, measured from the front boundary, (excluding driveways, footpaths etc.) is to be soft landscaped. Landscaping within the front yard is to comprise species from the Residential Design Palette included at Appendix B.

Figure 40: Private Open space location principles



10.6 Fencing

Objectives

a) To enhance the quality of the streetscape through consistent and co-ordinated front fencing.

b) To define the public and private domain and provide a sense of enclosure to the front yard.

c) To ensure boundary fencing is of a high quality and does not detract from the streetscape.

Controls

1. Front fencing is required for all residential allotments. Front fencing is to:
    i. Be between 700mm and 1.2m high (including feature elements),
    ii. Be generally open in design and may comprise a solid component that is no higher than 700mm,
    iii. Extend along the side boundaries to the front facade line (or at least 1m behind the front facade line for dwelling houses),
    iv. Extend along the secondary street frontage to match the length of the articulation zone, and
    v. Are not to impede safe sight lines for pedestrians and / or traffic.
2. The design, materials and colour of front fencing is to be consistent with the Residential Design Palette included at Appendix B.
3. Where a dwelling is located adjacent to open space, boundary fencing is to be of a high quality material and finish. Articulated post and paling fences (with exposed posts) are preferred in these locations. The design of the fencing is to permit casual surveillance of the open space and provide the dwelling with outlook towards the open space.
4. Timber paling or lapped / capped fencing only can be used internally between allotments. No sheet metal fencing is permitted within the project.

10.7 Garages, site access and parking

Objectives

a) To provide a level of residential parking appropriate for the precinct's location, in close proximity to Penrith Railway Station.

b) To reduce the visual impact of garages, carports and parking areas on the streetscape and improve dwelling presentation.

c) To ensure the design of garages do not dominate the frontage of the dwelling.

Controls

1. The parking rates provided in this Section override the parking rates outlined in the Transport, Access and Parking Chapter of Penrith DCP.

2. The maximum parking rates for multi-unit housing, attached and semi-detached dwellings and dwelling houses are:

    i. 1-2 bedroom: 1 space per dwelling.

    ii. 3+ bedroom: 2 spaces per dwelling.

3. All visitor parking is to be provided on-street.

4. The garage arrangement is to be consistent with Figures 43 and 44 in that:

    i. Vehicle access for lots with rear lane access should only be via the rear lane

    ii. For lots less than 8m wide, all garaging is to be accessed from the rear lane (if rear loaded). If there is no rear laneway, a single / tandem garage is permitted at the front

    iii. For lots between 8m and 12m wide, garaging may comprise a single / tandem front loaded garage or a rear loaded, double / tandem garage

    iv. For lots greater than 12m wide, garaging may either comprise a double front loaded garage or a rear loaded, double / tandem garage.

    Note: For the purposes of determining the width of an allotment, the front facade line is defined as being 3m from the front, street boundary alignment.

5. The maximum width of a garage door is 3.2m and 6m for single/tandem and double garages respectively. Where a studio loft is included, its own garage or carport requires access from the rear lane.

6. Carports and garages are to be treated as an important element of the dwelling facade and interface with the public domain. They are to be integrated with and complementary, in terms of design and material, to the dwelling design. Garage doors are to be visually recessive through use of materials, colours, overhangs and the like.

7. The location of driveways is to be determined with regard to dwelling design and orientation, street gully pits and tree bays and is to maximise the availability of on-street parking.

8. All parking and driveway access is to comply with AS 2890.1 – 2004.

Figure 41: Garage location principles (<8m and 8-12m wide lots)

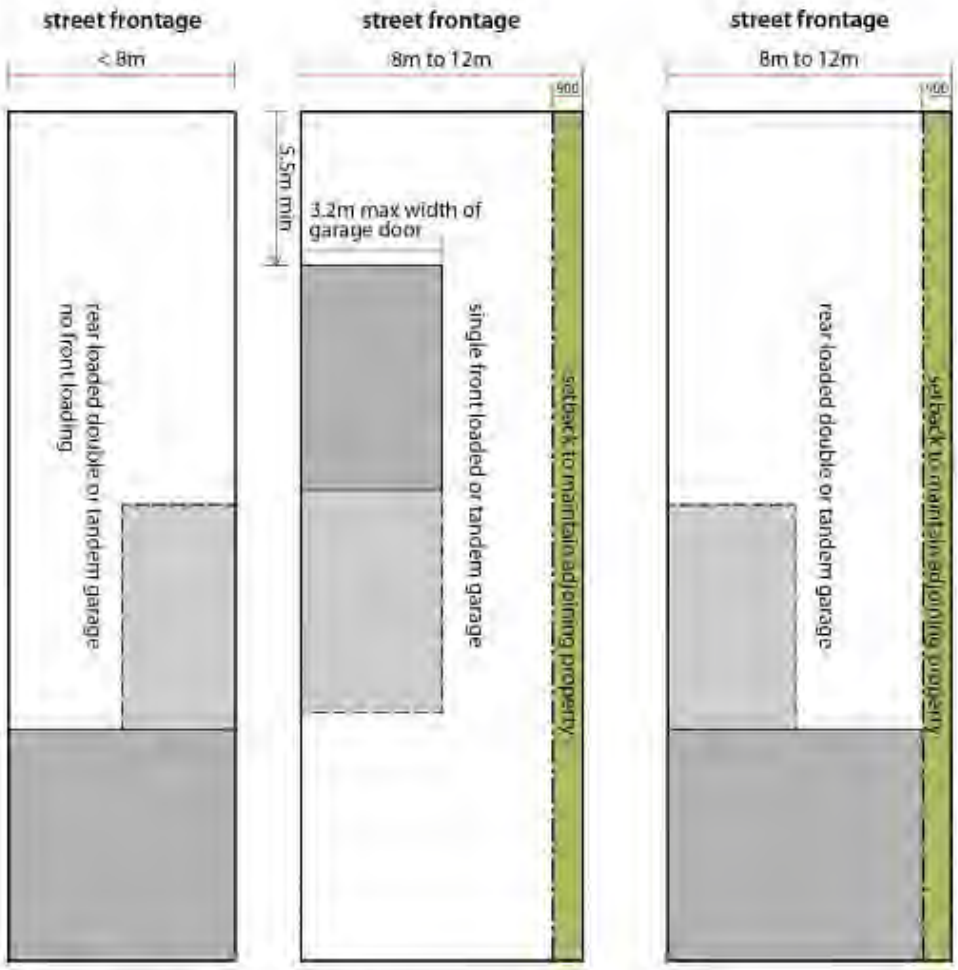
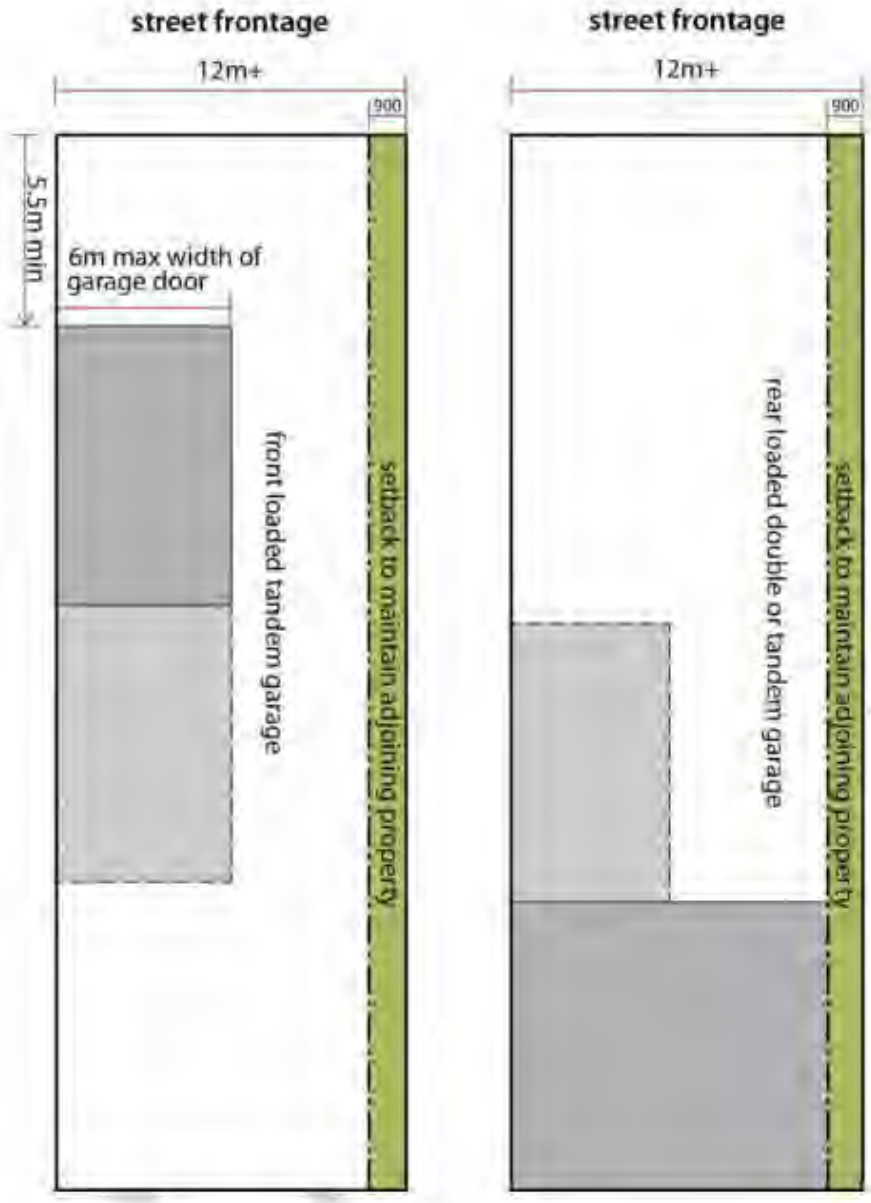


Figure 42: Garage location principles (12m+ wide lots)



10.8 Visual and acoustic amenity

Objectives

a) To ensure buildings are designed to achieve the highest possible levels of visual and acoustic privacy.

b) To protect visual privacy by minimising direct overlooking of habitable rooms and private open space.

c) To contain noise within dwellings and minimise the intrusion of noise from outdoor areas.

Controls

1. Direct overlooking of main habitable areas and private open spaces of adjacent dwellings should be minimised through building layout, window and balcony location and design, and the use of screening devices, including landscaping.

2. Habitable room windows with a direct sightline to the habitable room windows in an adjacent dwelling within 3m are to:

    i. Be obscured by fencing, screens or appropriate landscaping, or

    ii. Be offset from the edge of one window to the edge of the other by a distance sufficient to limit views into the adjacent window, or

    iii. Have sill height of 1.5m above floor level, or

    iv. Have fixed opaque glazing in any part of the window below 1.5m above floor level.

3. A screening device is to have a maximum of 25% permeability to be considered effective.

4. The design of attached dwellings must minimise the opportunity for sound transmission through the building structure, with particular attention given to protecting bedrooms and living areas.

5. In attached dwellings, bedrooms of one dwelling are not to share walls with living spaces or garages of adjoining dwellings, unless it is demonstrated that the shared walls and floors meet the noise transmission and insulation requirements of the Building Code of Australia.

6. Residential development in close proximity to the railway corridor, Coreen Avenue, the east and west sides of the Boulevard, the upgraded commuter car park and those flanking the entry road from Coreen Avenue to the commuter car park, are to include design measures so as to achieve the following internal noise levels at these residences:

    i. A target internal noise level of 35 dB(A) LAeq is to apply in the sleeping areas

    ii. A target internal noise level of 40 dB(A) LAeq in other living areas.

10.9 Specific provisions – key sites

Objectives

a) To provide additional guidance with respect to the urban design outcomes sought for key sites within the precinct.

b) To promote development that results in a high quality public and private domain interface, in particular, the streetscape appearance of development.

Controls

Development on the key sites nominated at Figure 43 is to achieve the desired outcomes specified below.

Figure 43: Specific Provisions for key sites



Entry Boulevard Lots

1. A minimum building height of 2 storeys is required for all lots. A third storey is preferred on corner lots.

2. Dwelling facades are to display high quality materials and finishes consistent with the Residential Design Palette (Appendix B).

3. Despite Section 10.7 Garages, site access and parking, all garaging is to be from the rear lane.

4. Front fencing is to generally consistent and assist in unifying the streetscape.

'Dress Circle' Park Lots

5. A building height of 3 storeys is encouraged for all dwellings (except for ancillary dwellings).

6. A high level of consistency of built form and massing is required across the dwelling frontages to achieve a harmonious streetscape and a strong urban edge to the oval.

7. Buildings are to take advantage of the location overlooking the oval with front balconies and terraces.

8. Dwellings are to display high quality materials and finishes consistent with the Residential Design Palette (Appendix B).

9. Identical facades are to be limited to no more than 4 dwellings in a row.

10. Despite Section 10.7, all garaging is to be from the rear lane.

Innovation Lots

11. Housing is to demonstrate how compact, affordable dwellings can achieve a high level of internal amenity.

12. Dwellings are to be single or double storey and may include 0m side and rear setbacks.

Canal Edge Lots

13. A minimum building height of 3 storeys is encouraged for all residential dwellings (except for ancillary dwellings).

14. Building form and massing is to create a strong consistent edge to the canal.

15. Entrances stairs to dwellings off the canal walk are to be paired together.

16. The ground floor level and front yard / private open space of the dwellings is to be raised above the level of the pedestrian boardwalk to provide privacy for the dwellings.

17. Detailing of front fencing and landscaping (fronting the canal) is to balance privacy and surveillance issues. The front fencing treatment is to be of high quality and consistent along the full length of the canal frontage.

18. The dwelling facades are to display high quality materials and finishes consistent with the Residential Design Palette (Appendix B).

19. Buildings are to take advantage of the location overlooking the canal and include high levels of glazing and front balconies and terraces.

20. Despite Section 10.7, all garaging is to be from the rear lane.

Opportunity Site

21. Buildings envelopes are to provide a legible and permeable development pattern.

22. The Opportunity Site may accommodate a variety of land uses, in addition to residential, such as commercial office, institution, education uses or the like, adjacent to the Village Centre, which is .

23. Non-residential uses fronting the canal should address the canal with semi-active uses.

24. The road and block pattern within the site may vary in response to alternative uses.

25. Building heights (of up to 6 storeys) are permitted for uses on the Opportunity Site.

26. A range of retail, business, and commercial premises should be provided at the ground level to activate the street frontages within the Opportunity Site.

27. Development within the Opportunity Site should promote pedestrian activity and cycling and provide facilities for pedestrians and cyclists.

10.10 Specific provisions – residential flat buildings

Objectives

a) To establish high quality residential flat developments that have a good level of amenity.

b) To provide additional guidance with respect to the urban design outcomes for residential flat buildings in the precinct.

Controls

1. Residential flat development is to be generally consistent with the guidelines set out within State Environmental Planning Policy (Housing) 2021 and the development controls in the table below. If there is any inconsistency, the development controls below prevail.

2. In addition, the parking rates provided in Table 8 override the parking rates outlined in the Transport, Access and Parking Chapter of Penrith DCP.

Table 8: Development Controls for Residential Flat Buildings

Element	Control
Minimum Lot Size	650m^2
Maximum Building Height	Maximum 6 storeys, except for Block C3 which is 3 storeys
Maximum car parking rates	Studio: 0.5 spaces per dwelling 1 – 2 bedroom: 1 space per dwelling 3+ bedrooms: 2 spaces per dwelling Visitor parking on street

3. Development on the residential flat development sites nominated at Figure 44 is to achieve the desired outcomes specified below.

   Note: Residential flat buildings may occur on sites other than those nominated at Figure 44.

Figure 44: Sites nominated for key residential flat development



Blocks A1 – A6

4. Front buildings onto streets with active uses where possible.

5. A range of retail, business, and commercial premises should be provided at the ground level to activate the street frontages within the Opportunity Site particularly.

6. Development is to include or facilitate public pedestrian/cycle connections. Public access and connections to public access is to be provided at development application stage. A staging plan showing how the proposed development will connect to the public access should be provided with each development application.

7. The ground floor level and front yard / private open space of the dwellings is to be raised above the level of the canal / street to provide privacy for the dwellings.

8. Buildings are to take advantage of the location overlooking the canal and oval with front balconies and terraces.

9. Parking should be screened from the street and canal interfaces. Underground parking is preferred.

10. Block A2 should include a ground floor cafe/neighbourhood shop adjacent to the oval.

11. Streets and lanes are to:

    i. Be clear and direct throughways for pedestrians with paving finishes, lighting etc. that are appropriate for a pedestrian route.

    ii. Provide public access at all times.

    iii. Have signage indicating public accessibility.

Blocks T3 – T5

12. Residential uses at ground floor should be designed as 'live/ work' spaces.

13. The residential component is to be consistent with relevant controls in Section 11 The village Centre.

Block C3

14. Existing highlighted trees identified at Figure 45 are to be retained.

15. No excavation or disturbance of area around the trees identified in Figure 47.

16. The site is to be retained as whole and not re-subdivided (except for strata or community title). The trees are to be retained in common property.

17. Boundary fencing with Open Space (OS2) is to be transparent of high quality materials.

Figure 45: Block C3 tree retention



10.11 Specific provisions – ancillary dwellings

Objectives

a) To encourage a diversity of affordable housing product.

b) To provide housing and accommodation options for a range of family types and age groups.

c) To promote innovative housing solutions compatible with the surrounding residential environment.

d) To provide passive surveillance of rear lanes and shared driveways.

e) To encourage the use of studios over garages to provide surveillance, work from home or residential accommodation opportunities.

Controls

1. Subdivision applications that involve the creation of a laneway are to nominate the preferred location of an ancillary dwelling so as to comply with the generally controls with the indicative controls provided at Appendix A and achieve an acceptable degree of passive surveillance within the laneway. The preferred locations for ancillary dwellings are shown at Figure 48.

2. Ancillary dwelling development is to be consistent with the controls in the table below.

3. The parking rates provided in this Section override the parking rates outlined in the Transport, Access and Parking Chapter of Penrith DCP.

Table 9: Controls for ancillary dwellings

Element	Control
Setbacks	0m to sides and laneway
Maximum building height	2 storeys (i.e. 1 floor above garage)
Private Open Space (required for studio lofts only)	Studio and 1 bedroom: 4m2, minimum dimension 1m 2 or more bedroom: 8m2, minimum dimension 1m
Maximum car parking	Secondary Dwellings: 0 spaces Studio lofts: 1 space

4. The design and layout of studio lofts is to minimise overlooking and overshadowing of the private space of the principal dwelling and any adjacent dwellings.

5. Strata title subdivision of a studio loft into a separate allotment will be permissible only where the following are provided:

    i. Appropriate private open space.

    ii. Separate pedestrian access.

    iii. One on-site car parking space.

    iv. Separate services for mail delivery and waste collection, and an on-site garbage storage area which is not visible from public street.

v. Separate connections and metering for utilities.

vi. Compliance with the Building Code of Australia.

Figure 46: Preferred location of ancillary dwellings



11. The village centre

11.1 Built form controls

For the purposes of this Part, the Village Centre is all land that is zoned B4 Mixed Use.

Objectives

a) To encourage a vibrant and active mixed use village centre and cater for the needs of the North Penrith residents.

b) To create an urban village environment that is complementary to its location near the Penrith City Centre and the Penrith Railway Station.

c) To provide the opportunity to accommodate a large format commercial and / or education use as part of the Village Centre.

d) To provide consistent streetscapes through control of the built form visible from the public domain.

e) To ensure developments are safe and secure for pedestrians and contribute to the safety of the public domain.

f) To provide shelter from sun, wind and rain for public streets where most pedestrian activity occurs.

g) To ensure buildings and places are accessible to people with a disability.

h) To ensure that all signage and advertising achieves a very high level of design quality in terms of graphic design, its relationship to the architectural design of buildings and the character of streetscapes.

i) To ensure buildings achieve a high level of environmental sustainability.

Controls

1. The location of preferred land uses within the Village Centre is to be generally consistent with the Figure 47. The nominated 'Opportunity Site' may be developed for commercial, educational uses and the like should the demand arise.

2. Building heights with the Village Centre are to be a minimum of 2 storeys, excluding the supermarket, and a maximum of 6 storeys.

3. The ground floor of all mixed-use buildings is to have a minimum floor to ceiling height of 3.6m in order to provide for flexibility of future use. Above ground level, minimum floor to ceiling heights are 3.3m for commercial office, 3.6m for active public uses, such as retail and restaurants, and 2.7m for residential.

4. Building setbacks / build-to lines within the Village Centre are to be consistent with Figure . Buildings are generally to be built to the street/square alignment. No upper level setbacks are required.

Figure 47: Village Centre location of preferred land uses



Figure 50: Village Centre build to lines



5. Building frontage types within the Village Centre are to be generally consistent with Figure 48 and Figure 49 and Table 10 below.

Table 10: Building frontage characteristics

Frontage Type	Characteristics
Village Square colonnade	• Continuous and consistent frontage treatment around the Village Square required with linkage to railway station entrance. • May be in the form of a colonnade, posted verandah or similar structure. • Minimum height of 8m to the top of the colonnade. • Must extend over 2 storeys with a minimum clear depth of 3m and height of 3.6m (at ground level).
Awnings	• Continuous and intermittent awnings required as per Figure 52. • To be solid element (not glazed), at an angle of 900 to the wall (i.e. not angled upwards) • May be cantilevered or suspended • Dimensions: o Min. 3m deep (to allow street trees etc.); o Min. soffit height of 3.2m and max of 4m; o Low profile, with slim vertical fascias or eaves (generally not to exceed 300m). • To be designed to match building facades and be complementary to those of adjoining buildings • Awnings to wrap around corners where a building is sited on a street corner • Vertical canvas drop blinds may be used along the outer edge of awnings. • Provide under awning or wall mounted lighting to facilitate night use and to improve public safety • One under-awning sign may be attached to the awning, at minimum intervals of 6m of the awning frontage

	• Temporary/pull down awnings permitted on intermittent awnings frontage.
Shelter to car park	• To provide continuous weather shelter between Village Square and the car park. • May be cantilevered or suspended with a min height of 3.2m. • Is to be well lit and publicly accessible at all times.

Figure 48: Village Centre frontage types

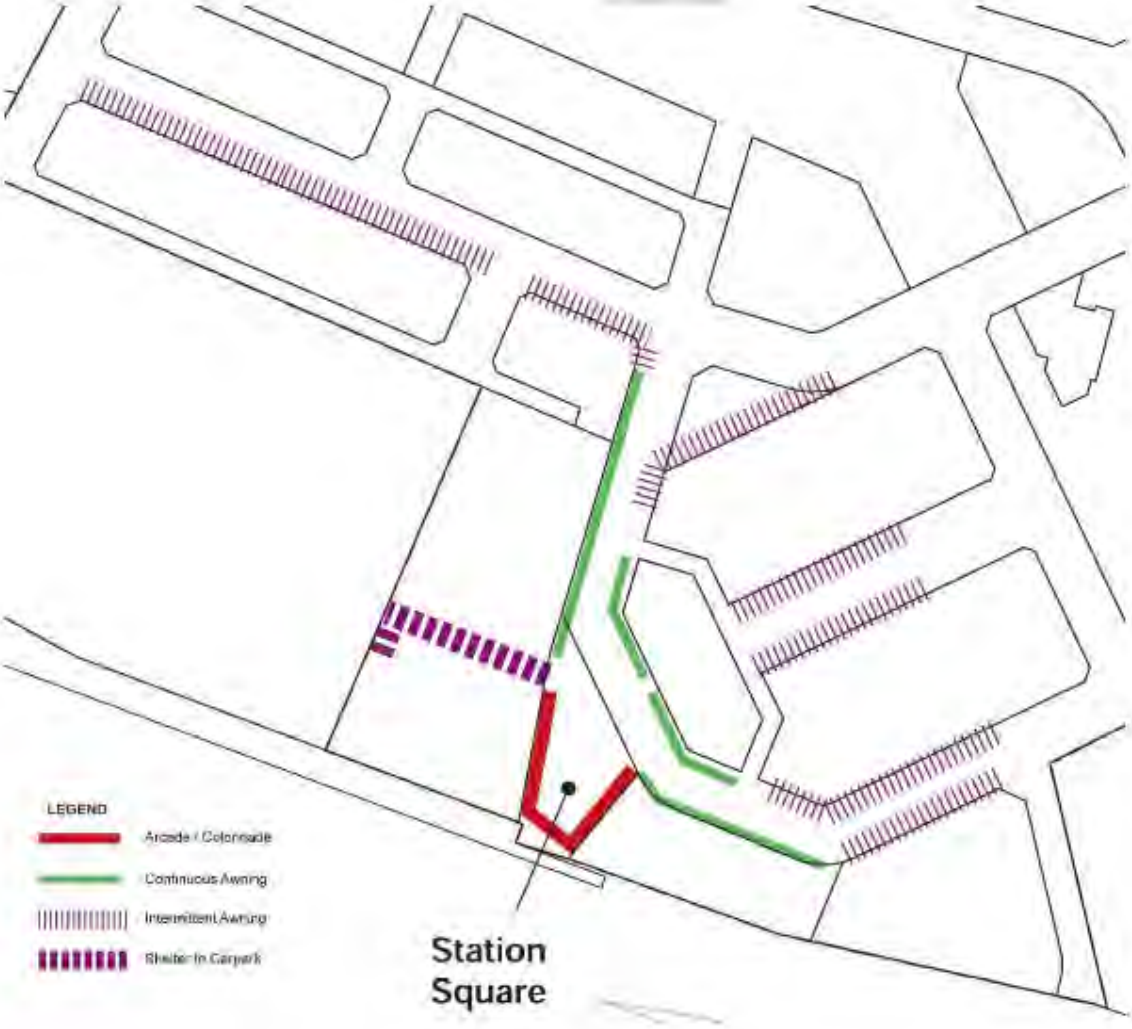
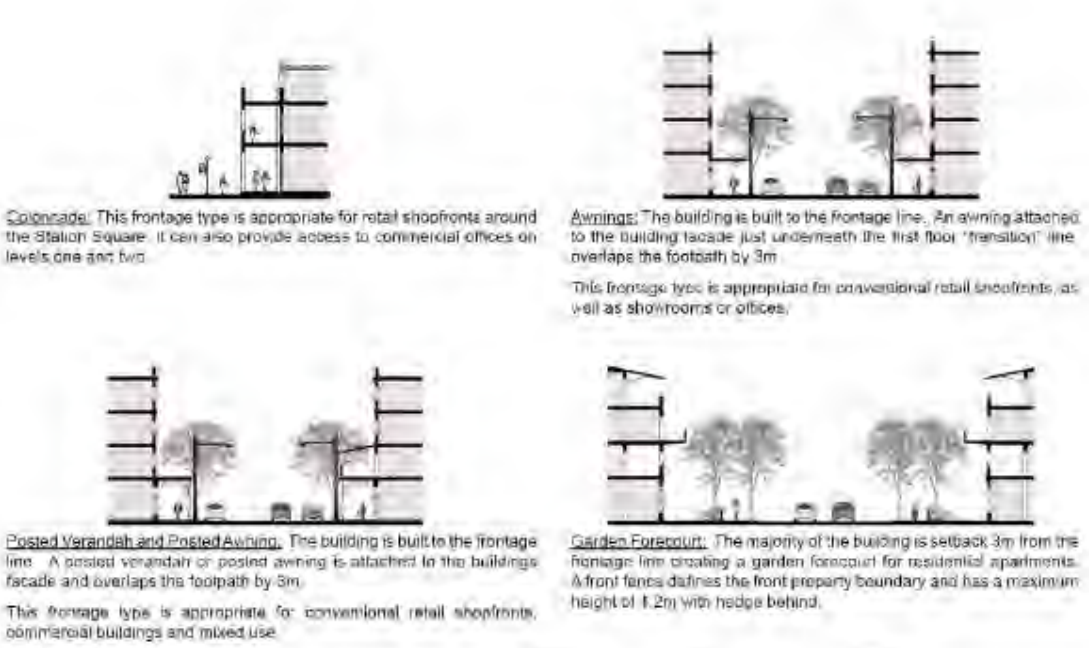


Figure 49: Examples of different frontage types within the Village Centre



6. Street frontages are required at ground level of buildings as shown at Figure 50 and Table 11 below.

Table 11: Street frontage requirements

Street Frontage Type	Characteristics
Active	• Retail shop fronts and entries. • Cafe / restaurants with direct access to the street.
Semi-active	• Active street frontage uses • Glazed entries to commercial and residential lobbies occupying less than 50% of the street frontage, to a maximum of 12m frontage. • Active office uses, such as reception, if visible from the street. • Public building if accompanied by an entry.
Street address	• Active and semi-active street frontage uses • Residential entries, lobbies, and habitable rooms with clear glazing to the street not more than 1.2m above street level, and does not include car parking areas

Figure 50: Village Centre active frontages plan



7. Main building entry points should be clearly visible from primary street frontages and enhanced as appropriate with awnings, building signage or high quality architectural features that improve clarity of building address and contribute to visitor and occupant amenity.

8. Mixed use buildings within the Village Centre are to:

    i. Provide direct 'front door' access from ground floor residential units

    ii. Provide clearly separate and distinguishable commercial and residential entries and vertical circulation

    iii. Provide multiple entrances for large developments including an entrance on each street frontage.

9. To facilitate the future conversion of ground floor residential uses to non-residential uses, the s88B instrument is to include a provision stating that the body corporate is not to unreasonably restrict or limit the ability for such a conversion to occur.

10. The design and provision of facilities for persons with a disability including car parking must comply with Australian Standard AS 1428 Parts 1 and 2 (or as amended) and the Commonwealth Disability Discrimination Act 1992 (as amended). A report from an accredited access consultant is to be submitted with a development application (where relevant), indicating the proposal's compliance.

11. The solid to void ratio is to be generally 60/40 for above ground levels. External materials and finishes:

    i. Should be constructed of high quality and durable materials and finishes with 'self-cleaning' attributes (e.g. face and rendered brickwork, stone, concrete and glass).

    ii. Consider the views/appearance from the commuter car park and the railway line.

    iii. Maximise glazing for retail uses at ground level.

    iv. Avoid large expanses of blank walls.

    v. Are not to include highly reflective finishes and curtain wall glazing above ground floor level.

12. The design of roof plant rooms and lift overruns is to be integrated into the overall architecture of the building, and in residential buildings may be screened by roof pergolas.

13. As part of the first major retail/commercial development within the Village Centre, a signage strategy is to be prepared and submitted for approval and is to:

    i. Identify the preferred locations and quantum of all building identification and advertising signage.

    ii. Include a palette of preferred materials, signage types and graphic style.

    iii. Outline proposed illumination requirements so as to consider its impact on future, nearby residential uses.

    iv. Promote a high quality, co-ordinated approach to signage within the Village Centre and minimise visual clutter.

    v. Include details of any way finding signage.

Proposed signage within future development is to be consistent with the approved signage strategy.

14. Non-residential developments including mixed-use developments with a construction cost of $1 million or more are to demonstrate a commitment to achieving no less than 4 stars under Green Star and 5 stars under the Australian Building Greenhouse Rating system.

15. All dwellings, including those dwellings in a mixed-use building and serviced apartments which are intended to be or are capable of being strata titled, are to demonstrate compliance with the BASIX provisions within State Environmental Planning Policy (Sustainable Buildings) 2022.

16. For commercial buildings that will be accommodating 'general office areas', the target internal noise level is to be 40 dB(A) LAeq.

11.2 Access, parking and servicing

Objectives

a) To provide an appropriate level of on-site parking consistent with the principles of transit oriented development.

b) To support the complementary use and benefit of public transport and non-motorised modes of transport such as bicycles and walking.

c) To provide adequate space for parking and manoeuvring of vehicles (including service vehicles and bicycles).

d) To reduce the impact of vehicular access on the public domain.

Controls

1. The parking rates provided in this Section override the parking rates outlined in the Transport, Access and Parking Chapter of Penrith DCP.

2. Maximum parking rates are to be in accordance with Table 12. The preferred location of and access to car parking within the Village Centre is shown at Figure 54.

Table 12: Parking rates

Development Type	Maximum Car Parking Rate
Commercial / Retail	1 space per 50m2 GFA*
Supermarket	1 space per 26m2 GFA
Residential Studio 1 – 2 bedrooms 3 + bedrooms Visitors Car wash bay	 • 0.5 spaces per dwelling • 1 space per dwelling • 2 spaces per dwelling • On-Street only • 1 space for car washing for every 50 units up to a maximum of 4 spaces per building.
Other uses	In accordance with the Transport, Access and Parking Section of this DCP.

* A minimum of 1space per 75m2 GFA is required for all commercial / retail uses

3. Accessible car spaces should be in accordance with the Access to Premises Standards, Building Code of Australia and AS2890.

4. Bicycle parking shall be provided in accordance with the Transport, Access and Parking Chapter of Penrith DCP.

5. Where above ground parking is proposed, the location of the parking area must:

    i. Be located on the side or rear of the site, and not be visible from the street and street frontage.

    ii. Be landscaped or screened so that cars parked in the parking area are not visible from adjoining buildings or the street/street frontage.

    iii. Allow safe and direct access to the building's entry points.

6. Where possible, natural ventilation is to be provided to underground parking areas with ventilation grilles and structures that are:

i. Integrated into the overall façade and landscape design of the development

ii. Located away from the primary street façade and

iii. Oriented away from windows of habitable rooms and private open space areas.

7. Car parking above ground level is to have a minimum floor to ceiling height of 2.8m so it may be adapted to another use in the future.

8. All parking provided on site is to meet AS2890 and where, appropriate AS1428.

Figure 51: Village Centre preferred location of car parking



12. Thornton hall

12.1 Built form controls

Objectives

a) To conserve the heritage significance of Thornton Hall including its setting and its relationship with its surroundings.

b) To provide an ongoing use that is appropriate for the heritage significance of the building.

c) To encourage removal of inappropriate alterations and additions and the reconstruction of significant missing elements of the building.

Controls

1. Any alteration and additions to Thornton Hall is to be consistent with the following principles:

    i. Retain and conserve significant building fabric.

    ii. Remove intrusive additions, including the verandah enclosures and brick porch.

    iii. Reconstruct verandahs based on the evidence provided in early photographs. Consideration should be given to interpreting the balcony/parapet structure that was accessed via the roof.

    iv. External painting of the original section of Thornton Hall should be based on colours that were used during the last quarter of the nineteenth century.

    v. Retain significant internal spaces and significant internal fabric. This should include 1930s fireplaces, ceilings, layout of the three main rooms.

    vi. There should be no roof additions such as dormers.

    vii. Additions to Thornton Hall should be restricted to one storey in height and should be located at the rear of the building and

    viii. Materials for any additions should be sympathetic to Thornton Hall but do not need to be the same as those used in Thornton Hall. A

high standard of contemporary design should be encouraged for the additions.

2. New development is to maintain an appropriate curtilage around Thornton Hall and be consistent with the following principles and Figure 52 and Figure 53.

    i. Maintain screening provided by existing trees. Some thinning of trees may assist in reinforcing the view corridor between Thornton hall and the rest of the site

    ii. Any garage should be located to the rear of Thornton Hall.

    iii. Any other outbuildings or structures such as a swimming pool should be located to the rear of Thornton Hall.

3. Vehicular access should reflect the original access to Thornton Hall. Reconstruct the original driveway and turning circle at the front of the house. Retain the historic hoop pine as the driveway entry marker at The Crescent.

4. Any new landscape design should enhance the setting of Thornton Hall and reinforce view corridors. Planting consistent with Thornton Hall's later nineteenth century date of construction should be considered for the grounds at the front of the house.

5. The existing trees along the existing entry road into Thornton Hall are to be retained and protected.

6. Fencing should be unobtrusive in character and simple in design. It is preferable to use timber rather than brick or stone. Hedging may be an acceptable alternative to a more traditional fence form.

7. Rear setback controls for all allotments that back onto the existing residential allotments fronting Lemongrove Road are provided at Section 10.3 Building Envelopes, control (11).

Figure 52: Thornton Hall site principles

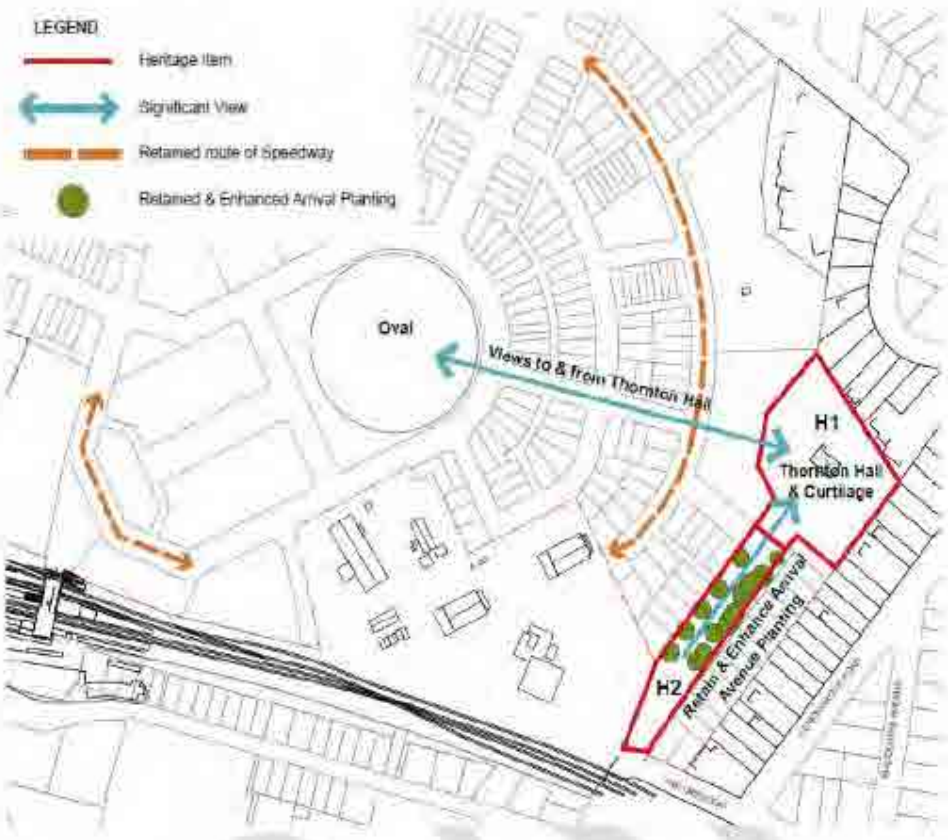


Figure 53: Thornton Hall Site Principles (aerial view)



13. Industrial Development

13.1 Built form controls

Objectives

a) To minimise the impact of industrial development on adjacent residential uses, in terms of solar access, noise and odour.

b) To ensure that industrial development can integrate with adjoining residential development and contribute to a visually cohesive urban environment.

c) To encourage a high standard of architectural design, utilising quality materials and finishes appropriate for the locality.

d) To enhance the visual quality of industrial development through appropriate setbacks, building and landscape design, particularly when viewed from public areas and residential areas.

Controls

1. The minimum lot size (Torrens Title) is 2,000m^2.

2. The maximum building height is 12m (1 - 2 storeys). Notwithstanding this, a maximum building height of 4m (1storey) applies within 8m from an adjoining residential boundary.

3. Building setbacks are as follows:

Table 12: Building setback requirements

Location	Minimum Setback
To Coreen Avenue (E1, E2)	6m
To western access road (E3)	6m
To adjacent industrial uses	0m
To adjacent residential uses	1m
To Combewood House property boundary	30m

4. Prominent elevations, such as those with a frontage to the street or public open space (OS5) are to:

i. Be finished in high quality materials that are durable, low maintenance and non-reflective

ii. Be activated through the use of glazing, office administration areas, building entries and the like (large, blank wall surfaces is not permitted) and

iii. Provide screening for any plant and mechanical equipment.

5. Elevations that are adjacent to a residential boundary are to be of solid in construction with minimal openings so as to minimise noise emissions.

6. Consideration should be given to the compatibility of the location and design of the car parking, storage loading areas to adjoining residential properties.

7. Boundary fencing (adjacent to residential uses) shall be between 1.8m and 2m high and of a solid material such as timber, steel or masonry.

DRAFT

Appendix A – Example of building envelope plan



Appendix B – Residential design palette



Part C – 164 Station Street, Penrith

14. Site analysis and local context

14.1 Land and purpose to which this section applies

This section applies to land located at 164 Station Street, Penrith as shown below (Figure 54), comprising 7.855Ha of land which has been identified to accommodate high density residential land uses consisting predominantly of high density housing/units. This purpose of this section is to facilitate the development of residential land uses in accordance with the envisaged future character of the site.

Figure 54: Land to which this section applies



14.2 Site vision

The urban vision for the redevelopment of the former Panasonic industrial site is to create a new residential neighbourhood at the southern edge of Penrith City Centre which respects and acknowledges the significance of the area including the city's urban vibrancy adjacent to the Blue Mountains. The site will act as the southern gateway to the Penrith City Centre and the new residential neighbourhood is consistent with the Penrith Progression Structure Plan 2015.

14.3 Site objectives

The development of the site is to meet the following site objectives:

a) Create a benchmark in urban residential neighbourhood development for Penrith

b) Create a built form formulated around large areas of public and community open space which provided connectivity through the site.

c) Provide well connected and accessible areas of open space which link the site to the surrounding context.

d) Provide an inviting and secure site with limited vehicular movement above ground level to enhance pedestrianisation.

e) Provide a diverse range of high density housing products which respond to growing household.

Figure 55: Landscape Masterplan



14.4 Local context

The site location within proximity to the Penrith City Centre, Penrith Station and the areas broader context can be seen in terms of the city context and adjacent existing land uses. Refer to Figures 59 and 60:

Figure 56: Existing land use analysis City context

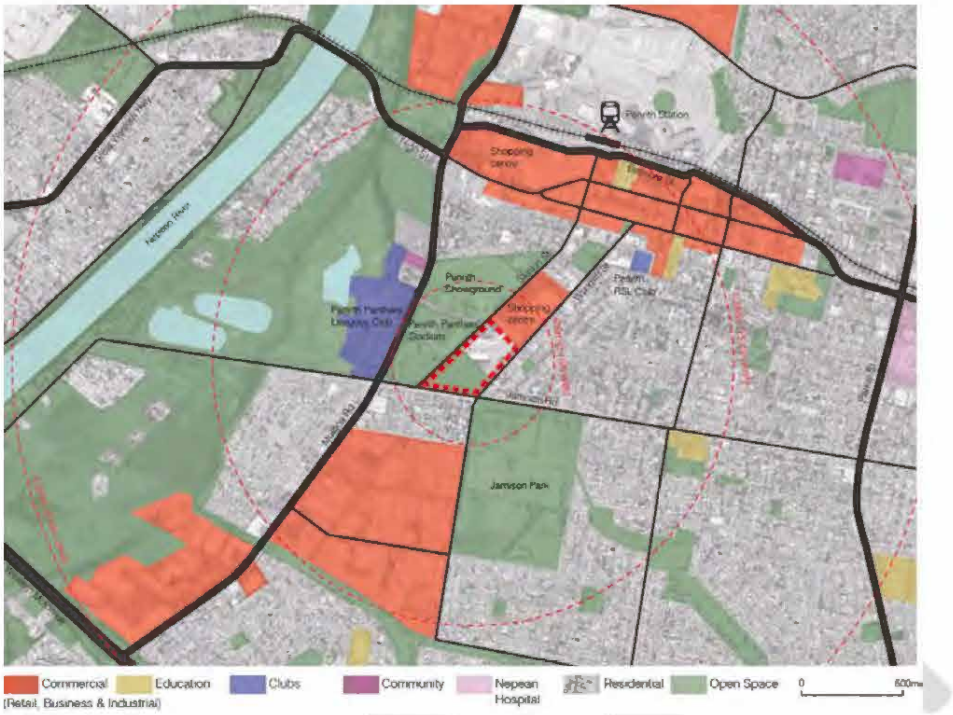
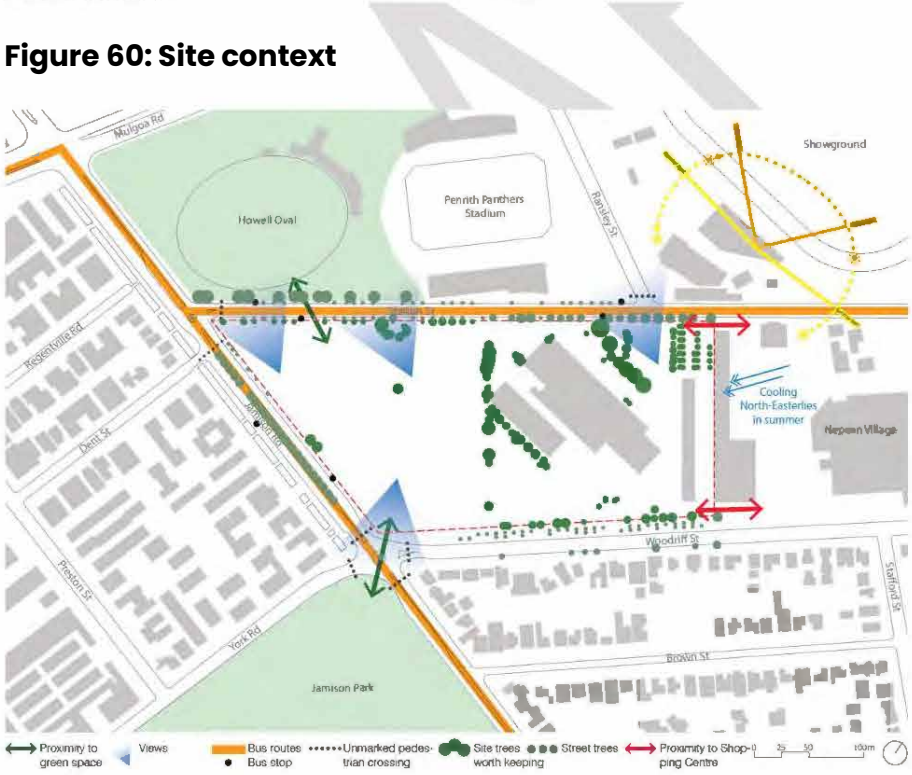


Figure 60: Site context



15. Structure plan

15.1 Urban structure

Background

The urban structure for the site is envisaged to be one centralised around the local and communal open space on the site, complimented by high quality public domain elements and architectural forms. In reference to architectural diversity and built form, the following objectives should be followed:

Objectives

a) To establish the urban image of the development by differences in public domain, built form and architectural diversity that enhance its prominent location within Penrith's city centre

b) To provide differences in streetscape treatment and urban character

c) To mark the pedestrian and vehicular entry points into the development off Station Street with formal urban strategies

d) To ensure a variety of pedestrian focused spatial experiences and safe social opportunities across the development.

Controls

1. To accommodate mixed uses and local retail off Station Street

2. To have a permeable pedestrian access structure with controlled vehicle circulation

3. To incorporate views and vistas across the site which accommodate Crime Prevention Through Environmental Design (CPTED) principles

4. Provide strong public landscape connections through the site in accordance with Figure 57

5. Encourage pedestrian access/movements through the site in accordance with Figure 58

6. Encourage through site views and vistas in accordance with Figure 59.

Figure 57: Urban Structure: Landscape and Open Space Connections

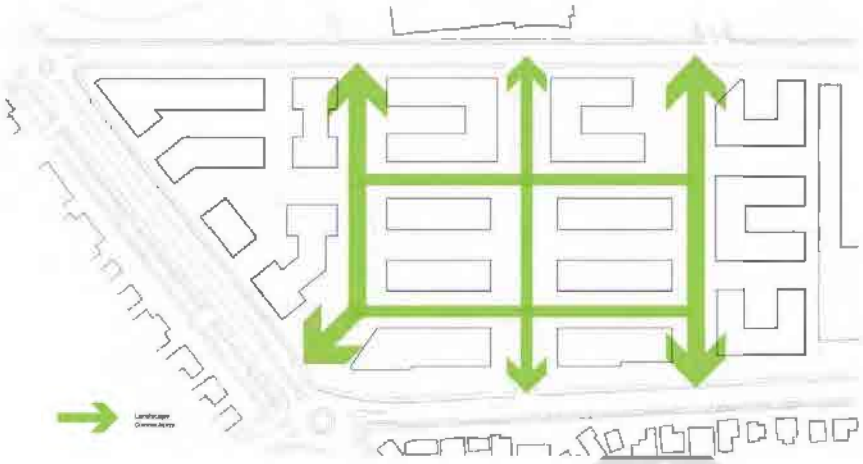


Figure 58: Urban Structure Access Patterns

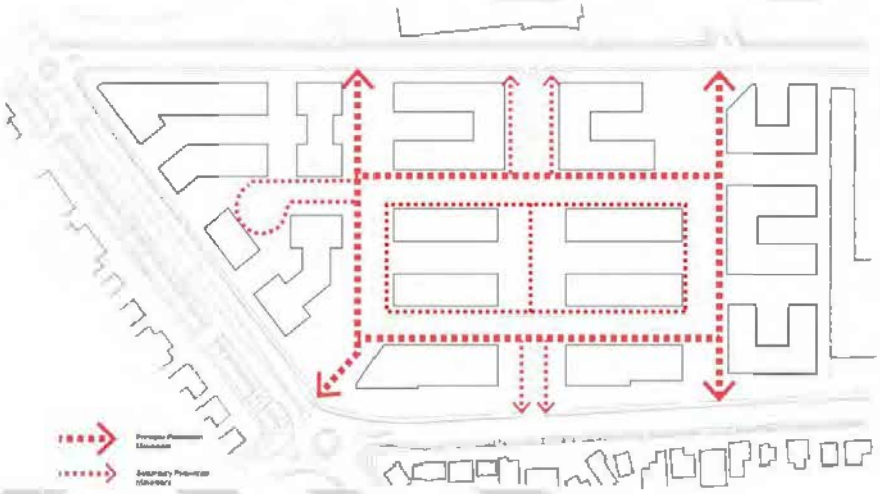
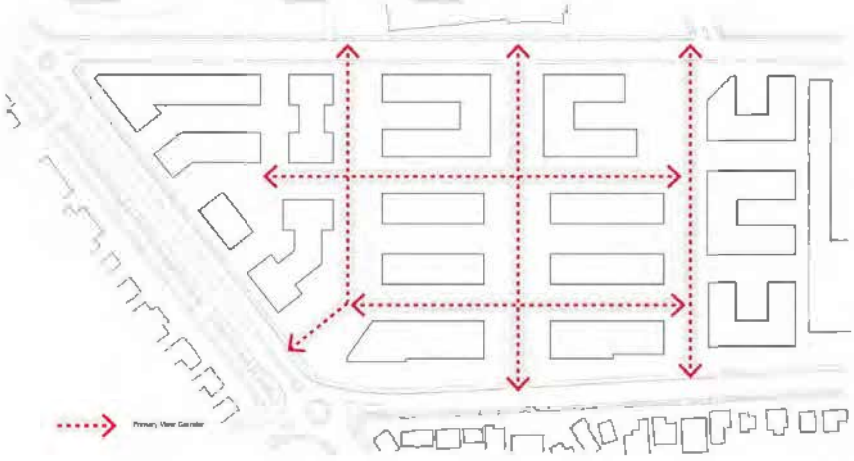


Figure 59: Urban Structure Views and Vistas



15.2 Landscape structure

Objectives:

The public domain and landscape character within the development pursues the following qualities as detailed in Figure 60:

a) A permeable, safe and pedestrian friendly landscape for community use.

b) A formal entry boulevard with retail and community uses.

c) Neighbourhood tree lined streets for enhanced urbanity and pedestrian friendly use.

d) Picturesque linear parks with shared pedestrian and bicycle paths.

e) Pedestrian links to Jamison Park to provide for passive recreation opportunities.

f) A formal Station Street Plaza/Park.

g) Landscaped buffers to adjacent developments.

h) Opportunity for a diversity of Communal Gardens (private open space).

Public domain/landscape detail is the subject of a landscape design competition. The above principles will be maintained throughout the competition stages.

Figure 60: Indicative Landscape Character Zones



Landscape and public domain allocation

A landscape design competition is required to be undertaken for public domain/public landscaping within the site. This competition is to run in accordance with the recommendations of the Government Architect and NSW State Governments Director Generals Design Excellence Guidelines. The Landscape Competition will relate to public open space (including the south finger parklands, the central boulevard garden and the north finger parklands and plaza). An indicative landscape and public domain allocation plan is provided in Figure 61.

Controls

1. A range of community uses within communal areas of open space are to be provided (including children's play areas and BBQ facilities)

2. Private open space is to be clearly separated from public open space via level changes (see Figure 64)

3. The following minimum area of public open space is to be provided on the site

Table 13: Minimum area requirements for public open space

Public open space	Minimum area
Southern Finger and Linear Parkland	4,000 sqm
Central Boulevarde	2,000 sqm
Northern Finger Linear Parkland with Station Street Plaza	4,000 sqm
Streetscape and pavement treatments	5,500 sqm
Boundary edges to Station Street, Jamison Road and Woodriff Street	1,000 sqm

Note: detailed character of each of these landscaped areas will be undertaken by the successful competition entrant.

Figure 61: Landscape and Public Domain Allocation



DRAFT

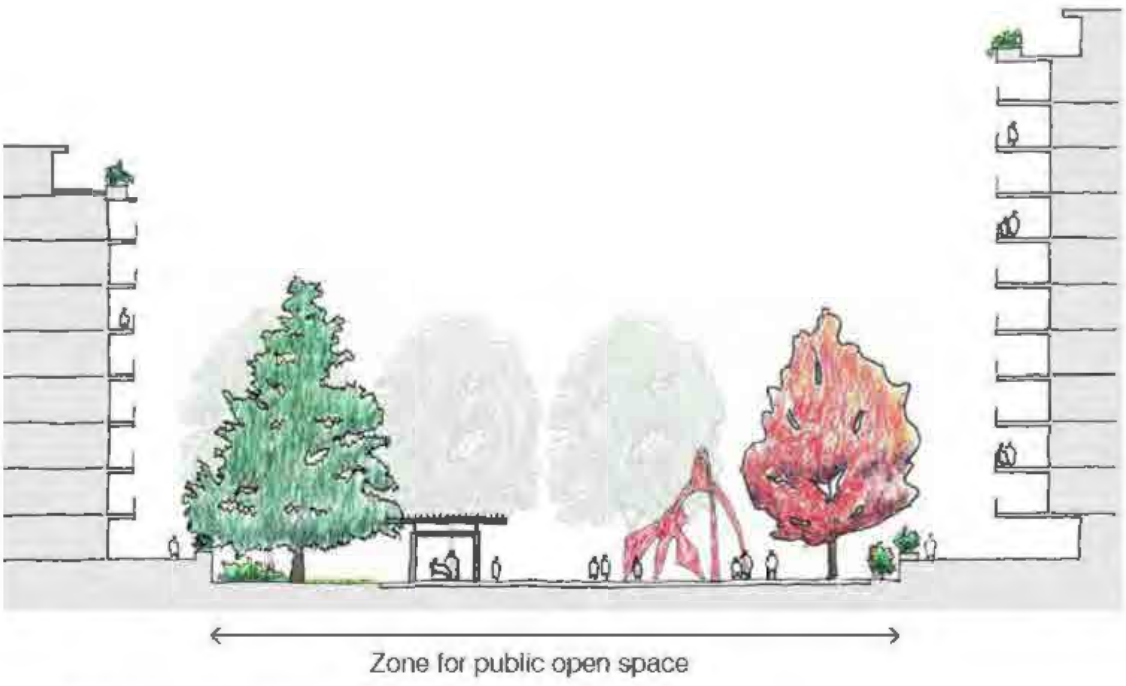
Figure 62: Illustrative Indicative Landscape Masterplan: Northern Finger Linear Park with Station Street Plaza. (Detailed Design subject to Landscape Competition)



Figure 63: Illustrative Indicative Landscape Masterplan: Southern Finger Linear Park. (Detailed Design subject to Landscape Competition)



Figure 64: Typical section plan demonstrating level transition from public v private open space



Typical section private space to puplic open space.
Note level changes.

15.3 Character areas and urban precincts

Background

Built form is to spatially frame new streets and linear parks. Taller built form is located along Jamison Road to define the importance of the southern urban edge to Penrith's city centre. Additional height is to be located at the corner of Jamison and Station Street as urban markers and in association with the linear parks. Elsewhere, the modulation of built form will 'close off' and spatially frame internal vistas. This will accentuate the urban experience when moving between the various urban precincts.

The following section provides a breakdown of key precincts within the site. The broader urban form strategy can be seen below in Figure 65. Detailed design for buildings within these precincts will be provided at Development Application phase.

Objectives

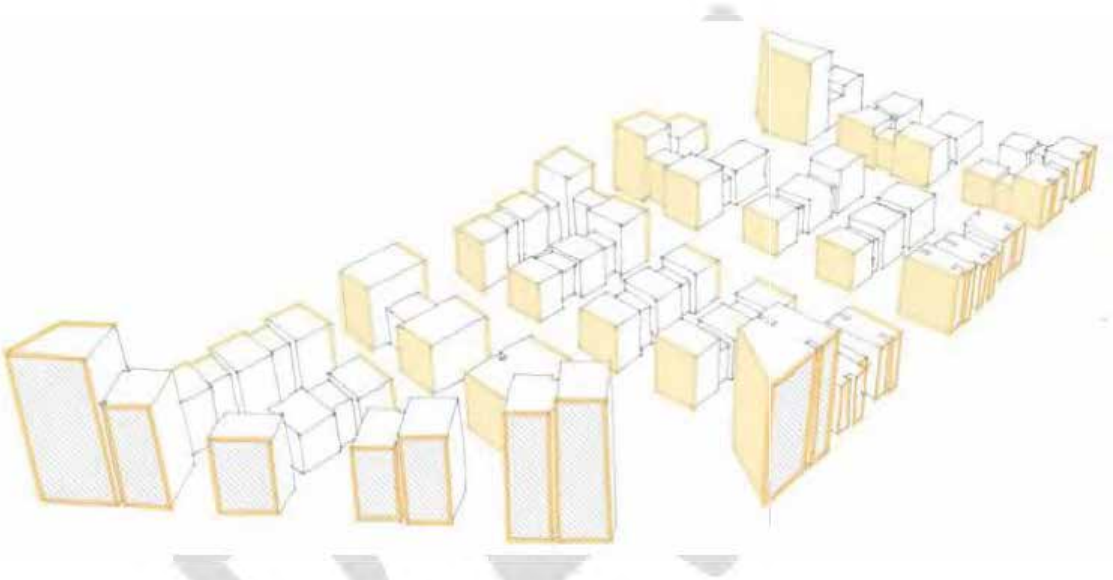
a) Provide a sequence of urban precincts which provide design excellence in the provision of public domain landscaping and built form articulation

b) Provide urban precincts which respect the surrounding character of the site and its context within Penrith.

Controls

1. Development Applications are to follow precinct specific objectives and controls as they relate to different parts of the site in line with precincts identified in Figure 66 toFigure 68.

Figure 65: Urban Form Strategy



15.3.1 Key urban building form

Background

The following corner sites are key urban building points within the site which will maintain the highest scale on the site.

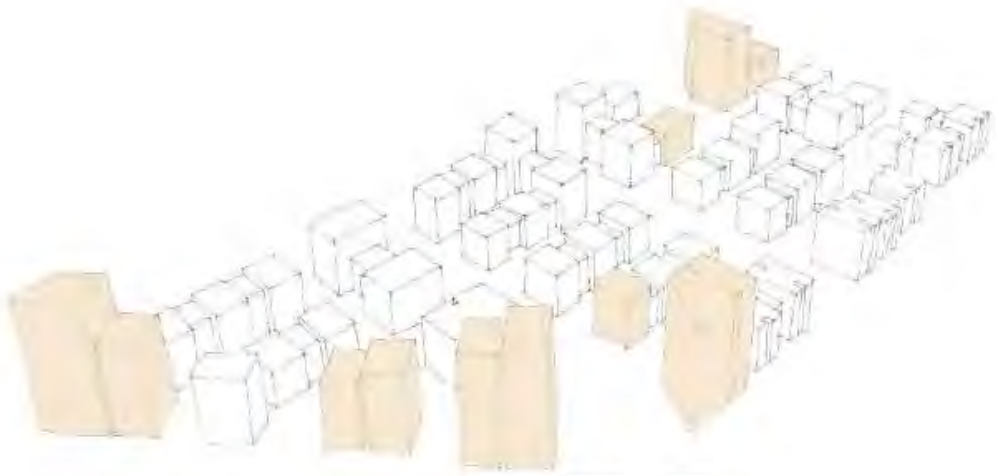
Objectives

a) Provide varied built forms across the site to improve vistas and visual presentation of buildings.

Controls

1. Pinnacle built forms are to be predominantly located on key building corners on the sites edges as identified in Figure .

Figure 70: Key urban forms



15.3.2 Urban Precinct: Station Street and Entry Boulevarde

Background

This section relates to the frontage of the site to Station Street and the entry boulevard into the site as identified in Figure 66.

Objectives

a) Provide a constant scale and allow for balcony projections which are set back into the building block

b) Allow for articulated entry points which are appropriately scaled

c) Provide for pedestrian access via defined access ways within the building wall

d) Provide a distinction between ground floor uses and upper floors for residential uses in the area for the entry boulevard (ground level retail and residential above)

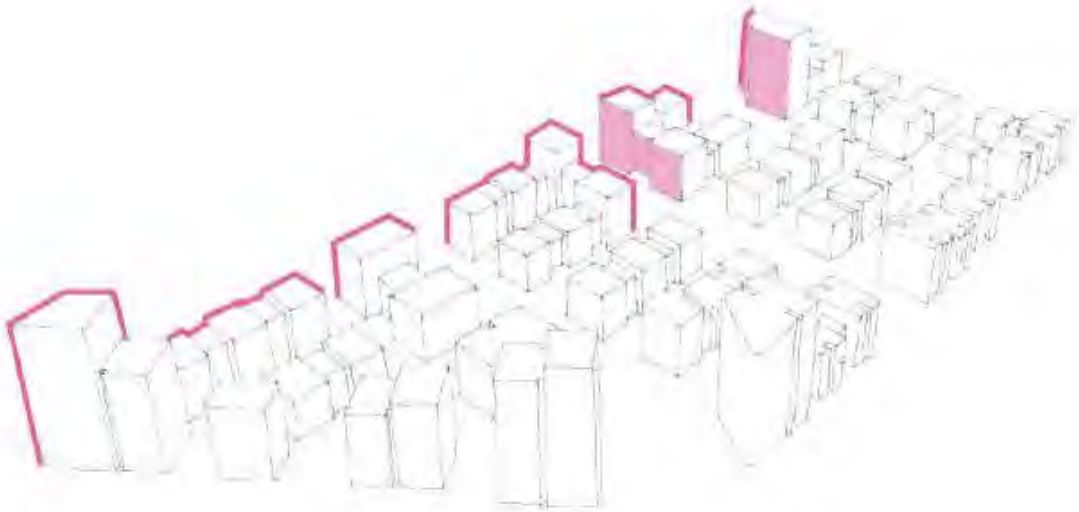
e) Provide street awnings with a recessed ground floor where local retail uses are proposed.

Controls

1. Retail uses should be contained to the entry boulevard off Station Street and consist of localised retail uses which complement the predominantly high density residential use of the site (i.e. cafes, pharmacies, newsagencies, general practitioners)

2. Provide footpath seating adjacent to the entry boulevard to the site off Station Street.

Figure 66: Station Street and Entry Boulevard Precinct



15.3.3 Urban precinct: Jamison Road

Background

This section relates to the Jamison Road site frontage, being the southern edge of Penrith's city centre, as identified in Figure 67.

Objectives

a) Provide street corner articulation and urban markers

b) Reinforce the geometry of Jamison Road through a constant setback

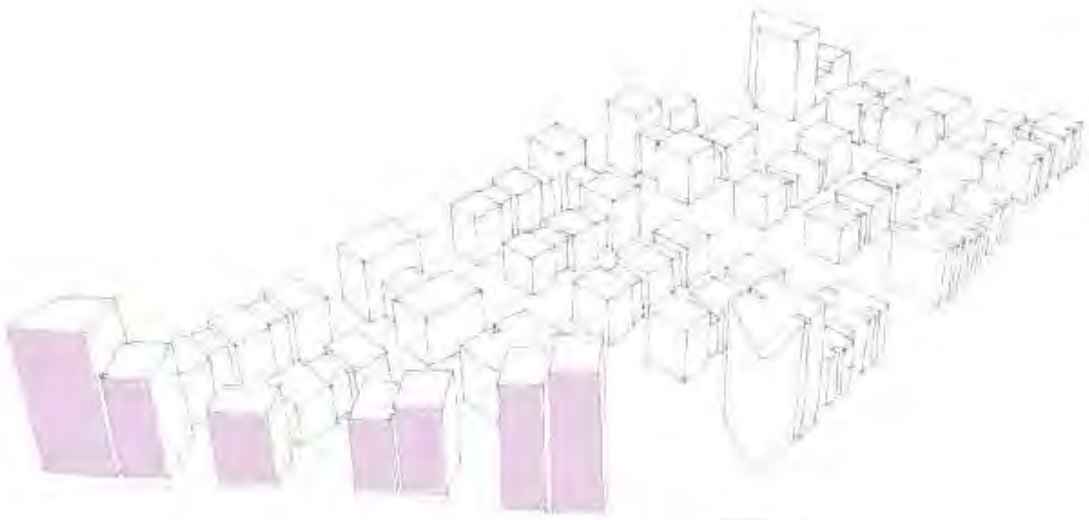
c) Emphasise the vertical element of the buildings through modulation and articulation.

Controls

1. Built form to demonstrate design excellence and present as modulated and articulated to the street

2. Provide a distinction between ground floor apartments and upper floors.

Figure 67: Jamison Road Precinct



15.3.4 Urban Precinct: Woodriff and Park Edge

This section relates to the Woodriff Street frontage of the site and adjoining park edges as identified in Figure 68.

Objectives

a) Provide transitional built form

b) Encourage the retention of public verge open space adjoining Woodriff Street.

Controls

Woodriff Street

1. Provide an appropriately scaled residential development to be set against a wide landscape verge

2. Create a varied building edge with a rhythm and modelling in the built form.

Park Edge

3. Provide elevated ground floor units integrated with balcony terraces and screening to provide suitable privacy and interface with the public domain/landscaped verge fronting Woodriff Street.

Figure 68: Woodriff and Park Edge Precinct



15.4 Dwelling density

Objectives

a) To provide a range of high density residential buildings to cater for housing demand and needs

b) To ensure that all residential development on the land is of a high quality and provides amenity

c) Appropriately cater for residential growth and housing demand within Penrith through delivery of dwelling yields illustrated.

Controls

1. The minimum residential dwelling densities should be achieved within each of the project stages

2. Higher density forms to be located on key corners of the site (urban markers). Lower scale form to be provided on eastern edge fronting Woodriff Street to respect the amenity of the adjoining low density residential uses

3. The following minimum apartment yields apply to the subject site at both a 2:1 compliant FSR and 2.5:1 FSR under the incentives clause

Table 14: Minimum apartment yields

Dwelling density	Current controls (Min)	Incentives clause (Min)
Stage 1	480	600
Stage 2	80	100
Stage 3	400	500
Stage 4	190	240
Stage 5	320	400
Minimum	1470 dwellings	1840 dwellings

15.5 Indicative development staging

Objectives

a) Stage development to limit issues associated with construction and traffic

b) Stage construction promoting the use of both site frontages

c) Provide quality housing and amenities for each stage limiting associated construction issues.

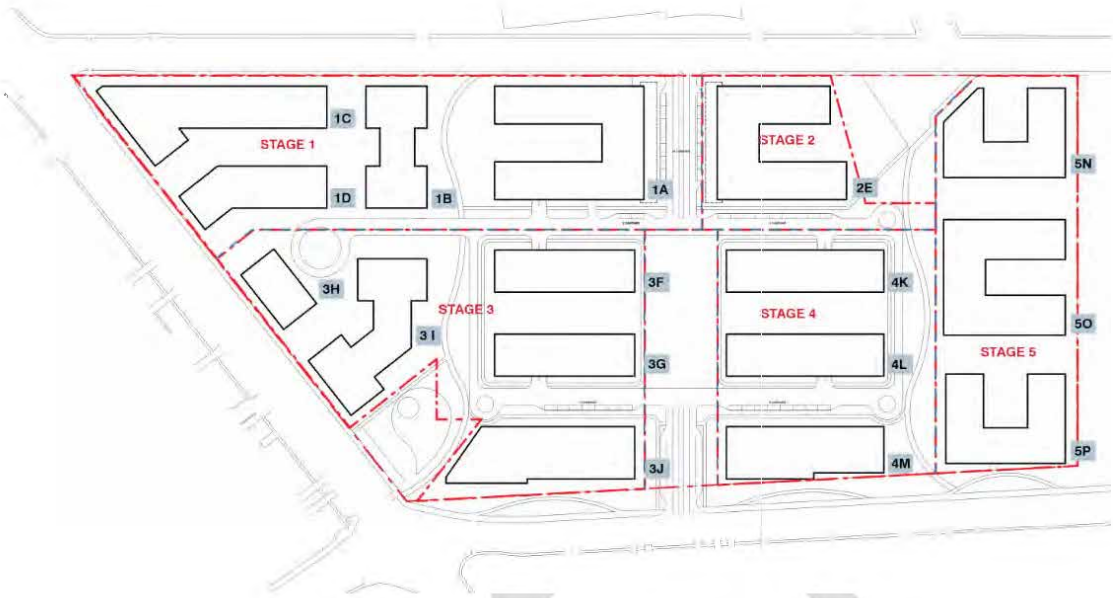
Controls

1. Undertake development in line with the indicative development staging plan identified in Figure 18:

Table 15: Staging plan

Stage	Location
1	Station Street and Entry Boulevarde (South) Precinct
2	Station Street and Entry Boulevarde (North) Precinct
3	Jamison Road, Woodriff Street and Central (South) Precinct
4	Woodriff Street and Central (North) Precinct
5	North Precinct

Figure 69: Staging Plan



16. The public domain

16.1 Street network and design

Objectives

a) Reduce vehicular movements at grade to maximise the presence and permeability of the ground level public domain and open space which connects the site to the surrounding context.

b) Encourage primary vehicular movements to basements.

Controls

1. The 'Roads' section within the Transport, Access and Parking Chapter of Penrith DCP applies in regard to road configuration and road hierarchy requirements.

16.2 Pedestrian and cyclist networks

Background

Pedestrian and cyclist movements should be incorporated into any design proposed on the site.

Objectives

a) The public domain of the streetscape is to define the urban character of the development as a pedestrian friendly neighbourhood precinct

b) To ensure that the streets are safe for pedestrian and cyclist movements incorporating Crime Prevention Through Environmental Design principles.

c) The site is to become a focus for community activity.

d) Encourage a shared use path along the Station Street frontage.

e) The pedestrian and cyclist paths are to be integrated within the existing and proposed open space networks.

Controls

1. Pedestrian and cyclists paths are to be provided within the public domain and public open space areas providing connectivity between the site.

2. Safe public thoroughfares are to be provided which connect the public domain to residential buildings and adjoining road networks.

16.3 Public open space and landscape network

Background

The public open spaces are to set a high standard in urban design quality. These spaces are to allow passive and active recreation uses, accommodate safe pedestrian circulation during the day and at night, adopt water sensitive principles and tell a story about the richness of living in a residential neighbourhood within Penrith's city centre. The detailed design of public open spaces across the site will be the subject of a landscape design competition.

Objectives

a) To provide a variety of high quality public domain and public areas of open space within the street including quality pavement, tree lined streets and well delivered pocket parks.

b) To provide high quality parkland spaces.

c) To provide a diversity of open space that facilities pedestrian linkages across the site.

d) To provide superior quality landscaping to the site.

Controls

1. A minimum of 10,000 square metres of land is to be allocated to the provision of public open space (excluding streetscape improvements). Delivery of landscaping and building construction to be carried out simultaneously in accordance with the indicative staging plan in Figure 69.

2. Provide comprehensive public and private landscaping in accordance with the indicative landscape plan provided in Figure 70.

3. Creation of a linear landscape corridor through the central area.

4. Create new public domain areas and public open spaces to frame key site entry areas and encourage pedestrian movements throughout the site.

5. Public art will be provided in key locations throughout the site.

DRAFT

Figure 70: Illustrative landscape masterplan



16.4 Above ground basements

Objective

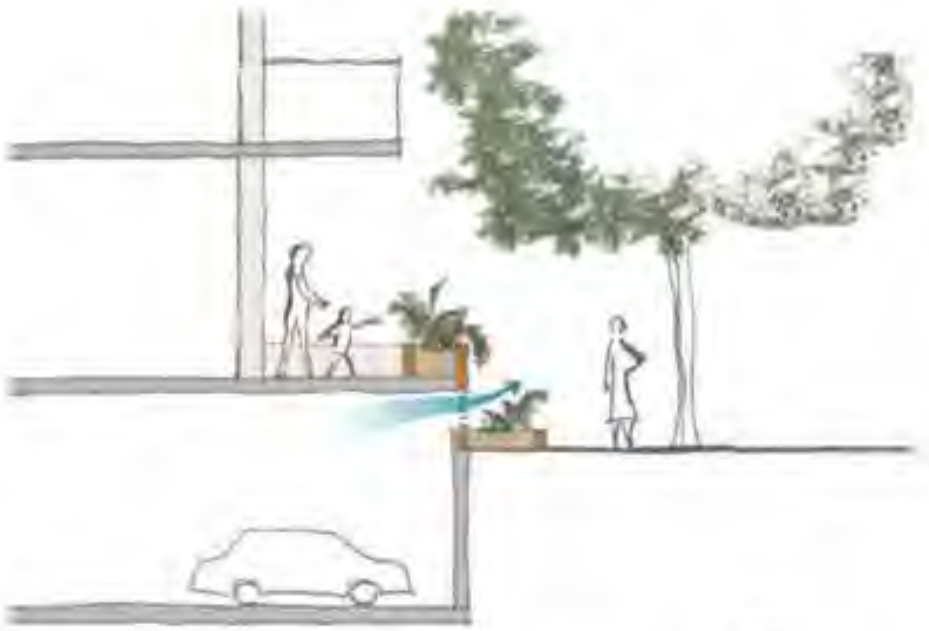
a) Improve basement circulation throughout the site.

Controls

1. Above ground basements less than 1m above natural ground level can be provided on site where appropriate to assist natural ventilation to the basement.

2. Basement openings above ground are to be adequately screened through building edge landscaping which separates the basement opening from the public domain and residential balconies as indicated in Figure 71.

Figure 71: Public Domain and Basement Interface



17. Residential development

17.1 Key design principles

Site Design Objectives

a) Provide good east-west and north-south connectivity with new public streets that are clearly integrated with the existing street network.

b) Locate non-residential uses towards the northern end of the site where they will be in closer proximity to the city centre.

c) Emphasise the significance of the site as the southern gateway to the city centre through the built form.

d) Provide high quality public domain interface with existing streets surrounding the site.

e) Consider interface with heritage conservation area on the eastern side of Woodriff Street.

Built Form Objectives

f) Provide a variety of building heights throughout the site which:

g) Result in well-defined and visually interesting built form

h) Reflect the gateway treatment to the corner of Station Street and Jamison Road with opportunities for increased building heights

i) Provide appropriate transition to surrounding land uses which is sensitive to amenity and visual impact of surrounding or nearby development

j) Taller buildings to be located and orientated to minimise the shadow impact on future buildings within the site and to avoid adverse impacts on the surrounding uses.

17.2 Building height, massing and siting

Background

Building height, massing and siting is to respect the surrounding urban context, public domain and landscaping provided on the site.

Objective

a) Where applicable, buildings should incorporate varying scales to improve articulation and modulation in addition to street presentation and architectural diversity. This includes varied heights and transition from low to medium to high rise buildings within specific precincts.

Controls

1. A range of building heights will be provided as indicated in Figure 72.

   i. Station Street: Predominantly medium building heights street edge alignment with higher building heights on key corners (Station Street and Jamison Road).

   ii. Jamison Road: Key urban markers incorporating medium to high building heights.

   iii. Woodriff Street: Predominantly low building heights appropriately setback from the road via the existing road reserve. High building heights will be on the corner of Woodriff Street and Jamison Road.

   iv. Entry Boulevarde: Higher buildings on street edges with low to medium building heights at the connector road interface.

   v. Connecter Road/Park Precinct: Predominantly low to medium building heights to maintain solar access to key areas of public open space.

Note: The building heights are subject to consistency with incentives provisions under the any Penrith LEP 2010. This includes Floor Space Ratio, Height of Building and any site specific or public-benefit based incentives.

The number of storeys indicated below are indicative only and will be subject to a Design Jury process.

Figure 72: Indicative Building Heights



17.3 Building setbacks

Background

Building setbacks are required to maintain appropriate separation between buildings in accordance with the controls of the NSW Apartment Design Guide.

Controls

1. The following setbacks should be provided as identified in Figure 73 and Table 16.

Table 16: Setbacks

Frontage	Setbacks

Station Street	5m from site boundary
Woodriff Street	5m from site boundary
Jamison Road	5m from site boundary
Buildings fronting public open spaces, parks and internal streets (other than entry boulevards)	2.5m (minimum)
Entry Boulevarde off Station Street	2.5m (minimum)
Northern boundary	6m (minimum)

2. Other setbacks (side and rear) will be governed via the separation controls of the NSW Apartment Design Guidelines as follows:

    i. Up to four storeys (approximately 12m):

    - 12m between habitable rooms/balconies
    - 9m between habitable and non-habitable rooms
    - 6m between non-habitable rooms

    ii. Five to eight storeys (approximately 25m):

    - 18m between habitable rooms/balconies
    - 12m between habitable and no-habitable rooms
    - 9m between non-habitable rooms.

    iii. Nine storeys and above (over 25m):

    - 24m between habitable rooms/balconies
    - 18m between habitable and non-habitable rooms
    - 12m between non-habitable rooms.

Figure 73: Built Form Frontages Setback Plan



17.4 Private open space

Background

Private open space must be provided for residential units on the site for each building

Objectives

a) Provide suitable private open space for future occupants of the site

b) Encourage the provision of rooftop private open space where possible.

Controls

1. Private open space to be provided within proximity of building envelopes within each site

2. Private open space is to be provided on the site via a combination of communal gardens, rooftop gardens and balconies

3. Private open space is to be provided in addition to the public open space within the site

4. Private open space is to be provided in accordance with State Environmental Housing Policy (Housing) 2021 and Apartment Design Guideline provisions

5. Ground level public open space is to be provided in general accordance with Figure 74.

Figure 74: Indicative Ground Level Private/Communal Open Space Plan



17.5 Mixed use buildings

Objectives

a) Provide a number of mixed use buildings which provide localised retail and community uses

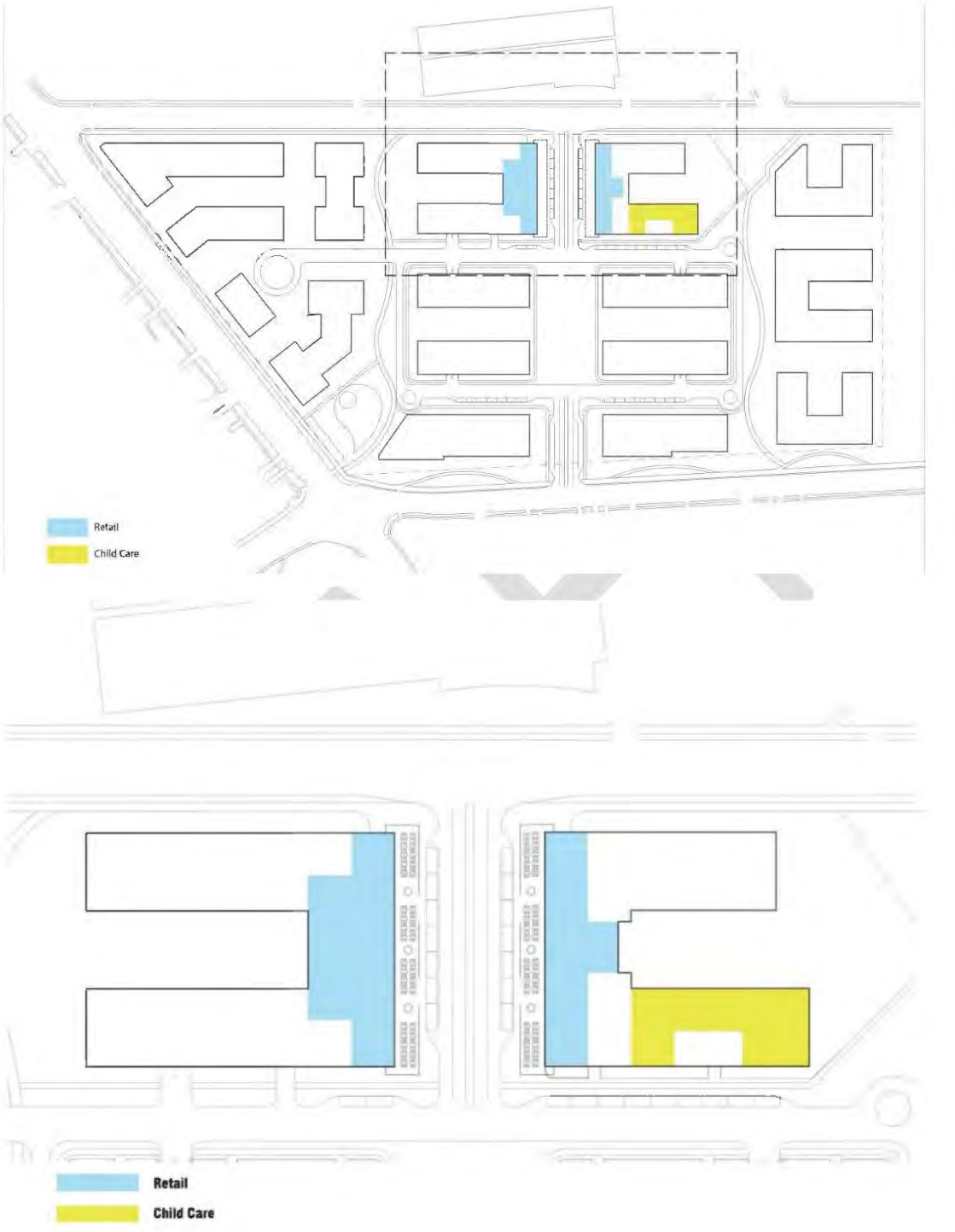
b) Provide localised services to meet the needs of future residents.

Controls

1. Provide a minimum of 1000 square metres of retail space surrounding the entry boulevard off Station Street as identified in Figure 80.

2. Provide for other non-residential uses such as a child care centre within close proximity to the entry boulevard.

Figure 80: Indicative ground floor retail and childcare centre location



17.6 Housing diversity

Objectives

a) A range of apartment sizes, types, forms and specifications are to be provided on the site.

Controls

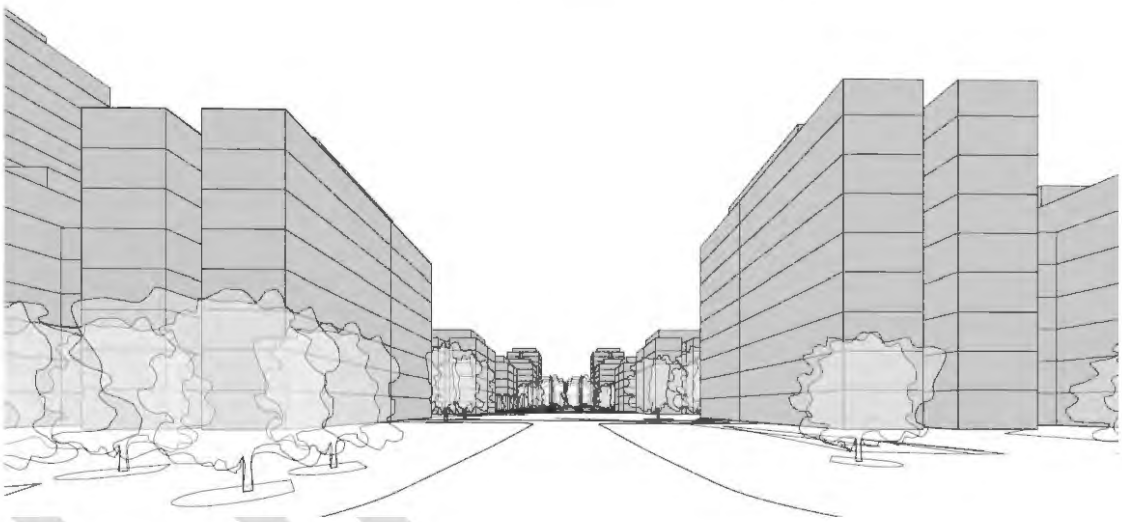
1. The following apartment mix will be achieved on the site:

    i. 1 Bedroom: 15-25%

    ii. 2 Bedroom: 60-65%

    iii. 3 Bedroom: 5 – 10%

Figure 75: Indicative visualisation of Central Boulevard looking north-west demonstrating diversity of built form and through site thoroughfare



18. Environmental and residential amenity

18.1 Visual privacy and acoustic amenity

Objectives

a) To ensure buildings are designed to achieve the highest possible levels of visual privacy, building quality and acoustic privacy.

b) To protect visual privacy by reducing direct overlooking of habitable rooms and private open space (use provisions of blank walls for key buildings with public space interfaces).

c) To contain noise within dwellings and apartment buildings through appropriate design, use of building materials and minimise the intrusion of noise from outside sources.

Controls

1. Development Applications should address acoustic and visual amenity including both internal and external impacts

2. Buildings to comply with separation distances prescribed by State Environmental Planning Policy (Housing) 2021 and the Apartment Design Guidelines.

18.2 View corridors

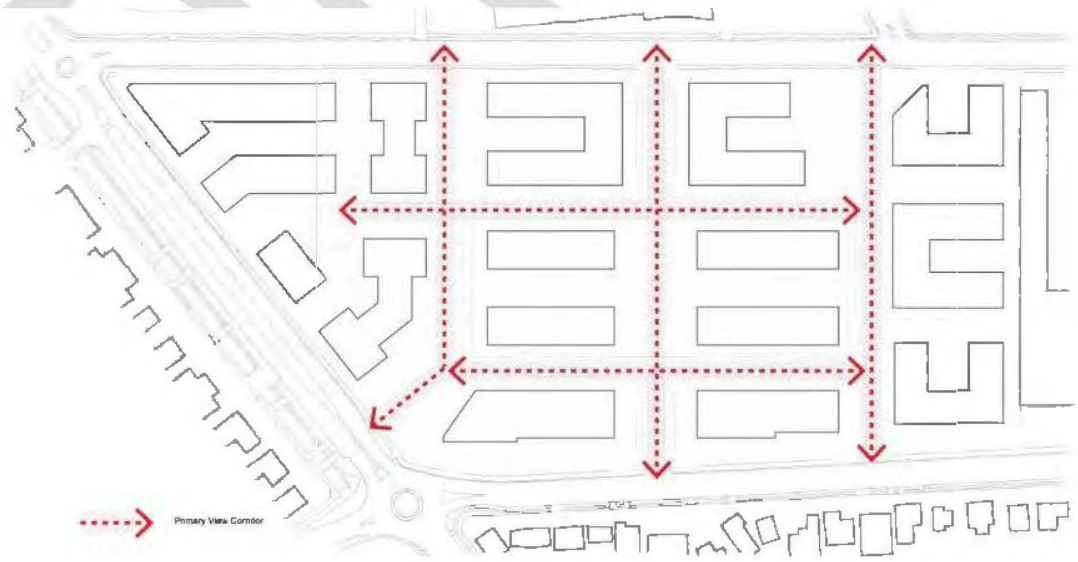
Objectives

a) Maintain key view corridors through the site which provide enhanced views of areas of public open space and key thoroughfares

b) Enhance north south and east-west view corridors through the site to surrounding road networks as identified in Figure 76.

c) Provide view corridors which support crime prevention through environmental design.

Figure 76: Primary View Corridors



19. Access, parking and servicing

19.1 Vehicle access

Objectives

a) Minimise vehicular access across the site to improve pedestrian connections.

b) Limit vehicular access and exits to the site to two primary intersections off Station Street and Woodriff Street.

c) Limit service vehicular access around the site to areas identified in Figure 77.

Controls

1. Vehicular access and movements are to be predominantly undertaken within the basement.

2. Above ground vehicle movements are to be predominantly used for basement access and service and emergency vehicles.

3. The vehicle movements identified in Figure 77 are indicative only and are subject to the outcomes of a traffic analysis and the satisfaction of Council.

19.2 Pedestrian access and mobility

Objectives

a) Create large pockets of public open space within the site to encourage pedestrian use of open space

b) Provide pedestrian access paths through the entire site to promote the movement of people within and across the site

c) Provide pedestrian access from all of the sites key frontages (Station Street, Woodriff Street and Jamison Road) to allow the distribution of people throughout the site

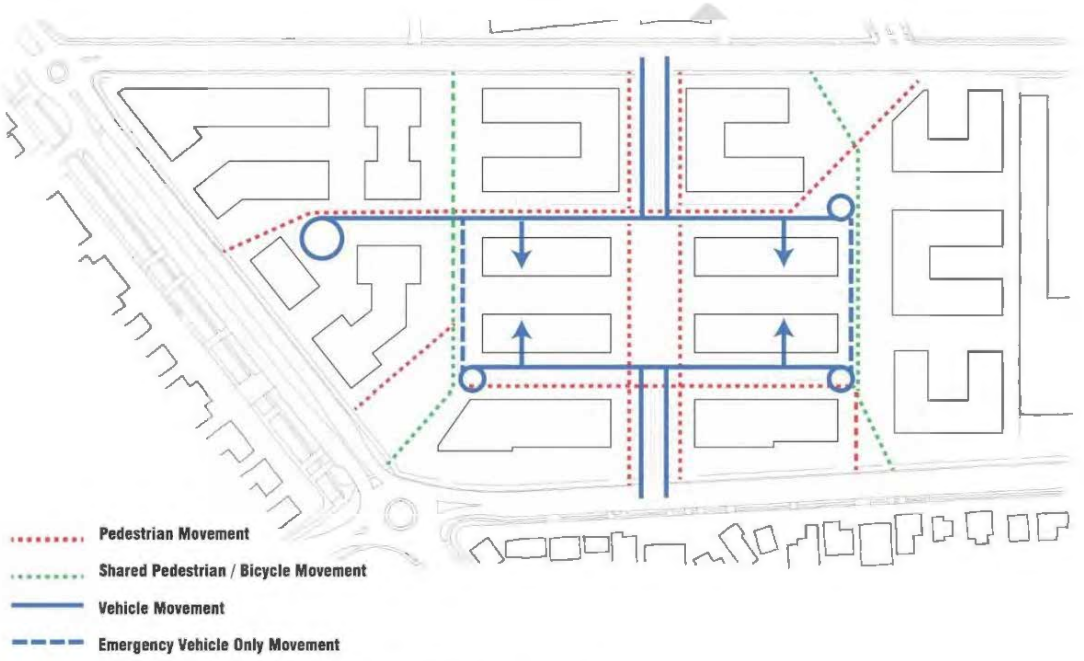
d) Encourage the provision of a shared user path along the Station Street frontage of the site.

Controls

1. Pedestrian and bicycle access paths to be provided connecting the site to adjoining streets consistent with the indicative pedestrian movements identified in Figure 77

2. Provide clear pathways from hardscape public domain through to public open space to encourage community use.

Figure 77: Vehicle access and pedestrian movement plan



19.3 On-street parking options

Background

This section relates to the provision of on street parking arrangements for visitors, residents, taxis, retail uses and the general public.

Objectives

a) Where possible encourage the provision of on-street parking to support the community

b) Encourage the use of on-street loading bays adjacent localised retail uses to be used for loading facilities outside of peak hours

c) Encourage the provision of residential visitor parking to be provided at ground level across the site

d) Provide short term parking for the public wishing to use the public open space provided on site

Controls

1. All parking to be provided on site.

2. Parking is to be provided in accordance with the parking rates within Table 2 of the Transport, Access and Parking Chapter of Penrith DCP.

19.4 Parking requirements for residential apartments

Controls

1. Parking is to be provided in accordance with the parking rates within Table 2 of the Transport, Access and Parking Chapter of Penrith DCP.

2. Resident parking is to be provided in basement levels.

19.5 Service roads and emergency vehicles

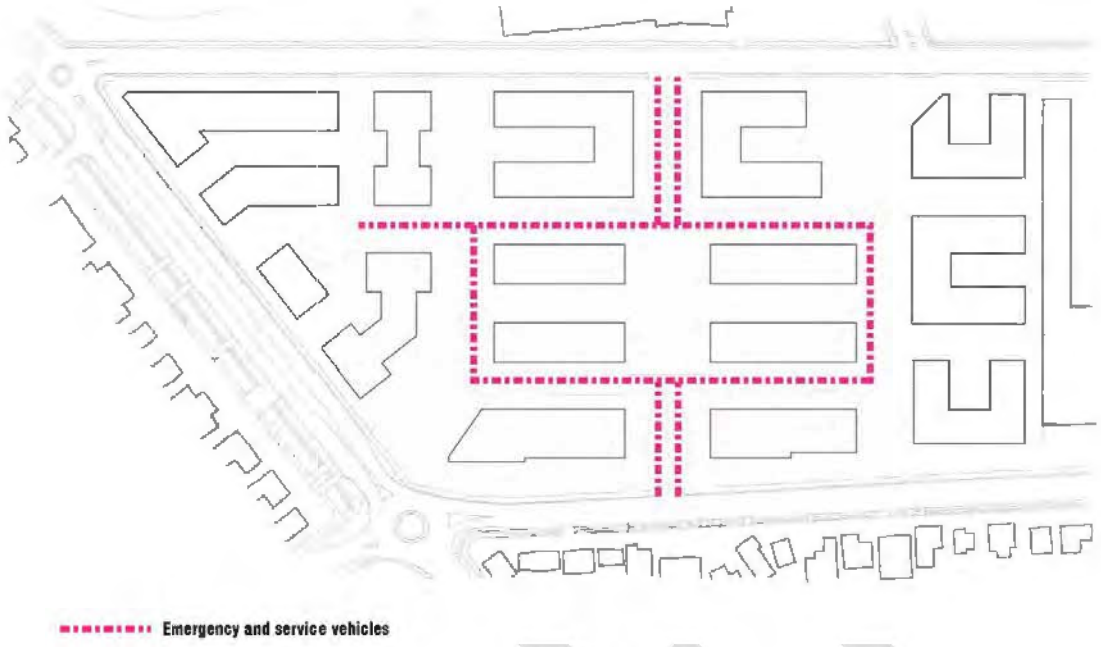
Background

The site will provide service and emergency vehicles road access via two east-west laneways off the primary t-intersection roads. These shared pathways will be made available for emergency and service vehicle access.

Controls

1. East-West road access for emergency and service vehicles is to be provided as identified in Figure 77 and Figure 78.

Figure 78: Service and emergency vehicle access



DRAFT

D12 Penrith Health and Education Precinct

Contents

Part A – Hospital Precinct 7

1. Background 7

1.1 Area included within the Hospital Precinct 7

1.2 Aims of the controls for the Hospital Precinct 8

1.3 General objectives 8

1.4 Character Areas 9

2. Land use controls 12

2.1 Mixed use development controls 12

3. Built form controls 15

3.1 Street alignment, building height and setbacks 16

3.2 Building depth and bulk 18

3.3 Boundary setbacks and building separation 19

3.4 Site coverage and deep soil zones 21

3.5 Building exteriors 22

3.6 Landscape design 24

3.7 Planting structures 25

4. Other controls 27

4.1 Public domain 27

4.2 Pedestrian amenity 27

4.2.1 Permeability 28

4.2.2 Active street frontages and address 30

4.2.3 Safety and security 32

4.2.4 Awnings 33
4.2.5 Vehicle footpath crossings 34
4.3 Car parking 36
4.4 Site facilities and services 37
5. Other information 39
Part B – Business Park Precinct 40
6. Introduction 40
6.1 Area included in the Business Park Precinct 40
6.2 General objectives 41
6.3 Requirements for a Concept Plan 41
6.4 Preparation of a concept plan 42
7. Built form controls 42
7.1 Street alignment and setbacks 42
7.2 Side and rear setbacks 45
7.3 Building bulk 45
7.4 Building separation 46
7.5 Site coverage and deep soil zones 47
7.6 Architectural excellence 48
7.7 Active Street Frontages 50
7.8 Pedestrian permeability 51
7.9 Awnings 53
7.10 Landscaping and fencing 54
7.11 Water and energy efficient design 55
7.12 Traffic, parking and site access 56
Part C – South Werrington Urban Village 58
8. Preliminary 58
8.1 Background 58

8.2 Land to which this section applies....58
8.3 Aims and general objectives of this section....59
8.4 Supporting studies....61
8.5 Concept plans....62
9. Structure plan....62
9.1 Vision....62
9.2 Urban structure....63
9.3 Desired future character....65
9.4 Dwelling yields....66
10. Public domain....68
10.1 Responding to the site's natural features....68
10.1.1 Riparian corridors....68
10.1.2 Water management....70
10.1.3 Flood management....71
10.1.4 Vegetation....71
10.1.5 Salinity....72
10.1.6 Contamination....73
10.2 Transport and accessibility....74
10.2.1 Road Network....74
10.2.2 Vehicular Movement....74
10.2.3 Public Transport....76
10.2.4 Pedestrians and bicycles....77
10.3 Streetscapes....79
10.3.1 Landscape Character....79
10.3.2 Road sections....81
10.4 Passive open space and environmental conservation areas....89
10.4.1 Public facilities....92

11. Private domain 92
11.1 Subdivision 92
11.2 Site Planning 94
11.2.1 Principal Private Open Space 94
11.2.2 Garages and parking 96
11.2.3 Building footprints 97
11.3 Building envelope 99
11.4 Dwelling design 100
11.5 Visual and acoustic privacy 103
11.6 Fencing 104
11.7 Site facilities 105
12. Residential development forms 106
12.1 All housing types 106
12.2 Integrated housing 106
12.3 Apartments 106
12.4 Attached dwellings 108
12.5 Semi detached dwellings 110
12.6 Studios 112
12.7 Detached dwellings 113
12.8 Built to boundary dwellings 114
13. Development for employment purposes 116
Part D – Werrington Mixed-Use area 121
12. Preliminary 121
12.1 Land to which this section applies 121
12.2 Aims of this Section 121
13. Concept plans 122
13.1 Requirements for a Concept Plan 122

13.2 Concept Plan Strategies 124
13.3 Adoption of a Concept Plan 125
13.4 Form of a Concept Plan 125
14. Urban design 126
14.1 Land use and activities 126
14.2 Pattern of streets, open spaces and community facilities 127
14.3 Pattern of Street-Blocks and Subdivision 128
14.4 Pattern of built form and landscaped areas 128
14.5 Public Domain 130
15. Sustainability 132
15.1 Social and Economic 132
15.2 Biodiversity: Flora and Fauna 132
15.3 Water cycle 134
15.4 Air quality 137
16. Public transport 138
17. Site features 138
17.1 Topography and soils 138
18. Infrastructure services 139
18.1 Street networks 139
18.2 Principal and secondary site roads 140
18.3 Pedestrian and cycle access 143
18.4 Energy supplies 144
18.5 Community services and recreation 144
18.6 Landscape design 145
19. Residential development 146
19.1 Residential density 147
19.2 Residential amenity 147

19.3 Crime Prevention and Community Safety 148
19.4 Population and housing 149
19.5 Home-Based Business Activities 150
19.6 Retail and business services 150
19.7 Parking 151

DRAFT

Part A – Hospital Precinct

1. Background

1.1 Area included within the Hospital Precinct

This section applies to development on land covered by the Hospital Precinct as shown in Figure 1. This section provides specific controls for the Hospital Precinct in addition to the general controls elsewhere in Penrith DCP. In the event of any inconsistency between this section and the rest of Penrith DCP, the requirements of this section prevail.

Figure 1: Land to which this section applies



1.2 Aims of the controls for the Hospital Precinct

The aim of the controls in this section of the DCP is to provide more detailed provisions for development in the Hospital Precinct that will:

a) Contribute to the growth and character of Kingswood as a specialised medical precinct

b) Deliver a balanced social, economic and environmental outcome

c) Protect and enhance the public domain.

1.3 General objectives

a) To facilitate the revitalisation of Kingswood by promoting redevelopment and urban sustainability.

b) To promote high quality urban design, architectural excellence and environmental sustainability in the planning, development and management of the Hospital Precinct.

c) To provide for mixed use, commercial and residential development within the Hospital Precinct which will provide high levels of amenity for occupants.

d) To encourage medical related uses and research and development opportunities between the Hospital and the University of Western Sydney.

e) To provide high levels of accessibility within the precinct, connecting significant activity nodes, public open space and surrounding residential areas.

f) To encourage development within the Hospital Precinct that prioritises the public domain and creates an attractive and vibrant centre.

g) To encourage integration of the residential and non-residential land uses and improved access to transport facilities.

h) To achieve an attractive and sustainable precinct.

i) To ensure that development within the Hospital Precinct is consistent with the desired future character of each character area.

1.4 Character Areas

The Hospital Precinct is located in Kingswood, immediately east of, and in close proximity to, the Penrith City Centre. The location of the Nepean Hospital and the surrounding range of medical services and facilities within its boundaries make this area the primary medical centre for the Penrith LGA. The University of Western Sydney's Kingswood campus as well as TAFE NSW Nepean College is located within close proximity of the Precinct, with many of the services also catering to students of these tertiary institutions. The Hospital Precinct also enjoys good access by public transport, with the Kingswood Railway Station located north east of the Precinct.

The majority of the Hospital Precinct is zoned B4 Mixed Use under Penrith LEP 2010, which provides for an innovative mix of commercial and medical related uses as well as higher density housing to service the needs of medical patients, staff and students.

There are three precincts identified in the Hospital Precinct (see Figure 2), all with their own distinct characteristics. Generally, these activity precincts acknowledge and reinforce existing patterns of use in the area and have been identified as having potential to contribute to the precinct's demands for growth in health and medical related uses and the related demands for key worker and student accommodation in an accessible location, with close proximity to the Nepean Hospital, the University of Western Sydney, local services and public transport.

The intended character of each of these precincts is identified below and will be used to inform and guide future development.

Commercial Mixed Use

This precinct includes the existing shopping strip located adjacent to the Great Western Highway, Wainwright Lane located to the south and the northern end of Bringelly Road.

The location of the existing retail strip adjacent to the Great Western Highway offers businesses high visibility as well as strong public transport linkages as a result of the proximity to the Kingswood Railway station. There are existing pedestrian linkages from the station to the Nepean Hospital which will be reinforced to ensure pedestrian safety and comfort. Additional linkages will be encouraged to provide a more direct route for pedestrians and cyclists.

Development in this area will be required to respond to potential impacts to amenity caused by the proximity to major transport corridors through building design, layout and materials. Mixed use developments will provide active ground floor uses and high quality building and public domain design outcomes to create a comfortable pedestrian environment that reduces the noise and traffic impacts. The ground floor tenancies will accommodate retail businesses. The lot orientation of this area may require applicants to demonstrate adequate solar access can be provided to the public domain. Consistent landscape treatment will be provided along the Great Western Highway.

Bringelly Road will provide the second tier of development opportunities south of the primary commercial and retail strip. The reduced building heights and generous pedestrian verges in this part of the precinct will allow for a more human scale streetscape that is supportive of active uses that encourage the community to gather and enjoy the public domain. High order landscaping elements will be incorporated on the Bringelly Road/ Northern Road intersection to create an embellished eastern gateway to the Hospital Precinct.

Bringelly Road is largely developed with medium density residential dwellings in the form of residential flats and two storey townhouses. There is opportunity for this area to adopt a higher density residential form along Rodgers Street and Bringelly Road.

The north western part of the Commercial Precinct offers three frontages to the Great Western Highway, Parker Street and Barber Avenue and is a major gateway site to the whole Hospital Precinct. Development within this part of the precinct will be encouraged to incorporate high quality architectural design standards and landscaping, fitting for its location as the gateway to the Hospital Precinct.

Medical Mixed Use

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.

Residential Edge

Development within this precinct should ensure there are pedestrian and cycle linkages from Stafford Street to Derby Street. The existing open space pocket on Stafford Street offers potential to be connected through to Derby Street which would add another public space in close proximity to the Hospital.

Development in this precinct will step down in bulk and scale to provide a transition to the surrounding residential areas located south and east of the Hospital Precinct and will ensure that impacts in terms of visual amenity and overshadowing are minimised.

Figure 2: Character areas



2. Land use controls

2.1 Mixed use development controls

Background

Mixed use developments can provide a variety of uses and activities, to ensure that the Hospital Precinct outside the working day, adding vibrancy and life to the streets. Different uses within the same building are encouraged with retail and commercial activity at ground level, and residential uses, requiring privacy and noise mitigation, located above street level. Residential developments overlooking street life provide active visual surveillance and contribute to a sense of security within an area.

The development of mixed use buildings within the Hospital Precinct, with active uses at the street frontage, is a significant strategy designed to revitalise the precinct and encourage medical related uses.

Objectives

a) To encourage a variety of mixed use developments in the Hospital Precinct.

b) To encourage medical based uses and facilities to locate in close proximity of the hospital.

c) To create additional jobs to support the hospital and local community.

d) To provide increased density to allow hospital workers to live close to work.

e) To create lively streets and public spaces night and day within the Hospital Precinct.

f) To increase the diversity and range of shopping and recreational activities for workers, residents and visitors.

g) To enhance public safety by increasing activity in the public domain outside business hours.

h) To minimise potential conflicts and achieve compatibility between different uses.

i) To ensure that the design of mixed use developments addresses residential amenity.

j) To create legible safe access and circulation in mixed use developments.

k) To ensure that mixed use developments address the public domain and the street.

l) To ensure an appropriate scale between new development and street width, local context, adjacent buildings and public domain.

Controls

1. Mixed use developments are to provide flexible floor areas and layouts to both the ground and first floor of buildings to accommodate a range of commercial uses.

2. Standard floor to ceiling heights apply for mixed-use developments in accordance with the Building Code of Australia, provisions within State Environmental Planning Policy (Housing) 2021 and the Apartment Design Guide. However, where an applicant is seeking to take advantage of the additional building height incentives prescribed by LEP 2010, the following floor to ceiling heights apply:

    i. 3.5m on the ground and first floor

    ii. 2.7m on the upper floors

These floor to ceiling heights must be applied to the entire floor in order to be granted the height bonus.

To demonstrate that 2.7m floor to ceiling heights can be achieved (allowing for recessed lighting) a minimum floor to floor height of 3.1m is to be provided.

3. Where it is proposed to vary the height of building controls to take advantage of the height incentives, applicants are to consult Council early in the design process.

4. The commercial and residential activities of the building are to have separate service provision, such as loading docks, lobbies and lift access, defined parking areas, garbage storage and servicing.

5. Mixed use developments are to provide commercial frontage (retail/business/office premises) as a part of the development as shown in Figure 3 for the ground and first floors. Variation may be considered to this control in order to provide adaptable housing.

6. The ground floor of a mixed use development is to provide a minimum of 75% commercial frontage.

7. A minimum site width of 24m is required for any mixed use development.

8. Residential entries shall be clearly marked and provide direct access to the street. Vehicular access is to be from rear lanes, where practicable and possible. Pedestrian entrances are to address the main streets.

9. Commercial and residential uses should have clearly separate entries and vertical circulation.

10. Security access controls must be provided to all entrances into private areas, including car parks and internal courtyards.

11. Buildings are to provide an active ground floor setback zone, free of columns, balustrades and other visual barriers to the primary streetfront.

12. Blank building walls at ground level are to be avoided.

Figure 3: Ground and first floor commercial



3. Built form controls

Background

Building form and character refers to the individual elements of building design that collectively contribute to the character and appearance of the built environment. Penrith LEP 2010 includes provisions for land use, building heights, floor space ratio, heritage provisions and design excellence. The controls in this section of Penrith DCP encourage buildings that provide high quality design, innovation and creativity.

Objectives

a) To establish an appropriate scale, dimension, form and separation of buildings.

b) To achieve active street frontages with good physical and visual connections between buildings and the street.

c) To ensure there is consistency in the main street frontages of buildings by having a common alignment to reinforce the streetscape sense of enclosure.

d) To provide for pedestrian comfort and protection from weather conditions.

e) To define the public street to provide spaces that are clear in terms of public accessibility and safety, and are easy to maintain.

f) To ensure building depth and bulk is appropriate to the environmental setting and landform.

g) To achieve visual interest and a reduction in scale through building design and finishes.

h) To achieve design excellence.

i) To achieve a high quality public domain through innovative use of landscape and public domain upgrades.

j) To achieve a high level of amenity throughout the Hospital Precinct and a sustainable urban environment.

k) To ensure that buildings are responsive to the overall character of the Hospital Precinct.

3.1 Street alignment, building height and setbacks

Background

Well framed streets are an important characteristic of a town centre. Buildings within the Hospital Precinct should contribute to a strong definition of the street and public domain by providing an appropriate scale, proportion and sense of enclosure to streets that reflect the hierarchy of the street and the precinct's role as an important centre.

Building alignment and street setbacks establish the front building line. They help to create the proportions of the street reserve and the level of interaction of the building to the street. They can contribute to the public domain by enhancing streetscape character and continuity of street facades.

Street setbacks can also be used to enhance the building address and provide for landscape areas, entries to buildings and deep soil zones. Buildings align along the street with a common setback line to reinforce the urban character and improve pedestrian accessibility, amenity and activity at street level.

Street frontage heights refer to the height of the building at the street alignment including buildings with setbacks. Above the street setback height, upper levels of buildings should be setback further to maintain an appropriate scale for the area.

The built form for the Hospital Precinct should be expressed as mixed use developments comprising of commercial and retail on the lower floors with additional levels of dedicated residential set further back.

Objectives

In addition to the objectives for Built Form, the objectives of this section are to:

a) Establish consistent streetscapes through control of the built form visible from the public domain.

b) Provide street setbacks appropriate to building function and character.

c) Establish the desired spatial proportions of the street and define the street edge.

d) Provide for an appropriate transition in building heights from key public spaces.

e) Locate active uses closer to pedestrian activity areas.

f) Maximise solar access to the public domain.

g) Ensure an appropriate level of amenity for building occupants in terms of daylight access, outlook, view sharing, ventilation, wind mitigation, and privacy.

h) Achieve comfortable public domain environments for pedestrians in terms of scale, daylight access and wind mitigation as well as healthy environments for street trees.

i) Provide building separation for visual and acoustic privacy.

Controls

1. Street building alignments are to be provided as specified in Figure 4.

2. Minor projections into front building lines and setbacks for sun shading devices, entry awnings and cornices are permissible.

3. Building height will generally be restricted to a maximum podium height of 2-4 storeys addressing the main streets, with any additional storeys set back.

4. Developments located within the Residential Edge Precinct must step down in height and demonstrate that the development does not adversely impact on the adjoining residential area in terms of visual amenity or overshadowing.

Figure 4: Street setbacks



3.2 Building depth and bulk

Background

Controlling the size of upper levels of taller buildings allows for good internal amenity, access to natural light and ventilation, and reduces potential adverse effects that tall and bulky buildings may have on the public domain.

Objectives

a) To provide viable and useable commercial floor space.

b) To ensure access to light, ventilation and outlook and minimise the dependence on artificial light.

c) To reduce the bulk of buildings by limiting depth.

d) To reduce the extent of overshadowing on neighbouring properties.

e) To reduce the apparent bulk and scale of buildings by breaking up expanses of building wall with modulation of form.

Controls

1. Non-residential buildings greater than 12m in height are to have a maximum depth of 25m.

2. All points of an office floor should be no more than 10m from a source of daylight (e.g. window, atria or light wells).

3. Atria, light wells and courtyards are to be used to improve internal building amenity and achieve cross ventilation and/or stack effect ventilation.

4. Large unrelieved expanses of wall or building mass will not be supported and should be broken up by the use of suitable building articulation, fenestration or alternative architectural enhancements.

3.3 Boundary setbacks and building separation

Background

Setbacks define the spaces between buildings and the balance in a street between built form and landscape between the buildings. The setbacks between the buildings set the rhythm of the street and contribute to the character of the street (ie mixed use versus residential).

Separation in combination with setbacks contributes to amenity by creating privacy, and allowing ventilation, daylight access and view sharing. The degree of separation required for the side setback at the street will relate directly to the design of any apartment or commercial use facing that boundary. For example, if living areas and balconies have their primary orientation towards the side boundary then the separation distance will take precedence over the setback control.

Separation for mixed use development containing residential and commercial uses is to be in accordance with specified distances for each component use.

Objectives

In addition to the objectives for Built Form, the objectives of this section are to:

a) Ensure an appropriate level of amenity for building occupants in terms of daylight access, outlook, view sharing, ventilation, wind mitigation and privacy.

b) Achieve usable and pleasant streets and public domain areas in terms of wind mitigation and daylight access.

Controls

1. The minimum side and rear building setbacks for non-residential uses are specified in Table 1.

2. If the specified setback distances cannot be achieved when an existing building is being refurbished or converted to another use, appropriate visual privacy levels are to be achieved through other means.

3. Minimum separation distances for buildings within a site and between adjoining sites for buildings are:

    i. Up to four storeys (approximately 12m):

        - 9m between habitable and non-habitable
        - 6m between non-habitable

    ii. Five to eight storeys (approximately 25m)

        - 12m between habitable and non-habitable
        - 9m between non-habitable rooms

Table 1: Side and rear setback requirements

Building height and use	Minimum Side and Rear Setback
Non-residential uses:	
up to 12m	0 m
12m to 24m	6 m

3.4 Site coverage and deep soil zones

Background

Limiting site coverage provides separation between buildings. This space may be public (accessible and useable by the general public), communal (shared by all occupants of a development) or private (for the exclusive use of a single dwelling or tenancy). Limiting site coverage improves amenity by providing daylight access, visual privacy and opportunities for recreation and social activities.

Deep soil zones are areas of natural ground retained within a development, uninhibited by artificial structures and with relatively natural soil profiles. Deep soil zones have important environmental benefits, including:

- Promoting healthy growth of large trees with large canopies.
- Protecting existing mature trees.
- Allowing infiltration of rainwater to the water table and reduction of stormwater runoff.

Objectives

In addition to the objectives for Built Form, the objectives of this section are to:

a) Provide an area on sites that enables soft landscaping and deep soil planting, permitting the retention and/or planting of trees that will grow to a large or medium size.

b) Limit building bulk on a site and improve the amenity of developments, allowing for good daylight access, ventilation and improved visual privacy.

c) Provide passive and active recreational opportunities.

Controls

1. Open space must be provided equivalent to 25% of the total site area.
2. The maximum site cover and minimum deep soil zone for development is specified in Table 2

Table 2: Maximum site cover and minimum deep soil zone

Character Area	Maximum Site Cover	Minimum Deep Soil Zone (% of Site Area)
Commercial Mixed Use and Medical Mixed Use	75%	10%
Residential Edge	50%	15%

Note: Council may consider 100% site coverage on land within the Commercial Mixed Use character area along the Great Western Highway only.

3. The deep soil zone is to be provided in one continuous block. If multiple deep soil zones are provided, they must have a minimum dimension (in any direction) of 6m.

4. Where non-residential developments result in full site coverage and there is no capacity for water infiltration, planting on roof tops or over basement carport structures can be provided as a component of the mixed use development. In such cases, compensatory stormwater management measures must be integrated within the development to minimise stormwater runoff.

5. Where deep soil zones are provided, they must be associated with any existing mature trees as well as allowing for the planting of additional trees and landscape.

6. No structures, works or excavations that may restrict vegetation growth are permitted in deep soil zones (including, but not limited to, car parking, hard paving, patios, decks and drying areas).

3.5 Building exteriors

Background

A town's streetscape and public domain is defined by its buildings, streets and public places. The maintenance and improvement of the public domain is dependent on a consistent approach to the design of new development including the articulation and finish of building exteriors.

Objectives

The objectives of this section are to ensure that buildings in the Hospital Precinct:

a) Contribute positively to the streetscape and public domain by means of high quality architecture and robust selection of materials and finishes.

b) Provide richness of detail and architectural interest especially at visually prominent parts of buildings, such as lower levels and roof tops.

c) Present appropriate design responses to nearby development that complement the streetscape.

d) Clearly define the adjoining streets, street corners and public spaces and avoid ambiguous external spaces with poor pedestrian amenity and security.

e) Maintain a pedestrian scale in the articulation and detailing of the lower levels of the building.

f) Contribute to a visually interesting skyline.

Controls

1. Adjoining buildings are to be considered when designing new buildings and extensions to existing buildings in terms of:
    i. Appropriate alignment and street frontage heights.
    ii. Setbacks above street frontage heights.
    iii. Selection of appropriate materials and finishes.
    iv. Facade proportions including horizontal or vertical emphasis.
    v. Provision of enclosed corners at street intersections.
2. Balconies and terraces should be provided, particularly where buildings overlook parks and on low rise parts of buildings. Gardens on the top of setback areas of buildings and on roofs are encouraged.
3. Reliance on continuous balconies to create the main façade is not supported.

4. Building façades are to be articulated so that they address the street and add visual interest.

5. The design of the street and laneway facades should respond to the existing lot subdivision pattern in the vertical expression of the building.

6. External walls should be constructed of high quality and durable materials and finishes with 'self-cleaning' attributes, such as face brickwork, rendered brickwork, stone, concrete and glass. Use of painted render as the primary material is not encouraged.

7. To assist articulation and visual interest, large expanses of any single material are to be avoided.

8. Glazing for retail uses is to be maximised but broken into sections to avoid large expanses of glass.

9. Highly reflective finishes and curtain wall glazing are not permitted above ground floor level.

10. A materials sample board and schedule are required to be submitted with applications for development over $1 million or for that part of any development built to the street edge.

11. The design of roof plant rooms and lift overruns is to be integrated into the overall architecture of the building, and in residential buildings, may be screened by roof pergolas.

3.6 Landscape design

Background

Landscape design includes the planning, design, construction and maintenance of all utility, open space and garden areas. Water sensitive urban design principles are encouraged and should be applied as much as possible. Good landscaping is fundamental to the amenity and quality of outside space for residential flats.

Where streets vary in scale and character, trees and plantings should be used to enhance and create a consistent character to each street and place. The design of parks and open space areas should reflect the function of the place, its existing or potential character, and its place in the overall structure and hierarchy of the public domain. The design of these spaces

should also contribute to providing a good amount of public amenity within the Hospital Precinct.

Objectives

In addition to the objectives for Built Form, the objectives of this section are to:

a) Ensure that the use of potable water for landscaping irrigation is minimised.

b) Ensure landscaping is integrated into the design of development.

c) Add value and quality of life for residents and occupants within a development in terms of privacy, outlook, views and recreational opportunities.

d) Achieve a strong and distinctive landscape character for the precinct and contribute to the reduction of surface stormwater runoff.

e) Celebrate the symbolic interpretation with the landscape of regional parklands, the mountains and historic watercourses.

f) Create an ongoing City ecology by using appropriate species for the area.

Controls

1. Recycled water should be used to irrigate landscaped areas.

2. Commercial and retail developments are to incorporate planting into accessible outdoor spaces.

3. Remnant vegetation must be maintained throughout the site, wherever practicable.

4. A long term landscape concept plan must be provided for all landscaped areas, including the deep soil zone, in accordance with the Landscape Design section of this DCP. The plan must outline how landscaped areas are to be maintained for the life of the development.

3.7 Planting structures

Background

The following controls apply to planting on roof tops or over car park structures, particularly for communal open space required as a component

of mixed use residential development, or in non-residential developments where the landscaping proposed is not on natural ground.

The plants in these areas are grown in total containment with artificial soils, drainage and irrigation and are subject to a range of environmental stresses that affect their health, and ultimately their survival. Compliance with the controls in this section will help minimise health risks to plants and provide quality landscaped areas.

Objectives

In addition to the objectives for Built Form, the objectives of this section are to:

a) Contribute to the quality and amenity of open space on roof tops and internal courtyards.

b) Encourage the establishment and healthy growth of greening in urban areas.

c) Minimise the use of potable water for irrigating planting on structures.

Controls

1. Planting should be designed for optimum conditions for plant growth by:
    i. Providing soil depth, soil volume and soil area appropriate to the size of the plants to be established.
    ii. Providing appropriate soil conditions and irrigation methods.
    iii. Providing appropriate drainage.
2. Planters should be designed to support the appropriate soil depth and plant selection by:
    i. Ensuring planter proportions accommodate the largest volume of soil possible and soil depths to ensure tree growth; and
    ii. Providing square or rectangular planting areas rather than narrow linear areas.
3. Minimum soil depths should be increased in accordance with:
    i. The mix of plants in a planter, for example, where trees are planted in association with shrubs, groundcovers and grass.

ii. The level of landscape management, particularly the frequency of irrigation.

iii. Anchorage requirements of large and medium trees; and

iv. Soil type and quality.

4. Other controls

4.1 Public domain

All public domain works within the Hospital Precinct shall be undertaken in accordance with the provisions of Penrith City Council's "Kingswood Public Domain Manual" (2013) and the other relevant parts of Penrith DCP.

4.2 Pedestrian amenity

The pedestrian environment provides people with their primary experience of and interface with the public domain. This environment needs to be safe, functional and accessible to all. It should provide a wide variety of opportunities for social and cultural activities.

Pedestrian amenity incorporates all those elements of individual developments that directly affect the quality and character of the public domain. The pedestrian amenity provisions are intended to achieve a high quality of urban design and pedestrian comfort in the public spaces of the Hospital Precinct.

The controls in this section aim to increase the vitality, safety, security and amenity of the public domain by:

a) Encouraging future through site links at ground level.

b) Ensuring active street frontages and positive building address to the street.

c) Ensuring provision of awnings.

d) Protecting significant views and vistas along streets.

4.2.1 Permeability

Background

Through site links provide access connections between the long sides of street blocks for pedestrian and vehicular access at street level. These links provide an important permeability function in the form of lanes, shared zones and pedestrian ways.

Objectives

a) To improve access in the Hospital Precinct by providing through site links as redevelopment occurs.

b) To retain and enhance existing through site links as redevelopment occurs.

c) To achieve activated links to increase safety and vitality.

d) To achieve a high quality pedestrian environment.

e) To retain or revitalise lanes as useful and interesting pedestrian connections as well as for service access.

f) To improve the permeability of large sites when they are redeveloped for more intensive uses.

Controls

1. Through site links are to be provided as shown in Figure 5 with accessible paths of travel that are:

    i. A minimum width of 4m for its full length and clear of all obstructions including columns, stairs, building overhangs etc.

    ii. Direct and publicly accessible thoroughfares for pedestrians.

    iii. Open-air for its full length and have active frontages or a street address.

    iv. Activated by retail or commercial for a minimum of 70% of its length.

2. Existing dead end lanes are to be extended through to the next street as redevelopment occurs.

3. New through site links should be aligned and connected with existing and proposed through block lanes, shared zones and pedestrian ways and opposite other through site links.

4. Existing publicly and privately owned links are to be retained.

5. Signage is to be located at street entries indicating public access through the site as well as the street to which the link connects.

6. Lanes are to be designated pedestrian routes that are:

    i. Accessible paths of travel, with a minimum width of 6m for the full length, which is clear of all obstructions

    ii. Designed, paved and well lit

    iii. Appropriately signposted indicating the street(s) to which the lane connects.

Figure 5: Existing and desired links



4.2.2 Active street frontages and address

Background

Active street frontages promote an interesting and safe pedestrian environment. Busy pedestrian areas and non-residential uses, such as shops, studios, offices, cafes, recreation and promenade opportunities, promote the most active street fronts.

Residential buildings contribute positively to the street by providing a clear street address, direct access from the street and direct outlook over the street.

Objectives

a) To promote pedestrian activity and safety in the public domain

b) To maximise active street fronts in Hospital Precinct

c) To define areas where active streets are required or outdoor dining is encouraged

d) To encourage an address to the street outside of areas where active street frontages are required.

Controls

1. Active frontage uses are defined as one or a combination of the following, at street level:
    i. An entrance to retail premises.
    ii. A shop front.
    iii. Glazed entries to commercial and residential lobbies occupying less than 50% of the street frontage, to a maximum of 12m frontage.
    iv. A café or restaurant if accompanied by an entry from the street.
    v. Active office uses, such as a reception, if visible from the street; and
    vi. A public building, if accompanied by an entry.
2. Active street fronts are to be located at the ground level of all buildings located in those areas as shown in Figure 6.

3. Ground floor active street frontage uses are to be at the same level as the adjoining footpath and must be directly accessible from the street.

4. Restaurants, cafes and the like are to consider providing openable shop fronts. A separate approval from Council is required under the Roads Act and Local Government Act for outdoor street dining.

5. Street address is defined as entries, lobbies, and habitable rooms with full height to a minimum of 2.1m clear glazing to the street.

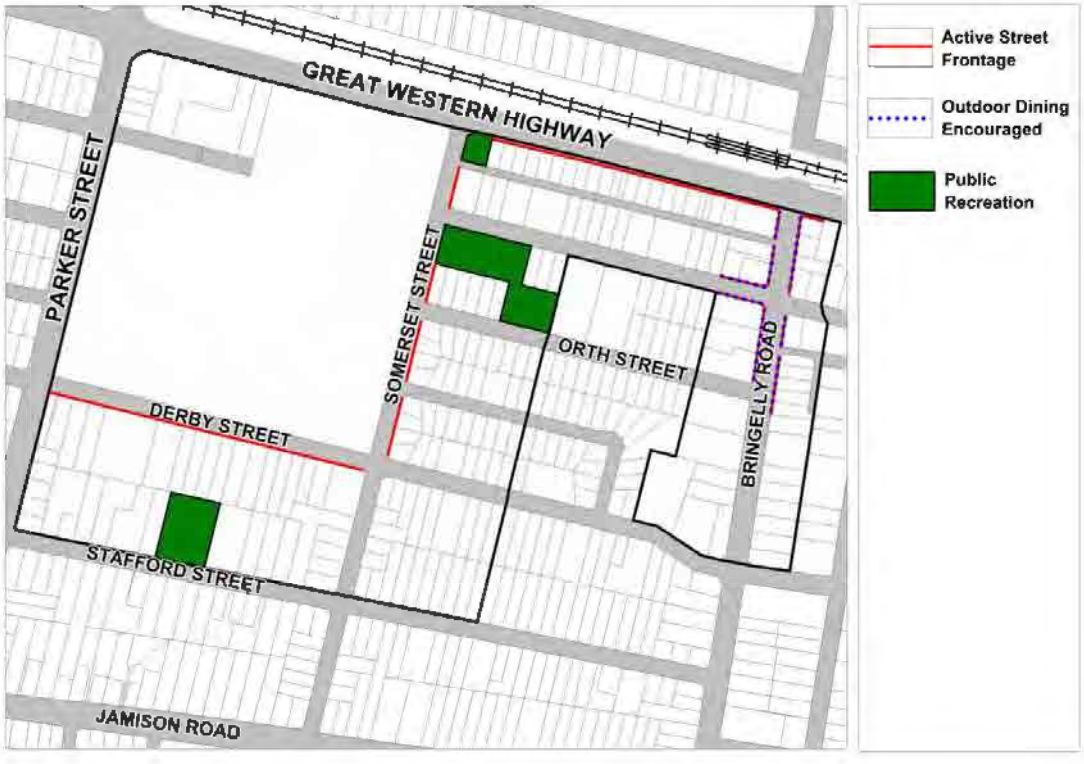
6. Residential developments are to provide a clear street address and direct pedestrian access off the primary street front or laneway (if provided), and allow for residents to overlook all surrounding streets.

7. Commercial entries are to be separate to residential entries and are to address the primary street frontage.

8. Large developments should provide multiple entrances including an entrance on each street frontage leading to separate cores.

9. Residential buildings are to provide not less than 65% of the lot width as street address.

Figure 6: Active street frontages



4.2.3 Safety and security

Background

The design of buildings and public spaces has an impact on perceptions of safety and security, as well as actual opportunities for crime. A safe and secure environment encourages activity, vitality and viability, enabling a greater level of security.

Objectives

a) To minimise opportunities for crime by incorporating environmental design in the development.

b) To ensure developments are safe and secure for pedestrians.

c) To contribute to the safety of the public domain.

d) To encourage a sense of ownership over public and communal open spaces.

Controls

1. For residential lobbies the lift is to be visible upon entry to the foyer.
2. The extent of corridors between the entry doors and the lift is to be minimised.
3. The minimum width of the corridor is to be at least 3m leading to the lift on the ground floor.
4. All residential lobbies are to be provided with a seating area and space for letterboxes.
5. Developments are to address the provisions of the Safety and Security Chapter of Penrith DCP as it relates to Crime Prevention through Environmental Design (CPTED) principles.
6. Building design, particularly for higher density residential buildings, are to allow for passive surveillance of public and communal spaces, accessways, entries and driveways.
7. For large scale retail and commercial development with a gross floor area of over 5,000m^2, a 'safety by design' assessment by a qualified consultant, is to be provided in accordance with the CPTED principles.

8. Certain types of development will be referred to Council's Community Safety Officer and, where appropriate, NSW Police in accordance with the CPTED protocol between Penrith City Council and NSW Police.

4.2.4 Awnings

Background

Awnings increase the useability and amenity of public footpaths by protecting pedestrians from sun and rain. They encourage pedestrian activity along streets and, in conjunction with active edges such as retail frontages, support and enhance the vitality of the local area. Awnings, like building entries, provide a public presence and interface within the public domain and contribute to the identity of a development.

A separate approval to erect an awning over the road reserve including a footpath will be required under the Roads Act and the Local Government Act.

Objectives

a) To provide shelter from wind and rain for public streets where most pedestrian activity occurs.

b) To address the streetscape by providing a consistent street frontage in the Hospital Precinct.

c) To provide a visually integrated streetscape.

Controls

1. Continuous street frontage awnings are to be provided for all new developments where active street frontages have been identified in Figure 6.

2. Awnings should generally:

    i. Be a minimum 2.8m deep where street trees are not required, otherwise a minimum 2.4m deep.

    ii. Have a minimum soffit height of 3.2m and a maximum of 4m.

    iii. Be stepped for design articulation or to accommodate sloping streets, integral with the building design and not exceed 700mm.

iv. Be low profile, with slim vertical fascias or eaves (generally not to exceed 300mm height).

v. Be setback from the kerb to allow for clearance of street furniture, trees, etc (minimum 600mm).

3. Awning design must match building facades and be complementary to those of adjoining buildings.

4. Awnings must wrap around corners for a minimum of 6m.

5. Under-awning lighting, recessed into the soffit of the awning or wall mounted onto the building, is to be provided to facilitate night use and to improve public safety.

6. One under-awning sign may be attached to the awning and must be 6m away from the sign of the adjoining property.

4.2.5 Vehicle footpath crossings

Background

Vehicle crossings over footpaths disrupt pedestrian movement and threaten safety. The design of vehicle access to buildings also influences the quality of the public domain. Overly wide and high vehicle access points detract from the streetscape and the active use of street frontages.

The design and location of vehicle access to developments should minimise both conflicts between pedestrians and vehicles on footpaths, particularly along pedestrian priority places, and visual intrusion and disruption of streetscape continuity.

Objectives

a) To make vehicle access to buildings more compatible with pedestrian movements

b) To reduce the impact of vehicular access on the public domain

c) To ensure vehicle entry points are integrated into building design and contribute to the building design.

Controls

1. A maximum of one vehicle access point (including the access for service vehicles and parking for non-residential uses within mixed use development) will be permitted for each development.

2. Where practicable, vehicle access is to be from lanes and minor streets rather than primary street fronts or streets with major pedestrian activity.

3. Where practicable, adjoining buildings are to share or amalgamate vehicle access points. Internal on-site signal equipment is to be used to allow shared access. Where appropriate, new buildings should provide vehicle access points so that they are capable of shared access at a later date.

4. To ensure pedestrian safety, vehicle entry points should not be located adjacent to building entry points.

5. Vehicle access widths and grades are to comply with the Australian Standard.

6. Vehicle access ramps parallel to the street frontage will not be permitted.

7. Vehicle access ramps must be integrated into the building design and are not permitted as separate structures, ramps must not be exposed along the side boundary.

8. Vehicle entry points are to be integrated into building design.

9. Doors to vehicle access points are to be roller shutters or tilting doors fitted behind the building facade.

10. Vehicle entries are to have high quality finishes to walls and ceilings as well as high standard detailing. No service ducts or pipes are to be visible from the street.

11. Porte cocheres disrupt pedestrian movement and do not contribute to active street frontage. They may only be permitted for hotels, medical use buildings and major tourist venues subject to urban design, streetscape, heritage and pedestrian amenity considerations.

12. If justified, porte cocheres are to be internal to the building with one combined vehicle entry and exit point, or one entry and one exit point on two different street fronts of the development.

13. In exceptional circumstances for buildings with one street frontage only, an indented porte cochere with separate entry and exit points across the footpath may be permitted, as long as it is constructed entirely at the footpath level, provides an active frontage at its perimeter and provides for safe and clear pedestrian movement along the street.

4.3 Car parking

Background

Most controls that relate to car parking are included in the Transport, Access and Parking Chapter of Penrith DCP. The following section provides some additional on-site car parking options for the Hospital Precinct.

Objectives

a) To facilitate an appropriate level of on-site parking provision to cater for a mix of development types.

b) To minimise the visual impact of on-site parking.

c) To provide adequate space for parking and manoeuvring of vehicles.

Controls

1. Car parking above ground level is to have a minimum floor to ceiling height of 2.8m so it may be adapted to another use in the future.

2. Where possible, natural ventilation is to be provided to underground parking areas with ventilation grilles and structures that are:

    i. Integrated into the overall façade and landscape design of the development.

    ii. Located away from the primary street façade.

    iii. Oriented away from windows of habitable rooms and private open space areas.

3. Proposals for basement parking areas are to be accompanied with a geotechnical report, prepared by an appropriately qualified professional, and any other supporting information.

4. Basement car parking should be located directly under building footprints to maximise opportunities for deep soil areas unless the structure can be designed to support mature plants and deep root plants.

5. The appearance of car parking is to be improved by locating parking so that it is not visually prominent from the street.

6. Car parking structures located above ground and viewed from the public domain are to be architecturally treated or where practical, sleeved with development.

7. Car parking layouts are to comply with the relevant Australian Standards.

4.4 Site facilities and services

Objectives

a) To ensure that the design and location of site facilities (such as clothes drying areas, mail boxes, etc.) are integrated within the development and are unobtrusive.

b) To ensure that site services and facilities are adequate for the nature and quantum of development.

c) To establish appropriate access and location requirements for servicing.

Controls

1. Letterboxes should be integrated into a wall immediately adjacent to the building entrance(s). Where there are a number of entrances into the building, the letterboxes located at each entrance should service the tenancies that will utilise that building entrance.

2. Letterboxes shall be secure and large enough to accommodate articles such as newspapers.

3. Telecommunication infrastructure should be built into the development and predominantly below ground, incorporating the following services fundamental in the effective operation of businesses, home businesses and dwellings:

    i. Multiple telecom services including high speed internet (including broadband), voice and data systems.

    ii. Cabling from all telephone lines and cable TV.

4. Where a master antenna is provided, the antenna must be sited in a location that is least visible from surrounding public spaces/ open areas.

5. Air conditioning units, service vents and other associated structures should be:

    i. Located away from street frontages and lanes

    ii. Located in a position where the likely impact is minimised

    iii. Adequately setback from the perimeter wall or roof edge of buildings.

6. Where they are to be located on the roof, they should be integrated into the roofscape design and in a position where such facilities do not become a feature in the skyline at the top of building(s).

7. Separate waste storage and collection areas are to be provided for domestic and commercial waste.

8. For developments comprising residential uses, a separate storage and collection area for bulky waste (such as cardboard boxes) and old or discarded furniture/appliances shall be provided.

9. Vehicular access to the waste collection areas should be from rear lanes, side streets and right of ways.

10. The responsibility for the ongoing management of waste facilities must be determined prior to work commencing on the development. Details of the management of waste by future tenants are to form part of the Waste Management Plan for the development. (See the Appendices Chapter of Penrith DCP for details on waste management plans).

11. Loading/unloading areas are to be:

    i. Integrated into the design of developments.

    ii. Separated from car parking and waste storage and collection areas.

    iii. Located away from the circulation path of other vehicles.

    iv. Designed for commercial vehicle circulation and access complying with AS2890.2.

    v. Vehicles are to enter and exit the site in a forward direction.

12. Separate loading/unloading areas are to be provided for commercial/retail and residential uses.

13. Generally, provision must be made for all emergency vehicles to enter and leave the site in a forward direction, particularly NSW Fire Brigade vehicles where:

    i. NSW Fire Brigade cannot park their vehicles within the road reserve due to the distance of hydrants from the building or restricted vehicular access to hydrants or

    ii. Otherwise required by the NSW Fire Brigade's Code of Practice – Building Construction – NSWFB Vehicle Requirements.

14. For developments where NSW Fire Brigade vehicle(s) are required to enter the site, the circulation path and access/egress provision is to comply with the NSW Fire Brigade's Code of Practice – Building Construction – NSWFB Vehicle Requirements.

5. Other information

Please refer to Parts B and C of Penrith DCP for other relevant controls that may apply to development within the Hospital Precinct.

DRAFT

Part B – Business Park Precinct

6. Introduction

6.1 Area included in the Business Park Precinct

This Section applies to development on land covered by the Business Park Precinct as shown in Figure 7. This Section provides specific controls for the Business Park Precinct in addition to the general controls elsewhere in this DCP. In the event of any inconsistency between this Section and the rest of the DCP, the requirements of this Section prevail.

Figure 7: Land to which this section applies



6.2 General objectives

a) To encourage development that promotes investment in the Business Park.

b) To provide a high quality environment for workers.

c) To promote quality urban design, architectural excellence and environmental sustainability in the planning and development, and long term use of the Business Park.

d) To encourage development in the Business Park that activates the public domain and creates an attractive and vibrant precinct.

e) To provide a framework that is flexible enough to accommodate a range of different and innovative uses.

f) To provide high levels of accessibility throughout the Business Park.

g) To provide clear connectivity through the Business Park and to the surrounding neighbourhoods.

h) To provide the framework to facilitate and encourage the use of public transport, safe pedestrian and cycle movement, and vehicular movement.

6.3 Requirements for a Concept Plan

1. Council must not grant consent to development on land comprised within the Business Park unless:

    i. A Concept Plan has been prepared substantially in accordance with the requirements of this Section, submitted to Council and adopted by Council.

    ii. The development is consistent with the adopted Concept Plan.

2. Council may waive the requirement for a Concept Plan due to:

    i. The minor nature of a development.

    ii. The adequacy of other planning controls or

    iii. Council's discretion.

6.4 Preparation of a concept plan

1. The Concept Plan shall address the following:

i. The existing physical and environmental features of the site.

ii. The general indication of the phasing of development.

iii. The proposed site layout including an indicative road layout.

iv. The distribution of land uses across the site and within multi storey buildings.

v. An urban design and landscape strategy.

vi. An infrastructure strategy.

vii. A public art strategy.

viii. Location of open space, its function and landscaping.

ix. Design principles based on analysis of the site and its context.

x. Identification of gateway sites and corridors.

xi. A street setback plan showing minimum front building setbacks and build-to boundary front setbacks.

xii. Identification of active street frontages.

xiii. Pedestrian, vehicular and cycle road access and circulation networks and facilities.

xiv. Remediation of any site contamination.

xv. Any other major infrastructure such as transmission lines, trunk sewage or water supply lines.

7. Built form controls

7.1 Street alignment and setbacks

Street setbacks and building alignments establish the front building line. They help to create the proportions of the street and can contribute to the public domain by enhancing streetscape character and continuity of street facades.

Street setbacks can also be used to enhance the setting and address for the building. They provide for landscape areas and entries to ground floor uses. Setbacks allow natural ventilation, daylight access and view sharing and increase privacy.

Above street frontage height, buildings should be set back to provide sunlight access to streets, pedestrian areas and lower levels of other buildings. These setbacks allow view corridors, an appropriate building scale for pedestrians, and good growing conditions for street trees.

Objectives

a) To establish consistent building alignments to the street.

b) To provide street setbacks appropriate to building function and character.

c) To establish the desired spatial proportions of the street and define the street edge.

d) To create a transition between public and private space.

e) To locate active uses closer to pedestrian activity areas.

f) To maximise solar access to the public domain.

g) To ensure an appropriate level of amenity for building occupants in terms of daylight access, outlook, view sharing, ventilation, wind mitigation, and privacy.

h) To achieve useable and pleasant streets and public domain areas in terms of wind mitigation and daylight access.

Controls

1. Street setbacks are to be in accordance with the requirements specified in Table 3 or in accordance with an adopted Concept Plan for the Business Park. These setback areas are to be used for landscaping designed in accordance with the Landscape Design section within the Environmental Management Chapter of Penrith DCP.

2. The minimum setback to the Great Western Highway is 20m.

3. Where appropriate, Landmark buildings are to be located on corner allotments to reinforce the intersections.

4. All buildings are to address the primary road.

5. A well designed urban landscaped entry plaza is to be developed on the frontage of all developments fronting primary roads.

6. Balconies may project up to 1m into front building setbacks, provided the cumulative width of all balconies at that particular level totals no more than 50% of the horizontal width of the building façade, measured at that level.

7. Minor projections into front building lines and setbacks for sun shading devices, entry awnings and cornices are permissible.

8. Basement car parking is not permitted to encroach into the setback area unless it can be demonstrated that the basement is designed to support significant mature trees and deep root planting.

9. Build to lines are to be adhered to however ground floor uses may be considered forward of the building line if these uses promote active street frontages.

10. The building setback areas are not to be used for the display or storage of goods/ materials.

Table 3: Minimum setback requirements

Road Classification	Minimum Setback
Primary Road	20m
Secondary Road	15m
All other	10m

Gateway Buildings

11. Gateway sites are to be nominated as part of future development applications. Special emphasis through architectural quality and detailing is required.

12. These buildings are to be iconic in form and will denote and provide emphasis to the street intersections.

13. Buildings are to address the corner condition with an emphasis on the higher order road.

7.2 Side and rear setbacks

Side and rear setback spaces provide a corridor of deep soil between sites. This area allows for the retention of existing mature trees, and future tree planting. Side and rear setbacks also provide opportunity to resolve changes in level between sites.

Objectives

a) To create a pattern of development that positively defines the streetscape.

b) To provide building separation for visual and acoustic privacy.

c) To provide deep soil zones, and maintain mature/significant vegetation.

d) To contribute to the landscape character of the Business Park.

Controls

1. Buildings are to be set back 10m from the rear and 5m from side site boundaries.

2. Awnings, canopies, balconies, sun shading, and screening elements can project into the side or rear setback zones.

3. Basement car park structures should not encroach into the minimum required side or rear setback zone unless the structure can be designed to support mature trees and deep root planting.

4. Natural ground level is to be retained throughout side and rear setbacks, where possible.

7.3 Building bulk

Objectives

a) To promote the design and development of sustainable buildings.

b) To achieve the development of working environments with good internal amenity and minimise the need for artificial heating, cooling and lighting.

c) To provide viable and useable commercial floor space.

d) To achieve useable and pleasant streets and public domain at ground level.

e) To achieve a skyline sympathetic to the topography and context.

f) To allow for view sharing and view corridors.

g) To reduce the apparent bulk and scale of buildings by breaking up expanses of building wall with modulation of form.

Controls

1. All points of a habited floor should be no more than 12m from a source of daylight (e.g. window, atria, or light wells).

2. Use atria, light wells and courtyards to improve internal building amenity and achieve cross ventilation and/or stack effect ventilation.

3. Courtyards and atria are to be arranged to promote access to natural light, pedestrian links and slender building forms.

4. Large unrelieved expanses of wall or building mass will not be supported and should be broken up by the use of suitable building articulation, fenestration or alternative architectural enhancements.

7.4 Building separation

Objectives

a) To allow solar access to buildings and communal areas.

b) To retain mature vegetation between buildings and allow for deep soil planting.

c) To provide a visual break between buildings and reduce the perceived bulk and scale of the built environment.

d) To provide visual privacy between buildings.

e) To provide outlook from buildings.

Controls

1. A minimum 20m separation is to be provided between buildings facing one another within a site.

2. A minimum 10m separation is to be provided between buildings perpendicular to each other within a site. This reduced building separation control only applies where the width of the facing facades does not exceed 20m.

3. Building separation between sites is controlled by 7.2 Side and Rear Setback controls.

7.5 Site coverage and deep soil zones

Deep soil zones are areas of natural ground retained within a development, uninhibited by artificial structures and with relatively natural soil profiles. Deep soil zones have important environmental benefits, including:

- Promoting healthy growth of large trees with large canopies.
- Protecting existing mature trees.
- Allowing infiltration of rainwater to the water table and reduction of stormwater runoff.

Objectives

a) To provide developments with a high level of amenity and landscape character.

b) To retain existing mature trees and allow for future tree planting.

c) To contribute to stormwater management and reduce runoff.

Controls

1. A minimum 20% of the site must be provided as deep soil area. The deep soil area will be included in the total landscaped area calculation for the site.

2. The deep soil zone is to be provided in one continuous block. If multiple deep soil zones are provided, they must have a minimum dimension (in any direction) of 6m.

3. Deep soil zones must accommodate existing mature trees as well as allowing for the planting of additional vegetation that will grow to be mature trees.

4. No structures, works or excavations that may restrict vegetation growth are permitted in deep soil zones (including, but not limited to, car parking and hard paving).

7.6 Architectural excellence

This Section seeks to encourage urban design and architectural excellence as well as environmental sustainability in both the public and private domain. Architectural excellence is particularly important where the building is highly visible from the public domain either outside or within the Business Park.

Good building design should positively contribute to the overall architectural quality of the city and provide buildings appropriate to their context. In some circumstances, this contribution may be as an iconic or landmark building, but more typically it is a well-mannered building that fits sensitively into the streetscape.

Architectural excellence should be achieved through careful consideration of:

- Built form- how it relates to its context
- Quality of materials
- Integrity of the design concept
- Its contribution to the public domain.

Objectives

a) To encourage a high level of design consideration.

b) To encourage that significant buildings achieve design excellence.

c) To provide buildings that contribute positively to the precinct character.

d) To encourage the development of sustainable design.

Controls

1. All development applications are to include a comprehensive site analysis that informs the design of the building and its placement on the site.

2. All applications are to include a design report that explains the design concept including built form, context response and materials selection.

3. Design of buildings should ensure natural surveillance of pathways and open space around buildings is possible from within the building and/or from adjoining roads and open space areas.

4. Landmark and gateway buildings are to demonstrate architectural excellence in the following areas:

    i. How the building reinforces and enhances significant vistas and view corridors.

    ii. How the building will enliven the public domain it adjoins.

5. The development must incorporate a variety of external finishes in terms of both colour and type of material used. The external finishes of the development are to be:

    i. Made from durable high quality, low maintenance, non-reflective materials.

    ii. Compatible with the overall design and form of the development.

    iii. Selected for all built forms to ensure the entire development presents a homogenous form.

    iv. Considered in association with proposed plantings and landscape treatment.

    v. Considered for their ability to provide visual relief in large wall surfaces and elevations.

    vi. Selected to ensure the development complements the surrounding built and natural environment.

6. Environmentally sustainable initiatives are to be incorporated into the design of all buildings.

7. Facades are to be composed with an appropriate scale, rhythm and proportion, which respond to building use and the desired character by:

i. Defining a base, middle and top related to the overall proportion of the building.

ii. Articulating building entries with awnings, porticos, recesses, blade walls and projecting bays.

iii. Incorporating architectural features which give human scale to the design of the building at street level. These can include entrance porches, awnings, pergolas and fences using recessed balconies and deep windows to create articulation and define shadows thereby adding visual depth to the façade.

8. Façade design is to reflect and respond to the orientation of the site using elements such as sun shading and environmental controls where appropriate.

9. Important corners are to be expressed by giving visual prominence to parts of the façade (e.g. a change in building articulation, material or colour, or roof expression).

10. Building services such as roof plant and parking ventilation are to be coordinated and integrated with the overall façade and building design, and screened from view. Roof forms, building services and screening elements are to occur within the overall height controls.

11. Ventilation louvers and car park entry doors are to be coordinated with the overall façade design.

7.7 Active Street Frontages

Active street frontages promote an interesting and safe pedestrian environment. Due to the size of the area, it is recognised that not all streets will develop as active pedestrian areas. Active frontages are to be identified where active ground level uses are to be consolidated, creating vibrant streetscapes in areas with high pedestrian traffic and possible located close to public transport and public open space.

Active uses include:

1. Shop fronts.

2. Retail and service facilities with a street entrance.

3. Café or restaurants with street entrance.

4. Community and civic uses with a street entrance.

5. Recreation and leisure facilities with a street entrance.

Objectives

a) To promote pedestrian activity and safety in the public domain.

b) To create vibrant streetscapes around areas of high pedestrian traffic.

c) To encourage activity within the Business Park outside commercial business hours.

d) To provide a mix of uses to support an increasing employment and visitor population over time.

e) To enhance pedestrian safety, security and amenity within the Business Park.

Controls

1. Entries to active frontage tenancies are to be accessible and at the same level as the adjacent footpath.

2. Vehicular access points should not, if possible, be located at primary active frontages.

3. Ground level uses at active frontage zones are to be located at or close to street level.

4. Transparency and openings to the street are to be maximised and blank walls, fire exits and building services elements are to be minimised.

5. The se of the footpath zone for outdoor seating areas is encouraged adjacent to active frontages.

6. Building entries are to address the primary road on corner sites.

7. All primary building entries should have entry canopies to emphasise the entry along the street.

7.8 Pedestrian permeability

The design and function of pedestrian spaces delivers amenity to the people using these spaces. The ability for pedestrians to safely and efficiently

access buildings, services and navigate through shopping areas is integral to good design. The equity and amenity of this access is also very important.

Pedestrian permeability is achieved by introducing through-site links which may be in the form of building separation, landscape dedications or setbacks.

Objectives

a) To ensure new development achieves appropriate pedestrian permeability.

b) To retain and enhance established and utilised through site links as redevelopment occurs.

c) To promote activation of through site links where possible.

d) To promote pedestrian circulation, amenity and safety.

e) To promote activation of the public domain by encouraging outdoor dining in appropriate locations.

f) To retain and develop lanes as useful and interesting pedestrian connections as well as for service access.

Controls

1. Commercial developments must provide pedestrian through-site links, the location of which will be determined on a site-by-site basis. Requirements for the location of pedestrian through-site links are to be discussed with Council prior to lodging a Development Application.

2. Pedestrian through-site links are to be straight, with clear views from end to end.

3. Pedestrian through-site links are to be publicly accessible and universally accessible for all.

4. Where pedestrian through-site links are adjacent to a courtyard or public space, their design is to be integrated with design of the open space and access provided between the two.

5. Where pedestrian through-site links are provided between buildings, a high level of transparency is to be provided between the internal ground floor space of the building and the pedestrian link.

6. Active ground level uses are encouraged along pedestrian through-site links.

7. Public access should be provided during all business trading times.

8. Pedestrian through-site links are to be clearly signed to identify street entries and the street to which the through-site link connects.

9. Where practical, pedestrian through-site links should have access to natural light.

7.9 Awnings

Awnings increase the useability and pedestrian amenity of public footpaths by providing shelter and enclosure at a pedestrian scale. They encourage pedestrian activity along streets and, in conjunction with active street frontages, support and enhance the vitality of the local area. Awnings provide a public presence and interface within the public domain and contribute to the identity of the development.

Objectives

a) To unify the streetscape.

b) To provide continuous shelter from sun, wind and rain for public streets where most pedestrian activity occurs.

c) To reinforce a consistent pedestrian scale through all business developments.

Controls

1. Continuous awnings must be provided where active street frontages have been identified within the Concept Plan.

2. Awnings should generally:

    i. Be a minimum 2.8m deep where street trees are not required, otherwise minimum 2.4m deep.

    ii. Have a minimum soffit height of 3.2m and a maximum of 4m.

    iii. Be stepped for design articulation or to accommodate sloping streets, integral with the building design and not exceed 700mm.

iv. Be low profile, with slim vertical fascias or eaves (generally not to exceed 300mm height).

v. Be set back from the kerb to allow for clearance of street furniture, trees etc (minimum 600mm).

3. Awning design must match building façades and be complementary to those of adjoining buildings.

4. Awnings are to wrap around corners for a minimum for 6m to the secondary street frontage.

5. Vertical canvas drop blinds may be used along the outer edge of awnings along north-south streets.

6. Lighting is to be recessed into the soffit of the awning or wall-mounted onto the building to facilitate night use and to improve public safety.

7.10 Landscaping and fencing

Objectives

a) To provide landscaping that is integrated into the design of the precinct and development sites.

b) To create well designed active and passive open space and recreation areas.

c) To provide landscapes that contribute to the amenity of streets.

d) To recognise urban air quality and biodiversity.

e) To encourage the use of recycled water for landscaping irrigation.

f) To incorporate Water Sensitive Urban Design principles and contribute to the reduction of stormwater runoff.

g) To improve the microclimate within the development.

h) To ensure that fencing does not detract from the overall visual amenity and character of the Business Park.

Controls

1. A minimum 30% of the developable area of the site is to be provided as Landscaped Area.

2. Landscaped Area is the area of the site not occupied by any buildings which is landscaped by way of gardens, lawns, shrubs or trees and is available for use and enjoyment by the occupants of the building and excludes areas used for driveways or parking areas.

3. Water management principles are to be incorporated as per the Water Management section within the Environmental Management Chapter of Penrith DCP.

4. Verge treatments are to be designed to reflect the intended use of the street activity and function.

5. New streets are to have a strong landscape character.

6. The landscape design within setbacks should consider the scale of the building and where appropriate, select and locate plants to help reduce the overall bulk and scale of the development.

7. All setback and car parking areas are to be regenerated and maintained to a high standard.

8. Outdoor staff break areas should be provided and integrated into landscaped areas. These areas are to be provided with shade and maintain a reasonable level of amenity.

9. Fencing should be constructed of natural materials and finishes that integrate into the landscape character of the Business Park.

10. No fencing, other than of a low ornamental type may be erected within the setback area to any road.

11. Fencing along rear boundaries adjacent to drainage or open space areas shall be integrated with the landscaping of the development.

12. All chain-wire fencing is to be black or dark green in colour.

13. Solid, metal sheet fencing is not permitted.

7.11 Water and energy efficient design

Objectives

a) To promote sustainable development which uses energy efficiently and minimises non-renewable energy usage in the construction and use of buildings.

b) To ensure that development contributes positively to an overall reduction in energy consumption and greenhouse gas emissions.

Controls

1. Development must aim to improve the control of mechanical space heating and cooling by designing heating/cooling systems to target only those spaces which require heating or cooling, not the whole building.

2. Developments should improve the efficiency of hot water systems by:

    i. Encouraging the use of solar powered hot water systems.

    ii. Insulating hot water systems.

    iii. Installing water saving devices, such as flow regulators, 3 star Water Efficiency Labelling and Standards Scheme (WELS Scheme) rated shower heads, dual flush toilets and tap aerators.

3. Developments must aim to reduce reliance on artificial lighting and design lighting systems to target only those spaces which require lighting at any particular 'off-peak' time, not the whole building. A timing system should be incorporated to automatically control the use of lighting throughout the building.

4. All non-residential developments Class 5-9 must comply with the Building Code of Australia energy efficiency provisions.

5. An Energy Efficiency Report from a suitably qualified consultant that demonstrates a commitment to achieve no less than 4 stars under the Australian Building Greenhouse Rating Scheme or equivalent must be provided for all commercial and industrial development with a construction cost of over $5 million.

7.12 Traffic, parking and site access

Objectives

a) To control traffic generation from the development so that it does not exceed agreed limits.

b) To integrate adequate car parking and servicing access without compromising street character, landscape or pedestrian amenity and safety.

c) To ensure adequate parking to serve development is provided on site.

d) To encourage shared use of parking.

e) To allow flexibility in parking rates to reflect shared use or best practice.

f) To provide parking structures that do not dominate the public domain.

g) To control site entry points to encourage the active use of street frontages.

Controls

1. An appropriate Traffic Report should accompany development applications for major development proposals that assesses the impact of projected vehicular traffic associated with the proposal.

2. Where practicable, vehicle access is to be from secondary streets.

3. Potential pedestrian/vehicle conflict is to be minimised by:
    i. Limiting the width and number of vehicle access points.
    ii. Ensuring clear site lines at pedestrian and vehicle crossings.
    iii. Utilising traffic calming devices.
    iv. Separating and clearly distinguishing between pedestrian and vehicular access ways.

4. The appearance of car parking and service vehicle entries is to be improved by locating or screening parking, garbage collection, loading and servicing areas visually away from the street.

5. Structured car parking that extends above ground, where viewed by the public domain, is to be architecturally treated or where possible sleeved by development.

6. Basement car parking should be located directly under building footprints to maximise opportunities for deep soil areas unless the structure can be designed to support mature plants and deep root plants.

7. Basement parking areas must not extend forward of the building line along a street.

8. Ventilation grills or screening devices or car park openings must be integrated into the overall design of the façade and landscape design of the development.

Part C – South Werrington Urban Village

8. Preliminary

8.1 Background

South Werrington Urban Village (SWUV) comprises approximately 48 hectares of land that has been identified for urban development comprising residential and employment generating uses. SWUV will assist the delivery of housing and employment opportunities in Penrith and integrate with the existing Werrington community north and south of the Great Western Railway.

8.2 Land to which this section applies

This Section applies to development on land covered by the South Werrington Urban Village as shown in Figure 8. This section provides specific controls for the South Werrington Urban village in addition to the general controls elsewhere in Penrith DCP. In the event of any inconsistency between this section and the rest of Penrith DCP, the requirements of this section prevail.

Figure 8: Land to which this section applies



8.3 Aims and general objectives of this section

The aims of this Section are to:

a) Support the objectives of Penrith Local Environmental Plan 2010.

b) Facilitate the sustainable development of residential, employment and open space areas of the South Werrington Urban Village.

This Section seeks to achieve the following objectives:

General

c) To facilitate and promote the principles of the Werrington Enterprise Living and Learning (WELL) Precinct.

Transport and Accessibility

d) To integrate public transport opportunities into the planning process.

e) To respond to the existing and future arterial road network including the Werrington Sub-Arterial.

f) To provide a sub-arterial and collector road network that links with surrounding areas.

g) To ensure vehicular, pedestrian and cycle ways link efficiently within and between residential areas and employment areas.

h) To provide an inter-connective street system that links with the existing Werrington community.

i) To ensure the proposed land uses relate to regional access routes, public transport routes, the local road network and the open space network.

j) To provide an interconnected local road network that creates easy access, including truck access to employment areas and accommodates bus movements.

k) To provide a logical and interconnected pedestrian and cycleway system linking with surrounding areas.

l) To ensure that there is adequate land set aside for the proposed east west link road within the land that is zoned for residential development.

Natural Environment

m) To recognise the natural land form in the design of the urban areas.

n) To conserve the biodiversity of the site by incorporating woodland areas into the open space system and protecting riparian corridors.

o) To reduce environmental impact by locating higher density housing closer to the railway station.

p) To design an integrated stormwater management system consistent with principles of water sensitive urban design.

q) To reinforce the importance of the natural landscape settings and areas with heritage conservation values, by protecting views and vistas to and from Frogmore House.

Built Environment

r) To maximise opportunities for higher density residential development in proximity to Werrington Station.

s) To respond to the physical, cultural and urban heritage of the area with plans and designs that respect the landform, climate and patterns of land use.

t) To encourage a contemporary built form of well-designed buildings that consider the amenity of the occupants and neighbours, and

u) To ensure that the proposed development and built form comply with best practices in ESD and complies with the principles in Penrith Council's Water Action Plan 2005 and Penrith City Council's Green House Gas Reduction Plan.

Social

v) To provide diversity of housing choice, including affordable housing.

w) To provide places for recreation that will accommodate casual activities.

x) To encourage safety and security through passive surveillance of streets and open spaces.

y) To build on the existing sense of community by integrating with the existing community.

z) To provide a range of passive open spaces that can act as meeting places for the existing and future communities.

Economic

aa) To encourage the provision of employment opportunities that are compatible with the existing or desired future adjoining residential development.

bb) To allow for the orderly and economic development of serviceable and accessible land.

cc) To ensure that employment development is delivered in a manner timely with the adjoining residential development.

8.4 Supporting studies

Some additional sources of relevant information for South Werrington Urban Village include:

- Community Facilities Study (BBC Consulting).
- Archaeology and Heritage Assessment (HLA-Envirosciences Pty Ltd).
- Employment Lands Paper (SGS Economics).
- Flora and Fauna Assessment (Kevin Mills and Associates).
- Assessment of Future Housing Needs and Population Characteristics (BBC Consulting).
- Report of Land Capability (Douglas Partners).
- Landscape Masterplan and Visual Assessment (Context Landscape Design).
- Traffic and Transport Assessment (Traffix).
- Bushfire Hazard Assessment (Holmes Fire and Safety and ABAC).
- Contamination (Douglas Partners).
- Stormwater and Servicing (Patterson Britton & Partners).

These documents are available for reference from Council.

8.5 Concept plans

A Concept Plan setting out proposals for the development on each of the different development zones (i.e. Residential and Light Industry) is required to be lodged prior to, or with, the first subdivision development application for each of the different development zones.

The Concept Plan must meet the objectives and controls of this section and demonstrate:

a) The proposed urban structure and public domain elements, including Landscape Masterplan.

b) The distribution of lot types and housing forms to suit a variety of lifestyles, household types and financial capacities for residential zones and consistent with the dwelling yield map in Figure 9 and Table 4.

c) The dwelling proportion numbers, types and location of affordable housing lots as required by Council's Sustainability Blueprint for Urban Release Areas. This is not necessary for the proportion of affordable housing for the estate delivered via another means such as a monetary contribution through a Voluntary Planning Agreement.

d) The proposed road hierarchy, sections and details.

e) The location and design of open spaces.

f) The location of pedestrian and cycle paths.

g) Development Staging.

h) Infrastructure Delivery Strategy.

9. Structure plan

9.1 Vision

A vision for South Werrington Urban Village (SWUV) was established through the Werrington Enterprise Living and Learning Strategy 2004 which is as follows:

"Demonstrating a model for sustainable urban development, that captures its potential arising from proximity to transport linkages and tertiary educational facilities, the WELL precinct will be an internationally renowned

destination of choice for business, residents and students. The synergies arising from the collective presence of these groups will energise the Precinct and represent a catalyst for the emergence of creativity and innovation demonstrated in the enterprise, living and learning activities undertaken within the Precinct. Whilst attracting and accommodating a diverse range of land use activities and people, the desirability of the place will be a function of the seamless integration of those people and activities and the cosmopolitan lifestyle choices it subsequently generates and offers."

The urban form within this Section is derived from the WELL Precinct Strategy including the adopted WELL Concept Plan 2006 and the studies informing this strategy.

9.2 Urban structure

The South Werrington Urban Village Structure Plan establishes the structure and form for the planning and future development of the subject lands. The emerging urban structure of SWUV is illustrated at Figure 9 – South Werrington Urban Village Structure Plan and characterised by the following performance measures:

Access

1. The structure plan envisages the construction of the proposed Werrington Arterial. A new major collector road is proposed to link the Werrington Arterial to future employment development to the west. This new link road also provides a separation between the employment and residential land uses. The intersection of the new link road with the Werrington Arterial has been located and designed and can be constructed in stages if required. The location of the new link road is as shown on the Structure Plan, and is located on the residential zoned land.

2. A minor north south road is proposed linking Werrington Station with the Great Western Highway and forming an edge between the employment precinct and the land that forms part of the Wollemi School.

3. The arterial and collector road system are proposed to be designed to accommodate buses and articulated vehicles.

4. Local streets are proposed to be generally inter-connective and link with existing streets in South Werrington.

5. A cycle system is proposed to provide movement through the area and linking with surrounding areas including the recreational areas to the east and St Marys. The system links with the proposed cycleway along the western side of the Werrington Arterial with the potential to extend northwards.

Land Use

6. Employment land is proposed south of the proposed east west collector road and extending to the Great Western Highway. It is proposed that this land would be used for a range of service and light industrial purposes.

7. Residential development is proposed with the density and form influenced by the topography, proximity to the station and the land use zoning of the existing residential area of South Werrington. Densities are to be consistent with Figure 9 and Table 4 relating to dwelling yields.

Open Space

8. Passive Open Space areas are located within SWUV and have been located having regard to a number of factors:

   i. The findings of the WELL Precinct studies in relation to the location of passive and active open space.

   ii. The present supply of passive open space in Werrington and the potential for passive parks to act as a meeting place.

   iii. The presence of woodland communities, predominantly along the northern boundary of the site and along the riparian corridor of Claremont Creek.

9. Active Open Space are located outside SWUV however will be provided in accordance with WELL wide open space planning principles and the adopted WELL Contributions Plan. Development within SWUV will contribute towards active open space requirements across the WELL Precinct.

Stormwater Management

10. An integrated approach to stormwater management is proposed that considers the capacity of the existing system and water sensitive urban design that is compatible with the topography and soil types.

11. A range of measures are proposed to manage stormwater.

12. The design of Stormwater Management Facilities is to include a schedule of the long term maintenance and operation costs.

Figure 9: South Werrington Urban Village Structure Plan



9.3 Desired future character

There are three main character areas within SWUV and they include:

1. General Residential: General Residential allows for a range of housing types with the prominent housing type comprising detached housing on the lower sloped land leading up to Frogmore House. Streets are oriented north south to provide a layering of street trees and rear garden trees up the slope with lots sizes generous to allow glimpses to the ridge behind. The predominant character of the area shall be of low to mid rise roof form interspersed with vegetation. The height and bulk of development and vegetation will not obstruct views to or from Frogmore House.

2. Multi Dwelling Housing: Development closer to the railway station is proposed to be medium density consistent with metropolitan planning policies and Council's *Sustainability Blueprint for New Urban Areas*. Development in the form of townhouses and apartments is proposed with a strong built edge to the street and a preference for dwellings that

address the streets. This type of development will transition to the general residential area.

3. Employment Uses: Development south of the proposed east west collector road is proposed for small lot industrial purposes that will not conflict with the existing and intended character and amenity of the residential areas to the north. Development in this location is to present high quality architectural design features with a strong built edge to the street with incorporated landscaping which contribute to the streetscape. The height of development and vegetation will not obstruct views to or from Frogmore House.

9.4 Dwelling yields

Objectives

a) To provide a diverse range of housing forms and densities.

b) To promote a range of dwellings types to meet the needs of diverse age groups and family types.

c) To provide opportunities for affordable housing.

d) To provide a range of residential densities that respond to the topography and proximity to Werrington Station.

Controls

1. A minimum of 414 dwellings is to be delivered.

2. In order to ensure the minimum residential dwelling target is achieved, as part of a subdivision application, an applicant is to demonstrate to Council that the sub-precinct dwelling targets shown in Figure 10 and Table 4 will be achieved. Subject to agreement of Council and consultation with relevant landowners, dwelling yields may be 'traded' between sub-precincts as long as it meets overall targets and objectives of Penrith DCP. The creation of a super lot or residual parcel is to specify the minimum dwelling yield which that lot is required to deliver.

3. Development proposals that seek densities above 414 dwellings must demonstrate that the site can accommodate the increased population with regard to issues including but not limited to potential traffic impacts, open space allocation and environmental constraints. It is recommended

that applicants attend a pre-lodgement meeting with Council officers in these instances.

Table 4: Dwelling yield

Sub-Precinct	Minimum dwelling yield
A	78
B	154
C	30
D	122
E	30
Totals	414

Figure 10: Dwelling yield



10. Public domain

10.1 Responding to the site's natural features

10.1.1 Riparian corridors

Objectives

a) To conserve biodiversity by providing linkages between significant natural vegetation units within the City.

b) To protect, restore and enhance the environmental values and functions of watercourses and riparian corridors along Claremont Creek.

c) To ensure that important natural features inform the urban structure of the place.

d) To provide high amenity areas for residents.

e) To ensure the water quality from the development is maintained or improved.

f) To convey stormwater flows through the site in a safe manner.

Performance measures

g) The natural drainage lines of Claremont Creek and its tributaries are conserved as healthy and naturally functioning riparian corridors.

h) Existing healthy remnant vegetation is retained within those corridors.

i) Significant revegetation of the riparian corridors occurs as part of development.

j) The corridors and other topographical features are represented as special places within the urban form.

k) A Corridor Management Plan shall be submitted and should identify how the corridor will be established is prepared developed and implemented on site as part of its development.

l) Native vegetation within the riparian corridor is protected and rehabilitated with local provenance species at a density that would naturally occur.

m) Water quality and water detention infrastructure should not be located within the Core Riparian Zone of the riparian corridor, and may be located in the Vegetated Buffer if:

   i. No alternative location outside the Vegetated Buffer can be found

   ii. The basin only occupies limited areas

   iii. The basin can be designed in such a way that they will not reduce the function of the adjacent Core Riparian Zone.

n) The management of the riparian corridor is to consider the long term maintenance and operation costs.

Controls

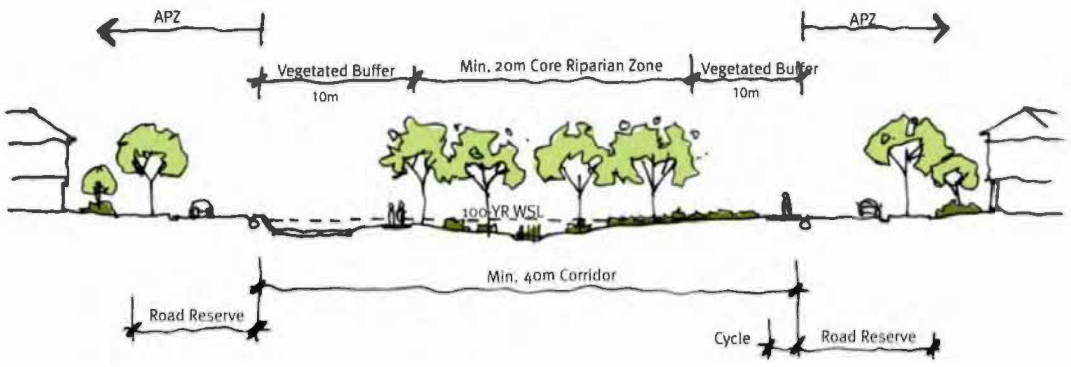
1. A minimum corridor width of 40m is to be provided along the Claremont Creek Corridor with 20m being core corridor.

2. The profile of the riparian corridor is to be generally consistent with that represented at Figure 11.

3. Asset Protection Zones are to be located outside the Core Riparian Zone and the Vegetated Buffer and any requirements for bushfire Asset Protection Zones (APZ) are not to compromise in any way the extent, form or function of the riparian corridor.

4. Any pathways adjacent or adjoining Riparian Corridors are to be consistent with the Department of Water and Energy "Design and Construction of Paths, Cycleways and Accessways along Watercourses and Riparian Area Guidelines (Version 3, April 2007)".

Figure 11: Corridor profile selection



10.1.2 Water management

Objectives

a) To maintain the stability and integrity of the finished creek profile.

b) To ensure the quality of water leaving the urban areas does not adversely impact upon the health of Claremont Creek.

c) To provide for stormwater detention.

d) Reduce the peak flow rate of stormwater run-off from the site for all storms up to the 100 year ARI.

Performance Measures

e) Trunk drainage works are provided as an initial stage of development of the release area.

f) Stormwater management shall incorporate various strategies and devices and should demonstrate best management practices and may include (but not limited to); pit inserts, underground pollutant traps, bio-retention swales, rain-gardens and educational programs to improve the quality of urban runoff before enters the creek channels.

g) Stormwater Management Plans for Claremont Creek catchment that identify how the quantity and quality of urban runoff from the site will be managed are prepared and implemented on site as part of its development.

h) A water quality plan and maintenance plan shall be submitted to Council with applications for subdivision. This plan shall cover all elements of the proposed drainage system that will ultimately be transferred to Council, and shall outline the maintenance schedule to ensure that the system operates at the required standard.

i) Consideration should be given to evaluating the opportunities for the integration of water supply and re-use of stormwater, grey water and treated effluent.

j) Reference is to be made to Section 10.1.5 Salinity in relation to the construction and location of stormwater management devices.

k) The design of the stormwater infrastructure is to include a schedule of the maintenance and operation costs of the facilities lifecycle.

Controls

1. Developments must achieve Council's downstream water quality objectives and measures outlined in the Water Management section within the Environmental Management Chapter of Penrith DCP.

10.1.3 Flood management

Objectives

a) To manage the risk to life and property assets from flooding events up to PMF.

b) To allow the riparian corridor to function as a naturally occurring waterway.

c) To manage flood waters within the site in a safe manner.

Performance Measures

d) Appropriate areas of land are provided outside the Core Riparian Zone for detention and storage of flood waters.

e) Flood waters are safely managed within the riparian corridor.

f) A Stormwater Management Plan for Claremont Creek that identifies how the flood waters will be managed is prepared and implemented on site as part of its development.

g) Refer to the Water Management section within the Environmental Management Chapter of Penrith DCP for further details.

Controls

1. Stormwater detention is to be provided to reduce post development flows to pre development levels for all storm events and durations.

2. Overland flow paths and floodways are to be sized and designed to safely convey flood waters.

10.1.4 Vegetation

Objectives

a) To protect and embellish local vegetation and habitat.

b) To integrate significant trees within the landscape of the new urban area.

Performance Measures

1. Existing mature trees are conserved for their natural functions and aesthetic value.

2. Open space is co-located with existing tree copses, where practicable.

3. Significant trees located within developable areas are able to be conserved on site, where practicable, as part of the landscaped area of future development.

4. No disturbance to existing ground levels occurs within the drip line of existing significant trees.

10.1.5 Salinity

Objectives

a) To ensure that saline soils, groundwater levels and salinity processes are identified, prior to finalisation of development form.

b) To ensure that appropriate measures are taken to protect buildings, infrastructure and the natural environment from deterioration associated with salt attack.

Performance Measures

c) Development applications for subdivision shall include a preliminary site investigation, which identifies areas of potential salinity.

d) A remedial action plan is to be submitted with a development application on land where there is an identified salinity hazard.

e) Salt and drought tolerant plant species must be used in the landscaping within the site and should be identified in any landscape plans for the site. This also includes appropriate hard landscaping materials and practice.

f) Detailed designs for stormwater management devices is required to ensure level of excavation and the impact of excavation will have on potential salinity on the site.

g) Further investigation of the land as well as additional work during construction will be required and may include (but not necessarily limited to):

   i. Installation of groundwater bores well in advance of construction and monitoring/sampling/analysis before, during and after construction, to assess changes in soil water quality as a result of the proposed development. The bores would be strategically located at exit points from the site into the Claremont Creek System.

   ii. Routine inspections and earthwork monitoring during construction.

   iii. Detailed geotechnical investigations on a stage-by-stage basis for determination of pavement thickness designs and lot classifications.

Controls

1. Public and private infrastructure is to be designed and constructed in accordance with the recommendations of the salinity investigation.

10.1.6 Contamination

Objectives

a) To ensure that contaminated land is identified, prior to finalisation of development form.

b) To ensure that a remedial action plan is prepared for any identified areas of contamination.

Controls

1. Development applications for subdivision shall include an assessment of possible contamination prepared by a suitably qualified person which covers the following:

   i. Likelihood of contamination over the subject area, based on previous land uses.

   ii. Assessments of the nature and extent of contamination in areas identified as likely to be contaminated

2. Reference is to be made to the particular requirements of State Environmental planning Policy (Resilience and Hazards) 2021 in relation to contamination and remedial action plans, if required.

10.2 Transport and accessibility

10.2.1 Road Network

Objectives

a) To provide a clear urban framework for the entire release area that informs the location of land uses.

b) To identify a clear hierarchy for movement within the subject lands and adjacent urban areas.

c) To provide a safe and efficient movement network for all users.

d) To promote public and active transport options.

Performance Measures

1. The street network is a modified grid that facilitates walking and cycling for access to daily activities; and also enables direct local vehicle trips within the neighbourhood and to local activity points.

2. The suburb has a coherent urban system of compact walkable neighbourhoods which cluster to form a suburb with a high degree of street connectivity.

3. Neighbourhood identity is reinforced by the location open space areas at focal points within convenient walking distance for residents.

4. The vehicle, cyclists and pedestrian networks and lot density assist in reducing local vehicle trips, travel distances and speeds, maximising public transport effectiveness, and encouraging walking and cycling to daily activities.

10.2.2 Vehicular Movement

Objectives

a) To create a legible road hierarchy.

b) To provide a high degree of connectivity within the site and between the site and the adjoining areas.

c) To minimise the negative impacts of through traffic.

Performance Measures

d) A hierarchy of streets should reflect the function and traffic load of each street in a network, minimise travel distances, maximise access to facilities and services and assist people find their way.

e) The street network connects with adjacent collector routes and neighbouring streets to maximise movement efficiency and social connection.

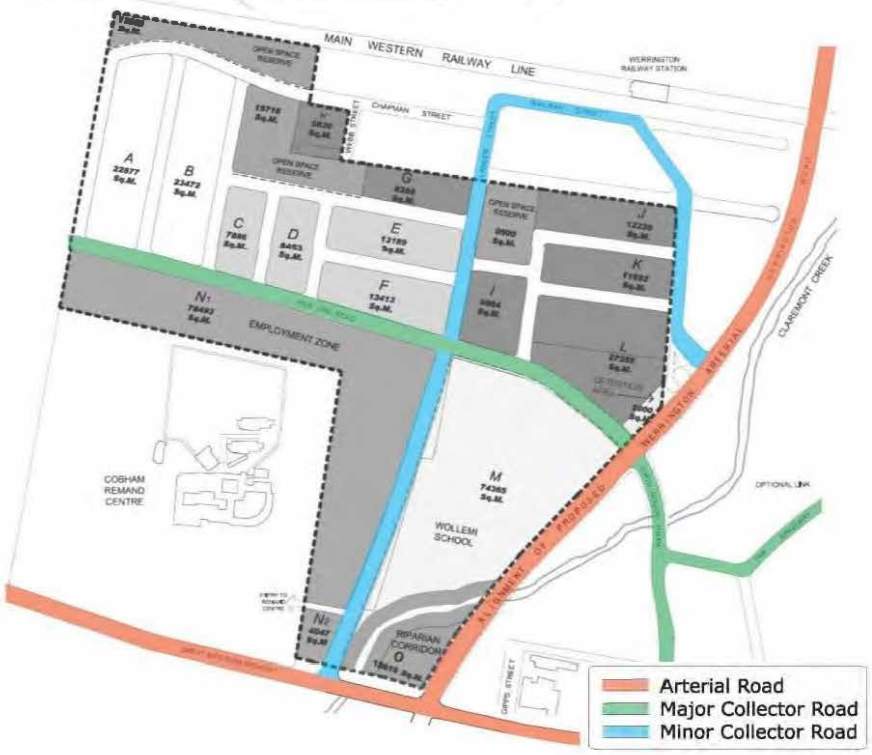
f) The street network takes account of the topography and vegetation and respects any existing or potential site assets.

g) The street network allows all development to address the street.

Controls

1. Street blocks are to have a maximum length of 200m and maximum depth of 90m.

Figure 12: Road network hierarchy



10.2.3 Public Transport

Objectives

a) To increase opportunities for use of public transport.

b) To enable the efficient operation of bus routes on designated roads.

c) To encourage the early introduction of bus services within the estate.

Performance Measures

d) The bus route facilitates connections between the Precincts, the existing residential estates and key facilities adjoining the subject lands, local facilities and the Penrith CBD.

e) Bus routes and sheltered bus stops are designed, constructed and clearly marked.

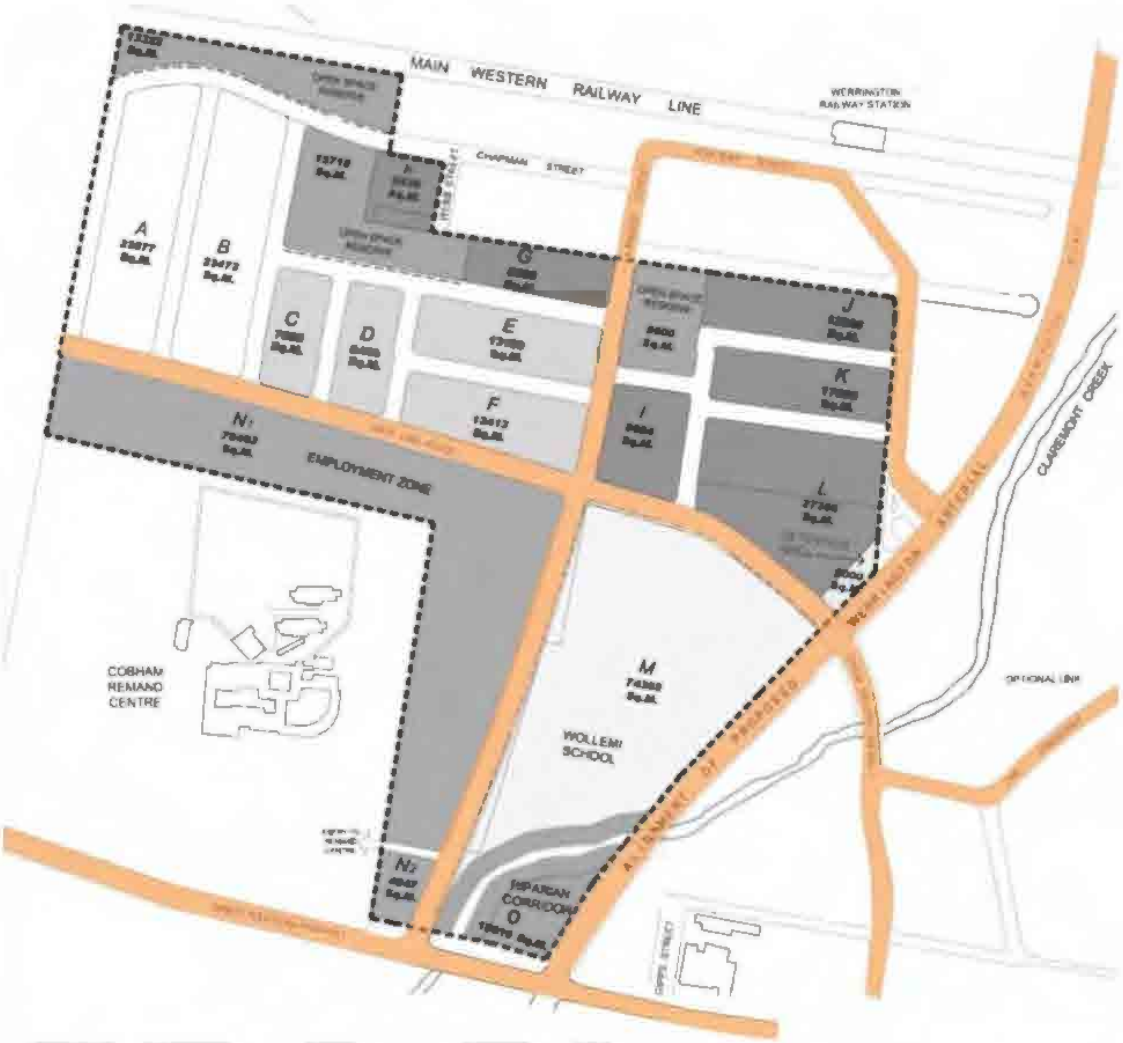
f) The early delivery of bus services as the community grows.

Controls

1. All dwellings within the release area are within 400m distance from a designated bus route as shown on Figure 13.

2. The bus route will be designed and constructed in accordance with the road profiles identified at Section 10.3.2.

Figure 13: Recommended bus routes



10.2.4 Pedestrians and bicycles

Objectives

a) To promote active transport options by providing safe and convenient routes to and from key focal points within the release area.

b) To promote an active and healthy lifestyle.

c) To promote casual social interaction among neighbours.

d) To promote Universal Design principles in all new facilities.

Performance Measures

e) Footpaths are an integrated element of the normal street network.

f) The cycle network is a combination of on street and dedicated pathways that link the main points of attraction and significant natural features.

g) Separate pathway will operate within parks and open spaces areas as well as the locations identified at Figure 14.

h) Pathways in open spaces are aligned approximately parallel with its interface to the street to take advantage of the street lighting and allow for casual surveillance by residents and drivers.

i) Pathways are designed and constructed wherever possible and practical to be of appropriate width, longitudinal gradient and, sight distance.

j) Kerb details cater for all users, including aged people, people with prams and in wheelchairs, and people with disabilities, and take account of Universal Design principles.

k) Street landscaping is provided to enhance the appearance of the street and pedestrian environment, including providing protection from the sun.

l) A primary pathway network is designed, constructed and clearly marked in accordance with Figure 14.

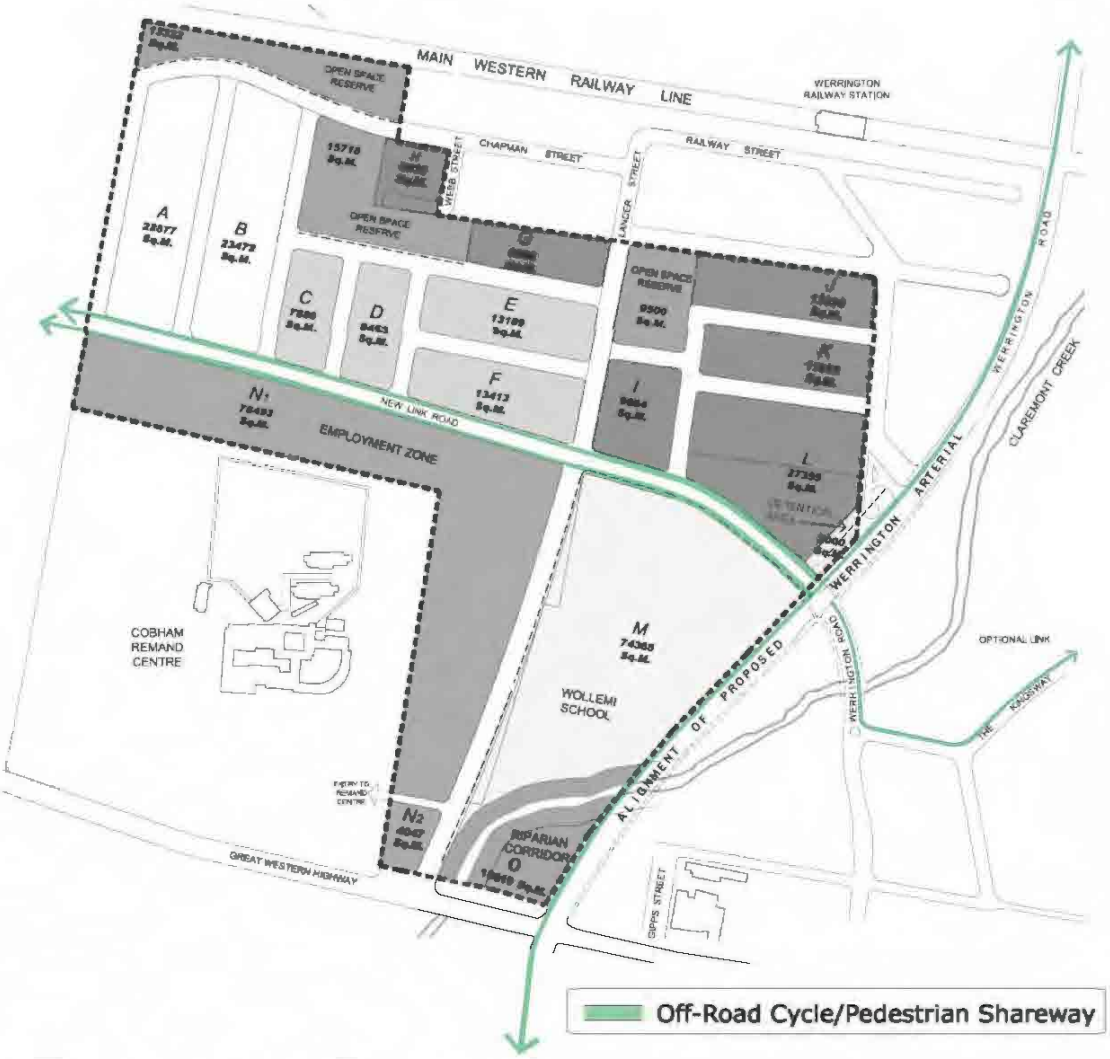
Controls

1. All Pathways will be a minimum of 1.5m and be provided to both sides of the road.

2. Pathways that form part of the open space network are to be a minimum width of 2.5m.

3. Where the pathway aligns with the street network, as identified at Figure 14, the road reserve will be widened by 1.3m where it aligns with a local road or minor local road and 1.0m where it aligns with a collector road as determined by Section 10.3.2 Road Sections, to ensure a 2.5m pathway can be provided.

Figure 14: Pedestrian and cycle network



10.3 Streetscapes

10.3.1 Landscape Character

Objectives

a) To provide an attractive and sustainable residential community.

b) To ensure development contributes to cohesive streetscape and desirable pedestrian environments.

c) To provide safe and secure environments for pedestrians and cyclists.

d) To promote casual social interaction among neighbours.

e) To encourage an active and healthy and active lifestyle.

f) To ensure street layouts provide well distributed public open spaces that contribute to the legibility and character of the development.

g) To promote landscape treatments that are appropriate to the character and constraints of each locality.

h) To ensure that landscaping is maintained and enhanced as a major element in the streetscape.

Performance Measures

i) The release area landscape includes streets lined with tall tree species.

j) Streets are designed to establish or enhance the unique character of the precinct by responding to its topography, desirable views or local features.

k) Street vistas are terminated with views to open spaces, parks and items of significance.

l) The carriageway is visually contained to promote steady, predictable traffic speeds by:

m) Clearly defining the boundary between pedestrian and vehicle zones.

n) Providing on-street parking.

o) Planting street trees at regular spacing.

p) Boundaries between street verges and private front yards are clearly defined and houses are designed to encourage passive surveillance.

q) Landscaping helps define boundaries, create continuity and provide shade.

r) Water sensitive urban design elements are integrated into street verges and shall be designed in such a way that they do not occupy the same zone required for street planting.

s) On-street parking is provided at a rate appropriate to the anticipated demand while ensuring the landscape character and street function is not compromised.

t) Design details such as footpath and driveway cross-overs are uniformly applied to make the street character more consistent.

u) Street signage is designed to be complementary to the overall streetscape design and character and signage clutter is avoided.

v) Existing mature trees are retained and native street tree plantings, are provided to enhance the appearance of the street and pedestrian environment, including providing protection from the sun.

Controls

1. Street trees are to be provided at a rate of one tree for every 10m of site frontage.
2. Street trees are to be provided at minimum size of 75 litres and fitted with tree guards.
3. Species selection is to be appropriate to the character and constraints of the locality.
4. Footpath verges are to be increased adjacent lots which have building setbacks less than 4.5m and where large street tree planting is proposed.

10.3.2 Road sections

Objectives

a) To provide a functional road network which allows good connections with the surrounding areas and encourages safe and convenient access into and through the site.

b) To provide a safe and efficient movement network for all users.

c) To encourage responsible driving behaviour, particularly safe travel speeds on residential streets.

d) To cater for the efficient provision of public utilities.

e) To incorporate the natural features of the site including the movement of stormwater, existing and new trees.

Performance Measures

General

f) Streets are designed to ensure vehicle speeds can be controlled and it is clear where vehicles can be parked, cyclists can ride and where pedestrians should walk or cross.

g) Opportunities for walking and cycling are well provided for.

h) The materials, line marking and landscaping of the streets clearly delineate the travel lanes from the parking "lanes".

i) Where the provision of parking "lanes" is included in the street reserve width, they are landscaped as parking bays and defined by means of line marking and/or built tree planting bays.

j) Parking on the grassed verge or on parks is restricted.

k) Intersections are designed for the safe and convenient passage of vehicles, pedestrians and cyclists.

l) The road layout and design should discourage high speeds and incorporate "traffic calming" devices as required.

m) The road design shall make provision for the needs of cyclists.

n) The road layout and design should allow for the safe access of commercial and articulated vehicles to the employment areas.

o) Upright kerbs are used throughout the suburb.

p) Development occurs in accordance with the road hierarchy demonstrated at Figure E12.14 – Road Network Hierarchy.

East West Road and North South Road

q) Direct vehicular access to development occurs only where topography and site distances allow safe entry and exit.

r) Provide for dedicated cycle lane on carriageway.

s) Provide high accessibility for all road users throughout the release area.

t) Have a clear lane width able to handle local bus services.

u) Are of a scale consistent with the higher order role these roads will play in the overall movement network the release area.

v) Integrate footpaths and establish pedestrian amenity that reflect the linking role these streets will play in the urban fabric.

w) Be designed to provide safe pedestrian crossing points and lighting in accordance with the relevant Australian Standard.

x) Are able to comfortably accommodate the co-location of bus shelters and pathways.

y) Include treatment of intersection of North South road with the East West road.

Local Roads

z) Provide accessibility between the link road and services the immediate residential lots.

aa) Roads are designed to allow a reasonable free flow of traffic and discourage high speeds.

bb) Speed controls are provided as integrated element of the streetscape and road design and provision is made for the needs of cyclists.

Minor Local Road

cc) Provide limited vehicle access for through traffic look to access or exit the local road network

dd) Regular, minor delays or the need for driver co-operation due to vehicles parking on local roads is an acceptable, traffic calming outcomes.

ee) Maintaining high levels of permeability for non-vehicle road users.

ff) Roads are designed to ensure a low speed traffic environment.

gg) Informal on street parking constrains traffic movement.

Laneways

hh) Lanes are shared zones allowing vehicular traffic for access to rear loaded garages only.

ii) Are to incorporate a change in materials and/or kerb cuts to provide differentiation to other vehicular streets.

jj) Are constructed in plain concrete pavement.

kk) No parking is permitted in Lane Ways.

ll) Designed with a central invert for drainage where topography allows

mm) Studio units built above or adjacent to garages will be encouraged to provide surveillance.

nn) Laneway provide distinctive plantings at lane entry areas.

Controls (All road types)

1. Roads are to be constructed in accordance with the dimensions identified at Figure 15 to Figure 19 as per the road hierarchy.
2. Any entry and exit to the employment areas must not adversely affect traffic movements on the road network.
3. Widening of road may be required where topographical or road curve circumstances dictate.
4. Any medians proposed within any road are to be in addition to the road widths detailed in Figure 15 to Figure 17.

Figure 15: East west link road

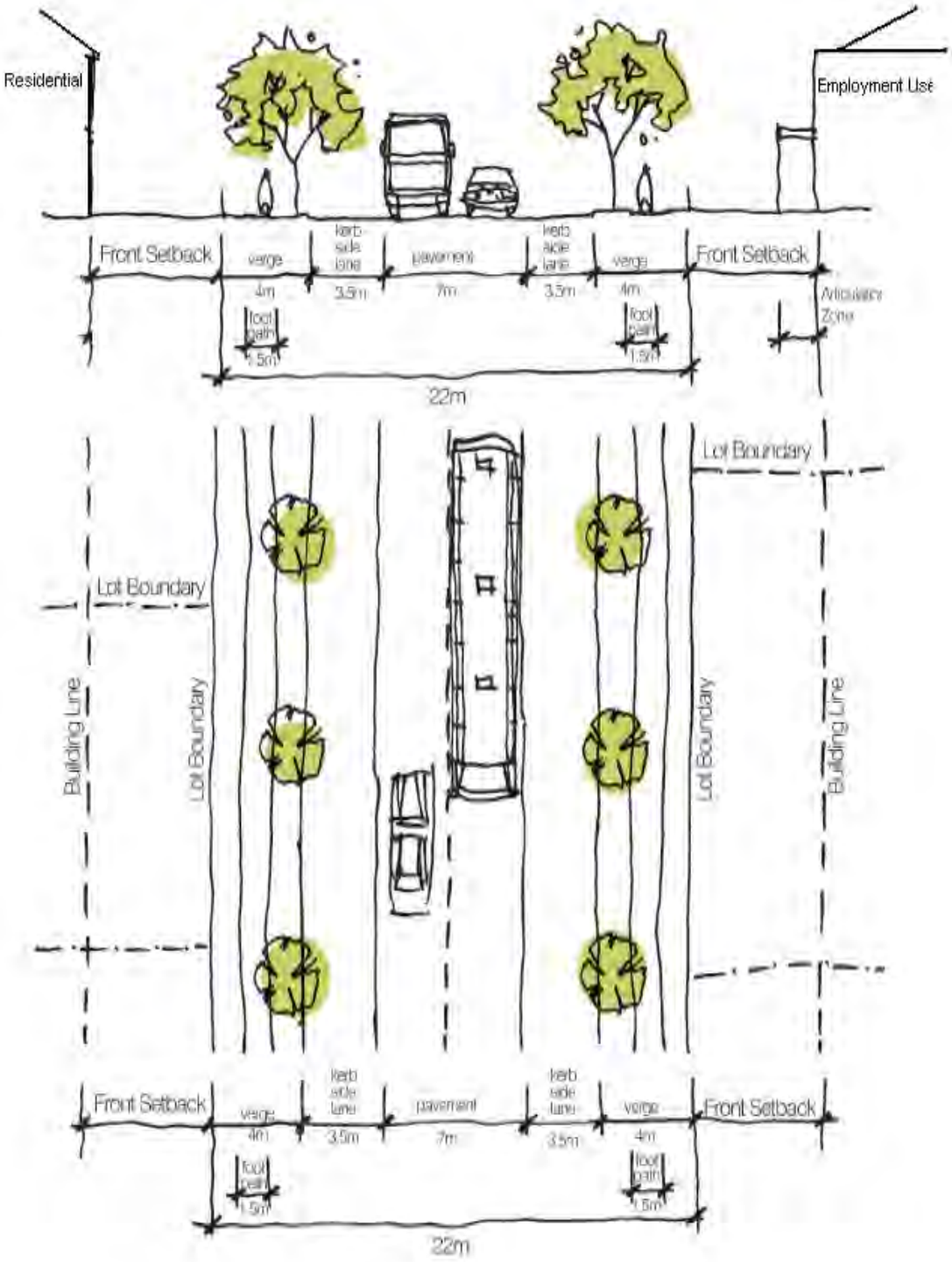


Figure 16: North south road

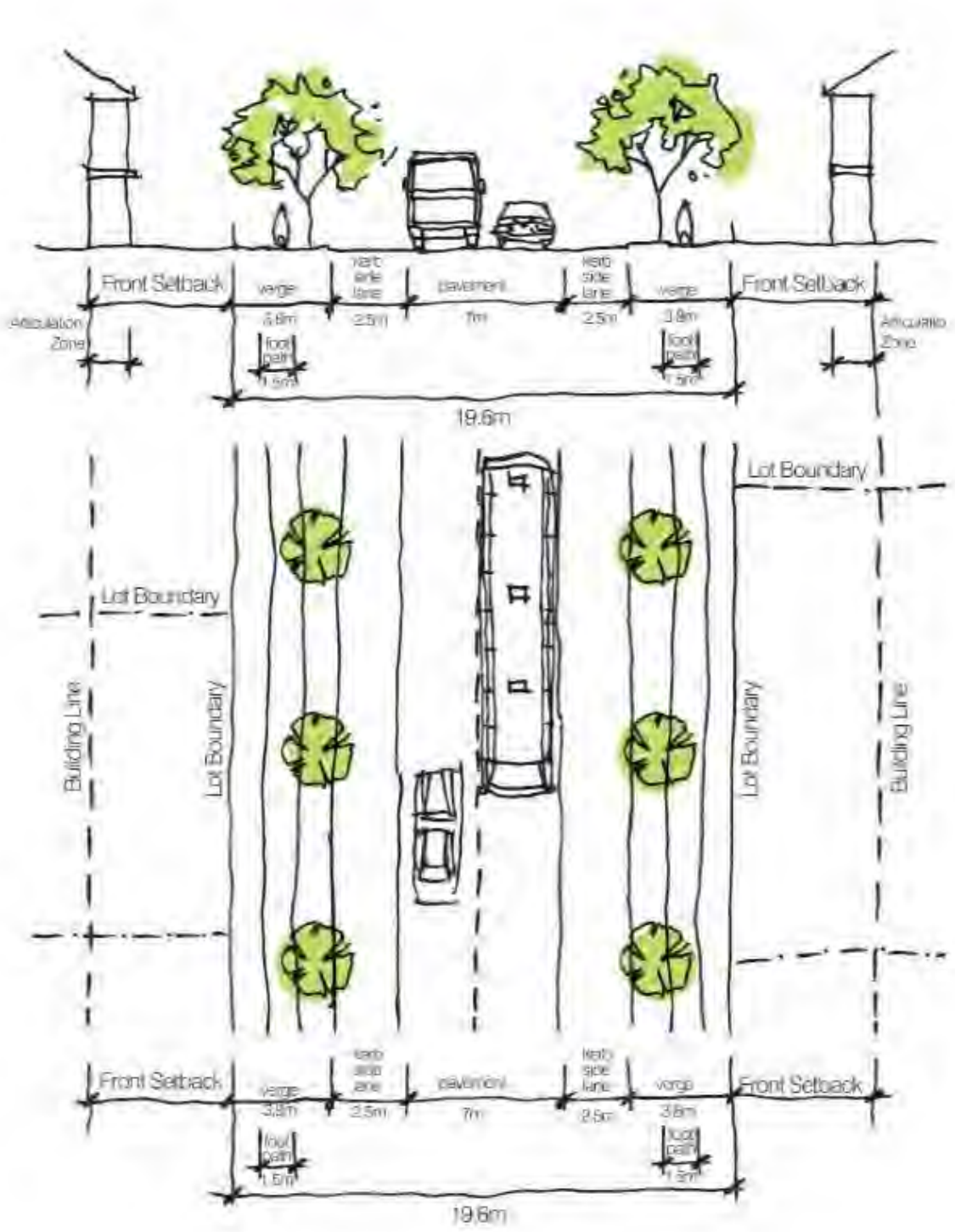


Figure 17: Local road

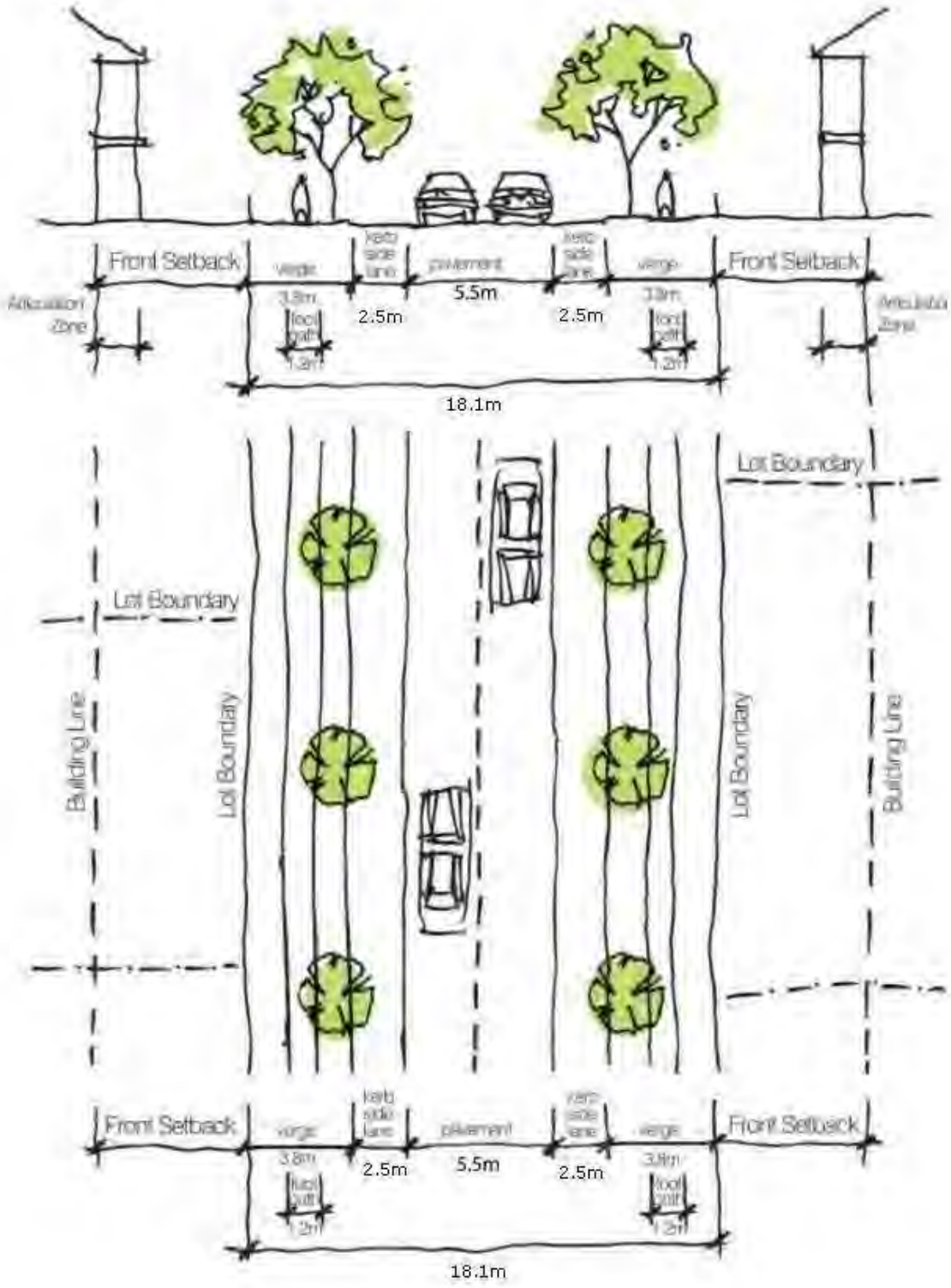


Figure 18: Minor local road

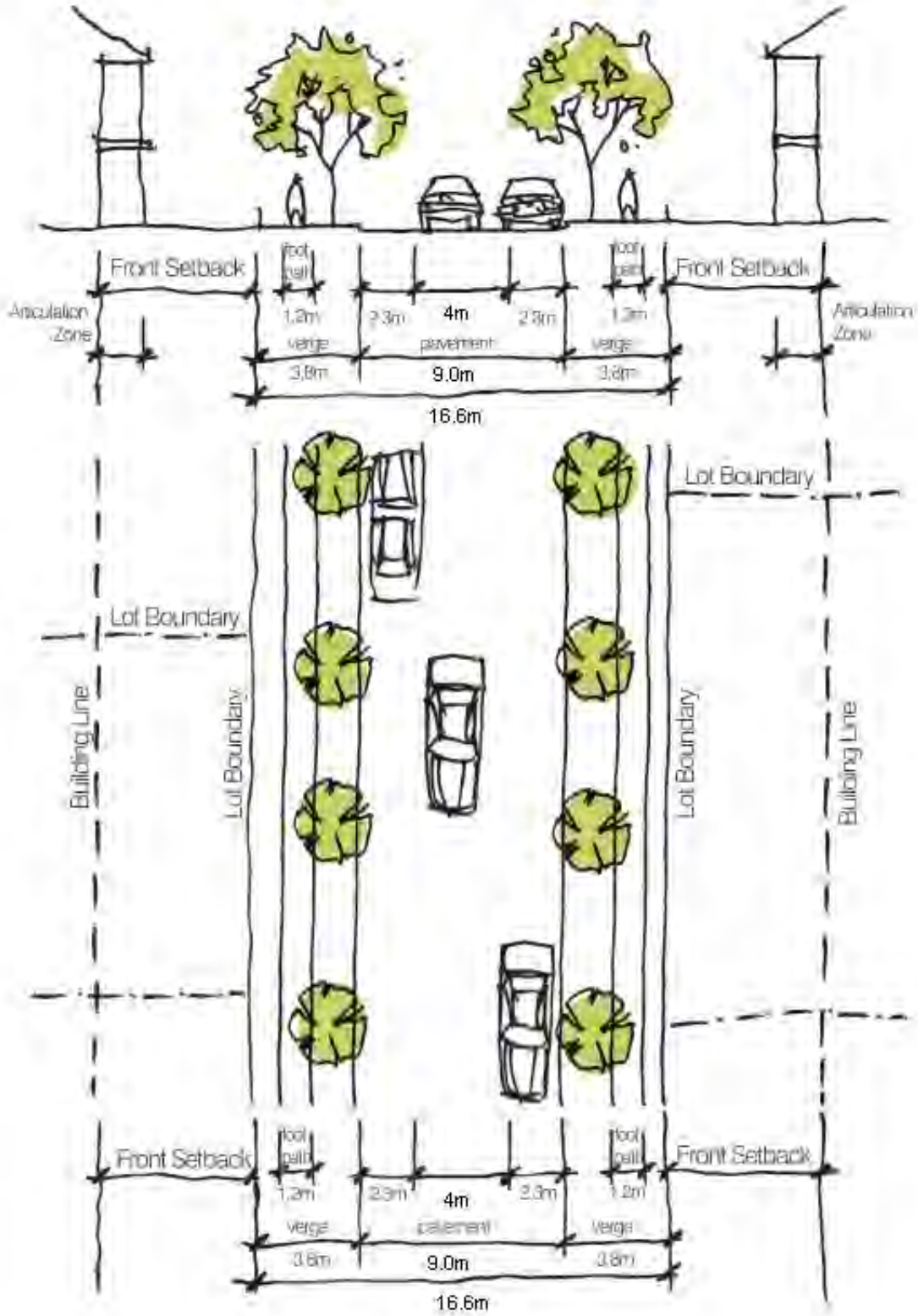
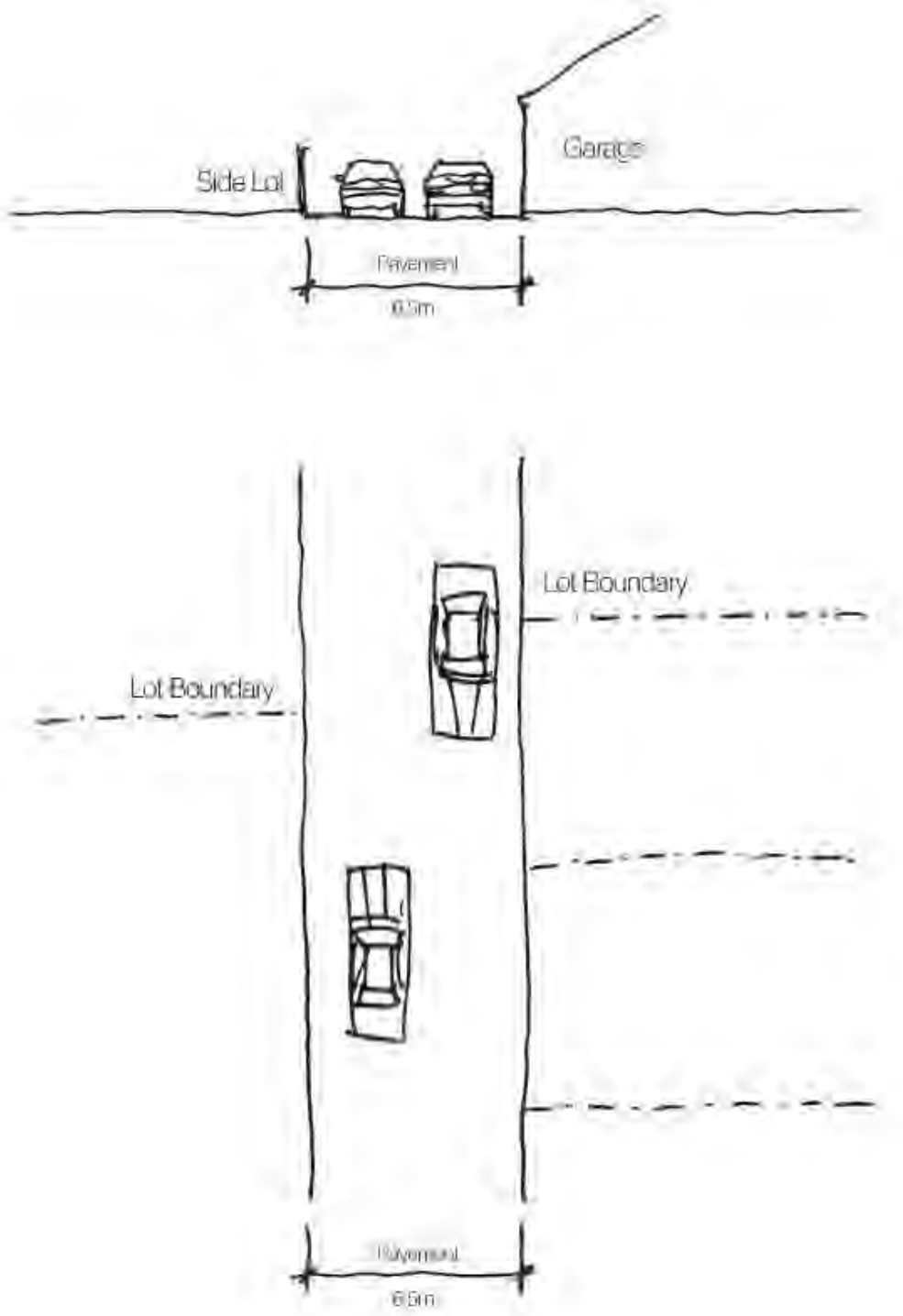


Figure 19: Laneways



10.4 Passive open space and environmental conservation areas

Objectives

a) To encourage community interaction by creating desirable gathering spaces, using parks as local meeting places providing a range of passive recreation activities.

b) To conserve and appreciate remnant woodland areas including biodiversity and native fauna habitat.

c) To provide high amenity areas for adjacent residential development.

Performance Measures

d) Existing vegetation is retained and enhanced by additional complementary plantings.

e) Parks create a precinct focus for the surrounding neighbourhood.

f) Parks are generally bounded by streets with buildings oriented towards the open space providing outlook and passive surveillance.

g) There are no back fences of development facing public open space.

h) The parks provide linkages between the broader pedestrian and bicycle networks.

i) Playground facilities are provided within the parks.

j) Seating and shade opportunities are provided within the parks.

Controls

1. The indicative location of neighbourhood parks and environmental conservation areas are indicated on the Structure Plan (Figure 9).

2. The design of the parks is to be in accordance with the concept landscape plans indicated in Figure 20 and Figure 21.

3. Lighting shall conform with the Australian Standards including AS1158, AS1680 and AS2890.

4. Development applications that include the creation of open space areas must be accompanied with a Vegetation Management Plan for those areas and shall outline procedures for such matters as (but not limited to): identifying revegetated areas, bushfire control, weed control, public access control, fencing and treatment of 'edge' zones.

Figure 20: Western local park concept plan

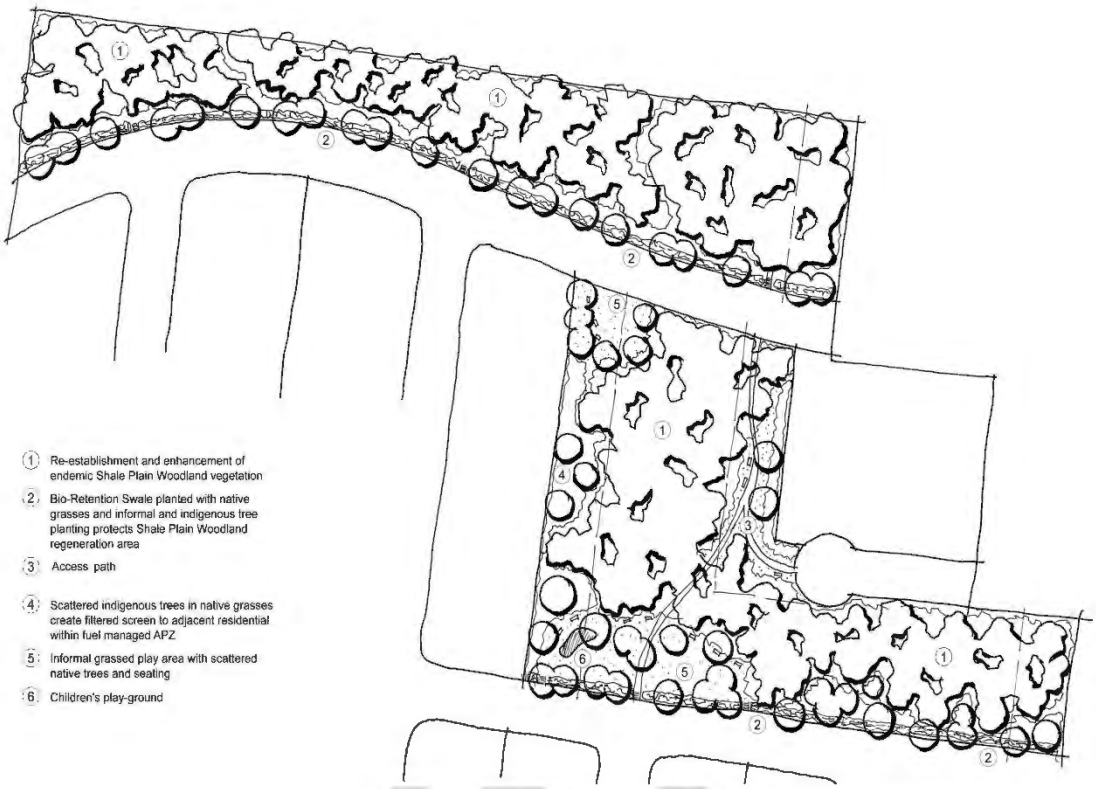
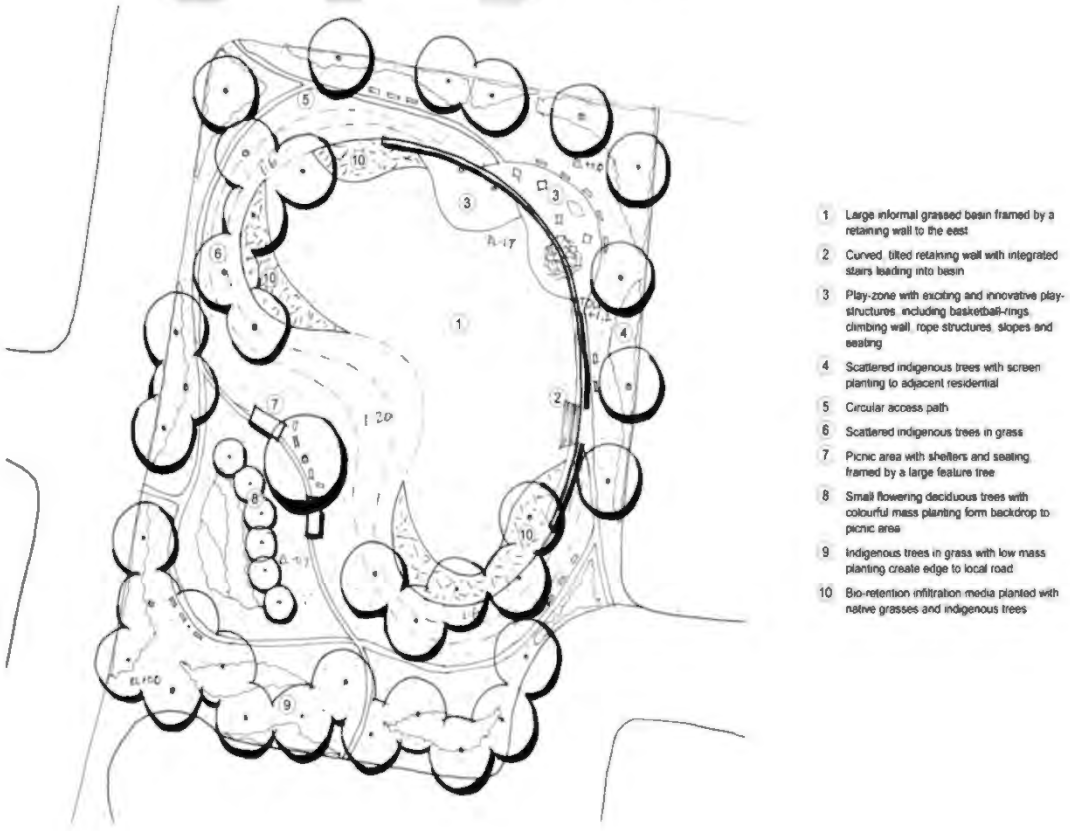


Figure 21: Eastern local park concept plan and northern environmental conservation area (private land)



10.4.1 Public facilities

Objective

a) To ensure that facilities to be provided in the public domain can be effectively managed and maintained.

Controls

1. The nature of facilities to be provided in the public domain shall include (but not limited to):
    i. Seating.
    ii. Bins.
    iii. Lighting.
    iv. Signage.
    v. Drainage facilities.
    vi. Shade structures.
    vii. Public art.
    viii. Fencing.
2. Development applications shall include detailed designs and a management and maintenance plan for all facilities proposed for the public domain. The plan shall include suggested maintenance schedule, outlining the nature and frequency of works required. The purpose of the maintenance plan is to enable Council to properly assess the future maintenance requirements of proposed public domain infrastructure.

11. Private domain

11.1 Subdivision

Objectives

a) To provide block sizes that maximise access to solar orientation.

b) To provide a subdivision pattern that accommodates a range of dwelling densities and lot sizes.

c) To provide lot sizes and shape that reflects the broader urban structure.

d) To promote the most appropriate locations for higher density housing forms.

e) To ensure development responds to site topography and natural constraints and opportunities.

f) To ensure lots have total areas and dimensions that allow dwellings, ancillary buildings, private outdoor open space, landscaped areas, vehicle access and parking to be located and constructed appropriately.

Performance Measures

g) Lots are designed to maximise efficiency in house plans and useable external areas by having a regular shape.

h) Lots are oriented to facilitate siting of dwellings and private open space to take advantage of winter solar access and summer sun deflection.

i) Lots identified to accommodate higher density housing forms will be around open space areas.

j) Larger lots frontages provided on street corners to allow development to address both street frontages.

k) Lot sizes and dimensions take into account site topography and reduce the need for earthworks and retaining wall construction.

l) Lot sizes and dimensions allow for retention of existing trees as part of subsequent site development.

m) Lots front streets and overlook open spaces to provide passive surveillance of those areas.

Controls

1. Minimum lot dimensions for residential development are identified in Section 12.

2. Single dwelling lots are to be a minimum of 25m deep.

3. North-south oriented lots shall vary in depth to provide longer, narrower lots on the south side of the street and shorter, wider lots on the north side.

4. Lots with an east-west axis shall have a minimum width of 12m, unless they are intended for use by attached dwellings.

5. On north-south roads, allotments may need to be widened to provide for solar access and prevent overshadowing of dwellings and private open space.

6. Where land slopes are generally greater than 5%, road and allotment design should provide for dwellings to be generally parallel with the contours to minimise earthworks. Special care should also be taken in the configuration of roads and allotments to:

   i. Minimise boundary retaining walls, particularly associated with building to boundary.

   ii. Minimise potential overlooking.

   iii. Maintain solar access, where slopes face south. A greater distance between dwellings will generally be required to achieve the same solar access as on level sites or north facing slopes.

7. Excavations associated with a cut and fill platform for all single dwellings, single dwelling additions and Class 10 buildings are limited to a maximum of 1m.

8. Construction on sloping sites where the combined cut and fill will exceed 1m shall incorporate raised floor or split level type construction.

9. Lots are to be designed to meet dwelling yields detailed in Table 4 and Figure 10.

11.2 Site Planning

11.2.1 Principal Private Open Space

Objectives

a) To provide a high level of residential amenity with opportunities for outdoor living within the property.

b) To enhance the spatial quality, outlook, and usability of private open space.

c) To optimise solar access to the living areas and private open spaces of the dwelling.

Performance Measures

d) Principal private open spaces are the primary organising element of site planning and dwelling design.

e) Private open spaces should be located at ground level in rear yard areas that maximise opportunities to obtain solar access for all dwelling types other than apartments.

f) Development with a northern orientation provides secondary private open spaces area at the street frontages through the use of courtyards and balconies.

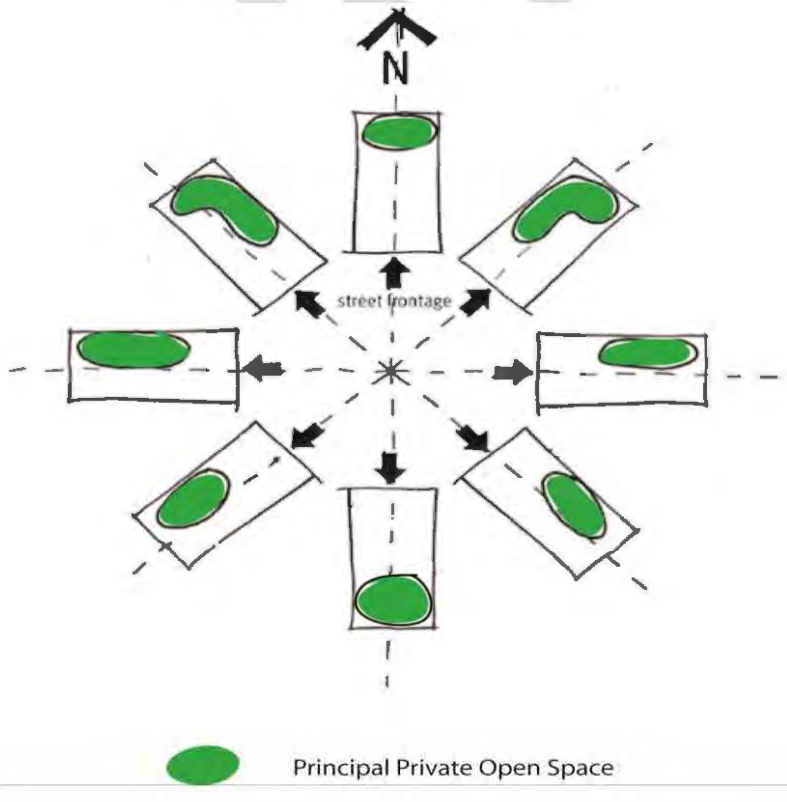
g) The principal private open spaces should have a direct interface with primary internal living area of its dwelling.

h) Development should achieve the preferred location for open space location as demonstrated at Figure 22.

Controls

1. Dwellings will achieve the minimum standards for Principal Private Open Space as identified at Section 12.

Figure 22: Private open space siting



11.2.2 Garages and parking

Objectives

a) To provide sufficient and convenient parking for residents and visitors.

b) To reduce the visual impact of garages, carports, and parking areas on the streetscape and improve dwelling presentation.

c) To promote safe public domain areas.

Performance Measures

d) Garages provide flexible accommodation for vehicles, storage, and covered areas for outdoor recreation.

e) Studios are provided over garages to rear lanes to provide surveillance, work from home or residential accommodation opportunities.

Controls

1. Front garages are to be setback behind the front most element of the house and integrated as part of the dwelling façade.

2. Garages are to be constructed in materials and colours which blend the garage doors into the main building.

3. Double garages are the maximum garage size allowed for single dwelling houses.

4. Where a dwelling provides vehicular access to the street the garage will be setback a minimum of 5.5m from the front boundary.

5. Stacked parking is an acceptable outcome provided it is accommodated entirely within the property.

6. Vehicle crossings between the street and front boundary shall be constructed in plain concrete only.

7. Garages are to be provided per AS 2890.1 Off Street Parking, for full door opening including:

    i. Minimum widths of 3.2m for single garages.

    ii. Minimum width of 5.8m for double garages.

11.2.3 Building footprints

Objectives

a) To provide a variety of streetscapes that reflects the character of different precincts.

b) To create an attractive and cohesive streetscape within local precincts.

c) To maximise provision of solar access to dwellings.

d) To minimise the impacts of development on neighbouring properties in regard to view, privacy, and overshadowing.

e) To encourage the efficient and sustainable use of land.

f) To allow for landscaped rear yard areas.

g) To promote public safety of public domain areas.

h) To manage risk from bushfire events.

Performance Measures

Front Setbacks

i) Front setbacks are site responsive and will be determined for individual lots as part of the Subdivision Approval process given consideration to the following matters:

   i. Future dwelling type.

   ii. Orientation of lots.

   iii. Provision of front yard open space and associated fencing.

   iv. Availability of direct vehicle access to the street.

   v. Relevant role of street in local road hierarchy.

   vi. Proximity to open space areas.

   vii. Location within Neighbourhood Centre.

   viii. Requirements to provide Asset Protection Zone.

Rear Setbacks

j) Landscaping provision that allows trees in the rear yard area to provide a vegetated backdrop to the development.

Development Controls

Front Setbacks

1. Front setbacks are identified in Section 12 for each dwelling type.

Side Setbacks

2. The width of the lot will determine the ability of the site to provide zero lot lines.
3. Where only one side of a lot can provide a zero lot line, then Figure 23 to Figure 25 will be used to determine which of those boundaries accommodates that zero lot line.
4. A maintenance easement of at least 900 millimetres is to be provided on the boundary adjacent to the zero lot line.
5. All other side setbacks will be a minimum of 900mm.
6. Fascias, gutters, downpipes, eaves (up to 450 millimetres wide) and chimneys flues may encroach into the side setback.
7. No windows are provided in zero lot line walls.

Figure 23: Zero lot lines - attached dwellings

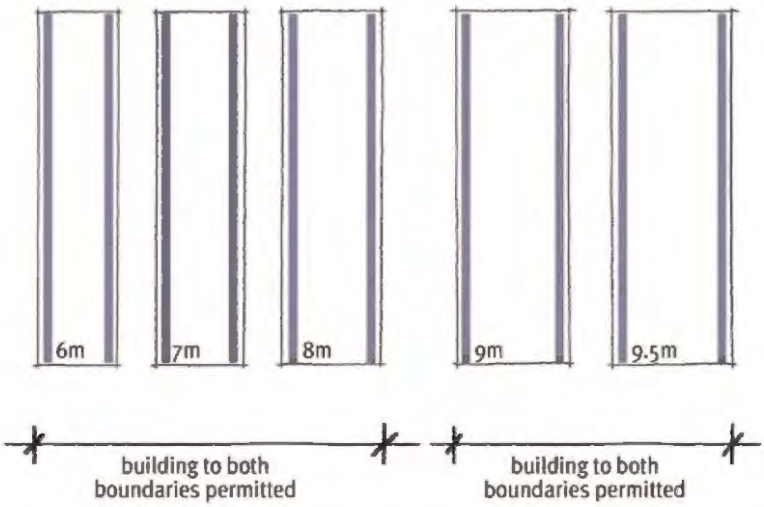


Figure 24: Zero lot lines - Semi detached dwellings

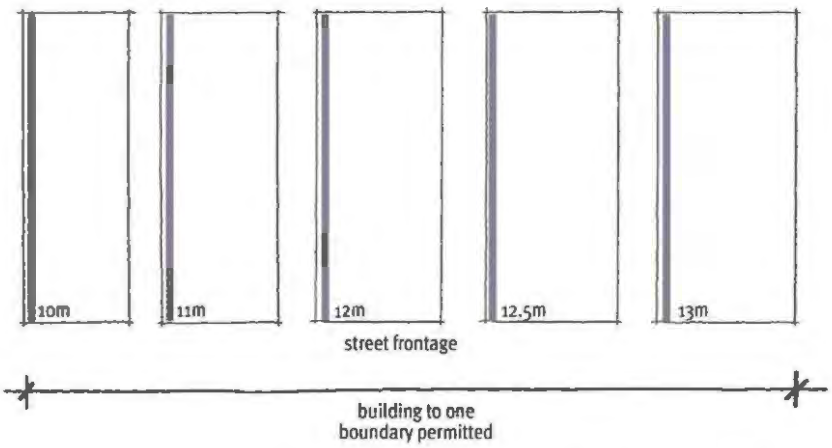
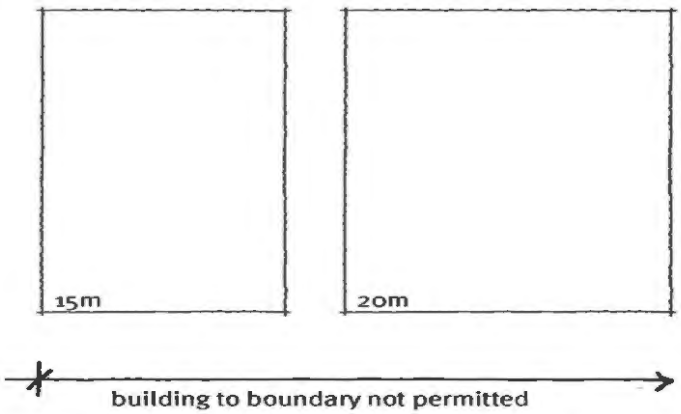


Figure 25: Zero lot lines - detached dwellings



11.3 Building envelope

Objectives

a) To ensure development is appropriately scaled to suit the dwellings local context.

b) To ensure building heights achieve built form outcomes that reinforce quality urban and building design.

c) To protect reasonable amenity expectations of neighbouring sites.

Performance Measures

d) Building heights are site responsive and will be determined for individual lots as part of the Subdivision Approval process given consideration to the following matters:

i. Future dwelling type.

ii. Orientation of lots.

iii. Relevant role of street in local road hierarchy.

iv. Site topography.

v. Key street intersections.

Development Controls

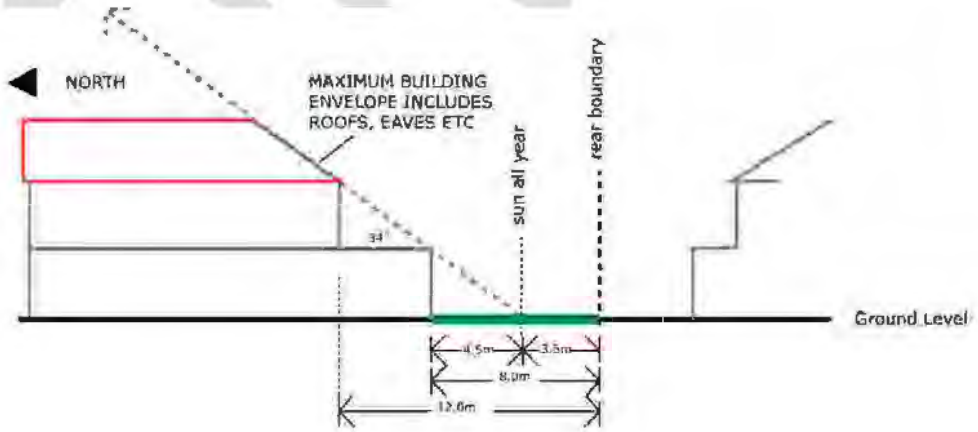
1. Areas of Principal Private Open Space should achieve at least 3 hours of sunlight to 50% of the required private open space area between 9am and 3pm on 21 June.

2. Buildings should be designed to ensure that 40% of the Principal Private Open Space area of adjoining dwellings sites receives a minimum of 3 hours of sunlight between 9.00am and 3.00pm on 21 June.

3. Dwellings with a northern orientation that share a rear boundary with residential development will achieve the building height envelope as identified at Figure 26 – Building Envelope from Rear Boundaries.

4. Dwellings that share a rear boundary with a private driveway or rear lane is not required to achieve the building envelope.

Figure 26: Building envelope from rear boundaries



11.4 Dwelling design

Objectives

a) To provide simple and articulated building forms.

b) To provide a high quality and cohesive streetscape.

c) To promote an architectural style that is contemporary and innovative.

d) To promote a safe public domain area.

e) To promote energy efficient and sustainable development.

f) To reduce the dominance of garages on the streetscape.

g) To identify appropriate design responses for corner lots.

Performance Measures

h) All development addresses the street and is provided with a clear, legible and well lit pedestrian entry.

i) The street elevation is well articulated by the use of awnings, verandahs, balconies and feature elements on the front facades of dwellings.

j) Development achieves the principle of three layers of rear setbacks as illustrated at Figure 26.

k) The finished ground level of development is raised above the street level to improve the outlook and enhance visual privacy from within the dwelling and front verandahs.

l) Garages will be recessed or capped by overhanging elements that provide shading over the garage opening.

m) Dwellings orientate living spaces to the north, sleeping areas to the east or south and utility areas to the west or south.

n) Dwellings provide shading of north, east and west facing windows with pergolas and awnings.

o) Buildings are to be designed to allow cross ventilation by positioning windows and doors opposite each other within rooms.

p) Material and external finishes of buildings in bushfire hazard areas comprise appropriate construction standards for those areas.

q) Built forms on corners provide important place making and way finding elements in the streetscape.

r) Corner sites provide a frontage to both streets and articulate their corner location with an architectural feature such as, but not limited to a wraparound verandah, bay window, corner entry or roof feature.

s) Dwellings provide adaptable house floor plans for the inclusion of a home office/business activity area.

Controls

1. Building elements (Verandahs, awnings, etc.) may project forward of the front building setback line by a maximum of 1.5m, as demonstrated in Figure 27.

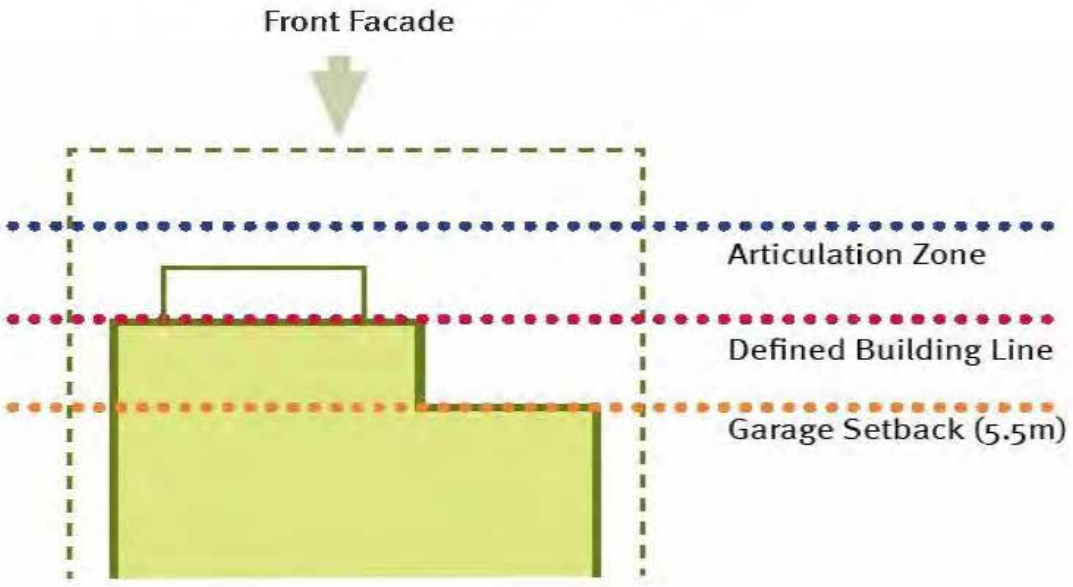
2. Building elements projecting forward of the front building setback are limited to a maximum of 60% of the dwelling width.

3. Eaves are required over all walls except those on zero lot lines.

4. External building materials/finishes are to be varied across front elevations of buildings.

5. Retaining walls are to be constructed with appropriate masonry materials.

Figure 27: Setbacks and articulation



11.5 Visual and acoustic privacy

Objectives

a) Ensure buildings are designed to achieve the highest possible levels of visual and acoustic privacy.

b) Protect visual privacy by minimising direct overlooking of habitable rooms and private open space.

c) Contain noise within dwellings and minimise the intrusion of noise from outdoor areas.

d) Ensure that noise generated by adjoining land use such as the proposed Werrington Arterial and Great Western Railway line are adequately addressed in the design and construction of development on the site

Performance Measures

e) Windows to upper storeys are located on front or rear facades where possible.

f) Offset second storey windows of living areas that face directly to windows, balconies or private open space of adjoining properties.

g) First floor balconies or living room windows do not directly overlook private open space of adjoining dwellings unless suitable screening is provided.

h) The design of attached dwellings minimises the opportunity for sound transmission through the building structure, with particular attention given to protection bedrooms and living areas.

i) Living areas and service equipment are located away from bedrooms of neighbouring dwellings.

j) Noise sensitive areas are located away from the noise emitting sources.

Development Controls

1. Habitable room windows with a direct sight line to habitable room windows in adjacent dwellings are to be avoided, however within 9.0m must be obscured by fencing, screens, or sufficient landscaping.

2. A screening device is to have a maximum of 25% permeability to be considered effective.

3. In attached dwellings, bedrooms of one dwelling are not to share walls with living spaces or garages of adjoining dwellings, unless it is demonstrated that the shared walls and floors meet the noise transmission and insulation requirements of the Building Code of Australia.

4. Residential development adjacent the proposed Werrington Arterial and the Main Western Railway will consider the relevant provisions in the State Environmental Planning Policy (Transport and Infrastructure) 2021.

11.6 Fencing

Objectives

a) Creates a clear distinction between public and private domain areas.

b) To ensure front fences contribute to the streetscape.

c) Maintain safety in the public domain.

d) Rear and side fencing provide privacy to open space areas.

Performance Measures

e) Delineation of front property boundaries is achieved through use of landscaping, low fences or changes of site level.

f) Front fences are open in style or "see through" construction (e.g picket fence).

g) Side property fences in front of the building line shall be treated as the front fence.

h) Side property fences are terminated at the front building line and returned to finish against the building.

Controls

1. Fences to the street frontage:

    i. Are to be a maximum of 900mm in height.

    ii. May be a maximum of 1.2m in height where they define the primary open space of a dwelling.

2. Side property fences are to be a maximum of 1.8m high.

3. Fences to corner lots that accommodate single dwelling houses are to be a maximum 900mm high on both the primary street frontage and secondary street frontage to a point 10m from the dwelling frontage where it may then increase to 1.8m in height.

4. Solid front fences at 1.8m in height are to provide for a 1.2m landscape strip in front of the fence for its entire length.

5. Fences to corner lots that accommodate multi-unit housing forms are to be a maximum of 900mm on the primary street frontage and 900mm in height along the secondary street frontage in areas in front of the built form or 1.2m if they define the primary open space areas.

6. Front fencing shall have a minimum opening ratio of 50%.

7. Where solid fences are required to satisfy acoustic abatement, these fences shall not exceed 8.0m in length without some articulation or detailing to and must be softened on the street side with a landscaping strip of 1.2m minimum.

8. Prefabricated metal fencing is not permitted to the street frontage.

11.7 Site facilities

Objectives

a) To ensure that adequate provision is made for site facilities.

b) To ensure that site facilities are functional and accessible to all residents and are easy to maintain.

c) To ensure that site facilities are thoughtfully integrated into development and are unobtrusive.

Performance Measures

1. Development demonstrates that the design takes into account garbage bin storage and collection without reducing the amenity of the dwelling or neighbouring lots.

2. Garbage bin storage and mail box structures are to be integrated with the overall design of buildings and/or landscaping and are not visible from the street or rear lane way.

3. External clothes drying areas are to be provided for all residential development.

12. Residential development forms

12.1 All housing types

Performance measures

a) Dwellings are designed to incorporate the option of 'live-work' activities (home-based businesses).

b) To encourage quality designed dwellings that make a positive contribution to the streetscape and amenity of the neighbourhood.

c) To provide definition of public domain by ensuring development addresses the streets and open spaces.

d) To promote housing choice, variety and affordability.

12.2 Integrated housing

Performance measures

a) Proposals where development includes subdivision which results in 3 or more dwellings on separate lots creating lots smaller than the minimum lot size for that type of development is to be considered as an Integrated Housing proposal.

b) Any proposal for integrated housing shall be designed by an architect registered with The NSW Architects Registration Board.

12.3 Apartments

Performance measures

a) Provide more urban orientated development and encourage higher density development in walking distance to Werrington Station.

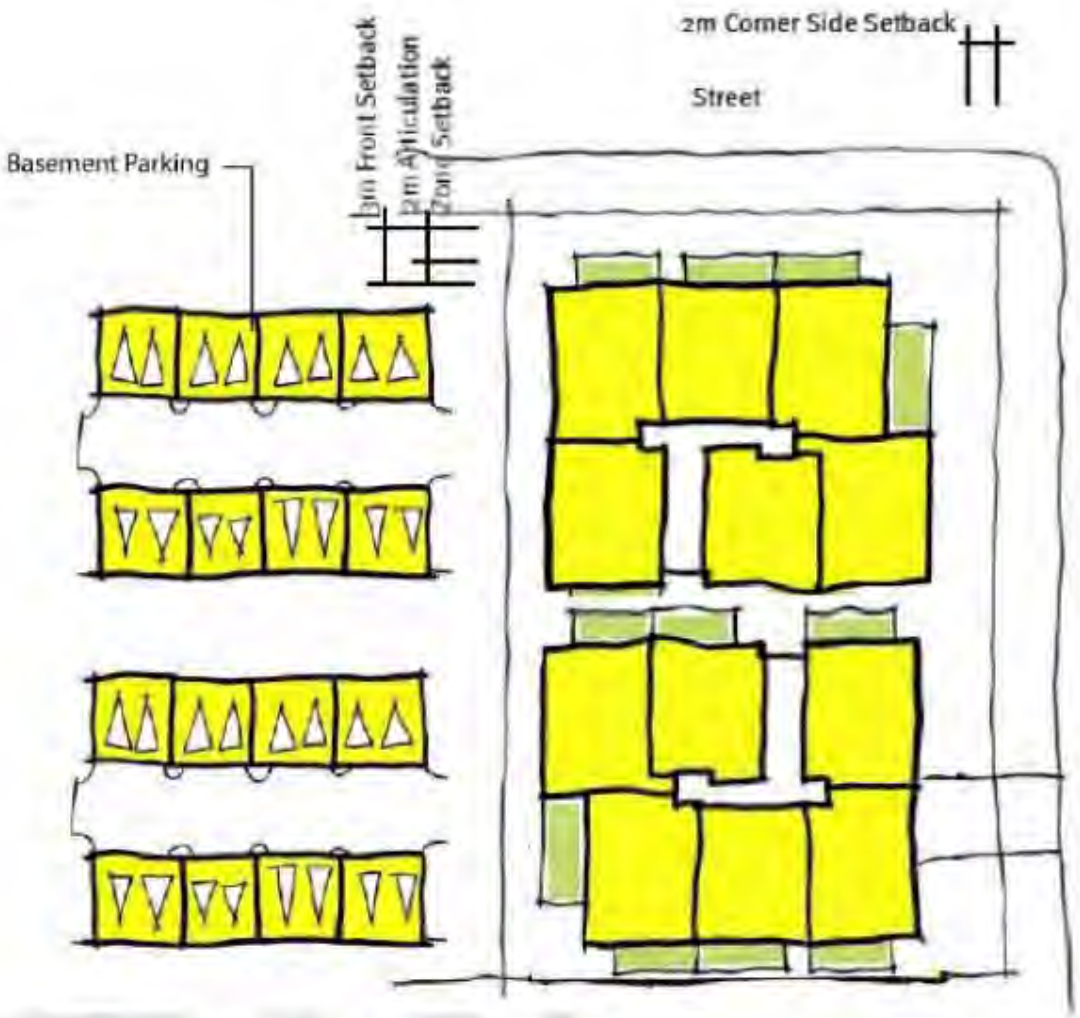
b) Be compatible in scale with the future mass and character of adjacent buildings.

c) Provide parking on site and underground where possible.

Controls

Lot dimensions	
Minimum Lot Size	650m^2
Minimum Lot Frontage	25m
Private open space	
Ground floor private open space	
Minimum Area	20m^2
Minimum Dimension	2.5m
Upper floor private open space	
Minimum Area	10m^2
Minimum Dimension	2m
Communal open space	
Per 10 dwellings	10m^2
Building setbacks	
Front	3m
Secondary Frontage	2m
Side	• 1.5m without opening to a habitable room • 3m opening to a habitable room
Rear	5m
Garage to rear lane/secondary frontage	0m
Other requirements	
Built Form	Development must utilise multiple entries and circulation cores in buildings with a length greater than 15m.
Adaptable Dwellings	10% of dwellings shall be adaptable per AS1428.1-1998- Design for Access and Mobility.
Vehicle Manoeuvring	Provide turning movements per AS 2890.1-2004.
Built Form	Development must utilise multiple entries and circulation cores in buildings with a length greater than 15m.

Figure 28: Apartment design principles



12.4 Attached dwellings

Performance measures

a) Provide for parking with a rear loaded garage accessed from a rear lane or shared driveway.

b) Integrate studio units located above a ground level garage are at ground level, located at the rear of the site in some locations.

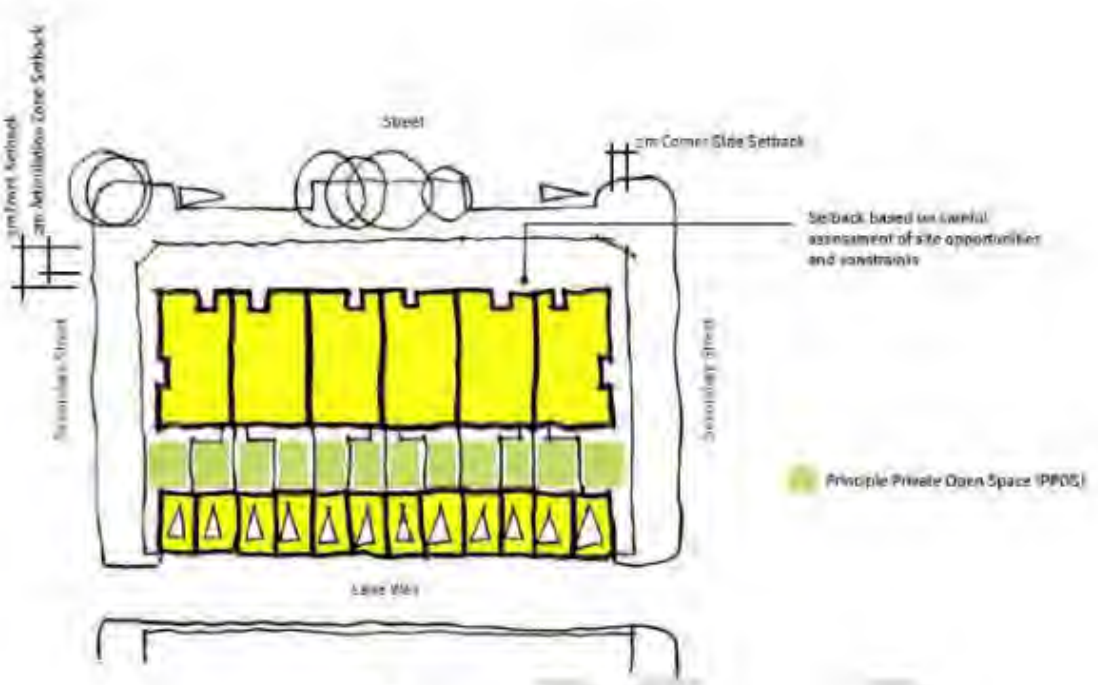
c) To encourage medium density development in close proximity to the railway station.

Controls

Lot dimensions	
Minimum Lot Size	195m^2 – 230m^2
Minimum Lot Frontage	6m – 9.5m
Private open space	
Minimum Area	20m^2
Minimum Dimension	4m
Landscaping site coverage*	40%
Building setbacks	
Front	3m
Secondary Frontage	2m
Side	0m
Rear	
Lots with a northern orientation	8m
All other lots: • Ground floor • Upper floor	 4m 6m
Garage to rear lane/secondary frontage	0m

*Any landscaped area having a dimension less than 2m shall not be included in the calculations of landscaped areas.

Figure 29: Attached dwelling design principles



12.5 Semi detached dwellings

Performance measures

a) Have the appearance of a larger home, but comprise of 2 dwellings on separate Titles.

b) When located on corner lots, semi-detached dwellings should provide distinct entries for each unit usually located on different street frontages.

c) Dwellings have an adaptable design which can incorporate options for home-based business activities.

d) When located at a corner provide vehicle access is to be provided off different street frontages.

Controls

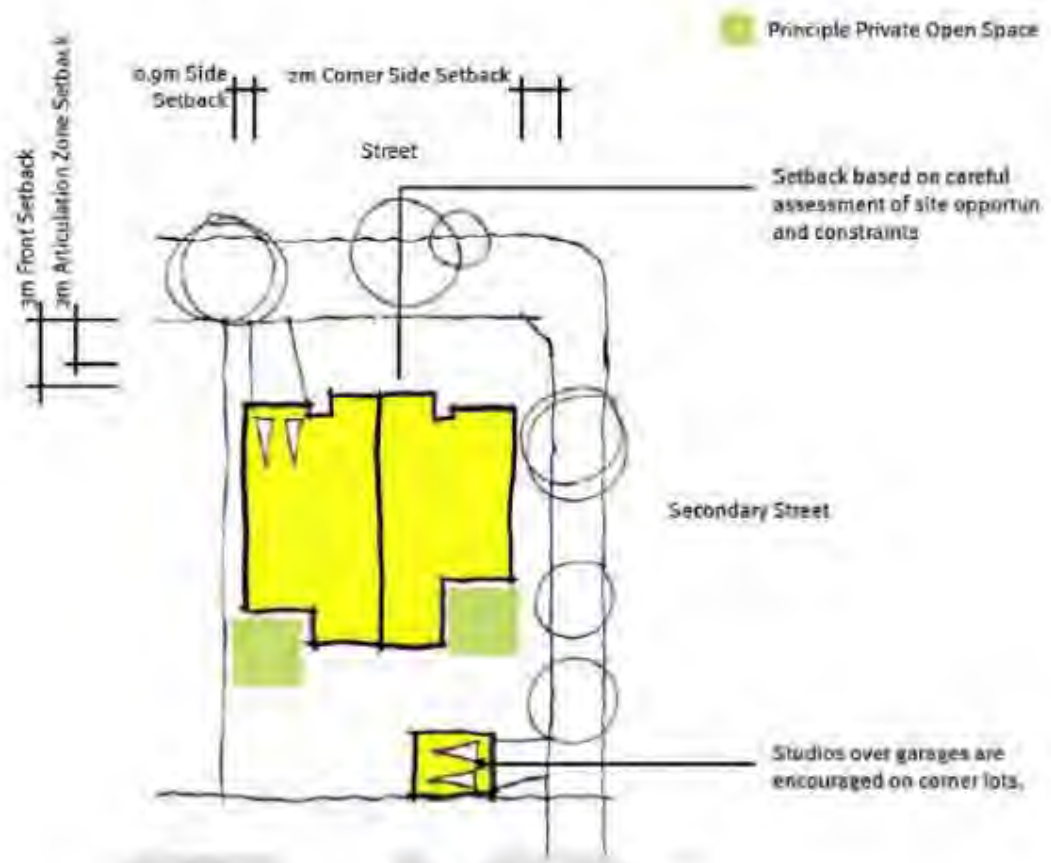
Lot dimensions	
Minimum Lot Size	230m^2 – 450m^2
Minimum Lot Frontage	12m – 15m
Private open space	
Minimum Area	30m^2
Minimum Dimension	4m

Landscaping site coverage*	40%
Building setbacks	
Front	3m
Secondary Frontage	2m
Side	0m (defined boundary) 0.9m
Rear	
Lots with a northern orientation	8m
All other lots: • Ground floor • Upper floor	 4m 6m
Garage to rear lane/secondary frontage	0m

* Any landscaped area having a dimension less than 2m shall not be included in the calculations of landscaped areas.

DRAFT

Figure 30: Semi detached design principles



12.6 Studios

Performance measures

a) Be located above garages that are accessed from rear lanes or shared driveways.

b) Provide their own sleeping, living, kitchen and bathroom areas.

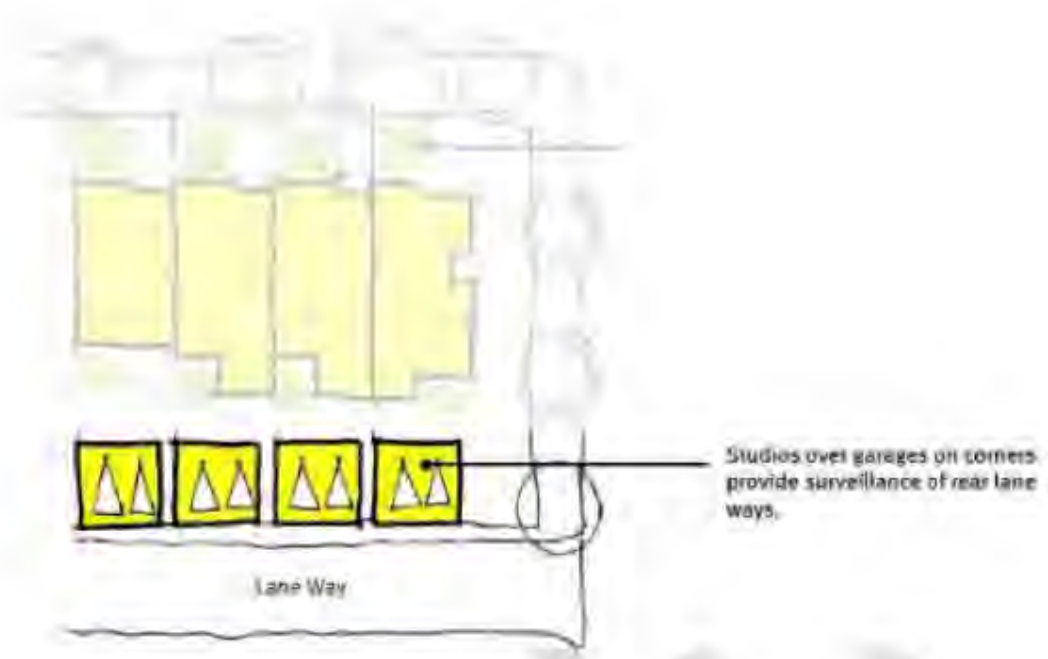
c) Provide casual surveillance over rear lanes or shared driveways.

d) Windows and private open spaces do not overlook the private space of any adjacent dwellings.

e) Do not overshadow the private open space of living space of any adjacent dwelling.

f) Balconies or verandahs do not overhang vehicle access areas.

Figure 31: Studio design principles



12.7 Detached dwellings

Performance measures

a) Allow for landscaped side setbacks to provide visual separation between dwellings and a more spacious streetscape environment.

b) To provide for more detached dwellings in the general residential zone which transitions to the medium density zone.

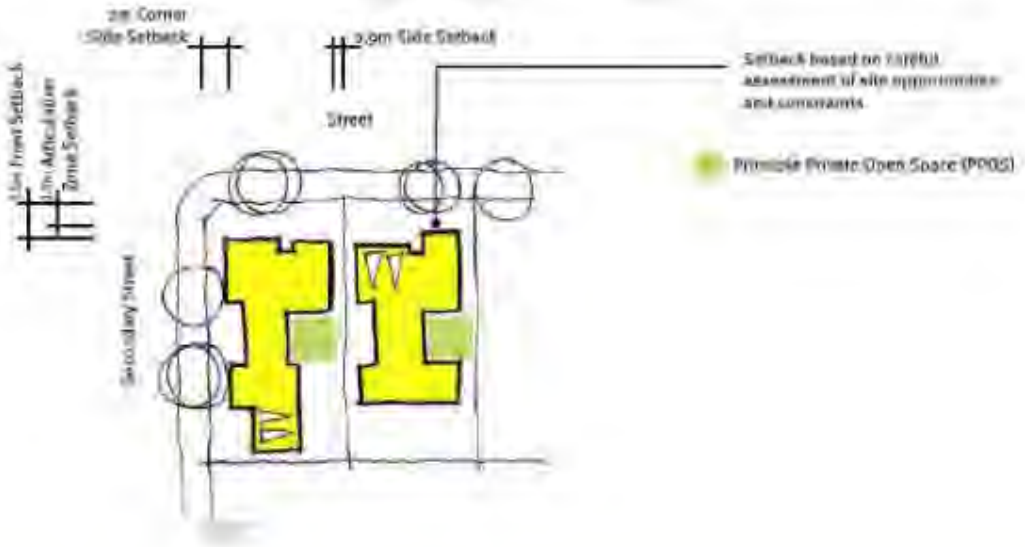
Controls

Lot dimensions	
Minimum Lot Size	450m^2
Minimum Lot Frontage	15m – 18m
Private open space	
Minimum Area	50m^2
Minimum Dimension	4m
Landscaping site coverage*	40%
Building setbacks	
Front	4.5m
Secondary Frontage	2m
Side	0.9m

Rear	
Lots with a northern orientation • Ground floor • Upper floor	 8m 12m
All other lots: • Ground floor • Upper floor	 4m 6m
Garage frontage	5.5m
Garage to rear lane/secondary frontage	0m

** Any landscaped area having a dimension less than 2m shall not be included in the calculations of landscaped areas.

Figure 32: Detached dwelling design principles



12.8 Built to boundary dwellings

Controls

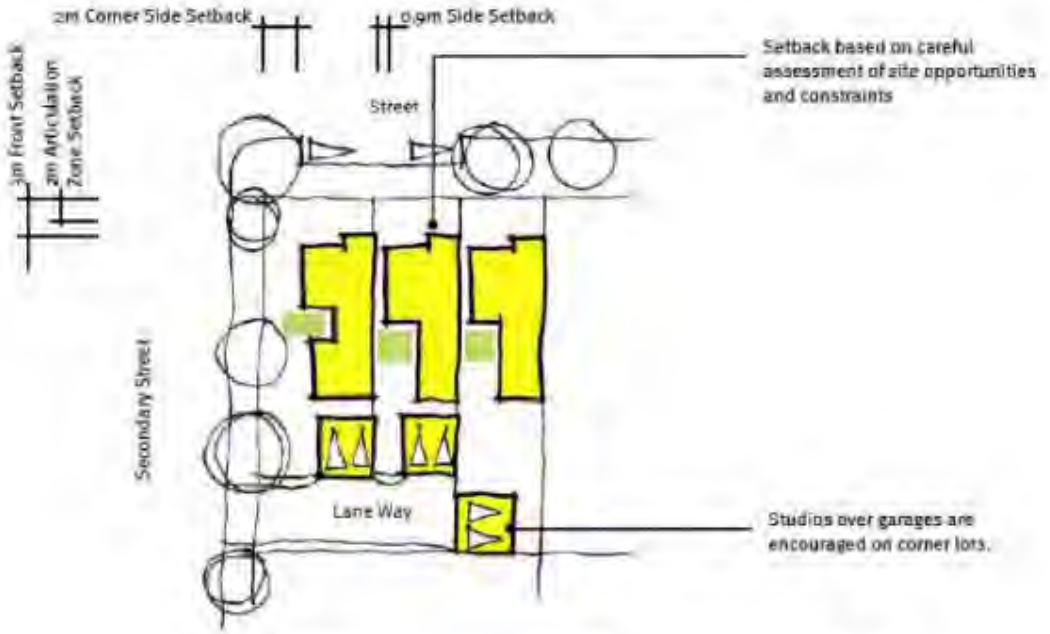
Lot dimensions	
Minimum Lot Size	450m^2
Minimum Lot Frontage	15m – 18m
Private open space	

Minimum Area	50m^2
Minimum Dimension	4m
Landscaping site coverage*	40%
Building setbacks	
Front	4.5m
Secondary Frontage	2m
Side	0.9m
Rear	
Lots with a northern orientation • Ground floor • Upper floor	 8m 12m
All other lots: • Ground floor • Upper floor	 4m 6m
Garage frontage	5.5m
Garage to rear lane/secondary frontage	0m

** Any landscaped area having a dimension less than 2m shall not be included in the calculations of landscaped areas.

DRAFT

Figure 33: Built to boundary design principles



13. Development for employment purposes

Performance Measures

a) Development for employment purposes should be planned and designed to be compatible with the existing and intended desired character of the locality.

b) Development for employment purposes shall consider views and vistas to and from Frogmore House.

c) Particular attention is paid to:

   i. The development site including setbacks

   ii. Urban form including:

      - traditional building design features
      - Building design to incorporate articulation and interest to street frontages and should be of a contemporary and innovative design
      - provide landscaped frontages to the street.

- orientation of building entrances.
- continuously occupied rooms facing the street.
- detailed consideration of significant townscapes or landscapes.
- Signs.

iii. Driveways and parking including:

- provision of on-site parking appropriate to the proposed use, and in accordance with the Access and Parking section of this DCP, the RMS or Australian standards.
- minimise site coverage by paved areas.
- conceal garages from views available from public parks and streets.
- locate driveways and parking areas away from any neighbouring residential development.
- Shared driveways between developments within the employment zones are encouraged
- All vehicles to enter and leave in a forward direction.

iv. Building envelope and setbacks:

- to achieve a two storey appearance.
- to provide for effective landscaped separation from adjacent developments.

v. Protect the privacy of adjacent properties.

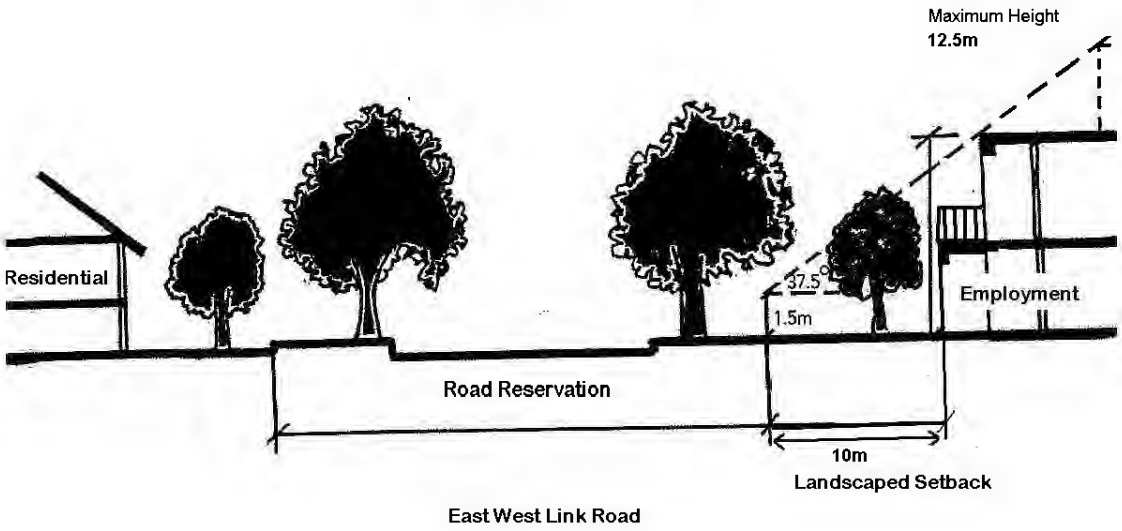
vi. Sufficient areas are provided for storage and building services to meet requirements generated by the proposed development and located to protect the amenity of adjacent developments. These storage areas are to be suitably screened from nearby streets and the Great Western Highway.

vii. Provision is made for on-site stormwater detention and treatment.

Controls

Minimum lot size	2,000m^2
Minimum lot frontage	25m
Minimum front building setbacks	10m
Council may consider a minor variation to the front setback but only where the proposal demonstrates a high level of architectural treatment plus an improved landscaping outcome.	
Height	Development will be carried out within the building height plane demonstrated in Figure 34 – Building Height Plane (Cross Section) to a maximum of 12.5m.

Figure 34: Building Height Plane - Cross Section of Employment development to Residential Development through proposed East West Link Road



Landscaping

1. A detailed landscape plan shall be submitted in accordance with the Landscape Design section of this DCP.

2. Landscaping within all setback areas shall be of a similar scale to the buildings on the site.

3. All unbuilt areas of the site not required for loading, car parking, or vehicle access should be landscaped.

4. 60% of any landscaped area shall provide for trees that grow to a height that exceeds the building height on the site and where possible be endemic to the area.

Drainage

5. On site stormwater detention systems are to be implemented to control the rate of runoff from the site to limit or reduce the rate of runoff to existing conditions or better.

6. A preliminary stormwater drainage plan is to be submitted with a development application for industrial uses on the site.

7. The onsite stormwater detention system must be designed, constructed and maintained in accordance with requirement of Councils OSD technical specifications.

8. Rainwater tanks are not to be located in the front setback and shall be integrated into the design of the building.

Fencing

9. No front fencing is permitted forward of the building line.

10. Security measures are to be integrated into the building design to avoid use of security fencing.

11. Should any fencing be required it is to be integrated into the landscaping theme to minimise visual impacts while providing associated site security. Chain wire, untreated metal, prefabricated metal and wooden fencing is not permitted.

Design

12. Architectural features shall be included in the design of the industrial buildings to provide for a more visually interesting industrial area that does not detrimentally affect the amenity and visual character of the locality or adjoining residential properties. Such features shall include:

    i. Distinctive parapets or roof forms

    ii. Visually interesting facades

iii. Architectural emphasis on built form

iv. Variety of window patterns

v. Variation in unit design within building group

vi. Entrance areas to be visually prominent within the overall building form

13. Additional design features can also include (but not limited to):

i. Balcony

ii. Canopy

iii. Awnings

iv. Entrances

v. Recesses

vi. Consideration of external materials and finishes

14. Roofing is to be constructed of non-reflective pre-painted metal with mid-tone colouring.

15. Buildings located on corner lots need to address both street frontages and reinforce the corner by massing and façade orientation.

Access

16. Development fronting the proposed East West Link road shall provide access to the western side of the property to reduce the impacts of cut into the site.

17. No parking spaces are to be provided within the front building setback.

18. Onsite parking and manoeuvring areas are to be in accordance with AS 2890.1 and AS2890.2. Lots greater than 2,000m2 shall cater for articulated vehicles.

Part D – Werrington Mixed-Use area

12. Preliminary

12.1 Land to which this section applies

The Werrington Mixed-Use Area covers land bounded by:

- The Main Western Railway Line to the north
- The Great Western Highway to the south
- French Street and existing residential development to the west and
- The University of Western Sydney (North Campus) to the east.

This Section does not apply to land zoned SP4 Enterprise.

12.2 Aims of this Section

a) To create an urban environment that optimises residential and employment opportunities that will act as a catalyst for future development for the area, and provides a mix of residential and employment generating land uses.

b) To optimise employment opportunities on the site presented by its proximity to the Great Western Highway and the University of Western Sydney (UWS).

c) To optimise the potential for use of public transport by residents, employees and visitors to the site.

d) To provide a high degree of accessibility that is safe and direct both within the site and between the site and the surrounding residential areas and educational institutions.

e) To provide a permeable and interconnected street system, with direct access denied to and from the Great Western Highway and a network of public thoroughfares (street and car parking areas), that accommodate the needs of vehicles, bicycles and pedestrians for efficient, convenient and safe access to all areas.

f) To promote active and vibrant street frontages with a high degree of surveillance, particularly along prominent access routes, streets and or boulevards in both residential and employment areas.

g) To ensure buildings have a high level of environmental performance consistent with Penrith City Council requirements, particularly with regard to energy efficiency, water management and the control of noise and emissions.

h) To retain and protect areas of high conservation value and commemorate past uses of the site.

i) To promote development that achieves best practice in ecologically sustainable development and enhances the natural values of the site.

j) To require the consideration of social and economic aspects of sustainable development.

k) To provide a public domain with a high aesthetic quality and appropriate landscaping.

l) To require the preparation for a Concept Plan for each zone on the site and provide details on the information to be included in that plan.

13. Concept plans

13.1 Requirements for a Concept Plan

Separate Concept Plans may be prepared for each of the zones. Concept Plans can be prepared, considered and adopted independently of one another, provided each demonstrates an appropriate integration and suitable interface between the zones and activities. Each Concept Plan must also demonstrate that development of the site will satisfy the requirements of this Section.

Council must not grant consent to development on land to which Penrith DCP applies unless:

1. A Concept Plan covering the land to be developed has been prepared and

2. The development is consistent with the amended Penrith DCP.

Except in the case where the Council has waived the requirement for a Concept Plan or where the development is exempt from the Concept Plan requirement. Where this occurs, Council will provide the applicant with written notice of the waiver or exemption. In the case of a waiver or exemption, Council must assess development with regard to the provisions of Penrith DCP, and development applications must meet the requirements for Concept Plans as specified in this Section.

Council may waive the requirement for a Concept Plan at its discretion, or where:

1. The development is of a minor nature and not inconsistent with the provisions of the LEP and this Section or

2. Development is for a purpose listed in the Penrith LEP.

A Concept Plan is to address, illustrate and explain the matters that the council determines are relevant to the future residential development of the land, and must include the following:

1. Urban design principles derived from analysis of the property and the character of its surroundings.

2. Conservation of cultural heritage and compatibility with the character of established neighbourhoods in Penrith City.

3. Conservation of natural features and biodiversity.

4. Protection of natural hazards, including flooding, bushfire and ground salinity.

5. Distribution of land uses and open space.

6. Provision of access for pedestrians, cyclists, road vehicles and public transport.

7. Controls for private landscapes and built form.

8. Safety and amenity of residential areas and the public domain.

9. Provision of on-site car parking.

10. Provision of service infrastructure.

11. Provision of public facilities.

12. Landscaping and improvements to the public domain.

13. Management of stormwater drainage and minimisation of water quality impacts.

14. Contribution to energy efficiency.

15. Staging of future development.

16. Proposed patterns of subdivision.

13.2 Concept Plan Strategies

The Concept Plan(s) must include and be based on the following strategies, prepared for the uses proposed in the relevant zone:

1. A transport management plan for the site, which promotes the use of public transport and pedestrian activity and recognises the site's context and surrounds. This study shall include:

    i. An assessment of the adequacy of the current French Street/Great Western Highway intersection to deal with the traffic volumes which will result from development of the site.

    ii. Development of any necessary traffic measures for O'Connell Street and Second Avenue to address the impacts of traffic interruptions due to greater pedestrian movements in the area.

2. An environmental management plan for the site, which promotes the enhancement and protection of the environmental qualities of watercourses, riparian land, remnant bushland and biological corridor linkages in accordance with best practice ecologically sustainable development.

3. An integrated economic strategy for the site, that promotes the optimisation of employment opportunities, particularly high technology developments.

4. A social plan for the site, which promotes the effective delivery of community facilities, services, and recreation opportunities and provides for community safety.

5. An implementation strategy to ensure that the provisions and measures proposed in the Concept Plan can be achieved.

13.3 Adoption of a Concept Plan

Concept Plans are required to be adopted by Council. Council must not adopt a Concept Plan unless:

1. The Concept Plan is consistent with the provisions and objectives of this Section and it addresses all matters outlined by this Section.

Council may consider a future application to amend an approved Concept Plan:

2. Subject to Penrith LEP, and the provisions of this Section.

3. Submitted in the form of a development application or amendment to this Section.

Minor amendments only may be submitted in the form of a development application.

13.4 Form of a Concept Plan

Concept Plans are to be adopted and will be assessed against the provisions of this Section. Accordingly, it is important that the information is presented in a form that can be easily checked against and assimilated into the structure of this Section.

Concept Plans shall describe details of the design, implementation and management of future development. Those details shall be consistent with the provisions and the sections in Penrith DCP, being:

1. Urban Design.

2. Sustainability.

3. Site Features.

4. Infrastructure Services.

5. The relevant zones.

This Section specifies the information to be provided in the Concept Plan and the provisions that must be complied with. A table will be required to be submitted with the Concept Plan which lists each requirement contained in this plan and indicates where it is addressed in the Concept Plan. If any provision is considered not relevant to a Concept Plan, the table must

indicate why it is not relevant and how the principles covered by the provision will be met (e.g. in a different Concept Plan, at Development Application stage etc.).

Concept Plans must include clear strategies for implementation and monitoring.

The use of tables, diagrams, and maps is encouraged to ensure information is clearly conveyed.

14. Urban design

14.1 Land use and activities

Objective

a) To ensure that the land uses and activities proposed in each zone comply with the provisions of the relevant planning instruments, and that any negative impacts arising from these activities are minimised.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. A scaled map of the site demonstrating that the R1 General Residential zone has a minimum area of 6ha
2. Pictorial depiction of the division of each zone into specified activities, generally in accordance with the proposed land use layout shown in Figure 35.
3. The nature of specified activities, with reference to likely environmental effects, including (where relevant) information on:
    i. resident population and number of employees
    ii. hours of operation
    iii. likely visitation
    iv. traffic generation
    v. noise generation

4. Compatibility of each activity with neighbouring activities, both on this site and on neighbouring properties.

5. Measures to achieve an appropriate interface between adjacent precincts and land uses, both on this site and on neighbouring land, including boundaries, buffers and gateways.

6. Visibility and accessibility of business / retail floor-space.

7. Important heritage values identified by any relevant heritage studies.

14.2 Pattern of streets, open spaces and community facilities

Objective

a) To ensure that the design of public areas, including streets, open space and community facilities, considers the needs of future residents and visitors in terms of accessibility, pedestrian movement, public transport use, safety and amenity.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. Details of access networks for vehicles, pedestrians and cyclists which are appropriate and effective, and cater for likely pedestrian routes around and through the site, including between the station and the UWS and TAFE campuses

2. Provision of a hierarchical structure of open spaces and meeting places.

3. Provision of a 'central park' which provides meaningful passive and active recreation opportunities.

4. Walking distances to key destinations, including UWS and TAFE.

5. Bus routes, bus and taxi set-downs.

6. Road-safety elements requiring detailed design treatment.

7. Vistas to key landmarks or features within the future development and beyond.

8. Interpretation and / or commemoration of particular items of historic or heritage significance.

9. Location of open spaces and community facilities, and the basis for this.

10. Any options presented by the site for innovative approaches to the implementation, ownership and management of required "public" infrastructure.

11. A draft management plan prepared in accordance with the Local Government Act for all open space which is proposed to be dedicated to Council.

14.3 Pattern of Street-Blocks and Subdivision

Objectives

a) To ensure residential density standards can be met.

b) To ensure design and layout of the site considers principles of ESD, safety and amenity.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. Overall dimensions and net area of each street block.

2. The climatic orientation of each block, optimising winter solar access.

3. Compatibility with accepted principles of planning for safety.

4. The identification and reinforcement of significant vistas.

5. Reinforcement of the gateways to the site, in particular at principal road intersections.

14.4 Pattern of built form and landscaped areas

Objectives

a) To ensure Concept Plans provide sufficient detailed information on proposed uses of the site to allow Council, the community and other stakeholders to develop an accurate picture of the site's future.

b) To ensure relevant aspects of urban design are considered in planning the design and layout of the site.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. Indicative range of building types.
2. Indicative building envelopes expressed in terms of:
    i. footprint
    ii. height and rise in storeys
    iii. overall frontage to the street
    iv. orientation
    v. setbacks
    vi. articulation and variation of forms
    vii. articulation and variation of garden areas
    viii. private open space provision
3. Projections of residential population and / or employment floor space
4. Car parking shall be:
    i. provided in accordance with the Parking section of this DCP for residential development unless otherwise indicated in the Infrastructure Services part of this Section
    ii. located appropriately for residents, employees, visitors and/or loading and unloading.
5. Landscaping strategy, in accordance with the proposed open space network shown in Figure 36 and the provisions of this plan and
6. Recommendations for location, orientation and detailed design of dwellings, buildings, private and public open space that are necessary to meet the solar access provisions of this plan.

14.5 Public Domain

Objective

To ensure that the safety, functionality, and amenity of the public domain is considered in the design and layout of the site.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. Location of each activity relative to the public domain.
2. Location of on-site parking relative to the public domain and neighbouring occupancies.
3. Measures to maximise public domain safety, including accepted Crime Prevention Through Environmental Design (CPTED) principles.
4. Integrated design of landscapes and buildings.
5. Design responses to the character of surrounding development and heritage items.
6. Design responses to achieve an individual character for each precinct.
7. Planning and design principles that achieve architectural variation within each street block, particularly with regard to the shape and style of facades and the selection of materials.
8. Planning and design principles for landscaping of private areas and the public domain, including:
    i. vegetation
    ii. paving
    iii. lighting
    iv. signage
    v. street furniture

Figure 35: Proposed land use layout

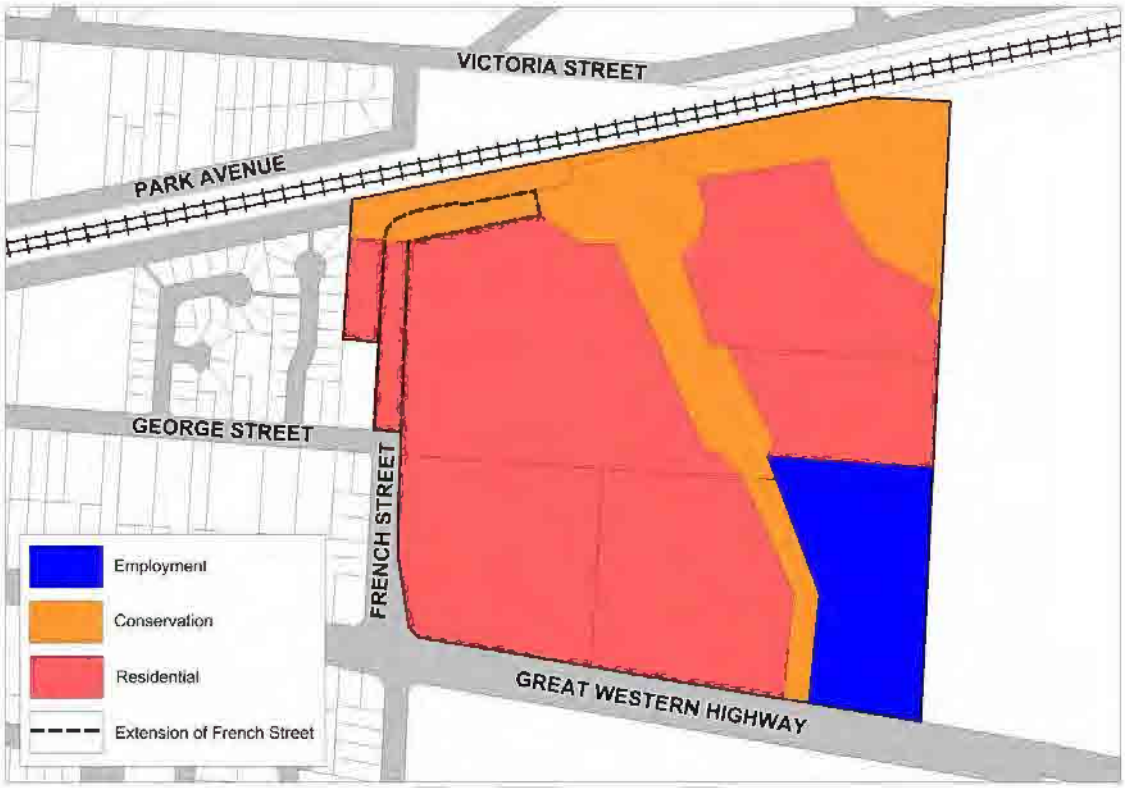


Figure 36: Proposed open space layout



15. Sustainability

Sustainability generally refers to the protection of ecosystems and biodiversity for the benefit of current and future generations as well as in terms of social and economic issues, so that it encapsulates all aspects of community life and wellbeing. This 'triple bottom-line' of environmental, social and economic considerations must be considered together if our community is to achieve true sustainability.

Given its location and nature, the Werrington Mixed-Use site presents a unique opportunity to achieve a development with a higher level of sustainability than is generally achieved in Penrith. The implementation of Environmentally Sustainable Development principles is a fundamental tenet for development within the Werrington site. The provisions of this Section of this DCP are designed to maximise this opportunity.

15.1 Social and Economic

Objectives

a) To ensure that plans for development of the site consider social implications for both future occupants and surrounding residents, and

b) To optimise the economic contribution development of the site can make, given its location and relationship with surrounding uses, particularly the University of Western Sydney.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. Demonstrate that the social needs of future occupants of the site have been considered in the context of the overall development, with particular reference to the social plan required by Concept Plan Strategies of this Part.

2. The initiatives developed in the economic plan required under Concept Plan Strategies of this Part are to be incorporated into the overall development plan for the site.

15.2 Biodiversity: Flora and Fauna

Indigenous vegetation and habitat on the site has been substantially modified by past use. Despite this, remnant native vegetation on the site

provides biodiversity and habitat value and should be preserved, including vegetation which has been identified as Cumberland Plain Woodland.

Cumberland Plain Woodland is an endangered ecological community and occurs within the subject lands. The Cumberland Plain Woodland should be viewed as an ecological constraint to development of the site and must be retained and protected. There are additional small pockets of woodland in the south-western part of the site. When designing the layout of the employment area, consideration should be given to preserving these stands and protecting their long-term viability.

Objectives

a) To conserve wildlife habitat and indigenous plant species.

b) To ensure that development adjacent to areas of existing vegetation identified for preservation is designed to minimise impact.

c) To retain indigenous vegetation and wildlife habitat and ensure appropriate buffer zone edge treatment between any development and any adjacent Cumberland Plain Woodland.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. Demonstrate what measures will be taken to enhance the biodiversity and habitat value of the site.

2. Identify those parts of the site that should not be disturbed and detail strategies to ensure they are protected.

3. Include a rehabilitation plan which details measures and strategies for protecting the long-term viability of remnant Cumberland Plain Woodland.

4. Identify and demonstrate appropriate edge treatments, including buffer zones, to minimise the impact of development on the Cumberland Plain Woodland present on the site.

5. Include a biodiversity strategy for the site which:

    i. Preserves mature trees within public reserves

ii. Preserves the mature stand of trees in the footpath reserves, building setbacks and on-site car parking areas

iii. Expands available habitat into corridors or blocks of appropriate configuration

iv. Employs predominantly indigenous plant species in site landscaping themes

6. Minimise the number of separate vehicular and pedestrian crossings of the riparian corridor.

7. Good quality, durable physical barriers shall be installed (complying with a National Parks and Wildlife Service specification) to prevent vehicular access and discourage pedestrian access into woodland areas.

8. Development practices for the site shall provide for the storage and reuse of excavated soils that are not affected by chemical or other contamination, to promote growth of indigenous species.

9. A Management Plan for all native vegetation on the site outlining the ongoing measures needed to properly manage areas required to be conserved.

15.3 Water cycle

The Werrington Mixed-Use site drains to South Creek. Studies by the Environment Protection Authority (EPA) and Sydney Water have demonstrated that the water quality in South Creek is significantly impacted by urban runoff. Minimising the pollution contained in urban runoff from this site will have a beneficial impact on the water quality in South Creek and ultimately the Hawkesbury River.

Objectives

a) To achieve an integrated approach to water cycle management on the site.

b) To control the quantity and quality of runoff from the site to maximise the improvements to downstream receiving waters and minimise the impact on the downstream catchment.

c) To investigate innovative approaches to water supply to minimise water wastage and reduce the demand for potable water.

d) To maximise the ecological, visual and recreational benefits gained from the riparian corridor.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. Demonstration that future development will not generate undesirable environmental impacts on receiving waters.

2. Identification and incorporation of best management practices to control runoff quantity and quality from the site.

3. Provision of information on existing salinity levels on site, including soil and ground water testing, and indicates measures to be taken to ensure that development does not adversely impact on those levels.

4. Provision of a stormwater management plan which demonstrates conformity with the EPA guidelines – Managing Urban Stormwater and Penrith City Council applicable development guidelines and the Storm Water Management Plans for South Creek.

5. Incorporation of sufficient runoff detention on the site to ensure peak flow rates do not exceed existing rates for all storm events.

6. Adoption of an integrated approach to the management of wastewater, which is consistent with:

    i. the objectives for a medium-density development incorporating water-sensitive urban design practices

    ii. capacity of site soils to absorb run-off

    iii. existing levels of soil salinity

    iv. the scale and desired density of future development, and the associated cost-benefits of dual supply for irrigation of open spaces and gardens

    v. local climate and likely rates of evaporation from open ponds

    vi. potential cost-benefits associated with nutrient polishing for stormwater and treated sewage effluent.

7. A surface drainage design shall be prepared, which is designed:

i. includes any runoff detention and water quality control ponds, swales and channels

ii. minimises land-take, consistent with the desired character of future development while still incorporating all major trees and riparian vegetation

iii. takes the form of a naturalistic channel with water on the surface

iv. limits disturbance to the ground whenever possible

v. utilises landscaped, open space and passive recreational features

vi. ensures engineered structures are integrated with the configuration and character of the wider development and its public domain

vii. incorporates ecological habitats in a riparian corridor.

8. Requirements for development proposals for the site to evaluate opportunities for the integration of water supply and re-use of stormwater, Greywater and treated effluent:

    i. in consultation with authorities such as Sydney Water, NSW EPA, NSW Department of Health, and Penrith City Council

    ii. A thorough investigation of opportunities for the reuse on-site of Greywater and treated effluent and recycled stormwater, noting:

        - rainfall patterns and the assimilative capacity of the site's soils
        - landscaped areas available for irrigation with treated effluent
        - impacts of irrigation on existing soil salinity
        - cost and feasibility of dual supply and storage of treated effluent for non-potable purposes.

9. Requirement for development proposals for the site to investigate and employ a package of measures that effectively reduces demand for potable water through re-use, including:

    i. dual potable and non-potable supplies and / or

    ii. appropriate landscape design and selection of species and / or

iii. rain-water tanks and / or

iv. use of site stormwater; and / or

v. the use of AAA rated plumbing fittings and appliances, including shower heads, water tap outlets, toilet cisterns, dishwashers and washing machines. Plumbing fittings shall achieve the following standards:

- shower heads – 9 litres or less per minute
- water tap outlets – 9 litres or less per minute
- toilet cisterns – 6/3 litre dual flush or equivalent
- separate hot and cold taps in basins and sinks.

15.4 Air quality

Objectives

a) To ensure that development does not have an undue adverse effect on air quality.

b) To identify appropriate compensatory measures that can be taken to help improve air quality in general.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. Stationary pollution sources are to comply with EPA licensing standards.
2. Prohibition of the use of solid fuel heaters on the site.
3. Identification and promotion of the use of compensatory measures such as the provision of green corridors.
4. Optimisation of the proportion of the site available for soft landscaping.

16. Public transport

Objectives

a) To reduce the demand for use of private motor vehicles and maximise the use of public transport through integrated planning of land uses and transportation.

b) To provide a dense and interconnected mixture of land uses which include residential, recreational, employment, retail and business services.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. The principles developed in the transport management plan required by Concept Plan Strategies of this Part have been incorporated into the overall development of the site; and

2. A safe and convenient pedestrian network formed by a closely spaced grid of streets interconnected with public open spaces.

17. Site features

17.1 Topography and soils

Objective

a) To protect the site's landscape character and minimise any environmental effects likely to arise from future development.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. Information is to be provided on the soil characteristics of the site and surrounding areas, including salinity and erodibility.

2. Concept Plans shall demonstrate how this information has been considered in site planning.

3. The development layout of the site shall minimise the need for reconfiguration of existing topography, particularly in areas surrounding

any mature trees which are to be preserved and in the vicinity of identified Aboriginal sites and artefacts.

18. Infrastructure services

18.1 Street networks

The network and design of streets has a fundamental influence upon the form and character of development, and the environmental amenity of neighbourhoods. Streets have several roles. They provide:

- safe and convenient access for pedestrians and cyclists
- effective distribution and circulation of vehicles
- visitor parking
- routes for reticulated services
- boundaries and separation between dissimilar land uses
- landscaped corridors which contribute to the character of neighbourhoods and overall townscape
- view corridors and vistas to landmarks within the site and beyond
- a public address for dwellings, commercial and employment activities
- establish an appropriate solar orientation for allotments and dwellings
- routing for trunk services
- overland drainage paths.

Objectives

Design a street network that:

a) is appropriate to environmental design objectives

b) is economically efficient

c) generates a distinctive character

d) provides high standards of amenity.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. The road network shall be designed to accommodate multiple purposes, including:

    i. safe and efficient access for pedestrians (including alternative forms of pedestrian activity), cyclists and vehicles

    ii. underground routing of service infrastructure

    iii. contribution to traditional townscape character

    iv. provision of vistas to landmarks within the site and beyond

    v. establishment of appropriate solar access for allotments, open spaces, buildings and dwellings

    vi. alternative means of emergency access, for example: during flood events.

18.2 Principal and secondary site roads

The site is situated on the edge of established residential suburbs, with frontages to a main road and the University site. An initial assessment of traffic impacts supports the following configuration for this site's major roads:

- hierarchical network which separates residential and employment traffic
- major entrance from French Street.

Objectives

a) To consider multiple objectives for roads including access and circulation, the character of townscape and market appeal of future development.

b) To provide safe and effective access to individual properties, contribute to a distinctive neighbourhood character and provide high standards of amenity.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. The design and layout of principle and secondary site roads shall:
    i. be in accordance with relevant Council policy and design standards and be based on forecast traffic flows
    ii. provide efficient access and circulation for buses and taxis
    iii. facilitate a configuration of neighbourhood streets appropriate to the desired solar orientation of dwellings
    iv. provide safe pedestrian access, and vistas towards landmarks and central destinations within the site and beyond
    v. limit the number of four-way intersections and where they occur, indicate their management.
2. The configuration of principal roads shall:
    i. not adversely affect traffic flows along existing arterial and main roads
    ii. interconnect the residential and employment areas
    iii. provide for a tightly-spaced grid of secondary streets, designed according to principles of traditional neighbourhood design
    iv. provide high-exposure business addresses.
3. Principle roads shall be designed:
    i. to provide adequate capacity to cater for expected traffic flows
    ii. according to principles of traditional neighbourhood design
    iii. to control traffic speeds, incorporating safe pedestrian crossings to central destinations
    iv. as tree-lined thoroughfares which contribute to the overall character of townscape
    v. to accommodate kerbside parking for visitors in the residential area and the employment area
    vi. to provide access to the Mixed-use employment zone separated from the Mixed-use residential zone.
4. The configuration of secondary roads shall:

i. discourage peak movements of through traffic

ii. discourage employment-area traffic from entering residential precincts

iii. distribute local traffic efficiently and effectively without congestion at intersections.

5. Secondary roads shall be designed to:

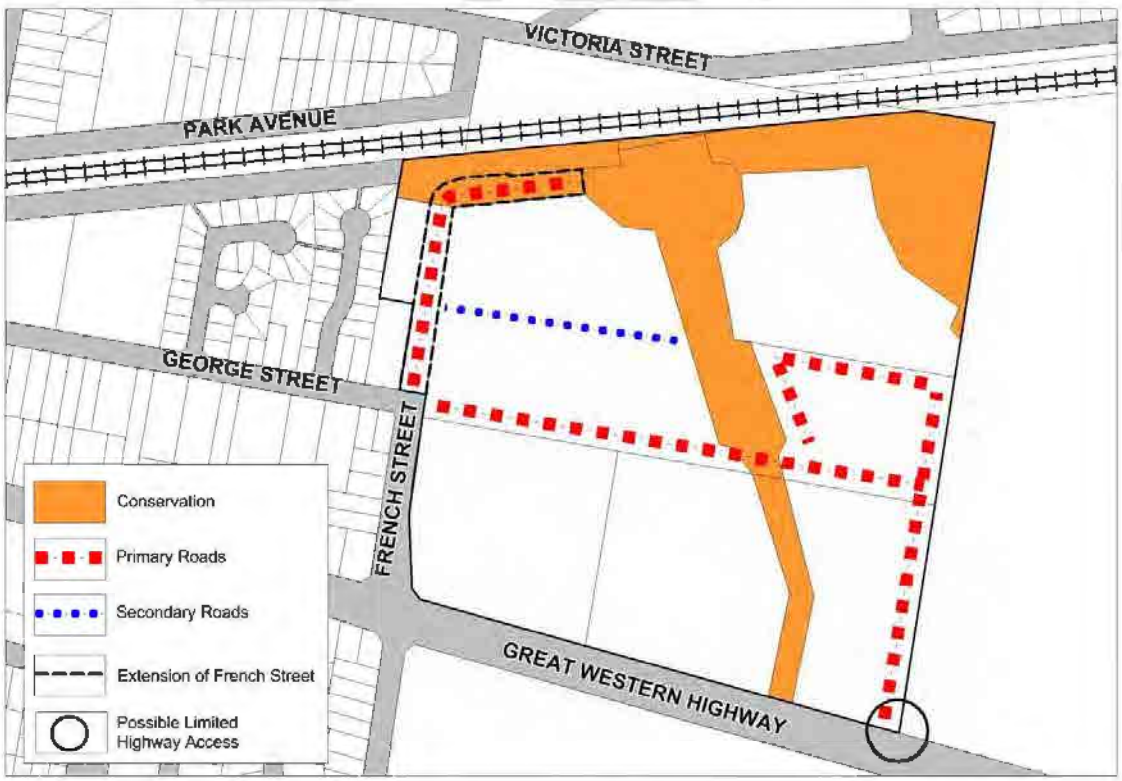
i. provide a distinctive landscaped address and character for each precinct

ii. to facilitate safe and effective circulation, parking and unloading for transport vehicles within employment precincts

iii. optimise on-street parking within residential precincts

iv. incorporate designated pedestrian footpaths, dimensioned and finished to service each precinct according to its desired function and character.

Figure 37: Proposed road network



18.3 Pedestrian and cycle access

Objective

a) To provide safe and effective pedestrian and cycle access to key destinations.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. Effective and convenient pedestrian and cycle access along streets, through public parks and drainage reserves, demonstrating that the pedestrian/cycle network has been linked to:

    i. key destinations on-site:

        - the future village centre
        - residential precincts and employment areas
        - community facilities, open spaces and meeting points

    ii. destinations surrounding the site that have regional, city or district significance, including the UWS and TAFE College.

Figure 38: Pedestrian, cycle routes and bus routes



18.4 Energy supplies

Objective

a) To ensure that the site is adequately supplied with energy.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. Council is to be supplied with appropriate evidence demonstrating that the site can be adequately serviced.

2. Prior to the submission of an application for development of the site, the owner / applicant shall negotiate the planning and design of services with relevant gas and electricity service providers.

3. All new services shall be located underground

18.5 Community services and recreation

Objective

a) Determine the range of services required and opportunities for public recreation and community use, consistent with the desired character of development and population projections.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. Confirmation of the likely population and social profile of the site's future residents

2. Identification of the range of needs, which may be reasonably attributed to the projected population

3. Identification of innovative means by which these needs can be met, possibly including shared facilities and/or joint ventures

4. A balanced provision of facilities to meet projected needs, having regard to existing facilities within the area

5. An appropriate location, configuration and design for facilities which meets the needs of users and minimises the costs operation and maintenance

6. Demonstration that local and district needs will be met in accordance with Council's social planning framework.

18.6 Landscape design

Effective landscape design is fundamental to traditional neighbourhood design, and makes a significant contribution to the implementation of Ecologically Sustainable Development objectives.

Objective

b) To integrate the planning and design of buildings with the site's landscaping.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. Landscapes shall be designed to achieve the environmental, recreational, amenity and townscape objectives of this Section and the Landscape Design Section.

2. Design of landscapes shall minimise need for water and nutrients

3. Mature vegetation that has habitat, civic or heritage values shall be conserved

4. Plant species to be in accordance with the Landscape Design Section and the Flora & Fauna study for the site

5. Paving material, lighting, signage and street furniture shall be in accordance with Council guidelines

6. Existing habitat shall be expanded with new plantings configured to provide continuous corridors

7. The design of public streets and parks shall:

    i. facilitate multiple uses

ii. be consistent with Council's current management policies and practices

iii. ensure that landmark locations, key thoroughfares and vistas are complemented and reinforced

iv. ensure that the public domain is embellished to compensate for smaller residential gardens

v. ensure that drainage reserves are embellished as attractive components within the public domain, as effective adjuncts to wastewater management and as habitat for bird life

vi. provide for the identification of individual neighbourhoods and precincts

vii. incorporate appropriate street tree planting.

8. Landscape design strategies shall be prepared for each residential neighbourhood and employment precinct; and

9. Shelter and shade should be provided for buildings and open spaces, moderating the site's natural microclimate.

19. Residential development

Objectives

a) To create a residential environment that is considered vibrant, aesthetically pleasing and safe for residents and visitors.

b) To provide a safe and competent pedestrian and transport network that links people with activities and places in an efficient manner.

c) To provide for a range of housing types that should include an affordable housing component.

d) To integrate with recreational, community and educational facilities.

e) To provide retail and commercial activities that are not in direct competition with locally based firms.

f) To conserve areas of biological diversity, which have heritage significance or are environmentally sensitive.

19.1 Residential density

Objective

a) To provide for a range of residential densities and housing choice.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. A minimum average net density of 30 dwellings per hectare is to be achieved in the R1 General Residential zone. Such density is to be achieved with a mix of housing types, including:

    i. Two storey townhouses.

    ii. Small lot housing.

19.2 Residential amenity

Objective

a) To achieve a high standard of residential and environmental amenity.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. A high standard of amenity appropriate to a medium density and mixed-use environment is to be achieved. This shall include measures to:

    i. reduce or eliminate potential conflicts between different neighbouring land uses

    ii. protect visual privacy for dwellings and private open spaces consistent with the Residential Development Section

    iii. Provide appropriate new communal spaces within the neighbourhoods and the village centre to allow for social interaction of residents.

2. Submission of a noise and vibration assessment for any residential development located within 100m of a major arterial road, Transitway environment or rail corridor or in any other area significantly affected by road and/or rail noise and vibration, and appropriate measures to

minimise this impact in areas that are significantly affected by noise and vibration.

3. Internal noise levels shall accord with EPA noise criteria including:
    i. Environmental Criteria for Road Traffic Noise, 1 July 2011, Environment Protection Authority
    ii. Interim Guidelines for Development Near Rail Corridors and Busy Roads, 2008, Department of Planning
    iii. NSW Industrial Noise Policy, December 1999, Environment Protection Authority.
4. Internal noise levels shall accord with the Noise and Vibration section within the Environmental Management Chapter of Penrith DCP.
5. Site planning and building design shall consider and address noise mitigation for areas close to significant noise sources including:
    i. residential development adjoining French Street and the new east/west road link
    ii. residential development adjoining employment developments; and
    iii. residential development adjoining the railway line.

19.3 Crime Prevention and Community Safety

Objective

a) To ensure the design of all public areas limits opportunities for crime.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. Compliance with the CPTED principles within the Safety and Security Chapter of Penrith DCP.
2. Protection of public spaces shall be demonstrated by:
    i. designing for high levels of casual surveillance
    ii. use of effective lighting type and location

iii. thoughtful placement of garden areas, trees, street furniture, walling and other structures

iv. clear delineation between public and private areas

v. ensuring there are clear sight lines

vi. elimination of entrapment and isolated spots

vii. provision of safe children's play areas

viii. provision of clear signage

ix. siting and design of buildings with graffiti management in mind

x. provision for ongoing maintenance and management strategies that will provide a high level of visual amenity.

3. Dwelling security to be demonstrated by ensuring:

i. dwellings are designed to have a clear presentation to the street

ii. dwelling entrances being designed to allow the occupant to view persons at the front door without needing to open the door.

19.4 Population and housing

Objective

a) To encourage diversification in housing to meet underlying demand from Penrith's existing population.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. Demonstration that the development pattern proposed for the site provides housing choice which:

i. meets identifiable demand from Penrith's population

ii. expands the range of available housing types

iii. is within an environmental setting which offers a village lifestyle

iv. complies with the provisions of the Residential Development Chapter of Penrith DCP.

19.5 Home-Based Business Activities

Objective

a) To maximise opportunities for residents to establish and operate small-scale business activities from home.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. Site planning, housing designs and other physical measures to be included to support home-based business activities, including:
    i. dedicated rooms for business activities
    ii. separate entrances for the residences and for business rooms
    iii. flexible parking and vehicle access for visitors and / or residents – subject to the scale of activity
    iv. buildings designed according to traditional residential scale and appearance when viewed from the street
    v. 'smart wiring' of homes to enable consumers to access multi telecommunications facilities (internet, e-commerce, cable TV, lighting, audio, security).

19.6 Retail and business services

Objective

a) Provide retail floorspace in the village centre that services the day-to-day needs of local residents and businesses.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. Sufficient retail floorspace shall be provided to meet projected local demand of:
    i. future residents
    ii. future businesses

2. The location and design of retail floorspace shall support the desired form and character of the future development:

    i. in a consolidated form to provide a core of pedestrian activity within the village centre.

    ii. in a location which is central, highly visible and accessible, fronting a principal site road.

    iii. incorporating a civic open space.

    iv. with continuous "active" shop-frontages and all-weather awnings facing wide, tree-lined footpaths.

    v. with short-term parking at kerbside for visitors and shoppers.

    vi. within buildings designed to preserve a human scale at street-level.

    vii. retail and commercial facilities are restricted to the ground floor level of buildings only.

3. Small-scale retail-type services shall be accommodated on the site:

    i. in response to demand from local home businesses and other business activities.

    ii. in prominent locations.

    iii. designed to maximise visibility and accessibility, and to provide distinctive urban design elements.

19.7 Parking

Objectives

a) To ensure a level of parking provision consistent with the density and form of housing provided.

b) To limit parking numbers as a tool to increase the use of public transport.

Controls

The following elements are required to be incorporated in a Concept Plan:

1. Applications for residential development shall demonstrate compliance with the relevant parking rates in and the Transport, Access and Parking Chapter of Penrith DCP.

2. A reduction in required parking provision may be considered by Council for any dedicated student housing within the development where a lesser demand is demonstrated.

DRAFT

D13 Riverlink Precinct

Contents

Part A – Riverlink Precinct (excluding Panthers Penrith Site) 3

1. Urban framework 7

1.1 Landscape structure 7

2. Connectivity 10

2.1 Permeability 10

2.2 Pedestrian and cycle network 13

3. Built form 13

3.1 Street alignment and setbacks 14

3.2 Active street frontages 17

4. Future character strategy for sub precincts 20

4.1 River gateway 23

4.2 Tourism and recreation precinct 26

5. Tench Avenue, Jamisontown 29

5.1 Design excellence 30

5.2 Built form 32

5.4 Sustainability 43

5.5 Amenity of surrounding properties 46

5.6 Traffic, parking and site access 52

5.7 Flooding and drainage 56

Part B – Panthers Penrith Precinct 59

6. Panthers Penrith site 59
6.1 Riverlink precinct plan 61
7. Panthers Penrith precinct vision 64
8. Urban framework 68
8.1 Structure plan 68
8.2 Landscape structure 71
8.3 Sub precincts 77
8.4 Views 87
8.5 Public Art Strategy 88
9. Connectivity 90
9.1 Street design and character 90
9.2 Pedestrian and cycle network 98
9.3 Public transport 100
9.4 Traffic, parking and site access 102
10. Built form 105
10.1 Street alignment, wall height and setbacks 105
10.2 Active street frontages 111
10.3 Awnings 113
10.4 Building depth and bulk 115
10.5 Building articulation 116
10.6 Architectural excellence 117
11. Delivery 119
11.1 Flooding and drainage 120
11.2 Utilities 122
11.3 Bushfire risk management 123
11.4 Staging 125

Part A – Riverlink Precinct (Excluding Panthers Penrith Site)

Background

The Riverlink Precinct has a rich and diverse history. Originally settled by the local Aboriginal peoples (Mulgowey and Booroonboorongal people), the area was first settled by Europeans in 1803 when land along the east bank of the Nepean River was surveyed. Land lots adjacent to the river were granted by Governor King to free settlers, ex-military men and ex-convicts.

Following further European settlement in the early 1800s, the Nepean River was crossed in 1813 by Gregory Blaxland, William Lawson and William Wentworth, who sought greater grazing lands in the western plains in order to help sustain the growing colony. This resulted in new towns along the river providing a gateway to the west. The construction of a road connecting Emu Plains to Sydney in 1815 resulted in further growth in the area. The construction of the Victoria Bridge in 1867 and the Regentville Bridge (also known as the M4 Bridge) further shaped development of the Riverlink Precinct. Ongoing development in the area over time has resulted in the Precinct's diverse land uses which exist today, such as residential, employment and entertainment facilities.

This section of the DCP applies to development on land known as the Riverlink Precinct as identified in Figure 1: Riverlink Precinct Location Map. This section provides specific controls for the Riverlink Precinct and is to be read in conjunction with other parts of the Penrith DCP.

Documents which are to be considered in the context of D13 Riverlink Precinct include:

- Riverlink Precinct Plan (2008)
- Riverlink Precinct Urban Design Study (2009)
- Traffic, Transport and Access Study (2009)
- Economic Impact and Land Use Analysis (2010)
- The Future of Penrith, Penrith of the Future (2012)
- 'Our River' Master Plan Report (2013)

The Riverlink Precinct is located within a 2km radius of the city centre and is approximately 370 hectares in area. The Precinct is bounded by the eastern bank of the Nepean River to the west, Mulgoa Road to the east, the M4 Motorway to the south and the Western Railway line to the north. It includes the Penrith Panthers Club and associated lands and facilities as shown in Figure 1.

The Precinct comprises a mix of uses including:

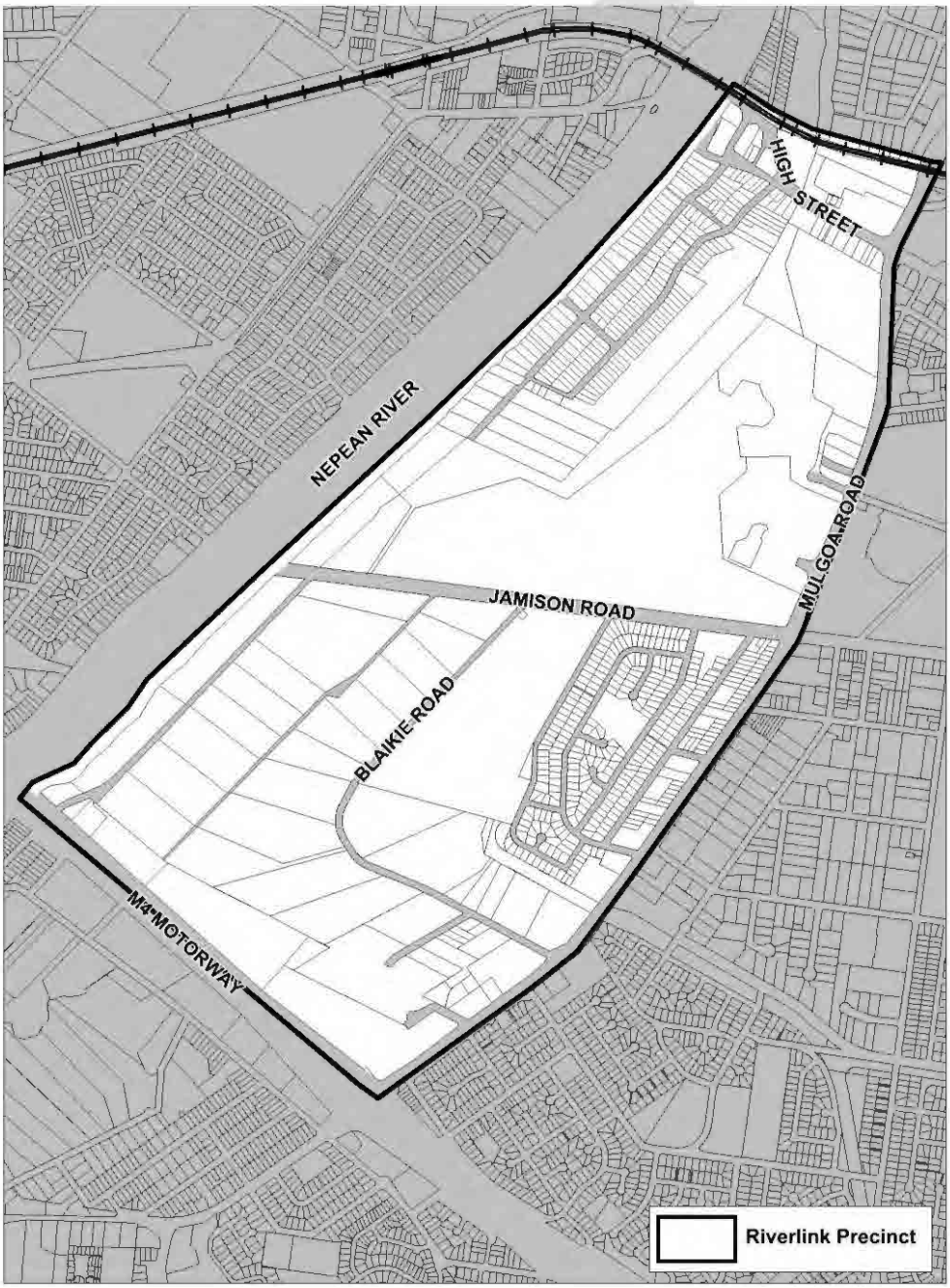
- Residential – rural and suburban – single detached houses, townhouses/villas, retirement housing.
- Bulky goods retail/warehousing – large floorplate with at grade car parking.
- Leisure/entertainment – large floorplate commercial buildings with at grade car parking.
- Hotels/motels – large floorplate, 2+ storey commercial buildings with at grade car parking.
- Open space – Tench Reserve, drainage easements, stormwater drainage.

The Precinct has the broad goal of creating a living, entertainment and working hub to link the city centre to the Nepean River. It seeks to create a cohesive and well-connected precinct by:

- Enhancing and activating Mulgoa Road as a significant approach to Penrith City Centre
- Reinforcing key intersections as gateways to the Precinct and the Penrith City Centre
- Creating a clear and legible public domain framework of streets and open space
- Creating a new local north-south access link between Jamison Road and the Great Western Highway
- Extending Ransley Street west through the Panthers site, connecting to the open space corridor
- Creating an exciting core of entertainment, leisure and lifestyle uses around the existing club

- Incorporating sustainability best practice
- Connecting Riverlink pathways with the Great River Walk
- Encouraging views of the Blue Mountains from the public domain
- Encouraging design excellence
- Improving connectivity through the Precinct
- Enhancing Peachtree Creek

Figure 1: Riverlink Precinct location map



Riverlink precinct vision

The Riverlink Precinct will be a living and working hub providing residential and employment activities with a key focus on the Nepean River. The Precinct will comprise a mix of activity nodes, with a diverse range of land uses and services and a substantial entertainment and leisure-based focus. A range of entertainment activities will be provided which will attract visitors from an extensive catchment in addition to servicing the local community. Community and cultural needs, including additional cultural facilities will be provided at the Western Gateway to the Penrith CBD and provide a distinctive architectural focus.

The public domain and open space character will be treed and green and relatively open, revealing views and vistas to the Blue Mountains, Peachtree Creek parklands and the Nepean River. View corridors to the Blue Mountains will be reinforced. A series of open space linkages will preserve areas for active and passive recreation, ensure land remains for natural habitats and incorporate water sensitive design. The public domain throughout the Precinct will be permeable and connected to its context and feature design excellence. A series of pedestrian and cyclist pathways will encourage walkability and easy access to the CBD and water activity nodes in the Precinct. Gateways for entering the sites will be strengthened and reinforced from major roads and thoroughfares. Mulgoa Road will be a high quality, urban entry to the Penrith CBD environs.

Built form development in the Precinct will be of a high quality, providing visual and landscape amenity for workers and residents befitting the site's proximity to the Penrith CBD. Development will incorporate best practice in terms of sustainability and urban design outcomes. The heritage significance of all heritage items and the natural landscape features in the Precinct will be recognised, reinforced and valued.

Objectives

Connectivity and links

a) To create strong synergies with the Penrith City Centre by optimising the proximity to the centre and complementing its land uses and character areas.

b) To create the Riverlink by strengthening the relationship to and connection with the Nepean River.

c) To reinforce transport links and pedestrian connections to the Penrith City Centre and public transport hubs.

d) To improve links and connectivity across the Precinct and between the various landholdings.

Co-operation

e) To address precinct issues such as flooding and access through collaboration with key stakeholders within the Riverlink Precinct.

Local character and regional appeal

f) To reinforce and enhance local identity and sense of place through public domain and building design.

g) To create a highly desirable visitor destination.

h) To create an exciting new entertainment, leisure and lifestyle hub.

Design excellence

i) To meet and exceed sustainability benchmarks, including water quality.

j) To achieve public domain and architectural design excellence.

1. Urban framework

The Urban Framework focuses on the broad scale and the long term, and sets an overall planning and design context within which more detailed and localised strategies, studies and projects can be coordinated. The Urban Framework provides a physical interpretation of Riverlink's vision and strategies. It helps to ensure that the built environment created reflects the community's vision and Council's strategies, and it underpins an integrated approach to better physical environments.

1.1 Landscape structure

The largely undeveloped and floodplain nature of the Precinct means that the existing character is predominantly 'green', grassed and open with a rural and undeveloped feel. There is a mixture of public domain and park planting, private domain larger site planting (front and rear), and riparian

planting (creek or river vegetation). There are some small neighbourhood parks associated with the residential areas.

The Landscape Structure seeks to integrate the natural and civic areas of the site through strong landscape links from the riparian areas back along the tree linked roadways to the Mulgoa Road frontage. Landscape components and strategies that underpin the Landscape Structure include:

- Landscaping streets, site boundaries and interfaces that contribute to the landscape identity of the Precinct.
- Acknowledging and responding to the site flooding events through landscape, environmental, engineering, built form and site management elements.
- Provision of a green interface with Mulgoa Road.
- Developing an interesting and culturally engaging component to connect the Great River Walk along the Nepean River.
- Enhancing the flood prone areas and riparian areas along Peachtree and Surveyors Creek as open space with a variety of active and passive recreational areas including a pedestrian/cyclist network. Naturalise, rehabilitate, and re-establish indigenous plantings along Peachtree and Surveyors Creeks.
- Maintaining the 'green' character by requiring setbacks for front gardens or plantings.
- Enhancing views to the Nepean River through management of the riparian plantings at Jamison Road and other public streets.
- Creating access points to the water for a wide range of passive and recreational activities.
- Creating shade in summer and solar access in winter.

Objectives

a) To create well designed active and passive recreation areas and open spaces.

b) To ensure the landscape contributes to the amenity of streets, including shade, especially the active streets.

c) To maintain view corridors to the mountains.

d) To reinforce the city's ecology by using appropriate species for the area.

e) To improve urban air quality and contribute to biodiversity.

f) To ensure landscaping designs incorporates methods for conserving mains water.

g) To incorporate WSUD principles and contribute to the reduction of stormwater runoff.

Controls

General

1. A long-term landscape concept plan must be provided for all landscaped areas including the deep soil landscape zone in accordance with the Landscape Design section within the Environmental Management Chapter of Penrith DCP.

2. Remnant vegetation and riparian areas in the precinct are to be protected and enhanced where possible.

3. Any significant stands of mature trees are to be assessed and where the health and vigour of the stand is demonstrated, are to be retained.

4. Landscaping is to be integrated in the front setback of the development to provide an attractive outlook within buildings, an attractive edge to the footpath, and to screen and breakdown the apparent scale of large areas of façade, bulk of building mass and urban form.

5. Where the setback area is a deep soil zone, clear-trunk canopy trees shall be planted.

6. Where an established planting character exists, this is to be continued into adjacent new development sites.

7. Native or indigenous plants that have lower water requirements are to be incorporated.

8. Landscaping of balconies, walls or roofs (vertical gardens/pots) should be provided to help visually minimise building mass and help soften the building. These areas should be designed for optimum conditions for plant growth by:

i. Providing soil depth, soil volume and soil area appropriate to the size of the plants to be established

ii. Providing appropriate soil conditions and irrigation methods

iii. Providing appropriate drainage

iv. The mix of plants in a planter, for example, where trees are planted in association with shrubs, groundcovers and grass.

v. Ensuring appropriate long-term maintenance will be provided.

Street design

9. All streets are to provide verge planting in local streets and full width decorative paving in pedestrian areas with high activity.

10. The street detailing, furniture, lighting and finishes are to be developed to respond to the specific character of the Precinct and are to complement the design palette in the draft Penrith Public Domain Technical Manual.

2. Connectivity

Connections for pedestrians, cyclists, public transport, cars, trucks and service vehicles through new and existing links to the Great River Walk, City Centre and surrounding areas ensures key activity nodes are activated. Key links through the Precinct as shown in Figure 2 will acknowledge views to the Blue Mountains and connections to the River.

2.1 Permeability

Background

Within the non-residential areas of the Precinct, there is a limited street network reflecting the large scale building footprint of land uses and activities and lack of development due to flooding. Large blocks reflect existing uses – bulky goods and entertainment. Rural residential, smaller blocks and lots (which are finer grain) reflect smaller scale residential uses.

Through site links provide access connections between the long sides of street blocks for pedestrian and vehicular access at street level. These links provide an important function in the form of lanes, shared zones, arcades and pedestrian ways.

Objectives

a) To retain and enhance existing through site links as redevelopment occurs.

b) To enhance connections between the Riverlink Precinct and surrounding areas, both along and across the Nepean River and through existing and new street networks.

c) To take advantage of all possible pedestrian connections to enable the site to function physically as a 'Riverlink' to the City Centre.

d) To connect the Riverlink pedestrian/cyclist network to the Great River Walk.

e) To improve the visual connection through the precinct to the river and mountains.

f) To improve permeability of large sites when they are redeveloped for more intensive uses.

g) To provide for pedestrian amenity and safety.

Controls

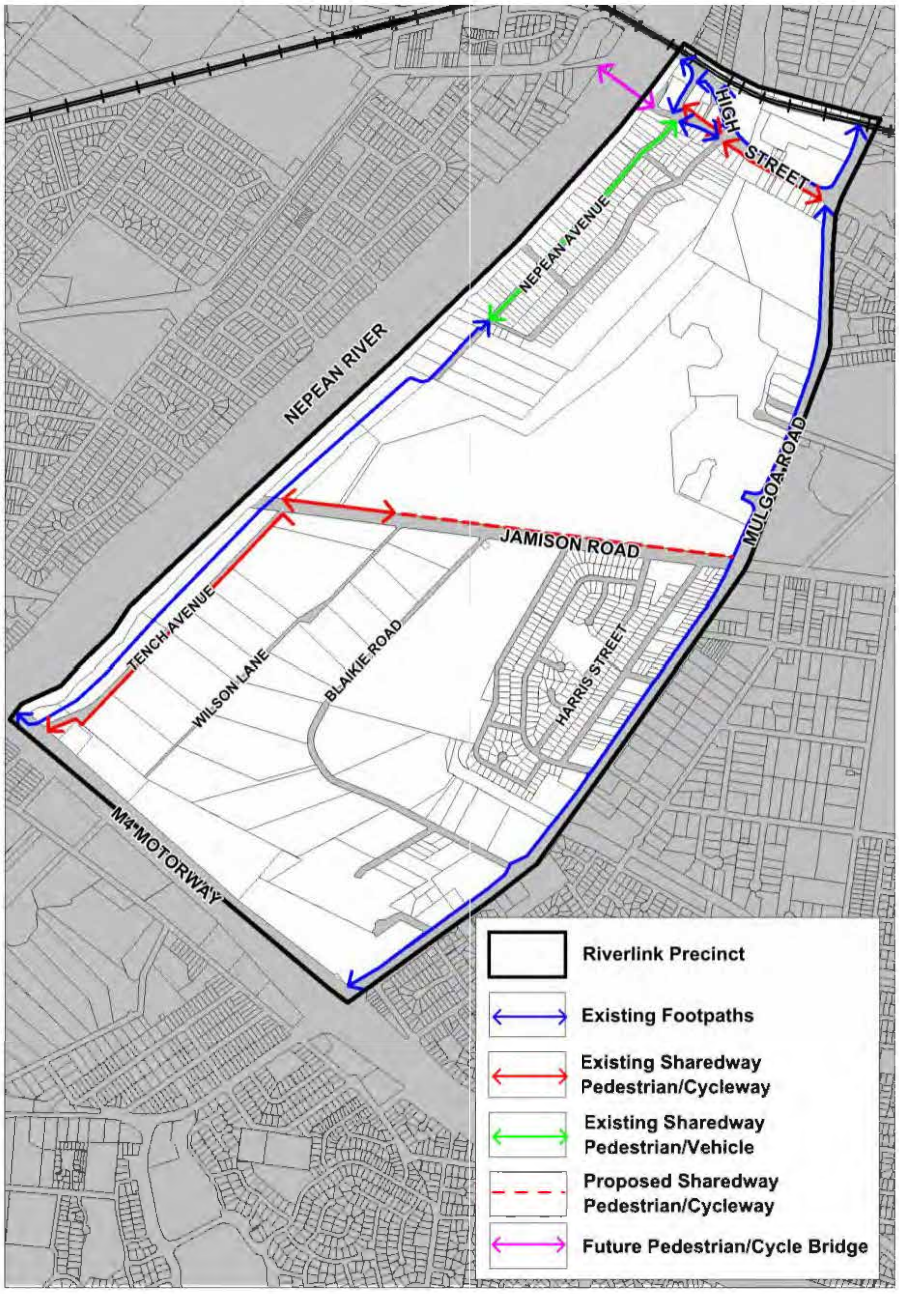
1. Through site links are to be provided as shown in Figure 2: Existing and Proposed Connections with accessible paths of travel that are:
    i. a minimum width of 4m for its full length and clear of all obstructions including columns, stairs, etc
    ii. Direct and publicly accessible thoroughfares for pedestrians; and
    iii. Open-air for its full length and have active frontages or a street address.
2. Ensure new streets and through site links extend and reinforce the existing street and block pattern as shown in Figure 2.
3. New through site links should be connected with existing and proposed through block lanes, shared zones, arcades and pedestrian ways and opposite other through site links.
4. The redevelopment of sites with an extra area of 5 hectares or more are to include new streets, lanes and/or site links to ensure permeability and encourage public access throughout the site.

5. Locate vehicular access and entries to parking on secondary streets or at the rear of buildings.

6. Existing publicly and privately owned links are to be retained.

7. Signage is to be located at street entries indicating public access through the site as well as the street to which the link connects.

Figure 2: Existing and proposed connections



2.2 Pedestrian and cycle network

Background

A series of linkages will encourage walkability and easy access to activity nodes in the Precinct as shown in Figure 2 Existing and proposed connections. Better pedestrian and cycleway connections will be created by new links and connections between existing pathways. Safety will be enhanced by designing buildings that have natural surveillance of pathways, laneways, parks, open space corridors or other elements of the public domain.

Objectives

a) To provide safe and easy access to buildings to enable better use and enjoyment by people regardless of age and physical condition, whilst also contributing to the vitality and vibrancy of the public domain

b) To provide a safe and accessible public domain

c) To create an extended and enhanced pedestrian and cycling network.

d) To provide continuous trafficable footpaths to all streets.

e) To provide opportunities for casual surveillance, places to enjoy views, and place to site and rest along the off road pedestrian and cycle network.

f) To ensure adequate provision for expansion of the cycle network.

Controls

1. Paved surfaces are to be designed to delineate between different uses including pedestrian areas, car parking spaces and driveways.

2. Signage is to be located at street entries indicating public access through the site as well as the street to which the link connects.

3. Built form

The development provisions in this section are intended to encourage high quality design for new buildings, balancing the character of the Riverlink Precinct with innovation and creativity. The resulting built form and character of new development should contribute to an attractive public domain and produce a desirable setting for its intended uses.

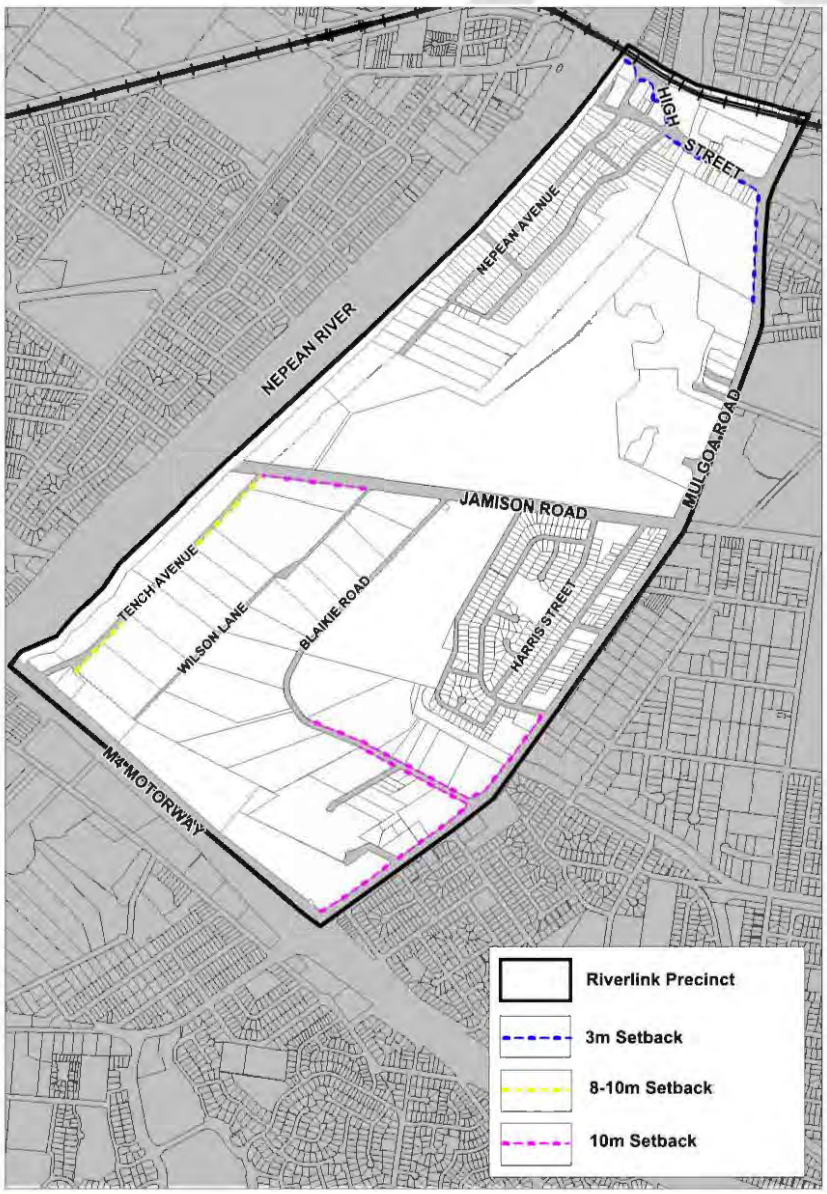
3.1 Street alignment and setbacks

Background

Street setbacks and building alignments establish the front building line. They help to create the proportions of the street and can contribute to the public domain by enhancing streetscape character and continuity of street facades.

Street setbacks can be used to enhance the setting and address for the building. They provide for landscape areas, deep soil zones and entries to ground floor apartments. Setbacks allow ventilation, daylight access and view sharing and increase privacy.

Figure 3: Street setbacks



Objectives

a) To establish consistent building alignments to the street.

b) To provide street setbacks appropriate to building function and character.

c) To establish the desired spatial proportions of the street and define the street edge.

d) To create a transition between public and private space.

e) To locate active uses closer to pedestrian activity areas.

f) To maintain solar access to the public domain.

g) To protect important views to the Blue Mountains escarpment.

h) To ensure an appropriate level of amenity for building occupants in terms of daylight access, outlook, view sharing, ventilation, wind mitigation, and privacy.

i) To achieve usable and pleasant streets and public domain areas in terms of wind mitigation and daylight access.

j) To provide building separation for visual and acoustic privacy

k) To provide deep soil zones within sites and maintain mature/significant vegetation where possible.

Controls

1. Street setbacks are to be in accordance with those shown in Figure 3. Where an area is not identified in Figure 3 applicants should refer to other chapters of Penrith DCP for minimum setback requirements.

2. Provide slender buildings aligned to the street or pedestrian walkways where possible.

3. Minor projections into front building lines and setbacks for sun shading devices, entry awnings and cornices are permissible.

4. Buildings must demonstrate that views to the Blue Mountains escarpment are maintained through the provision of technically accurate perspectives to the satisfaction of Council officers.

5. The following development is permitted and preferred within the 8-10m setback along Tench Avenue:

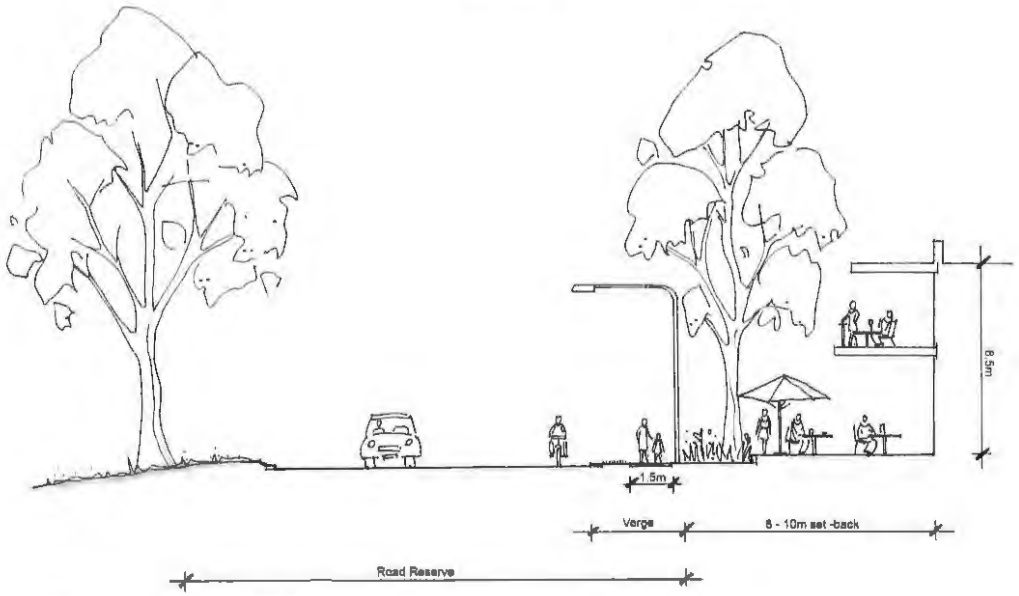
    i. Outdoor dining and awnings, including upper storey dining, where appropriate, to maximise views to the river

    ii. Landscaping, including shade trees and

    iii. Limited signage and parking.

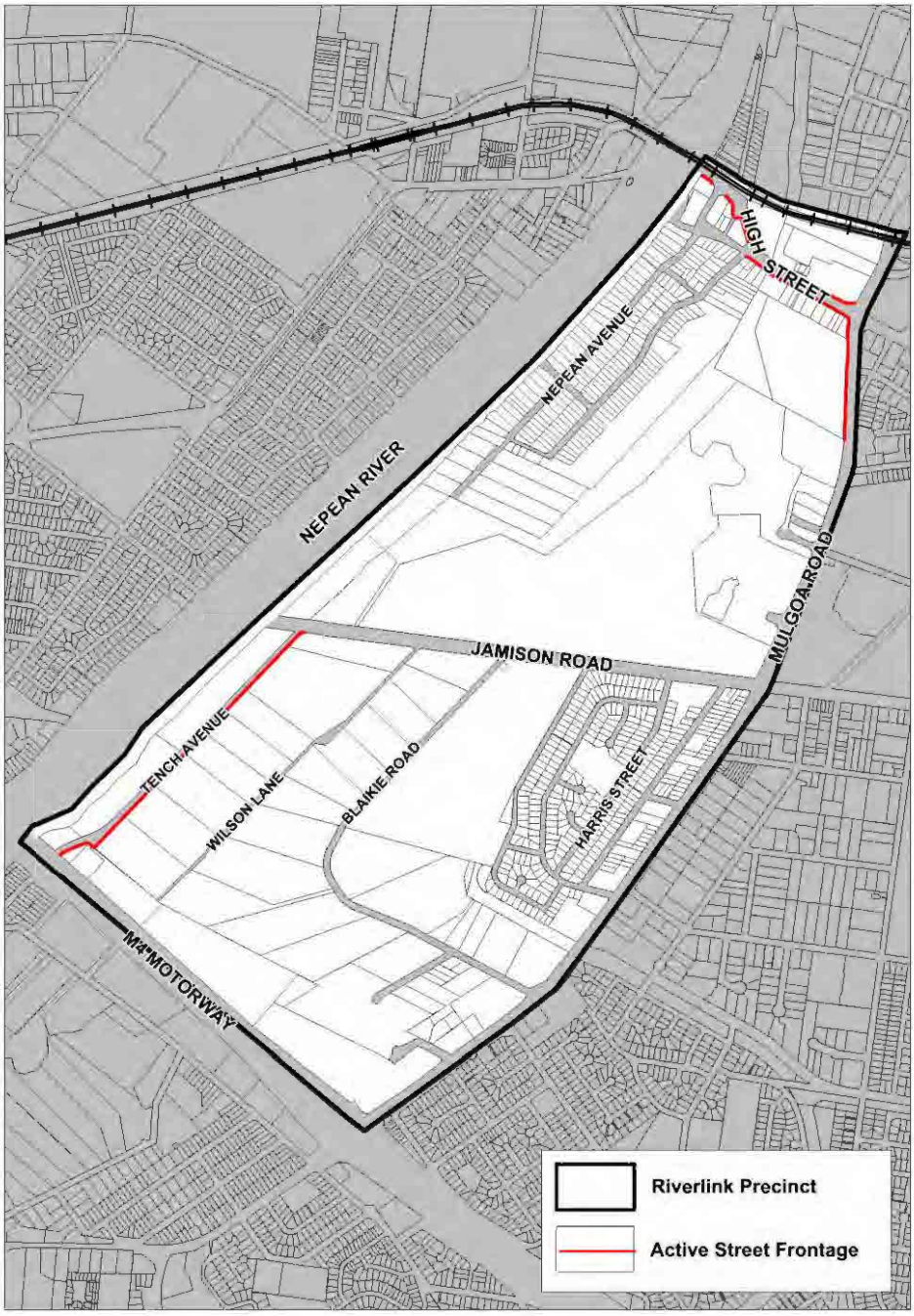
    A cross section of preferred development within the 8-10m setback along Tench Avenue is illustrated in Figure 4 below.

Figure 4: Cross section of preferred development within 8-10m setback along Tench Avenue



3.2 Active street frontages

Figure 5: Active street frontages



Background

Active frontages promote an interesting and safe pedestrian environment. Due to the size of the area, it is recognised that not all streets will develop as active pedestrian areas. As shown in Figure 5 Active Street Frontages have been identified where active ground level uses are to be consolidated,

creating vibrant streetscapes in areas with high pedestrian traffic and possibly located close to public transport and public open space.

Active uses include:

- Shop fronts
- Retail/service facilities with a street entrance
- Cafe or restaurants with street entrance
- Community and civic uses with a street entrance
- Recreation and leisure facilities with a street entrance.

Objectives

a) To promote pedestrian activity and safety in the public domain.

b) Achieve active street frontages with good physical and visual connections between buildings and the street.

c) To create vibrant streetscapes around areas of high pedestrian traffic.

d) To encourage activity within the site outside commercial business hours.

e) To provide a mix of uses to support an increasing employment and visitor population over time.

f) To enhance pedestrian safety, security and amenity.

Controls

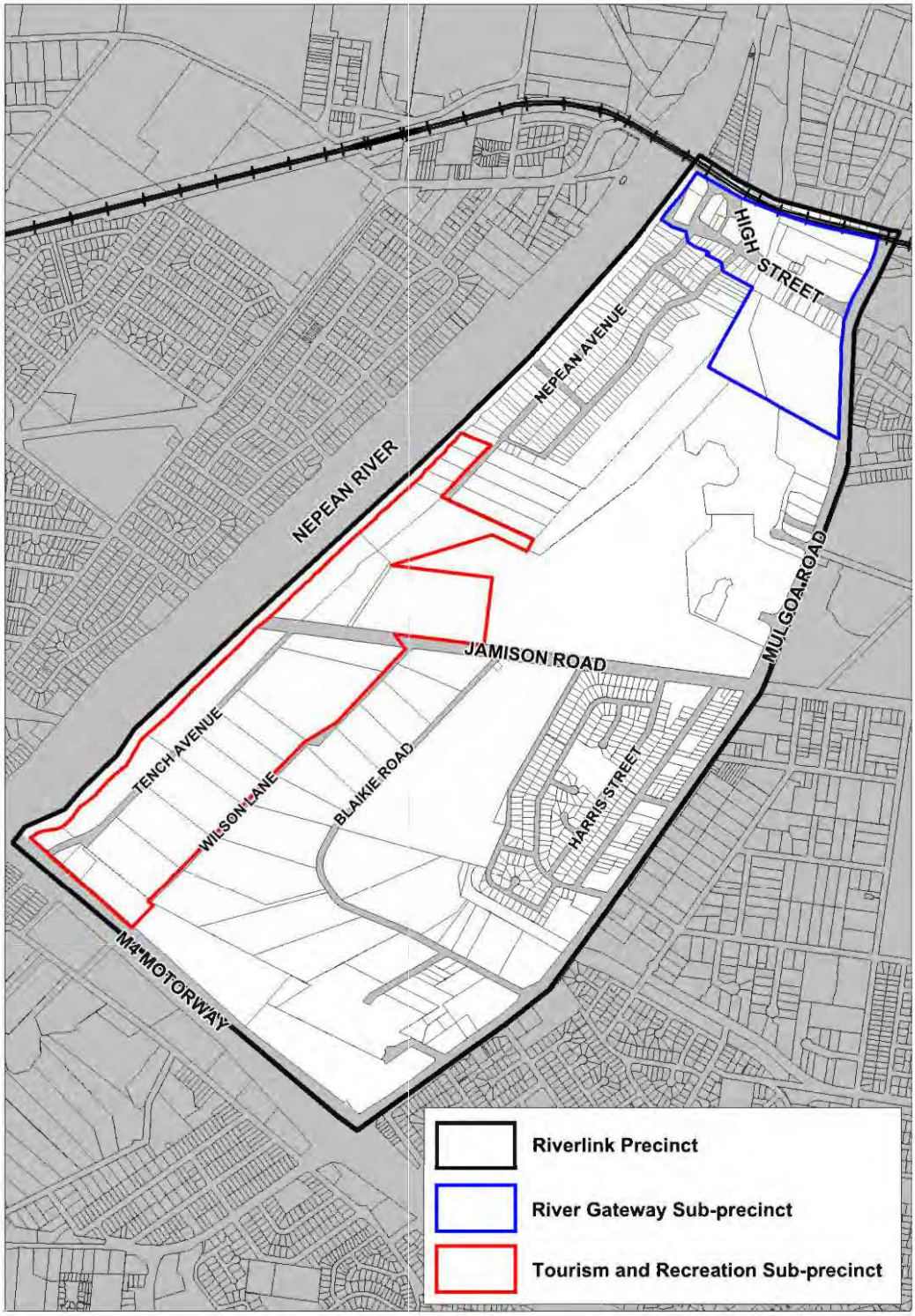
1. Active ground level uses are to be located as shown in Figure 5.
2. Entries to active frontage tenancies are to be accessible and at the same level as the adjacent footpath.
3. Vehicular access points should not be located at primary active frontages or adjacent to building entry points.
4. Ground level uses at active frontage zones are to be located at or close to street level.
5. Transparency and openings to the street are to be maximised and blank walls, fire exits and building services elements are to be minimised.

6. Locate primary pedestrian entries to buildings on the street frontage.
7. Design setback areas to provide interest and maximise opportunities for casual surveillance.
8. Design openings, including main entries, to the street to activate the street and to provide passive surveillance and overlooking of the public domain
9. Development on High Street may be built to the street frontage to encourage active uses including restaurants and cafes.

DRAFT

4. Future character strategy for sub precincts

Figure 6: Sub precincts



Background

Character is determined by the differing combinations of physical elements that give an area a distinctive quality. These elements refer to the physical setting, the economic and land use patterns over time, and the social and cultural history.

Due to the size and strategic importance of the Riverlink Precinct, specific design principles and development outcomes have been identified for sub precincts. Large parts of the Precinct are in transition and will have a different character in time to what currently exists.

This part seeks to encourage urban design and architectural excellence as well as environmental sustainability in both the public and private domain for these key precincts.

Built form and public domain controls need to retain positive character elements such as built form and landscape elements and control future development to achieve a desired future character. Development within sub precincts as shown in Figure 6 is to consider the desired character of that precinct.

Architectural excellence is particularly important where the building is highly visible from the public domain outside the Precinct. Good building design should positively contribute to the overall architectural quality of the city and provide buildings appropriate to their context. In some circumstances, this contribution may be as an iconic or landmark building, but more typically it is as a well-mannered building that fits sensitively into the streetscape.

The maintenance and improvement of the public domain is dependent on a high quality approach to the design of new development including the articulation and finish of building exteriors. Careful consideration must be given to the built form, quality of materials, integrity of the design concept and its contribution to the public domain.

Sub precincts are also rich in panoramic and focused street views to the Blue Mountains escarpment. These views are fundamental to the identity of the region and characterise this area of Penrith. Views are regarded as significant when they terminate at places of architectural, landscape, or cultural significance. This may include views of the Nepean River, public open space areas or heritage buildings. It is important that views to the Blue Mountains be maintained from as many points as possible at street level. In

the redevelopment of key sites consideration should be given to opening up new significant views.

Objectives

a) To create a framework that is flexible enough to accommodate a changing range of uses over time and respond to market opportunities

b) To facilitate the orderly development of key precincts

c) To create distinctive places activated by a mix of uses

d) To ensure that development contributes to the overall creation of a destination within Penrith

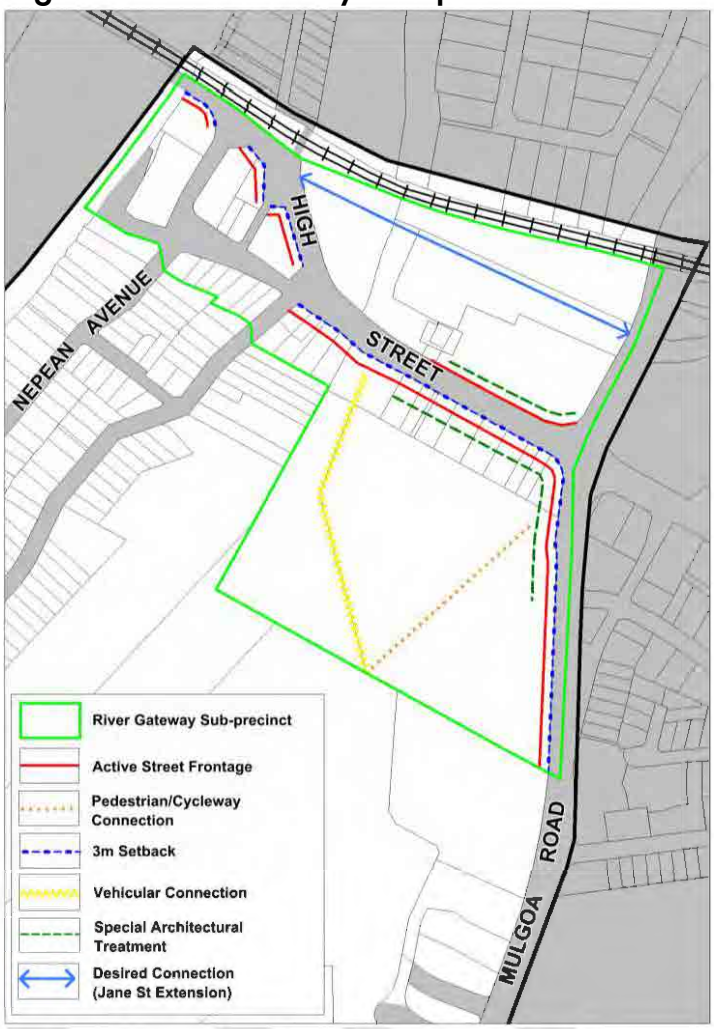
e) To retain and enhance panoramic views to the Blue Mountains escarpment and the Nepean River from existing streets and the public domain

f) To retain and enhance views to natural and cultural landmarks and heritage items.

DRAFT

4.1 River gateway

Figure 7: River Gateway sub-precinct



Background

The River Gateway sub precinct as shown in Figure E13.7 is an integral part of the 'Riverlink', the reconnecting of the City Centre with the River, to better link the beauty of the City's natural landscape with its urban environments. This Precinct, along with the Carpenters site and Woodriff Gardens, proposes the re-visioning of public transport, stronger pedestrian and cycling networks, green spaces and a pedestrian bridge. In addition, there has been identified a community desire for an activated river frontage, as well as a strategic mix of indoor and outdoor areas which encourage people of all ages to come together to build a sense of community.

Objectives

a) To connect the Penrith City Centre with the River and Penrith Lakes

b) To create multi-modal opportunities for people to engage with the River

c) To optimise views of the Victoria Bridge, Nepean Valley and the Blue Mountains eastern escarpment

d) To connect Penrith, Emu Plains and the Blue Mountains

e) To respect the historic setting and place

f) To provide an iconic bridge, dedicated to pedestrians and bicycle riders, over the Nepean River

g) To ensure buildings and structures are iconic and regionally significant, and which distinguish Penrith from other places

h) To integrate with a green network that connects the Penrith City Centre with the River and environs – the' Riverlink'

Controls

1. The built form within this sub precinct must provide a transition from the City Centre to the active, recreational edge of the Nepean River and the lower density residential surrounds.

2. Development should be massed to the High Street corners at Mulgoa and Castlereagh Roads to mark the City Centre Western Gateway.

3. Development must provide an active edge to High Street, street address and continuation of High Street to the water.

4. Power lines are to be located underground.

5. Where power lines cannot be located underground, development may need to be set back from the corridor to allow for an appropriate buffer zone (may require up to 30 metres each side – with exact dimensions to be confirmed by utility authorities).

6. Civic and cultural elements of the City Centre should be incorporated and extended through to the Nepean River via High Street.

7. Landmark and gateway locations are to have buildings that demonstrate architectural excellence in the following ways:

    i. How the building reinforces and enhances significant vistas and view corridors.

ii. How the building will enliven the public domain it adjoins.

8. Particular attention is to be paid to detailing of materials. In general:

    i. Painted surfaces are not appropriate especially at street 'level'.

    ii. External walls should be clad with high quality and durable materials and finishes.

    iii. Architectural form/design uniqueness is to be considered.

9. Provide an architecturally distinctive, high quality, unique and well-designed building, which responds to the character of the region and establishes the site as a special place.

10. Buildings are to be simple, elegant and well proportioned.

11. Balconies and terraces should be provided, particularly where buildings overlook parks and on low rise parts of buildings. Gardens on the top of setback areas of buildings are encouraged.

12. Façades are to be articulated so that they address the street and add visual interest.

13. To assist articulation and visual interest, large expanses of any single material are to be avoided.

14. Adjoining buildings (particularly heritage buildings) are to be considered in the design of new buildings in terms of:

    i. Datum of main façade and roof elements.

    ii. Appropriate materials and finishes selection.

    iii. Façade proportions including horizontal or vertical emphasis.

15. Parking areas must not dominate the street frontage.

16. Mixed use buildings are to provide pedestrian friendly, active street edges.

17. A street should be provided on the boundary of the Mountain View Retirement Village complex to activate this edge.

18. A north-south vehicular link should be provided through the sub precinct from Great Western Hwy/High Street to the southern boundary (Panthers Precinct).

19. A view connection should be created from Penrith Civic Centre through the sub precinct on the corner of Mulgoa Road and High Street in the form of a pedestrian through link.

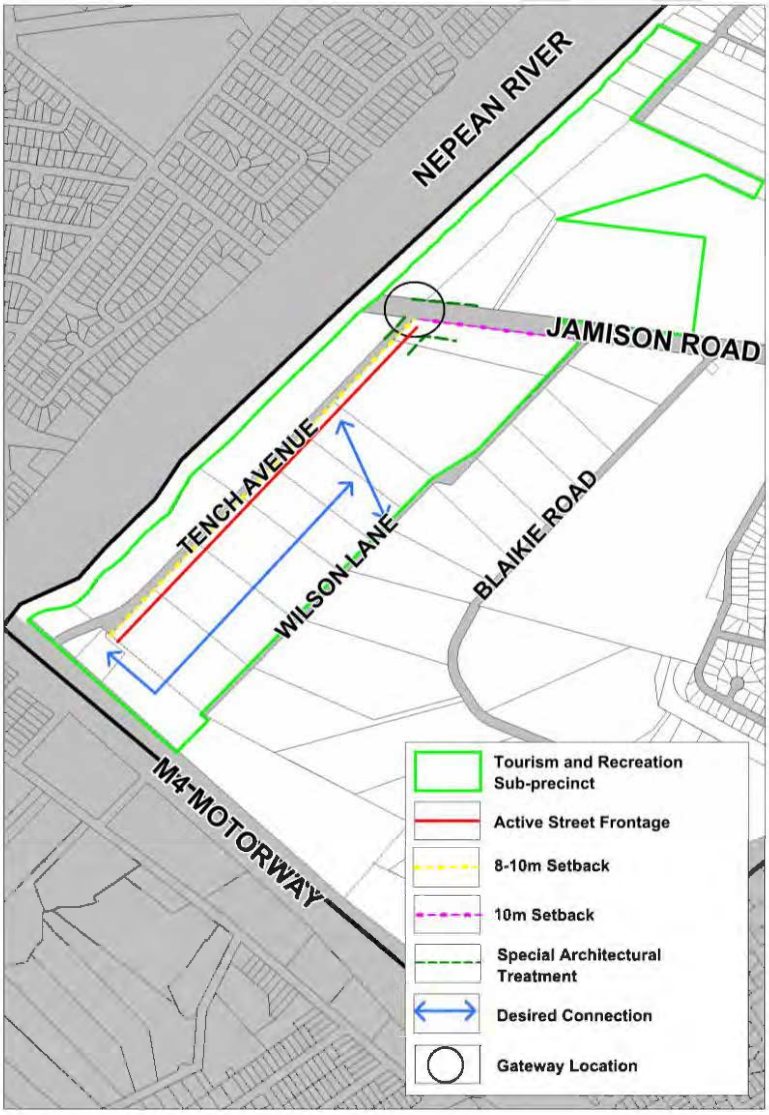
20. A landscaped public domain is to be provided with water features and public art incorporated at street level.

21. The city edge should be defined through the use of formal structured plantings, banners on light poles, and street treatments in line with the City Centre.

22. Environmental and sustainable initiatives are to be incorporated into new buildings.

4.2 Tourism and recreation precinct

Figure 8: Tourism and Recreation Precinct



Background

The Nepean River has a long cultural history, dating back thousands of years. As a spectacular natural and cultural landscape setting, the river provides the opportunity for a series of memorable spaces and places each with their own focus and character, a place to celebrate the community's culture and diversity.

The Tourism and Recreation Precinct as shown in Figure 8 is focused around the River and provides a sequence of foreshore open spaces of different sizes, shapes and characters that contribute to a rich and varied promenade experience that draws people along the waterfront. The river is a significant and important recreational asset in the region. An active and vibrant river should provide a wide range of recreational opportunities both on and off the water, making the river a place to be enjoyed by all.

Objectives

a) Be a destination – provide a river park for the people.

b) Provide a strong sense of arrival along Jamison Road.

c) Create a connected, active and vibrant river with a wide range of recreational opportunities at hubs both on and off the water.

d) Create spaces and places for people to celebrate the community's culture and diversity.

Controls

1. Facilitate access and areas for casual spectator vantage points for river based events.

2. Facilities for water related uses should be provided at major points along the River such as pontoons, wharf structures, boardwalks and viewing decks.

3. Improved vehicle circulation and parking should be provided, including trailer parking near boat launch areas.

4. Improvements to the public domain are to be implemented such as street lighting and continuous street planting.

5. Vehicular access points and entries to parking areas are to be located on secondary streets or at the rear of buildings.

6. Landmark and gateway intersections are to be reinforced with buildings and structures and are to demonstrate architectural excellence in the following areas:

    i. How the building reinforces and enhances significant vistas and view corridor

    ii. How the building will enliven the public domain it adjoins.

7. Materials are to be selected for durability and quality. In general painted surfaces are not appropriate especially at street 'level'.

8. Particular attention is to be paid to detailing of materials.

9. Balconies and terraces should be provided, particularly where buildings overlook parks and on low rise parts of buildings. Gardens on the top of setback areas of buildings are encouraged.

10. Facades are to be articulated so that they address the street and add visual interest.

11. To assist articulation and visual interest, large expanses of any single material are to be avoided.

12. External walls should be clad with high quality and durable materials and finishes.

13. Adjoining buildings (particularly heritage buildings) are to be considered in the design of new buildings in terms of:

    i. Datum of main façade and roof elements

    ii. Appropriate materials and finishes selection

    iii. Façade proportions including horizontal or vertical emphasis

14. Buildings are to be simple, elegant and well proportioned.

15. Environmental and sustainable initiatives are to be incorporated into new buildings.

5. Tench Avenue, Jamisontown

Land to which this section applies

This section applies to development permitted pursuant to clause 7.29 of Penrith LEP 2010 at 2 Tench Avenue, Jamisontown (Lot 1 DP 38950) as identified in Figure 9.

Figure 9: Aerial image of the subject site (Source: Six Maps 2018)



Relationship of this section to the Riverlink Precinct Section

Clause 7.29 of Penrith LEP 2010 permits a development on the site that incorporates an indoor ski slope.

This section provides specific controls for a development on the site that incorporates an indoor ski slope, in addition to the general controls elsewhere in Penrith DCP. Where there is an inconsistency between this section and the rest of Penrith DCP, the requirements of this section prevail.

Vision

It is envisaged that the subject site will be developed for an indoor skiing facility, utilising the site-specific provisions under LEP clause 7.29 and this section of Penrith DCP.

The development will potentially accommodate an indoor ski slope and a range of other facilities such as an ice-skating rink, ice climbing facilities, rock climbing facilities, snow play areas, a gymnasium and training facilities. The development may also accommodate hotel accommodation, function centre and food and drink premises.

Objectives

a) To contribute to the attainment of the objectives of the SP3 Tourist zone and Riverlink Precinct and Tourism and Recreation sub-precinct by facilitating the development of a unique indoor recreation facility that offers a range of winter sport related activities that will attract local, interstate and international visitors.

b) To promote quality urban design, architectural excellence and environmental sustainability in the planning, development and management of the development of the site.

c) To encourage the development of a high-quality building that positively contributes to the skyline and view corridors to and from the Blue Mountains and escarpment and provides an appropriate architectural response to the Gateway location of the site.

d) To ensure that the development provides an appropriate interface with the public domain and contributes to a positive pedestrian experience for visitors to the precinct.

e) To ensure that massing, setbacks, design and landscaping of the development minimise the visual, privacy, acoustic and overshadowing impacts of the development on this site.

f) To ensure the development is compatible with the flood characteristics of the site and that any development on the site has no impact on adjoining or upstream or downstream properties.

g) To ensure local traffic impacts of the development are appropriately managed and adequate parking is provided on site.

5.1 Design excellence

This Part seeks to encourage urban design and architectural excellence as well as environmental sustainability. This Part supports the requirement of clause 7.29 of the Penrith LEP 2010 for a design competition to be held for the future development of the site.

Achieving design excellence for the development is particularly important given the building will be a visually prominent building.

Objectives

a) To ensure that the development achieves design excellence.

b) To encourage a high level of design consideration.

c) To ensure that buildings contribute positively to the precinct character.

d) To encourage the development of sustainable design.

e) To encourage the use of high quality, durable and robust materials.

Controls

1. The development must achieve design excellence. In deciding whether the development exhibits design excellence, the following matters are to be taken into consideration:

    i. Whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved.

    ii. Whether the form and external appearance of the development will improve the quality and amenity of the public domain.

    iii. Whether the building reinforces and enhances significant vistas and view corridors.

    iv. How the development will address the following matters:

        - The impact of the development on the heritage significance of 'Madang Park' which is listed as a heritage item with local significance in Schedule 5 of the Penrith LEP 2010.

        - The relationship of the development with buildings on neighbouring sites in terms of separation, setbacks, amenity and urban form.

        - Bulk, massing and modulation of the building.

        - Environmental impacts such as sustainable design, overshadowing and reflectivity.

- The achievement of the principles of ecologically sustainable development.
- Pedestrian, cycle, vehicular and service access, circulation and requirements.
- The impact on, and any proposed improvements to, the public domain.
- Achieving appropriate interfaces at ground level between the building and the public domain.
- Excellence and integration of landscape design.

2. Any future development application must be accompanied by a report that details how the building achieves design excellence in relation to these matters.

5.2 Built form

5.2.1 Indicative building envelope

This section of Penrith DCP will guide the building envelope for development on this site to control and minimise the potential environmental impacts of future development on this site on the surrounding properties and ensure that the development delivers an appropriate streetscape outcome along both Tench Avenue and Jamison Road.

Controlling the height and setbacks of the building will be essential to reducing the apparent bulk and scale of the building, creating an appropriate landscaped setting for the building and providing a physical and visual transition between the building and the surrounding properties. The setbacks will also ensure a reasonable level of solar access will be maintained to the adjoining properties.

Objectives

a) To ensure future development achieves a high-quality streetscape.

b) To minimise the impacts of overshadowing.

c) To ensure adequate separation and amenity is provided to the surrounding properties.

d) To ensure the development is compatible with the flood characteristics of the site and that any development on the site has no impact on adjoining or upstream or downstream properties.

Controls

1. The building height and setbacks are to be generally consistent with the height and setbacks shown in Figure 10, Figure 11, Figure 12 and Figure 13. The building envelope depicted in these Figures is indicative only and is to be refined through the design excellence process.

2. The ski slope may extend up to 2 metres into the 10 metre setback to Jamison Road, above a height of 6 metres above ground level, to allow for the articulation and modulation of the ski-slope.

3. The ski slope is to be setback from the southern boundary to minimize the visual and solar access impacts of the slope on the adjoining property. The height and setback of the ski slope from the southern boundary should be consistent with the indicative building envelope diagram included as Figure 12.

DRAFT

Figure 10: Site plan view of height limits and setbacks

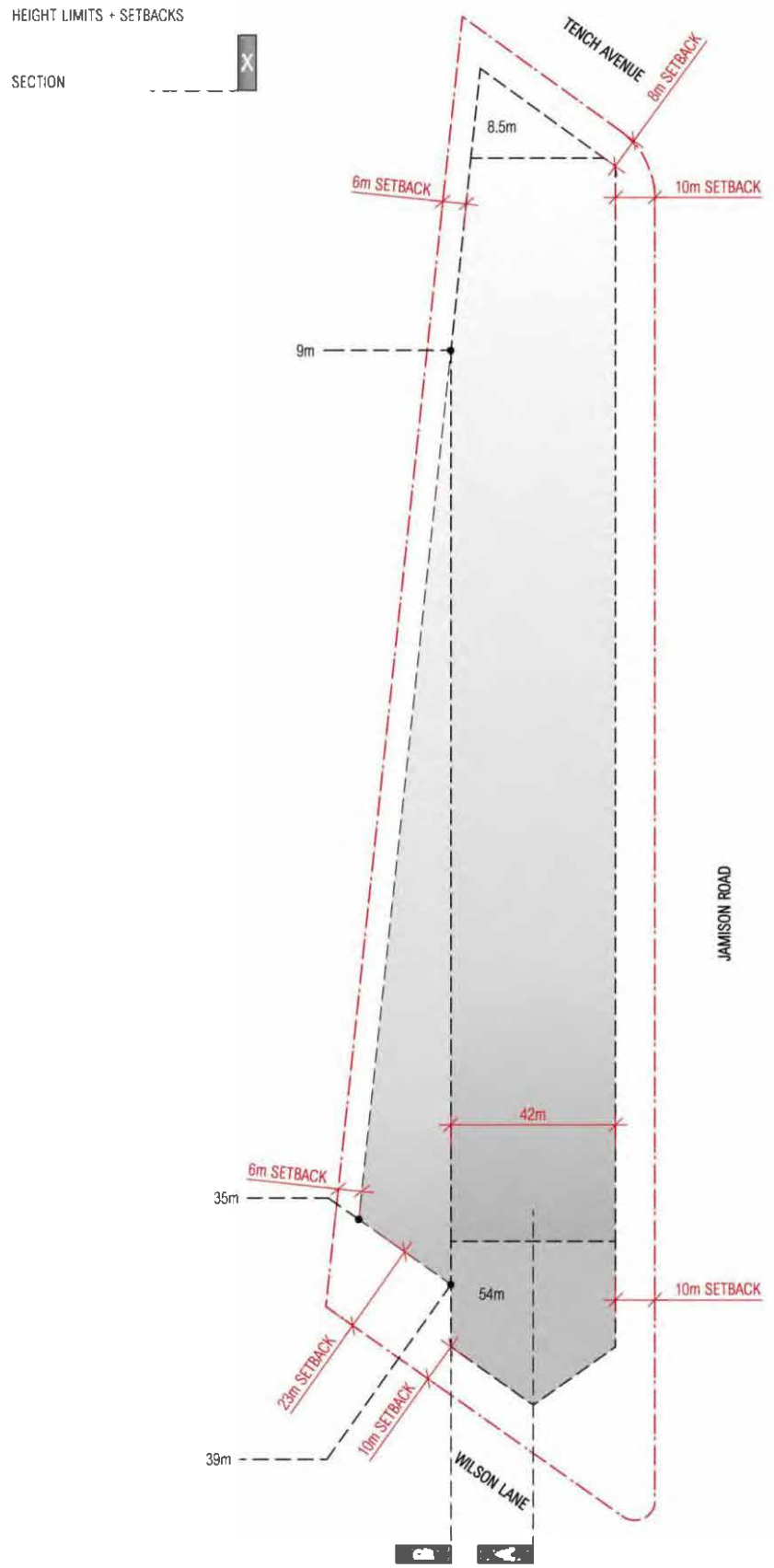
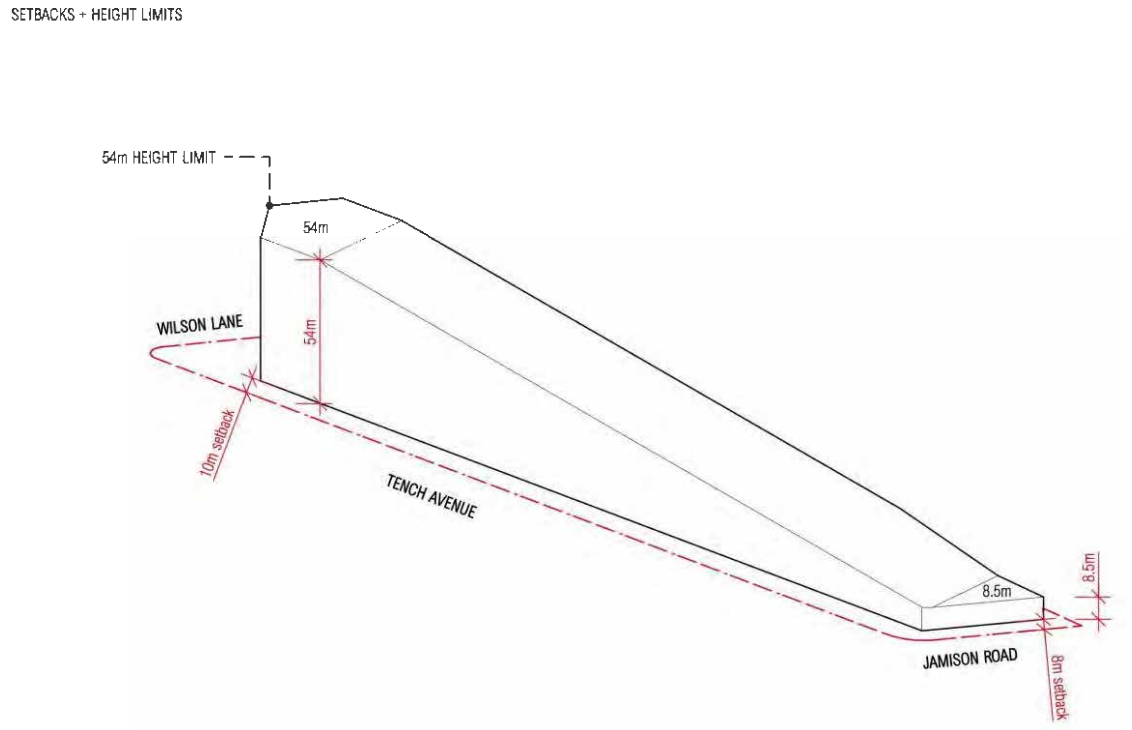


Figure 11: Indicative Building Envelope – Height limits and setbacks



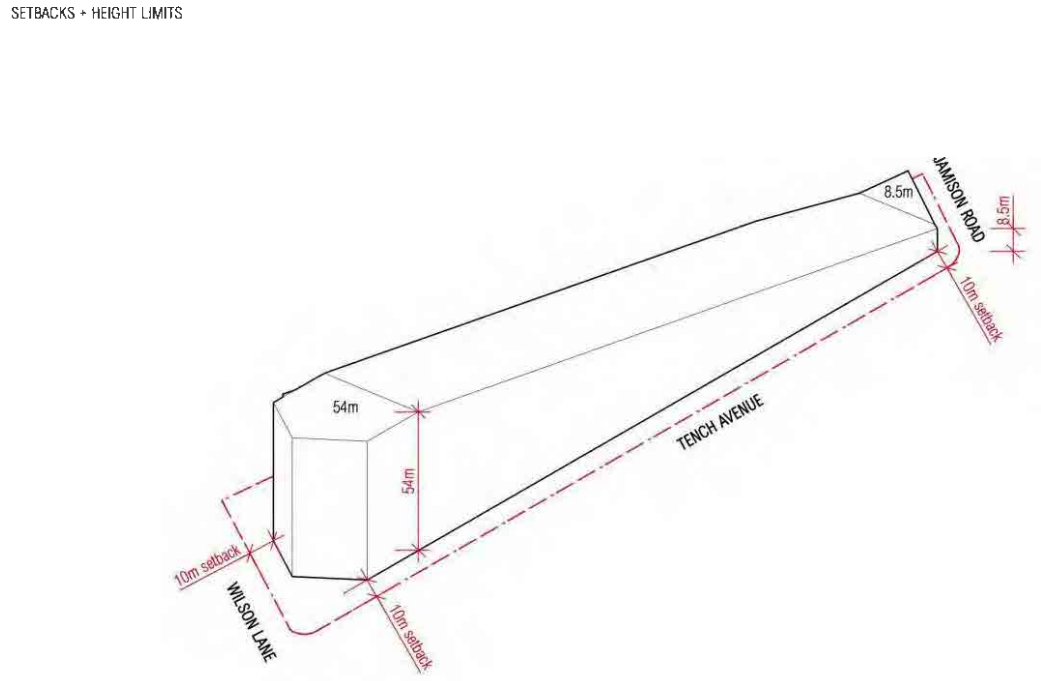
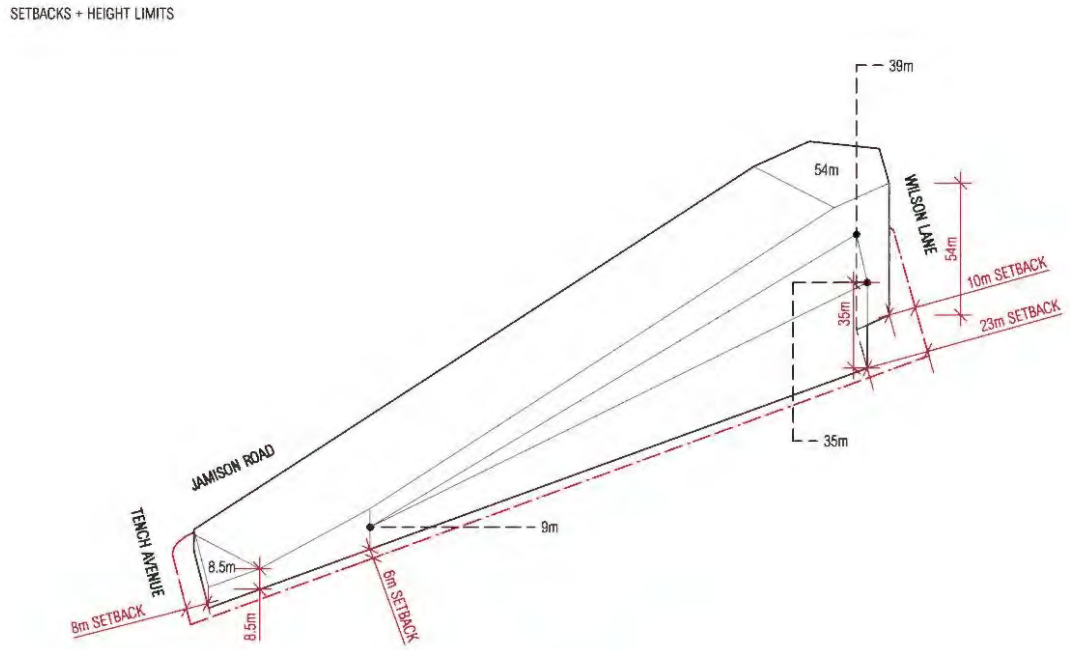


Figure 12: Building Envelope – Height limits and setbacks



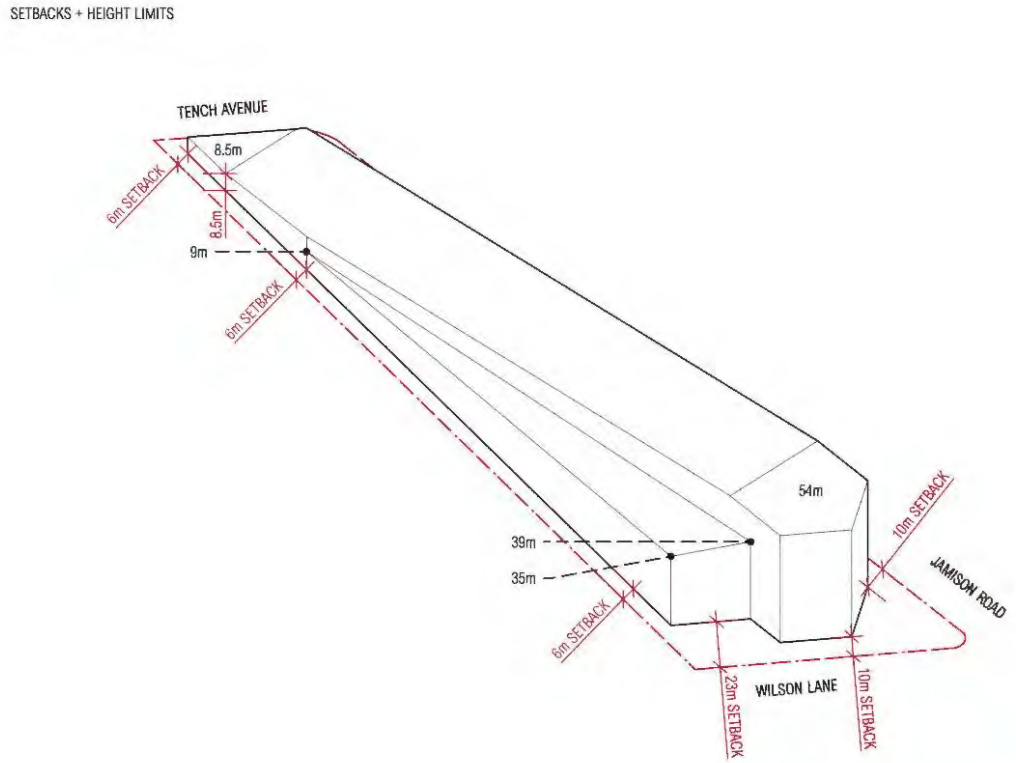
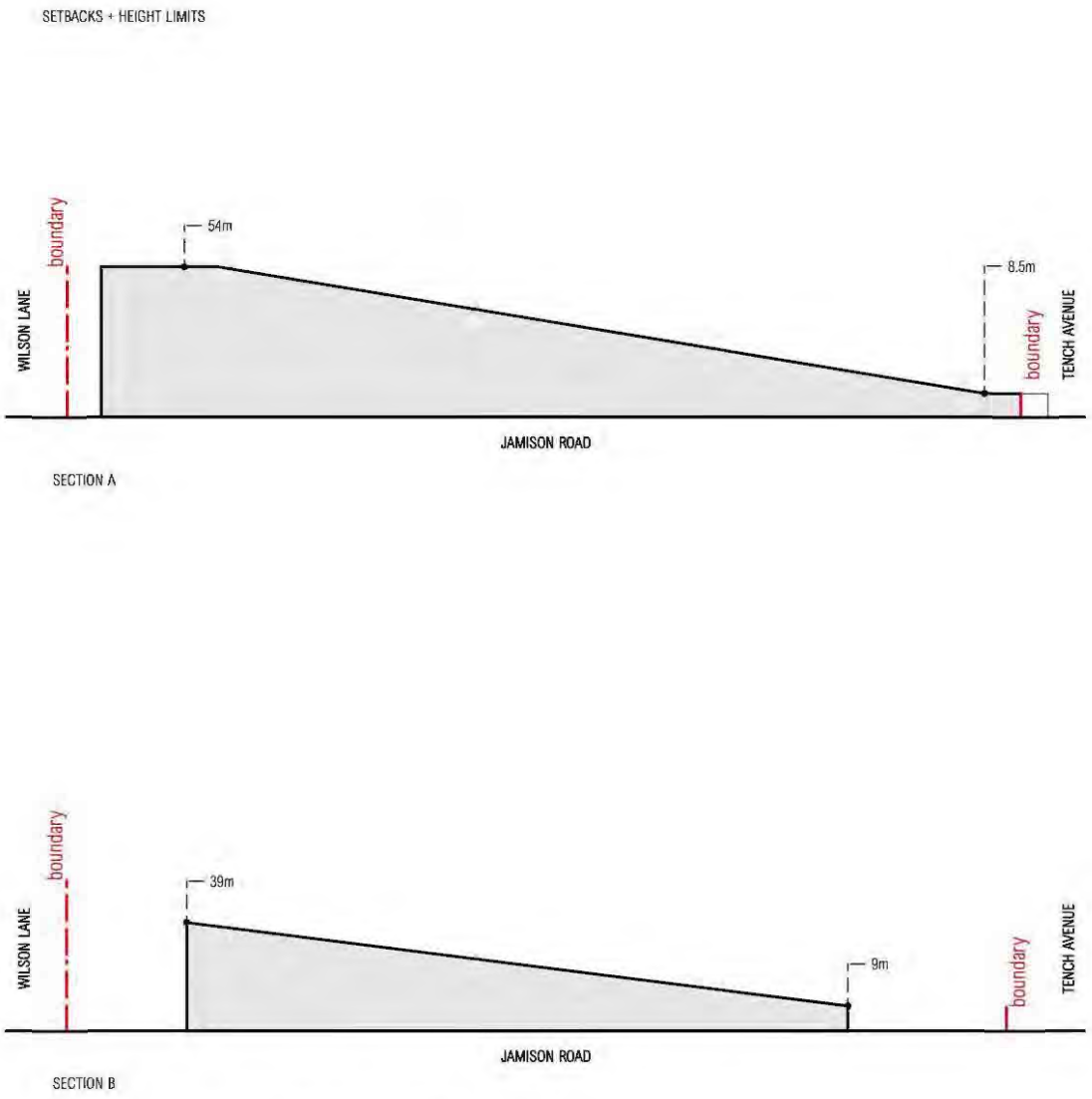


Figure 13: Sections – Height limits and setbacks



5.2.2 Building design and articulation

Background

The future development will be designed to be a landmark building for the area due to its height and unique shape. A high-quality architectural design is required for the building to ensure that the landmark building provides a positive contribution to the local skyline and attracts visitors to the Riverlink Tourism and Recreation Precinct.

The composition and detailing of the building façade will influence the apparent bulk and scale of the building, the success of the building's relationship with the public domain and the visual impact on the

surrounding properties. The pattern or rhythm established by the proportions of the façade, the modulation of the external walls, the design of façade elements and the quality of the materials are therefore all-important considerations.

Objectives

a) To ensure that new development makes a positive contribution to the skyline, streetscape and public domain.

b) To ensure that the building's facades define and enhance the public domain.

c) To create a transition between public and private space.

d) To maintain a usable and pleasant public domain at street level.

e) To ensure that an appropriate architectural treatment is provided at the intersection of Jamison Road and Tench Avenue.

f) To ensure that building elements such as awnings, screens, shading devices, roof structures and service elements are integrated into the overall building form and façade design.

Controls

1. As the building will be visible from vantage points throughout the local area, both the northern and southern sides of the building are to be articulated and modulated to provide visual interest.

2. Long continuous walls are to incorporate design treatments to reduce their visual mass and bulk. Such design treatments may include the use of architectural treatments or elements that serve to provide building articulation and modulation, the inclusion of greenwalls and the use of a variety of high quality external colours and materials.

3. The intersection of Jamison Road and Tench Avenue is identified as a Gateway Location in the Riverlink Tourism and Recreation Precinct section of this Chapter. The building is to respond to the Gateway Location of the site by:

    i. Incorporating an active frontage to Tench Avenue (as required by the Riverlink Active Street Frontages section of this Chapter).

ii. Providing pedestrian access to the building from Tench Avenue. The building entry point is to be clearly visible from the street and enhanced as appropriate with awnings, building signage or high-quality architectural features that improve the clarity of a building's address and contribute to visitor and occupant safety and amenity.

iii. Delivering high quality building facades complemented by a landscape design that enlivens the public domain and contribute to a strong sense of arrival.

4. A range of high quality, attractive and durable materials are to be used. A detailed schedule of external colours and finishes and photomontages are to be submitted with the development application.

5. Building services such as roof plant and parking ventilation are to be coordinated and integrated with the overall façade and building design and screened from view.

6. Ventilation louvres and car park entry doors are to be coordinated with the overall façade design.

7. The building and landscaping design is to incorporate the strategies outlined in the Penrith Council Cooling the City Strategy. The Statement of Environmental Effects is to detail how the development is consistent with the strategies outlined in the Penrith Council Cooling the City Strategy.

5.2.3 Landscape and public domain design

Objectives

a) To ensure landscaping is integrated into the design of the development.

b) To provide landscaped areas and deep soil zones within the site and maintain mature/significant vegetation where possible.

c) To ensure that the use of potable water for landscaping irrigation is minimised.

d) To ensure landscaping is compatible with the flood constraints of the site.

Controls

1. A detailed Landscape Plan and Public Domain Plan prepared by a suitably qualified professional is to be submitted with the development application.

2. The Landscape Plan must address, and be consistent with, the requirements of the Landscape Design section within the Environmental Management Chapter of the Penrith DCP.

3. The Landscape Plan and Public Domain Plan must include details of the landscape treatment of the public domain between the site and the adjacent roads/lane. Cross-sections are required to be submitted to detail verge widths, footpath locations and space for tree plantings.

4. The public domain design must improve accessibility to the site by foot, bike and public transport by providing appropriate connections to the existing shared path on the northern side of Jamison Road and the bus stop on Tench Avenue.

5. A minimum setback of 6 metres is required to the southern boundary at ground level. The existing mature vegetation along the southern boundary is to be retained where possible and enhanced.

6. Landscaping is to be integrated in the setbacks of the development to Tench Avenue and Jamison Road to provide an attractive edge and shade to the footpath, and to screen and soften the bulk and scale of the façade.

7. The building's setback to the southern boundary, Jamison Road and Tench Avenue is to be a deep soil zone, except where pedestrian pathways and vehicular crossings are required.

8. Consideration should be given to including green walls into the façade design.

9. Recycled water should be used to irrigate landscaped areas. Details are to be submitted with the development application.

10. The development application should address the development's consistency with the Greener Places Design Guide Framework.

11. An urban tree canopy of at least 25% should be achieved in accordance with the Draft Greener Places Design Guide prepared by the Government Architect New South Wales.

12. Details of any proposed landscaping shall be included in a Flood Impact Assessment.

5.3 Views and visual impact

The Penrith LEP 2010 permits a maximum building height of 54 metres for the development. The future development of the site will be a local landmark and visible from vantage points in Penrith and outside the area.

To ensure that view corridors to and from Penrith and the Blue Mountains are not adversely impacted by the development, and to ensure the development has a positive impact on the local skyline, a high standard of architectural design is required.

Objective

a) To ensure the building provides a positive contribution to the local skyline and reinforces view corridors to the Blue Mountains.

Controls

1. The form and detailing of the building should create a visually interesting and attractive façade when viewed from the surrounding public domain and from a distance.

2. The building is to be setback from Jamison Road in accordance with the setbacks specified in the Indicative Building Envelope section of this Chapter to ensure the view corridor along Jamison Road to the Blue Mountains is maintained and to minimize the visual dominance of the building on the view corridor.

3. Landscaping is to be provided in the building's setback to Jamison Road to soften the view corridor to the west from Jamison Road and to contribute to the landscaped, open character of the Precinct.

4. The building is to be setback from Tench Avenue in accordance with the setbacks specified in the Indicative Building Envelope section of this Chapter to provide a consistent landscaped setback along Tench Avenue and ensure that views along Tench Avenue are not adversely impacted by the building.

5. The western façade of the building is to have a maximum height of 8.5 metres to provide consistency in the height of development adjacent to Tench Avenue and to provide an appropriate transition in scale from the foreshore park to the highest point of the building.

6. A Visual Impact Assessment (VIA) is to be submitted with the development application. The VIA is to be prepared in accordance with the relevant NSW Land and Environment Court Planning Principles. All photographs and observations should be made by a suitably qualified expert.

7. Photomontages showing the building from the key vantage points identified in Figure 14 are to be submitted to show how the building will reinforce and enhance significant vistas and view corridors.

Figure 14: Vantage point locations for photomontages



VANTAGE POINTS:
01. From the M4 Bridge
02. Yandhai Nepean Crossing
03. The Blue Mountains escarpment
04. Mt Portal lookout
05. Regatta Park
06. Lewers Gallery (Heritage Item)
07. Corner Jamison Rd and Mulgoa Rd
08. Corner Jamison Rd and Harris St
09. Corner Jamison Rd and Racecourse Rd
10. Corner Jamison Rd and York Rd
11. Corner Jamison Rd and Blakie Rd
12. Corner Jamison Rd and Wilson Ln
13. Madang Park
14. River Rd
15. Tench Avenue

5.4 Sustainability

5.4.1 Environmental performance

Ecologically sustainable development principles are to be applied in the design, construction and ongoing operation of the development to minimise the use of non-renewable resources.

Objectives

a) To apply principles and processes that contribute to ecologically sustainable development (ESD).

b) Minimise the impacts of the development on the environment.

c) Minimise the use of potable water and encourage water re-use.

d) To minimise non-renewable energy consumption in the construction and use of the building.

e) Consider the use of sustainable materials and building components.

Controls

Thermal Efficiency

1. The thermal performance of the building is to be optimised by using building materials and insulation that maximise the thermal efficiency of the building.

2. No direct external glazing to external walls to be provided from the snow and ice areas.

3. The areas of the building that accommodate uses reliant on snow and ice are to be sealed to reduce energy consumption in temperature regulation and to slow the decline of snow and ice quality.

Energy Efficiency

4. Development is to be designed and constructed to reduce the need for active heating and cooling by incorporating passive design measures including design, location and thermal properties of glazing, natural ventilation, appropriate use of thermal mass and external shading.

5. A renewable energy source is to be provided for the building, such as a Photovoltaic Solar System, that contributes to making electricity for the uses of the building.

6. Where possible heat removed from the snow and ice areas is to be captured and re-used.

7. Car parking areas are to include electric vehicle charging points.

8. Where possible, the responsible sourcing of construction and fit out materials are to be used, including recycled content and recyclable materials.

Water Efficiency

9. The following water saving measures are to be incorporated into the development:

    i. Where possible recycled or harvested rainwater is to be used for water use in the building and watering new gardens and landscape features.

    ii. Snow and ice scraped off for cleaning / re-topping is to be placed in a drainage holding area so the ice can be melted, filtered and stored in the main water tank.

    iii. Snow and ice melted from the bottom layer is to be drained and filtered into the main water tank.

    iv. All water fixtures (low flow shower heads and taps, dual flush toilets, low flush/waterless urinals, etc) are to be the highest Water Efficiency Labelling Scheme (WELS) star rating available at the time of development.

    v. Stormwater capture and reuse, including water quality management is to be in accordance with Council's Policy Water Sensitive Urban Design Policy.

    vi. Water efficient plants and / or locally indigenous vegetation are to be used for landscaping.

Requirements for Specific Uses

10. Indoor ski slope: After commissioning the ski slope, the ski slope component of the building shall meet the following criteria:

    i. 100% green energy sourced from the building, or other sources, such that the operations are energy carbon neutral for the making of snow, conditioning and lighting of the space and all internal power requirements.

    ii. 100% of all water required for snow and ice making shall be sourced from the roof and water tanks specially constructed for the purpose.

11. Ice Hockey arena and ice climbing area: After commissioning the ice hockey arena and ice climbing area, this component of the development shall meet the following criteria:

    i. 100% green energy sourced from the building, or other sources, such that the operations are energy carbon neutral for the making of snow, conditioning and lighting of the space and all internal power requirements.

    ii. 100% of all water required for snow and ice making shall be sourced from the roof and water tanks specially constructed for the purpose.

12. Snow centre foyer and reception, hotel and all ancillary retail areas: The snow centre foyer and reception, hotel and all ancillary retail areas shall be designed to achieve the equivalent of a Green Building Council of Australia Green Star 5-star rating.

5.4.2 Reflectivity

Reflective materials used on the exterior of building can result in undesirable glare for pedestrians and potentially hazardous glare for motorists. Reflective materials can also impose additional heat load on other buildings. The excessive use of highly reflective glass should be discouraged. Buildings should be designed to minimise hazardous or uncomfortable glare arising from reflected sunlight.

Objectives

a) To restrict the reflection of sunlight from buildings to surrounding areas and buildings.

b) to encourage the consideration of the use of sustainable materials and building components

Controls

1. Finishes and materials are to be of a low reflectivity. Visible light reflectivity from building materials used on the façades of new buildings should not exceed 20%.

2. New buildings and facades should not result in glare that causes discomfort or threatens safety of pedestrians or drivers.

3. Given the height of the building and proximity of the site to major roads a Reflectivity Report, prepared by a suitably qualified professional, is to be submitted that analyses the potential solar glare from the proposed development on pedestrians and motorists.

5.5 Amenity of surrounding properties

The development of the site will need to be carefully managed to ensure the changing character of the Precinct does not unreasonably impact on the amenity of existing surrounding uses.

The design of the indoor skiing facility should minimise the potential visual, solar, privacy and acoustic impacts on the surrounding properties.

Objectives

a) To maintain a reasonable level of amenity for the surrounding properties.

b) To ensure the shadow cast by the development does not exceed the shadow generated by the permitted building envelope.

c) To ensure that the noise generated by the uses and any associated plant and machinery complies with the relevant standards to protect the amenity of the surrounding properties.

d) To ensure that development will not result in light overspill or glare from artificial illumination.

e) To provide clear and direct pedestrian entrances to the building to avoid unnecessary disturbance to the surrounding properties.

Controls

General

1. A Plan of Management is to be submitted with the development application for the indoor skiing facility to ensure that the development operates with minimal impact on the surrounding properties. The Plan of Management is to include details of:

    i. Hours of operation. Where uses within the development have different hours these hours must be clearly identified.

    ii. Noise control measures including measures to be implemented to minimize the noise impact of visitors entering or leaving the premises between 10pm and 6am.

    iii. Deliveries and rubbish collection and details of measures to be implemented to minimize any impacts on the amenity of the surrounding properties.

    iv. Cleaning and maintenance of the grounds of the future development of this site.

    v. Fire safety and emergency access

    vi. Flood evacuation procedure

    vii. Complaint management

    viii. Safety and security measures including:

        - Perimeter lighting.
        - Surveillance or security cameras.
        - Fencing and secure gates.

Solar Access

2. The development is to comply with the indicative building envelope shown in Part 5.2.1 of this Chapter to limit the extent of shadow cast by the development.

3. The development is not to result in any additional shadowing than is shown on the shadow diagrams that identify the shadow cast by the indicative building envelope. The shadow diagrams are included as Figure 15, Figure 16 and Figure 17.

4. The extent of shadow cast by the development is to be minimized. A design statement is to be submitted that outlines how the shadow cast by the building has been minimized.

5. Shadow diagrams showing the impact of the proposed development at each hour between 9am and 3pm on 21 June are to be submitted with the development application.

Visual and Privacy Impacts

6. The southern elevation must include visual interest through the modulation and articulation of the façade to provide an appropriate outlook from the adjoining property. The southern elevation should incorporate a range of materials to contribute to the visual interest of the façade and consideration should be given to the inclusion of green walls.

7. The setback of the ski slope to the southern boundary should accord with the setbacks shown in Figure 10and Figure 12 in order to limit the visual impact of the building on the properties to the south.

8. The number of windows and openings on the southern elevation is to be minimized in order to maintain a reasonable level of visual privacy to the adjoining properties to the south and prevent light spill. Generally only high-level windows should be provided. Where windows are necessary on the levels below the ski slope, measures to protect the privacy of the adjoining property are to be considered such as high sill windows, translucent glass windows or windows with privacy screens.

9. The overspill from artificial illumination is to be minimised. Indicative nighttime views are to be submitted with the application to demonstrate the extent of nighttime illumination.

Acoustic Impact

10. The developments must comply in all respects with the Protection of the Environment Operations Act 1997, and other relevant legislation.

11. Where possible noise generating plant and machinery are to be located away from noise sensitive uses on the surrounding properties.

12. A Noise Impact Statement is to be submitted with any future development application. The Noise Impact Statement is to be prepared by a qualified acoustic consultant in accordance with the requirements set out in Appendices of Penrith DCP.

Signage

13. Signage for the development is to be integrated into the design of the building.

14. A Signage Strategy must accompany the development application that provides details of all directional and business identification signage required for the development.

15. Signage for the development is to be consistent with provisions within the Advertising and Signage Chapter of Penrith DCP.

DRAFT

Figure 15: Shadow diagrams generated by the indicative building envelope showing maximum extent of shadow

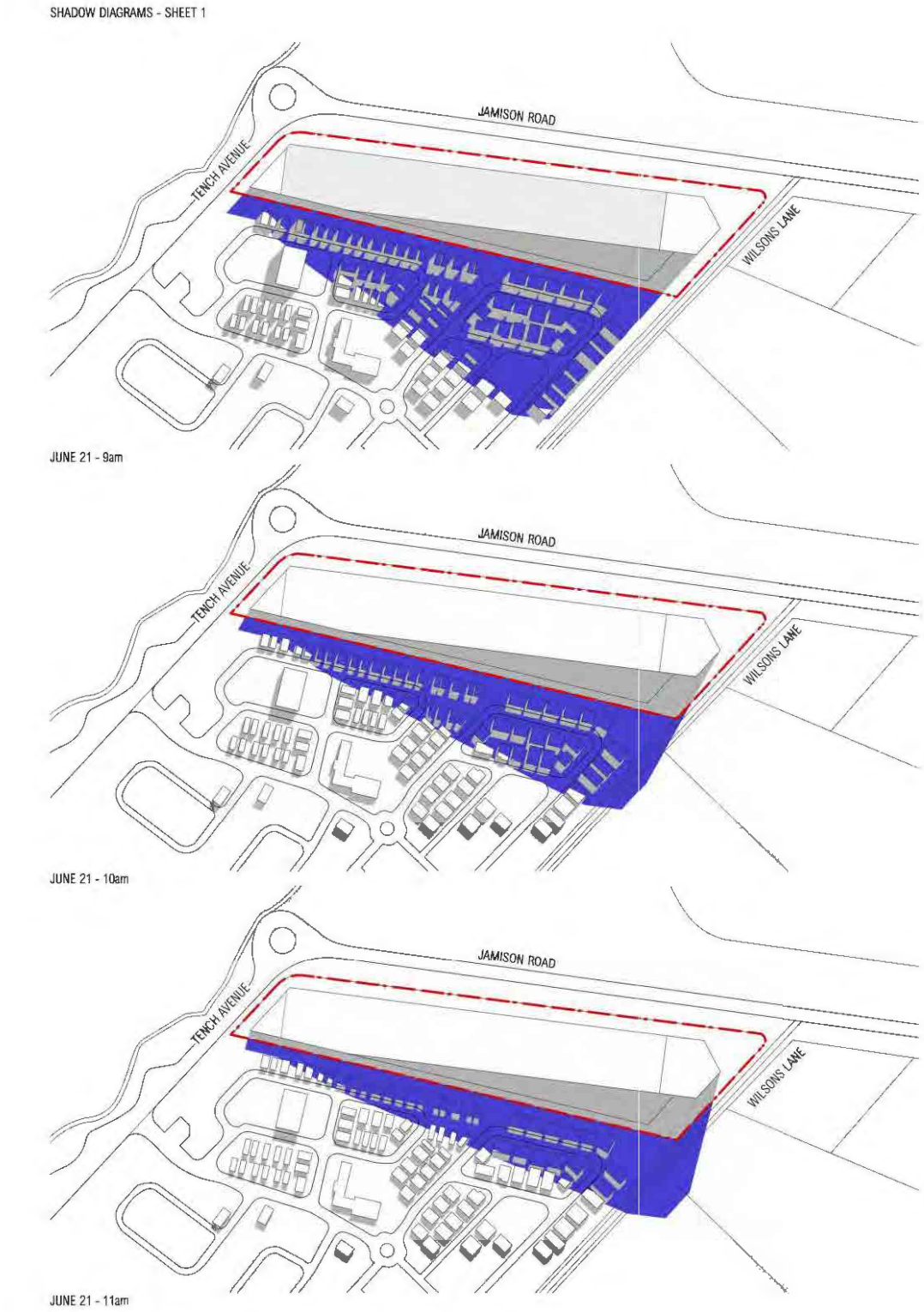


Figure 16:Shadow diagrams generated by the indicative building envelope showing maximum extent of shadow

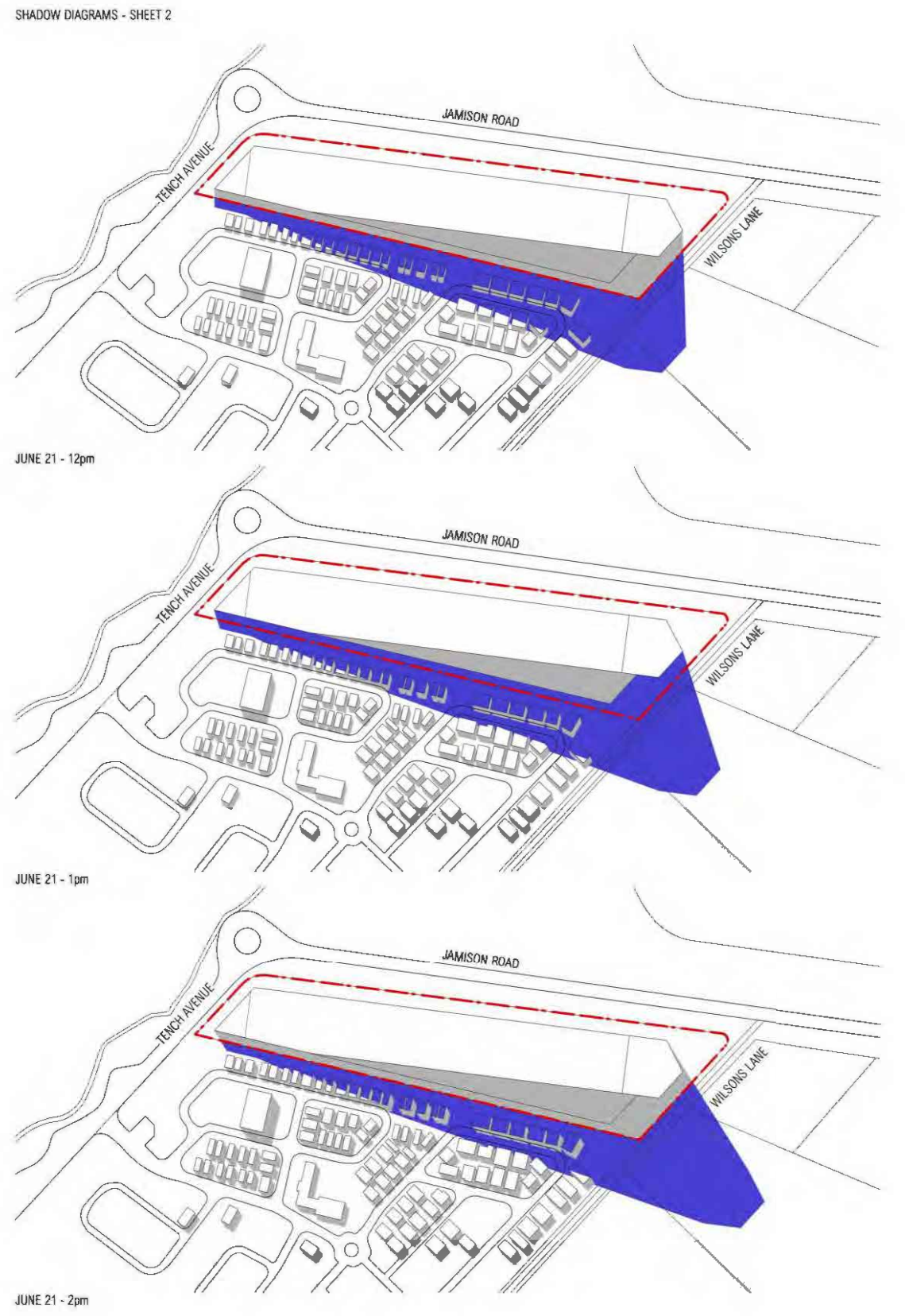
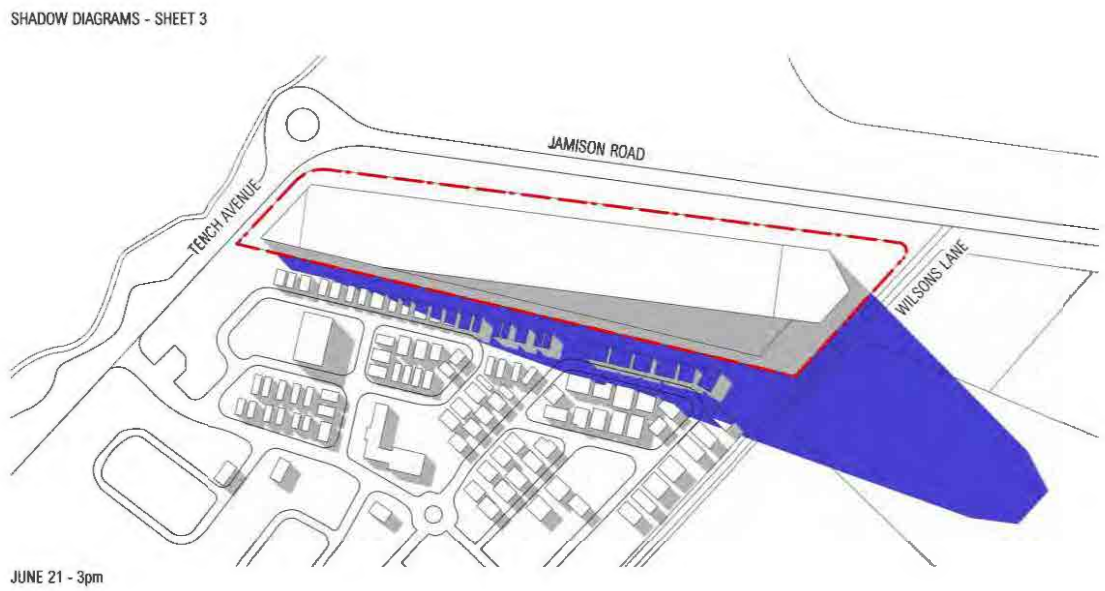


Figure 17: Shadow diagrams generated by the indicative building envelope showing maximum extent of shadow



5.6 Traffic, parking and site access

The future development on this site will accommodate a unique combination of uses. The traffic generation and parking needs will therefore differ from traditional single use sites and require site-specific responses and treatments.

Objectives

a) To ensure that adequate car, motorcycle and bus parking is provided on site for staff and visitors.

b) To ensure that driveways and parking structures do not dominate the public domain.

c) To integrate adequate car parking and servicing access without compromising street character, landscape or pedestrian amenity and safety.

Controls

Traffic and Access

1. A Travel / Transport Plan is to be submitted with the development application and is to contain a range of measures to promote and maximise the use of more sustainable modes of travel to and from the site.

2. A Traffic Report is to be submitted with the development application for the development. The Traffic Report is to be prepared in accordance with the requirements set out in Appendices of Penrith DCP.

3. The Traffic Report is to assess the impact of the development on the efficiency of the local road network and the performance of intersections.

4. The intersection of Jamison Road / Blaikie Road is to be upgraded in the form of an urban Channelised Right Turn treatment (CHR) to accommodate predicted traffic volumes during the AM and PM peak. The upgraded layout of the Jamison Road intersection with the CHR treatment is shown in Figure 18.

5. Vehicular access to the site is to be provided from Jamison Road or Wilson Lane in the zones shown in Figure 19.

6. All vehicular access to the development is to comply with Australian Standard AS2890.1 and AS2890.2 and accommodate vehicles up to and including a 14.5-metre-long bus/coach.

7. Potential pedestrian/vehicle conflict is to be minimised by:

    i. Limiting the width and number of vehicle access points

    ii. Ensuring clear site lines at pedestrian and vehicle crossings

    iii. Separating pedestrian and vehicular accessways

8. All vehicles must enter and leave the site in a forward direction

Figure 18: Upgraded layout of the Jamison Road and Blaike Road intersection with the CHR treatment



Figure 19: Vehicular access points



Parking

9. Car parking is to be provided at the following minimum rates within Table 1:

Table 1: Car parking rates

Use	Parking requirement
Indoor recreation facility	Visitor: 1 space per 2.5 persons Staff: The staff parking rate shall be confirmed by a survey of a similar site in the Penrith LGA. The parking rate for staff shall be either 1 space per 2 staff or at the rate determined from a survey of a similar site in the Penrith LGA, whichever is the higher rate.
Hotel	Visitor: 1 space per room Manager: 1 space per manager Employees: 1 space per 6 employees
Function centre	Table 2 in the Transport, Access and Parking Chapter of Penrith DCP provides a parking rate for function centres of 1 space per 3.5 seats or 1 space per 3.5sqm of gross floor area, whichever is the greater. Given the people attending large functions would also stay at the hotel and use the indoor recreation facility, the lesser car parking rate should be applied for a function centre that forms part of the development.

10. The Traffic Report is to assess the likely demand for bus, motorcycle and bicycle parking. The development must be designed to accommodate the assessed demand for bus, motorcycle and bicycle parking on the site.

11. All internal car, service vehicle and bus/coach parking facilities are to be designed in accordance with the relevant requirements of Australian Standards AS2890.1, AS2890.2, AS2890.3 and AS2890.6.

12. Bicycle parking and storage facilities shall be designed in accordance with Australian Standard AS2890.3 – Bicycle Parking Facilities.

13. The appearance of car parking and service vehicle entries is to be improved by locating parking, garbage collection, loading and servicing areas away from the street or screening these areas.

14. Structured parking that extends above ground where viewed from the public domain is to be architecturally treated or where possible sleeved with development.

15. The car park shall meet the minimum standards required under Section J of the National Construction Code.

5.7 Flooding and drainage

Background

Flooding and stormwater are major considerations for the development.

A Stormwater Management Strategy (SMS) will minimise the impact on water quality, identify opportunities to maximise the reuse of stormwater runoff, reduce the demand on potable water supplies, reduce pollutants and enhance the landscaping opportunities within the development.

The SMS will be based upon the principles of Water Sensitive Urban Design (WSUD) and will be underpinned by a stormwater harvesting strategy aimed at maximizing the reuse of runoff for non-potable purposes, maintaining the ecological integrity of Peach Tree Creek and the Nepean River and complying with Penrith City Council's water management requirements as set out in the Water Management section within the Environmental Management Chapter of Penrith DCP.

The development will require an appropriate level of flood assessment and will include the need to undertake a detailed Flood Impact assessment. The applicant should recognise that a Flood Impact Assessment was not undertaken in preparation of this Chapter of the Penrith DCP and as such the building footprint may need to be amended or reduced to ensure that any proposed development has no impact on upstream, downstream or adjoining properties when considering pre and post development flows. The assessment will need to include consideration of flood behaviour and hazard, and any mitigation measures required to ameliorate any impacts identified.

Objectives

a) To manage development of the site with respect to its flooding characteristics.

b) To develop the site in accordance with sound flood management principles.

c) To achieve high quality outcomes for water quality and quantity.

d) To provide opportunities for WSUD initiatives.

Controls

1. The development application is to address the relevant sub-sections of the Water Management section within the Environmental Management Chapter of Penrith DCP.

2. Any proposed development must have no adverse impacts on upstream, downstream or adjoining properties when considering pre and post development scenarios for all storms up to and including the 1% AEP.

3. A Stormwater Management Strategy (SMS) is to be prepared and be submitted with the development application and should identify and address:

    i. Impacts of stormwater generated both on and off the site

    ii. Overland flow paths

    iii. Opportunities to maximise the reuse of stormwater runoff

    iv. Means to reduce the demand on potable water supplies

    v. Reductions in pollutants entering the water system.

4. A Flood Study must be prepared in accordance with the Water Management section within the Environmental Management Chapter of Penrith DCP and Councils Stormwater guidelines for Building Developments. The Flood Study must address:

    i. The Low Flood Island and any loss of flood storage and how this is proposed to be mitigated.

    ii. Impacts of the development on the flood.

    iii. The impacts of flooding on the development.

5. Any future Development Application is to be supported by a comprehensive Flood Evacuation Strategy and Emergency Response Plan, that is consistent with the relevant NSW State Emergency Service flood evacuation plan.

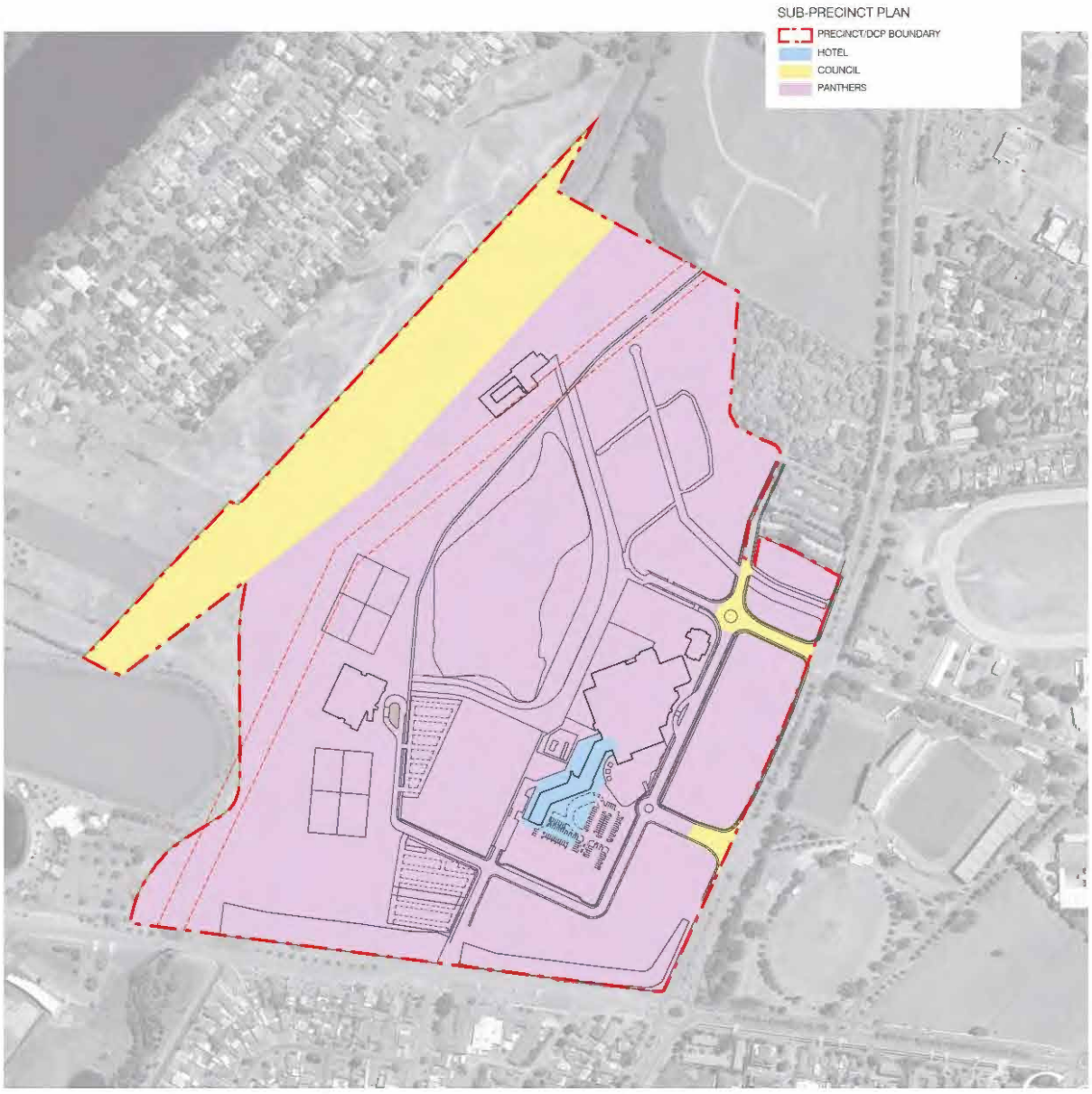
6. Any future Development Application is to be supported by a comprehensive Flood Impact Assessment. The flood impact assessment shall include but not be limited to an assessment of the proposed development and its impacts on upstream and downstream properties. The Development shall be designed to ensure that there are no impacts on upstream, downstream or adjoining properties with regard to increases in depth or velocity comparing pre and post development conditions.

DRAFT

Part B – Panthers Penrith Precinct

6. Panthers Penrith site

Figure 20: Ownership - Panthers Penrith precinct area



Background

This section applies to development on land known as Panthers Penrith Precinct as identified in Figure 20 and Figure 21. This section provides specific controls for Panthers Penrith in addition to the general controls elsewhere in Penrith DCP. Where there is an inconsistency between this section and the rest of Penrith DCP, the requirements of this section prevail.

The Panthers Penrith Precinct is located within a 2km radius of the City Centre and is approximately 68.1ha in area. It is bounded by Mulgoa Road to the east, the Nepean River, Nepean and Ladbury Avenue residences to the west, Council's 'Carpenter's site' to the north and Jamison Road to the south. It includes the Panthers Club and associated lands and facilities.

The agglomeration of land uses, within an entertainment core east of Peachtree Creek that incorporates the existing Panthers Club will be revitalised, as an entertainment, leisure, lifestyle and sporting precinct. Possible uses include cinemas, bowling, restaurants, cafes, limited retail, health, wellness and aquatic facilities, sporting facilities, accommodation, including expanded hotel accommodation, and a multi-use events/exhibition centre to be known as the Western Sydney Conference and Community Centre.

It will be surrounded by a mix of residential offerings and campus style business park accommodation. Recreational opportunities will be enhanced with green parks and open spaces, as well as walking and cycling tracks. The part of the precinct that has been identified for entertainment, retail, business and residential use in the Panthers Penrith Planning Proposal is 51.11ha in area.

The aim of the controls in this section of Penrith DCP is to provide more detailed provisions for development in the Panthers Penrith Precinct that will:

- Contribute to the growth and character of Panthers Penrith Precinct as a cohesive and active entertainment, leisure, lifestyle (including sporting) precinct that will contribute to Penrith as a regional city
- Deliver a balanced social, economic and environmental outcome and
- Protect and enhance the public domain.

Figure 21: The Panthers Penrith Precinct relationship to Penrith City Centre



6.1 Riverlink precinct plan

The Panthers Precinct lies within the area considered in the Penrith Riverlink Precinct Plan (adopted by Council 5 May 2008) – a vision plan for the area on the eastern bank of the Nepean River between the Main Western Railway Line and the M4 Motorway (Figure 22). It includes the area known as Blaikie Road and Tench Avenue, south of Jamison Road and identifies locations and types of future activity nodes, view corridors, key gateway locations and connections for the precinct including the Concept Plan area.

The Riverlink Precinct Plan has the broad goal of creating a living, entertainment and working hub to link the City Centre to the Nepean River. It seeks to create a cohesive and well-connected precinct by:

1. Enhancing and activating Mulgoa Road as a significant approach to Penrith City Centre.

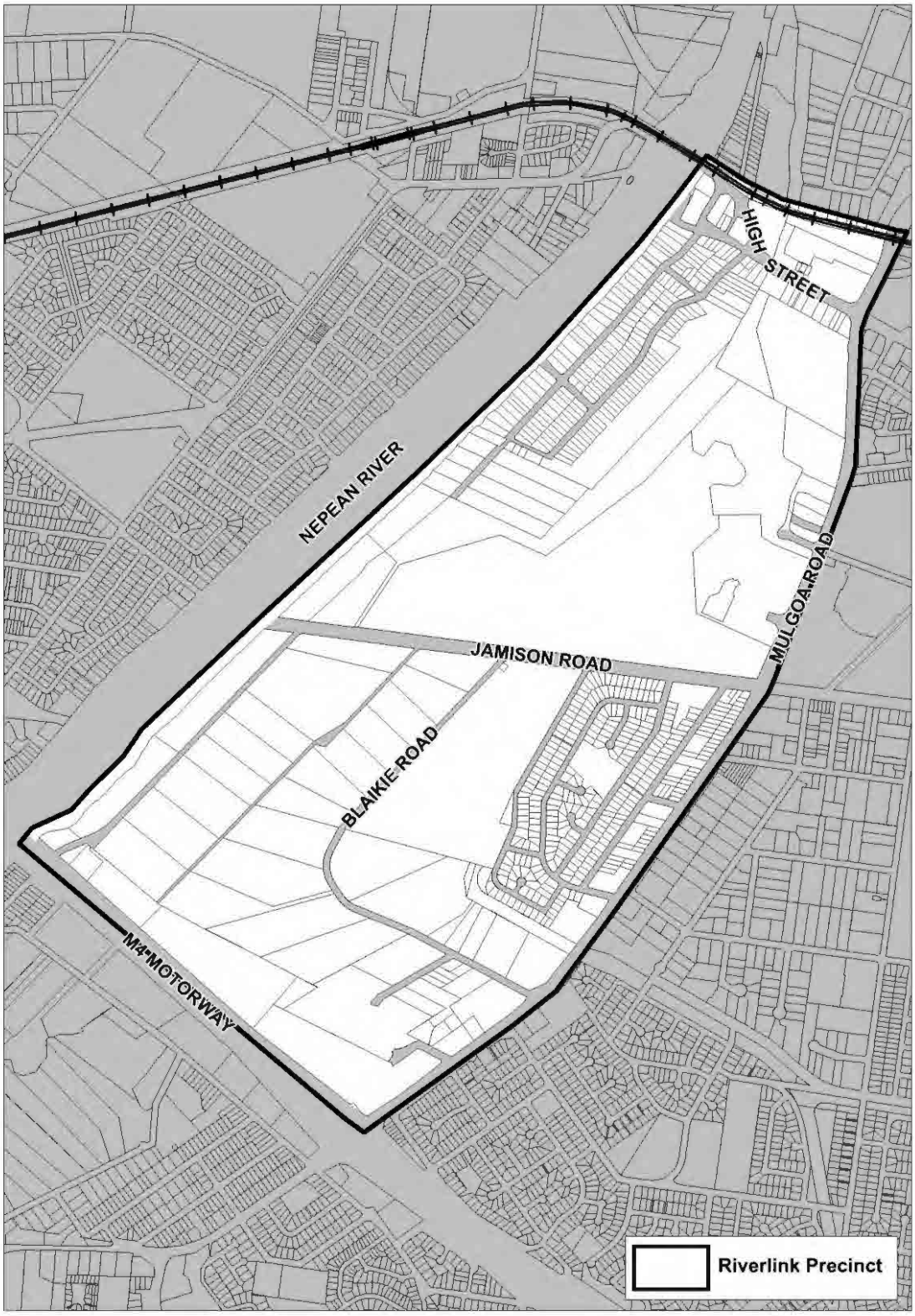
2. Reinforcing key intersections as gateways to the Precinct and the Penrith City Centre.

3. Creating a clear and legible public domain framework of streets and open space.

4. Creating an exciting core of entertainment, leisure and lifestyle uses around the existing club.
5. Incorporating sustainability best practice.
6. Connecting Riverlink pathways with the Great River Walk.
7. Encouraging views of the Blue Mountains from the public domain.
8. Encouraging design excellence.
9. Improving connectivity through the Precinct.
10. Enhancing Peachtree Creek with the planting of indigenous riparian vegetation.

DRAFT

Figure 22: The Riverlink precinct



7. Panthers Penrith precinct vision

Figure 23: Panthers Penrith Illustrative Concept Plan showing indicative land uses





Entertainment Uses



Retail



Multi Use Facility



Commercial Uses



Cafes and Restaurants



Medium density housing

The Panthers Penrith vision is to create a vibrant entertainment, leisure, lifestyle and sporting precinct that offers a range of activities to attract a diverse mix of locals and intrastate, interstate and international visitors.

Panthers Penrith Precinct will be a dynamic and sustainable place, providing a new workplace, day and night-time entertainment, a new and different shopping experience, food and beverage opportunities, conferencing and accommodation. It will be linked to the Penrith City Centre by public transport, pedestrian and cycle pathways.

In addition to building on the Panthers Penrith Precinct as a core entertainment, leisure and lifestyle offer for the region, the plan aims to provide open space and access that will benefit the wider community and to contribute to Penrith's role as a regional city. The illustrative plan developed for the precinct (Figure 23) shows the proposed concept with the anticipated building footprint.

The Panthers Penrith Precinct will enable better integration with and connection to neighbouring lands and will facilitate improved management of precinct-wide issues such as flooding and also facilitate the future road widening of Mulgoa Road and a suitable landscape setting to the new road alignment. The regionally important Riverlink will be incorporated into the structure, providing a key missing pedestrian and cycle connection between the Nepean River and the city centre. In addition, the needs of adjoining sites have been taken into account.

The Panthers Penrith Precinct is to be a pedestrian oriented, quality-landscaped and urban public domain with equitable access throughout the precinct for pedestrians, public transport, cyclists and cars. The new landscaped public domain is to improve amenity for workers and residents of the nearby areas in addition to providing convenient and logical internal linkages.

Precinct objectives

a) To facilitate the development of the place by promoting redevelopment and urban sustainability.

b) To promote quality urban design, architectural excellence and environmental sustainability in the planning, development and management of the place.

c) To create a high quality public domain and ensure development integrates and relates to the public domain.

d) To provide for mixed use development (entertainment, limited retail, hotel, campus style office development, residential, seniors living, multi-use events /exhibition and conference facility/community centre.) which provide high levels of amenity for occupants and visitors.

e) To provide high levels of accessibility within Panthers Penrith, connecting significant activity nodes, public open space and surrounding residential and mixed use areas.

f) To encourage development within Panthers Penrith that gives primacy to the public domain and creates an attractive and vibrant centre.

g) To encourage integration of the existing Panthers Club with residential and non-residential land uses and improved access to transport facilities.

h) To ensure that development at Panthers Penrith is consistent with the desired future character of the precinct and sub-precincts as described in the following section.

i) To provide clear connectivity through the site and to the surrounding neighbourhood and to enable suitable address and presentation to Mulgoa Road after proposed road widening.

j) To ensure that view corridors are maintained to the lake and Blue Mountains escarpment.

k) To provide the framework to facilitate and encourage the use of public transport, safe pedestrian and cycle movement and vehicular movement.

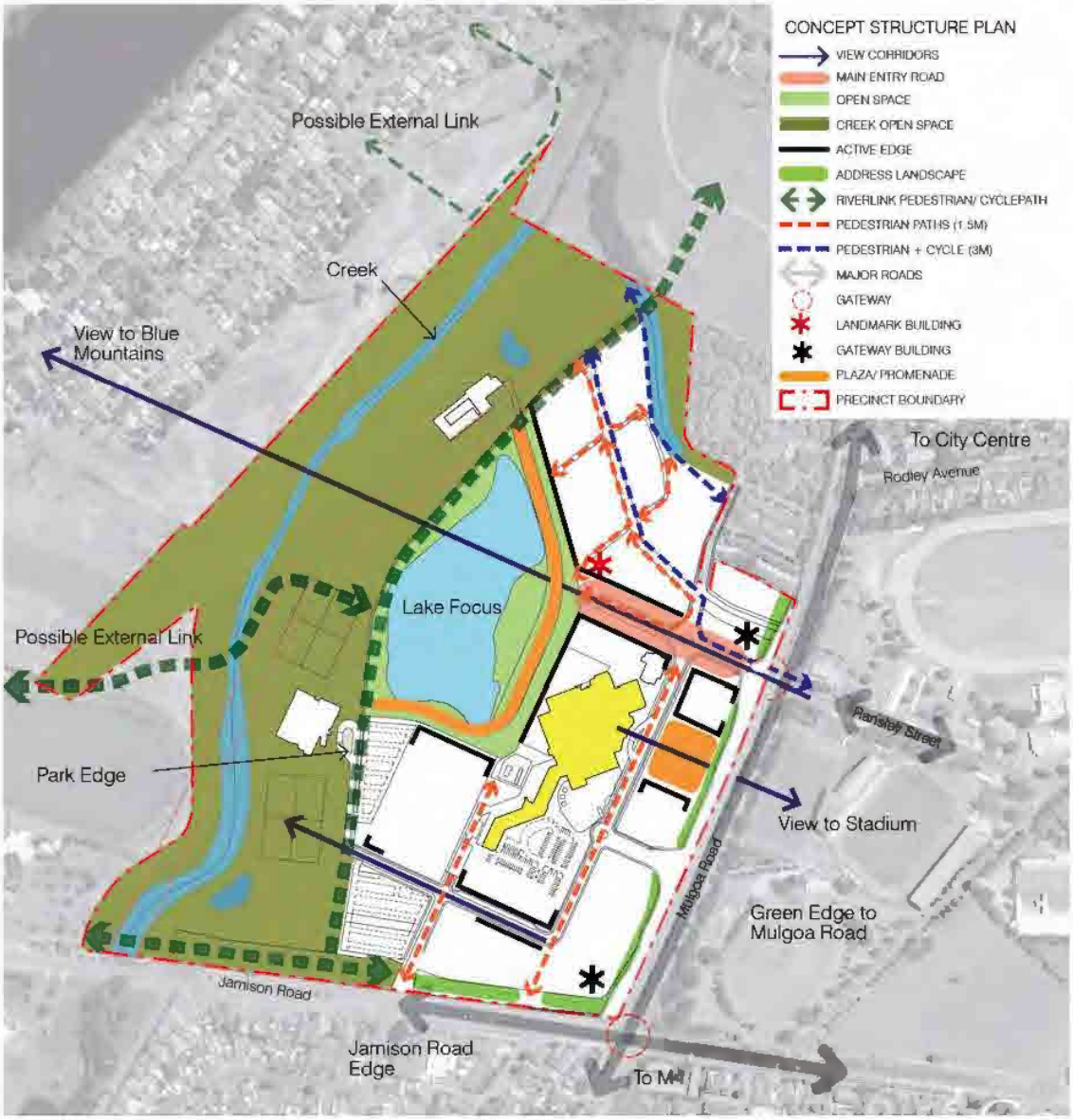
l) To create a sensitive buffer between the development within the precinct and neighbouring properties, where required.

m) To maximise opportunities for pedestrian activities around the lake at the centre of the precinct to create an active promenade and waterside edge and allow for lakeside circulation.

8. Urban framework

8.1 Structure plan

Figure 24: Panthers Penrith Structure Plan



Background

A new public domain defined by streets and blocks and interface between buildings and the lakeside will create new site connectivity, links to existing surrounding areas and safe and legible access for pedestrians, cyclists, public transport, cars, trucks and service vehicles.

The Structure Plan is based around the creation of a new integrated street network that will be designed to Penrith Council standards. Cycle paths will

be provided in appropriate locations in the open space network. The creek open space corridor will be activated by the construction of a new road along the western edge of the site known as the Riverlink.

The plan has been developed to accommodate a range of flexible uses within a new framework of roads and open space opportunities. It allows for a variety of complementary uses to be developed on the site over the next 20 years.

The landscaped public domain will improve amenity for workers, visitors, patrons and residents of the nearby areas in addition to providing convenient and clear internal linkages. Key links through the site will acknowledge views to the Blue Mountains and connections to the River.

Objectives

a) To create a new entertainment, leisure, lifestyle (including sporting) and residential precinct that contributes to Penrith's role as a regional city.

b) To create a well-defined and accessible public domain that is connected to the CBD, river and recreation system.

c) To achieve active street frontages with good physical and visual connections between buildings and the street.

d) To provide for pedestrian comfort, amenity and protection from weather conditions.

e) To provide for quality landscape to contribute to user amenity and a sustainable urban environment.

f) To maintain and enhance important views to surrounding natural landscape features, including the lake and the Blue Mountains.

g) To establish the scale, dimensions, form and separation of buildings appropriate for the setting.

h) To develop a built form and density that reflects the location and proximity to the city centre.

i) To protect and enhance the amenity of residents in the vicinity of the development.

j) To create an active and well defined lake's edge that is accessible and provides a central focal point for the site.

Controls

1. Future development is to be consistent with Figure 24 and is to:

    i. Develop a public domain based on the lake's edge, new streets and blocks.

    ii. Extend key streets from the existing network.

    iii. Facilitate access to the Peachtree Creek corridor.

    iv. Create view corridors that open views to the Blue Mountains.

    v. Focus activity around the lake's edge and Ransley Street.

    vi. Create a high quality address to Mulgoa Road having regard to the new road alignment proposed by Transport for NSW.

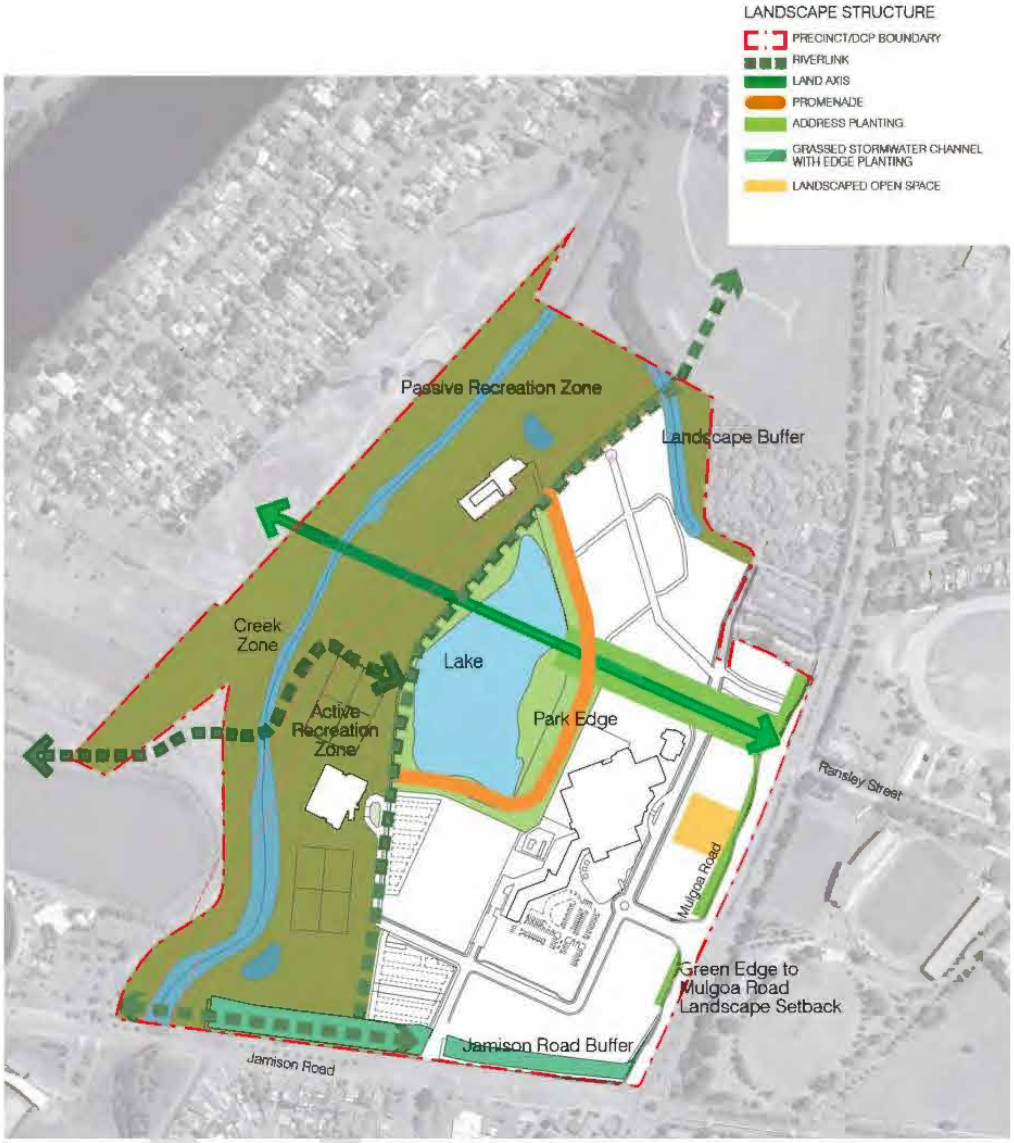
    vii. Develop high quality buildings that in particular respond to gateway locations.

    viii. Create new pedestrian and cyclist links along the Riverlink corridor.

DRAFT

8.2 Landscape structure

Figure 25: Landscape structure



Background

The plan seeks to create a vibrant new destination with integrated public domain, streetscapes, built form and sophisticated coordinated range of finishes, furniture, lighting, street trees and landscaping. Water Sensitive Urban Design (WSUD) features, signage systems, canopies and other public domain elements will add to the detailed resolution of the public domain.

The Landscape Structure seeks to integrate the natural and civic areas of the site through strong landscape links from the riparian areas back along the tree lined roadways to the Mulgoa Road frontage. Proposed landscape components and strategies that underpin the Landscape Structure include:

- Enhancement of the linear north-south open space and riparian corridor that links Penrith and the Riverlink Precinct Plan structure of pedestrian and cycleway connectivity, and strong integration of the surrounding area with the Panthers precinct.
- Reinforcing the central lake as a focal landscape element, and creating an active lakeside that provides a high level of amenity within the precinct.
- Create a civic identity through a parkland and playing fields area that extends west of the lake to integrate and transition between the developed eastern portion of the site, and the open space and riparian zone to the west of the site.
- Acknowledgement of and a response to the site flooding events through landscape, environmental, engineering, built form and site management elements.
- Framing western views to the mountains.
- Creation of shade in summer and solar access in winter to key public spaces.
- Provision of a landscaped interface with Mulgoa Road that recognises the road widening and new road alignment.
- The creation of defined site entries that integrate with new public domain areas and open spaces to the north, south and west.
- Development of an interesting and culturally engaging component to connect to the Great River Walk along the Nepean River.
- Create a landscaped precinct that integrates with the precinct's surrounds.
- The detail design response of all landscape areas is to be the subject of on-going consultation with Council in order to develop a specific Panthers precinct identity and landscape character, while also referencing the existing open space and urban design palette of Penrith.

Objectives

a) To ensure landscaping is integrated into the design of the precinct and development sites.

b) To ensure landscape design is flood compatible so that works proposed improve safety and do not adversely flood impact others.

c) To reinforce and enhance the entries and gateways to the precinct from Mulgoa and Jamison Roads.

d) To create well designed active and passive recreation areas, open spaces, and lakeside promenade.

e) To create a well-defined high amenity and active lakefront.

f) To ensure that landscape contributes to the amenity of streets, including shade, particularly to the active streets.

g) To maintain select view corridors to the mountains and the lake.

h) To reinforce the city's ecology and biodiversity by using appropriate species for the area.

i) To improve urban air quality.

j) To ensure that the use of potable water for landscaping irrigation is minimised.

k) To incorporate WSUD principles and contribute to the reduction of stormwater runoff.

l) To improve the microclimate within the development.

Controls

General

1. A detailed landscape/public domain design is to be submitted with a development application. In addition to this section refer to the Landscape Design section within the Environmental Management Chapter of Penrith DCP.

2. The landscape treatment of precincts within the site is to be developed based on the following controls for open space uses, landscape character and the Landscape Principles for the precinct. Remnant vegetation and riparian areas in the precinct are to be protected and enhanced where possible.

3. Any significant stands of mature trees are to be assessed and where possible, are to be retained.

4. The vegetation within the area identified as "Landscape Buffer" on Figure 25 is to be retained.

5. Water management principles are to be incorporated as per the Water Management section within the Environmental Management Chapter of Penrith DCP.

Street Design

6. Verge planting is to be provided in local streets and full width paving in pedestrian areas with high activity.

7. New streets in the precinct are to have a strong landscape character with planting of trees consistent with Council policy. East-west street trees are to be predominantly native and north-south streets deciduous.

8. The street detailing, furniture, lighting and finishes are to be developed to respond to the specific character of the Panthers precinct and its sub-precincts and are to complement the design palette in Penrith Public Domain Technical Manual.

Lake Edge

9. The lake edge is to be developed as a pedestrian promenade that links the retail, commercial and residential precinct to the north, club and club expansion to the east, and multi-purpose facility to the south. The promenade will become a key focus for activity in the precinct and will allow for adjacent land uses to 'spill out' to the lake frontages.

10. The lake edge treatments will appropriately include trees, shade structures, seating and other amenity elements that will encourage gathering and active uses at the water edge. The design is to vary to respond to the adjoining conditions including roadways, the promenade, passive and active recreational areas, development zones and the parkland interfaces:

    i. Western edge - predominantly a soft landscape interface with easy transition of slopes back to the adjoining Riverlink pathway and open space areas. The edge provides a future north-south link through the precinct.

ii. Eastern and northern edge – a formalised promenade edge to the lakeside that will be the primary focal point of the site, drawing activity from the various uses across the eastern portion of the site.

iii. Southern edge – An edge defined by the multi-use facility that allows interaction with the waterfront.

11. Views of mountains and access to the water are to be key elements in the landscape/public domain design.

12. The promenade and lake edge is to provide sufficient area to accommodate a range of uses such as festivals, markets, passive and active recreation and interaction with the lake.

13. The lakefront open space and promenade will accommodate spill over from any multi use facility to the south and multi-use development to the north. Open space and promenade areas are to integrate food, beverage and outdoor dining and recreational opportunities provided by the club expansion and future multi-use (retail and residential) development at the eastern and northern edges of the lake.

14. Provide pedestrian connectivity from the active eastern part of the precinct to the western edge of the lake.

Ransley Street

15. The Ransley Street character is to be designed as the main entry to the precinct. It is to be lined with active land uses, and lead to the active promenade at the lake frontage.

16. Wide pavements are to be provided to allow for active adjacent land uses. In particular the southern side is to allow for generous pedestrian circulation and outdoor eating areas. These pavement areas will connect to a lakefront promenade and to parkland to the west and are to be suitable for active uses.

17. The view corridor is to be maintained along the street to the mountains.

18. Provide a focal point at the end of Ransley Street to draw visitors to the lake edge and to activate the precinct.

19. A well-designed urban space at the end of the Ransley Street activity zone is to be provided.

20. The street should be characterised by active uses at ground floor level.

Recreational Open Space

21. Detailed design is to allow parkland areas to transition from high amenity and useable trees-in-grass style parkland to more densely vegetated areas with strong riparian character and content.

22. The central visual axis along Ransley Street is to be extended to a visual element across the lake and the parkland.

23. Areas for services and associated uses should not impact on the functionality or amenity of the recreational precinct.

24. Parking areas serving the active recreation areas are to be suitably located and are to incorporate suitable landscaping and tree planting.

25. A plan for the landscape treatment of Peachtree Creek is to be developed by the owners of the creek - Penrith City Council and Panthers Penrith.

26. Any development application in the Recreational Precinct in regards to Peachtree Creek rehabilitation must take into consideration conditions of previous approval for a golf course on the site.

Mulgoa Road Frontage

27. Acknowledging the importance of this major regional roadway, the landscape treatment along Mulgoa Road is to be high quality design and is to be well maintained in the future and any development proposal is to take into account the road widening and new road alignment of Mulgoa Road.

28. A 5m landscape setback along this frontage, relative to the new road alignment, is to continue the nearby character of lawns, grasses and low native planting and retain the existing native canopy trees.

29. Planting is to provide framed and filtered views and exposure to the new buildings along this frontage.

30. Where tree removal is required as a result of widening to Mulgoa Road, in accordance with the Roads Works Planning Agreement, replacement planting shall occur.

Jamison Road Frontage

31. Jamison Road is to provide a transitional landscape character, continuing the Mulgoa Road landscape character with scattered canopy trees east

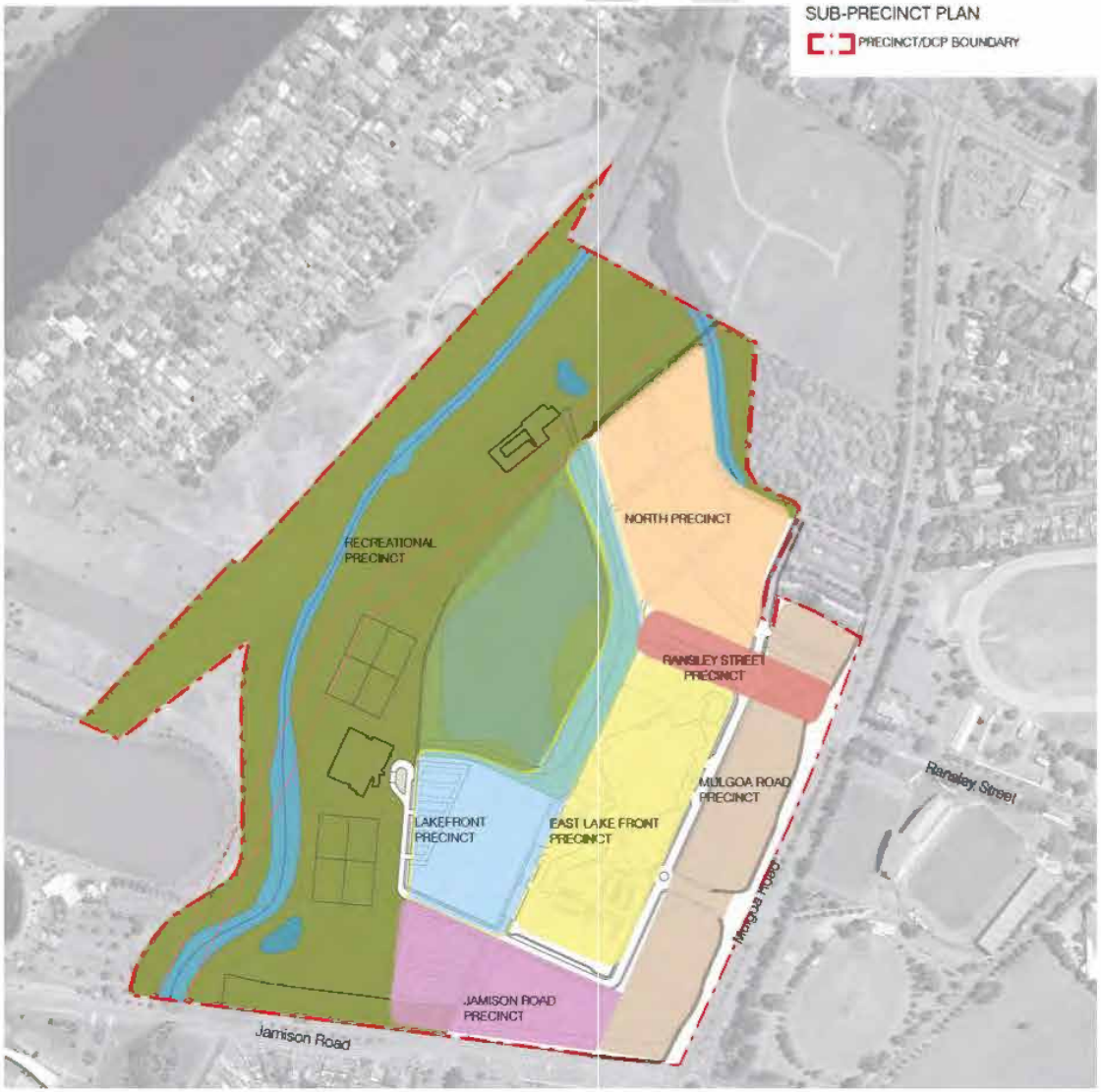
of the new Harris Street intersection, and a more open parkland landscape character to its west.

32. A landscape setback is to accommodate overland flow from land to the east.

33. Landscape east of the overflow at-grade car park along the Jamison Road frontage is to successfully interface with adjoining playing fields and Peachtree Creek open space.

8.3 Sub precincts

Figure 26: Sub precinct



Background

The Panthers Precinct comprises a series of integrated sub precincts, each with a distinctive character and role. The sub precincts are defined by varying uses and built form, which are interconnected through the key focal points, being the lake's edge, Ransley Street and the site's street network. Within each sub precinct there are a wide range of uses possible. These uses are not necessarily limited to a particular sub precinct however development must address the envisaged character of each sub-precinct. It is the mix of these uses that provide a net community benefit to Penrith in delivering an entertainment, leisure, lifestyle and residential precinct.

The following is the envisaged character and range of indicative uses for each sub precinct:

Ransley Street sub precinct

Ransley Street links the main entry from Mulgoa Road west to the Lakefront and Recreation precinct. This sub precinct, centred on Ransley Street will be a pedestrian oriented place, is linked by a range of active uses on both sides at street level.

The Ransley Street alignment and the alignment of buildings on either side provide a vista to the mountains, visible on entry to the Panthers Precinct as well as from Ransley Street to the east of Mulgoa Road. It will be an active street that will become a destination and strong entry to the precinct.

Indicative land uses within this sub precinct include a mix of uses comprising staged retail (limited to 12,500m2 GFA), entertainment and residential uses above. These sites are seen as having active edges that encourage both a vibrant street life and a rich public domain. Cafes, restaurants and ground level retail will generate activity through the day and into the evening as the Precinct becomes a unique urban environment.

Mulgoa Road sub precinct

Mulgoa Road is one of the major entries to Penrith City and therefore the sub precinct fronting it is an important 'front door' and gateway to the city itself.

This frontage is currently characterised by a 'green' landscaped edge to both sides of Mulgoa Road. Mulgoa Road is subject to road widening by the RMS and it is proposed to strengthen this frontage with a well-defined built form that reinforces the landscape setback that is to be established relative to the new road alignment.

While buildings within the Mulgoa Road precinct will not have direct vehicle access off Mulgoa Road, the buildings are to address this frontage, not 'turn their backs' on Mulgoa Road.

Open space between the Club and Mulgoa Road is to enhance the clubs address to the street. This open space is to be defined by a strong built edge to the north and south and will open up the site to its surrounds.

The north-west corner of the Jamison and Mulgoa Road intersection will be highly visible and will require high quality architectural and landscape design.

Indicative land uses include:

- Campus-style office development that is differentiated from, but complements, office space in the Penrith City Centre.
- A mix of uses that attract and sustain a vibrant and active day and night time economy including apartments, hotel, and the Western Sydney Conference and Community Centre.
- Sporting and recreation uses.

Club/Hotel sub precinct

There are existing buildings and facilities associated with the Club and Hotel within this sub precinct.

A key objective of the Panthers Precinct, and reinforced in this sub precinct, is to create a series of connections between this core and its surroundings including east to Mulgoa Road, west to the open space and recreation facilities as well as to the north towards the city.

Future development and/or expansion of the existing Club and existing Hotel should take advantage of views over the lake and towards the Blue Mountains.

It is proposed that new buildings will improve the activation of the public street edges of this precinct including the relationship with new Ransley Street area and the western edge.

Indicative land uses may include:

- Extension to the existing Club.

- Indoor/outdoor dining will be a vibrant and exciting new destination for Penrith.
- Food and beverage outlets and live entertainment venues.
- Hotel uses with synergies with conference and meeting events.
- A mix of uses that attract and sustain a vibrant and active day and night time economy.
- An aquatic centre.

Lakefront sub precinct

This sub precinct sits between the existing club core and recreation and open space area to the west. It is therefore an important linking sub precinct as well as the primary focus for pedestrian activity and active uses that 'spill out' to the lake, and the precinct's open space corridor. The Lakefront should also provide good pedestrian amenity.

The sub precinct will activate both the open space generally and the Lakefront in particular providing an excellent outlook to open space and the mountains.

Indicative uses may include:

- A Multi use events/ exhibition centre which would be a significant asset for Penrith and the region. The facility would host conferences, exhibitions, sporting events and concerts. Associated uses may include a gymnasium, sports medicine facility, café, community services and supporting facilities.
- Serviced apartments/ hotel uses with synergies with conference and meeting events.
- Residential that supports mixed use development outcomes and links to residential in adjoining North Precinct and active land uses within Ransley Precinct. Planning will take advantage of water and open space views with residents enjoying the range of uses and facilities within the precinct and adjoining precincts.
- Café/restaurants to activate the Lake edge.

Jamison Road sub precinct

This Precinct is the southern edge of the Panthers site and is immediately north of Jamison Road and the largely residential areas to the south.

The precinct also addresses the open space recreational area to the west and a range of precincts to the north and east.

Indicative land uses may include:

- Residential development to provide additional activity and year round activation of the Precinct. A range of options exists on the site for medium and higher density residential and aged housing. Planning will take advantage of water and open space views with residents enjoying the range of uses and facilities within the precinct.
- Car park to support adjoining development.

North sub precinct

This sub precinct sits immediately north of Ransley Street and is located adjacent to the open space recreational area and lake.

The sub precinct creates a transition from the Panthers site to the Council owned 'Carpenter's site' that sits to the north which then connects to the Penrith City.

Retail uses within the zone will contribute to the activation of the Ransley Street precinct and the lakefront.

Indicative land uses may include:

- Residential development to provide additional activity and year round activation of the Precinct and adjoining Precincts. A range of options exists on the site for medium and higher density residential. Planning will take advantage of the generous northerly aspect, water and open space views with residents enjoying the range of uses and facilities within the precinct and surrounding precincts.
- A mix of uses such as cafes, restaurants and ground level retail will generate activity through the day and into the evening as the Precinct becomes a unique urban environment.

Recreational sub precinct

The recreational sub precinct is the largest precinct on the Panthers site, occupying almost half the entire area. The precinct includes Peachtree Creek and the Riverlink which connects green space from Jamison Road northwards to Penrith City Centre via Council's 'Carpenter's site'.

This sub precinct will be characterised by landscaping, creek, lake and outdoor playing fields. The fields will be integrated into the landscape design to create distinctive linear parkland with a water focus at the termination of Ransley Street.

Indicative land uses may include:

- Sports facilities available to the wider Greater Western Sydney community as well as to elite training to allow promotion of excellence and participation.
- A range of active and passive recreation uses are to be accommodated including playing fields for a range of sporting codes.
- Temporary markets and community events.

Objectives

a) To create distinctive places activated by a mix of uses compatible with each sub precinct

b) To create a framework that is flexible enough to accommodate a changing range of uses over time and respond to market opportunities.

c) To facilitate the orderly development of the precinct.

d) To encourage high quality urban design, architectural excellence and environmental sustainability.

e) To minimise potential conflicts and achieve compatibility between different uses.

f) To guide development of sub-precincts across the site.

g) To ensure that development contributes to the overall creation of a destination within Penrith.

h) To plan uses in the most appropriate locations.

i) To preserve views to surrounding places where identified.

j) To limit retail floor space permitted on that part of the Panthers Precinct delineated on the Sub-Precinct Plan (Figure 26).

Controls

General

1. A development application within each sub precinct is to consider the desired character of that sub precinct and the Panthers Precinct.

Mulgoa Road sub precinct

2. Any proposed residential uses are to be located at the southern end towards Jamison Road and north of Ransley Street within this sub precinct.

3. Development is to take advantage and respond to the high visibility of the Mulgoa Road frontage and is to recognise the proposed road widening and new road alignment of Mulgoa Road. A high-quality architectural response is required for development along the Mulgoa Road frontage and is to address this road.

4. Campus style office development is to complement office space within the City Centre through features such as low rise, large floor plate development.

5. The Western Sydney Conference and Community Centre and hotel is to present a high quality design and presentation to the public domain.

Club/Hotel sub precinct

6. Future expansion of the existing club is to take advantage of views to the lake and Blue Mountains and allow for associated outdoor areas for club use.

7. Pedestrian linkages through the sub precinct are to be provided.

Ransley Street sub precinct

8. Ransley Street is to be developed as the main street to the Precinct with a range of active street level uses including restaurants and cafes. The sub precinct is to support uses to the immediate north and south of Ransley Street.

9. A focal point is to be provided at the lakefront end of the street to create a sense of arrival.

10. Development is to facilitate connectivity between Ransley Street and the Stadium to connect patrons between the two sites and generate activity by providing an attractive pedestrian environment.

11. Development in Ransley Street is to take into consideration views towards the lake and the Blue Mountains.

Mixed Use Controls (not limited to Ransley Street sub precinct)

12. Developments with a mix of uses must have flexible building layouts which allow greater adaptability of the floor area of, or tenancies on, the first floor of a building above the ground floor.

13. Development with a mix of uses is to have a minimum floor to floor height of 3.6m in order to provide for flexibility of future use.

14. The commercial and residential activities of the building are to have separate service provision, such as loading docks and residential access and servicing needs.

16. Residential pedestrian and vehicular entries shall be clearly marked and provide direct access to the street. Pedestrian entrances are to address the main streets.

15. Commercial and residential uses should have clearly separate pedestrian and vehicular entries and internal vertical circulation.

16. Security access controls must be provided to all entrances into private areas, including car parks and internal courtyards.

17. Buildings are to front onto major streets with active uses.

18. Blank building walls with frontage to streets or open space are to be avoided.

Lakefront sub precinct

19. A landmark building (up to 50m) is to be located on the lake adjacent to the Ransley Street termination.

20. Develop an accessible frontage to the lakefront. Ensure shade through the provision of trees and shade structures.

21. A well designed landscaped promenade is to be developed on the lakefront, connecting retail, cafes, restaurants, residential and tourist accommodation, Club and multi-use facility.

North sub precinct

22. Retail use in the sub precinct is to explore the possibility of open air shopping and must develop a strong relationship to the lake and Ransley Street activity zone.

23. Medium and higher density residential development within the sub precinct is to promote high architectural quality and diversity; excellence in landscaping; strongly defined streets and pedestrian spaces; and a strong relationship to the lake and Ransley Street activity zone.

24. New public open spaces should be provided and designed to have a strong landscape character, serve the recreational needs of the community and encourage social interaction.

25. Deliver publicly accessible, high quality through-site links that provides for a variety of both passive and active uses and responds to community needs.

26. Any uses within this sub precinct are to consider the privacy and amenity of adjoining residences.

27. A landscape buffer is required at the interface with existing adjoining residential development.

Recreational sub precinct

28. On-grade parking areas are to be located adjacent to sports fields with suitable landscaping so as to minimise visual impact and to provide shade.

29. Development within the Recreational sub precinct will be required to demonstrate compatibility and flood conveyance and must not adversely affect the existing flood conditions.

Jamison Road sub precinct – Residential (not limited to Jamison Road sub precinct)

30. In addition to other controls in Penrith DCP, State Environmental Planning Policy (Housing) 2021 and the accompanying Apartment Design Guide (ADG) apply to residential development in the Panthers Penrith Precinct

including flats, multi dwelling housing, any residential component of a mixed use development, and serviced apartments that are strata titled.

31. In particular, Parts 3 and 4 of the Apartment Design Guide will apply to the precinct.

32. In addition to controls for apartment mix in Part 4 of the Apartment Design Guide, the following controls apply:

    i. Where residential units are proposed at ground level in a zone nominated as an Active Frontage, a report must be provided with the development application demonstrating how future non-residential uses can be accommodated within the ground level design. The report must address:

        - Access requirements including access for people with a disability
        - Any upgrading works necessary for compliance with the Building Code of Australia and
        - Appropriate floor to ceiling heights.

    ii. 10% of all dwellings or a minimum one dwelling, whichever is the greater, must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995), to be capable of adaptation for people with a disability or elderly residents.

    iii. Where possible, the mandatory adaptable dwellings shall be located on the ground floor. Adaptable dwellings located above the ground level of a building may only be counted towards the minimum required where lift access from the basement is available within the building.

    iv. The development application must be accompanied by certification from an accredited Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Adaptable Housing Standard (AS 4299-1995).

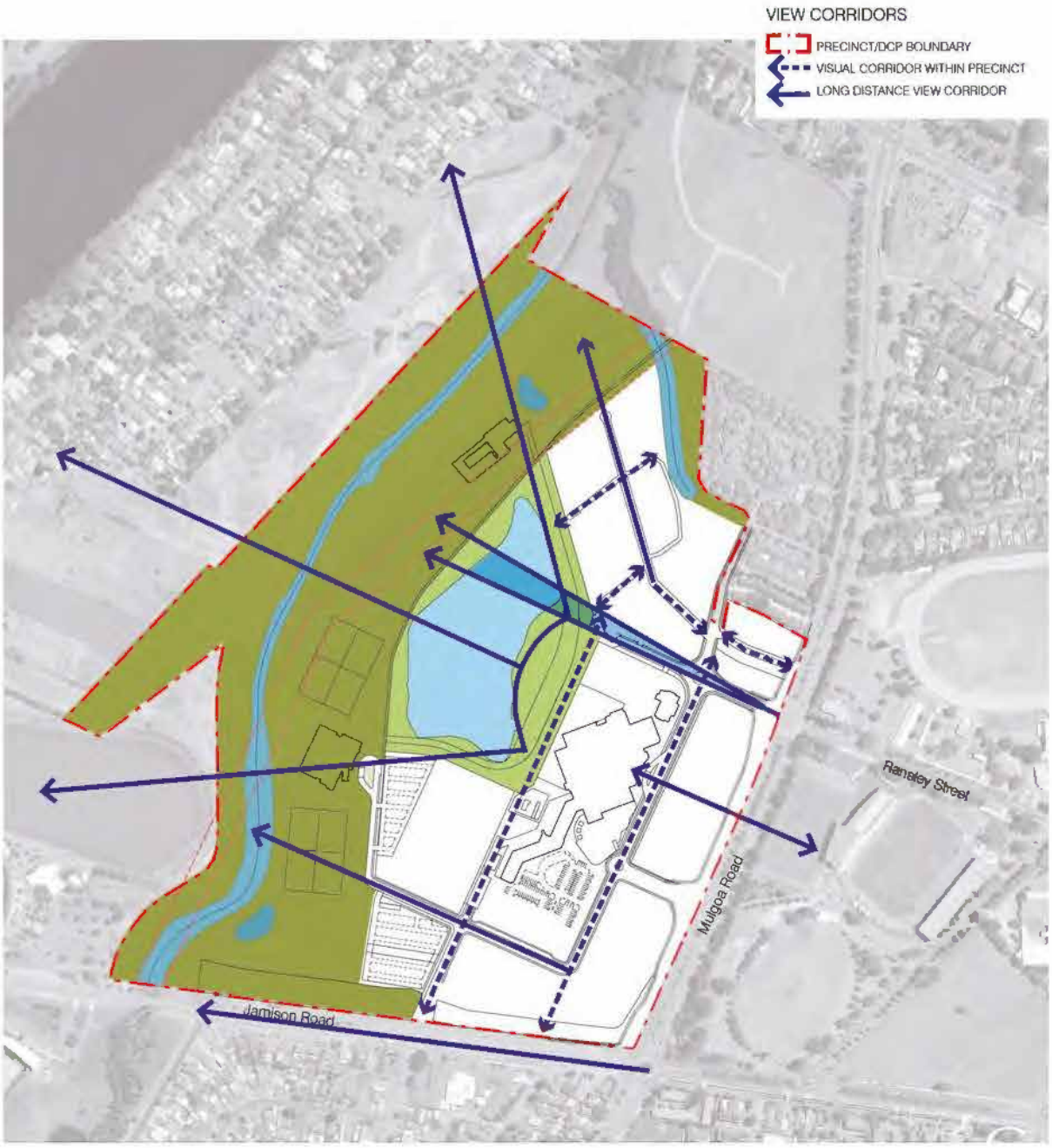
    v. Car parking and garages allocated to adaptable dwellings must comply with the requirements of the relevant Australian Standard regarding parking for people with a disability.

Retail Threshold

33. Retail premises located in the area described as Retail Threshold Site Boundary, shown delineated on the Sub-Precinct Plan (Figure 26), is to be limited to a maximum 3,500m^2.

8.4 Views

Figure 27: Views



Background

There are a number of existing distant views, especially from the eastern edges, looking west across the site. These views are important to the identity of the region and characterise this area of Penrith.

The Blue Mountains can be seen from various points along Mulgoa Road and along the Ransley Street alignment at the Panthers site. There are important views between the Panthers Club and the Penrith Football Stadium across Mulgoa Road. Figure 27 shows the views corridors on the Site to the mountains and between the Panthers Club and the Penrith Football Stadium.

Objectives

a) To maintain identified views and vistas.

b) To reinforce the visual connection between Mulgoa Road and the mountains.

c) To protect and provide visual connectivity between sub precincts and towards the site recreational areas.

d) To improve legibility and sense of place from within the site.

e) To visually connect the Precinct to the wider area.

f) To create new view corridors where possible, to maximize views over the lake and towards the Blue Mountains.

Controls

1. Development is to preserve major views /vistas as identified on Figure 27 which include:

    i. Extension of Ransley Street view corridor to the Blue Mountains.

    ii. The view from the Club entry to the Stadium.

    iii. Views from the eastern edge of the lake to the Blue Mountains.

8.5 Public Art Strategy

Panthers Penrith is an entertainment, leisure, lifestyle and sporting precinct with a unique sense of place. It is a key destination for the Penrith Community and the Western Sydney region that will be further realised by

the vision of the master plan. The provision of public art within open space is an important step in contributing to this sense of place in the precinct and the creation of an enlivened public domain.

Public art should be developed with the engagement of professional artists, and reflect and interpret matters of local significance.

An art strategy for the precinct is to be developed that responds to the architectural character and environment of the Panthers Penrith precinct through the staged integration of public art with public spaces as the precinct is delivered.

Objectives

a) To integrate urban art within the public domain and property development.

b) To position Penrith as an internationally renowned arts destination.

c) To encourage excellence in the development of urban art initiatives.

d) To create opportunities for landmark statements in the Penrith landscape.

e) To enrich the public domain through the installation of artworks in the open space network, particularly around the lakeside promenade.

Controls

1. A Public Art Strategy is to be prepared by a specialist art consultant for the whole Precinct prior to approval of the first major building development application $5 million in value.

2. The Public Art Strategy is to be relevant and site specific for the precinct and is to address:

    i. Context of precinct within Penrith and the Penrith Community.

    ii. Community / public artist engagement.

    iii. Location of installations/art work.

    iv. Themes and narrative.

    v. Procurement strategies.

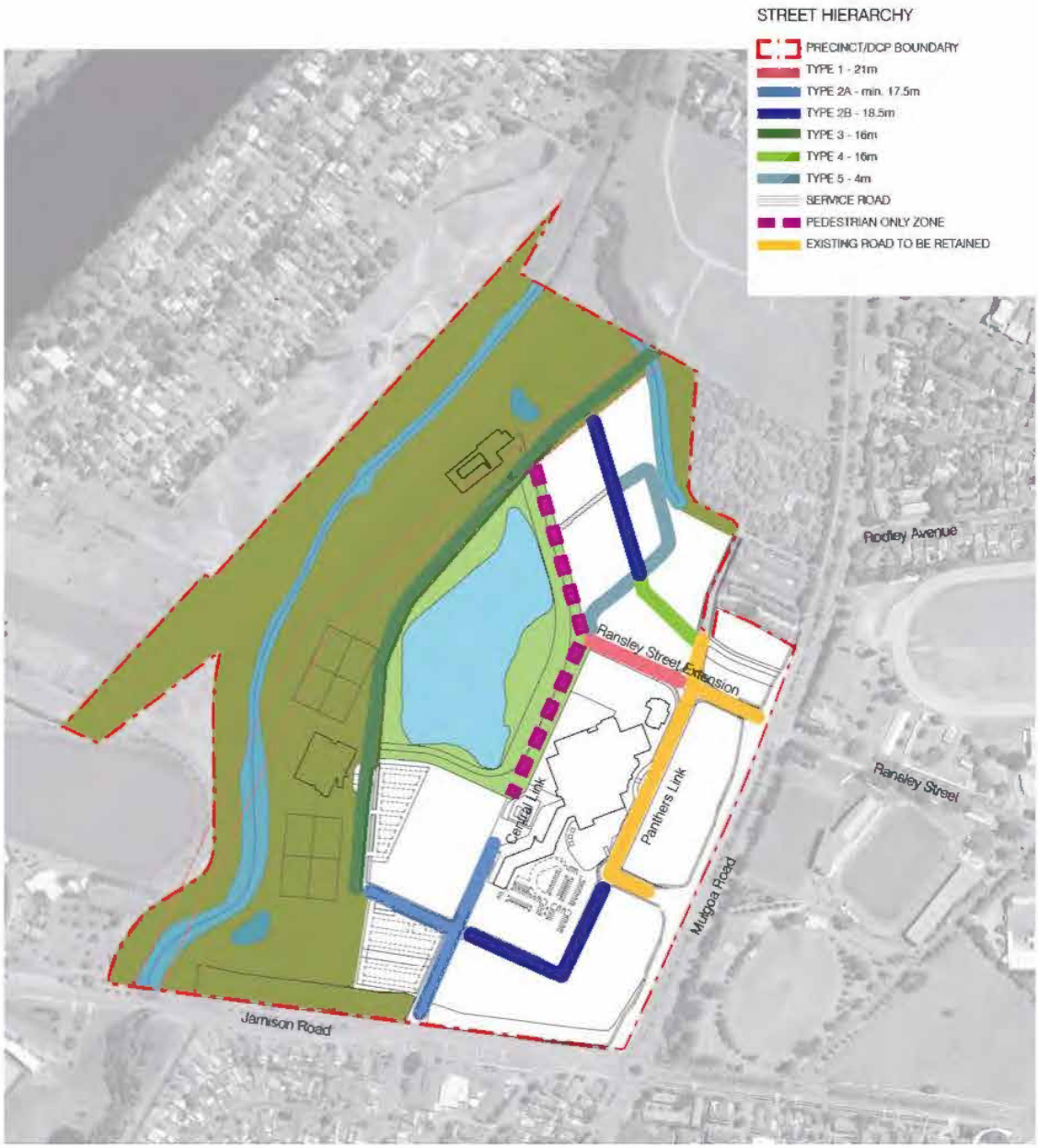
    vi. Maintenance strategies.

vii. Decommissioning strategies.

9. Connectivity

9.1 Street design and character

Figure 28: Street hierarchy



Background

The Panthers Penrith Precinct currently has three existing streets: Ransley Street, Panther Place and the road between Ransley Street and Panther Place in front of the Club. The expanded street network encourages pedestrian

permeability, public transport, cycle and local vehicle and service access and movement across the Site and to adjoining places.

A clear hierarchy of street types is proposed throughout the site.

The street character is local in nature with street tree planting used to reinforce the character of the street. Generous footpaths and setbacks allow for cafes and outdoor seating opportunities. Consistently spaced street tree planting will create a generous landscape treatment framing the street, providing shade to the street and complementing the green corridors of Mulgoa Road and the north-south open space green corridor.

It is anticipated that Panthers Penrith will have a variety of new streets:

Ransley Street extension (Type 1 - Primary Street)

The Ransley Street extension provides the primary point of address to the Site, linking Mulgoa Road physically and visually to the Site and to the mountains beyond. The opening up of this link will also create a memorable sense of arrival. The interface and intersections of this link create the most important address points to the Site. Its character will be active with some outdoor seating, and with buildings built to the boundary. It will provide an appropriate prelude to the vibrancy of the lake promenade and adjacent uses.

Panthers Link (Existing Road to remain)

The Panthers Link is currently the primary north-south vehicular link within the Site. This road will be maintained with public domain improvements. The public bus will use this street with the front entry to Panthers the main stop within the Site.

Central Link (Type 2 Secondary Streets)

The Central Link roads will provide vehicular access within the Site, from Jamison Road at the south to Panthers Link. They will be designed to accommodate events and exhibition traffic and service vehicles.

Peachtree Creek Edge & Riverlink (Type 3 - Park Edge Street)

The Peachtree Creek edge will be defined by a low volume north-south vehicular link through the Site from Jamison Road at the south, past the western edge of the existing lake to the northern boundary of the site. A footpath and cycleway will be developed the full length of the north-south

corridor providing an essential part of the link from the CBD leading to the Nepean River. The footpath and cycleway shall be located to the east of the vehicular link, at varying distances, to provide access and interaction with the lake, as well connectivity with proposed lakeside promenade. The street will be strongly pedestrian focussed but it will accommodate slower vehicular traffic with the ability to close the street if required for events or at other times.

Residential Link (Type 2B – Secondary Street (with parking))

This portion of the Residential link will provide vehicular access within the site from Road Type 4 north to the Recreational Precinct. The new Secondary Street will be designed to accommodate dual local traffic, on-street parking to both sides and service vehicles. The street shall allow for clear pedestrian and cycle routes to enable safe access with lobbies and building entries legible and easily located from the public domain. The street must be designed so that its northern end can be linked to the proposed Type 3 - Park Edge Street.

Residential Link (Type 4 – Local Street (with parking))

This portion of the Residential link will provide vehicular access within the site from Retreat Drive north to Road Type 2B. The new street will be designed to be dual carriageway, accommodating local traffic and on-street parking to one side and service vehicles. The street shall allow for clear pedestrian and cycle routes to enable safe access with lobbies and building entries legible and easily located from the public domain.

Retail Link (Type 5 – Minor Local Street)

The Retail Link is a portion of Road Type 5 that will provide both vehicle and pedestrian access within the site from the Ransley Street Extension to the Residential Link. The Retail Link will intercept active frontages along Ransley Street and the Lakes Edge and be one-way requiring vehicles to travel north, north-east from the Ransley Street Extension to the Residential Link.

Its character will be active with a pedestrian focus whilst accommodating slower vehicular traffic. Access to parking, servicing and loading facilities associated with commercial and retail uses may be provided from this street. A drop-off zone shall be provided along its western edge adjacent or within the urban space located at the end of Ransley Street. A minimum 1.5m pedestrian path shall be provided, however total verge width will be variable depending on building setbacks.

Landscape Link (Type 5 – Minor Local Street)

The Landscape Link is a portion of Road Type 5 that will provide a circuitous loop from the Residential Link, around residential buildings identified in the Structure Plan under Figure 23, returning to the Residential Link. As a one-way loop, the Landscape Link may function as a shared way combing vehicular and pedestrian circulation to provide access to future residential buildings as well as activation and identification of public and communal open space areas. A minimum 1.5m pedestrian path shall be provided, however total verge width will be variable depending on building setbacks and location of pedestrian paths.

Service Road

A Service Road will accommodate vehicular traffic traveling between the Residential Link and the Pedestrian Only Zone located adjacent to the lake. The Service Road is to be designed as a dual carriageway (either in part of overall) no-through-road, terminating in a cul-de-sac. The function of the Service Road is to provide access to residential and retail plant, lobbies, loading docks and associated goods handling rooms.

The Service Road is not to conflict with the Pedestrian Only Zone and assist in providing pedestrian connectivity between the Residential Link and the Pedestrian Only Zone. A minimum road width of 4m and minimum pedestrian path of 1.5m shall be provided, however total verge width will be variable depending on building setbacks and location of pedestrian paths.

RMS Road Widening

A portion of Mulgoa Road and the existing road between Mulgoa Road and the round-a-bout at the intersection of Panthers Link, Retreat Drive and Ransley Street extension, is subject to Roads and Maritime Services (RMS) road widening requirements, established in a Planning Agreement between the following parties: Penrith Rugby League Club Limited, Penrith City Council and Roads and Maritime Services.

This Road Works Planning Agreement establishes the scope of works, development triggers, as well as ensuring adequate infrastructure is defined to support development proposed within the Penrith Panthers Precinct. Any development is to have regard to the new road alignment of Mulgoa Road.

Objectives

a) To create a quality public domain that provides legible, safe and comfortable street environments, in terms of daylight, scale, sense of enclosure and wind mitigation

b) To ensure good circulation within the site

c) To encourage sunlight access to new public spaces

d) To facilitate view corridors to the Blue Mountains.

Controls

1. All streets will be constructed in accordance with Council's standards.

2. All requirements, as detailed in the Roads Works Planning Agreement entered into by Penrith Rugby League Club, Penrith City Council and Roads and Maritime Service are to be provided for.

3. All development is to be designed to take into account the Mulgoa Road widening and new road alignment.

4. The dimensions of each road as noted in Figure 28 will be:

Road Type		Total width	Road width	Parking	Verge width*
1	Primary Street	21.0 m	10.5m	N/A	1 x 3.5m 1 x 7.0m
2A	Secondary Street (without parking)	17.5m	10.5m	N/A	2 x 3.5m
2B	Secondary Street (with parking)	18.5m	6.5m	2 x 2.5m	2 x 3.5m
3	Park Edge Street	16.0m	6.5m	1 x 3.0m	1 x 6.0m
4	Local Street (with parking)	16m	6.5m	1 x 2.5	2 x 3.5m
5	Minor Local Street	Variable	4.0m	N/A	Variable
Service Road		Variable	4.0m	N/A	Variable

** Refer to Figure 24 for location and dimensions for pedestrian and cycle paths.*

Note: For road dimensions relating to RMS road widening requirements, refer to the Planning Agreement entered into between Penrith Rugby Leagues Club Limited, Penrith City Council and Roads and Maritime Services.

5. Indicative street sections are illustrated in Figure 29 to Figure 33.

Figure 29: Primary Street – Type 1

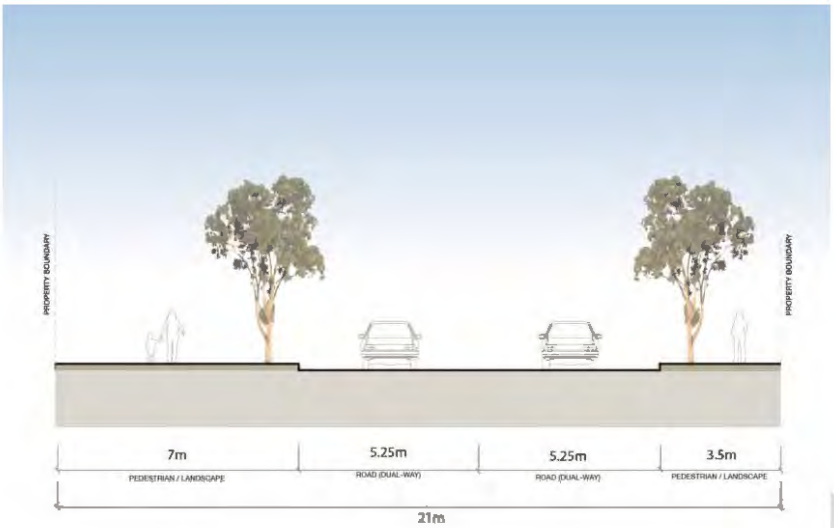


Figure 30: Secondary Street (without parking) – Type 2A

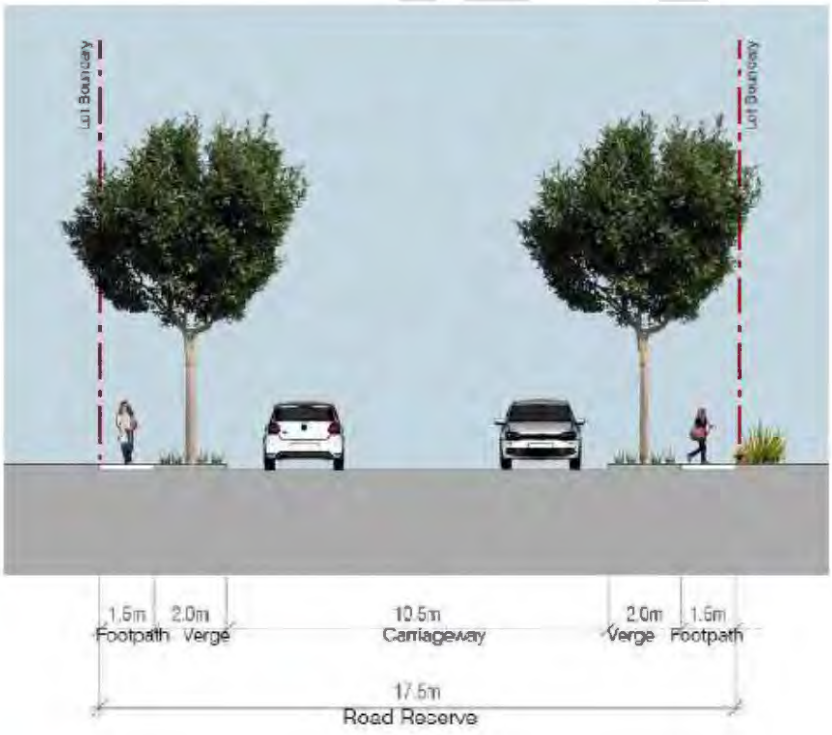


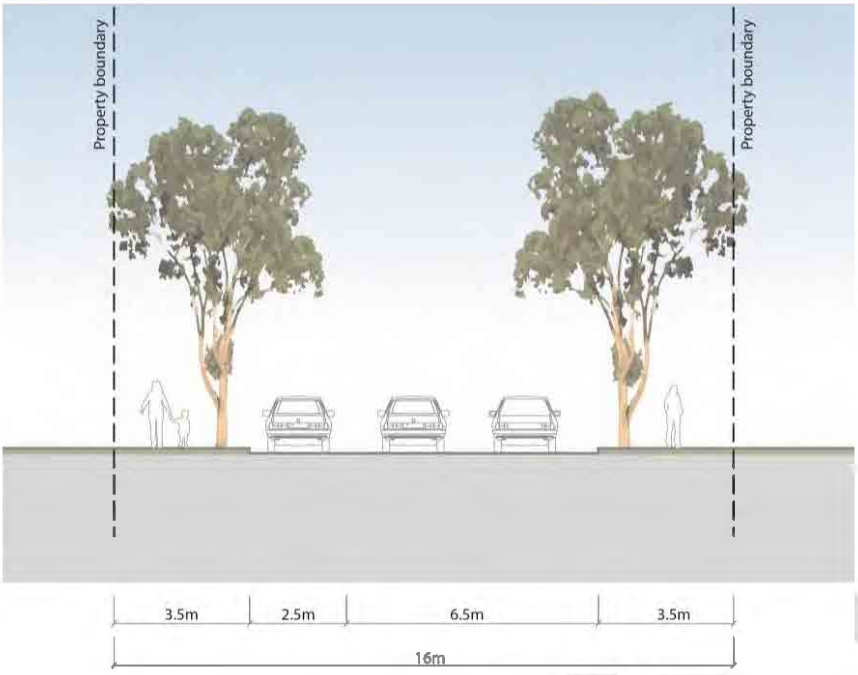
Figure 31: Secondary Street (with parking) – Type 2B



Figure 32: Park Edge Street – Type 3



Figure 33: Local Street – Type 4



DRAFT

9.2 Pedestrian and cycle network

Figure 34: Pedestrian and cycle network



Background

The new road network forms the basis of both pedestrian and cycle access within the site. Generous footpaths accommodate pedestrian movement and wide lanes and in some areas dedicated cycleways facilitate bicycle movement around the precinct.

Objectives

a) To improve access in the Panthers Penrith by providing through site links as development occurs.

b) To retain and enhance existing through site links as redevelopment occurs

c) To encourage active street fronts along the length of through site links where possible.

d) To provide for pedestrian amenity and safety.

e) To improve the permeability of large sites when they are redeveloped for more intensive uses.

f) To provide a lakefront promenade that provides a central pedestrian connection to the various lakeside sub precincts.

Controls

1. Pedestrian and cycle access within the site is to be provided as indicated in Figure 34.

2. A dedicated cycle lane is to be provided to the park edge.

3. Pedestrian links are to make use of existing crossings within the Peachtree Creek zone.

4. Pedestrian links are to facilitate future connections from outside the site.

5. Through site links are to be provided as shown in Figure 34 with accessible paths of travel that are:

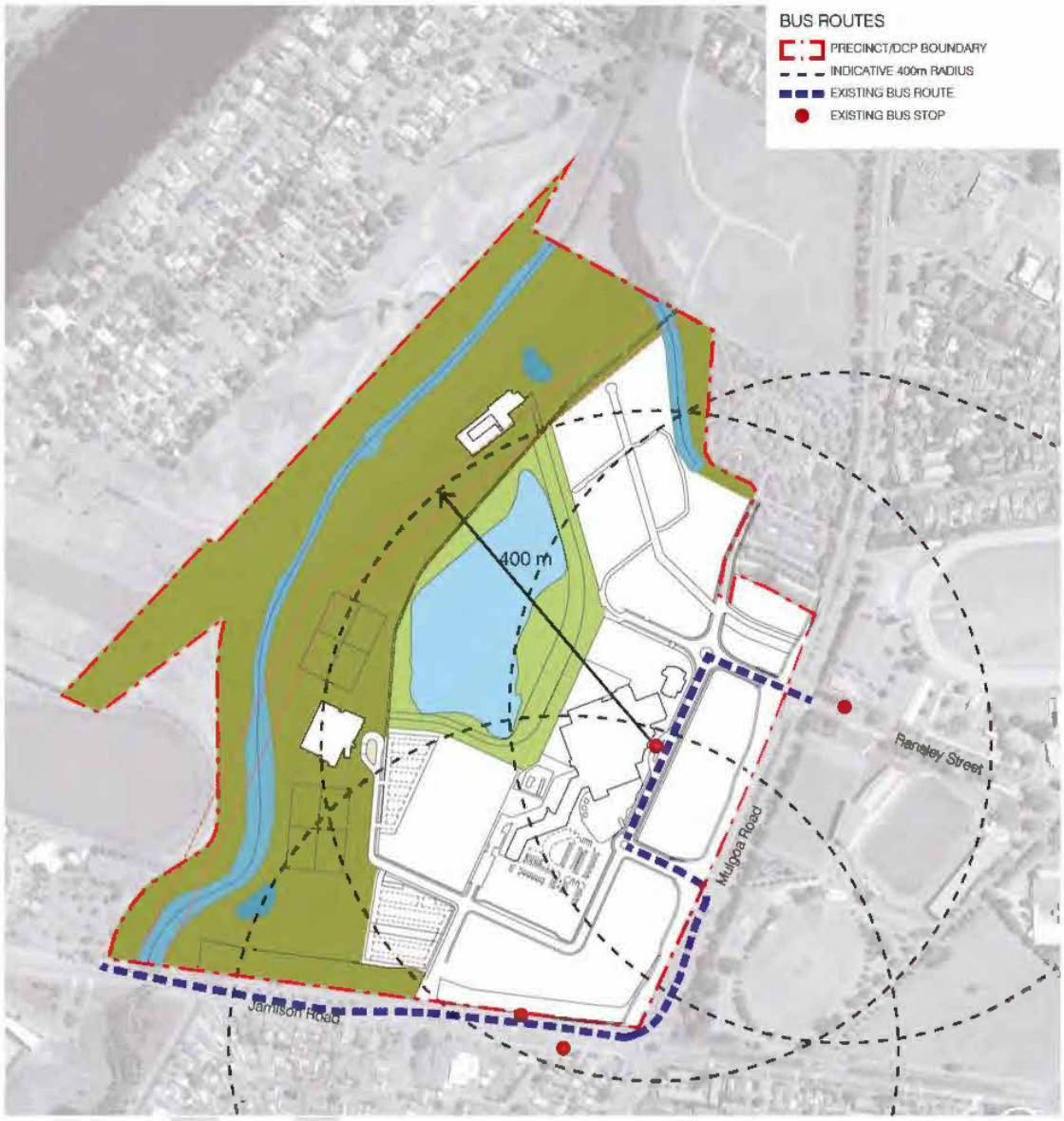
6. A minimum width of 4m for its full length and clear of all obstructions including columns, stairs, etc.

7. Direct and publicly accessible thoroughfares for pedestrians.

8. Signage is to be located at street entries indicating public access through the site as well as the street to which the link connects.

9.3 Public transport

Figure 35: Public transport nodes



Background

The Site benefits from its relatively close proximity to Penrith railway station – the station is within 20 minutes casual walking distance to the north of the precinct.

A number of bus routes travel north-south along Mulgoa Road, providing access to the railway station and Penrith city centre. Jamison Road has a weekday bus service. Panthers has a bus stop for public buses serving Penrith and the Blue Mountains.

Objectives

a) To locate higher density development near public transport opportunities.

b) To explore extension of bus services into the site.

c) To ensure adequate infrastructure for pedestrian amenity and safety.

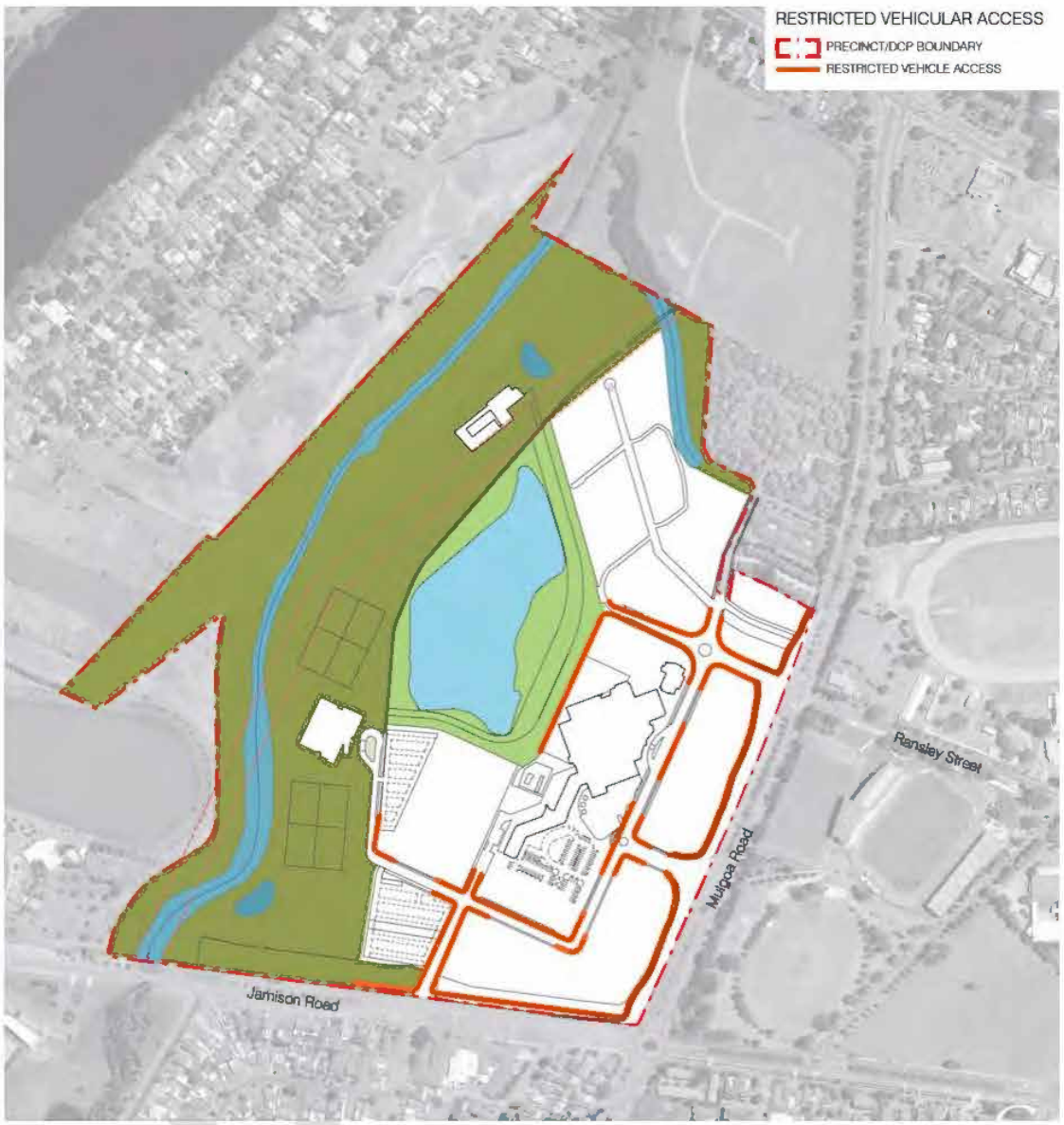
Controls

1. The public transport route is shown as per Figure 35.
2. New development is to respond to public transport opportunities within and adjacent to the site.
3. Ensure adequate infrastructure for bus users such as seating and shelters are provided at bus stops within the site.

DRAFT

9.4 Traffic, parking and site access

Figure 36: Restricted Vehicular Access



Background

The Panthers Penrith Precinct will accommodate a range of uses and traffic generation and parking needs will differ from traditional single use sites.

Panthers have entered into a Voluntary Planning Agreement with Transport for NSW and Council to deliver local and State road infrastructure as result of traffic generated by the development within the Precinct.

Objectives

a) To ensure that traffic generation of development on the Panthers Penrith Precinct does not exceed agreed limits.

b) To integrate adequate car parking and servicing access without compromising street character, landscape or pedestrian amenity and safety.

c) To ensure that adequate parking to serve development is provided on site.

d) To encourage shared use of parking.

e) To allow flexibility in parking rates to reflect shared use or best practice.

f) To ensure that parking structures do not dominate the public domain.

g) To control site entry points to encourage the active use of street frontages.

Controls

Traffic and Access

1. Development applications for major development proposals should be accompanied by an appropriate Traffic Report that details the assessed impact of projected vehicular traffic associated with the proposal. Traffic on the site is not to exceed limits identified in the Voluntary Planning Agreement supporting Traffic Management Report.

2. Any Traffic Report or Traffic Impact Statement is required to address the following issues:

    i. The objectives of this section relating to transport and land use

    ii. The objectives of this section relating to traffic management and safety

    iii. The objectives and controls of this section relating to traffic generating developments.

3. A Traffic Plan that addresses Special Event traffic conditions is to be submitted with any DA for event or major sporting facilities on the site.

4. Vehicular access is not permitted in zones nominated in Figure 36 and where practicable, vehicle access is to be from secondary streets.

5. A new median in Jamison Road is to be provided.

6. Potential pedestrian/vehicle conflict is to be minimised by:

    i. Limiting the width and number of vehicle access points.

    ii. Ensuring clear site lines at pedestrian and vehicle crossings.

    iii. Utilising traffic calming devices.

    iv. Separating and clearly distinguishing between pedestrian and vehicular accessways.

Parking

7. The appearance of car parking and service vehicle entries is to be improved by locating or screening parking, garbage collection, loading and servicing areas visually away from the street.

8. Structured parking that extends above ground where viewed from the public domain is to be architecturally treated or where possible sleeved with development.

9. Any development application within the Mulgoa Road sub precinct is to submit a car parking strategy that details the location and provision of the displaced existing parking as a result of any development within this sub precinct.

10. Built form

10.1 Street alignment, wall height and setbacks

Figure 37: Setbacks

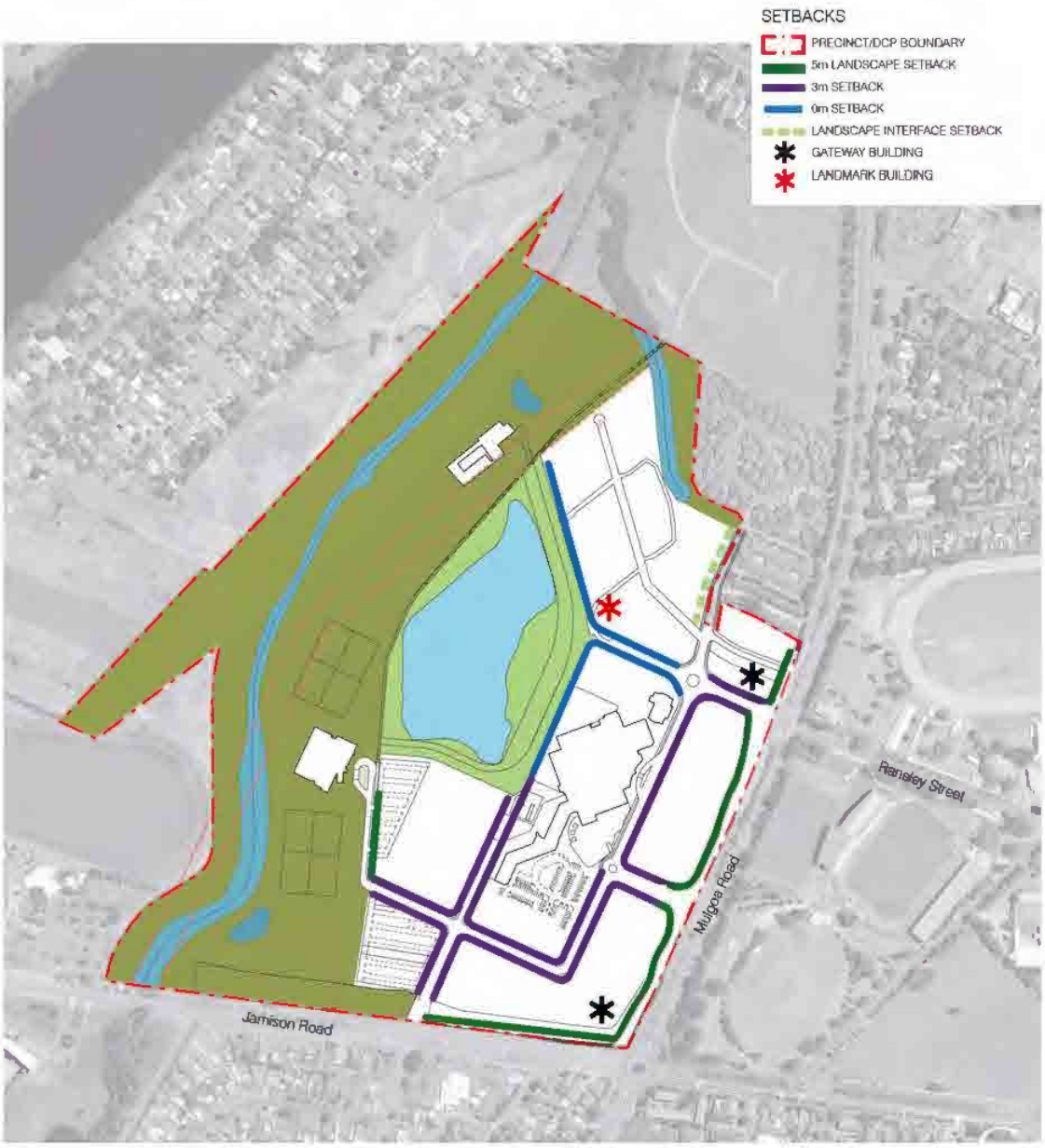
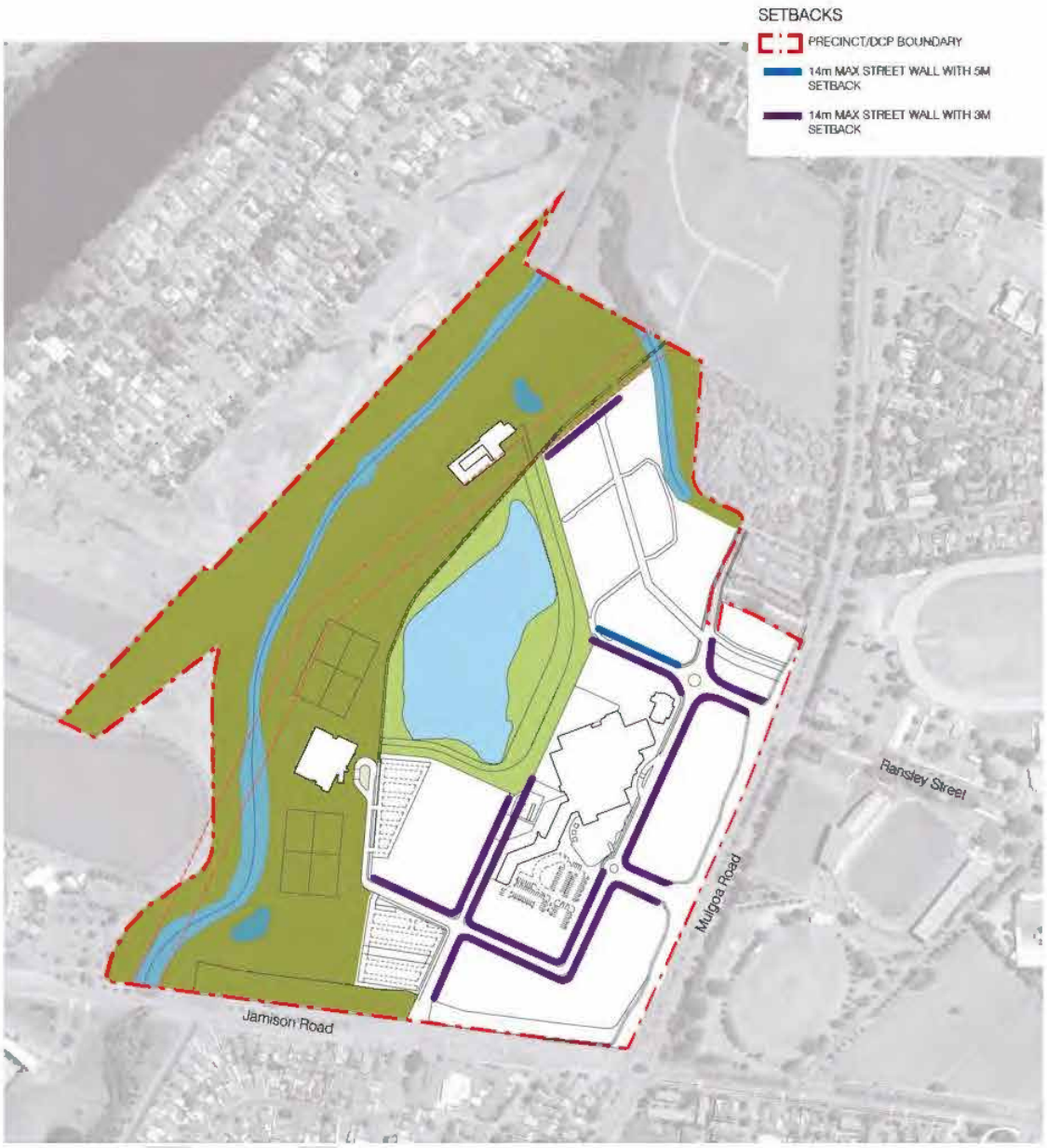


Figure 38: Street wall height



Background

Zoning of the site allows for a range in building heights from 15m up to 20m, 24m and 38m, with a landmark building site of 50m. The establishment of a clear and cohesive built form framework allows for flexibility of building use.

Street setbacks and building alignments establish the front building line. They help to create the proportions of the street and can contribute to the public domain by enhancing streetscape character and continuity of street facades.

Street setbacks can also be used to enhance the setting and address for the building. They provide for landscape areas, entries to ground floor apartments and deep soil zones. Setbacks allow ventilation, daylight access and view sharing and increase privacy.

Buildings should be built up to the street alignment to reinforce the urban character and improve pedestrian accessibility amenity and activity at street level. Above street frontage height, buildings are to be set back to provide sunlight access to streets, pedestrian areas and lower levels of other buildings. These setbacks allow view corridors, an appropriate building scale for pedestrians, and good growing conditions for street trees.

Objectives

a) To establish consistent building alignments to the street.

b) To provide street setbacks appropriate to building function and character.

c) To establish the desired spatial proportions of the street and define the street edge.

d) To create a transition between public and private space.

e) To locate active uses closer to pedestrian activity areas.

f) To maintain sun access to the public domain.

g) To protect important views to the Blue Mountains escarpment.

h) To ensure an appropriate level of amenity for building occupants in terms of daylight access, outlook, view sharing, ventilation, wind mitigation, and privacy.

i) To achieve usable and pleasant streets and public domain areas in terms of wind mitigation and daylight access.

j) To provide building separation for visual and acoustic privacy.

k) To provide deep soil zones within sites and maintain mature/significant vegetation where possible.

Controls

General

1. Street building alignment and street setbacks are specified in Figure 37 and Figure 38. These setbacks are to follow the new road alignment of Mulgoa Road.

2. Balconies may project up to 600 mm into front building setbacks, provided the cumulative width of all balconies at that particular level totals no more than 50% of the horizontal width of the building façade, measured at that level.

3. Minor projections into front building lines and setbacks for sun shading devices, entry awnings and cornices are permissible.

4. The minimum height of development built to the side boundary should comply with the maximum street frontage height requirement as shown in Figure 39 to Figure 43. Exceptions to this control can occur for parts of a building's frontage provided it is not more than 40% of that buildings frontage and such exemption is justified on architectural merit.

5. Where 0m side and rear boundary setbacks are permissible, it must be demonstrated that 0m setbacks provide amenity in terms of day light access and ventilation.

Gateway buildings

6. Gateway sites have been nominated at the corner of Jamison and Mulgoa Roads and at the site entry off Mulgoa Road at Ransley Street. Special emphasis through architectural quality and detailing is required.

7. These buildings are to be iconic in form and will denote and provide emphasis to the main Blue Mountain view corridors from Mulgoa Road.

8. Buildings are to address the corner condition with an emphasis on the approach along Mulgoa Road.

Landmark building

9. A landmark building is to be located at the western end of Ransley Street in accordance with Figure 37. The building is to demonstrate landmark qualities through height, architectural treatment and detailing.

10. The building is to be iconic in form and will denote and provide emphasis to the Panthers Precinct and Blue Mountain view corridor along Ransley Street.

11. The building is to address the corner condition of Ransley Street and the Retail link with an emphasis on the approach along Ransley Street and the lakefront promenade.

Figure 39: Setbacks on existing North/South Street



Figure 40: Setbacks west of existing hotel

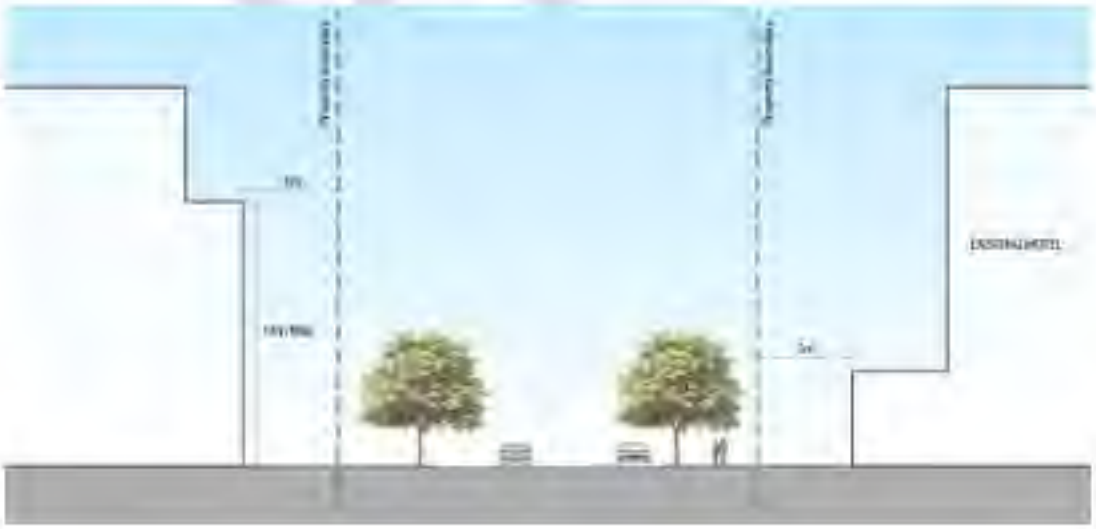


Figure 41: Setbacks on Ransley Street



Figure 42: Setbacks Park Edge Street

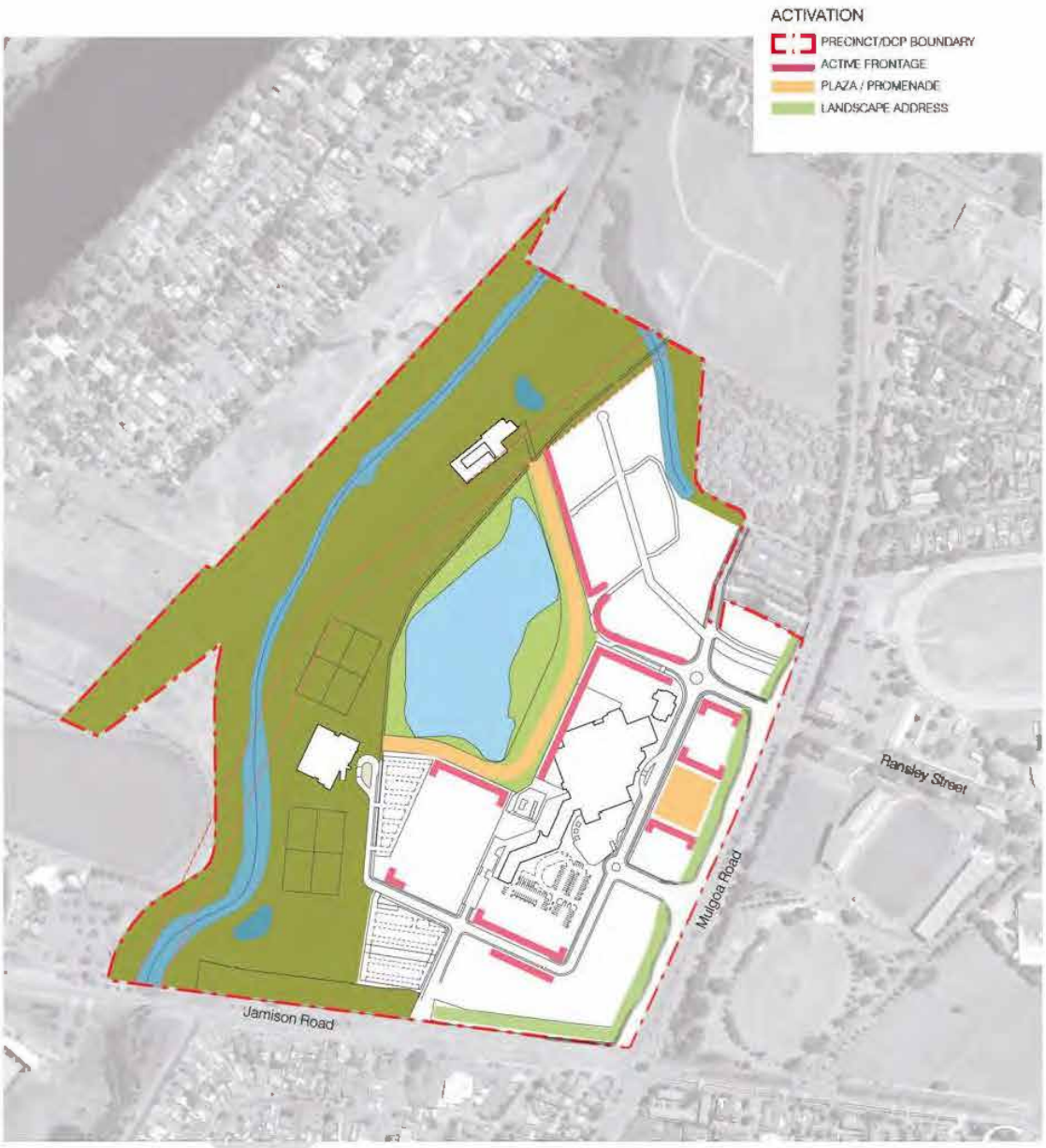


Figure 43: Mulgoa Road Frontage



10.2 Active street frontages

Figure 44: Active frontages



Background

Active frontages promote an interesting and safe pedestrian environment. Due to the size of the area, it is recognised that not all streets will develop as active pedestrian areas. Active frontages have been identified where active ground level uses are to be consolidated, creating vibrant streetscapes in areas with high pedestrian traffic and possibly located close to public transport and public open space.

Active uses include:

- Shop fronts.
- Retail/service facilities with a street entrance.
- Cafe or restaurants with street entrance.
- Community and civic uses with a street entrance.
- Recreation and leisure facilities with a street entrance.

Objectives

a) To promote pedestrian activity and safety in the public domain

b) To create vibrant streetscapes around areas of high pedestrian traffic

c) To encourage activity within the Site outside commercial business hour

d) To provide a mix of uses to support an increasing employment and visitor population over time

e) To enhance pedestrian safety, security and amenity within Precinct.

Controls

1. Active ground level uses are to be located as shown Figure 44.
2. Active street fronts are to be maximised along Ransley Street, to the lakeside promenade, and in front of hotels and the multi-use facility.
3. Entries to active frontage tenancies are to be accessible.
4. Vehicular access points should not, if possible, be located at primary active frontages.
5. Ground level uses at active frontage zones are to be located at or close to street level.
6. Transparency and openings to the street are to be maximised and blank walls, fire exits and building services elements are to be minimised.

10.3 Awnings

Figure 45: Awning locations



Background

Awnings increase pedestrian amenity by providing shelter and enclosure at a pedestrian scale. They encourage pedestrian activity along streets and, in conjunction with active edges, support and enhance the vitality of the local area. Awnings and entry canopies provide a public presence and interface within the public domain, contributing to the identity of a development.

Objectives

a) To provide weather protection, safety and security for pedestrians.

b) To unify the streetscape.

c) To demarcate building entries and contribute to the image and identity of development.

Controls

Awnings

1. Continuous awnings must be provided as shown in Figure 44.
2. Awning width is to be a minimum of 3m.
3. Provide awnings with a soffit height of 3.6m above the finished ground floor level. On sloping sites, awning soffit height may vary from 3.6m – 4.2m.
4. Where the topography slopes along the street, awnings are to step to provide a regular height over the footpath. Steps in awnings should not exceed 600mm.
5. Stepped awnings must be detailed to provide continuous weather protection.
6. Glazing is not permitted in continuous awnings.
7. Under awning lighting is to be provided to achieve appropriate luminance levels for pedestrians (Refer to relevant Australian Standards). This should be recessed into the soffit of the awning.

Entry Canopies

8. Entry canopies and discontinuous awnings may be provided to building entries not located along Active Frontages.
9. Entry canopies may be glazed or solid, and are to be coordinated with the overall facade design.
10. Provide canopies with a soffit height of 3.6m – 4.2m.

10.4 Building depth and bulk

Background

The final use of sites remains flexible and subject to market demand and opportunities. Without a clear program of land uses across the precinct, controlling the size of floor plates of buildings and site coverage helps to create good internal amenity, access to natural light and ventilation and reduces potential adverse effects that tall and bulky buildings may have on the public domain, including visual impacts and overshadowing.

Building depth is related to building use.

Objectives

a) To promote the design and development of sustainable buildings.

b) To achieve the development of living and working environments with good internal amenity and minimise the need for artificial heating, cooling and lighting.

c) To provide viable and useable commercial floor space.

d) To achieve usable and pleasant streets and public domain at street level.

e) To achieve a skyline sympathetic to the topography and context.

f) To allow for view sharing and view corridors.

g) To reduce the apparent bulk and scale of buildings by breaking up expanses of building wall with modulation of form.

Controls

1. Commercial floor plate sizes are governed by the Panthers Penrith provisions within Penrith LEP.

2. All points of an office floor should be no more than 10m from a source of daylight (e.g. window, atria, or light wells) in buildings less than 24m in height, and no more than 12.5m from a window in buildings over 24m in height.

3. Use atria, light wells and courtyards to improve internal building amenity and achieve cross ventilation and/or stack effect ventilation.

10.5 Building articulation

Background

Building articulation refers to the three dimensional external modelling of a building façade. Building articulation establishes the relationship of the building with its street. The composition and detailing of the building façade has an impact on its apparent scale as well as its appearance. The pattern or rhythm established by the proportions of the façade, the modulation of the external walls, the design of façade elements, their materials and detailing are all important considerations.

Objectives

a) To create buildings with articulated façade that address the public domain.

b) To ensure that new developments have facades which define and enhance the public domain.

c) To ensure that new developments minimise street wall length with appropriate breaks in built form massing to increase opportunities for solar access and view corridors.

d) To ensure that building elements such as awnings, sun screens, shading devices, roof structures and service elements are integrated into the overall building form and façade design.

Controls

1. Facades are to be composed with an appropriate scale, rhythm and proportion, that respond to building use and the desired character by:

    i. Defining a base, middle and top related to the overall proportion of the building.

    ii. Expressing key datum lines in the context using cornices, a change in materials or building setback.

    iii. Expressing the internal layout of the building, for example, vertical bays or its structure, such as party wall divisions.

    iv. Expressing the variation in floor-to-floor height, particularly at the lower levels.

v. Articulating building entries with awnings, porticos, recesses and blade walls.

vi. Incorporating architectural features which give human scale to the design of the building at street level. These can include entrance porches, awnings, pergolas and fences using recessed balconies and deep windows to create articulation and define shadows thereby adding visual depth to the façade.

2. Facade design is to reflect and respond to the orientation of the site using elements such as sun shading and environmental controls where appropriate.

3. The maximum unbroken facade length is to be 70 metres and it must provide articulation and interest.

4. Important corners are to be expressed by giving visual prominence to parts of the façade (e.g. a change in building articulation, material or colour).

5. Building services such as roof plant and parking ventilation are to be coordinated and integrated with the overall façade and building design and screened from view.

6. Ventilation louvres and car park entry doors are to be coordinated with the overall façade design.

7. Built form should respond to street corners and/or intersection locations and should provide for 'fine grain' articulation in response to adjacent open space to promote a sense of identity.

10.6 Architectural excellence

Background

This Part seeks to encourage urban design and architectural excellence as well as environmental sustainability in both the public and private domain.

Architectural excellence is particularly important where the building is highly visible from the public domain outside the precinct.

Good building design should positively contribute to the overall architectural quality of the city and provide buildings appropriate to their context. In some circumstances, this contribution may be as an iconic or landmark building,

but more typically it is as a well-mannered building that fits sensitively into the streetscape.

Architectural excellence should be achieved through careful consideration of:

- Built form – how it relates to its context
- Quality of materials
- Integrity of the design concept
- Its contribution to the public domain.

Objectives

a) To encourage a high level of design consideration.

b) To ensure that significant buildings achieve design excellence.

c) To ensure that buildings contribute positively to the precinct character.

d) To encourage the development of sustainable design.

Controls

1. All applications are to explain the design concept including built form, context response and materials selection.
2. Gateway and Landmark buildings are to demonstrate architectural excellence in the following areas:
    i. How the building reinforces and enhances significant vistas and view corridors; and
    ii. How the building will enliven the public domain it adjoins.
3. Materials are to be selected for durability and quality. In general, painted surfaces are not appropriate especially at street 'level'.
4. Particular attention is to be paid to detailing of materials, which should be diverse to articulate individual character of buildings.
5. Buildings are to be simple, elegant and well proportioned.
6. Environmental sustainable initiatives are to be incorporated into new buildings.

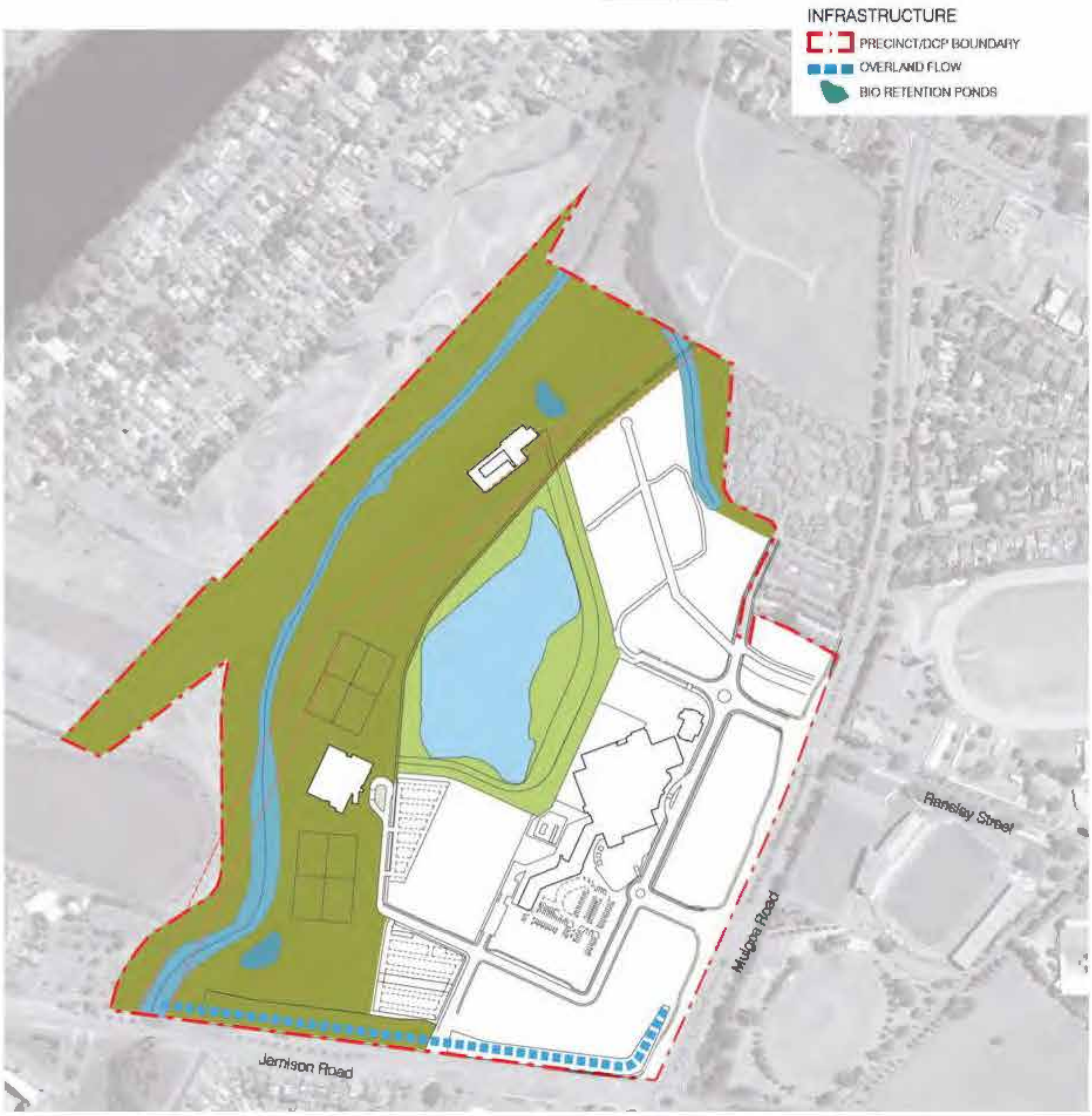
7. Appearance of buildings should have architectural character and/or distinguishing features.

8. Composition of building facades are to include both vertical and horizontal elements to create interest and provide for greater articulation.

9. Identifying features should be integrated into the building design in response to the location and context of the individual building.

11. Delivery

Figure 45: Infrastructure plan



11.1 Flooding and drainage

Background

Flooding and stormwater are major considerations on the Penrith Panthers Precinct site. A precinct Stormwater Management Strategy (SMS) will minimise the impact on water quality, identify opportunities to maximise the reuse of stormwater runoff, reduce the demand on potable water supplies, reduce pollutants and enhance the landscaping opportunities within the development.

The SMS will be based upon the principles of Water Sensitive Urban Design (WSUD) and will be underpinned by a stormwater harvesting strategy aimed at maximizing the reuse of runoff for non-potable purposes, maintaining the ecological integrity of Peachtree Creek, and complying with Penrith City Council's water management requirements as set out in Section B5 of this DCP.

Any development that is flood affected will require an appropriate level of flood assessment and may include the need to undertake modelling and prepare flood reports. The assessment will need to include consideration of flood behaviour and hazard, and any mitigation measures required to ameliorate any impacts identified.

Maintaining the regional flood runner function of Peachtree Creek through the site and ensuring no adverse impact upon flood levels and flood conveyance on surrounding properties and in Peachtree Creek is of prime importance. In this regard the adopted flood conveyance principles of Panthers Planning Proposal Appendix H Scenario 4 Flood Model apply to the site (i.e. conveyance of 200 year regional flood).

The flood levels detailed in Panthers Planning Proposal Appendix H table H1.1 have been prepared for strategic planning purposes only. Applicable flood levels for each development shall be determined in conjunction with Penrith City Council at the time of each application.

Figure 46: Development Layout as modelled from Panthers / Adopted Scenario 4 development footprint



Objectives

a) To manage development of the Panthers site with respect to its unique flooding characteristics.

b) To develop the site in accordance with sound flood management principles.

c) To achieve high quality outcomes for water quality and quantity.

d) To provide opportunities for WSUD initiatives.

e) To ensure adequate consideration and management for evacuation is undertaken.

Controls

1. All applications are to address the relevant sub-sections of the Water Management section within the Environmental Management Chapter of Penrith DCP.

2. A Stormwater Management Strategy (SMS) is to be prepared for the whole Precinct and be submitted with the first major development application and should identify and address:

    i. Impacts of stormwater generated both on and off the site

    ii. Stormwater easements and overland flow paths

iii. Opportunities to maximise the reuse of stormwater runoff

iv. Means to reduce the demand on potable water supplies

v. Reductions in pollutants entering the water system.

3. Any development west of the Club and within the flood flow conveyance corridor is to develop a strategy to ensure that the 200-year regional flood runner is maintained without causing adverse impact to adjoining lands in accordance with the principles of Scenario 4 modelling under Panthers Planning Proposal – Appendix H. The strategy will identify the timing, staging and detailing of necessary works to be undertaken.

4. Development of a comprehensive flood evacuation and emergency response plan as part of the Infrastructure Master Plan.

5. Proposed residential development on Lot 2, as detailed in Figure 23, must include:

    i. Provision for external vertical access up to the Probable Maximum Flood (PMF) level where possible

    ii. Provision for accessible refuge areas, at or above the PMF level. Refuge areas must be enclosed and of sufficient size to accommodate, at a minimum, residents located below the PMF level. Refuge areas must have access to toilet facilities, running water and electricity where possible.

11.2 Utilities

Background

The Panthers Penrith Precinct will connect to the local utilities network, with upgrades occurring where required to support the future development. As part of the overall development strategy, alternative services and energy sources will be investigated.

An integral part of determining development suitability for a site involves assessing whether the appropriate utilities and services are available on the site to service the proposed development, and whether they have sufficient capacity to meet the demand of the proposal.

This section aims to ensure that development consent is only granted where a proposal can be appropriately serviced, either through the existing system having sufficient capacity or being upgraded, or an alternative system being

provided. In most cases, the developer will be required to fund necessary system upgrades or alternatives.

Objectives

a) To ensure that development will not place unreasonable pressure on servicing authorities in terms of timing and extent of supply.

b) To ensure that development will take place only where satisfactory arrangements are made with the servicing authorities.

c) To ensure that adequate consultation is carried out with the relevant servicing authorities during the formulation of development proposals.

Controls

1. All development applications are to address the existing and proposed provision of services/utilities to a site and whether there is satisfactory capacity to address the required demand of the proposal.

2. Satisfactory arrangements are to be made with the servicing authorities for the provision of services to the property.

3. Where possible, services (including easements) should not be located in areas where vegetation will be removed or damaged.

4. Existing easements are to be reviewed and rationalised.

11.3 Bushfire risk management

Background

Bushfire Prone Land is identified on maps certified by the Rural Fire Service in accordance with section 10.3 of the Environmental Planning & Assessment Act 1979. The Bushfire Prone Land map shows land within the Panthers Precinct to be considered at risk from bush fire.

Development on bush fire prone land must comply with Planning for Bush Fire Protection 2019. This section of the DCP should be read in conjunction with Section 1.3 Bushfire Management of the Vegetation Management section within the Environmental Management Chapter of Penrith DCP, and focuses on providing guidance on achieving a balance between future development, environmental considerations and meeting the requirements for Planning for Bush Fire Protection 2019.

Objectives

a) To prevent loss of life and property due to bushfires by providing for development compatible with bushfire hazard.

b) To encourage sound management of bushfire prone areas.

Controls

1. Generally, at development application stage, any required Asset Protection Zones (APZs) provided:

    i. Are to be located wholly within the Panthers Precinct.

    ii. May incorporate roads and flood prone land.

    iii. May be used for open space and recreation subject to appropriate fuel management.

    iv. Are to be designed and maintained in accordance with the Planning for Bushfire Protection 2019 (NSW RFS).

    v. May incorporate private residential land, however no dwellings are to be located within the APZ.

    vi. Are not to burden public land.

2. Vegetation within public and community title parks is to be designed and managed as a 'fuel reduced area'.

3. The asset protection zone must be located and designed to allow ongoing maintenance to be readily carried out by the responsible landowners or occupiers.

4. Buildings adjacent to APZs are to be constructed in accordance with the requirements of Appendix 3 of Bushfire Protection and Australian Standard 3959 - Construction of Building in Bushfire-prone Areas.

5. Where an allotment fronts and partially incorporates an APZ it shall have an appropriate depth to accommodate any building with private open space and the minimum required APZ. The APZ will be identified through a Section 88b instrument.

11.4 Staging

Background

The Panthers Penrith Precinct Structure Plan represents indicative super lots on the site and the order and timing in which elements are to be delivered will be in response to market opportunities.

The delivery of individual developments must be considered in the context of:

- Available and future infrastructure.
- Site access.
- Flood control.
- Public domain delivery.
- Traffic and parking limits.
- As each development is delivered, the supporting infrastructure must be provided. All relevant supporting studies must be completed with each major development application.

Objectives

a) To facilitate orderly development of the site.

b) To ensure that adequate services are provided at each stage of development.

c) To ensure that infrastructure anticipates future development.

d) To ensure that development does not exceed floor space or traffic and parking limits identified for the Precinct.

Controls

1. Each development application for new buildings in excess of 1,000m2 GFA is to identify the infrastructure provision necessary to service this development. This includes, but is not limited to:

    i. Power.

    ii. Water and gas supply.

iii. Drainage works.

iv. Flood control works.

v. Roadworks.

2. Infrastructure provision is to anticipate future development adjacent and linked to the site. The provision is to ensure that any disruption to new roads and services is minimised as future projects are brought on line.

3. Consideration of any flood studies undertaken to determine in particular the timing and delivery of any flood mitigation works (e.g. if required, reducing the ski lake)

4. Major new development in excess of 1,000m^2 GFA will require evaluation of parking and traffic generation based on the findings and limits identified in Supplementary Transport Assessment for the Panthers Penrith Planning Proposal GHD May 2011 and the Panthers Roadworks Planning Agreement.

5. A register of all floor area, use and parking provision in the precinct is to be maintained through the life of precinct development.

DRAFT

D14 St Clair

Contents

D14 St Clair 2

1. Land at Banks Drive and Mamre Road 2

1.1 Land to which this section applies 2

1.2 Aims of this section 2

1.3 Controls 2

2. Land at Cook Parade 3

2.1 Development standards 3

2.2 Aims of this section 3

2.3 Controls 3

DRAFT

D14 St Clair

1. Land at Banks Drive and Mamre Road

1.1 Land to which this section applies

This section applies to Lot 1 and 2 DP 730490 and Lot 52 DP 634527 situated at the north-eastern corner of Banks Drive and Mamre Road St Clair.

Figure 1: Land to which this section applies



Banskds

1.2 Aims of this section

a) The aim of this section is to retain the landscaped buffer areas to the street frontages and boundaries with the residential areas, in order to maintain the amenity and scenic quality of the area.

1.3 Controls

Setbacks

1. Any application submitted concerning development of this land is to observe the following landscaped setback/buffer area provision:

    i. 18m to Mamre Road

ii. 5m to Banks Drive

iii. 12m to any adjoining residential development

Access

2. All access to the site is confined to the frontage to Banks Drive.

2. Land at Cook Parade

2.1 Development standards

Lot 2566 DP263157, Lot 68 DP702772 and Lots Part 671 and 672 DP739138 Cook Parade, St Clair

2.2 Aims of this section

a) Specifies the purposes for which land may be developed

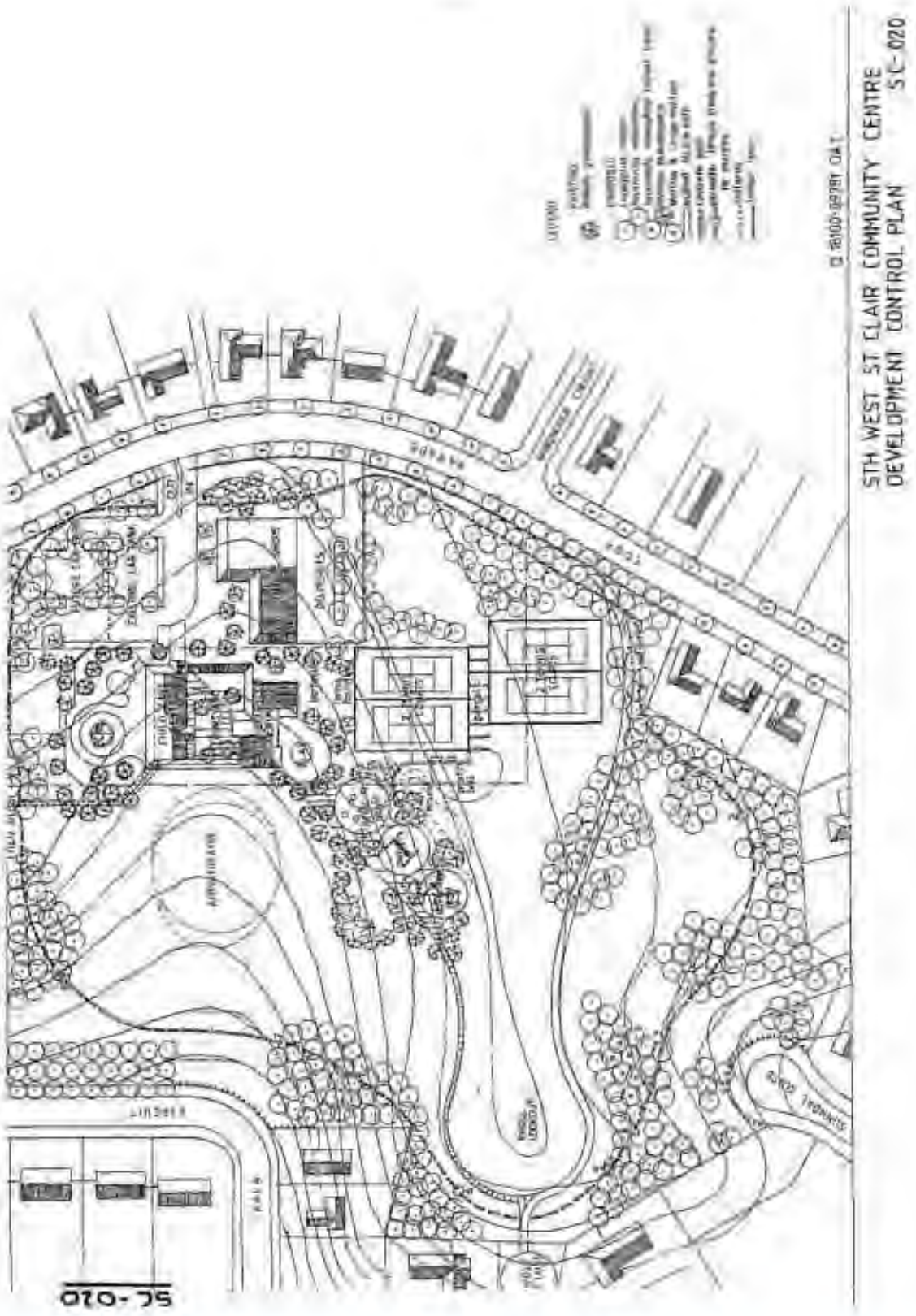
b) Regulates the siting of facilities on the land described above.

2.3 Controls

1. This section operates in the manner set out on the accompanying map (SC-020).

DRAFT

Figure 2


STH WEST ST CLAIR COMMUNITY CENTRE
DEVELOPMENT CONTROL PLAN
SC-020

D15 St Marys Town Centre

Contents

D15 St Marys Town Centre 3

1. Preliminary 3

1.1. Land to which this chapter applies 3

1.2. Aim of this chapter 3

1.3. General objectives 4

1.4. Relationship with other plans 4

1.5. Supporting studies 5

2. Spatial framework 5

2.1. St Marys Town Centre Master Plan 6

2.2. Key precincts and planned future character 8

3. Public open space 9

4. Landscape and environment 13

5. Water management 20

6. Access and movement 26

6.1. Active Transport 26

6.2. Pedestrian connections and through-site links 28

6.3. Street network and design 30

6.4. Indicative street cross sections 35

7. Mixed use and commercial development 50

7.1. Development site and setbacks 51

7.2. Building heights in storeys and dwelling mix 57

7.3. Building depth, bulk and separation 59

7.4. Site coverage and deep soil zones 60
7.5. Commercial development in the Commercial Core Precinct 62
7.6. Active street frontages, building entries, awnings and outdoor dining 64
7.7. Night-time economy 67
8. Streetscape 71
9. Residential development 73
9.1. Setbacks 74
9.2. Building design, bulk and scale 76
9.3. Landscaping and deep soil planting zones 80
9.4. Apartment mix (Residential flat buildings and Shop top housing) 82
9.5. Building height and separation 83
9.6 Private and communal open space 85
10. Parking, access and servicing 87
10.1. Public parking 87
10.2. On-site parking 88
10.3. On-site bicycle parking and end of trip facilities 89
10.4. Access, vehicular driveways and servicing 90
11. Key precinct and site controls 92
11.1 Commercial Core Precinct 93
11.2 Gateway Living Precinct 97
11.3 Town Centre Core - Civic Heart Precinct 98
11.4 Green Spine Precinct 102
11.5 Co-Working and Creative Industry Precinct 102
Appendix A: Planned character statements 106

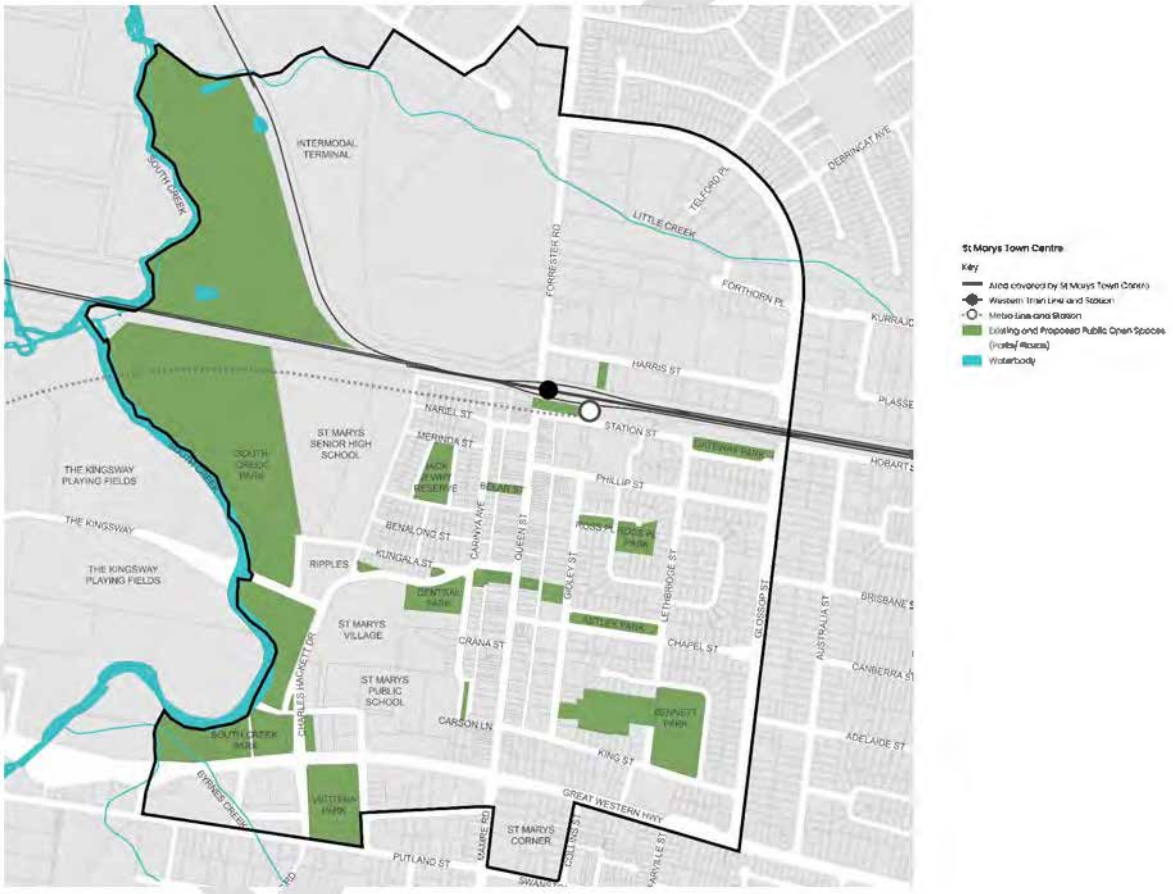
D15 St Marys Town Centre

1. Preliminary

1.1. Land to which this chapter applies

This chapter applies to the land covered by the St Marys Town Centre as shown in Figure 1.

Figure 1: Map of St Marys Town Centre



1.2. Aim of this chapter

The aim of this chapter is to provide detailed provisions for development within the St Marys Town Centre that will:

a) Facilitate the growth of St Marys as a strategic centre in Western Sydney.

b) Deliver the vision and desired place outcomes for the St Marys Town Centre as established by the St Marys Town Centre Master Plan.

c) Deliver a balanced social, economic and environmental outcome.

d) Celebrate and protect the natural environment and rich history of St Marys.

1.3. General objectives

The objectives of this chapter are to:

a) Facilitate the revitalisation of the St Marys Town Centre by promoting a sustainable approach to growth.

b) Promote urban design and architectural excellence with diversity in built form and architectural styles.

c) Promote environmental sustainability in the planning, development and management of the St Marys Town Centre to achieve improved environmental outcomes.

d) Provide for a mix of land uses that support employment and housing choice with a diversity of dwelling typologies, and which afford a high level of amenity for workers, residents and visitors.

e) Encourage integration of residential and non-residential land uses, and to minimise conflicts between land uses.

f) Encourage development within the St Marys Town Centre that gives primacy to the public domain and creates an attractive and vibrant centre.

g) Provide high levels of accessibility, permeability and connectivity within the St Marys Town Centre, linking activity nodes, public open space and residential areas, and encourage travel by foot, cycling and public transport.

h) Ensure that development in the St Marys Town Centre is consistent with the desired future character of each precinct as described in Appendix A of this chapter.

1.4. Relationship with other plans

The other City-wide chapters of the Penrith Development Control Plan 2014 or as amended (Penrith DCP) continue to apply to all land covered by this chapter. Where there are any inconsistencies between the controls contained within this chapter and other City-wide controls in the Penrith DCP, this chapter prevails to the extent of the inconsistency for development in the St Marys Town Centre. Where this chapter is silent on a specific matter or land use, the other City-wide controls in the Penrith DCP apply.

1.5. Supporting studies

The following supporting studies and documents that accompany the St Marys Town Centre Master Plan have been used in the preparation of this chapter, as well as current Council strategies and policies:

- St Marys Integrated Water Management Plan, prepared by Civille, Revision C, dated 30 August 2024.
- St Marys Town Centre Urban Ecology Action Plan, prepared by Eco Logical Australia Pty Ltd, Project No. 23SYD4740, Version 3, dated September 2023.
- St Marys Town Centre Environmental Sustainability Study Phase 1-3, prepared by Flux, dated 28 September 2023 (Phase 1), 28 September 2023 (Phase 2) and 25 October 2024 (Phase 3).
- St Marys First Nations Heritage Study, prepared by Artefact Heritage Services Pty Ltd, Revision 5, dated 15 January 2024.
- Duration Cottages Heritage Investigation Report, prepared by City Plan, Revision 02, dated 28 July 2022.
- Heritage Assessment 54, 56 & 60 Queen Street St Marys NSW 2760, prepared by City Plan, Revision 02, dated 26 May 2023.
- St Marys Town Centre Draft Master Plan Transport Assessment, prepared by Bitzios Consulting, Version 003, dated 17 October 2024.
- St Marys Town Centre Master Plan Parking Study, prepared by Bitzios Consulting, Version 003, dated 25 June 2024.
- St Marys Town Centre Master Plan Report on Preliminary Site Investigation (Contamination), prepared by Douglas Partners, dated November 2023.

2. Spatial framework

St Marys Town Centre is one of two major centres within the Penrith Local Government Area, alongside Penrith City Centre.

St Marys is also identified as a strategic centre within the Greater Sydney Region Plan 'A Metropolis of Three Cities' and the Western City District Plan, playing an important role in the future of the Western Parkland City and supporting the growth of Greater Penrith and the Western Sydney Aerotropolis.

Its importance is elevated with the arrival of the Western Sydney International (Nancy-Bird Walton) Airport and its direct link to St Marys via a station on the Sydney Metro – Western Sydney Airport line.

2.1. St Marys Town Centre Master Plan

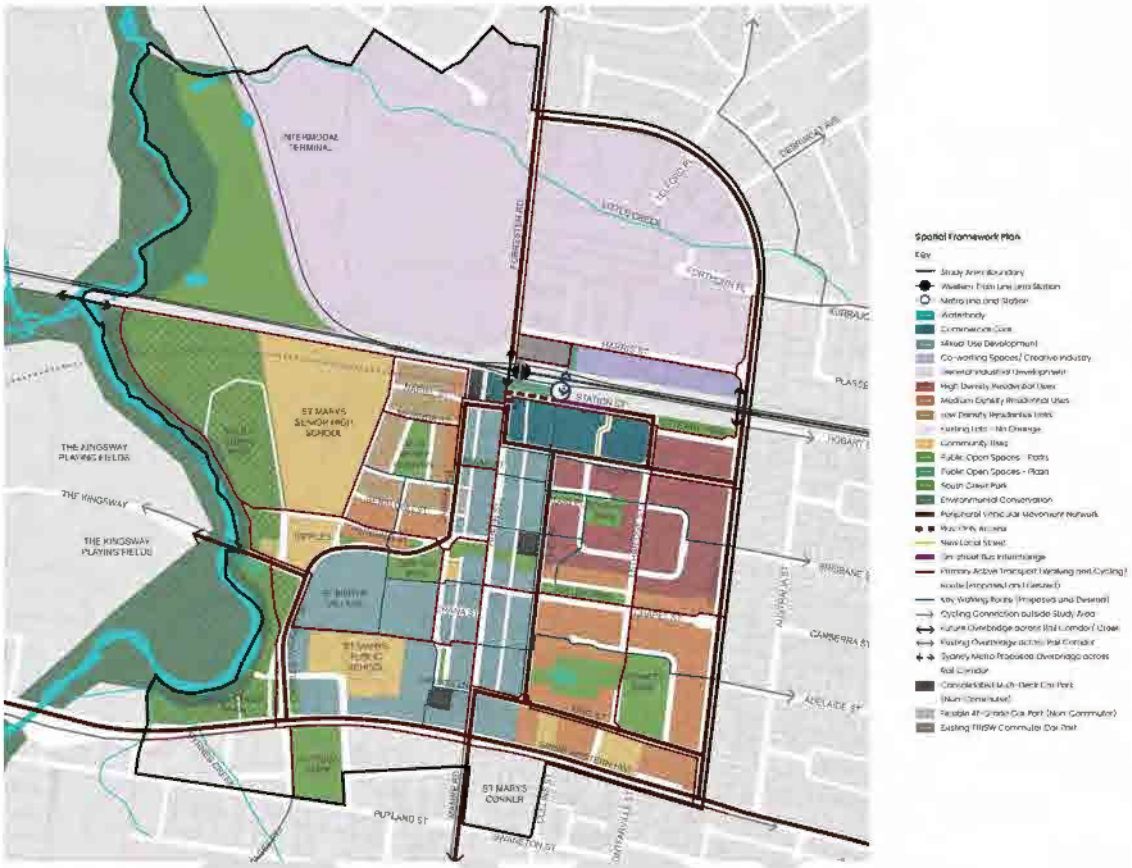
The St Marys Town Centre Master Plan approaches and desired outcomes are:

- A mix of land uses that support housing choice, job creation and a liveable town centre.
- A network of high-quality, complementary and multi-functional open spaces.
- Facilitating redevelopment opportunities by consolidating public at-grade car parking into multi-deck facilities.
- A sustainable approach to growth aligned with the principles of transport-oriented centres.
- A cool, connected and authentic urban experience that enhances the overall quality of life for residents and visitors.
- A healthy and resilient environment that contributes to the wellbeing of the community.
- An exemplar urban experience with diversity of high-quality buildings and architectural styles.
- A place-sensitive, people-oriented movement network that is permeable and prioritises sustainable transport options.
- An innovative approach to water management that balances infrastructure, urban design and environmental outcomes.
- Development that delivers a sustainable and diverse economic offering.
- A network of high quality, convenient, safe and accessible walking and cycling connections.
- A place that respects and celebrates its unique heritage and cultural values.

The St Marys Town Centre Master Plan key spatial moves are:

- Rejuvenation of Queen Street as a mixed-use 'high street' entertainment and dining precinct complemented by residential and commercial uses, and priority/dedicated infrastructure for pedestrians and bike riders.
- An enlivened Civic Heart Precinct, including a new central park and future library and community hub.
- A consolidated Commercial Core complemented by a new co-working and creative hub of activity on the northern approach to the St Marys Town Centre.
- Retention of the productive and diverse industrial precinct north of Harris Street.
- Retention of the low-scale Historic Living Precinct with a strong connection to St Marys' rich past, sensitively intensified to support housing growth in a transit-oriented centre.
- Greater housing choice with diversity of dwelling typologies close to transport, jobs, services and amenity.
- A peripheral vehicular movement corridor around the Town Centre Core streamlining through-traffic and bus movement, protecting Queen Street's 'place' function.
- Consolidation of public car parking spaces into multi-deck structures accessible via the peripheral movement corridor, enabling redevelopment opportunities within the St Marys Town Centre.
- An enhanced public domain and active transport network with improved pedestrian permeability, including legible and efficient connections to St Marys train and metro stations and the civic heart for pedestrians and bike riders.
- New and improved public open spaces.
- Multifunctional infrastructure to improve waterway health and management as well as biodiversity, open space and sustainability outcomes.
- Enhanced connections to Wianamatta South Creek and restoration of the creek corridor.

Figure 2: Spatial framework plan

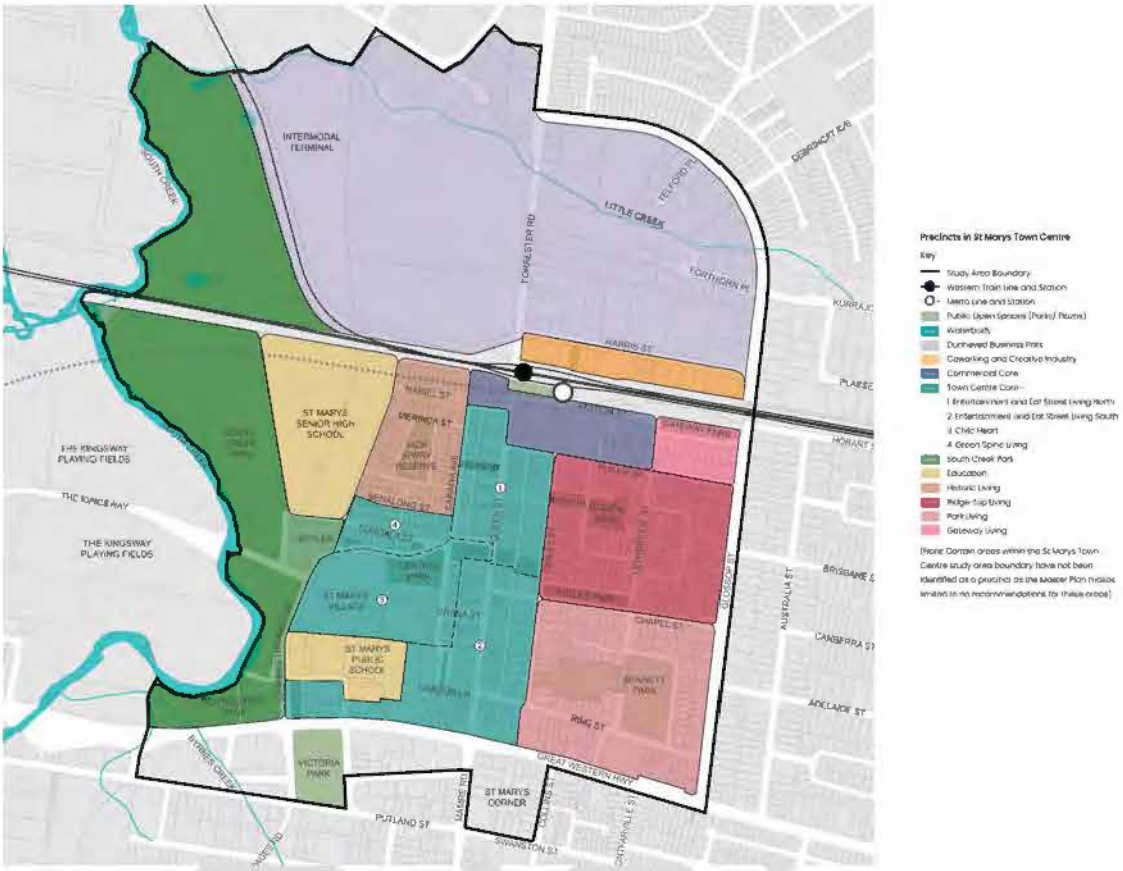


2.2. Key precincts and planned future character

There are 12 precincts identified in the St Marys Town Centre, each with its own distinct role, function and character. The location of each precinct is identified in Figure 3. The precincts acknowledge and reinforce existing patterns of use in the St Marys Town Centre.

The aim is to create a clearly legible series of precincts which define the retail and commercial centres while also promoting the appropriate implementation of mixed use. The planned future character of key precincts is described in Appendix A of this chapter and is to be used to inform and guide future development.

Figure 3: Precincts in St Marys Town Centre



3. Public open space

Application

This section applies to all development in the St Marys Town Centre.

Objectives

a) Provide a network of high-quality open space that activates the St Marys Town Centre and provides areas of high amenity for residents, workers and visitors.

b) Retain existing open space and create additional open space of a range of sizes and types to accommodate a variety of recreational activities, including passive, informal, and active uses.

c) Promote increased canopy tree planting within public open space to provide shade, reduce urban heat and support the delivery of spaces that connect and contribute to Penrith's Green Grid Strategy (2021).

d) Maintain adequate levels of solar access to existing and planned public open space throughout the year to enhance the useability and amenity to these places.

e) Encourage active street frontages to create lively and attractive public spaces and promote passive surveillance of open space.

f) Integrate the management of stormwater and floodwater into the design of public open spaces.

g) Maintain and enhance regional views to the Blue Mountains.

Controls

1. The location of existing open space to be retained and future open space to be delivered within the St Marys Town Centre is identified in Figure 4.

2. Development applications are to consider the location of existing and future public open space as shown in Figure 4 in addressing site suitability and site context.

3. Development in the vicinity of existing or planned public open space that is identified in Figure 5 shall be accompanied by overshadowing diagrams to demonstrate that the development will not adversely overshadow the public open space. If a development application seeks to vary built form controls contained within this chapter, the application must demonstrate in relation to solar access that:

    i. Public open space as identified in Figure 5 will receive a minimum 4 hours of continuous sunlight to 50% of the open space between 9am and 3pm on 21 June.

    ii. For development in the vicinity of Central Precinct, Ross Place and Astley Park, development is not permitted to overshadow areas of the public open space that are shaded in yellow in Figure 1 to Figure 3.

4. Active street frontage requirements under the Penrith Local Environmental Plan 2010 (Penrith LEP 2010) apply to land with an interface to the following open space, and are to be addressed:

    i. Parks: Central Park, Gateway Park, Blue-Green Link between Gidley and Queen Street

    ii. Plazas: Belar Street, Station Street, Harris Street.

5. Notwithstanding the above control 4, all development adjacent to existing or future open space is to provide passive surveillance of the open space.

6. Rear fences of development are not permitted to face public open space.

7. Belar Street between Carinya Avenue and Queen Street shall be a pedestrianised plaza, closed to east-west vehicular movement.

Figure 4: Open space



Figure 5: Solar access to open space

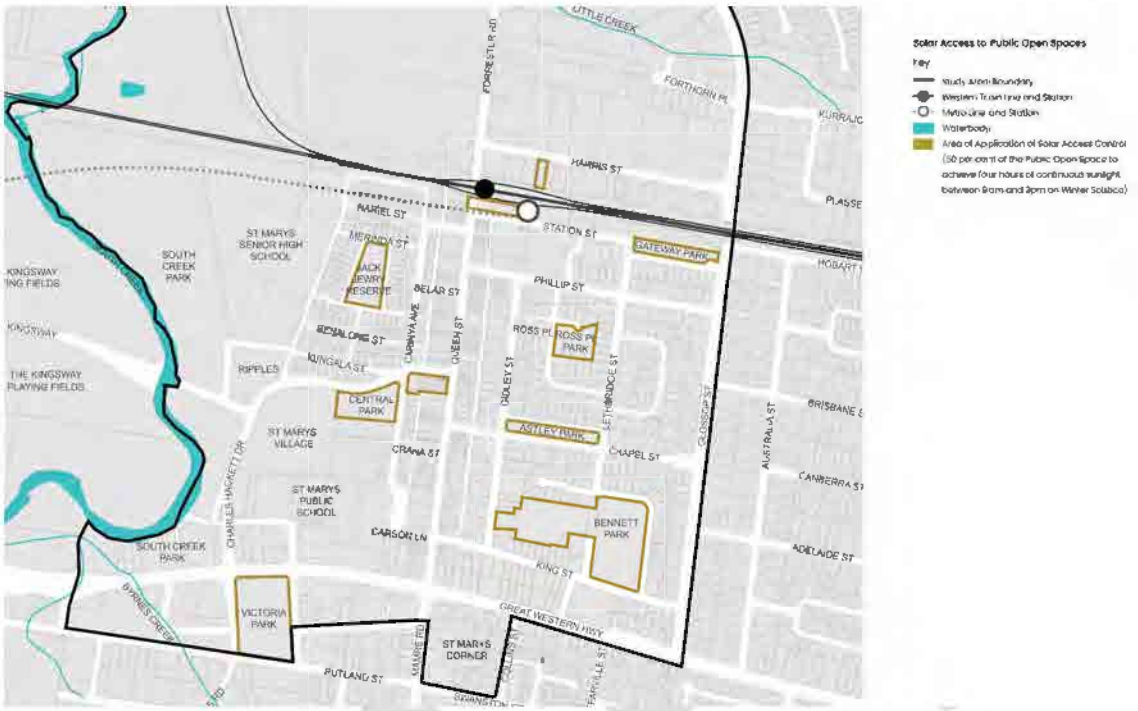


Figure 6: Solar access to Ross Place Park

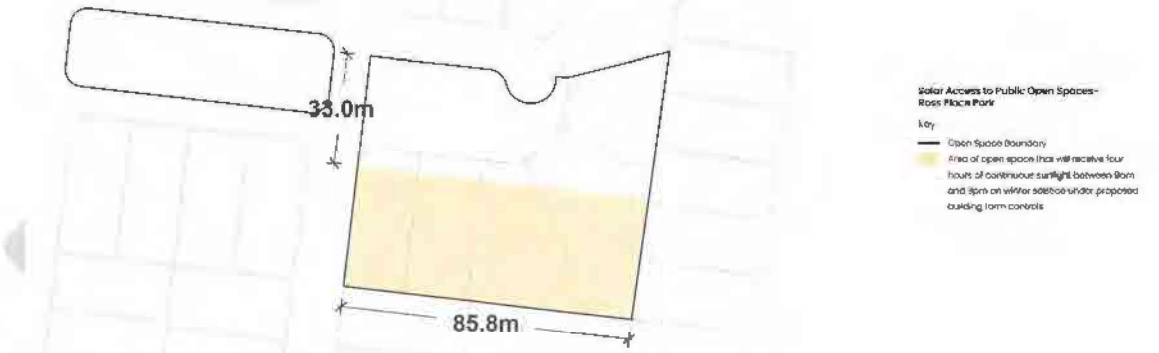


Figure 7: Solar access to central park

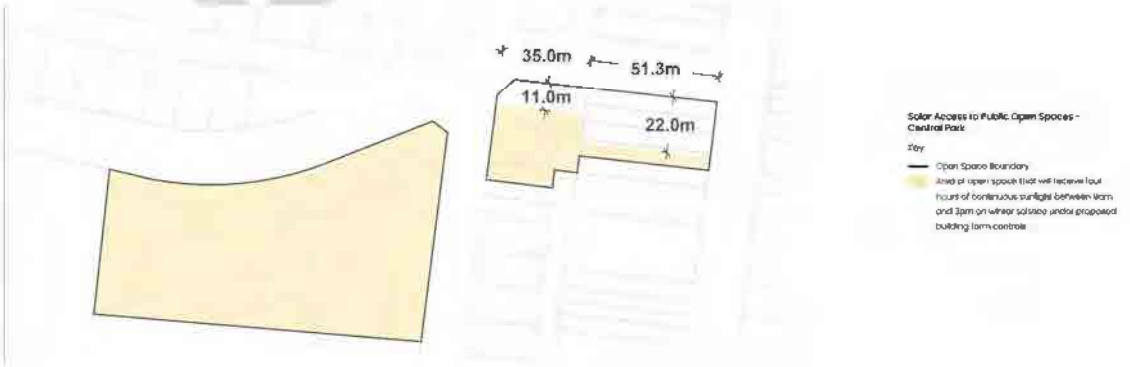
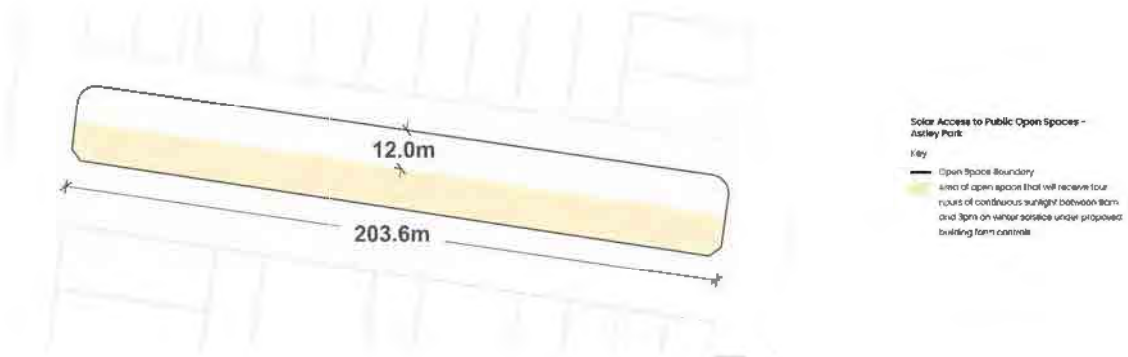


Figure 8: Solar access to Astley Park



4. Landscape and environment

Application

This section applies to all development within the St Marys Town Centre.

This section must be read in conjunction with other sections within this chapter, as well as requirements within the city-wide Environmental Chapter (Vegetation Management, and Landscape Design sections) and Urban Heat Management Chapter of Penrith DCP.

Objectives

a) Protect and conserve Wianamatta South Creek.

b) Protect, maintain and enhance natural biodiversity value for a cool and green St Marys Town Centre.

c) Improve the naturalisation of Little Creek and Byrnes Creek riparian corridors.

d) Ensure development incorporates landscape design elements to reduce urban heat impacts and provide cooling for the existing and emerging community.

e) Achieve tree canopy targets on private land.

f) Encourage the planting of small trees on podiums and rooftops.

g) Preserve and enhance tree canopy and support the growth and health of trees with adequate connected deep soil zones.

h) Promote opportunities to connect urban and built forms to the natural environment.

i) Ensure protection of native vegetation, plant community types and high value trees.

j) Encourage planting on urban structures that will contribute to the quality and amenity of open space on roof tops and internal courtyards.

k) Strengthen connections between the built form and natural environment and promote urban ecology corridors.

l) Encourage the planting of native, locally indigenous and climate-resilient trees to create an ongoing city ecology.

m) Ensure the St Marys Town Centre has a strong landscape character that contributes to the reduction of surface stormwater runoff.

n) Ensure development is undertaken in a sustainable manner.

o) Ensure development incorporates circular economy design principles to maximise recycling and reuse of materials.

p) Protect and enhance regional views to the Blue Mountains.

Controls

1. A long-term landscape maintenance plan must be provided for all landscaped areas, including deep soil zones. The plan must outline how landscaped areas are to be maintained for the life of the development, including details of any proposed irrigation system.

2. In areas where landscaping is proposed adjacent to sensitive areas or aims to achieve landscape in line with locally indigenous vegetation, a Biodiversity Management Plan (BMP) is to be provided. The BMP is to include adaptive landscape and biodiversity considerations under climate change.

3. All new development adjacent to the Little Creek riparian corridor must be located, designed and constructed to prevent or minimise, as far as possible, adverse impacts on native vegetation, fauna and habitat. In accordance with Section 5, a 10m wide channel for Little Creek is to be reinstated with a 10m wide riparian corridor at the top of bank on both sides of Little Creek to provide for a minimum 30m wide riparian zone, expanding to wider than this where vegetation exists along Little Creek. Refer to Section 5 for further requirements.

4. All new development adjacent to South Creek must be located, designed and constructed to prevent or minimise, as far as possible, adverse impacts on native vegetation, fauna and habitat. In accordance with Section 5, a 40m wide riparian corridor within industrial lots along South Creek is to be restored, maintained and managed through a Vegetation Management Plan (VMP). Refer to Section 5 for further requirements.

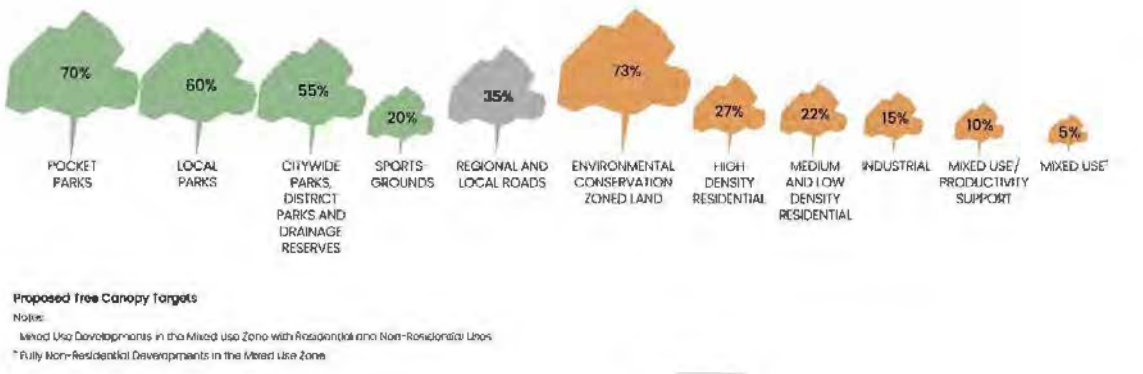
5. Existing vegetation is to be maintained throughout the site, wherever practical.

6. Development sites are to achieve minimum tree canopy targets in accordance with Table 1.

Table 1: Tree canopy targets

Land use zone/development	Tree canopy target (%)
C2 - Environmental Conservation Zone	73%
R4 - High Density Residential Zone	27%
R2 – Low Density Residential Zone R3 - Medium Density Residential Zone	22%
E4 – General Industrial Zone	15%
Mixed use developments in the below zones: E3 – Productivity Support Zone and MU1 – Mixed Use Zone	10%
Commercial developments within the Commercial Core Precinct of the MU1 – Mixed Use Zone	5%

Figure 9: Tree canopy targets



7. In measuring tree canopy targets for sites:

    i. Minimum canopy spread and soil volumes shall be as follows:

    - **Small trees** (less than 8m tall or under 4m wide): 4m spread, and minimum soil volume of 15m^3 per tree
    - **Medium trees** (9-12m tall or under 4-8m wide): 6-8m spread, and minimum soil volume of 35m^3 per tree
    - **Large trees** (taller than 13m or wider than 8m): 16m spread, and minimum soil volume of 80m^3 per tree.

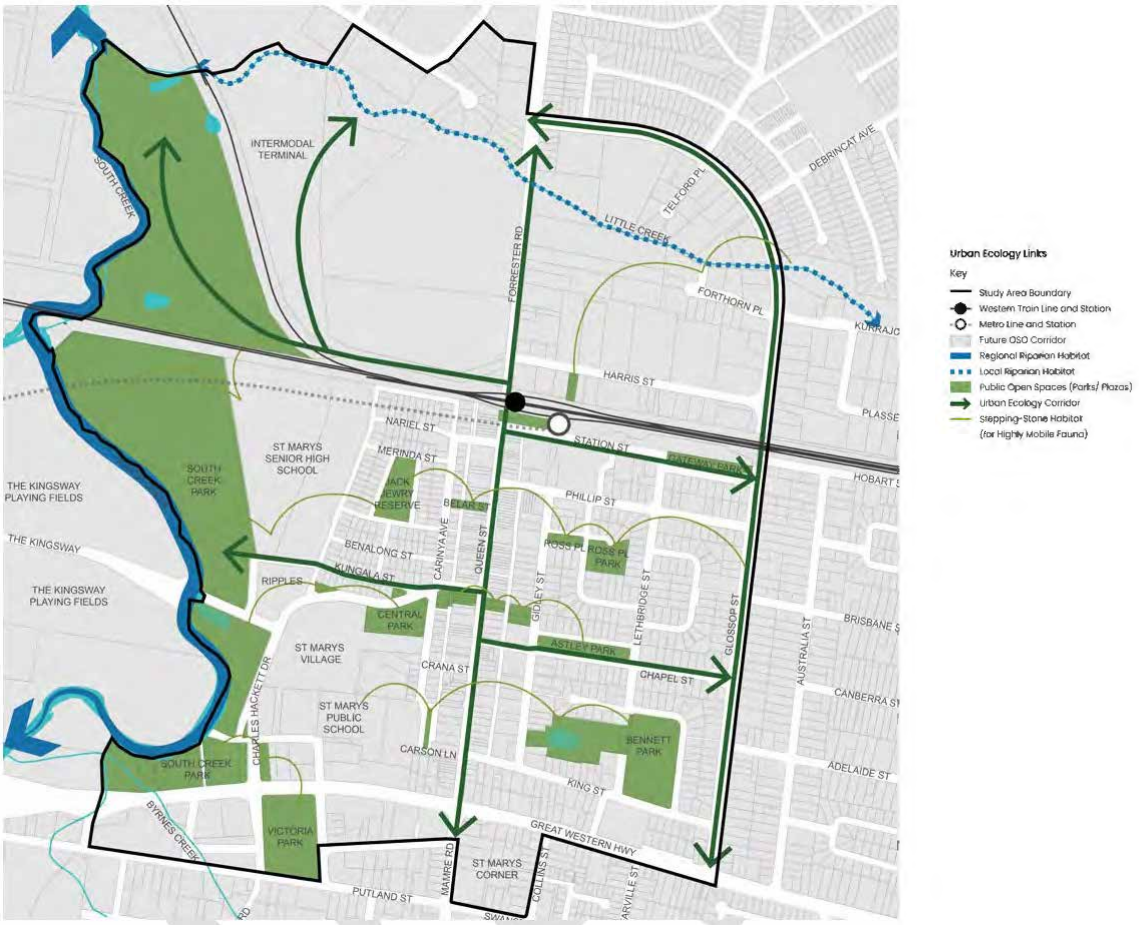
    ii. Where trees are planted in proximity to site boundaries and canopy cover extends beyond the site boundaries, the full canopy cover of trees planted on the site may be counted towards the overall tree canopy target for the site Tree canopy planted on podium/building may be counted towards the overall tree canopy target for the site.

    iii. Tree canopy targets are based on a minimum target and must not be used to reduce or support the reduction of existing canopy cover.

8. Tree species selection and planting must demonstrate consideration of native, locally indigenous and climate resilient tree and plant species. Tree selections and planting are to meet the requirements of the city-wide Urban Heat Management section of this DCP.

9. Key urban ecology links within the St Marys Town Centre are identified in Figure 10. Landscape concepts are to have regard to and support these urban ecology links.

Figure 10: Urban ecology links



10. Mixed use and commercial developments are to incorporate planting into publicly accessible outdoor spaces.

11. Green roofs and vertical landscaping (green walls) are encouraged. Council's requirements for green roofs and walls are provided within the city-wide Urban Heat Management section of this DCP.

12. The integration of rooftop solar and green roofs is encouraged to maximise the utility of the roof. Where possible, flat mounting of solar panels is to be avoided, and framing that provides adequate air behind the panels to prevent heat build-up is to be provided.

13. Non-residential developments including mixed use developments with a construction cost of $1 million or more are to demonstrate a commitment to achieving no less than 4-stars under the Green Building Council Australia's Green Star rating system or 4.5 stars under the Australian Built Environment Rating Systems (NABERS).

14. All new development is to incorporate urban heat mitigation measures in line with the city-wide Urban Heat Management section of this DCP.

15. The design of developments should incorporate principles on how waste can be minimised by:

    i. Incorporating the use of modular components.

    ii. Incorporating materials from any buildings to be demolished on the site.

    iii. Minimising excavation and fill (see the city-wide Land Management section of this DCP).

    iv. Using prefabricated frames, trusses and cladding.

    v. Using standard material sizes or negotiating with manufacturers for the supply of non-standard material sizes.

    vi. Selecting materials that do not require finishes.

    vii. Grouping wet areas together to minimise the amount of pipe work required.

16. Development along regional view corridors as identified in Figure 11 must be designed and sited to protect regional views to the Blue Mountains escarpment. Views shown in Figure 11 to Figure 14 must be preserved and protected and not obstructed by development.

Figure 11: Regional view corridors

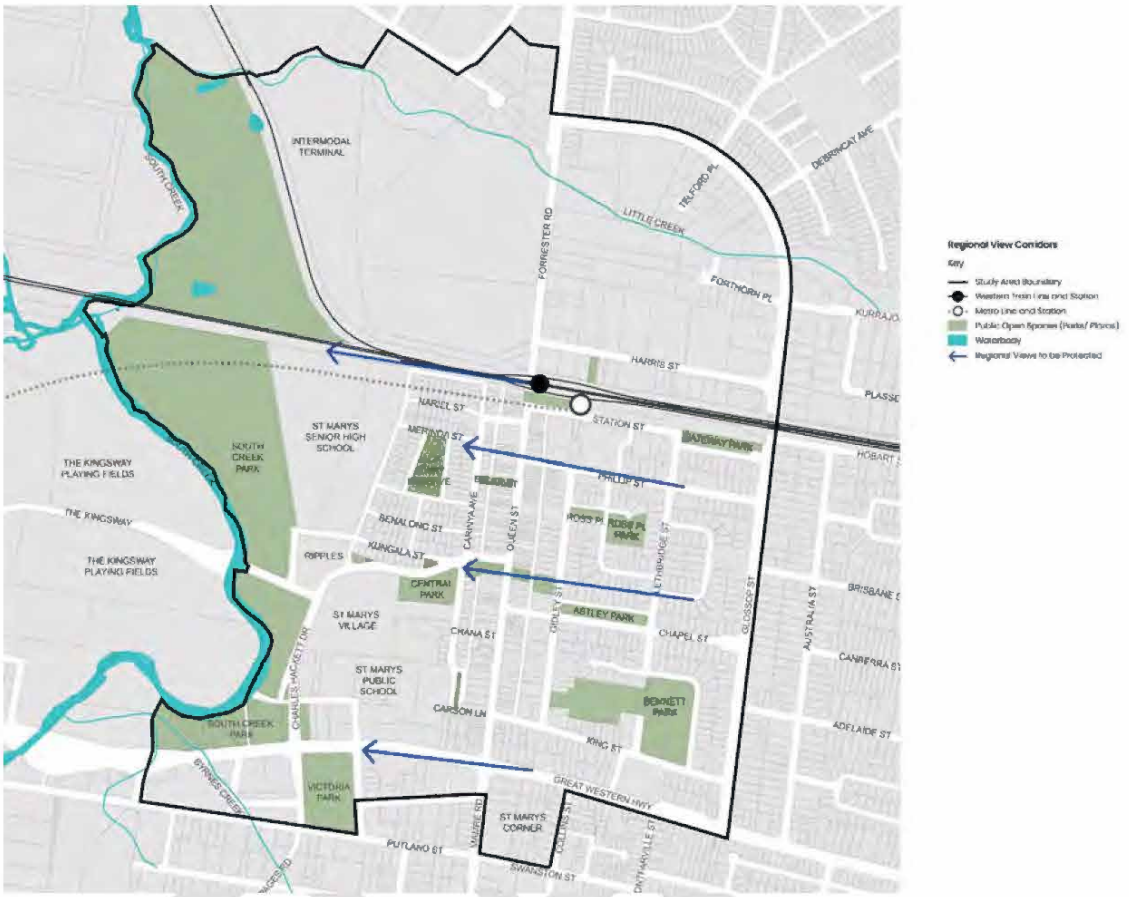


Figure 12: Cross-sections through lots impacted by regional view corridors on Phillip Street



Figure 13: Phillip Street view corridor - Section 1

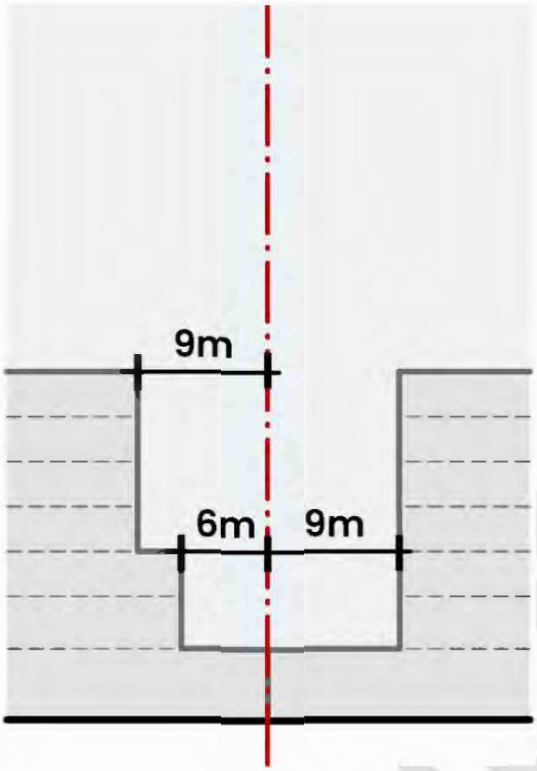
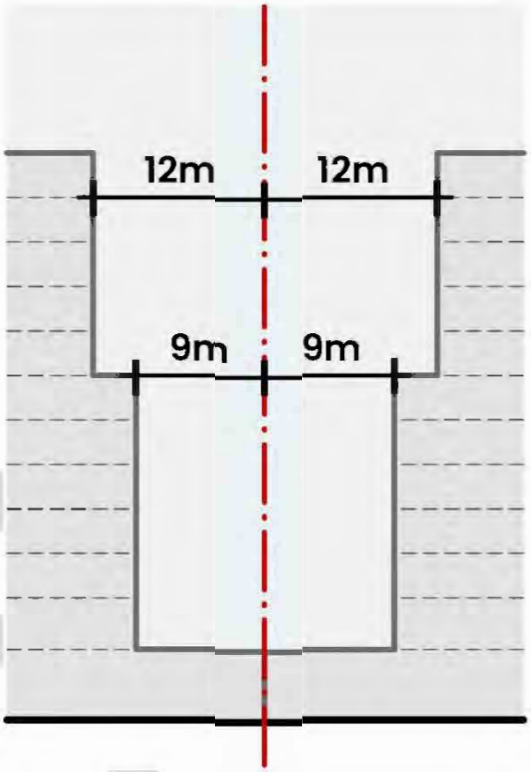


Figure 14: Phillip Street view corridor - Section 2



5. Water management

Application

This section applies to all development in the St Marys Town Centre. This section must be read in conjunction with the city-wide Water Management section of this DCP, and relevant Council engineering specifications and technical guidelines.

The St Marys Town Centre is located within the Wianamatta-South Creek system, an intermittent waterway that is sensitive in flow and water quality. Waterway objectives (flow and water quality) have been established for the protection of waterways in the Wianamatta-South Creek catchment in line with the Western Parkland City District Plan and *NSW Government Risk-based Framework for Considering Health Outcomes in Strategic Land-use Planning Decisions* (2017).

The re-development of St Marys Town Centre offers the opportunity to transform the relationship between the waterway and the Town Centre and create a valuable natural asset for the community, as well as implement development while having regard to the waterway health objectives for the catchment. To achieve the vision of the Master Plan and contribute to the

improvement of the health and condition of Wianamatta-South Creek, a site specific Integrated Water Management Plan has been prepared to support the growth of the St Marys Town Centre.

The approach taken in developing the Integrated Water Management Plan consists of both on-lot measures and downstream regional measures. Passively irrigated street trees are also incorporated into the Strategy to contribute to both waterway health and to the mitigation of urban heat through increased canopy cover. To achieve these outcomes, a number of site-specific controls apply to developments within the precinct.

Objectives

a) Implement an integrated approach to water management that enables provision of infrastructure as well as positive urban design and environmental outcomes.

b) Retain stormwater in the catchment by integrating Water Sensitive Urban Design into the public domain and utilising passive irrigation for street trees, open space and sports fields.

c) Implement a porous paver street tree passive irrigation system for streetscapes in the St Marys Town Centre to maximise tree canopy health, and promote urban cooling, biodiversity and streetscape amenity outcomes.

d) Protect, maintain and improve water quality and terrestrial and aquatic life forms and reduce annual stormwater runoff volumes by identifying a riparian corridor along identified waterways and establishing specific planning controls for land within those corridors.

e) Manage overland flow through the provision of an open space link from East Lane through to Queen Street.

f) Upgrade the existing detention basin in Bennett Park into a feature wetland treatment system to achieve additional treatment for the existing catchment area and enhance the overall amenity of the park.

g) Deliver an additional district treatment system in South Creek parklands to meet stormwater targets for the redevelopment of the Town Centre.

h) Protect Wianamatta South Creek and restore the creek corridor.

i) Minimise water consumption and increase the reuse of grey water, stormwater and rainwater collection on development sites.

j) To minimise disturbance and/or impacts on natural water bodies.

k) To rehabilitate riparian corridors and ensure that width, buffers to development, quality of landscape and diversity of vegetation to support principles of ecological sustainability are provided.

Controls

1. A site-specific Integrated Water Management Plan has been developed for the St Marys Town Centre, as shown in Figure 15 and Figure 16. Development applications must include a stormwater strategy, demonstrating how the development complies with the site-specific Integrated Water Management Plan for the St Marys Town Centre.

2. Development is to be designed in accordance with Council's Stormwater Drainage Specification for Building Developments.

3. On-site stormwater detention is required to be provided on developments in the St Marys Town Centre consistent with Council's Stormwater Drainage Specification for Building Developments.

4. On-site stormwater detention mechanisms are to be placed on the title of the relevant allotment/property to ensure their retention and maintenance.

5. Onsite detention tanks must be designed and sited to minimise impacts on existing and proposed landscaping and canopy trees. Onsite detention tanks are to be located under the driveway where possible.

6. Residential development, and non-residential development is to address relevant requirements under State Environmental Planning Policy (Sustainable Buildings) 2022 or as amended.

7. Development sites that are greater than 500m^2 must achieve a post-development Mean Annual Runoff Volume of no more than 2.3ML/Ha/yr for the development site. Development sites are deemed to have met this requirement by incorporating the following:

    i. Draining a minimum of 95% of all roof area to a rainwater tank.

    ii. Supplying rainwater back to all non-potables uses within the development, including as a minimum, irrigation systems, outdoor taps, swimming pools, toilets, laundry and cooling tower make up water.

iii. Providing a minimum rainwater tank of:

- 1,500L per residential dwelling.
- 1,500L per 100 m^2 of retail/commercial net leasable area.
- 1,500L per hotel room/serviced apartment or equivalent.

iv. Providing passively irrigated street trees along development street frontages at a rate of a minimum 1 tree per 10 linear metres along the street frontage of the development.

The above requirements are additive for mixed use developments. Residential flat buildings must have rainwater tanks connected for internal non-potable uses.

8. Installation of rainwater tanks is to comply with:

   i. relevant standards established by Sydney Water.

   ii. relevant guidelines including Australian Guidelines for Water Recycling Stormwater Harvesting and Reuse 2009.

   iii. Plumbing Code of Australia and relevant Australian Standards.

9. To ensure a continuous and reliable water supply from the rainwater tank and adequate storage to maximise harvesting from rainfalls events, an interconnection to the potable water supply or a maximum storage volume (mains top-up) is to be set when installing the system. For mains top up, the maximum level is to be set to daily usage expected from the tank and set for one day's usage. The system must be designed by a Chartered Professional Engineer (CPEng) (Hydraulic Engineer), who has membership to Engineers Australia.

10. Rainwater tanks are an important element in the Integrated Water Management Plan for the precinct. Dual reticulation is required to allow non-potable uses to be connected to the rainwater tanks, and dual reticulation systems are to have:

    i. One reticulation system servicing drinking water uses, connected to the drinking water supply,

    ii. One reticulation system servicing all non-drinking water uses, such as toilet flushing, irrigation and washing machines. The non-

drinking water system is to be connected to the rainwater tank with drinking water supply backup, and

iii. All connection and metering of water services are to be in accordance with Sydney Water's requirements.

11. New development is to provide passively irrigated street trees for every 10m of road frontage in locations identified in Figure 15. Passively irrigated street trees must incorporate a porous paver passive irrigation system and comply with relevant Council specifications.

12. On large format industrial lots, stormwater treatment is to occur onsite using bio-retention systems or wetlands located in private open space. Where large format industrial lots extend to or include Little Creek within the lot, treatment systems are to be incorporated into riparian zones.

    Note: Separate approvals may be required under the Water Management Act 2000 for activities/land uses in proximity to watercourses. The design of bio-retention systems and wetlands must be in accordance with all relevant state requirements.

13. Development on large format industrial sites must meet the following stormwater quality targets as identified in Table 2.

Table 2: Stormwater quality targets

Stormwater quality targets	
Parameter	Target
Gross pollutants (anthropogenic litter >5mm and coarse sediment >1mm)	90% reduction (minimum) in mean annual load from unmitigated development.
Total suspended solids (TSS)	90% reduction in mean annual load from unmitigated development
Total phosphorus (TP)	80% reduction in mean annual load from unmitigated development.
Total Nitrogen (TN)	65% reduction in mean annual load from unmitigated development.
Operational phase stormwater quality targets – allowable loads	
Parameter	Target- allowable mean annual load from development
Gross pollutants (anthropogenic litter >5mm and coarse sediment >1mm)	<16kg/ha/y

Total suspended solids (TSS)	<80kg/ha/y
Total phosphorus (TP)	<0.3kg/ha/y
Total Nitrogen (TN)	<3.5kg/ha/y

14. Little Creek channel is to be restored to include more geomorphic complexity to the channel and diversity in the in-stream habitat. A 10m wide channel for Little Creek is to be reinstated, with a 10m wide riparian corridor to the top of bank on both sides of Little Creek, providing for a minimum 30m wide riparian zone, expanding to wider than this where existing vegetation is present along Little Creek.

15. A riparian corridor of 40m on average on both sides of South Creek is to be reinstated, which extends into large format industrial lots long South Creek.

16. Refer to the city-wide Water Management section of this DCP for additional requirements regarding watercourses, wetlands and riparian corridors.

Figure 15: Integrated water management plan

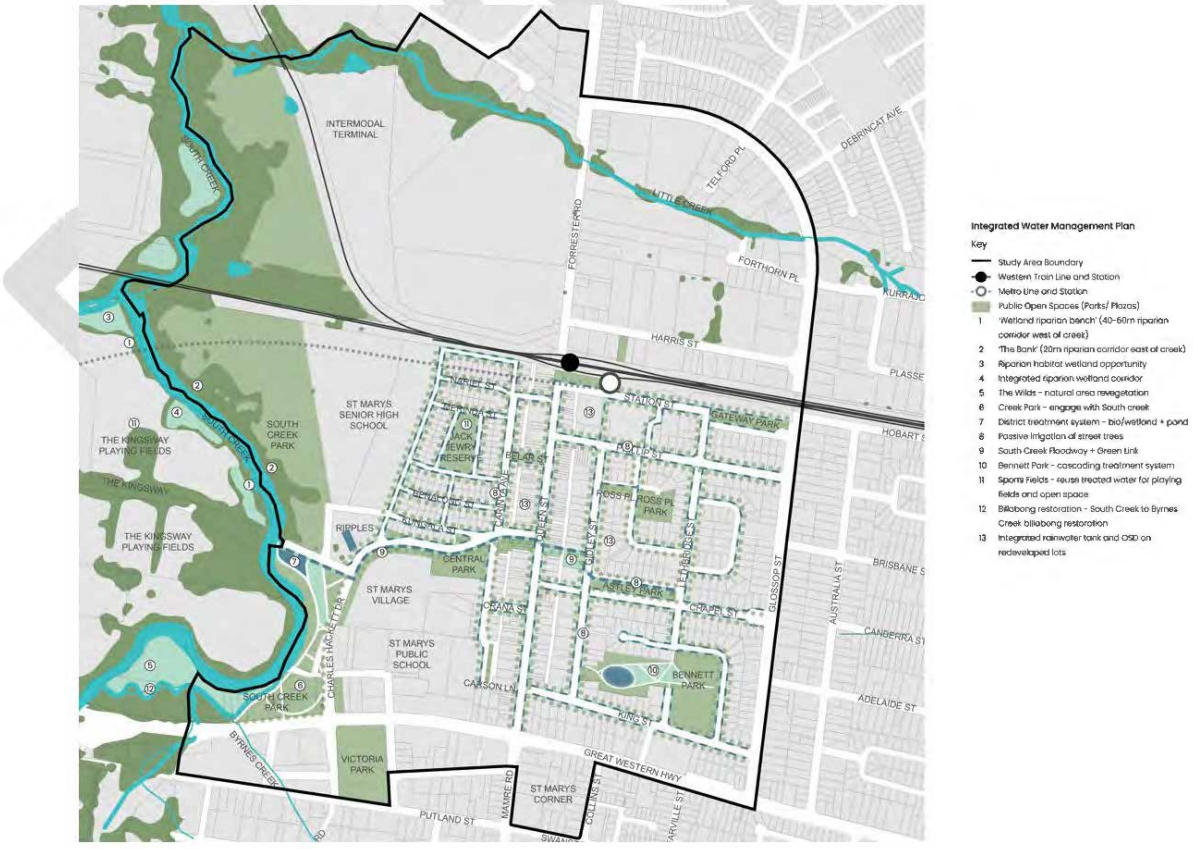
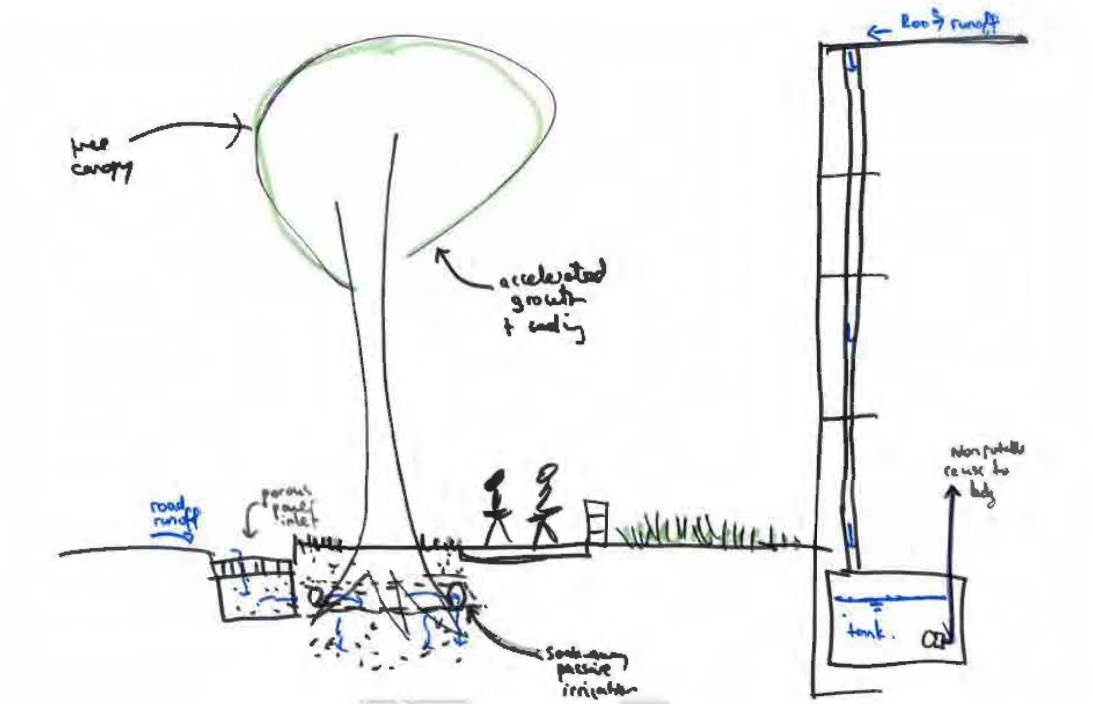


Figure 16: Indicative sketch of section of porous paver passive irrigation system



6. Access and movement

Application

This section applies to all development in the St Marys Town Centre.

This section identifies the location and alignment of the future planned street network. The majority of local infrastructure and amendments to the street network identified in this section are to be delivered under the St Marys Town Centre Development Contributions Plan and are likely to be staged as redevelopment occurs.

New development is to consider the future planned street network as set out in this section with regard to access and design, to ensure that the public domain is prioritised and respected as part of the design of development.

6.1. Active Transport

Objectives

a) To promote walking, cycling and public transport as the preferred modes of travel.

b) To identify the location and alignment of key cycleways, share paths and pedestrian walking routes, connecting key activity nodes, public open space and residential areas.

c) To identify the location of desired share paths and walking routes as redevelopment occurs.

d) To create a safe, accessible and convenient active transport network.

e) To increase walking and cycling connections to the St Marys transport interchange from the St Marys Town Centre and surrounding residential areas.

f) To prioritise an east-west walking and cycling network that connects existing and proposed public open space, public plazas and arcades within the St Marys Town Centre.

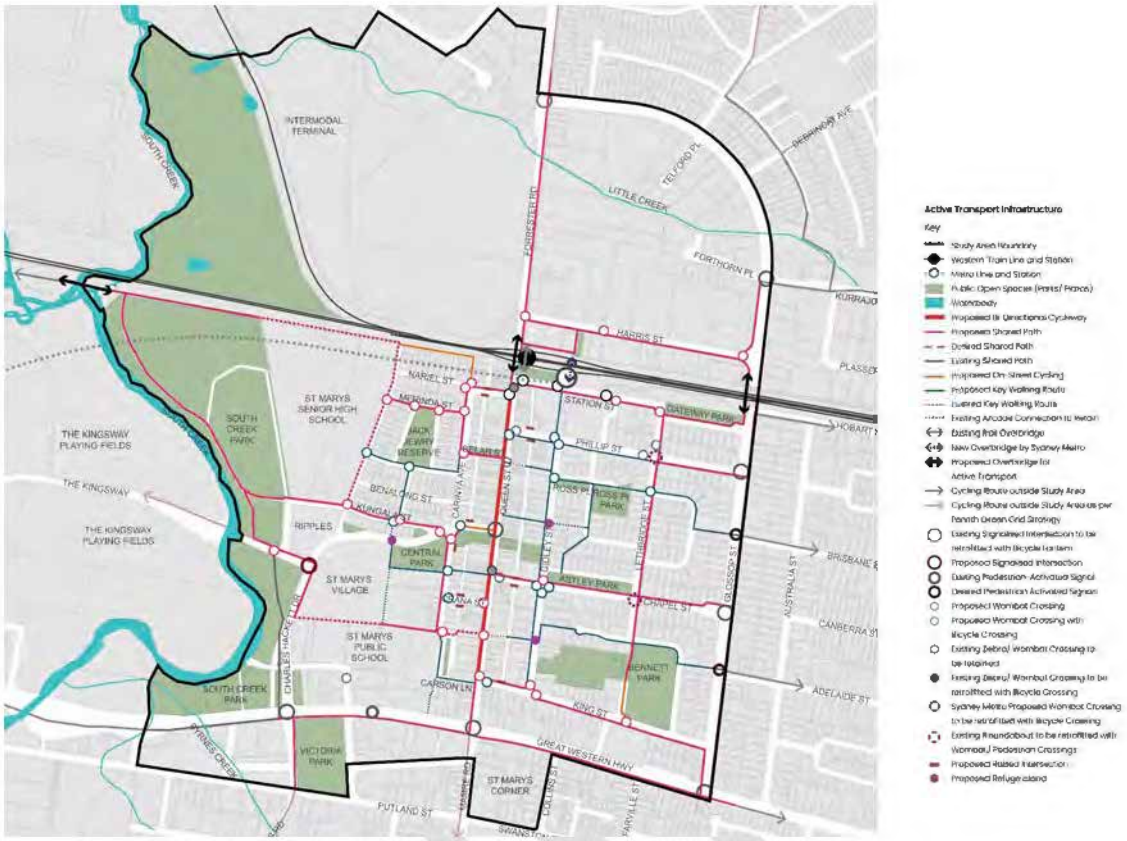
Controls

1) The location and alignment of cycleways and share paths is to be generally in accordance with Figure 17.

2) The design and width of cycleways and share paths vary depending on location and are to be consistent with the relevant road cross-section and widths identified in Section 6.4.

3) The location of pedestrian and bicycle crossings is to be generally in accordance with Figure 17.

Figure 17: Active transport infrastructure



6.2. Pedestrian connections and through-site links

Objectives

a) Improve pedestrian access and permeability within the St Marys Town Centre.

b) Retain existing through-site links and pedestrian connections including lanes and arcades.

c) Identify the location of new pedestrian connections and through-site links.

d) Identify opportunities for desired through-site links as redevelopment occurs.

e) Encourage active street fronts along the length of pedestrian through-site links.

f) Ensure that pedestrian connections and through-site links are designed to be accessible to all, safe and provide a high level of amenity.

g) Retain and develop lanes as useful and interesting pedestrian connections as well as for service access.

Controls

1. Pedestrian connections and through-site links are to be provided as shown in Figure 17.

2. Existing publicly and privately-owned pedestrian connections and through-site links are to be retained.

3. Pedestrian through-site links are to:

    i. Provide an accessible path of travel which is a minimum 6m wide for its full length (new through-site links).

    ii. Be clear of all obstructions, including columns, stairs etc.

    iii. Be open to the sky for the length of the through-site link.

    iv. Be publicly accessible 24-hours a day 7-days a week and direct, allowing visibility along the full length of the through-site link to the public domain.

    v. Have active frontages or a street address and promote opportunities for natural surveillance.

    vi. Include signage at street entries to advise that the through-site link is publicly accessible and identify the street or place to which it connects.

4. Existing publicly and privately owned pedestrian connections and through-site links are to be retained.

5. Pedestrian arcades are to:

    i. Provide an accessible path of travel which is a minimum 4m wide for its full length and clear of all obstructions, including columns, stairs etc.

    ii. Be direct and publicly accessible for pedestrians during business trading hours.

    iii. Have active frontages on either side for the full length

iv. Incorporate design principles of Crime Prevention Through Environmental Design (CPTED).

v. Where practical, have access to natural light for at least 30% of the length.

vi. Where enclosed, have clear glazed entry doors to at least 50% of the entrance.

6. Residential development (or a residential component of a development) that adjoins a site-through link is to ensure that habitable rooms face the through-site link to promote passive surveillance of through-site link.

6.3. Street network and design

Objectives

a) To create a 'place-based' street network aligned with the NSW Movement and Place Framework.

b) To prioritise walking, cycling and public transport, and promote health and environmental outcomes.

c) To provide a high level of amenity and safety for all users.

d) To ensure that street design provides sufficient space for street trees for shade, cooling and visual amenity within the public domain.

e) To implement a peripheral vehicular movement network for through traffic and buses to protect and enhance the civic function of Queen Street as a destination high street.

f) To retain the service function of East Lane and West Lane.

g) To identify minimum widths of footpath and share paths.

Controls

1. Streets are to be designed generally in accordance with indicative cross-sections contained within Section 6.4 and Section 6.5.

2. Design and width of streets vary, having regard for existing conditions, location, and desired movement and place function of streets. The desired movement and place function of streets is identified in Table 3.

Table 3: Street typologies

Street environment	**Type** (Refer to Figure E15.12 for location)	**Typical movement and function**
Main street	**Destination high street**	Vibrant with an intense sense of place, supported by multi-modal movement at low speeds and volume. Attractive and popular places for gathering and retail, civic and cultural activity. Community, business and tourism destinations.
	Arterial high street	Lively street that supports high place intensity and a high level of multi-modal movement. Both the movement spine through and the heart of urban communities.
	Connector avenue	Moderate place intensity and movement function that connects neighbourhoods, urban centres or enterprise areas.
	Transit street	Prioritises active and public transport mobility, restricts private vehicle use in lively and high amenity place.
Main road	**Principal arterial**	Major movement corridor for travel within metropolitan areas at lower speed than motorways.
	Secondary arterial (regional road)	Major movement functions that connect principal arterial roads, urban centres or enterprise areas.
Local street	**Urban centre street**	Streets in the centre of towns and cities with destinations of local or regional significance but are not the high street.
	Connector street	Connects neighbourhoods, linking residential areas with local destinations, such as centres, schools, and transport hubs.
	Enterprise street	Serving industrial and commercial areas, catering to people who work in

		the area as well as those who deliver freight and servicing.
	Yield street	Very quiet residential street for living activities and movement at low speeds and volumes, with a carriageway that requires people driving vehicles to yield to one another to pass.
	Residential way	Very quiet residential street inviting for people to spend time in, often with informal layout and a sharing of space. Low speed and volume of movement.
Civic space	Transit mall	Vibrant high amenity street, shared with on-street transit where people can easily interchange between modes and enjoy civic activities.
	Service lane	Aligned to the rear of mixed-use properties to provide service access and facilitate continuous active frontages on parallel streets.
	Civic high street	Vibrant street maximising space for civic enjoyment at the heart of a community's social and cultural life. High quality public domain for walking, shopping, playing and cultural activities.

3. As redevelopment occurs and street upgrade works, as identified in this section and the St Marys Town Centre Development Contributions Plan are carried out, vehicular and bus traffic shall be redirected to circulate around the St Marys Town Centre, as indicated in Figure 19. Note: this will require further consultation with Transport for NSW and relevant local bus operators.

4. In consultation with Transport for NSW and relevant local bus operators, bus stops on Queen Street (between Phillip Street and King Street) shall be relocated to Carinya Avenue and Gidley Street to support peripheral bus and vehicle movement.

5. Minimum width of footpaths and share paths are identified in Figure 20. Minimum widths are not inclusive of street tree/landscaping area. For Queen Street, Station Street, Carinya Avenue South and Chapel Street West, the width includes private front setback space.

6. All cycleways required by this chapter and as shown in Figure 17 are to be a minimum of 1.5m wide and are to be provided on street. Refer to indicative road cross-sections in Section 6.4 and Section 6.5 of this chapter.

7. All landscaping as required within the verge shall be in accordance with Figure 21 to Figure 50.

8. Notwithstanding the indicative cross-sections within Table 4, all travel lanes are to be a minimum of 3m.

Figure 18: Movement and place functions of streets

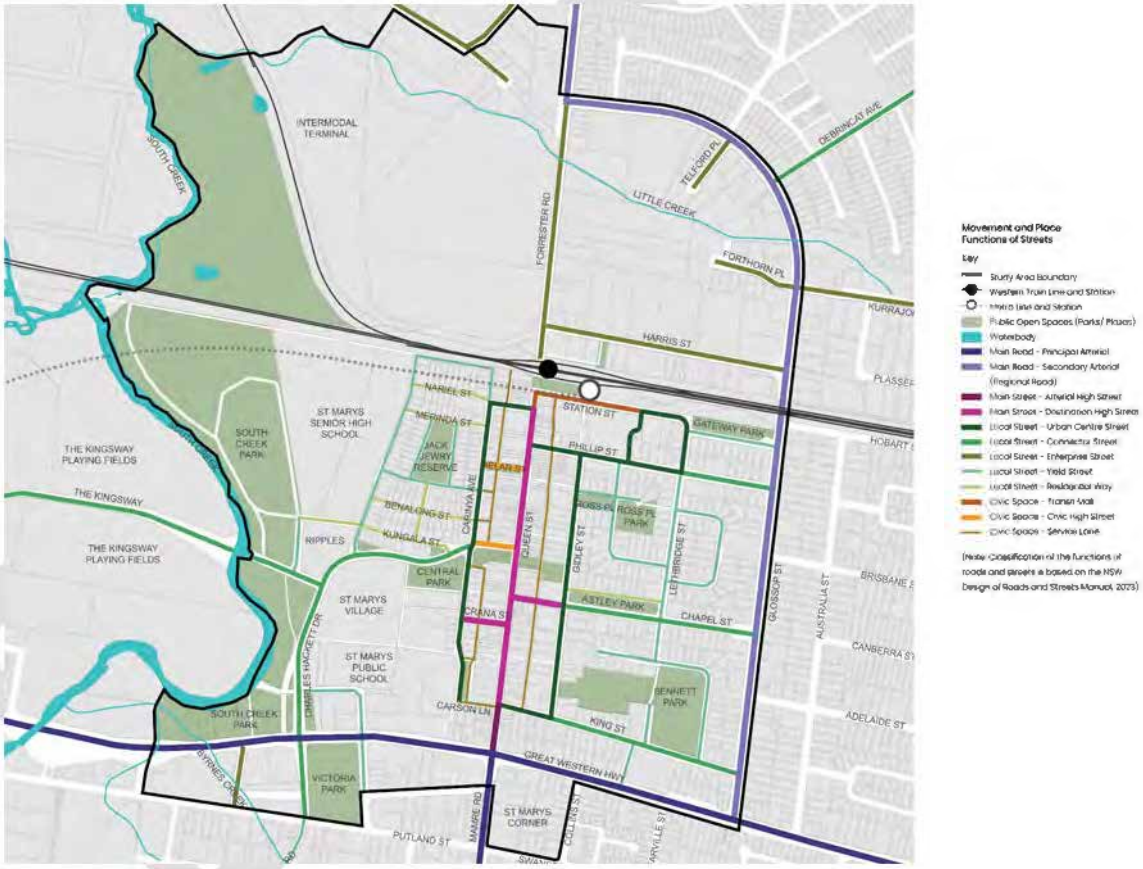


Figure 19: Vehicular movement network

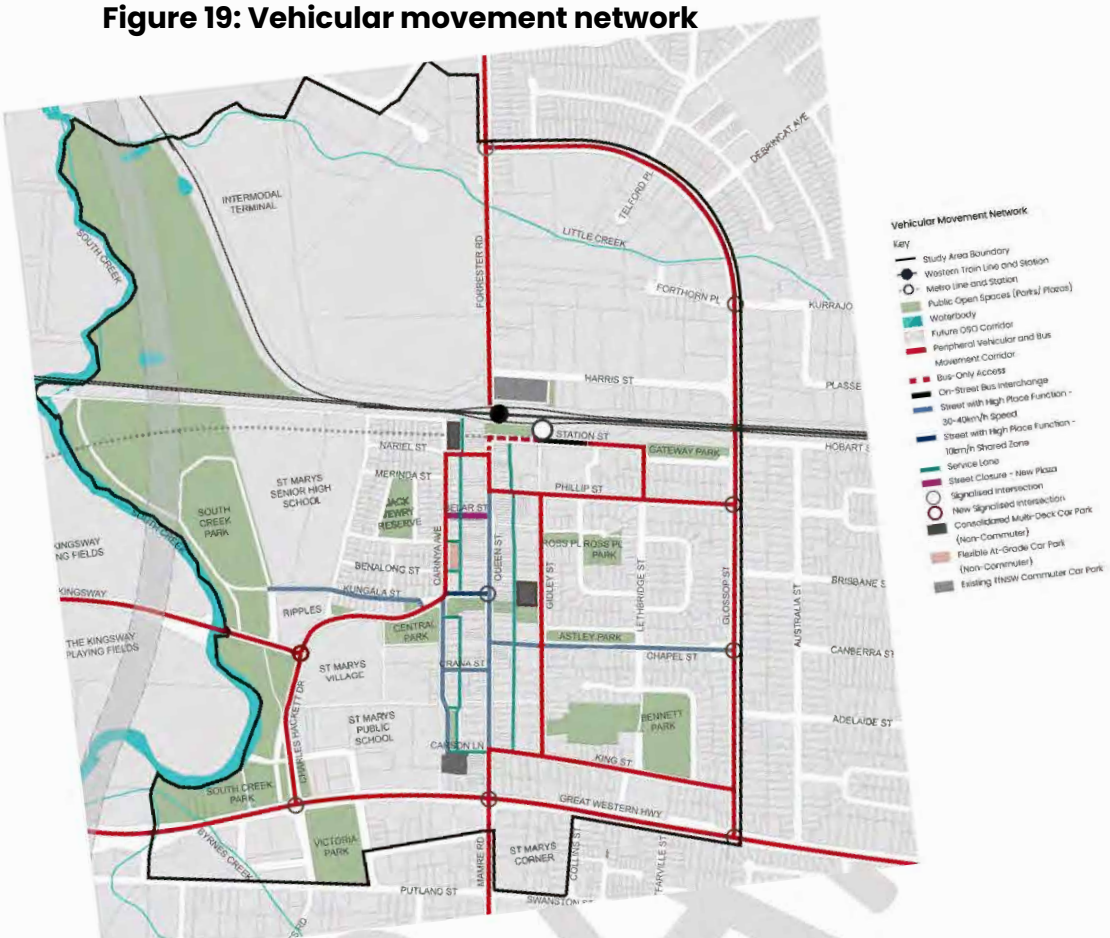
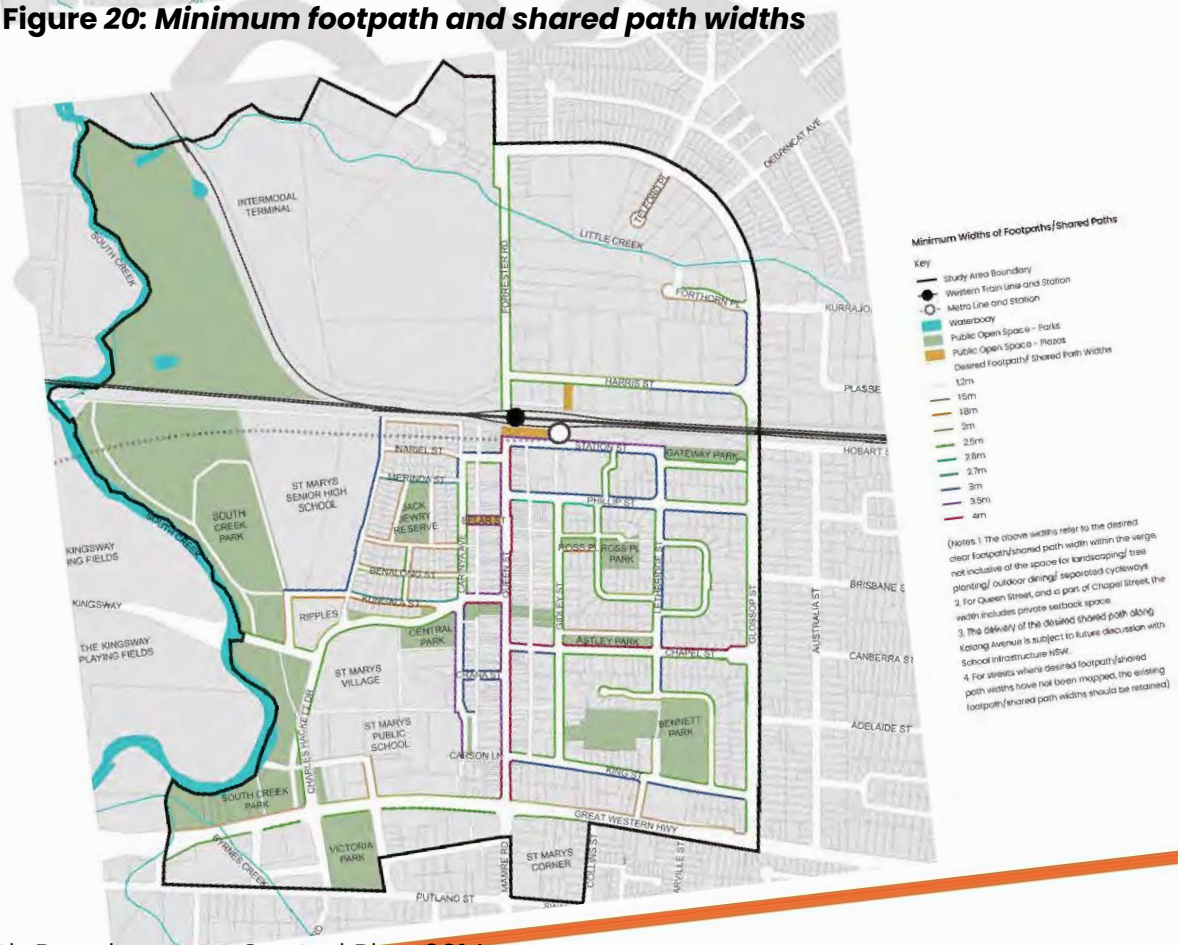


Figure *20: Minimum footpath and shared path widths*



6.4. Indicative street cross sections

Table 4: Road/street composition

Street / Road Type	Verge	Pavement			Road reserve	Footpath/ share path (incl. within verge)	Figure ref.
		Kerbside lane (parking)	Min. travel lane	Cycle-way			
Major amendments (kerb and/or road works)							
Queen Street (Between Nariel and Station Streets)	6.7m (west) 7.8m (east)**	-	As existing	-	20.1m*	2.5m (west)	21
Queen Street (Between Phillip and Nariel Streets)	6.4m (west) 7.7m (east)**	1 x 3.2	3.2m & 3.5m	2x 1.5m (west)	20.1m*	3.5m (west) 4m (east)***	22
Queen Street (Between King and Phillip Streets)	6.7m (west) 7.7m (east)**	2 x 2.2	2 x 3m	2x 1.5m (west)	20.1m*	3.5m (west) 4m (east)***	23
Queen Street (Between Great Western Highway and King Street)	7.2m (west) 7.5m (east)**	As existing	As existing	-	20.4m*	3m (west) 4m (east)***	24
Charles Hackett Drive (Between Carinya Avenue and Queen Street)	5.1m (west) 8.5m (east)	1 x 3.2m	1 x 3.5m	-	20.3m	3.5m (west) 4m (east)	25

Street / Road Type	Verge	Pavement			Road reserve	Footpath/ share path (incl. within verge)	Figure ref.
		Kerbside lane (parking)	Min. travel lane	Cycle-way			
Major amendments (kerb and/or road works)							
Kungala Street(Between Kalang Avenue and Charles Hackett Drive)	3.7m (north) 3.1m (south)	1 x 2.5m	1 x 3.5m	-	12.8m	2.7m (north) 1.8m (south)	31
Kungala Street (Between Creek Road and Kalang Avenue)	5.5 (north) 3.1m (south)	1 x 2.5m	1 x 3.5m	-	14.6m	3m (north) 1.8m (south)	30
Belar Street (Between Carinya Avenue and Queen Street)	2 x 5m	-	-	-	20m	2 x 3.5m	32
Chapel Street (Between Queen Street and Gidley Street)	7.5m (north) 6.5-6.9m(south)	-	2 x 3m	-	17m*	4m (north) 3m (south)***	29
Carinya Avenue (Between Carson Lane and Charles Hackett Drive)	8m (west) 4.5m (east)**	1 x 2.5m	2 x 3m	-	18m*	3.5m (west) 3m (east)	34
Carinya Avenue (Between Charles Hackett Drive and Nariel Street)	3.6m (west) 4m (east)	2 x 3m	2 x 3.2m	-	20m	2.5m & 3m (west) 2.5m & 2m (east)	33

Street / Road Type	Verge	Pavement			Road reserve	Footpath/ share path (incl. within verge)	Figure ref.
		Kerbside lane (parking)	Min. travel lane	Cycle-way			
Major amendments (kerb and/or road works)							
Benalong Street (Between Kalang and Carinya Avenue)	2.7m (north) 3.5m (south)	1 x 2.5m	1 x 3.5m	-	12.2m	1.5m (north) 2m (south)	35
Blair Avenue (Between Phillip and Station Streets)	2 x 4.3m	-	2 x 3.2m	-	15m	2 x 2.5m	36
Station Street (Between Queen Street and Gidley Street through-site link)	As existing	-	2 x 4m	-	As existing	6m, 3m	26
Station Street (Between Gidley Street through site link and Blair Avenue extension)	6.7m	2 x 3.5m	2 x 4m	-	As existing	6m, 3m	27
Station Street (Between Blair Avenue extension and Lethbridge Street)	7.4m (north) 3.5m (south)	-	3.2m, 3.5m, 2.5m(taxi bay)	-	As existing	3.5m, 3m	28

Street / Road Type	Verge	Pavement			Road reserve	Footpath/ share path (incl. within verge)	Figure ref.
		Kerbside lane (parking)	Min. travel lane	Cycle-way			
Major amendments (kerb and/or road works)							
Merinda Street (Between Kalang and Carinya Avenues)	2.2m (north) 3.7m (south)	1 x 2.5m	1 x 3.5m	-	11.9m	1.2m (north) 2.7m (south)	37
Taroona Avenue (Between Kungala and Waratah)	3.7m (north) 2.6m (south)	1 x 2.5m	1 x 3.5m	-	12.3m	2.5m (north) 1.5m (south)	38

Notes:

All measurements in **Table 4** are in metres.

All measurements within **Table 4** are indicative only and in the event of any inconsistency, the accompanying figure within Major amendments (kerb and/or roadworks) section takes precedence.

* Indicates road reserve does not include private setbacks.

** Indicates both verges include private setbacks.

*** Indicates one or both areas are partly or fully within private setbacks.

6.5 Indicative Street cross-sections - figures

Major amendments (kerb and/or roadworks)

Figure 21: Queen Street (between Nariel and Station Streets)

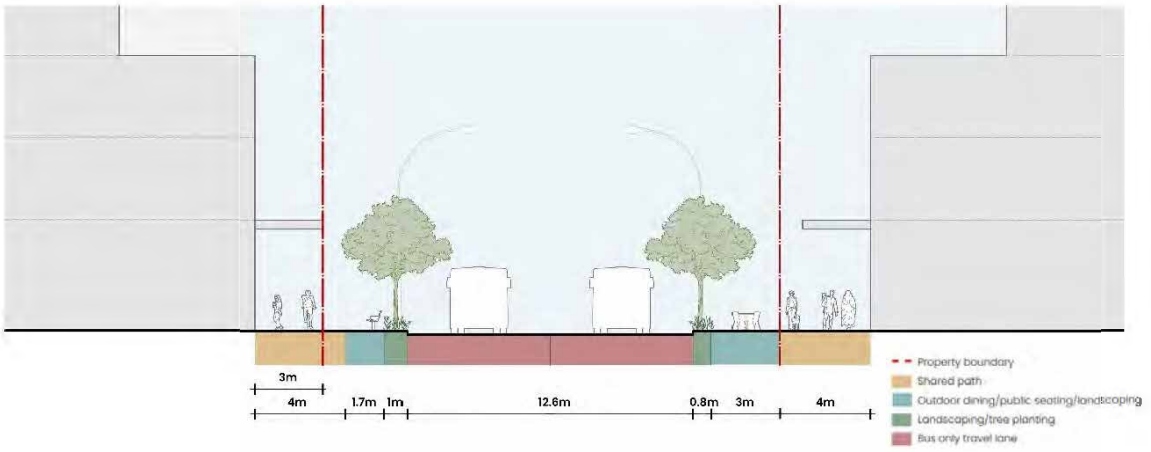


Figure 22: Queen Street (between Phillip and Nariel Streets)



Figure 23: Queen Street (between King and Phillip Streets)

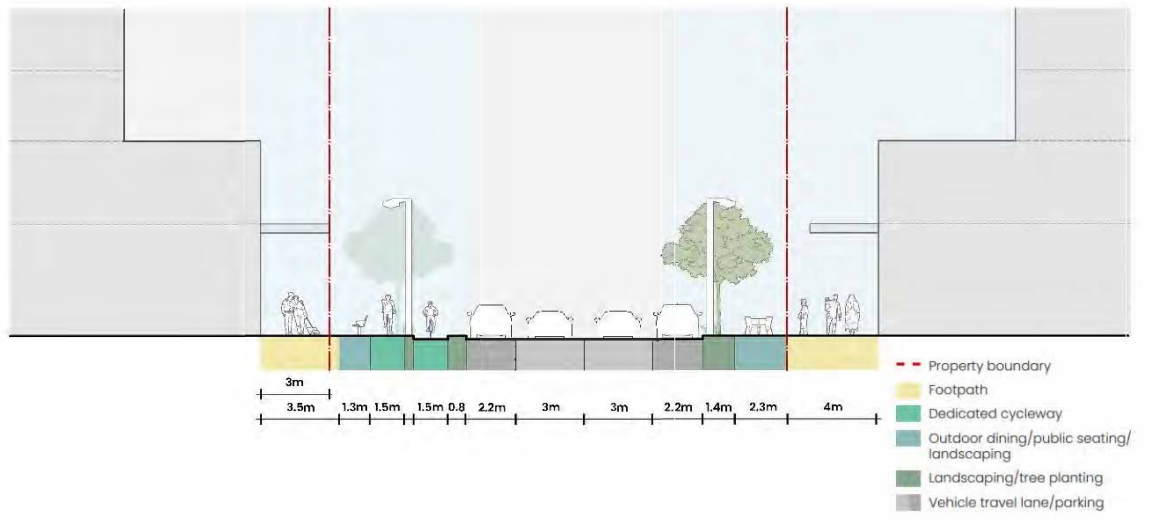


Figure 24: Queen Street (between Great Western Highway and King Street)

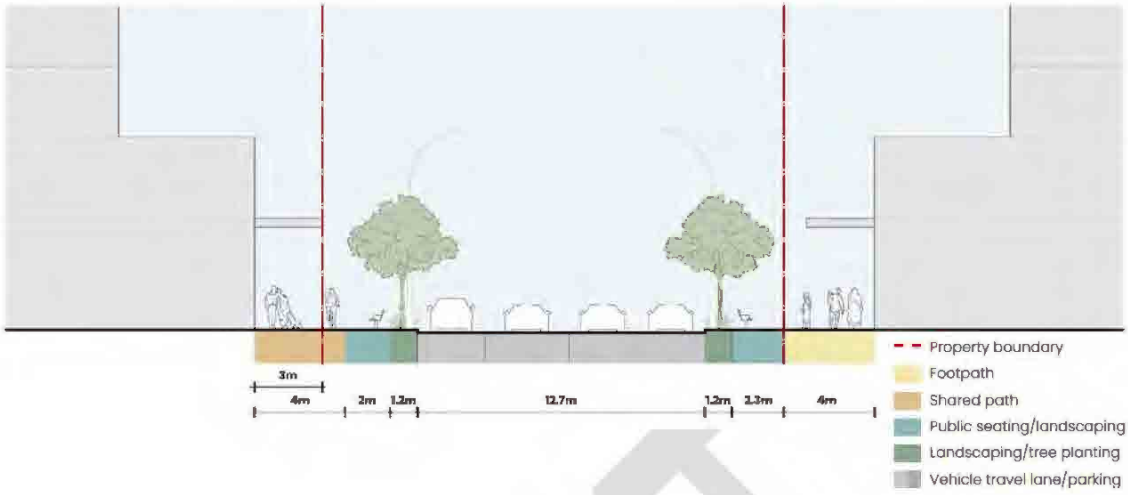


Figure 25: Charles Hackett Drive (between Carinya Avenue and Queen Streets)

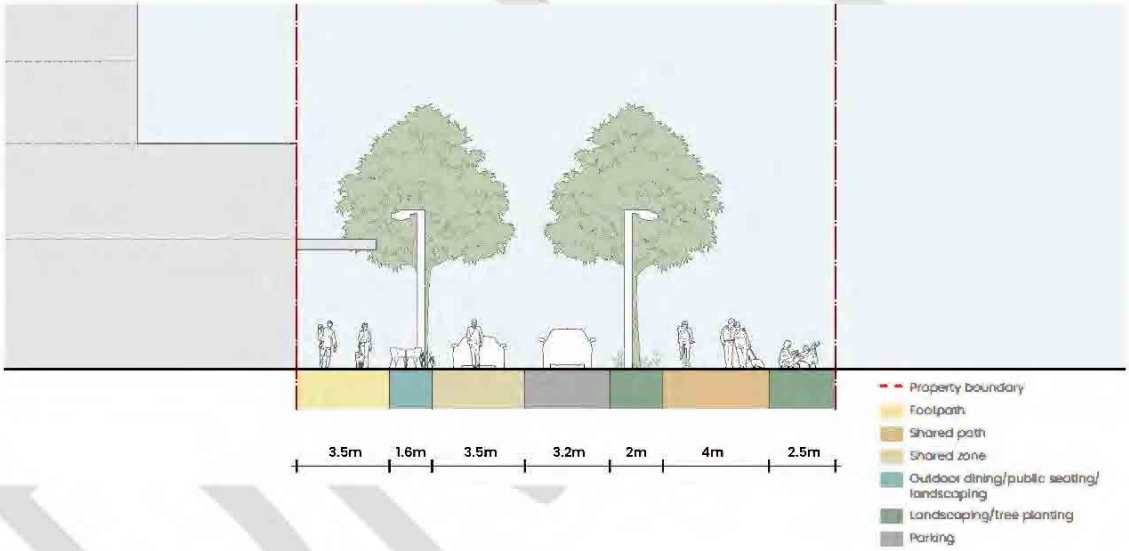


Figure 26: Station Street (between Queen Street and Gidley Street through-site link)

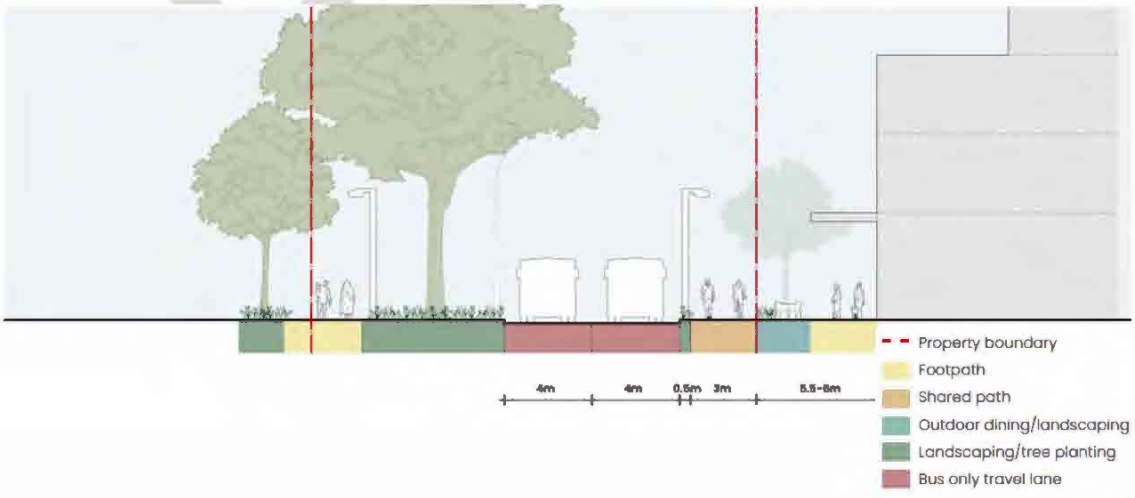


Figure 27: Station Street (between Gidley Street through-site link and Blair Avenue)

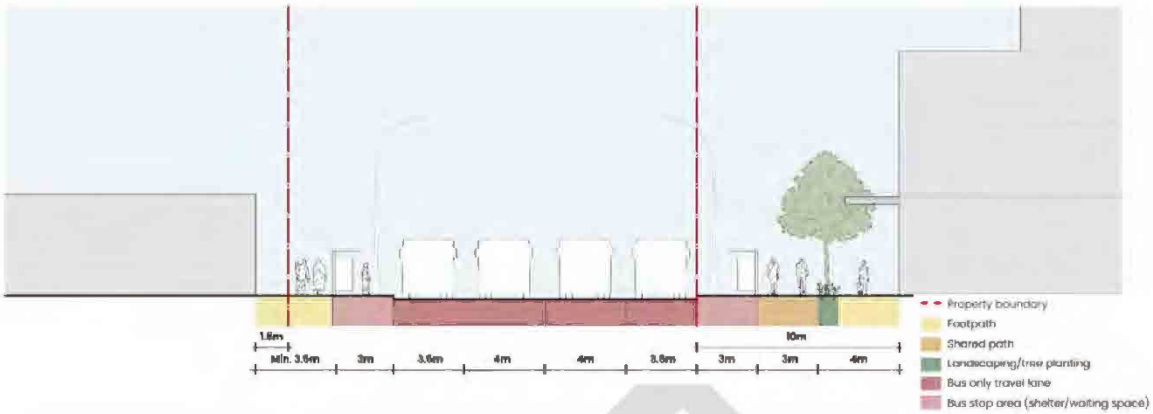


Figure 28: Station Street (between Blair Avenue and Lethbridge Street)

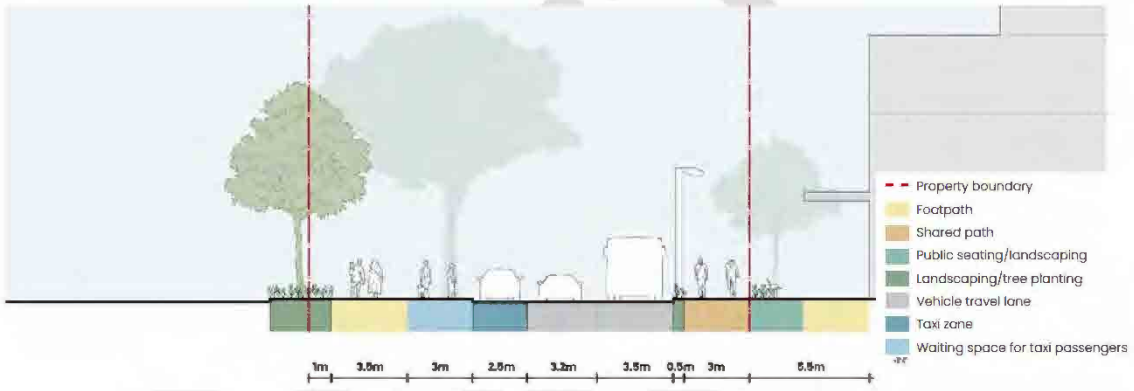


Figure 29: Chapel Street (between Queen and Gidley Streets)

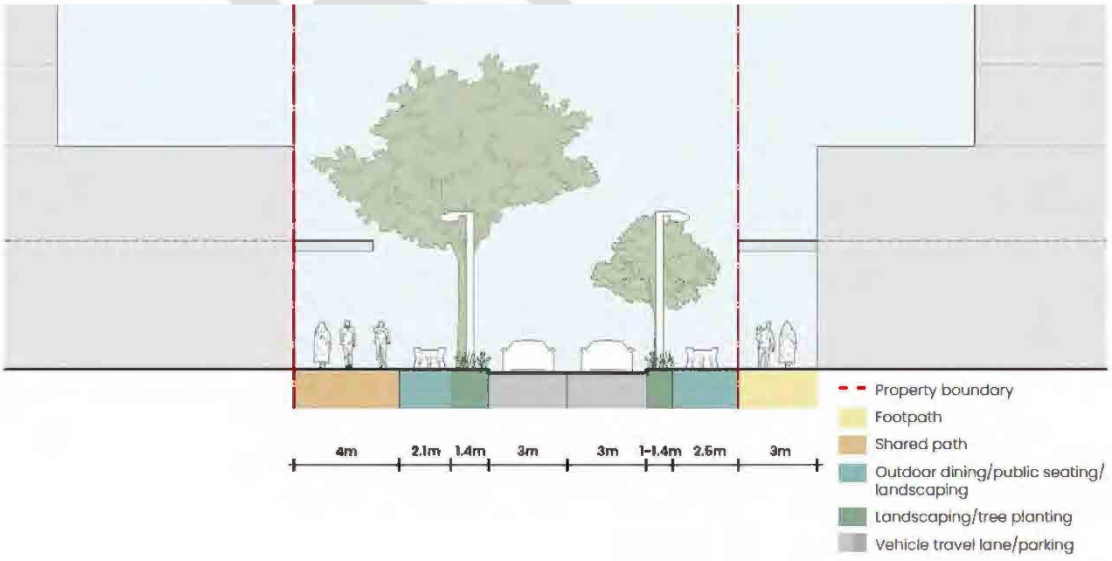


Figure 30: Kungala Street (between Creek Road and Kalang Avenue)

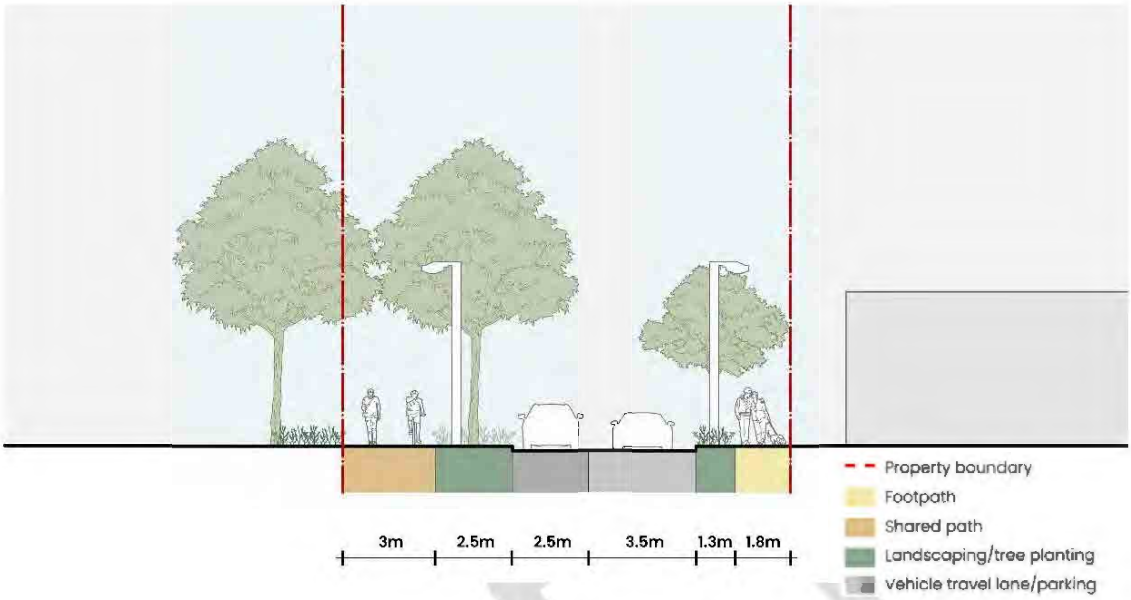


Figure 31: Kungala Street (between Kalang Avenue and Charles Hackett Drive)

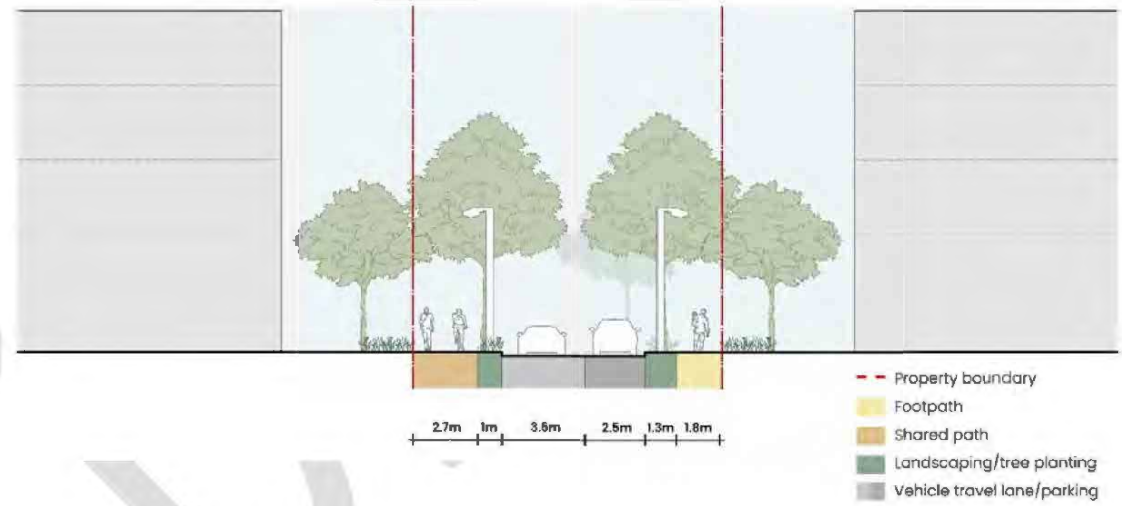


Figure 32: Belar Street (between Carinya and Queen Streets)

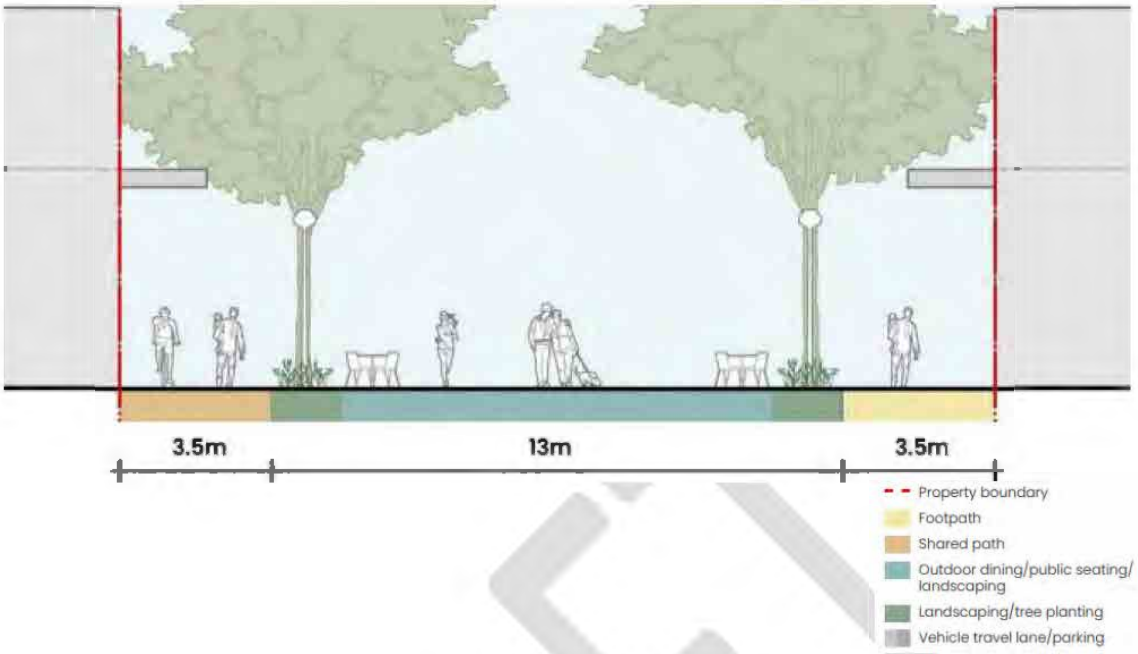


Figure 33: Carinya Avenue (between Charles Hackett Drive and Nariel Street)



Figure 34: Carinya Avenue (between Carson Lane and Charles Hackett Drive)

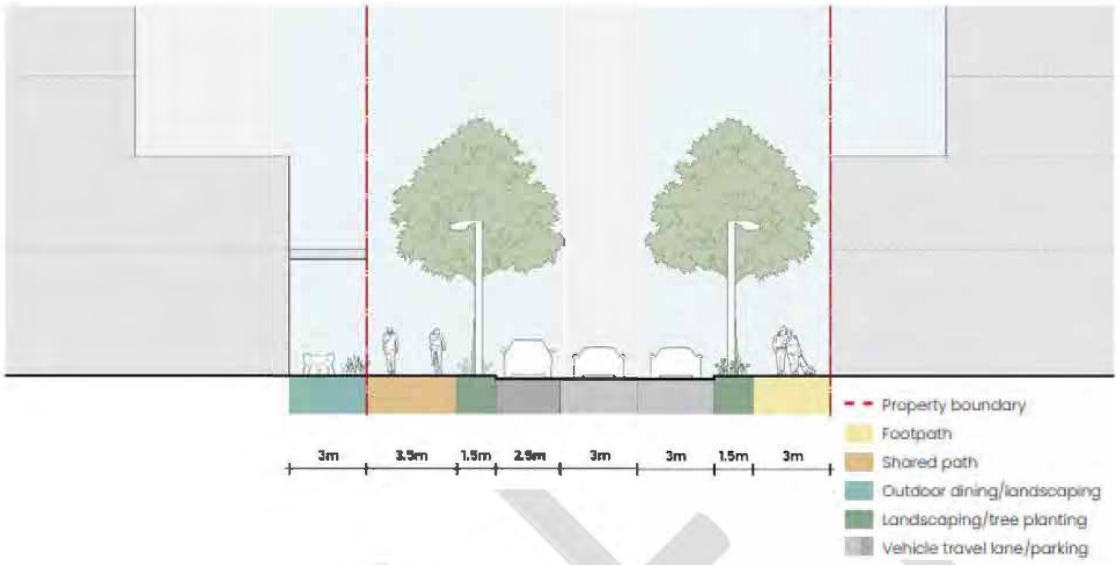


Figure 35: Benalong Street (between Kalang and Carinya Avenue)



Figure 36: Blair Avenue (between Phillip and Station Street)

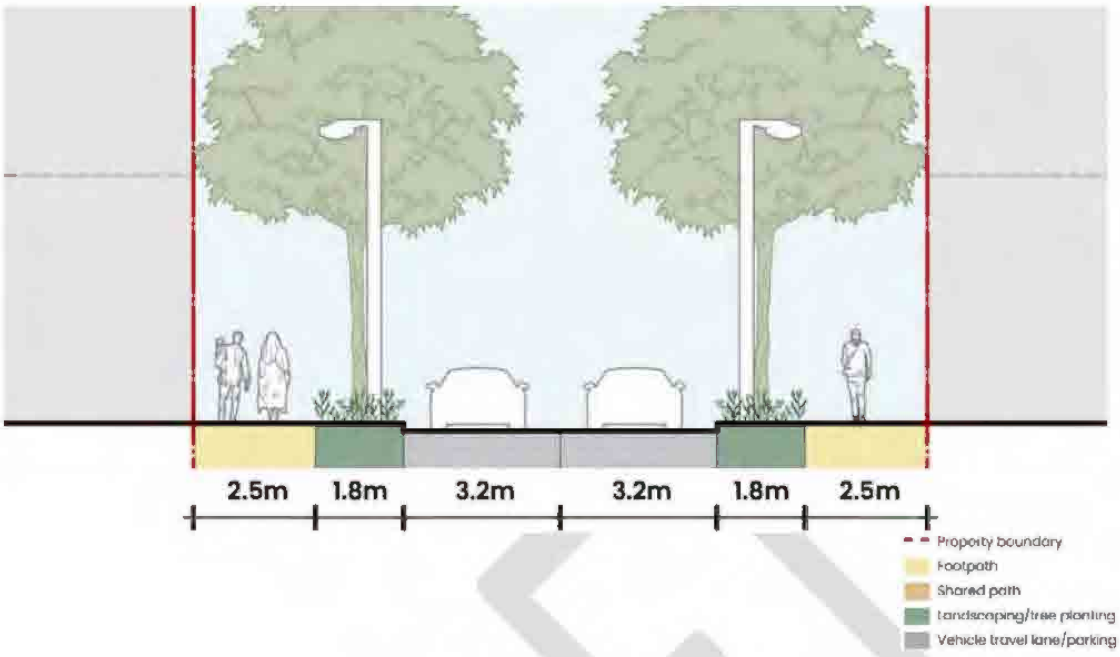


Figure 37: Merinda Street (between Kalang and Carinya Avenue)

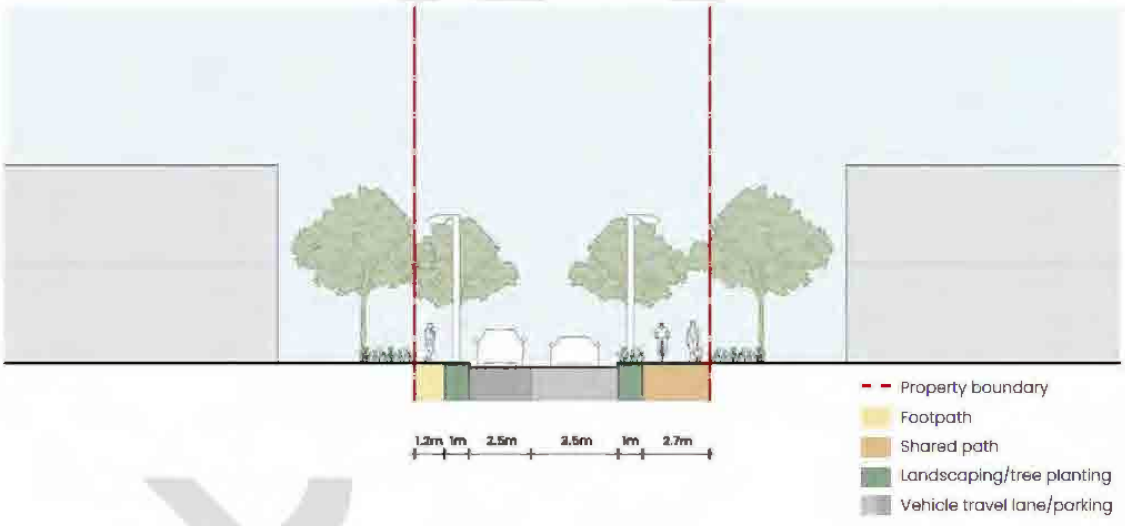


Figure 38: Taroona Avenue (between Kungala and Waratah Streets)



Minor amendments (verges)

Figure 39: Lethbridge Street (between Phillip and Station Streets)

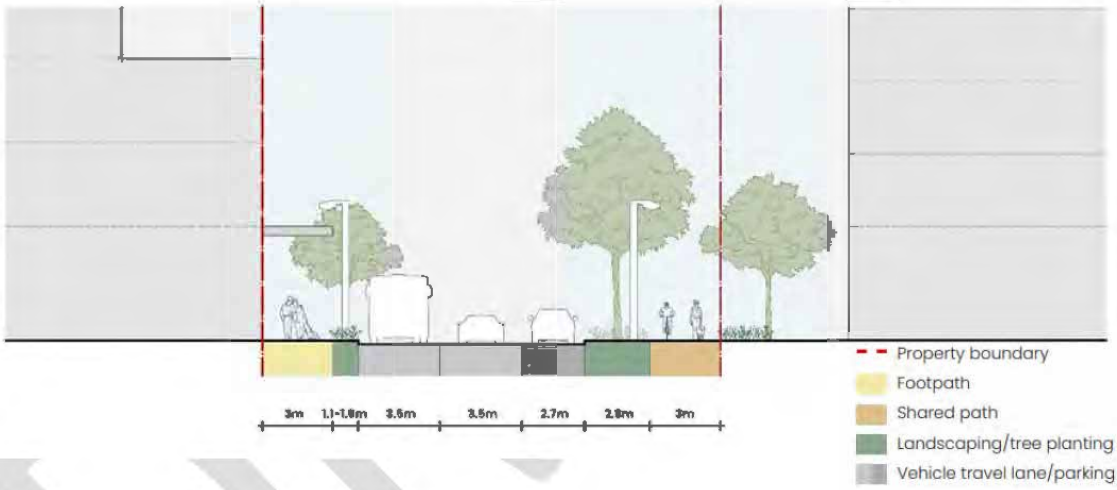


Figure 40: Chapel Street (between Lethbridge and Glossop Streets)

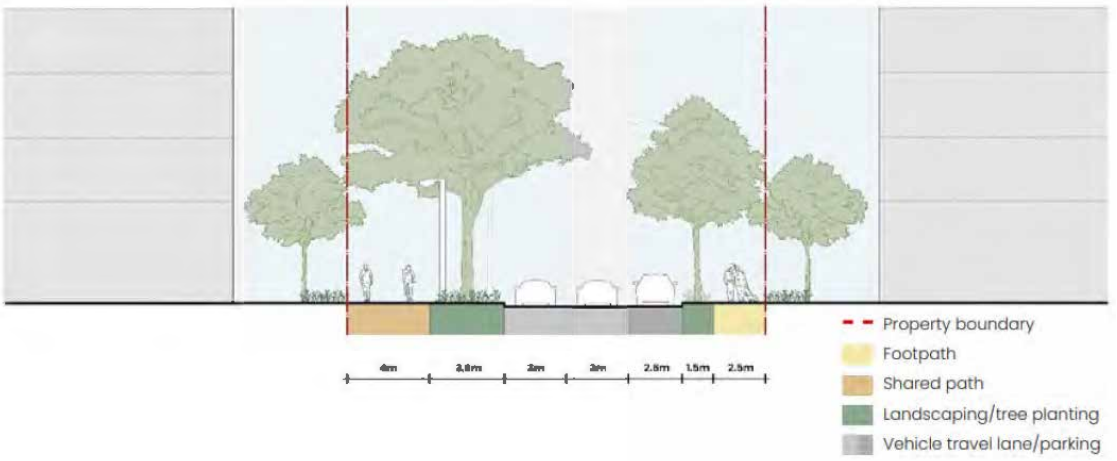


Figure 41: Chapel Street (between Gidley and Lethbridge Streets)

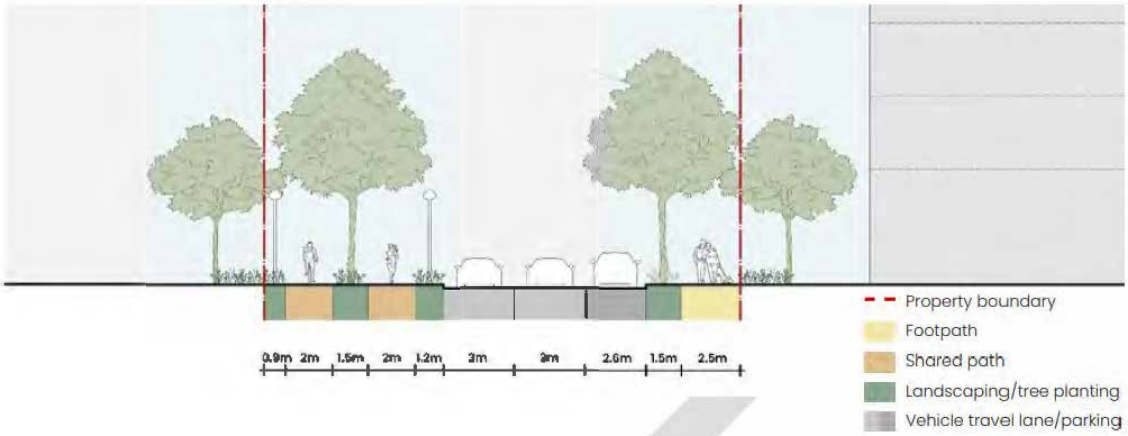


Figure 42: Gidley Street (between King and Phillip Streets)



Figure 43: King Street (between Gidley and Glossop Streets)

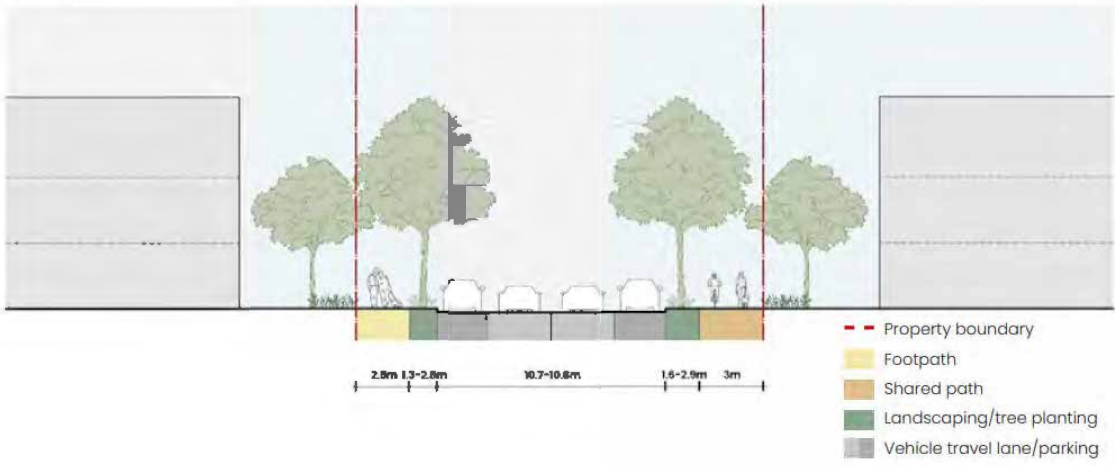


Figure 44: King Street (between Queen and Gidley Streets)

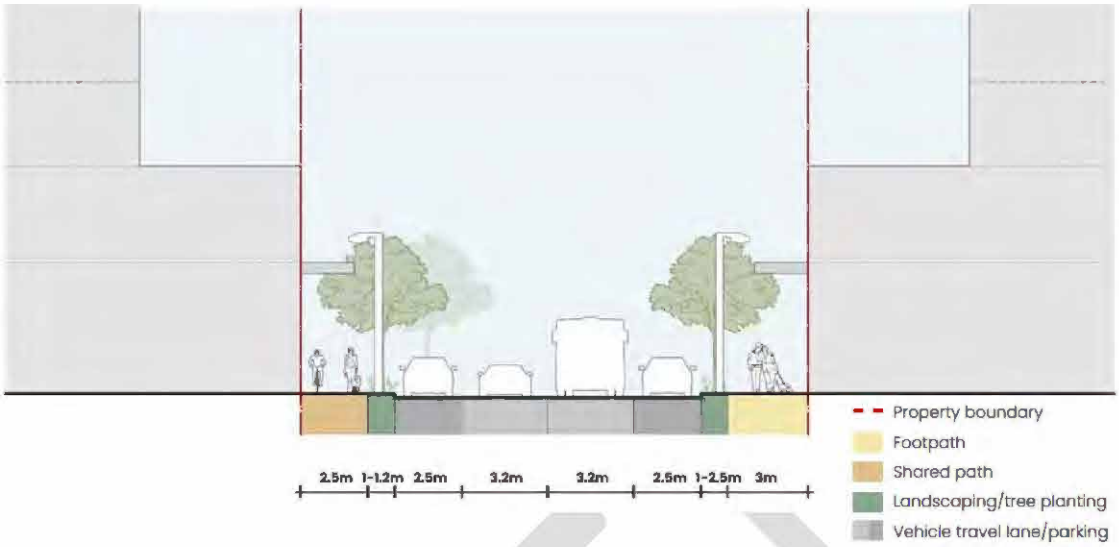


Figure 45: Nariel Street (between Carinya Avenue and Queen Street)

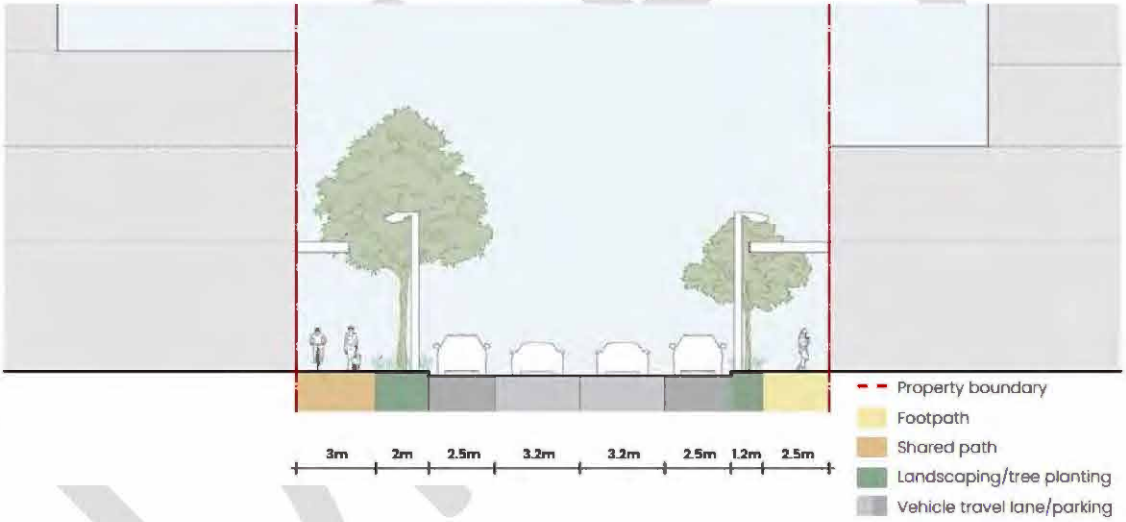


Figure 46: Crana Street (between Carinya Avenue and Queen Street)

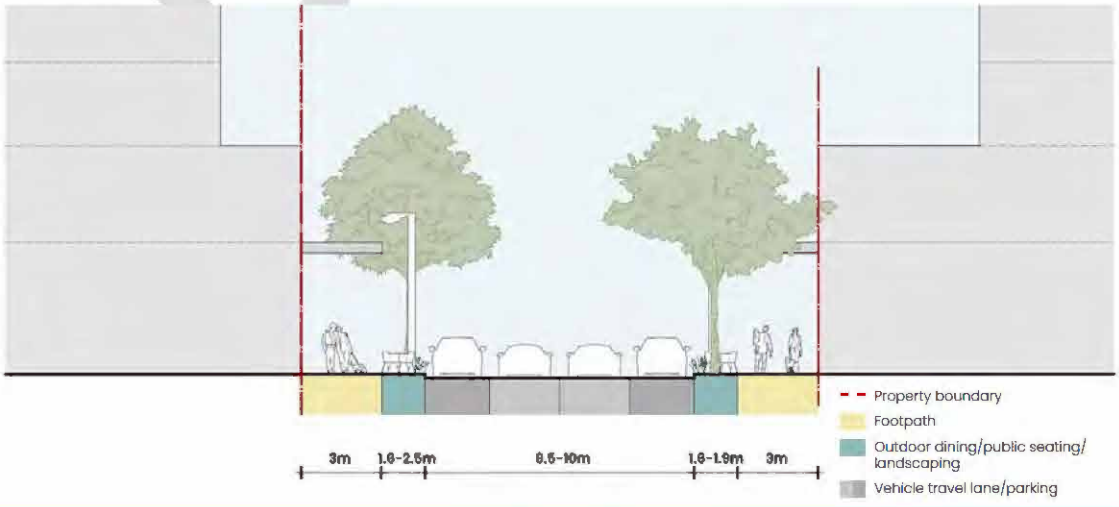


Figure 47: Phillip Street (between Lethbridge and Glossop Streets)

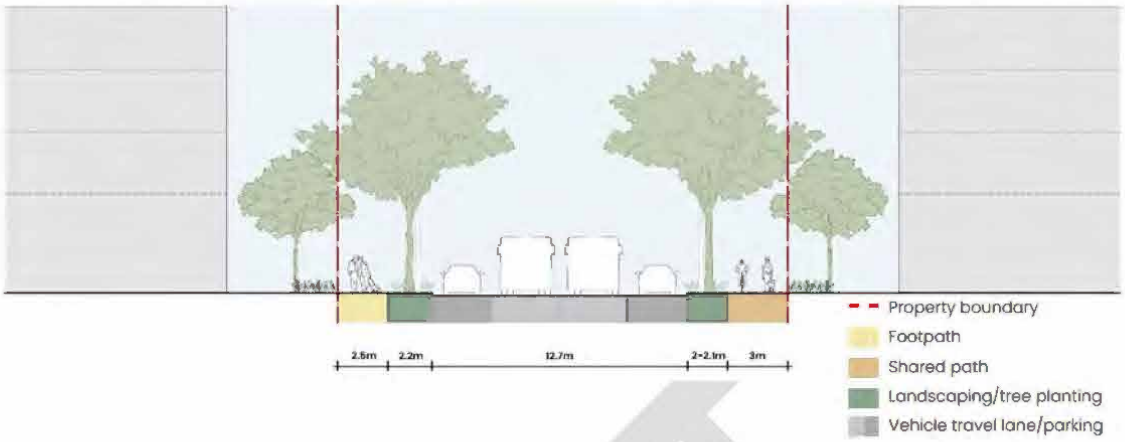


Figure 48: Harris Street (between Forrester and Glossop Streets)

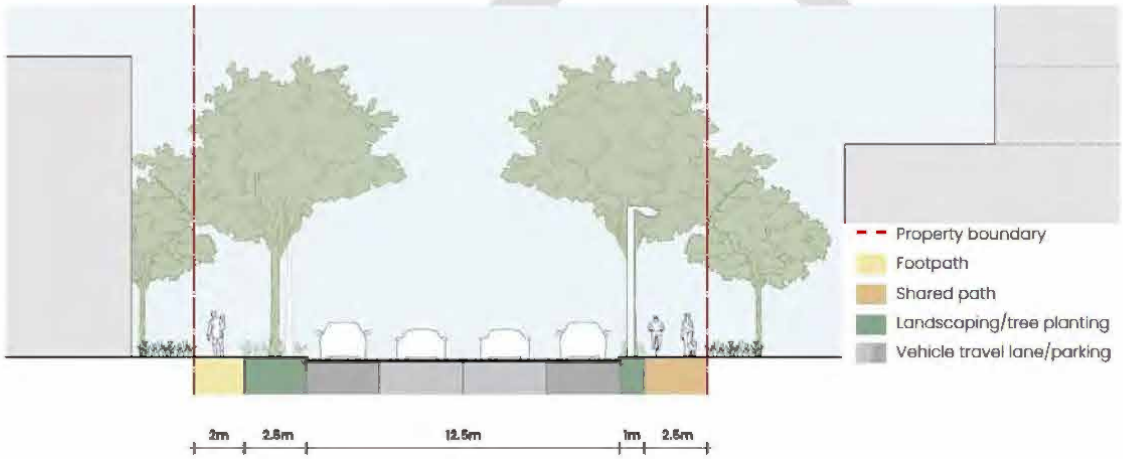


Figure 49: Phillip Street (between Queen and Lethbridge Streets)

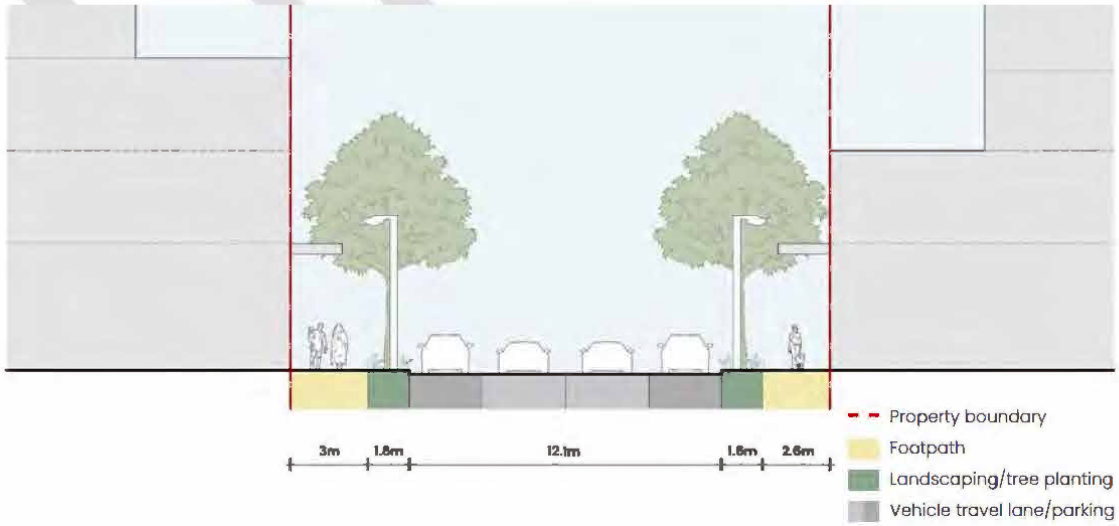


Figure 50: Harris Street (between Forrester and Glossop Streets)



7. Mixed use and commercial development

Application

This section provides objectives and controls to guide the following development:

- Mixed use development in the St Marys Town Centre.
- Commercial development in the Commercial Core Precinct in the St Marys Town Centre.

Objectives

a) Encourage a variety of mixed use and commercial developments in the St Marys Town Centre.

b) Create lively streets and public spaces in the St Marys Town Centre.

c) Contribute to the legibility of the City and provide a strong definition of the public domain.

d) Ensure that development is consistent with the desired future character of precincts as set out in this chapter and responds to heritage values.

e) Promote high quality architectural buildings and create gateway statements at the northern and southern arrivals into the St Marys Town Centre.

DRAFT

f) Ensure that building designs adhere to the principles of Crime Prevention Through Environmental Design (CTPED).

7.1. Development site and setbacks

Objectives

a) Encourage development that responds to the local fine grain lot pattern and fragmented ownership pattern.

b) Ensure that development sites have appropriate dimensions for access and servicing.

c) Establish consistent building alignments to the street.

d) Establish the desired spatial proportions of the street, and to define the street edge.

e) Provide street setbacks appropriate to building function and character, and where relevant reinforce a desired future character area.

f) Create a transition between public and private space.

g) Maximise the impact of active frontages, locating active uses, such as shopfronts closer to pedestrian activity areas.

h) Allow for high-quality street landscape character that contributes to the amenity of the St Marys Town Centre and a sustainable urban environment.

i) Minimise overshadowing and maintain solar access to the public domain throughout the year.

j) Reinforce east-west regional views to the Blue Mountains.

k) Retain a human-scale streetscape through consistent street frontage heights proportionate to street width and by setting back upper floors.

A. Controls

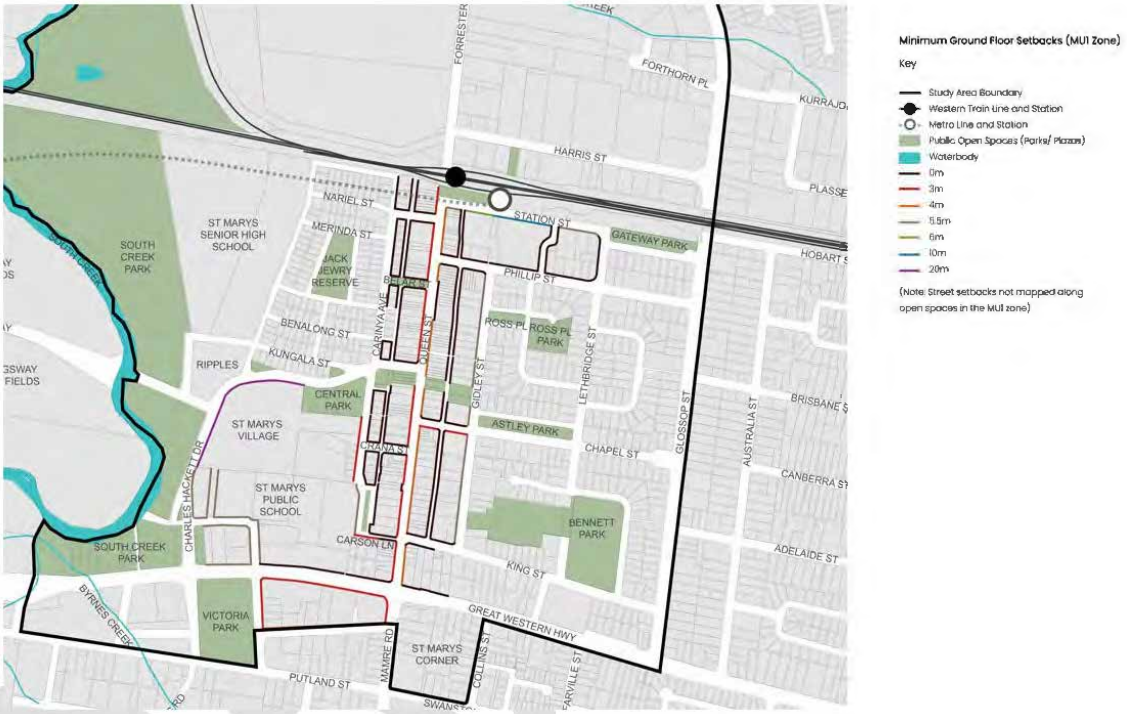
1. A minimum lot width of 20m is required for mixed use development.

2. Minimum ground floor building setbacks are specified in Figure 51 and are to be complied with. Where unspecified in Figure 51, ground floor setbacks should be consistent with the prevailing street setbacks in the immediate context and will be subject to a merit assessment.

3. Minor projections into front building lines and setbacks for sun shading devices, entry awnings and cornices are permitted.

4. Balconies may project up to 600mm into front building setbacks, provided the cumulative width of all balconies at that particular level totals no more than 50% of the horizontal width of the building façade, measured at that level.

Figure 51: Minimum ground floor setbacks (MU1 Zone)



5. Street frontage heights must be consistent with Figure 52.

6. Minimum building setbacks at upper floor (podium level and above) are to be in accordance with Figure 53 and as illustrated in typical section drawings at Figure 54 to Figure 60.

   Note: building separation for residential uses are to comply with the State Environmental Planning Policy (Housing) 2021 (or as amended) and supporting design guide, as relevant. In the event of an inconsistency, the provisions of the SEPP and supporting design guide prevail.

7. Minimum building setbacks for the uppermost 2 floors are to be as follows:

   i. 20m setback from West Lane for the development site between West Lane, Charles Hackett Drive and Queen Street.

ii. 12m setback from Charles Hackett Drive for the development site between West Lane, Charles Hackett Drive and Queen Street.

8. Development with an interface to the Historic Living Precinct is to provide a transition to the lower-scaled built form and include appropriate articulation to fit with the context.

Figure 52: Street frontage heights in storeys (MU1 Zone)

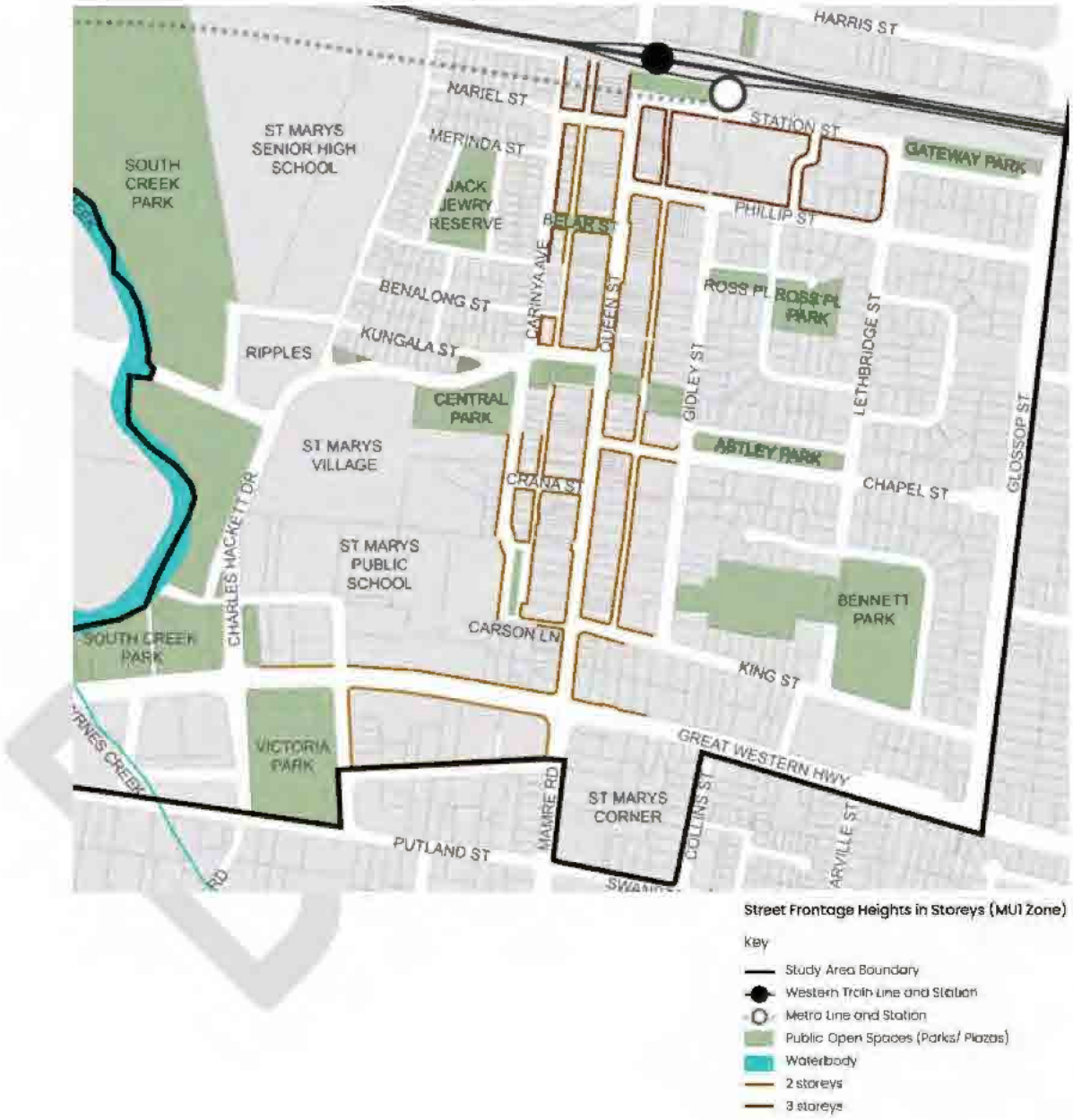


Figure 53: Minimum upper-level setbacks at podium level (MU1 Zone)

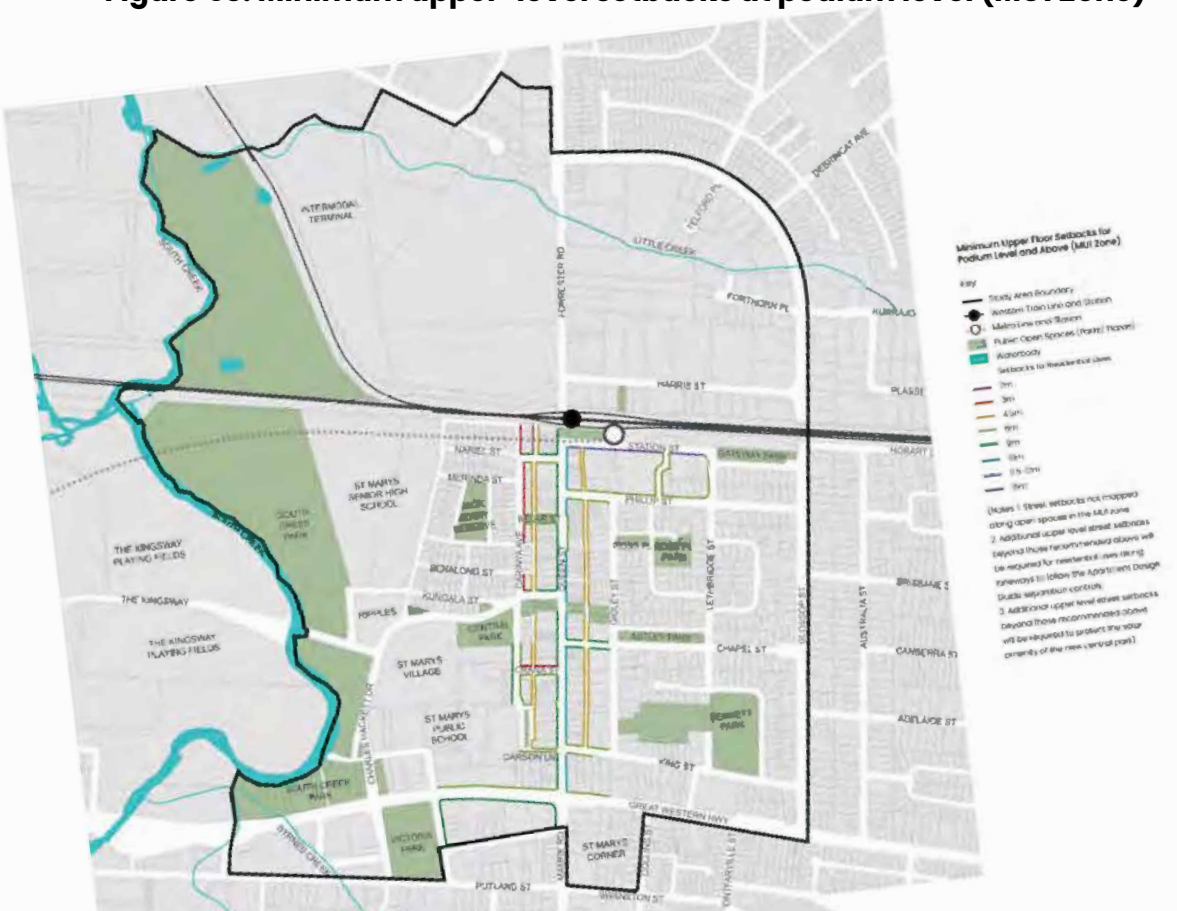


Figure 54: Typical sections



Figure 55: Typical section across Queen Street (Section A)

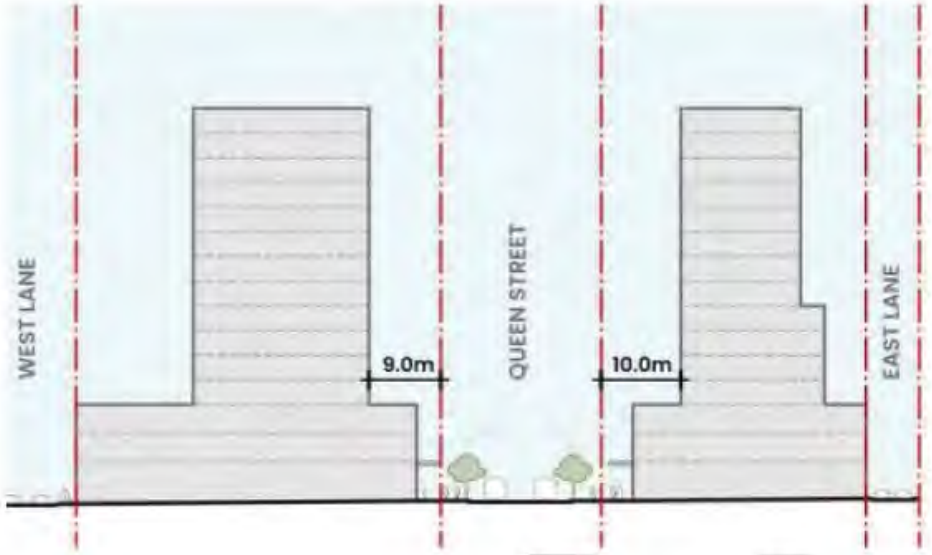


Figure 56: Typical section across Queen Street (Section B)

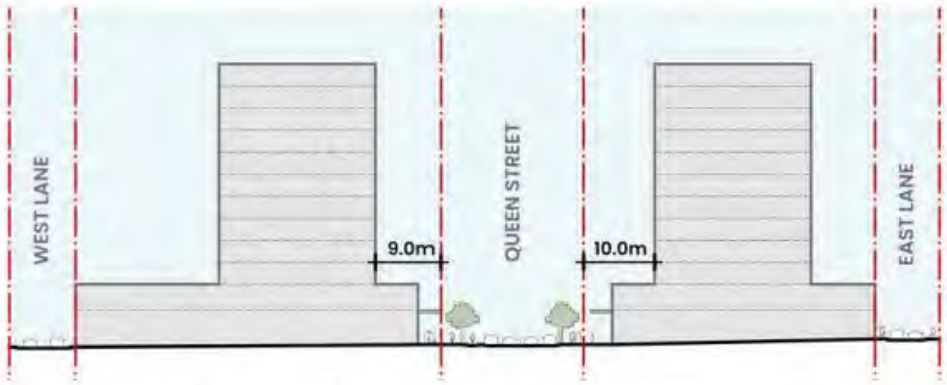


Figure 57: Typical section across Phillip Street (Section C)

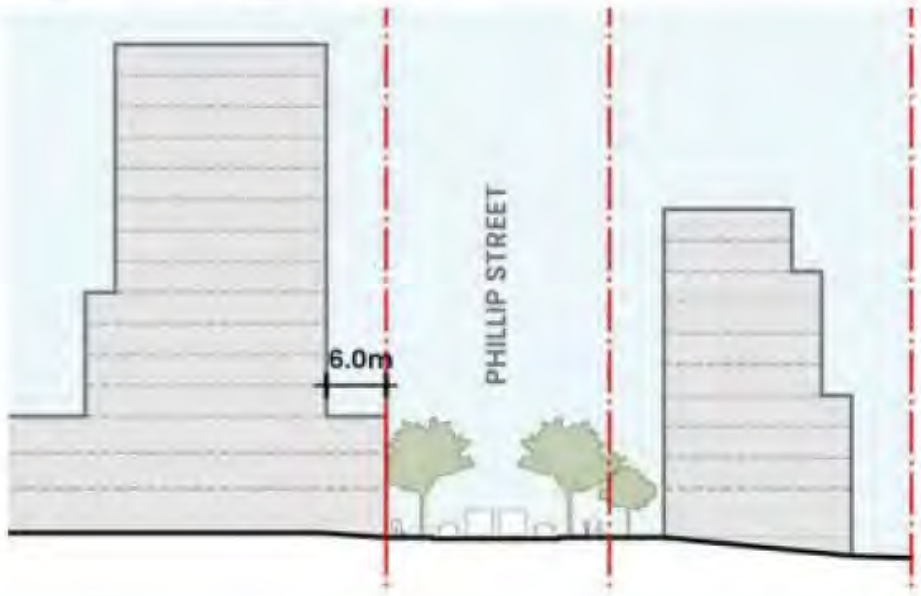


Figure 58: Typical section across Belar Street (Section D)

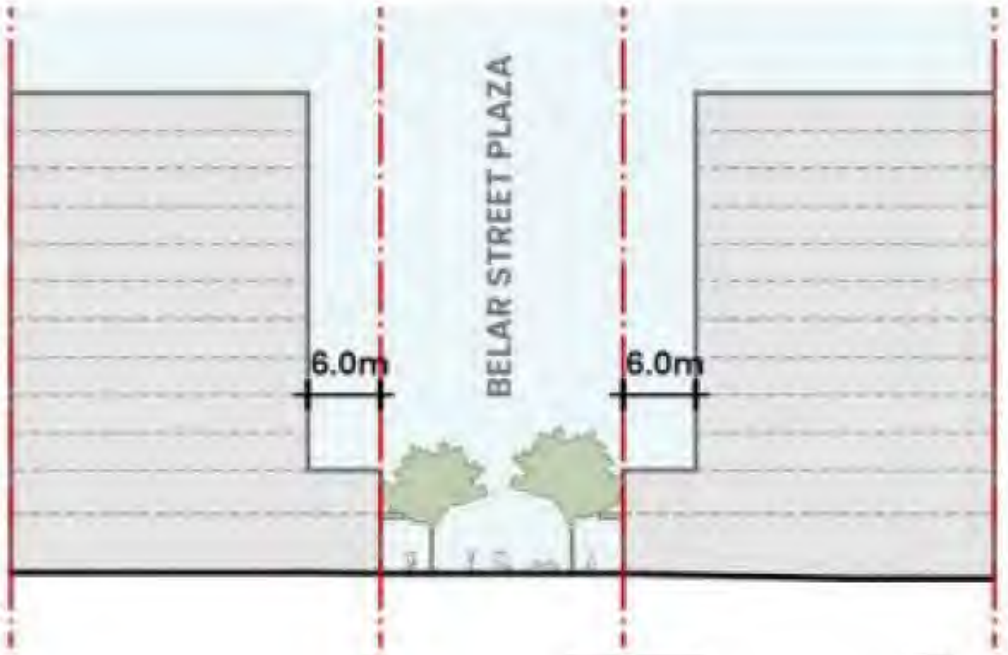


Figure E15.55: Typical sections across Carinya Avenue (Section E)

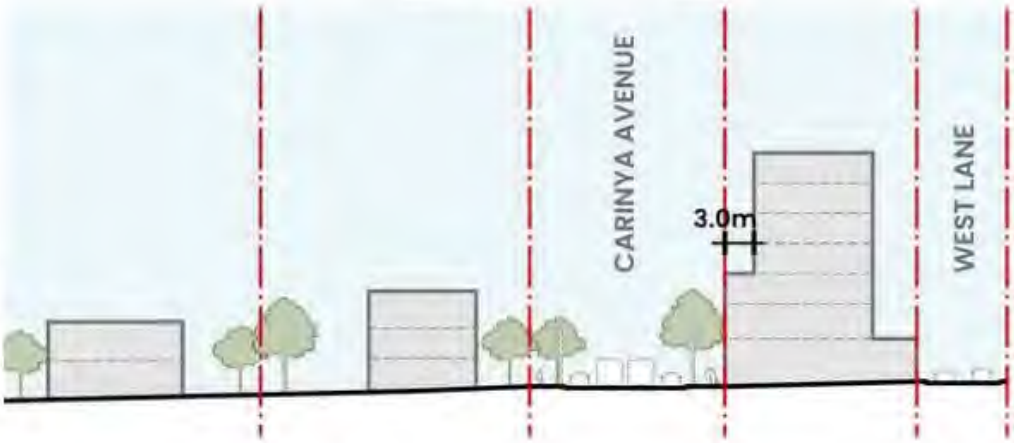
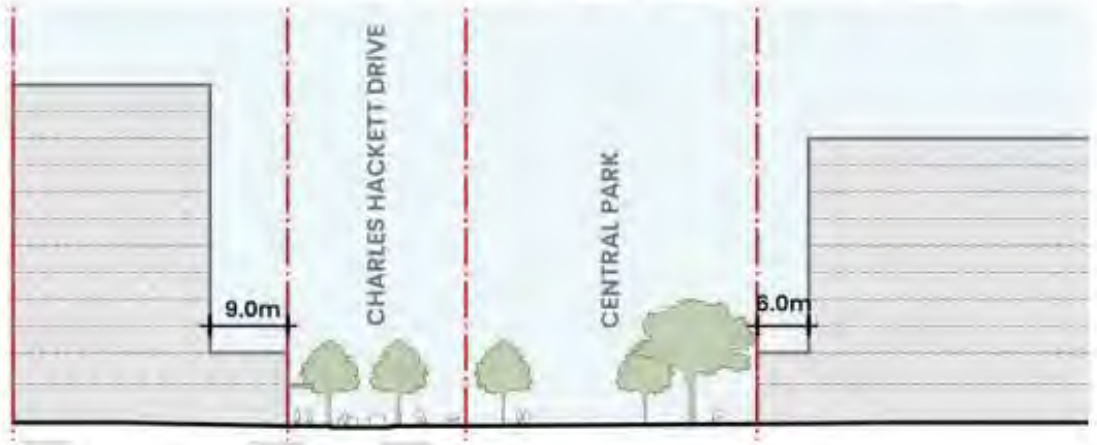


Figure 59: Typical section across Carinya Avenue (Section F)



Figure 60: Typical section across central park showing building envelopes to its north and south (Section G)



7.2. Building heights in storeys and dwelling mix

Objectives

a) Achieve gradation of building heights to ensure appropriate management of overshadowing, access to sunlight and privacy.

b) Ensure floor to ceiling heights provide adequate amenity for building occupants, support a range of uses and allow for flexibility of uses over time.

c) Provide rooftop access for use as communal open space and landscaped gardens.

Controls

1. The maximum number of storeys is to be no greater than the equivalent height in metres detailed in Table 5.

2. Buildings must be designed to provide adequate height clearance to permit Council's standard waste collection vehicles to safely enter and exit the building for waste collection. The City-wide controls relating to waste management in the Penrith DCP and supporting Waste Management Guideline apply and are to be complied with.

3. Minimum floor to ceiling heights are to be in accordance with Table 6.

Table 5: Building height in storeys

Maximum building height under Penrith LEP 2010	Maximum height in storeys
8.5m	2 storeys
10-12m	3 storeys
16.5m	4 storeys
22.5m	6 storeys
25.5m	7 storeys
29m	8 storeys
32m	9 storeys
35-35.5m	10 storeys
41.5m	12 storeys
50.5-51.5 m	15 storeys
61m	18 storeys

Table 6: Minimum floor to ceiling height

Land use	Floor	Minimum floor to ceiling height
Mixed use	Ground	• 4.5m
	Above ground floor	• 3.3m for all floors within the building podium (i.e. first and second floors where applicable). • As per the relevant SEPP and supporting guidelines for floors above the building podium.
Commercial	Ground	• 4.5m

	Above ground floor	• 3.3m for commercial office use. • 3.5m for active public uses.
Residential	Ground	• 2.7m for habitable rooms.
	Above ground floor	• 2.7m for living rooms. • 2.4m for habitable rooms (excluding living rooms).

4. Mixed use developments are to provide flexible building layouts which allow greater adaptability of the floor area of, or tenancies on, the first floor of a building above the ground floor.

5. Developments that contain 10 or more dwellings are to provide the following mix of apartments:

    i. 1-bedroom units: 25% of the total dwelling yield

    ii. 2-bedroom units: 55% of the total dwelling yield

    iii. 3+bedroom units: 20% of the total dwelling yield.

6. 10% of all dwellings or a minimum one dwelling, whichever is the greater, must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299- 1995), to be capable of adaptation for people with a disability or elderly residents.

7. Development applications must be accompanied by certification from an accredited access consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Adaptable Housing Standard (AS 4299-1995).

7.3. Building depth, bulk and separation

Objectives

a) Establish an appropriate scale, dimension, form and separation of buildings.

b) Provide viable and useable commercial floor space.

c) Allow for view sharing and view corridors.

d) Reduce the apparent bulk and scale of buildings by breaking up expanses of building walls with modulation of form.

e) Provide adequate privacy, access to light, air and outlook for the occupants of buildings, neighbouring properties and future buildings.

f) Ensure sunlight penetrates through to street level to protect the amenity of pedestrians and to ensure that street trees grow.

Controls

1. For buildings 12m in height or above, the maximum building depth for residential uses is 18m from glass line to glass line (excluding balconies) for cross-over or cross-through apartments.

2. Notwithstanding the above control 1, a maximum building length of 50m is permitted for buildings that are 24m in height or greater.

3. All points of an office floor are to be no more than 10m from a source of daylight (e.g. window, atria, or light wells) in buildings less than 24m in height, and no more than 12.5m from a window in buildings over 24m in height.

4. Building separation is to be provided in accordance with the State Environmental Planning Policy (Housing) 2021 (or as amended) and supporting design guide.

5. In the case where a development results in an isolated site, the development may need to provide greater separation to ensure the isolated site can be reasonably developed.

7.4. Site coverage and deep soil zones

Objectives

a) Ensure developments contribute to mitigating urban heat impacts by increasing canopy coverage and deep soil planting and retaining existing canopy trees on sites.

b) Limit building bulk on a site and improve the amenity of developments, allowing for good daylight access, ventilation and improved visual privacy.

c) Provide passive and active recreational opportunities.

Controls

1. The maximum site coverage and minimum deep soil zones for development are specified in Table 7.

2. Deep soil zones are to have a minimum width of:
   i. 3m for sites with an area between 650m^2 and 1,500m^2

   ii. 6m for sites with an area greater than 1,500m^2.

3. To enable the planting of and healthy growth of medium to large canopy trees:

   i. retain existing canopy trees onsite

   ii. contain unexcavated soil with no encroachment of basement, structures, works, services, car parking, hardstand or the like

   iii. planting on structures will not be included in the calculation of the minimum deep soil zone.

Table 7: Site coverage and deep soil

Precinct/use	Maximum site cover	Minimum deep soil zone (% of site)
MU1 Mixed Use Zone (Commercial Core Precinct, Town Centre Core Precinct except for lots with a frontage to the Great Western Highway)	100%	0%
MU1 Mixed Use Zone (Lots with a frontage to the Great Western Highway)	70%	10%
E3 Productivity Support Zone (Co-Working and Creative Industry Precinct)	-	15%

7.5. Commercial development in the Commercial Core Precinct

Objectives

a) Facilitate growth in commercial office space to support professional, knowledge and innovation businesses and employment.

b) Provide a high-level of amenity for business growth.

c) Respond to the fine grain lot pattern and fragmented ownership pattern.

d) Ensure that development sites have appropriate dimensions for access and servicing.

e) Provide a large-format supermarket within the Commercial Core Precinct.

Controls

1. A minimum lot width of 20m is required for commercial development.

2. Development applications are to address the minimum non-residential floor space ratio requirements that apply to the Commercial Core Precinct under the Penrith LEP 2010.

3. Minimum ground floor building setbacks are specified in Figure 51 and are to be complied with.

4. A street frontage height of 3 storeys is required for commercial development in the Commercial Core Precinct, consistent with Figure 52.

5. Minimum building setbacks at upper levels (podium level and above) are to be in accordance with Figure 53.

6. Minimum building setbacks from side boundaries are:

    i. Buildings up to 12m in height: 0m

    ii. Buildings above 12m in height: in accordance with the relevant SEPP and any supporting design guideline.

7. Minimum building separation between non-residential buildings on the same site are to be in accordance with the following:

    i. 0m for buildings up to 12m in height.

    ii. 10m for buildings 12m-24m in height.

iii. 15-24m for buildings over 24m in height (15m separation between east-west facing facades of buildings and 24m separation between north-south facing facades).

iv. Courtyards or internal atriums to have 2:1 or 3:1 width to depth ratio to ensure effective air circulation and avoid trapped odours.

8. A maximum building length of 50m is permitted for buildings that are 24m in height or greater.

9. Buildings are to be articulated, and large expanses of any single material is to be avoided. Buildings over 30m in length are to be separated into at least 2 parts by a significant recess or projection.

10. All points of an office floor are to be no more than 10m from a source of daylight (e.g. window, atria, or light wells) in buildings less than 24m in height, and no more than 12.5m from a window in buildings over 24m in height.

11. Commercial development in the Commercial Core Precinct is permitted to have a maximum site cover of 100% of the site area, and 0% deep soil planting area.

12. The minimum floor to ceiling height, and floor to floor height are to be in accordance with the following:

    i. **Ground Floor:** 4.5m floor to ceiling height; and 4.9m floor to floor height

    ii. **Upper Floors:** 3.3m floor to ceiling height for commercial office use; and 3.5m floor to ceiling height for active public uses.

13. An area of communal open space is to be provided for staff recreation, appropriate to the needs of the premises, and integrated with adjacent open space or natural areas.

14. Development applications are to demonstrate that developments will achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9am and 3pm on 21 June (mid-winter).

15. Buildings are to be designed to provide adequate height clearance to permit Council's standard waste collection vehicles to safely enter and exit the building for waste collection. The city-wide controls relating to

waste management in the Penrith DCP and supporting Waste Management Guideline apply and are to be complied with.

7.6. Active street frontages, building entries, awnings and outdoor dining

Objectives

a) Achieve active street frontages with good physical and visual connections between buildings and the street.

b) Maximise active frontages along select streets and public places to encourage community activity and contribute to the liveliness of the St Marys Town Centre.

c) To promote safety, natural surveillance and territoriality of the public domain.

d) Encourage an address to the street outside of areas where active street frontages are required.

e) Require awnings where high pedestrian activity occurs to provide weather protection and to create a comfortable pedestrian environment.

f) Ensure a high quality and consistent street frontage.

g) Minimise conflicts between uses within mixed use development.

h) Provide a high level of residential amenity.

i) Encourage outdoor dining in suitable locations within the St Marys Town Centre.

Controls

1. Active street frontages are to be provided in accordance with Clause 7.8- Active Street Frontages of the Penrith LEP 2010.

2. Ground floor active street frontage uses must be at the same level as the adjoining footpath and are to be directly accessible from the street.

3. Active street frontage uses at street level may include one or a combination of the following:

    i. Shop front.

ii. Entrance to retail premises.

iii. Café or restaurant if accompanied by an entry from the street.

iv. Active office uses, such as reception if visible from the street.

v. Public building if accompanied by an entry from the street.

4. Continuous street frontage awnings must be provided for all new developments that are required to have active street frontages under Clause 7.8 of the Penrith LEP 2010.

5. Awnings are to:

   i. Be a minimum 2.8m deep where street trees are not required, otherwise a minimum 2.4m deep.

   ii. Have a minimum soffit height of 3.2m and a maximum of 4m.

   iii. Be stepped for design articulation or to accommodate sloping streets, integrate with the building design and not exceed 700mm

   iv. Be low profile, with slim vertical fascias or eaves (generally not to exceed 300mm height).

   v. Be set back from the kerb to allow for clearance of street furniture, trees, etc.

   vi. Be designed to match building facades and be complementary to those of adjoining buildings.

   vii. Wrap around corners for a minimum 6m.

   viii. Under-awning lighting, recessed into the soffit of the awning or wall mounted onto the building, is to be provided to facilitate night use and to improve public safety.

   ix. No more than one under-awning sign may be attached to the awning and must be 6m away from the sign of the adjoining property.

   Note: a separate approval to erect an awning over the road reserve including a footpath is required under the Roads Act and the Local Government Act.

6. Outdoor dining areas are encouraged in areas shown in Figure 61.

Note: a separate approval from Council is required under the Roads Act and Local Government Act for outdoor street dining.

7. Restaurants, cafes and the like shall provide openable shopfronts.

8. Solid roller shutters and fixed bars are not to be installed on windows and doors of shop fronts. Only open grill or transparent security shutters are permitted to retail frontages and shall be fitted to be fully retractable.

9. Buildings are to address the public domain. Street address is defined as entries, lobbies and habitable rooms with clear glazing to the street and not be more than 1.2m above street level.

10. Activation of rear lanes at ground level is encouraged.

11. Building entries are to provide direct access to the street. Entries are to be clear of obstructions, providing a clear sight line from the street to the building and from the building to the street.

12. Large developments should provide multiple entrances including an entrance on each street frontage.

13. Mixed use developments are to provide:

    i. Separate and defined entry and vertical circulation for each use within the development.

    ii. Separate service provisions for commercial and residential activities within a development, including but not limited to loading docks, waste collection, and servicing. Refer to Section 10 of this chapter for further controls regarding servicing.

    iii. Security access controls to all entrances into private areas, including car parks, internal courtyards and the like.

    iv. Screening for rear and at grade car parks when adjacent to the public domain.

14. Where residential units are proposed at ground level, a report must be provided with the development application demonstrating how future non-residential uses can be accommodated within the ground-level design. The report must address:

    i. Access requirements including access for people with disability

ii. Any upgrading works necessary for compliance with the Building Code of Australia

iii. Appropriate floor to ceiling heights.

15. Blank building walls at ground level are to be avoided.

Figure 61: Outdoor dining encouraged



7.7. Night-time economy

Night-time economy refers to any activity which takes place between 6pm and 6am. The night-time economy is usually driven by core activities such as food, drink, entertainment and creative and cultural events, as well as supporting activities such retail, transport, accommodation and education.

Night-time economy plays an important role in the St Marys Town Centre as it contributes to active and vibrant centres, creates opportunities for growth, improves safety at night and builds identity and culture.

Application

This section applies to any development application within the Town Centre Core, Commercial Core, and Co-working and Creative Industry Precincts as identified on Figure 3 that seeks to:

- Operate between 6pm and 6am, including temporary uses and events.
- Intensify or change an existing late-night trading use.

This section does not apply to sex service premises and restricted premises.

Figure 62: Examples of night-time economy activities



Objectives

a) Promote and encourage night-time economy activities within identified precincts in the St Marys Town Centre.

b) Create a vibrant evening economy that serves residents, workers and visitors.

c) Provide a high level of amenity for business growth.

d) Encourage development that enhances and contributes to economic and social sustainability.

e) Support and enhance retail, hospitality, entertainment and tourism industries to undertake late-night trading in appropriate locations.

f) Enhance public safety by increasing activity in the public domain at night time.

g) Ensure night-time economy activities are appropriately managed and operated to minimise privacy and amenity impacts on neighbouring land uses.

h) Ensure the operation of night-time economy activities will not result in unreasonable safety and security impacts to patrons, staff and the general public.

i) Protect local amenity within close proximity of night-time economy activities and ensure any potential land use conflicts with adjoining uses are minimised.

Controls

1. Development applications must demonstrate that the type of activity, including hours of operation, is suitable for the location and is unlikely to have an adverse impact on surrounding land uses.

2. In determining the suitability of a proposed night-time economy use, Council will consider the following matters:

    i. The type of land use and proposed hours of operation.

    ii. The size of all buildings and structures associated with that use

    iii. Staff and patron capacity.

    iv. Whether a live performance space or amplified music is proposed.

    v. Whether alcohol will be served on the premise.

    vi. Patron queuing and dispersal.

    vii. Existing hours of operation of surrounding businesses and how the proposal interacts with these.

    viii. Availability and frequency of public transport or safe areas to park during operating hours, including taxi services.

    ix. Safety, security and crime prevention measures for patrons, the immediate public domain and surrounding area.

    x. Potential amenity impacts to surrounding uses, by way of noise, lighting, traffic and parking.

    xi. The impact of the premises on the mix, diversity and possible concentration of uses in the locality.

    xii. The location of the activity and its proximity to sensitive noise receptors, including residential development.

    xiii. The size and nature of public spaces or temporary structures.

    xiv. Availability of public toilets or temporary public toilets.

xv. Waste and recycling management.

3. Development applications must demonstrate that the proposed hours of operation are appropriate, having regard for the type of land use and its size, capacity and location.

4. The design of late-night trading premises shall ensure sources of noise, such as waste collection, deliveries, ventilation systems, parking areas and mechanical heating/cooling units are sited away from adjoining lots with acoustic treatments implemented.

5. Shopfront entrances and outdoor dining areas shall be located away from immediately adjoining residential zoned properties to ensure there are no amenity impacts.

6. Late-night trading premises are to be designed in accordance with requirements under the Safety and Security section within Chapter C1 of this the Penrith DCP.

7. All areas intended to be used at night must provide appropriate levels of visibility for staff and patrons. Lighting must be installed to enable visibility and surveillance of car parking areas and the entrances and exits.

8. After-hours lighting is to be provided in shopfronts to prevent areas of concealment and discourage undesirable behaviours.

9. Where trading after 2am is proposed, Council will assess a proposal on its merit, having regard to:

    i. The nature of the use, size and potential capacity.

    ii. Hours of operation of surrounding businesses and how proposed hours interact with these.

    iii. Availability and frequency of public transport or safe areas to park

    iv. The likelihood of the proposed use to promote antisocial activities, such as lewd acts, or violence.

    v. The level of public lighting available at and to the site.

    vi. Amenity impacts of surrounding premises and sites.

    vii. Cumulative impact of uses in one location.

viii. The location of the premises and the proximity of residential and other sensitive uses, including any external areas (not fully enclosed).

10. An application for late-night trading outside of the Town Centre Core, Commercial Core and Co-working and Creative Industry Precincts will be considered on a merit assessment and will depend on the nature and scale of the use and any potential amenity impacts.

8. Streetscape

Application

This section applies to all development in the St Marys Town Centre.

Objectives

a) Encourage variety in architectural styles for visual interest and to reinforce desired future character of precincts.

b) Contribute positively to the streetscape and the public domain by means of high-quality architecture and robust selection of materials and finishes.

c) Promote high-quality architectural buildings to create gateway statements at the northern and southern arrivals into the St Marys Town Centre.

d) Maintain a human-scale built form in the articulation and detailing of lower levels of buildings.

e) Provide richness of detail and architectural interest at visually prominent parts of a building, including lower levels and rooftops.

f) Present appropriate design responses to nearby development that complement the streetscape.

g) Ensure building services are designed and located to minimise impacts on the streetscape.

h) Minimise untidy 'back-of-house' presentation to service lanes.

i) Encourage undergrounding of powerlines to minimise impacts of services on tree canopy cover.

Controls

1. Adjoining buildings are to be considered when designing new buildings and extensions to existing buildings in terms of:
    i. Appropriate alignment and street frontage heights.
    ii. Setbacks above street frontage heights.
    iii. Selection of appropriate materials and finishes.
    iv. Facade proportions including horizontal or vertical emphasis.
    v. Provision of enclosed corners at street intersections.
2. Buildings designs are to incorporate balconies and terraces, particularly where buildings overlook parks and on low rise parts of buildings. Gardens on the top of setback areas of buildings and on roofs are encouraged.
3. Façades are to be articulated so they address the street and add visual interest.
4. External walls should be constructed of high quality and durable materials and finishes with 'self-cleaning' attributes.
5. To assist articulation and visual interest, large expanses of any single material must be avoided.
6. Glazing for retail uses is to be maximised but broken into sections to avoid large expanses of glass.
7. Development in the vicinity of Heritage Items mapped under the Penrith LEP 2010 shall provide a curtilage to the satisfaction of Council.
8. Lift overruns, air-conditioning and plant equipment is to be integrated into the overall architecture of the building and screened from the public domain.
9. Building design must promote natural surveillance of rear lanes.
10. Where required by development, service infrastructure (such as electricity substations/kiosks, fire pumps and hydrants, and fire escapes and the like) must be addressed at development application stage and shown on the development application plans. Service infrastructure must be located on secondary streets or rear lanes. Where this is not possible,

services infrastructure must be integrated into the building form, designed to minimise impacts on the streetscape, and concealed from public view.

11. For residential flat buildings and buildings that are 3-storeys or greater, all existing (aerial) and proposed services for the development, including those across the frontage of the development are to be located or relocated underground in accordance with the relevant authorities' regulations and standards.

9. Residential development

Application

This section applies to all development zoned residential within the St Marys Town Centre. This section must be read in conjunction with relevant city-wide sections within the Penrith DCP, which continues to apply except as amended by this section.

Residential flat building development with 3 or more storeys, and 4 or more dwellings, is to comply with the relevant State Environmental Planning Policy (SEPP) and any supporting design guideline. Where there is an inconsistency between this DCP and a SEPP or supporting design guideline, the SEPP and/or supporting design guideline prevail to the extent of the inconsistency.

Objectives

a) Ensure a high standard of residential development is achieved in the St Marys Town Centre.

b) Promote residential development that responds to the planned future character of the identified precincts within the Town Centre.

c) Promote a mix of residential housing types and dwelling sizes to meet the increasingly diverse needs of the local community.

d) Ensure the bulk and scale of dwellings does not have an adverse impact on privacy and solar amenity.

e) Encourage attractive streetscapes that provide enhanced amenity for pedestrians and occupants.

f) Ensure appropriately scaled and designed development occurs within and adjacent to sensitive interfaces such as the Historic Living Precinct.

g) Retain the existing subdivision pattern with the Historic Living Precinct.

h) Encourage rooftop access for use as communal open space and landscaped gardens within residential development in the R4 High Density Residential zone.

i) Ensure development incorporates contemporised environmental design elements to create sustainable and liveable places compatible with the desired character of the relevant precinct.

j) Ensure that buildings are responsive to the character and heritage values of the St Marys Town Centre.

k) Ensure regional views to the Blue Mountains are preserved and protected.

9.1. Setbacks

Objectives

a) Establish consistent building alignments that complement the streetscape.

b) Minimise impacts of development on neighbouring properties with regards to overshadowing, views, privacy and amenity.

c) Provide sufficient setbacks that create an appropriate spatial arrangement for all development types.

d) Ensure garages don't dominate the streetscape.

e) Provide opportunities for landscaping and deep soil planting zones between neighbouring properties.

Controls

1. The minimum building setbacks for dual occupancy development and multi-dwelling housing are to be in accordance with Table 8.

Table 8: Minimum setbacks

Dwelling type	Side setback (m)	Rear setback (m)
Dual occupancy	1.2m (ground and upper floor component)	8m (ground and upper floor component)

Multi-dwelling housing and manor houses	2m for not more than 50% of a boundary (ground and upper floor)	6 metres

Table 9: Minimum setbacks for residential flat buildings

Dwelling type/ location	Front setback	Secondary street setback	Setback along public open spaces
Residential flat building (unless otherwise specified below)	5.5m	5.5m	2m for not more than 50% of the total building elevation
Lots that are north of Ross Place Park (between Blair Avenue and Lethbridge Street)	5.5m up to 24m in height 8.5m above 24m in height	5.5m	2m for not more than 50% of the total building elevation. Upper floor setback as per front setback control
Lots with a frontage to Little Chapel Street (north of Astley Park)	5.5m for the lower 4 floors 8.5m for the uppermost 2 floors	5.5m	2m for not more than 50% of the total building elevation. Upper floor setback as per front setback control
Lots with a frontage to Chesham Street	0m up to 12m in height 6m for above 12m in height	5.5m	2m for not more than 50% of the total building elevation
Side and rear setbacks are to be provided in accordance with the relevant State Environmental Planning Policy and any supporting design guideline.			

2. Rear setback areas are to provide a green corridor of trees and shrubs which may be utilised as part of a dwelling's private open space.

3. Notwithstanding controls within Table 8, a greater setback to a side or rear boundary may be required if:

i. There are anticipated to be adverse privacy impacts to adjoining properties.

ii. The topography of the site is sloping to the rear and has a gradient of 30 degrees or more across the site.

iii. Where there is an adjoining lower-density zone or lot that does not have higher-density development potential.

4. Balconies may project up to 600mm into front building setbacks if:

   i. The cumulative width of all balconies at that particular level totals no more than 50% of the horizontal width of the building façade, measured at that level

   ii. There is no conflict with tree canopies within the front setback.

5. Covered car parking areas for dual occupancy developments must be located a minimum of 0.5m behind the front building line.

6. Patio and porch areas for dual occupancy developments are permitted to encroach the front building line by a maximum of 1m.

9.2. Building design, bulk and scale

Objectives

a) Encourage innovative and quality designs of residential development that enhances the built form and streetscape character for the relevant precinct.

b) Ensure development is of an appropriate scale to protect and enhance residential amenity.

c) Reduce the visual bulk and scale of garages, ensuring they do not dominate the building façade.

d) Encourage visual interest and designs of high architectural quality through incorporating a variety of articulation measures.

e) Encourage casual surveillance of the street through building design.

Controls

1. All residential development must demonstrate that it responds to the adopted vision and future desired character for the applicable precinct as contained within Appendix A of this chapter.

2. Dual occupancy developments within the Historic Living Precinct are to ensure that garages do not dominate the building frontage and are to incorporate a combination of the below articulated elements within the building façade:

    i. External structures, finishes, etchings and recessed patterns

    ii. Decorative features, textures and colours

    iii. Windows on every elevation of the front building façade

    iv. A variety of building materials, roof forms and pitches

    v. Highlighting entries within front façades to provide a sense of address and visual interest from the streetscape.

    vi. Protrusions and penetrations in building elements.

3. Double garages are not permitted within dual occupancy developments located in the Historic Living Precinct.

4. A maximum of 2 driveways shall be permitted to service dual occupancy development. Driveways are to be 3m wide, be designed and sited to maximise landscaped areas and tree planting within the front setback area and be designed in accordance with Council's engineering specifications.

5. The maximum site coverage for dual occupancy developments is 60% of the size of the lot. For the purpose of this control, site coverage includes all buildings and structures on the site, including the following:

    i. Awnings

    ii. Basements

    iii. Detached studios

    iv. Driveways

    v. Outbuildings

vi. Swimming pools

vii. Any balcony, deck, pergola, terrace, verandah, carport and garage, whether covered, enclosed or unenclosed

viii. Waste and recycling storage and collection areas

ix. Service infrastructure.

6. Windows and balconies on upper floors should be positioned above garages where possible for development in the Historic Living Precinct.

7. Where development is located adjacent to public open space or other public areas, buildings are to be designed to positively address this interface through a combination of design measures including:

   i. Habitable room windows facing the public domain

   ii. Street access, pedestrian paths and building entries

   iii. Paths, low fences and planting that clearly delineate between public/private domains.

8. Development that adjoins a through-site link is to ensure that habitable rooms face through-site links, to promote passive surveillance of through-site links.

9. All building forms are to be articulated to reduce visual bulk and scale of a dwelling and add visual interest to the streetscape. At minimum, the following must be incorporated into the design of the building:

   i. Windows on every elevation.

   ii. Stepped roof forms and pitches.

   iii. A variety of building materials and finishes.

10. The minimum dwelling sizes for multi-dwelling housing developments are to be as follows:

    i. 90m^2 for 2-bedroom dwellings (one toilet)

    ii. 115m^2 for 3+ bedroom dwellings (one toilet)

    iii. An additional 5m^2 is required for each additional toilet.

11. Development applications for residential development are to address relevant requirements under State Environmental Planning Policy (Sustainable Buildings) 2022 or as amended.

12. Applicants must demonstrate that the proposed configuration of the development is suitable for the size, width, orientation and topography of the lot.

13. Development on corner lots must address both primary and secondary road frontages with the incorporation of design features such as building entrances, windows, verandahs and other architectural features.

14. Garages must not dominate the dwelling façade or road frontage.

15. All development is to incorporate passive design measures in line with the Urban Heat Management section of this DCP.

16. Buildings along Queen Street must demonstrate that views to the Blue Mountains escarpment are maintained through the provision of technically accurate perspectives to the satisfaction of Council officers.

17. External solar shading on all residential development types should be provided to glazing on the north, east and western facades where it is not significantly overshadowed by neighbouring buildings or shaded by the inclusion of balconies. The solar shading should be designed to maximise the protection of the glazing from the summer sun and maximise solar transmission in the winter sun.

18. The minimum internal dwelling dimensions for residential development are to be provided in accordance with Table 10.

Table 10: Minimum internal dwelling dimensions

Dwelling type/precinct	Living room (m)	Combined living/dining (m^2)	Bedroom (m) (excluding wardrobe space)
Attached dual occupancy (Historic Living Precinct)	Minimum width: 4m	Minimum area: 2-bedroom dwelling: 24m^2 3+bedroom dwelling: 28m^2	Minimum width: 3m

Multi-dwelling housing	Minimum width: 4m	Minimum area: 2-bedroom dwelling: 24m^2 3+bedroom dwelling: 28m^2	Minimum width: 3m
Residential flat building	As per relevant SEPP and supporting design guide.		

9.3. Landscaping and deep soil planting zones

Objectives

a) To maximise deep soil zones on sites for canopy tree planting.

b) To achieve canopy tree targets that will contribute to mitigating urban heat impacts.

c) Ensure development sites have an appropriate spatial arrangement for sufficient landscaped area and deep soil zones.

d) Enhance the quality of the built environment and create desired streetscapes.

Controls

1. Minimum landscaped areas and deep soil planting zones are to be provided as a percentage of the total site area in accordance with Table 11.

Table 11: Minimum landscaped area and deep soil planting zones

Dwelling type/precinct	Minimum landscaped area (% of site)	Minimum deep soil planting zone (% of site)
Attached dual occupancy (Historic Living Precinct)	40% (20% per dwelling)	20% (10% per dwelling)
Multi-dwelling housing	35%	15%

Residential flat building	35%		7% of site area with minimum dimensions as the following: • 650m^2 – 1,500m^2 = 6m • >1,500m^2 = 6m
Manor house	Sites 600-799sqm	30%	20%
	Sites 800sqm+	50% of the site area minus 100sqm	

2. Landscaped area is to:

    i. Have a minimum width of 2m.

    ii. Have no basement encroachment and contain unexcavated soil to promote landscaping that is effective and healthy.

    iii. Not include substantially paved areas such as driveways and car parking, buildings including garages and sheds, impervious surfaces, waste storage areas, and the like.

3. Landscaping is to be designed to integrate developments with the streetscape character and reflect attributes such as topography, views and vistas.

4. Landscaping is to be provided within the front, rear and side boundary setback areas and along driveways to improve visual amenity.

5. Landscaping and canopy tree planting shall be provided between detached buildings to improve privacy and amenity and provide a green outlook for dwellings.

6. Deep soil zones are to:

    i. Have minimum width of 3m, or in accordance with the relevant requirements of State Environmental Planning Policy and the supporting design guide, whichever is greater to enable the planting of and healthy growth of medium to large canopy trees and vegetation, and ensure that tree canopy targets can be achieved.

ii. Retain existing canopy trees onsite.

iii. Contain unexcavated soil with no encroachment of basement, structures, works, services, car parking, hardstand or the like

iv. Planting on structures will not be included in the calculation of the minimum deep soil zone.

7. Deep soil zones may form part of the landscaped area.

8. A minimum of 2 deep soil zones are to be provided on development sites, with one located in the front yard and one located in the rear yard. The location of deep soil zones is to maximise the achievement of sunlight to ensure the growth of trees.

9. Where open parking spaces are proposed between development blocks, a landscaped verge is to be provided, consisting of small to medium canopy shade trees to create a landscaped buffer.

10. Artificial or synthetic grass will not be included in the landscaped area calculation and will be treated as an impervious surface. Artificial and synthetic grass are not considered to be ecologically sustainable and can have detrimental impacts regarding drainage, odour, toxic run-off, reduction in biodiversity, as well as other impacts.

9.4. Apartment mix (Residential flat buildings and Shop top housing)

Objectives

a) Establish a mix of residential housing types and dwelling sizes to meet the increasingly diverse needs of the local community.

Controls

1. Developments that contain 10 or more dwellings are to provide the following mix of apartments:

i. 1-bedroom units: 25% of the total dwelling yield

ii. 2-bedroom units: 55% of the total dwelling yield

iii. 3+bedroom units: 20% of the total dwelling yield.

9.5. Building height and separation

Objectives

a) Ensure building heights are compatible with the desired future character of the relevant precinct.

b) Ensure building heights achieve built form outcomes that reinforce quality urban design.

c) Ensure dwellings are adequately separated from adjoining lots to protect privacy and amenity of occupants.

Controls

1. The minimum floor to floor and floor to ceiling heights are to be in accordance with Table 13.

2. The maximum number of storeys for residential development is to be no greater than the equivalent height in metres as detailed in Table 12.

3. Notwithstanding the provisions in Table 13, buildings must be designed to provide adequate height clearance to permit Council's standard waste collection vehicles to safely enter and exit the building for waste collection. Refer to the Waste Management section of this DCP and the supporting Waste Management Guideline for further requirements.

Table 12: Maximum storeys for residential development

Maximum building height under Penrith LEP 2010	Maximum height in storeys
8.5m	2 storeys
10-12m	3 storeys
16.5m	4 storeys
18m	5 storeys
21-22.5m	6 storeys
25.5m	7 storeys
29m	8 storeys
32m	9 storeys
35m	10 storeys
41.5m	12 storeys
50.5m	15 storeys

Table 13: Minimum floor to floor and floor to ceiling heights

Dwelling type	Minimum floor to ceiling heights and floor to floor heights
Dual occupancy	Ground floor: • 3.1m floor to floor height. • 2.7m floor to ceiling height for habitable rooms.
	Upper floor component: • 2.4m floor to ceiling height for habitable rooms.
Multi-dwelling housing and manor houses	Ground floor: • 3.1m floor to floor height. • 2.7m floor to ceiling height for habitable rooms.
	Upper floor component: • 2.4m floor to ceiling height for habitable rooms.
Residential flat buildings (R4 zone)	Ground floor: • 4.9m floor to floor height. • 4.5m floor to ceiling height.
	Upper floor component: • As per SEPP/supporting design guideline.

4. A minimum building separation for multi-dwelling housing and manor houses of:

    i. 4m is required between the sides of each development block where no windows or habitable rooms are located.

    ii. 6m between the sides of each building block where windows and habitable rooms are located.

5. A minimum separation of 6m is required between the front and rear of each development block for multi-dwelling housing and manor houses.

6. The maximum building length for multi-dwelling housing development is as follows:

    i. 20m for lots facing side boundaries

    ii. 45m for lots facing the street, rear boundary or public open space.

9.6 Private and communal open space

Objectives

a) Ensure development sites have an appropriate spatial arrangement for sufficient private and communal open space.

b) Provide a high level of amenity with opportunities for outdoor recreation and outdoor dining.

Controls

1. The minimum private and communal open space area is to be provided in accordance with Table 14.

Table 14: Minimum private and communal open space

Dwelling type/precinct	Private open space	Communal open space
Attached dual occupancy in Historic Living Precinct	• Minimum 50m^2 per dwelling. • Minimum width of 4m.	N/A
Multi-dwelling housing and manor houses	• 35m^2 per dwelling. • Minimum width of 4m.	For developments with 15 or more dwellings, an outdoor communal open space area that is: • 10% of the minimum landscaped area. • Minimum width 4m.
Residential flat buildings (R4 zone)	• As per relevant SEPP and supporting design guide.	• 25% of the total site area. • Minimum width 3m.

2. Private open space is to:

   i. Be provided as one single area to ensure functionality.

   ii. Include an area that is a minimum 6m x 4m which is suitable for outdoor dining.

   iii. Be located immediately adjoining and level with a living, dining or kitchen area.

3. Developments should be designed to align with the adjoining lots' private open space area to help achieve a corridor of trees and vegetation along rear boundaries.

4. Development applications for multi-dwelling housing are to demonstrate that the development will achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9am and 3pm on 21 June (mid-winter).

5. Communal open space is to be:

    i. Centrally located so it can be conveniently and safely accessible by all residents in the development

    ii. Located behind the building line

    iii. A minimum of 3m wide

    iv. Designed to enable it to be used for passive recreational activities

    v. Screened from adjoining lots and the public domain.

6. Cool refuges are to be incorporated into communal open space areas where possible through the use of landscape design elements and may include:

    i. Canopy shade trees that contribute to increased canopy coverage

    ii. Clustering of shrubs and planting to improve their combined cooling effect

    iii. Trees are supported by understory planting.

10. Parking, access and servicing

Application

This section applies to all development in the St Marys Town Centre. This section must be read in conjunction with relevant city-wide sections within the DCP, which continues to apply except as amended by this section.

10.1. Public parking

Objectives

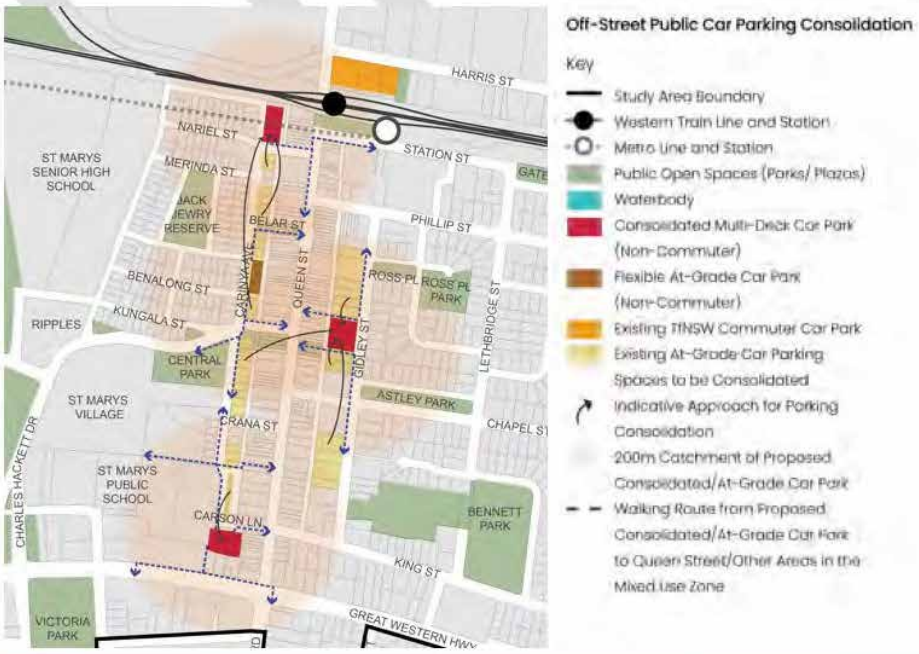
a) Retain the existing supply of public parking spaces within the Town Centre, and provide for a mix of short, medium and long stay parking.

b) Identify desired consolidation of certain at-grade public car parks into multi-deck facilities, maximising parking at accessible and convenient locations and encouraging efficient use of land.

Controls

1. As redevelopment occurs, the consolidation of at-grade car parks is encouraged to provide for multi-deck facilities as identified in Figure 63. Multi-deck parking facilities are to be non-commuter, with desired locations being directly accessible from the peripheral movement network with convenient access to Queen Street.

Figure 63: Desired off-street public parking consolidation



10.2. On-site parking

Objectives

a) Provide an adequate supply of on-site parking to cater for a mix of development types, and to minimise impacts on local roads.

b) Encourage a shift from private vehicles to sustainable and communal modes of transport, including cycling, walking, public transport and car sharing.

c) Encourage basement parking, and to minimise the visual impact of on-site parking from the public domain.

d) Ensure that new development is equipped with necessary infrastructure to support the uptake of electric vehicles.

Controls

1. On-site car parking is to be provided in accordance with the parking rates shown in Table 15.

Table 15: Parking rates

Land use	Car parking rate
Retail premises	1 space per 30m^2 of GFA
Business and Office premises	1 space per 50m^2 of GFA
Any other use	As specified in the city-wide Transport Access and Parking section of this DCP.
Accessible car spaces are to be provided in accordance with Access to Premises Standards, Building Code of Australia, and AS2890.	

2. New residential flat buildings and mixed use developments must comply with the requirements in Deemed-to-Satisfy Provisions of the National Construction Code 2022 Volume One Part J9D4 Facilities for electric vehicle charging equipment or any subsequent amendment.

3. The provision of car-share scheme parking spaces within private developments are encouraged.

10.3. On-site bicycle parking and end of trip facilities

Objectives

a) Promote the use of bicycles and provide sufficient supply of bicycle parking that is safe, secure and convenient.

b) Provide end of trip facilities within new commercial developments and encourage travelling by bicycle or on foot.

Controls

1. Bicycle parking is to be provided in accordance with the rates shown in Table 16.

Table 16: Minimum bicycle parking rates

Development	Minimum bicycle parking rate
Residential flat buildings, or residential component of mixed use building	1 space per 3 dwellings 1 space per 10 dwellings for visitors
Retail premises	1 space per 300sqm of GFA
Business and office premises	1 space per 200sqm of GFA
Bicycle parking spaces is to be rounded up to the nearest whole number.	

2. Bicycle parking is to be:

    i. Designed in accordance with Australian Standard AS2890.3: Bicycle Parking Facilities.

    ii. Provided in secure and accessible locations. Where bicycle parking is provided in a basement, it is to be located close to entry/exit points, within clear sight of entry/exit points, and on the uppermost level of the basement.

    iii. Accessible via a ramp, if not provided at grade.

    iv. Provided with weather protection.

    v. Clearly defined with line marking and identified by signage.

vi. Located to not obstruct or hinder pedestrian access ways, loading zones, public help access points, fire hydrants, fire escapes or the like.

vii. Where the building is to be strata-titled, bicycle parking and end of trip facilities are to be made available to all occupants of the building.

3. For commercial developments providing employment for 20 or more employees, end of trip facilities are to be provided in accordance Table 17.

Table 17: End of trip facilities

Bicycle parking	Facilities required
Up to 10 bicycle parking spaces	1 shower and change cubicle.
11-20 bicycle parking spaces	2 shower and change cubicles.
21+ bicycle parking spaces	2 shower and change cubicles. Plus, an additional shower and change cubicle for each additional 20 bicycle spaces thereafter.
Note: Showers and change facilities may be provided in the form of shower/change facilities in a unisex area, or in both female and male change rooms.	

10.4. Access, vehicular driveways and servicing

Objectives

a) Minimise the impact of vehicle access points on the quality of the public domain.

b) Minimise the impact of driveway crossovers on pedestrian safety and streetscape amenity.

c) Minimise conflicts between uses within mixed use developments.

Controls

1. No vehicle entry is permitted via Queen Street and other key streets as indicated in Figure 64.

2. Despite control 10.4(1), Council's standard waste collection vehicles are permitted to enter/exit Carinya Avenue (between Charles Hackett Drive and Nariel Street) to ensure the safe access and vehicular manoeuvring for the purpose of on-site waste collection can be undertaken.

3. All vehicles must be able to enter and leave the site in a forward direction without the need to make more than a 3-point turn. Note: this control does not apply to single dwellings.

4. Driveways are to be:

    i. Provided from lanes and secondary streets rather than the primary street wherever practical.

    ii. Located taking into account any services within the road reserve, such as power poles, drainage inlet pits and existing street trees.

    iii. Set back a minimum 6m from the tangent point in the kerb

    iv. Located to minimise noise and amenity impacts on adjacent residential development.

5. Vehicular crossings and driveways are to be designed in accordance with Council's Engineering Construction Specification for Civil Works.

6. Vehicle access is to be integrated into the building design so as to be visually recessive.

7. Access ways to underground parking are to be sited to minimise noise impacts on adjacent habitable rooms, particularly bedrooms.

8. For mixed use developments, separate loading/unloading areas are to be provided for commercial/retail, and residential uses.

9. Loading/unloading areas to:

    i. Be integrated into the design of developments.

    ii. Separate from car parking and waste storage/collection areas.

    iii. Be located away from the circulation path of other vehicles.

    iv. Be designed for commercial vehicle circulation and access complying with AS2890.2.

    v. Allow for vehicles to enter and exit the site in a forward direction.

Figure 64: Restrictions on vehicular entries (MU1 Zone)



11. Key precinct and site controls

Application

This section applies to development within the following precincts:

- Commercial Core Precinct
- Gateway Living Precinct
- Green Spine Precinct
- Town Centre Core - Civic Heart Precinct
- Co-Working and Creative Precinct
- Specific sites located within the above precincts and identified in the figures in this section, which are significant due to their size, location, and broader strategic function within the St Marys Town Centre.

This section applies in addition to all other relevant provisions contained in this chapter.

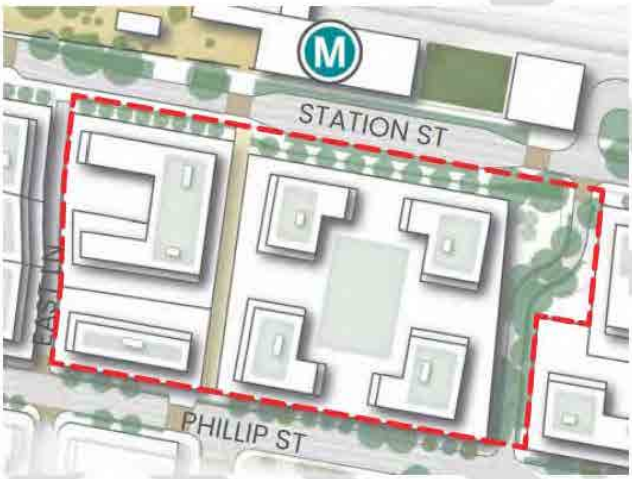
11.1 Commercial Core Precinct

A. Sydney Metro divestment site - former Station Plaza Shopping Centre

Application

This section applies to the site that is located within the Commercial Core Precinct, which is bounded by Station Street to the north, East Lane to the west, Phillip Street to the south, and the property boundary that is east of the new road extension that connects Station Street and Phillip Street, and as identified in Figure 65.

Figure 65: Sydney Metro divestment site – former Station Plaza Shopping Centre



Objectives

a) Provide a diversity of uses that strengthen the role of the Commercial Core Precinct and generate employment opportunities and economic growth.

b) Deliver a high-quality architectural, urban and landscape design response given the site's proximity to the transport interchange, being a key arrival point to the St Marys Town Centre.

c) Provide a high-quality interface between the development and extended southern plaza.

d) Provide a share path along Station Street to facilitate a pedestrian and cycling route and canopy tree planting to support an urban ecology corridor.

e) Encourage large-format retail uses, including a supermarket.

f) Promote lot amalgamation for orderly development of land and delivery of public infrastructure.

g) Deliver a north-south pedestrian through-site link.

h) Deliver a new local road, connecting Phillip Street and Station Street for improved permeability, access into the site and to adjacent sites.

i) Require vehicle access into the site from East Lane and the new local road connecting Phillip Street and Station Street.

j) Provide active frontages to streets, the through-site link, and the public plaza, promoting vibrancy and surveillance, including at night.

Controls

1. A north-south through-site link is to be delivered, providing a pedestrian connection between Station Street and Phillip Street. Refer to Section 6.2., and the S7.12 Development Contributions Plan for St Marys Town Centre for further requirements.

2. A new road connecting Station Street and Phillip Street and as indicated in Figure 66 is to be delivered. Refer to Section 6.3., and the S7.12 Development Contributions Plan for St Marys Town Centre for further requirements.

3. Vehicle access to the site is not permitted from Phillip Street or Station Street. Vehicle access is to be provided from East Lane and/or the new road connection between Phillip Street and Station Street.

4. Consolidate existing land ownership patterns to allow for orderly development of land and deliver local infrastructure.

5. Active street frontages must be provided along Station Street, Phillip Street, and along the full length of the north-south pedestrian through-site link in accordance with the Penrith LEP 2010.

Figure 66: New local road connection

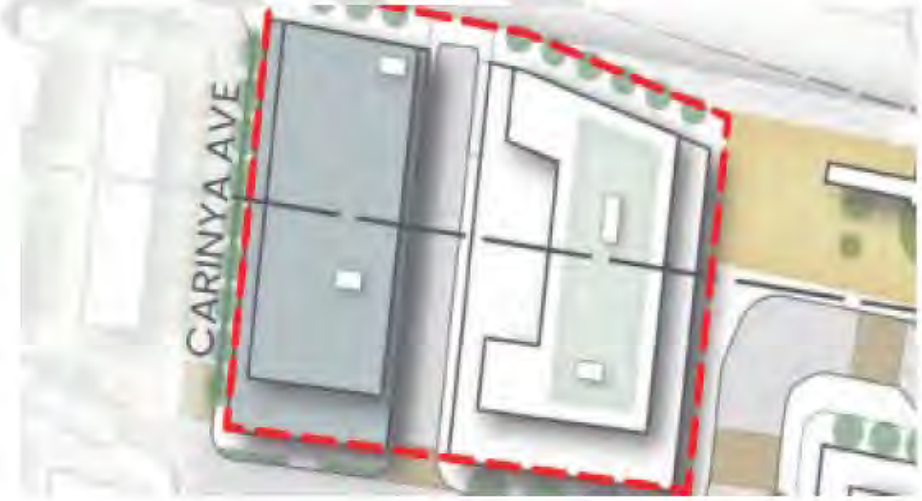


B. Northern landmark site

Application

This section applies to the site which is bounded by Queen Street to the east, Nariel Street to the south, Carinya Avenue to the west, and the railway land to the north, and as shown in Figure 67.

Figure 67: Northern landmark site



Objectives

a) Create a landmark mixed-use development site to 'bookend' the northern extent of Queen Street and provide a statement entry to the Town Centre.

b) Encourage lot amalgamation to optimise development potential and promote the orderly development of land.

c) Encourage the consolidation of public at-grade car parking to support the delivery of a multi-deck public car park.

d) Deliver a high-quality architectural, urban and landscape design response given the site's proximity to the transport interchange, being a key arrival point to the Town Centre.

e) Provide a diversity of uses that strengthen the Commercial Core Precinct, and generate employment opportunities and economic growth.

f) Provide activate frontages to Queen Street, Nariel Street and the railway corridor to promote vibrancy and surveillance, including at night-time.

g) Provide a transition in built form to lower scale development in the Historic Living Precinct.

Controls

1. The amalgamation of Lot 925 DP1288339 and Lots 1-4 SP12965 and as indicated Figure E15.64 is encouraged.

2. Active street frontages are required along Queen Street, Nariel Street, and the railway corridor in accordance with the Penrith LEP 2010.

3. Vehicle entries to the site are not permitted on Nariel Street, Queen Street and Station Street.

11.2 Gateway Living Precinct

Application

This section applies to all development in the Gateway Living Precinct.

Objectives

a) Promote contemporary architectural design to integrate development in the Gateway Living Precinct with the adjoining Commercial Core Precinct.

b) Provide a defining entry statement to the Town Centre.

c) To maintain adequate solar access to Gateway Park.

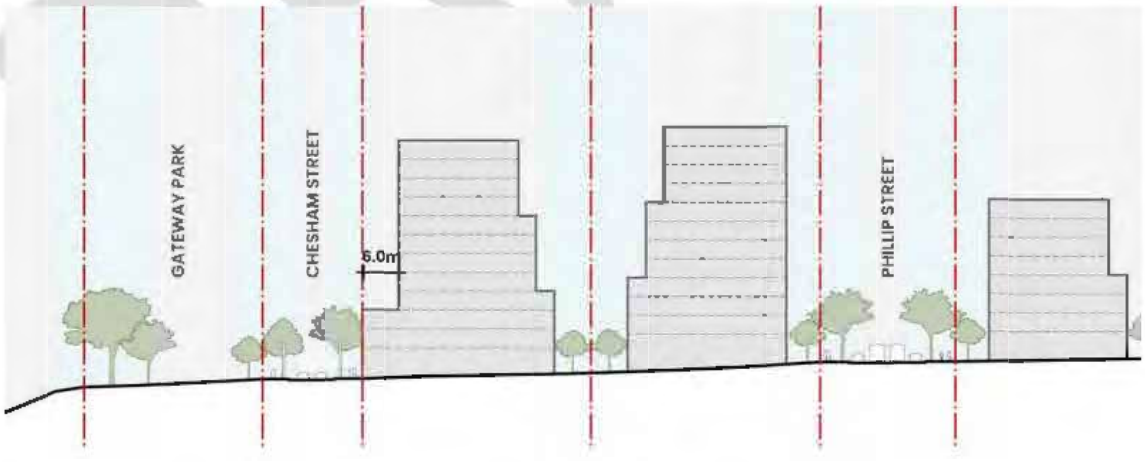
Controls

1. Maximum 3 storey podium height is permitted for development in the Gateway Living Precinct.

2. A 0m building setback to Chesham Street is permitted, as illustrated in the typical section at Figure 68.

3. A minimum 6m upper floor building setback to Chesham Street is to be provided.

Figure 68: Typical section



11.3 Town Centre Core - Civic Heart Precinct

A. St Marys Village Centre

Application

This section applies to the site in the Town Centre Core - Civic Heart Precinct which is bounded by Charles Hackett Drive to the north-west and west, central park to the north-east, Carinya Avenue to the east, and the St Marys Primary School to the south, and as identified in Figure 69.

Figure 69: St Marys Village Centre



Objectives

a) Provide a diversity of land uses with high amenity that support the Civic Heart Precinct.

b) Provide east-west walking and cycling links, connecting the Civic Heart Precinct with the South Creek Precinct.

c) Provide north-south walking links to connect the Civic Heart Precinct with key activity nodes, including school sites.

d) Provide a high-quality street presentation to Charles Hackett Drive.

e) Require a landscaped setback to Charles Hackett Drive, providing a blue-green overland flow path through the site along Charles Hackett Drive, enhancing connectivity between central park and South Creek Park, and supporting stepping stone habitats for biodiversity.

f) Preserve views within the Civic Heart Precinct.

g) Consolidate the delivery and service access along the western boundary of the site.

h) Minimise amenity impacts on adjoining sensitive uses, including adjoining school site.

Controls

1) A minimum 20m landscaped building setback to Charles Hackett Drive is to be provided consistent with Section 7.1. in this chapter.

2) Loading and service access to retail development must be consolidated and be provided on Charles Hackett Drive (west) at the southern end of the precinct.

3) Basement car parking with underground access shall be provided from Charles Hackett Drive (west).

4) For development with an interface to St Marys Public School, increased upper-floor building setbacks are required to minimise privacy and overlooking impacts, and to maintain solar access to the school site.

5) Deliver an east-west walking and cycling connection through the site, and a north-south walking connection through the site. The desired location for walking and cycling connections are identified in Section 6.2.

6) Development is to be designed to provide landscaped setback to walking and cycling links, and active frontages along their full length to promote passive surveillance. Refer to Section 6.2 in this chapter for further requirements.

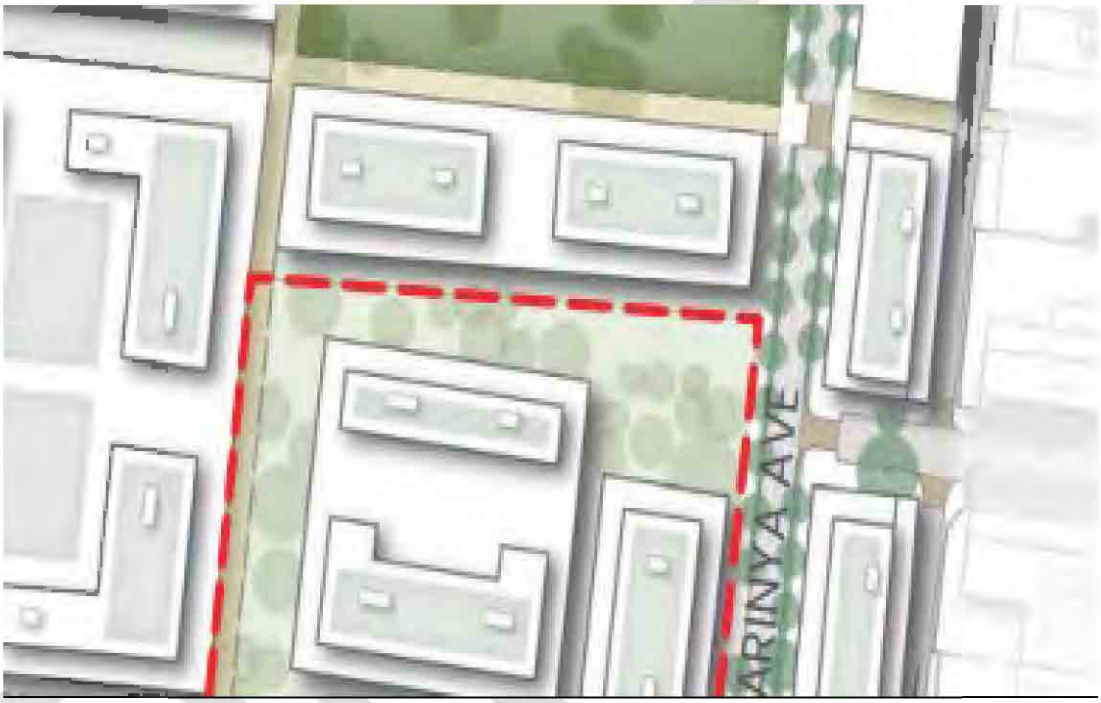
7) Active street frontages along Carinya Avenue and central park are to be provided in accordance with the Penrith LEP 2010.

B. Lang Park

Application

This section applies to the site located within the Town Centre Core-Civic Heart Precinct which is bounded by the St Marys Village Centre to the north and west, Carinya Avenue to the east, and St Marys Primary School to the south, and as identified in Figure 70.

Figure 70: Lang Park site



Objectives

a) Provide a diversity of uses that support the Civic Heart Precinct and generate employment opportunities.

b) Deliver a high-quality architectural, urban and landscape design response.

c) Encourage lot amalgamation for orderly development of land.

d) Provide for east-west and north-south walking/cycling routes to provide connections to St Marys Village, St Marys Public School and central park.

e) Provide landscaped setbacks to all new pedestrian routes, including increased tree canopy to reduce urban heat.

f) Dedicate land for road widening of Carinya Avenue.

g) Retain existing vegetation particularly along lot boundaries to adjoining sites.

h) Acknowledge and respond to the Munitions Memorial Garden in the Lang Park site as part of any future development.

i) Provide active frontages to Carinya Avenue and street setbacks suitable to accommodate landscaping, seating and outdoor dining.

j) Maintain solar access and reduce overlooking of St Marys Public School and outdoor play areas, and achieve a consistent human scale street frontage height within the Civic Heart Precinct.

Controls

1. Lots are to be amalgamated as indicated in Figure 69.

2. Deliver east-west and north-south active transport connections as indicated in Section 6.2 in this chapter, including:

    i. An east-west walking and cycling connection through the site.

    ii. A north-south pedestrian connection through the site.

    iii. A north-south walking and cycling share path along the Carinya Avenue frontage within the road reserve. Refer to Section 6 in this chapter for indicative road cross-sections.

3. Development is to be designed to provide landscaped setback to walking and cycling links, and active frontages along their full length to promote passive surveillance. Refer to Section 6.2 in this chapter for further requirements.

4. The dedication of land is required to facilitate the widening of Carinya Avenue to a minimum road reserve width of 18m between property boundaries. The western verge is to be a minimum 5m wide, inclusive of a 3.5m wide share path. Refer to Section 6 in this chapter for indicative road cross-sections.

5. Development is to be designed to provide landscaped setback to walking and cycling links, and active frontages along their full length to promote passive surveillance. Refer to Section 15.6.2 for further requirements.

6. Active street frontages along Carinya Avenue are to be provided in accordance with the Penrith LEP 2010.

11.4 Green Spine Precinct

Application

This section applies to all development in the Green Spine Precinct.

Objectives

a) Provide a sensitively designed presentation to Charles Hackett Drive and promote passive surveillance.

b) Provide north-south pedestrian link to support a broader north-south pedestrian route connecting Jack Jewry Reserve and St Marys Public School.

Controls

1. A minimum 6m ground floor building setback to Charles Hackett Drive is to be provided for development in the Green Spine Precinct.

2. Provide a north-south pedestrian connection between Charles Hackett Drive and Kungala Street. The desired location for a pedestrian connection is identified in Section 6.2. Development is to be designed to provide landscaped setback to walking and cycling links, and active frontages along their full length to promote passive surveillance. Refer to Section 6.2 for further requirements.

11.5 Co-Working and Creative Industry Precinct

Application

This section applies to development in the Co-Working and Creative Industry Precinct.

The Penrith LEP permits limited residential development on land zoned E3 Productivity Support within the Co-Working and Creative Industry Precinct when carried out in association with Light Industry uses. For mixed-use development comprising Light Industry with limited residential uses, this section must be read in conjunction with the additional requirements under the Penrith LEP.

Objectives

a) Create a new hub of activity on the northern approach to the Town Centre.

b) Promote small scale live/work developments to support creative and cultural enterprises and emerging industries.

c) Encourage opportunities for low cost spaces to support creative and cultural enterprises, emerging industries and starts-ups.

d) Ensure that live/work relationships are integrated and conserved in perpetuity.

e) Provide a transition between adjoining land uses, including the Commercial Core Precinct and Dunheved Business Park Precinct.

f) Contribute positively to the streetscape and the public domain by means of high-quality architecture and robust selection of materials and finishes.

g) Encourage building designs that are suitable to accommodate creative spaces and light industrial uses.

h) Ensure developments contribute to mitigating urban heat impacts by increasing canopy coverage and deep soil planting and retaining existing canopy trees on sites.

i) Minimise conflicts between residential and non-residential uses to provide a safe and liveable urban environment.

j) Encourage well designed residential development in conjunction with permissible ground floor uses to support employment, and which affords a high level of residential amenity.

k) Provide a green buffer to the rail corridor and screening through canopy tree planting.

Controls

1. Development applications for live/work enterprises are to address relevant mixed-use development controls in Section 7 in this chapter, except where those controls are amended by this section.

2. Minimum building setbacks are to be in accordance with the following:

Table 18: Minimum building setbacks

Setback	Minimum Setback (m)
Front	5.5m
Secondary street	5m

(corner site)	
Rear	6m
Side (for residential component)	In accordance with the relevant State Environmental Planning Policy and any supporting design guide.

3. Front and secondary street setback must be landscaped and include canopy tree planting.

4. A minimum tree canopy target of 10% of the site area is to be provided. Refer to Section 4 in this chapter for further requirements.

5. A minimum deep soil planting zone of 15% of the site area is to be provided with no encroachment of basement, hardscaped areas or infrastructure.

6. Private open space for residential uses is to be provided in accordance with Table 20.

7. Private open space is to be located at podium level and above podium level (balconies) above street level and in locations that contribute to passive surveillance of the public domain.

8. Minimum dwelling sizes shall be in accordance with Table 21.

9. Minimum internal dimensions of dwellings shall be in accordance with Table 22.

10. Minimum floor to ceiling heights shall be in accordance with Table 19.

Table 19: Minimum floor to ceiling heights

Floor	Minimum floor to ceiling height (m)
Ground floor	• 4.9m (with 5.3m floor to floor height).
Upper floors	• 3.3m for non-residential uses. • 2.7m for habitable rooms within residential uses. • 2.4m for non-habitable rooms within residential uses.

11. Suitable visual and acoustic privacy measures shall be incorporated to the protect the amenity of residents. A plan of management detailing how the Light Industry will operate and manage its impacts, particularly on residential uses, shall be submitted with the development application.

12. Noise and vibration guidelines published by the NSW Government apply. A noise impact assessment may be required to be submitted to demonstrate compliance with relevant residential requirements.

Table 20: Minimum private open space requirements

Level	Private open space requirement (minimum)
Podium level	• 15m^2 with a minimum depth of 3m.
Above podium level (balconies)	• 4m^2 for studio dwellings • 8m^2 for 1-bedroom dwellings with a minimum depth of 2m. • 10m^2 for 2-bedroom dwellings with a minimum depth of 2m. • 12m^2 for 3+bedroom dwellings with a minimum depth of 2.4m.

Table 21: Minimum dwelling sizes

Dwelling type	Minimum area of Dwelling (with one toilet)
Studio	35m^2
1-bedroom	50sm^2
2-bedroom	70m^2
3-bedroom	90m^2
*each additional toilet: +5m^2.	

Table 22: Minimum internal dimensions of dwellings

Room/Dwelling type	Minimum area, width and depths (excluding wardrobe space)
Master bedroom	• Minimum area of 10m^2. • Minimum 3m width.
Bedroom	• Minimum area of 9m^2. • Minimum 3m width.
Living room and combined/ dining room	• Minimum 3.6m width for studio and 1-bedroom dwellings. • Minimum 4m width for 2-bedroom and 3-bedroom dwellings.
Cross-through dwellings	• 4m width of cross-over or cross-through dwellings.
Habitable room	• Habitable room depths to be limited to a maximum of 2.5 times the ceiling height.

Appendix A: Planned character statements

Town Centre Core - Green Spine Living

Comprises low to mid-rise residential apartments with building heights of up to 4-storeys. The precinct provides an active pedestrian and cyclist focused green spine connecting residents to the Town Centre Core and South Creek Park.

The precinct offers high amenity with streets prioritising space for walking, cycling and tree planting. One-way vehicle movements along Kungala Street (westbound), Benalong Street (eastbound) and Taroona Avenue (southbound) allow for widened verges for wider footpath/share path and tree street tree planting.



Caption: (1) New pedestrian through-site link. (2) New active transport connections. (3) Street network changes.

Town Centre Core - Civic Heart

Is the central gathering place of the Town Centre comprising a concentration of community focused uses. The precinct is anchored by St Marys central park, which combines Coachmans Park and Kokoda Park into a continuous open space area, and community facilities providing flexible and multi-purposes spaces.

Building heights range from 7 to 10 storeys with activated ground floor uses along Central Park and fronting part of Carinya Avenue, Charles Hackett Drive and through-site links. At the eastern end of Charles Hackett Drive, a shared zone with high place function provides one-way vehicle movements and a pedestrian friendly interface to central park. A landscaped setback of 20m along Charles Hackett Drive continues an east-west blue-green spine across the Town Centre.



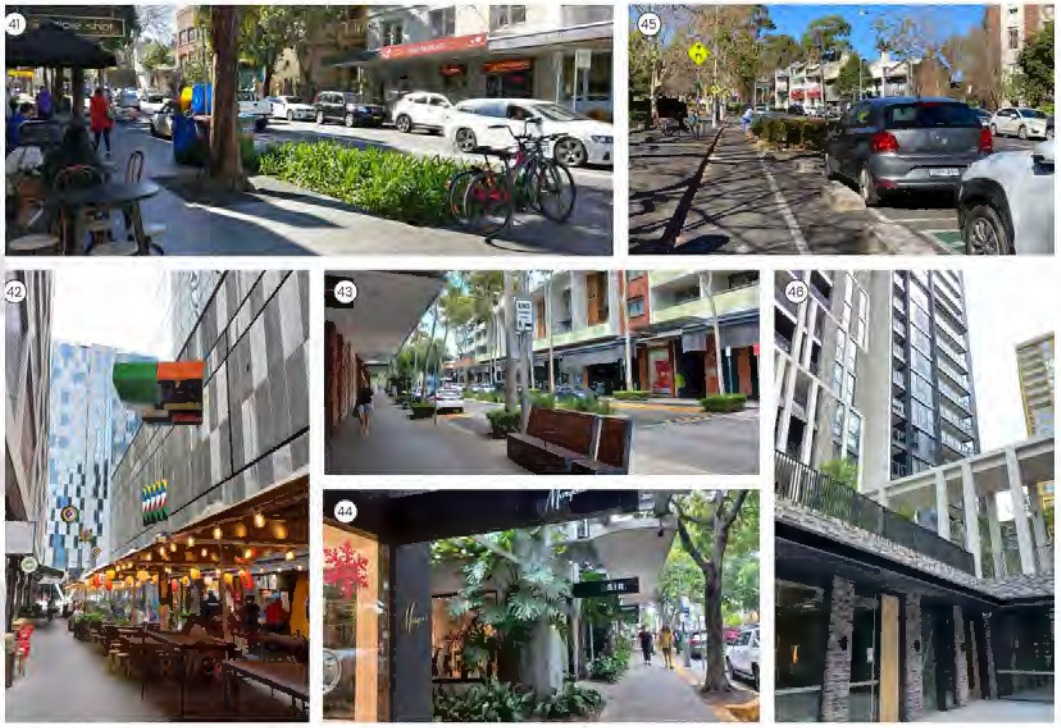
Caption: (1) Central Park. (2) New Library and Community Hub. (3) New shared zone. (4) Extended pedestrian through-site link. (5) New active transport connections. (6) Opportunities.

DRAFT

Town Centre - Entertainment and Eat Street Living (North & South)

The Town Centre - Entertainment and Eat Street Living is a mixed use precinct offering places to live, work, shop, dine and gather at the core of the Town Centre. Queen Street is the focus of this precinct for social and economic activity.

The precinct is characterised by fine-grain built form and quality human-scale architecture. Building heights range from 7 to 12 storeys, with a transition in building scale to adjacent to residential precincts. Ground floor building setbacks of 3-4m to Queen Street and activated ground floor uses to Queen Street and along connecting side streets and through-site links encourage activity at street level. The precinct comprises a north and south end, as described below.



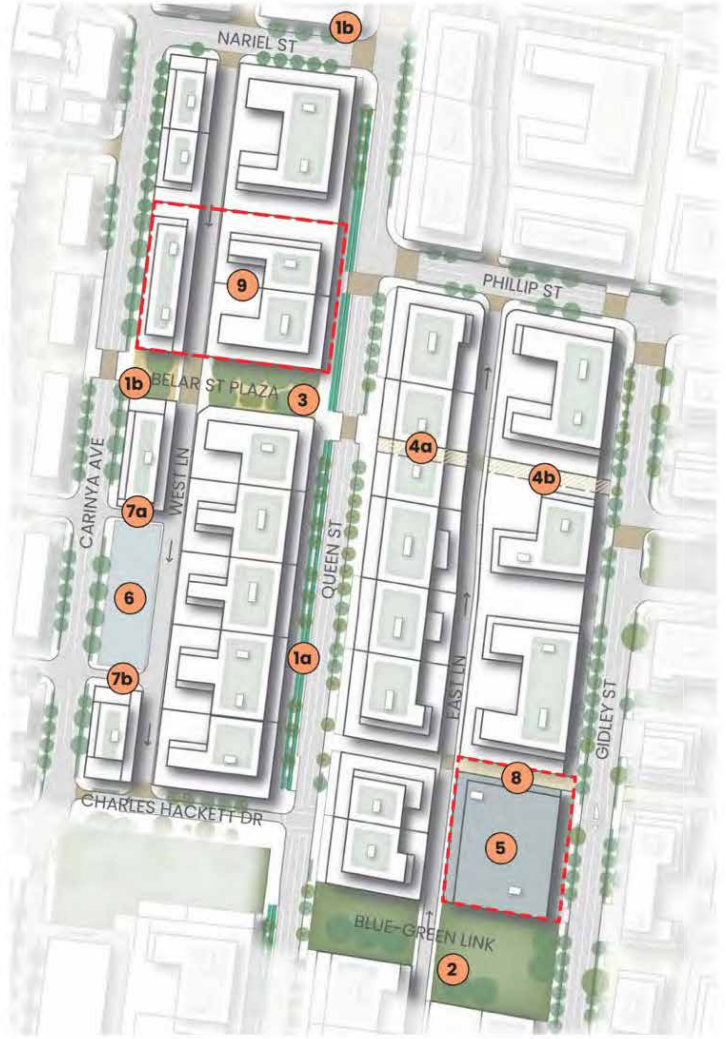
g. 41: Streetscape with active frontages, dining and greenery along Crown Street, Surry Hills NSW. Fig. 42: An activated laneway with outdoor dining and artwork, Darling quare, Haymarket NSW. Fig. 43: Streetscape within Rouse Hill Town Centre, NSW. Fig. 44: Green shopfronts at James Street Precinct, Fortitude Valley QLD. g. 45: Physically separated cycleway, Campbell Street, Surry Hills NSW. Fig. 46: Mixed-use development with ground floor retail space, Sydney Olympic Park NSW

North:

The closure of Belar Street to vehicles enables a vibrant civic plaza to be created (Belar Street Plaza), bounded by Carinya Avenue and Queen Street. The civic plaza enhances pedestrian movement, and offers opportunities for outdoor dining, and temporary events. The civic plaza will be embellished with landscaping, seating and public art, and fronted by specialised retail and active uses, such as cafés and restaurants.

A new multi-functional blue-green link is designed to manage stormwater from local overland flows along East Lane and serving as a green corridor linking Astley Park to South Creek.

Existing publicly accessible arcades in private developments along Queen Street to be retained to maintain permeability, and pedestrian through-site link to be extended to Gidley Street as part of new development proposals supporting the connection to adjacent residential precincts. A dedicated pedestrian connection from Queen Street through to East Lane increases permeability and supports east-west connectivity, with a minimum width of 6m and open to sky. Dedicated bi-directional cycleway along Queen Street to Nariel Street, with a shared path from Nariel Street to Station Street provides high connectivity to the north of the Town Centre.



Caption: (1) New active transport infrastructure. (2) New blue-green link. (3) New Civic Plaza. (4) Retained and extended pedestrian through-site links. (5) Multi-deck public car park. (non-commuter) (6) Flexible at-grade public parking

South:

South of Charles Hackett Drive, a mix of cafes, local business, services and entertainment options will cater to a range of community needs and interests, alongside complementing the residential uses.

A dedicated pedestrian connection from Queen Street through to West Lane increases permeability and supports east-west connectivity, with a minimum width of 6m and open to sky. Existing publicly accessible arcades in private developments along Queen Street are to be retained to maintain permeability. Pedestrian through-site links to be extended to Carinya Avenue and Gidley Street as part of new development proposals supporting the movement of people from adjacent residential precincts into the Town Centre Core.

A bi-directional cycleway along Queen Street up to King Street, and a shared path from King Street to the Great Western Highway provides connectivity to the south of the Town Centre.



Caption: (1) New active transport infrastructure. (2 &4) Retained and extended pedestrian through-site links. (3) Multi-deck public car park (non-commuter). (5) Opportunities.

Ridgetop Living

A vibrant, high density residential area situated within a short walk to transport, essential services, employment opportunities and a range of hospitality and shopping options.

The precinct benefits from regional views to the Blue Mountains, enhancing connection to the natural landscape, and is characterised by modern, high-quality residential buildings set within landscaped setbacks. Buildings heights range of 6 to 10 storeys with a transition in scale to lower densities towards the periphery of the Town Centre.

A new local park (Ross Place Park) provides open space with landscaping, areas for relaxation and social gatherings set within a high-density living environment, in addition to Astley Park. Residential building setbacks ensure adequate solar access to Ross Place Park.

Existing publicly accessible through-site link connecting Blair Avenue and Little Chapel Street is to be retained to maintain pedestrian connections into the Town Centre.

Desired pedestrian connections north of Ross Place Park linking to Lethbridge Street is an opportunity for enhanced permeability of the precinct and walkability to key destinations. Share paths along Chapel Street, Glossop Street and Phillip Street encourage walking and cycling.



Caption: (1) New Ross Place Park. (2) Retained existing pedestrian through-site links. (3) Desired pedestrian connections. (4) New active transport connections. (5) Astley Park.

Gateway Living

The Gateway Living Precinct is a defining entry statement providing a sophisticated sense of arrival into the Town Centre. The precinct is characterised by high density urban residential development of contemporary architectural design, integrating with the
adjoining Commercial Core precinct.

A new local park (Gateway Park) bounded by the rail corridor, Chesham Street, Station Street and Glossop Street provides a
green interface to the rail corridor and enhanced urban ecology corridor promoting environmental outcomes.

Building heights are up to 15 storeys, with buildings permitted to be built to front boundaries on Chesham Street with upper levels setback. Communal open space and landscaping on podiums
and rooftops afford a high level of amenity.



Caption: (1) New Gateway Park. (2) New active transport connections.

Park Living

The Park Living Precinct provides for medium density residential dwellings adding to the diversity of housing within the Town Centre.

The precinct surrounds Bennett Park and is characterised by its highly landscaped park setting. The precinct offers new play spaces, filtered views to the Blue Mountains and integrated wetland feature to improve water catchment health and contribute to the amenity of open space.

Buildings heights range from 3 to 6 storeys with a transition in scale moving away from the Town Centre. Existing through-site link connecting Brock Avenue to Gidley Street is to be retained to maintain pedestrian connections into the Town Centre, and share paths along Chapel Street, Lethbridge Street, King Street and Glossop Street offer amenable walking and cycling routes to local shops and school.



Map 29: Park Living Precinct

Caption: (1) Bennett Park. (2) Water Management. (3) Retained existing through-site links. (4) New active transport connections.

Historic Living

The Historic Living Precinct is characterised by its strong association with the history of St Marys, connecting the Town Centre to its rich past, whilst embracing the future. The original subdivision pattern is preserved and a focus on Jack Jewry Reserve maintained.

The precinct is characterised by low-scale character, with an emphasis on low-rise dwelling typologies including dual occupancies and townhouses. Building heights are predominately 2 storeys with 3 storey buildings permitted along Carinya Avenue North as an interface to the adjoining mixed use development.

One-way vehicle movements along Benalong Street (eastbound), Merinda Street (eastbound), Nariel Street (westbound) and Taroona Avenue (southbound) allow for widened verges for wider footpaths/shared paths and street tree planting encourage cycling and walking and afford high pedestrian amenity.



Caption: (1) Jack Jewry Reserve. (2) New active transport connections. (3) Street network changes, (4) New Sydney Metro Rail Line.

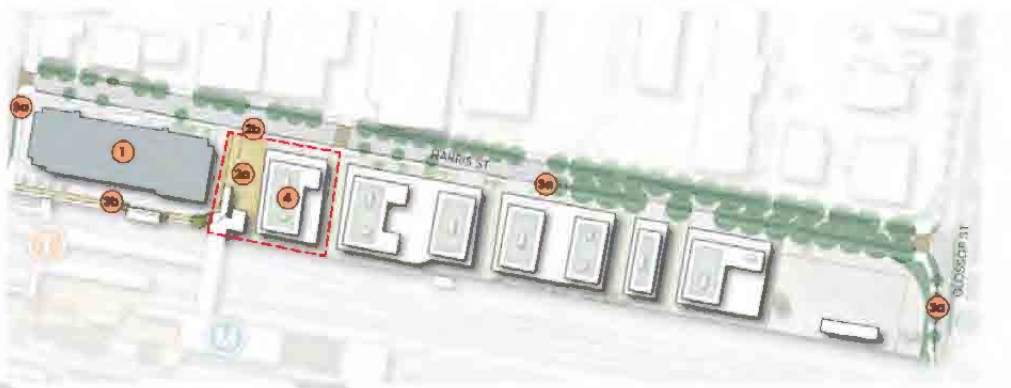
Co-Working and Creative Industry

The Co-Working and Creative Industry Precinct offers a mixed-use environment for emerging industries and creative enterprises with limited ancillary residential accommodation. Building heights of 12m are permitted with increased floor to floor heights to accommodate and create spaces and light industrial uses. Landscaped setbacks along Harris Street ensure a high level of amenity is maintained.

Key to the precinct is the Transport Interchange and associated public plaza (Northern Plaza). The existing commuter car park adjacent to the station is to be retained, and taxi and kiss-and-ride parking provided along Harris Street. An active transport connection along the rail corridor and shared paths along Harris Street, Glossop Street ensures high level of connectivity.

South Creek Park

The South Creek Park Precinct is envisioned as a gateway for recreation and environmental perseveration, with South Creek Park together with the adjoining Kingsway Playing fields offering contemporary sports and active recreation facilities, and cool, green open spaces for passive recreation and respite. A network of walking and cycling paths connecting to and along Wianamatta South Creek promote activation, and new regional treatment basin to improve water quality and contribute to biodiversity and recreational amenity outcomes



Caption: (1) Existing Commuter Car Park. (2) Transport Interchange. (3) New active transport connections. (4) Opportunities.



Fig. 117 Open space along the riverfront in Brisbane QLD. Fig. 118 Wetland within Francis Park, Blacktown NSW. Fig. 119 Public artwork and playspace in Ian Potter Children's Wild Play Garden, Centennial Park, NSW. Fig. 120 BMX track in South Creek Park, St Marys NSW. Fig. 121 Recreational cycling route across North Para River, SA.

Dunheved Business Park

The Dunheved Business Park Precinct is to be retained as an employment precinct that will continue to provide a high number of jobs and a diversity of industrial uses contributing to the local and regional economy. The precinct's high level of amenity enhanced green streets, and sustainable buildings will attract businesses and workers. Access to the precinct will be improved with the metro station, with new walking and cycling paths located within existing street corridors and new overbridges to safely connect areas north of the rail line including North St Marys with the Town Centre Core and Commercial Core precincts.



Education

Comprises 2 distinct areas, with St Marys Public School located to the south-west of the Town Centre, and St Marys Senior High School located to the north-west of the Town Centre.

Well integrated with places to live, work, shop and catch public transport, with improved waking and cycling connections for students, workers and the wider community. A new share path along the northern side of Kungala Street (between Creek Road and Charles Hackett Drive) provides connections to the east and west from St Marys Senior High School, with future opportunities for desired share paths along Kalang Avenue and the rail corridor, and the northern boundary of St Marys Public school.



DRAFT

D16 Luddenham Road Industrial Business Park

Contents

D16 Luddenham Road Industrial Business Park 3

1. Introduction 3

1.1 Area included in the Luddenham Road Industrial Business Park 3

2. Site development and urban design 4

2.1 Building setbacks 4

2.2 Landscaping 5

2.3 Building and urban design 7

2.4 Signage and estate entrance walls 11

2.5 Lighting 14

2.6 Services 15

2.7 Interface with the Transmission Line Easement 15

2.8 Interface with the Outer Sydney Orbital 16

2.9 Lot yield controls 17

3. Environmental quality 19

3.1 Strategic conservation area and avoided land 19

3.2 Noise pollution 23

3.3 Air pollution 23

3.4 Trading/operating hours of premises 24

3.5 Storage, transportation and/or processing of chemical substances 24

4. Road network and site access 26

5. Access and parking.....32
6. Integrated Water Cycle Management.....34
7. Flood Prone Land.....38
Appendix A Waterway health objectives.....41
Appendix B Individual Lot Noise Contributions.....43

DRAFT

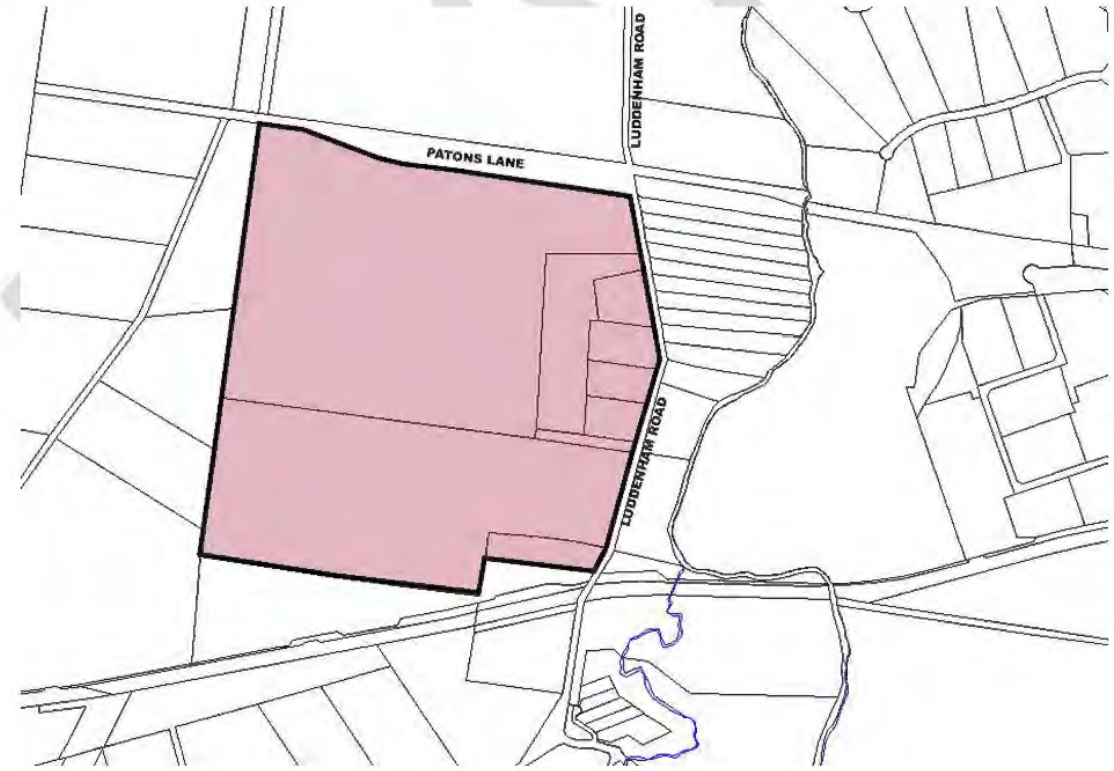
D16 Luddenham Road Industrial Business Park

1. Introduction

1.1 Area included in the Luddenham Road Industrial Business Park

This chapter applies to development on land covered by the Luddenham Road Industrial Business Park Precinct as shown in Figure 1. This chapter provides specific controls for the Luddenham Road Industrial Business Park Precinct, in addition to the general controls elsewhere in Penrith DCP. In the event of any inconsistency between this section and the rest of Penrith DCP, the requirements of this chapter prevail.

Figure 1: Land to which this section applies.



2. Site development and urban design

2.1 Building setbacks

Objectives

a) To provide an open streetscape with substantial areas for landscaping.

b) To ensure a consistent and high-quality presentation to the street and enable opportunities for landscaping and tree canopy provision.

c) To enhance the visual quality of the development and the urban landscape and to minimise the visual impact of carparking and hardstand areas.

d) To facilitate the future widening of the Luddenham Road corridor.

Controls

1. Setback requirements are outlined in Table 1.

2. Notwithstanding Control (1) above, no development other than the following development is permitted within the defined setback for any road, including the future widening of Luddenham Road:

    i. Landscaping in accordance with the provisions of an approved Landscape Master Plan

    ii. Accessways and driveways (not permitted in setbacks to designated roads which includes the potential widening of Luddenham Road)

    iii. Utility services installation

    iv. Approved signage

    v. Street furniture

    vi. Drainage works

    vii. Where car parking and hardstand areas are proposed within a building setback fronting a public road, these areas are to be

located behind a 10m landscaped buffer for sites with frontage to an Arterial Road, and located behind a 5m landscape buffer for all other road typologies

viii. For corner sites no car parking and hard stand areas are to be located within the secondary or side building setback, unless they are located behind the 5m landscaped setback

ix. On-site detention is not permitted in the building setback to the street.

Table 1: Minimum building setback requirements

Road Classification	Minimum Setback
Arterial Road - Luddenham Road (from the ultimate boundary of the road widening corridor)	20m
Distributor – Paton's Lane	15m
Collector Road – North South Boulevard	15m
Estate Roads	7.5m
Rear and Side Boundaries	5m
Outer Sydney Orbital Corridor	5m

2.2 Landscaping

Objectives

a) To contribute to the Greater Sydney Regional Plan – A Metropolis of Three Cities tree canopy cover target for metropolitan Sydney of 40%.

b) To contribute to the delivery of a high quality and high amenity streetscape.

c) To ensure landscaping designs deliver canopy trees for cooling and shade and enhance the visual quality of development and the urban landscape.

d) To ameliorate bulk and scale of buildings, screen undesirable views and minimise the impacts of hard surfaces.

e) To provide for a high amenity transition between the existing and ultimate interface with Luddenham Road.

f) To ensure development is provides adequate landscape screening to rural residential uses to the east.

Controls

1. The landscape setback requirements for the Luddenham Road Industrial Business Park are outlined in Table 2 below.

2. Setbacks shall include suitable tree planting along the northern and western elevations of buildings to provide shadow and cool the building.

3. The landscape treatment along the Luddenham Road interface is to incorporate a landscape mound treatment needed along the Luddenham Rd interface to screen buildings to the residential properties to east (refer to Figure 2).

4. A Landscape Plan prepared by a suitably experienced Landscape Architect is to be submitted with all development applications. Landscape plans shall correlate with civil and services plans to ensure landscaping is achievable and sustainable to maturity.

5. Landscaped front setbacks should include canopy trees whose mature height is in scale with the proposed development.

6. Within car parking areas, tree planted landscaped blister islands are to be provided at a rate a maximum rate of 1 per 6 car spaces and be minimum width of 1.5m.

7. Street tree planting is required to be provided in accordance with Council's specifications.

8. Sufficient area/space is to be made available to allow trees to grow to maturity and not damage local infrastructure.

9. Local Indigenous groundcovers should be considered as a turf alternative in areas not specifically designed for pedestrian use.

10. Where possible existing remnant trees are to be retained and protected.

Table 2: Landscape setback requirements

Luddenham Road (from the boundary of the ultimate road widening corridor)	10m
Paton's Lane	6m
All other Roads	50% of building setback
Rear Boundaries	2.5m
Outer Sydney Orbital corridor	5m

Figure 2: Landscape Buffer



2.3 Building and urban design

Objectives

a) To encourage a high standard of landscape and architectural design, utilising quality materials and finishes.

b) To establish varied and articulated frontages facing or visible from public roads and places.

c) To ensure the built form along the Luddenham Road frontage contributes to the visual amenity along the streetscape.

d) To minimise perceived scale and mass and to prevent monotonous building forms resulting from limited articulation and poor design of walls or rooflines.

e) To ensure that new development contributes to the creation of a visually cohesive and high amenity urban environment.

f) To ensure buildings achieve a high level of sustainability and environmental performance.

g) To provide high amenity places for people.

Controls

1. Prominent elevations and façades which have a frontage to the public domain, environmental zones or those that are visible from public areas, must present a building form of significant landscape, architectural and design merit.

2. The construction of large, blank wall surfaces along the prominent elevations and façades, are not permitted.

3. Large unrelieved expanses of wall or building mass will not be supported by Council, and as such should be broken up by the use of suitable building articulation, fenestration or alternative architectural enhancements and landscaping.

4. The use of large, uninterrupted areas of metal cladding or untreated concrete surfaces for wall construction is not supported. Applicants shall vary materials and/or finishes for external walls to provide attractive streetscapes and quality building designs. Council may limit the use of a single construction material to 50% of a wall surface area.

5. All loading areas should be located towards the rear of allotments, where practicable. Where loading areas are visible from the street, loading areas should be screened from the view of main road frontages through physical and/or vegetation screening.

6. Developments are to provide staff communal or break-out/lunch areas which are commensurate with the scale of the development. Such

communal areas are to be high amenity and their design shall consider access to sun, shade, outlook, amenities and landscaping.

7. Details of external materials and finishes shall be submitted with the Development Application.

8. External materials should not have an index of reflectivity above 20%.

9. Energy efficient design principles should be employed in all building designs.

10. Offices are to address the streetscape and are to be located at street intersections or along frontages where possible.

11. The design of office components is to differ although complement associated warehouse activities and is to be elevated in design quality with articulating elements, glazing and cladding, and be provided with high amenity landscaping.

12. Building walls shall be articulated to provide more varied streetscapes, where visible from public roads or adjacent residential areas, particularly along the Luddenham Road frontage and for buildings visible from the rural-residential areas to the east.

13. Part of the cross-section of buildings shall be projected to reduce apparent height and scale of external walls (refer to Figure 3) including:

    i. awnings and/or upper storeys that project above footpaths

    ii. roofs with eaves that project beyond external walls, and

    iii. colonnades.

14. Entrances to buildings and office areas must be highlighted by architectural features complementary to the overall design of the building.

15. Particular care should also be taken in:

    i. designing roof elements, which could potentially contribute to shading where possible

ii. locating plant and mechanical equipment including exhausts, so as to reduce their visual impact, and

iii. ensuring that external materials generate low solar absorbance, particularly on the roof to reduce urban heat island effect and reduce thermal comfort levels in the buildings.

16. Large expanses of façade which are oriented towards the rural residential areas to the east shall be minimised.

17. Hardstand areas must not be oriented towards rural residential areas to the east and are not to present to street frontages where possible.

18. The design and layout of buildings shall give consideration to local climatic conditions, including:

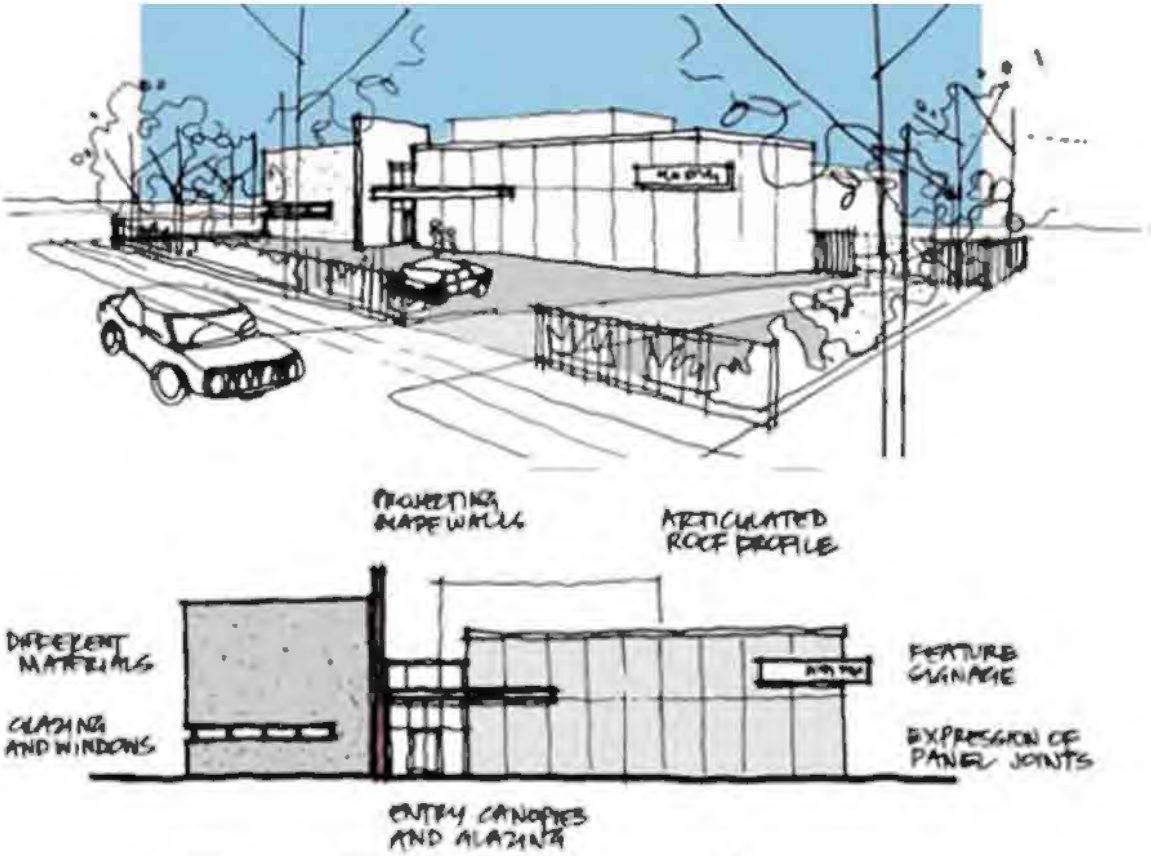
    i. where possible, building should take advantage of a north or north easterly aspect

    ii. western orientations should be avoided, and

    iii. canopy shade trees and shrubs are to be planted around buildings, car parks and hard stand areas to create shade, provide visual screening and to act as a wind break (refer Figure 2).

DRAFT

Figure 3: Acceptable solution for articulation of large buildings



2.4 Signage and estate entrance walls

Objectives

a) To promote an integrated design approach to all signage in character with the locality and its architectural and landscape features.

b) To provide a quality entrance statement and signage at each of the entrance points to the Estate.

c) To prevent the proliferation of signs.

d) To minimise the visual impact of signage.

e) To prevent distraction to motorists and minimise the potential for traffic conflicts.

f) To permit the adequate display of information concerning the identification of premises, the name of the occupier and the activity conducted on the land.

g) To encourage a coordinated approach to advertising where multiple occupancy of sites occur.

Controls

1. Estate identification pylons within the estate shall be no more than 4m in height (refer to Figure 4) and are to be located at the following entrance points to the estate:
    i. corner of Luddenham Road and Patons Lane
    ii. entry to the estate off the roundabout on Patons Lane, and
    iii. the southern secondary entry off Luddenham Road.
2. All signage is required to be:
    i. constructed of high quality, durable materials
    ii. considered in conjunction with the design and construction of buildings
    iii. restricted generally to one sign identifying the name of the occupants and/or products manufactured or produced on the site, and
    iv. contained wholly within the site.
3. Business directory signage shall be of a high quality and shall have a consistent. design throughout the Luddenham Road Industrial Business Park.
4. Illuminated signage is discouraged.
5. A detailed Wayfinding and Signage Strategy is to accompany development applications for proposals with multiple entrances, internal road networks or sites with more than 6 tenancies.

6. All signs, including pylon signs are to be no greater in height than 4m and are to be no greater in width than 2m.

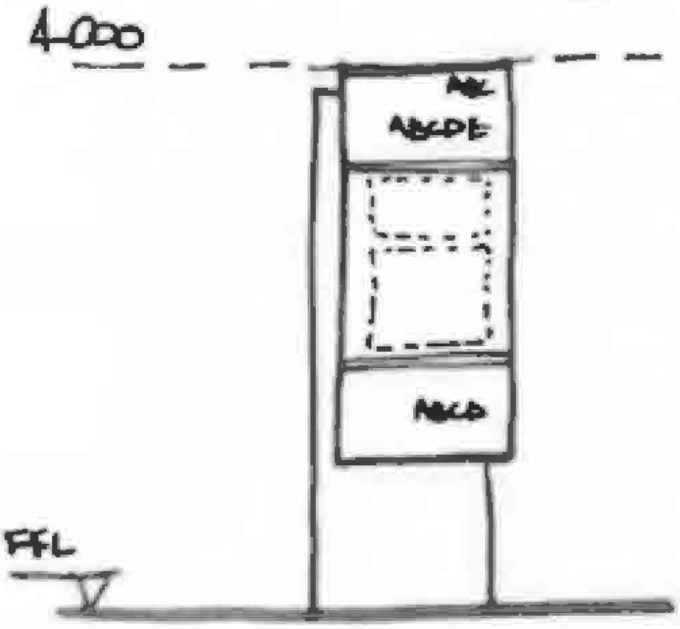
7. No roof mounted signs are permitted.

8. Painted wall signs, mega-graphic signs, brand advertising, graphics or stickers greater than $2m^2$ are not permitted.

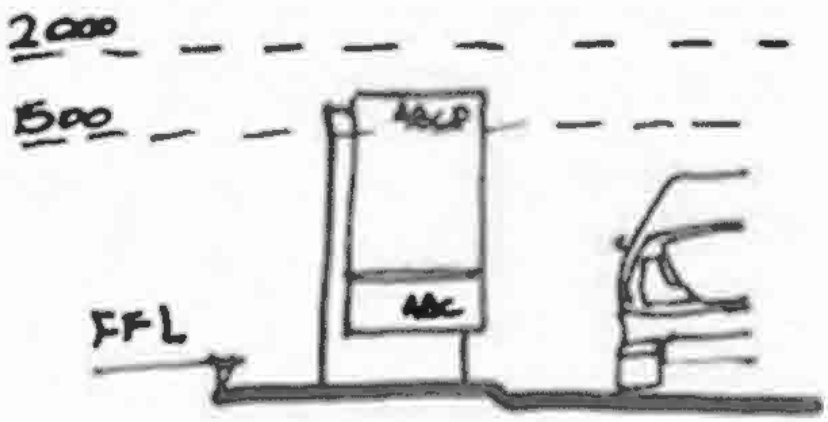
9. Up-lighting of signs is not permitted.

Figure 4: Estate identification signs

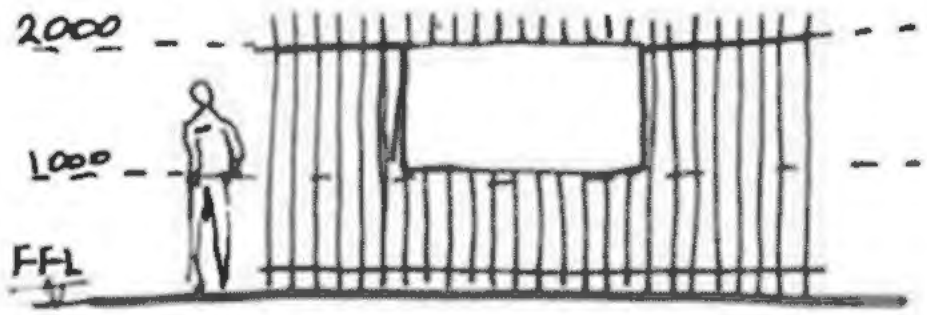
Pylon



Gate, Fence or Wall Mounted Sign



Directional Totem



2.5 Lighting

Objectives

a) To provide adequate security lighting, whilst ensuring that there are no adverse impacts on the use and enjoyment of adjoining premises and surrounding areas, particularly rural residential areas to the east of Luddenham Road

b) To ensure building entrances, streets and public spaces are safe and adequate visibility is maintained

c) Encourage sustainable and efficient design of lighting which does not detract from the amenity of the precinct or nearby sensitive land uses.

Controls

1. A Lighting plan and details shall accompany a development application.

2. Lighting design should address the principles of CPTED where there is significant pedestrian activity, late night work-shifts or safety and security issues or considerations.

3. Adequate lighting shall be provided to meet security requirements without excessive energy consumption. Lighting powered by solar batteries or other renewable energy sources and the use of sensor lighting, both internally and externally, is encouraged.

4. Lighting is to be designed or directed so as to not cause light spill onto adjoining sites or sensitive receivers, such as rural-residential areas and Avoided Lands or Strategic Conservation Areas.

2.6 Services

Objectives

a) To ensure that adequate services are available to facilitate development.

b) To ensure that services are appropriately located and do not detract from landscaping and streetscapes.

c) To ensure the co-location of services where possible.

Controls

1. All electricity and telecommunication mains be placed underground.

2. Council also requires the co-location of services where this is technically feasible.

3. All existing overhead services and wires are to be relocated underground as a result of the re-development of the precinct and as each site develops.

4. All development applications are to be accompanied by documentation confirming that essential services to meet the needs of the development can be provided to the site.

2.7 Interface with the Transmission Line Easement

Objectives

a) To create a physical buffer between the Luddenham Road Industrial Business Park and the riparian corridor within the north-western corner of the site.

b) To provide limited opportunities for development of land affected by the transmission line easement for landscaping, water quality and on-site detention basins, flood storage basins, and/or maintenance/rehabilitation of biodiversity conservation areas.

Controls

1. All buildings are to be setback a minimum of 5 meters from the Transmission easement corridor.

2. Approved landscape treatment shall be carried out on land affected by the transmission line easement and must comply with TransGrid's Easement Guidelines.

3. The provision of Onsite Stormwater Detention, Water Quality and flood storage basins is permitted within the transmission line easement corridor and must comply with TransGrid's Easement Guidelines.

2.8 Interface with the Outer Sydney Orbital

Objectives

a) To ensure the proposed development does not impede on the future development of the Outer Sydney Orbital (OSO) and requirements of Transport for NSW (TfNSW).

b) To provide an appropriate interface between the proposed development and the OSO corridor.

c) To ensure the OSO is preserved and protected to allow for the corridor design to change.

d) To ensure an appropriate and high-quality interface between the development within the Business Park and the OSO corridor.

Controls

1. All buildings are to be setback a minimum of 5m from the OSO corridor.

2. Buildings are not to directly front the OSO corridor.

2.9 Lot yield controls

Objectives

a) To implement the lot yield requirement of Clause 7.24 of Penrith Local Environmental Plan 2010.

b) To demonstrate that lot widths and sizes are suitable for industrial development.

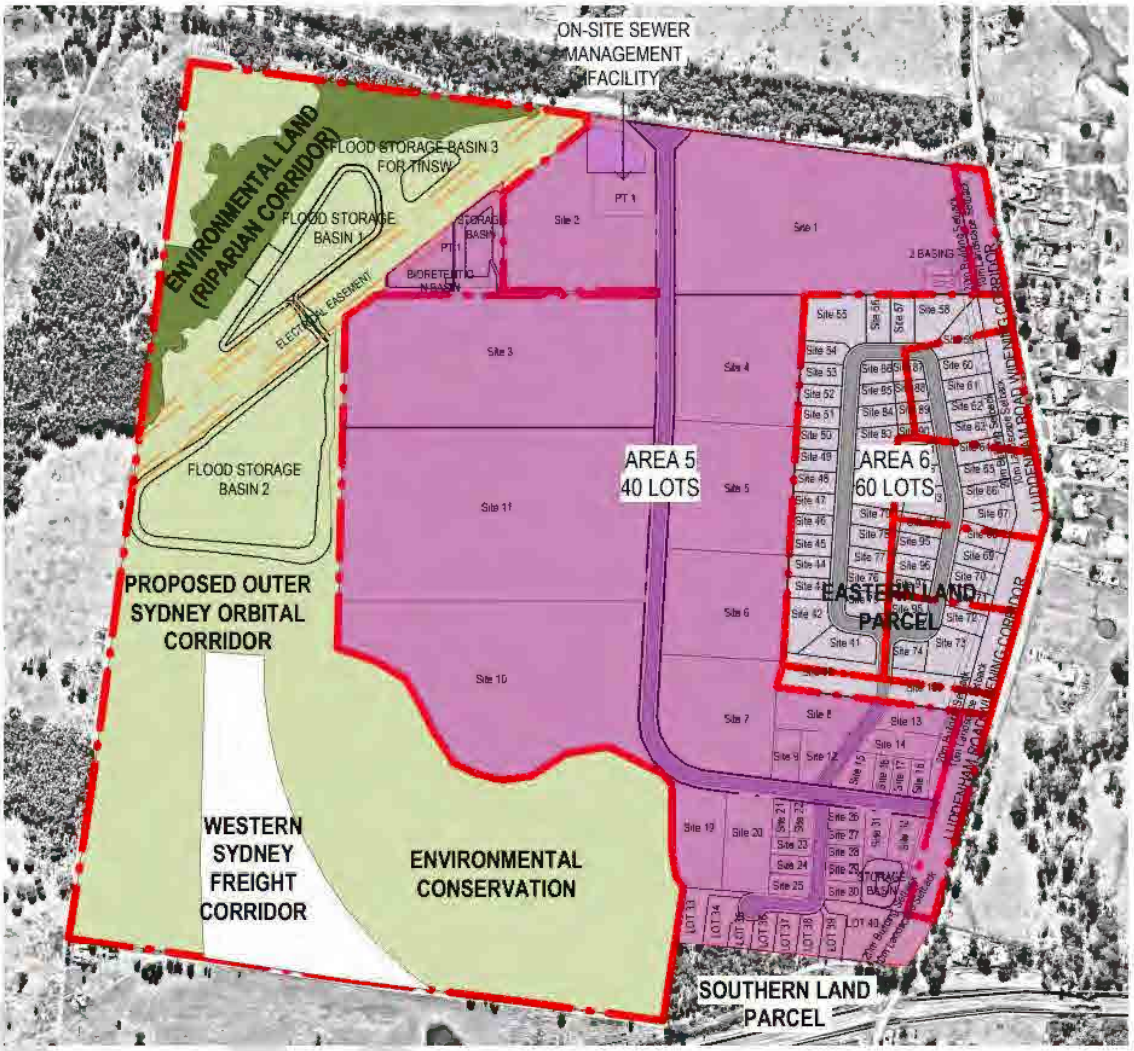
c) To provide a range of lot sizes that facilitate a diversity of industrial land uses that are permissible.

Controls

1. Development Applications which involve subdivision shall be generally in accordance with the lot layout in Figure 5 to ensure that the cumulative lot yields for Area 5 and Area 6 can be achieved, as specified in Clause 7.24 of the Penrith Local Environmental Plan 2010 (LEP 2010).

2. Development Applications which involve subdivision must be supported by a concept design to demonstrate the suitability of each proposed lot, including compliance with LEP 2010 and this Chapter.

Figure 5: Indicative lot yield map, Luddenham Road Industrial Business Park



Note: Figure 5 is indicative only. Subdivision proposals will be subject to a comprehensive assessment to determine the suitability of each lot.

3. Environmental quality

3.1 Strategic conservation area and avoided land

'Strategic conservation area' and 'avoided land' is land within the Luddenham Road Industrial Business Park Precinct that has been zoned C2 Environmental Conservation to implement the *Cumberland Plain Preservation Plan.*

Objectives

a) To maintain the current area of native bushland and retain the natural species diversity of bushland as far as possible.

b) To facilitate the implementation of weed control and management measures that act upon the processes causing weed invasion of natural areas.

Controls

Protecting and enhancing 'strategic conservation area' and 'avoided land'

1. No clearing of native vegetation should occur within these areas.
2. As far as possible, 'strategic conservation area' and 'avoided land' should be retained with the smallest possible edge-to-area ratio. Measures must be taken to avoid fragmentation of vegetation by roads, tracks, services and the like.
3. Management of 'strategic conservation areas' and 'avoided land' vegetation must allow natural processes to continue. Measures must be taken to prevent disturbance to existing vegetation, including roots, the hydrological regime and surrounding soil.
4. Management of 'strategic conservation area' and 'avoided land' must have regard to the value of the vegetation as fauna habitat. In particular, old trees (both living and dead), fallen logs, bush rock and a diverse

vegetation structure, including understorey species, should be maintained for fauna habitat.

5. Where land disturbance occurs, natural regeneration is the preferred method of rehabilitation.

6. Locally native species must be used for revegetation and restoration of 'strategic conservation area' and 'avoided land' if regeneration is unlikely to occur.

7. Where possible, new native vegetation must be planted in clusters and connected to isolated patches of vegetation to enhance the network of 'strategic conservation area' and 'avoided land'.

8. Non-native or introduced vegetation removed from a site is to be disposed of away from 'strategic conservation area' and 'avoided land' to avoid the spread of seed and regenerative vegetative material.

9. Where possible, structures and any associated fire protection zones must be sited on existing cleared land and not within 'strategic conservation area' and 'avoided land'.

10. Regular maintenance is required for existing tracks, especially to control track damage and erosion.

11. Non-essential roads and tracks in biodiversity corridors and areas of remnant native vegetation must be closed and rehabilitated.

12. Road signs should be erected where 'strategic conservation area' and 'avoided land' crossroads to alert motorists to the significance of fauna at these sites.

13. Activities such as horse riding and motorcycle riding can cause damage to tracks and native vegetation, spread weeds and introduce nutrients. Therefore these activities must not occur in 'strategic conservation area' and 'avoided land'.

<u>Development near strategic conservation area and avoided land</u>

14. All new development adjacent to 'strategic conservation area' and 'avoided land', is to be designed and constructed to prevent or minimise,

as far as possible, adverse impacts on native vegetation, fauna and habitat.

15. The layout of new development is to:

    i. Ensure low intensity land uses are situated directly adjacent to 'strategic conservation area' and 'avoided land'

    ii. Ensure viability and functionality of the 'strategic conservation area' and 'avoided land'

    iii. Maximise connectivity to neighbouring biodiversity corridors

    iv. Maximise connectivity to other areas of remnant native vegetation retained on-site or on neighbouring sites

    v. Ensure retained vegetation is configured to provide low edge-to-area ratios and avoid narrowing or bottlenecks within the biodiversity corridor

    vi. Ensure associated road infrastructure avoids core vegetation, or where not possible

    vii. provides for wildlife under/overpasses and minimises the intrusion, length and width

    viii. Where possible mitigate or prevent the impact of light pollution on fauna and habitat in adjacent biodiversity corridors and areas of remnant native vegetation.

Natural regeneration and planting native species

16. Natural regeneration is the preferred method of rehabilitation. However, if planting is to be undertaken, native species related to the local vegetation community should be selected when planting on both public lands and private lands to aid the restoration or expansion of bushland.

Management of weeds and invasive species

17. Weed control refers to the control of non-native or introduced plants, particularly invasive species. Important elements of weed control are

gaining an understanding of the causes of weed invasion and taking measures to minimise these causes.

18. Measures are to be taken to prevent the occurrence of factors leading to weed invasion. Weed invasion occurs within native vegetation areas mainly as a result of the following factors:

    i. Physical site disturbance

    ii. Increased soil moisture due to runoff from adjacent areas

    iii. Increased nutrients from runoff or waste dumping

    iv. Increased light levels due to clearing or dieback

    v. Increase in weed propagules and seed dispersal agents.

19. Weed control techniques are to be carried out in a manner that minimises negative environmental impacts. Different techniques are required in varying situations, especially along watercourses, which are very sensitive to pollution impacts. Regular monitoring of weeds is to be carried out on an ongoing basis to identify and respond to the occurrence of new plant species that pose a potential threat to native vegetation.

20. Biosecurity matter declared under the *Biosecurity Act 2015* include weed plant species posing a threat to primary production, the environment or human health. Please refer to the *Biosecurity Act 2015* for the requirements and a list of biosecurity matter. Further details on weed management in the Hawkesbury River County Council area (which includes the Penrith local government area) can be found at http://hrcc.nsw.gov.au/.

21. Weeds not declared as biosecurity matter (commonly called environmental weeds) should also be controlled as part of a weed management program.

3.2 Noise pollution

Objectives

a) To ensure there is minimal noise pollution and impact to the existing rural residential uses to the east of Luddenham Road.

b) To establish a set of cumulative noise criteria to guide development.

Controls

1. Where it is considered likely that a development may cause an adverse impact on nearby rural or residential areas, particularly for the existing residential receivers to the east of Luddenham Road, a noise impact statement from a qualified acoustical engineer will be required to be submitted to Council for consideration with the Development Application. A noise impact statement will need to demonstrate that the proposed development will not create any adverse impact.

2. The Noise Impact Assessment for each Development Application is to demonstrate the ability to meet the cumulative noise criteria at Appendix B of this Chapter.

   Where a proposal exceeds the individual noise criteria specified in Appendix B, an updated Cumulative Nosie Impact Assessment (CNIA) is required to be submitted with the Development Application.

   The updated CNIA must provide an updated review of Appendix B (in accordance with the NSW EPA Noise Policy for Industry) that assesses and justifies the proposed exceedance in consideration of the cumulative impact of development of Luddenham Road Industrial Business Park as a whole.

3.3 Air pollution

Objectives

a) To maintain existing air quality and improve local air quality where possible.

b) To ensure future development does not adversely affect existing air quality.

Controls

1. The emission of air impurities is to be controlled and limited to the standards allowed by the *Protection of the Environment Operations Act 1997*, to the satisfaction of Council and the Environmental Protection Authority at all times.

2. Applicants may be required to provide information detailing the potential impact of their development on air quality in the region.

3. An assessment of the merits of the proposal will be made at the Development Application stage. However, applicants should be able to demonstrate that the most efficient means of minimising emissions are being utilised.

3.4 Trading/operating hours of premises

Objectives

a) To ensure the amenity of adjoining residential and rural areas is preserved.

Controls

1. In considering applications Council shall have regard to the likely impact of the trading hours of a particular activity on the amenity of adjoining residential and rural areas, particularly to the east of Luddenham Road.

3.5 Storage, transportation and/or processing of chemical substances

Objectives

a) To ensure that the use, storage or transportation of any chemical substance/s do not have any detrimental impact on the environmental quality of the surrounding area.

b) To ensure any proposed development involving the storage, transportation and processing of chemical substances shall have regard to the requirements of *State Environmental Planning Policy (Resilience and Hazards) 2021.*

Controls

1. External storage of goods must be avoided wherever possible. Where the nature of the activity or the materials means that internal storage is impractical, all external storage areas must be located behind the front building setback. In addition, when assessing development applications involving external storage of goods, Council will take into consideration:

    i. the proposed height and on-site arrangement of stored goods

    ii. visual impact of the storage area, and how this is proposed to be minimised (orientation, screening with landscaping and/or solid fencing etc.)

    iii. access arrangements, and

    iv. safety issues.

2. The following information is to be submitted with any Development Application which involves the storage, transportation and/or processing of chemical substances:

    i. Detailed description of the use and all methods/procedures associated with the use, including flow diagrams

    ii. A floor plan of the subject premises depicting the dimensions of the building and indicating the internal layout of all equipment, storage, and display areas

    iii. A comprehensive list of all chemicals/goods and quantities proposed to be utilised in the activity and stored on the subject premises

    iv. A description of the method of storage of chemicals/goods on the premises, and the type of containment or packaging to be used

    v. A description of the method of transportation of chemicals/goods to/from the premises (include the size and nature of vehicles, proposed routes and frequency of delivery to and from the site)

vi. Details regarding the number of vehicles likely to be involved with the use at any one time and the provision and allocation of storage/standing areas for such vehicles

vii. Details of onsite water quality control, and

viii. Details of waste treatment and transportation.

4. Road network and site access

Objectives

a) To enhance the streetscape presentation of development to Luddenham Road.

b) To ensure development takes into consideration the future widening of Luddenham Road.

c) To enable a road network that is safe and efficient for all users and minimises through traffic on minor roads.

d) To encourage modal split and the use of public transport, bicycles and walking over private vehicles.

e) To provide safe and efficient access to Luddenham Road for all road users (light vehicles, heavy vehicles, pedestrians and cyclists), while minimising the number of road entry points.

f) To maintain and enhance the safety and efficiency of Luddenham Road.

g) To provide better connectivity between the Precinct and the Aerotropolis and strategic pedestrian and traffic desire lines.

h) To encourage the orderly and economic provision of road and intersection works.

Controls

1. A 40m corridor for future road widening of Luddenham Road is required as highlighted in Figure 6 to provide an ultimate 60m wide road reserve.

2. The road hierarchy for the Luddenham Road Industrial Business Park is outlined in Figure 7.

3. No direct vehicular access to Luddenham Road will be permitted.

4. Development applications shall be accompanied by a Traffic and Transport Report. The Traffic and Transport Report shall include a Green Travel Plan and Travel Access Guide and assess the impact of projected pedestrian and vehicular traffic associated with the proposal and outline the extent and nature of traffic facilities necessary to preserve or improve the safety and efficiency of the road system.

5. Road design must comply with the road configurations in Table 3 and corresponding road cross-sections in Figure 8, Figure 9 and Figure 10.

6. The road network is to be designed for 30m Performance Based Standards (PBS) Level 2 Type B vehicles and tested for a 36.5m PBS Level 3 Type A vehicles.

7. All intersections within the internal road network shall incorporate traffic facilities, which promote safe and efficient pedestrian, cyclist and traffic movement.

8. Development shall, where appropriate, be designed to:

    i. Allow all vehicles to either leave or enter the site in a forward direction

    ii. Accommodate heavy vehicle parking and manoeuvring areas

    iii. Avoid conflict with staff, customer and visitor vehicular movements

    iv. Ensure satisfactory and safe operation with the adjacent road system.

9. Development applications shall detail the volume, frequency and type of vehicle movements.

10. The design of manoeuvring areas for large vehicles shall consider the Australian Standard 2890 series and Performance Based Standards *An Introduction for Road Managers* (National Heavy Vehicle Regulator – May 2019).

Figure 6: Future Road widening corridor for Luddenham Road

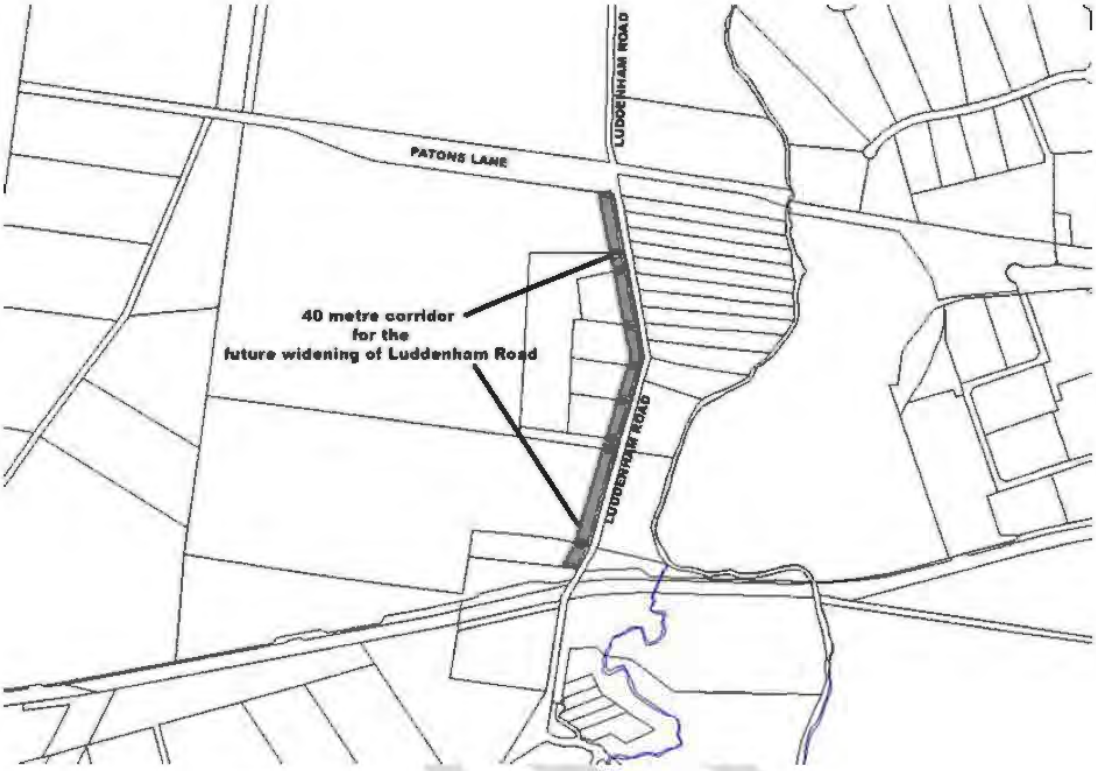


Figure 7: Alspec Industrial Business Park Road Hierarchy

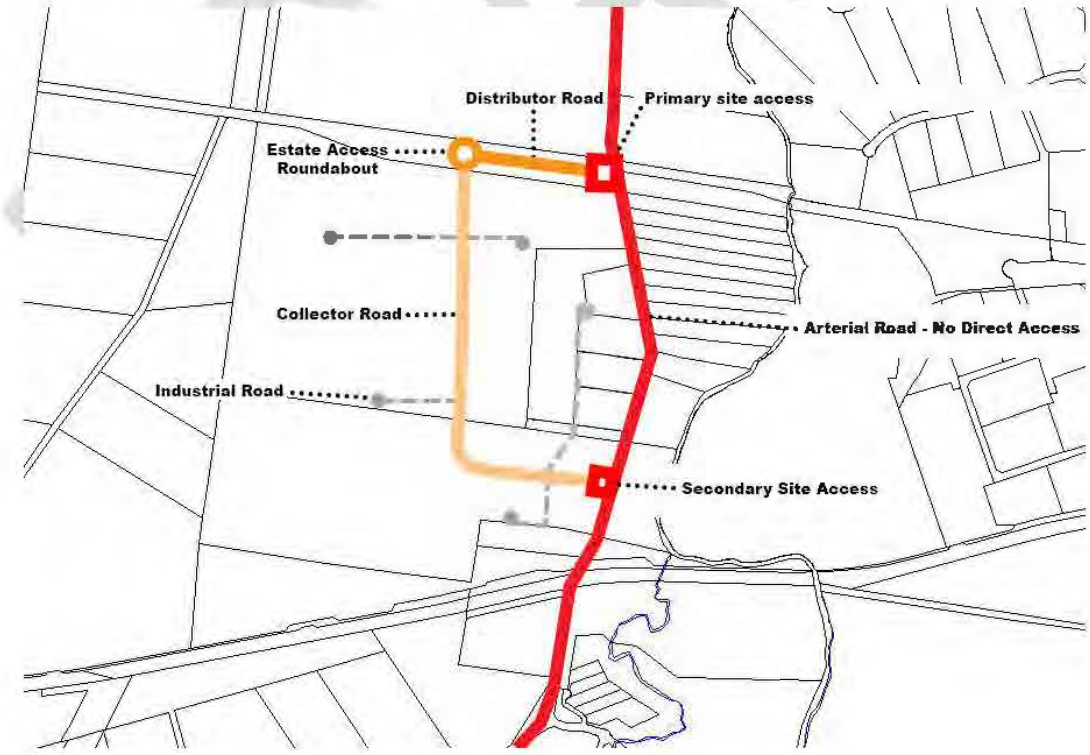


Table 3: Road Typologies

Component	Industrial Road	Collector Road	Distributor Road
Signposted speed	50km/hr	50km/hr	60km/hr
Pedestrian and cycle path (within verge width)	• Verge 1: 1.5m path • Verge 2: 2.5m shared path	• Verge 1: 1.5m path • Verge 2: 2.5m shared path	• Verge 1: 2.5m shared path • Verge 2: 2.5m shared path
Through traffic lane	2 x 3.5m = 7.0m	2 x 3.5m = 7.0m	2 x 3.5m = 7.0m
Kerbside / travel lane	2 x 4.0m = 8.0m (No Parking)	2 x 4.2m = 8.4m (No Parking)	2 x 4.5m = 9.0m (No Parking)
Central median widths*		0.8m* (mid-block) required only at key signalised intersections and locations to separate opposing movements which may cause conflicts	1.6m (mid-block) and 5.0m required at the intersection of a collector road, distributor road, arterial road, or at any signalised intersection
Road carriageway width	15.0m (mid-block)	• 15.4m (mid-block no median) • 16.2 (mid-block with median)	• 18.6m (mid-block with 1.6m median) • Variable – subject to detailed intersection design and approval of road authority.

Verge width (both sides of road)	• Verge 1: 4.0m • Verge 2: 5.0m	• Verge 1: 4.6m • Verge 2: 5.6m	• Verge 1: 6.5m • Verge 2: 6.5m
Street tree planting	1.9m (both sides of road)	2.5m (both sides of road)	3.5m (inclusive of 2m clearance zone requirement on both sides of road)
Road reserve width (total)	24.0m (mid-block)	• 25.6m (mid-block no median) • 26.4m (mid-block with 0.8m wide median)	• 30.6m • Variable – subject to detailed intersection design and approval of road authority.

Figure 8: Industrial Road cross section

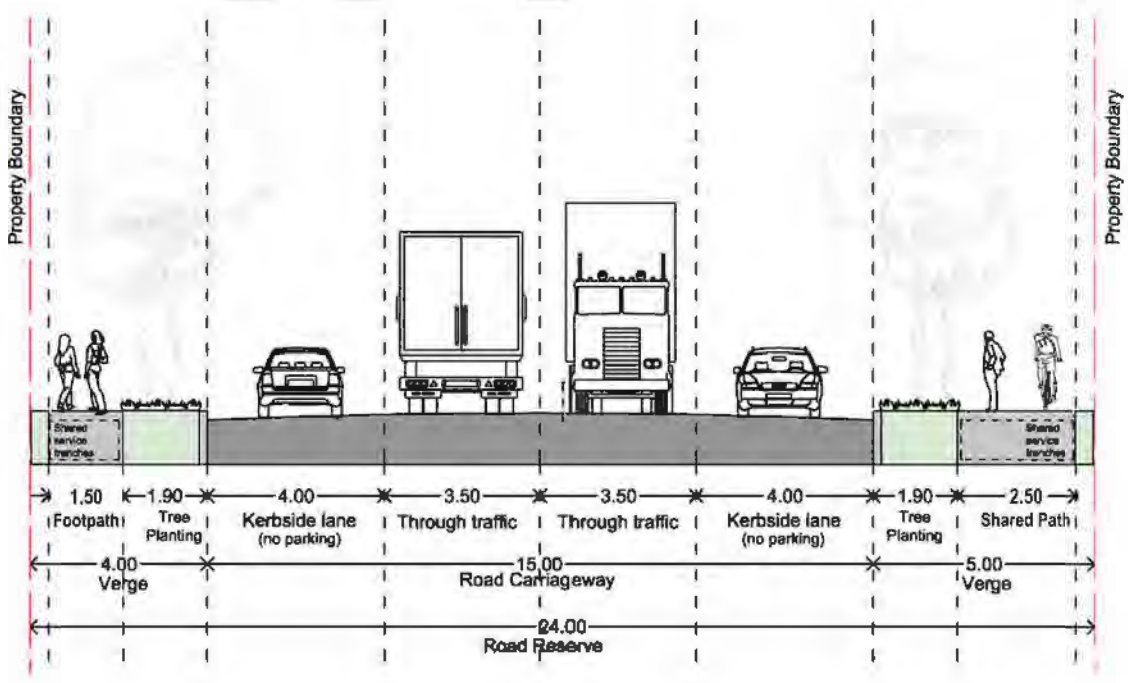


Figure 9: Collector Road cross section

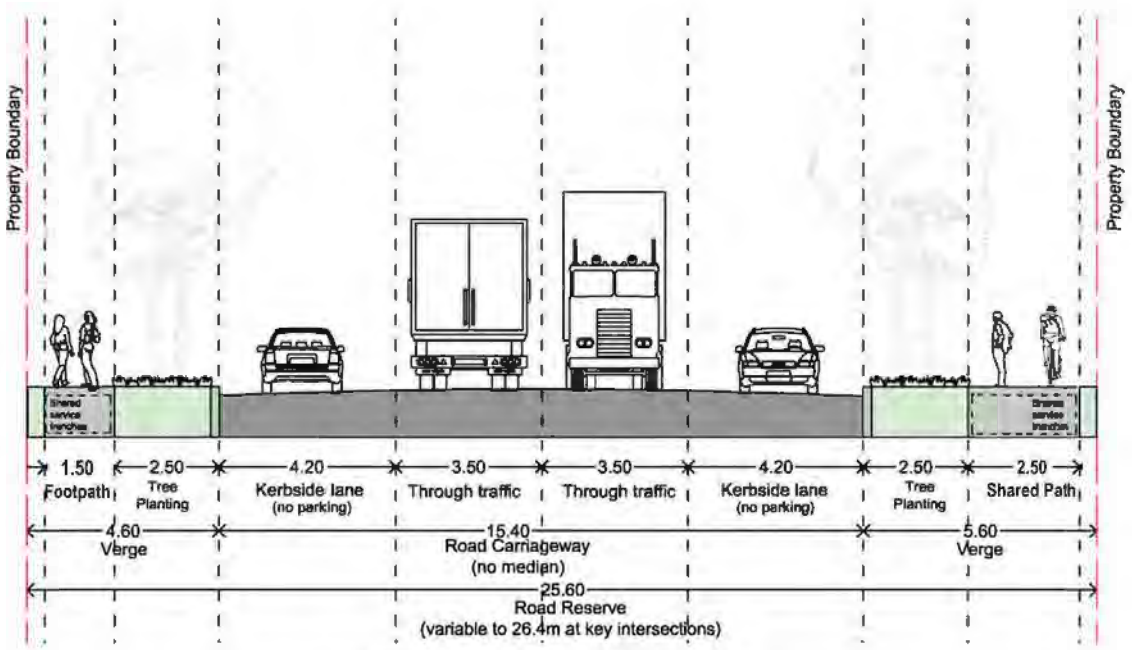
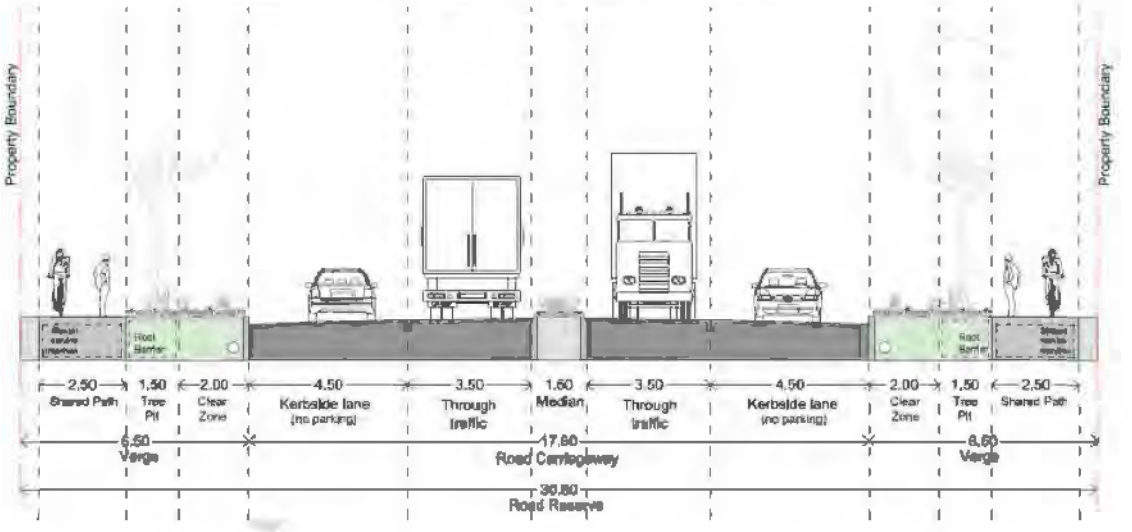


Figure 10: Distributor Road cross section



5. Access and parking

Objectives

a) To facilitate an appropriate number of vehicular spaces having regard to the activities proposed on the land, the nature of the locality and the intensity of the use.

b) To promote efficient and safe vehicle circulation, manoeuvring and parking (including service vehicles and bicycles).

c) To reduce pedestrian and vehicle conflicts on development sites.

d) To minimise the visual impact of on-site parking.

e) To support the complementary use and benefit of public and active transport.

Controls

1. Onsite car and bicycle parking is to be provided to a standard appropriate to the intensity of the proposed development as set out in Table 4.

2. The following bicycle destination facilities for staff are to be provided:

    i. For ancillary office and retail space with a gross floor area over 2500m^2, at least 1 shower cubicle with ancillary change rooms

    ii. For industrial activities with a gross floor area over 4000m^2, at least one shower cubicle with ancillary change rooms

    iii. Change and shower facilities are to be located close to the bicycle storage areas, and

    iv. Where the building is strata-titled, the facilities are to be available to all occupants.

3. Bicycle parking, facilities and storage must be in convenient locations, visible, secure, and provide weather protection for the bicycle.

4. Electric vehicle parking and charging stations are to be integrated into car park design on the development site.

5. Charging stations are to be located within or immediately adjacent to the parking spaces.

6. On-street charging stations are to be located within the Flex Zone, a minimum of 600mm from the face of the adjacent kerb.

7. Charging stations are to be located clear of pedestrian paths of travel and do no inhibit desire lines.

8. Car parking spaces are designed to be easily converted into electric charging stations.

Table 4: Car parking requirements

Activity	Parking requirement
Freight Transport Facilities	1 space per transport vehicle present at peak vehicle accumulation plus 1 per 2 employees, or to be determined by a car parking survey of a comparable facility
Industries	1 space per 200m^2 of gross floor area or 1 space per 2 employees, whichever is the greater
Vehicle Body Repair Workshops/ Vehicle Repair Stations	3 spaces per 100m^2 of gross floor area or 6 per work bay, whichever is the greater
Warehouses or distribution centres	1 space per 300m^2 of gross floor area or 1 space per 4 employees, whichever is the greater.
Ancillary office space	1 space per 40m^2 of gross floor area
Neighbourhood shops	1 space per 40m^2 of gross leasable area
Accessible Parking	Accessible car spaces should be in accordance with the Access to Premises Standards, Building Code of Australia and AS2890.

Bicycle Parking	1 space per 600m^2 of gross floor area of office and retail space (over 1200m^2 gross floor area) 1 space per 1000m^2 of gross floor area of industrial activities (over 2000m^2 gross floor area)
Electric vehicle	1 space per 40 car spaces
Car share	1 space per 40 car spaces
Electric bicycle	A charging station for electric bicycles is provided for the first 5 bicycle spaces within a development, and for every 10 bicycle spaces thereafter.
Motorcycle Parking	1 space per 10 car spaces

6. Integrated Water Cycle Management

The Luddenham Road Industrial Business Park forms part of the Wianamatta-South Creek system, an intermittent waterway that is sensitive to changes in flow and water quality. Protection and restoration of creek health, ecology and biodiversity is a key policy for future development and delivery of the Blue-Green Infrastructure Network in the catchment. By improving and maintaining waterway health we can optimise environmental outcomes and promote healthy and resilient communities.

Waterway objectives (flow and water quality) were established for the protection of waterways in the Wianamatta-South Creek catchment, in line with the Western Parkland City District Plan and NSW Government Risk-based Framework for considering Waterway Health Outcomes in Strategic Land-use Planning Decisions (2017).

In addition, the NSW Government has prepared technical notes and guidance documentation on the modelling parameters and software packages that can be used to demonstrate compliance with these objectives and the controls below (refer to the Technical guidance for achieving Wianamatta–South Creek stormwater management targets (DPE 2022).

Objectives

a) To protect, maintain or restore waterway health within Wianamatta-South Creek and its tributaries by managing development impacts.

b) To ensure the waterway objectives (flow and water quality) for Wianamatta-South Creek are achieved.

c) To ensure land use and development is integrated with water cycle management, including:

   i. service planning for potable water, recycled water and wastewater

   ii. effective management of stormwater flow and quality

   iii. urban design and landscape integration, and

   iv. water management infrastructure solutions at a range of scales.

d) To protect, maintain and restore the ecological condition, hydrologic and hydrogeology of aquatic ecosystems (including but not limited to wetlands and riparian lands).

e) To protect groundwater quality and availability.

f) To consider whole of life costs and ease of maintenance in water planning.

g) To transition to regional water infrastructure, where feasible, to optimise the efficiency of development and deliver better outcomes for waterways, amenity and liveability.

h) To safely and effectively convey stormwater flows from the developed area to the existing waterways or stormwater treatment infrastructure.

i) To deliver the waterway objectives (flow and water quality) held in Appendix A of this chapter.

Controls

1. Development applications must demonstrate compliance with the stormwater quality targets in Table 5 and the stormwater flow targets during construction and operation phases in Table 6 and Table 7 at the lot

or estate scale to ensure the NSW Government's waterway objectives (flow and water quality) for the Wianamatta-South Creek catchment are achieved. Where the strategy for waterway management is assessed at an estate level, the approval should include for individual buildings within the estate, which may be the subject of future applications.

2. The stormwater flow targets during operation phase (Table 7) include criteria for a mean annual runoff volume (MARV) flow-related option and a flow duration-related option. Applicants must demonstrate compliance with either option.

3. Development applications must include a Water Management Strategy (WMS) detailing the proposed Water Sensitive Urban Design (WSUD) approach, how the WMS complies with stormwater targets (i.e. MUSIC modelling), and how these measures will be implemented, including ongoing management and maintenance responsibilities. Conceptual designs of the stormwater drainage and WSUD system must be provided to illustrate the functional layout and levels of the WSUD systems to ensure the operation has been considered in site levels and layout.

4. The design and mix of WSUD infrastructure shall consider ongoing operation and maintenance. Development applications must include a detailed lifecycle cost assessment (including capital, operation/maintenance, and renewal costs over 30 years) and Maintenance Plan for WSUD measures.

5. WSUD infrastructure may be adopted at a range of scales (i.e. allotment, street, estate, or sub-precinct scale) to treat stormwater, integrate with the landscape and maximise evaporative losses to reduce development flow runoff. Vegetated WSUD measures, and rainwater/stormwater reuse are preferred.

6. Development must not adversely impact soil salinity or sodic soils and shall balance the needs of groundwater dependent ecosystems.

7. Infiltration of collected stormwater is generally not supported due to anticipated soil conditions in the catchment. All WSUD systems must incorporate an impervious liner unless a detailed Salinity and Sodicity Assessment demonstrates infiltration of stormwater will not adversely impact the water table and soil salinity (or other soil conditions).

8. Where development is not serviced by a recycled water scheme, at least 80% of its non-potable demand is to be supplied through allotment rainwater tanks.

Table 5: Stormwater quality targets

Gross pollutants (anthropogenic lifter>5mm and coarse sediment>1mm)	90% reduction (minimum) in mean annual load form unmitigated development.
Total suspended solids (TSS)	90% reduction in mean annual load form unmitigated development.
Total Phosphorus (TP)	80% reduction in mean annual load form unmitigated development.
Total Nitrogen (TN)	65% reduction in mean annual load form unmitigated development.

Table 6: Stormwater flow targets construction phase

TSS and pH	All exposed areas greater than 2500m^2 mist be provided with sediment controls designed, implemented and maintained to a standard achieving at least 80% of the average annual runoff volume of the contributing catchment treated (80% hydrological effectiveness) to 50mg/l TSS or les and pH in the range 6.5-8.5.
Oil, litter and waste contaminants	No release of oil, litter or waste contaminants
Stabilisation	Prior to completion of works for development, and prior to removal of sediment controls, al site surfaces must be effectively stabilised including all drainage systems. An effective stabilised surface is defined as one that does not, or is not likely to result in visible evidence of soil loss caused by sheet, rill of gully erosion or lead to sedimentation water contamination.

Table 7: Stormwater flow targets Construction Phase

Option 1: Mean Annual Runoff Volume (MARV) Approach	
MARV	≤ 2 ML/ha/year at the point of discharge to the local waterway
90%ile flow	1000 to 5000 L/ha/day at the point of discharge to the local waterway
50%ile flow	5 to 100 L/ha/day at the point of discharge to the local waterway
10%ile flow	0 L/ha/day at eh point of discharge to the local waterway
Option 2: Flow Duration Curve Approach	
95%ile flow	3000 to 15000 L/ha/day at the point of discharge to the local waterway
90%ile flow	1000 to 5000 L/ha/day at the point of discharge to the local waterway
75%ile flow	100 to 1000 L/ha/day at the point of discharge to the local waterway
50%ile flow	5 to 100 L/ha/day at the point of discharge to the local waterway
Cease to flow	Cease to flow to be between 10% and 30% of the time

7. Flood Prone Land

Objectives

a) To ensure development in the floodplain is consistent with the *NSW Flood Prone Land Policy* and principles in the NSW Government *Floodplain Development Manual*.

b) To ensure floodplain risk management minimises the potential impact of development upon the aesthetic, recreational and ecological values of waterways.

c) To maintain the existing flood regime, velocities, flow conveyance and stream hydrology.

d) To ensure development does not alter flood behaviour resulting in adverse impacts to surrounding properties, land uses and infrastructure.

e) To enable safe occupation and evacuation of flood prone land.

f) To ensure development is compatible with flood hazard and flood behaviour.

g) To avoid adverse or cumulative impacts on flood behaviour and environment.

Controls

1. A comprehensive Flood Impact Risk Assessment (FIRA) (prepared by a qualified hydrologist and hydraulic engineer) is to be submitted with development applications on land identified as fully or partially flood affected. The FIRA shall include 2-dimensional flood modelling and shall provide an understanding of existing flooding conditions and developed conditions consistent with the requirements of the *NSW Flood Prone Land Policy and Floodplain Development Manual*. The FIRA shall determine:

    i. Flood behaviour for existing and developed scenarios for the full range of flooding including the 5% Annual Exceedance Probability (AEP), 1% AEP, 0.5% AEP, 0.2% AEP and Probable Maximum Flood (PMF)

    ii. Flood Function (floodways, flood fringe and flood storage areas)

    iii. Flood Hazard, and

    iv. Flood constraints, including evacuation constraints (if applicable).

2. The FIRA shall adequately demonstrate to the satisfaction of the consent authority that:

    i. Development will not increase flood hazard, flood levels, flood velocities or risk to other properties

    ii. Development has incorporated measures to manage risk to life from flooding

    iii. For development located within the PMF, an Emergency Response Plan is in place

iv. Structures, building materials and stormwater controls are structurally adequate to deal with PMF flow rates and velocities (including potential flood debris)

v. Development siting and layout maintains personal safety during the full range of floods and is compatible with the flood constraints and potential risk

vi. The impacts of climate change on flood behaviour has been considered. Flood modelling shall assess and determine flood behaviour and characteristics under future climate change flooding conditions in accordance with Clause 5.21 Flood Planning of Penrith Local Environmental Plan 2010. The following rainfall increases shall be used as a minimum when assessing the various climate change scenarios: 4.9% (High 2030); 9.1% (Low 2090); 13.9% (Medium 2090) and 18.6% (High 2090)

vii. Development considers Construction of Buildings in Flood Hazard Areas and accompanying handbook developed by the Australian Building Codes Board (2012)

viii. Fencing does not impede the flow of flood waters/overland flow paths.

Appendix A Waterway health objectives

The waterway health objectives are derived from the Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions. This framework provides a structured approach that decision-makers, such as councils and environmental regulators, can use to help manage the impact of land-use activities on the health of waterways in New South Wales.

The waterway health objectives consist of ambient water quality and stream flows requirements of health waterways, riparian corridors and other water – dependent ecosystems in the Wianamatta – South Creek catchment. The water quality objectives are the same as those adopted by Local Government in the catchment. The waterway objectives have been prepared by the NSW Government to ensure that urban developments are achieving the NSW Government policy on water quality and waterway health.

The NSW Government has prepared technical guidance on calibrated MUSIC modelling parameters that should be used to demonstrate compliance with the targets.

Table 8: Flow-related objectives for waterways and water dependent ecosystems

	1st or 2nd order streams	3rd order Streams
Daily flows (L/Ha)		
Median Daily Flow Volume (L/Ha)	71.8 ± 22.0	1095.0 ± 157.3
Mean Daily Flow Volume (L/Ha)	235.1 ± 604.6	5542 ± 320.9
High Spells (L/Ha)		
≥ 90th Percentile Daily Flow Volume	2048.4 ±739.2	10091.7 ± 769.7
Frequency (number per year)	6.9 ± 0.4	19.2 ± 1.0
Average Duration (days per year)	6.1 ± 0.4	2.2 ± 0.2
Freshwater Flows (L/Ha)		

≥ 75th and ≤90th Percentile Daily Flow Volume	327.1 to 2048.4	2642.9 to 10091.7
Frequency (number per year)	4.0 ± 0.9	24.6 ± 0.7
Average Duration (days per year)	38.2 ± 5.8	2.5 ± 0.1
Cease to Flow		
Proportion of time per year	0.34 ± 0.04	0.03 ± 0.007
Duration of days per year	36.8 ± 6	6 ± 1.1

Table 9: Ambient water quality objectives for waterways and waterbodies

Pollutant	Value
Total Nitrogen (TN)	1.72mg/L
Dissolved Inorganic Nitrogen (DIN)	0.74mg/L
Ammonium (NH_3-N)	0.08Mg/L
Oxidised Nitrogen (NOx)	0.66mg/L
Total Phosphorus (TP)	0.14mg/L
Dissolved Inorganic Phosphorus	0.04mg/L
Turbidity	50 NTU
Total Suspended Solids (TSS)	37mg/L
Conductivity	1,103µS/cm
pH	6.20-7.60
Dissolved Oxygen	43-75%SAT
Dissolved Oxygen	8mg/L

Appendix B Individual Lot Noise Contributions

Table 10: Individual warehouse noise impact WH1-14A

Assessment Period	NCA	WH1	WH2	WH3	WH7	WH8	WH9	WH10	WH11	WH22	WH13	WH14a
Morning Shoulder	NCA1	44	31	33	28	<25	32	29	30	29	26	31
	NCA2	39	29	30	33	26	37	30	31	34	32	42
	NCA3	25	<25	27	29	33	26	35	29	30	32	<25
	R15	42	<25	26	33	<25	27	<25	<25	29	26	<25
Day	NCA1	44	33	37	30	27	36	33	34	32	27	31
	NCA2	39	30	34	34	30	41	33	34	37	33	42
	NCA3	25	25	31	32	36	30	38	32	34	35	<25
	R15	42	25	30	35	25	31	<25	28	31	28	<25
Evening	NCA1	42	29	31	27	<25	30	27	27	27	26	31
	NCA2	38	26	28	32	<25	35	27	28	33	31	42
	NCA3	<25	<25	25	26	30	25	33	27	28	29	0
	R15	42	<25	<25	33	<25	<25	<25	<25	28	<25	<25
Night	NCA1	39	30	30	28	<25	30	27	27	28	26	31
	NCA2	39	27	27	32	<25	35	27	28	35	31	42

	NCA3	<25	<25	<25	26	30	25	33	27	28	29	<25
	R15	42	<25	<25	33	<25	<25	<25	<25	28	<25	<25

Table 11: Individual warehouse noise impact WH14b-WH22

Assessment Period	NCA	WH14b	WH15a	WH15b	WH16	WH17	WH18a	WH18b	WH19	WH20	WH21	WH22
Morning Shoulder	NCA1	29	28	<25	26	36	36	34	<25	<25	26	<25
	NCA2	36	45	44	26	36	36	34	37	49	34	36
	NCA3	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
	R15	<25	30	30	<25	<25	<25	<25	<25	27	<25	<25
Day	NCA1	29	28	<25	28	36	36	34	<25	<25	26	<25
	NCA2	36	45	44	28	36	36	34	37	49	34	36
	NCA3	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
	R15	<25	30	30	<25	<25	<25	<25	<25	27	<25	<25
Evening	NCA1	29	28	<25	26	36	36	34	<25	<25	26	<25
	NCA2	36	45	44	26	36	36	34	37	49	34	36
	NCA3	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
	R15	<25	30	30	<25	<25	<25	<25	<25	27	<25	<25
Night	NCA1	29	28	<25	28	36	36	34	<25	<25	26	<25

	NCA2	36	45	44	28	36	36	34	37	49	34	36
	NCA3	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
	R15	<25	30	30	<25	<25	<25	<25	<25	27	<25	<25

Table 12: Individual warehouse noise impact WH23 – OSSM

Assessment Period	NCA	WH23	WH24	WH25	WH26	WH27	WH28	WH29	WH30	WH31	WH32	OSSM
Morning Shoulder	NCA1	<25	33	33	<25	<25	<25	<25	<25	<25	<25	27
	NCA2	36	36	33	32	31	27	31	42	25	<25	<25
	NCA3	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
	R15	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Day	NCA1	<25	33	33	<25	<25	<25	<25	<25	<25	<25	27
	NCA2	36	36	33	32	31	27	31	42	25	<25	<25
	NCA3	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
	R15	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Evening	NCA1	<25	33	33	<25	<25	<25	<25	<25	<25	<25	27
	NCA2	36	36	33	32	31	27	31	42	25	<25	<25
	NCA3	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
	R15	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25

Night	NCA1	<25	33	33	<25	<25	<25	<25	<25	<25	<25	27
	NCA2	36	36	33	32	31	27	31	42	25	<25	<25
	NCA3	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
	R15	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25

DRAFT

D17 Orchard Hills North

Contents

D17 Orchard Hills North 4

1. Land to which this Chapter applies 4

1.1 Aims of this chapter 6

1.2 Relationship to other parts of Penrith DCP 6

2. Structure Plan – Orchard Hills North 7

2.1 Vision 7

2.2 General objectives 7

2.3 Character areas 9

3. Transport, mobility and street network 12

3.1 Street network 12

3.2 Caddens Road 23

3.3 North-South road corridor 25

3.4 East-West Road corridor 27

3.5 Intersection treatments 28

3.6 Existing roads – Castle Road, Ulm Road, Kingswood Road 28

3.7 Pedestrian and cycle network 29

3.8 Public transport 30

4. Public realm 32

4.1 Public realm 32

4.2 Active local open space 35

4.3 Passive local open space 39
4.4 Bushland open space 43
4.5 Riparian corridor open space 45
4.6 Biodiversity 47
4.7 Street furniture and public art 50
4.8 Street landscaping 51
4.9 Rural Fire Service facility 53
4.10 Canopy cover 53
5. Residential development 56
5.1 Subdivision and neighbourhood design 57
5.2 Site grading, earthworks and retaining walls 58
5.3 Developing on sloping land 62
5.4 General residential built form design 64
5.5 Residential typology and built form 67
5.6 Shop top housing 77
5.7 Dwellings located in Precinct 6 78
5.8 Secondary dwellings 80
5.9 Dual occupancy 81
5.10 Multi dwelling housing 81
5.11 Private open space 81
5.12 Landscape design 82
5.13 Fencing 84
5.14 Garages, driveways, parking and access 84
5.15 Shared driveways 86
5.16 Residential amenity 88
5.17 Safety and surveillance 89
5.18 Road traffic noise 90

6. Village centre 92
6.1 Urban layout context 92
6.2 Land use and built form 93
7. Other 95
7.1 Urban heat island 95
7.2 Water cycle management, basins and flooding 96
7.3 Contaminated land management 98
7.4 Development staging 98
8. References 100

DRAFT

D17 Orchard Hills North

Background

This chapter of Penrith Development Control Plan 2014 (Penrith DCP) is called Orchard Hills North and facilitates the sustainable development of the infill site for contemporary residential and lifestyle living, education, retail and interconnected open space on the site.

This chapter is used as a guideline to facilitate development controls and objectives that are not covered by other controls within Penrith DCP.

1. Land to which this Chapter applies

This chapter of Penrith DCP applies to the land bound in red in Figure 1 below.

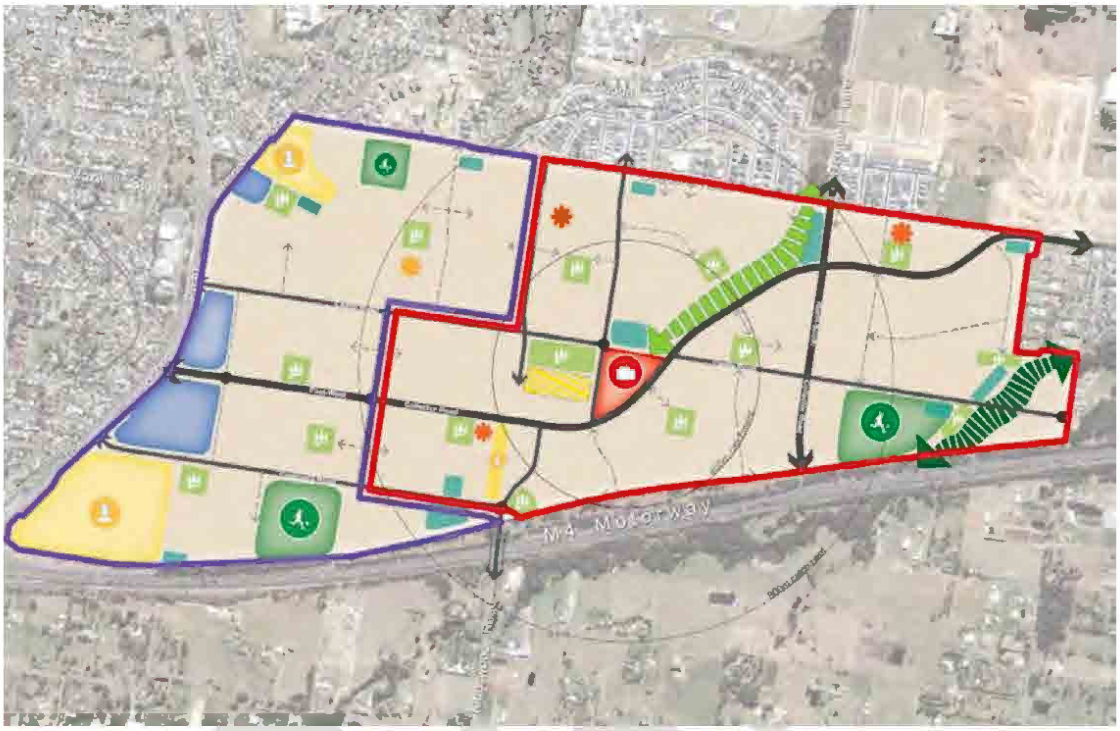
Figure 1: Land to which this chapter of the DCP applies



The future development of Orchard Hills North is required to take into account the broader Structure Plan. An indicative Structure Plan for the whole Orchard Hills North Precinct is provided in Figure 2 below. The Orchard Hills North precinct is bound by the M4 Motorway, The Northern Road / Bringelly Road,

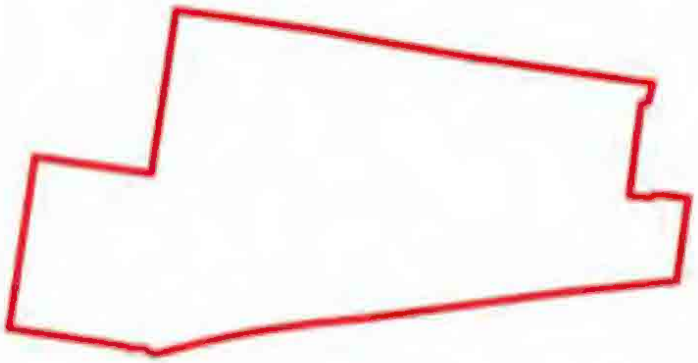
Caddens Road and land to the east, which is subject to this part of the Penrith DCP.

Figure 2: Orchard Hills North: Indicative Structure Plan



LEGEND

- Area A
- Area B
- Collector Roads
- Major Roads
- Village Centre
- Employment
- Residential
- Active Open Space
- Open Space
- Open Space Corridor
- Riparian Corridor
- Heritage
- Water Towers
- Basin
- Existing School
- Potential Future School



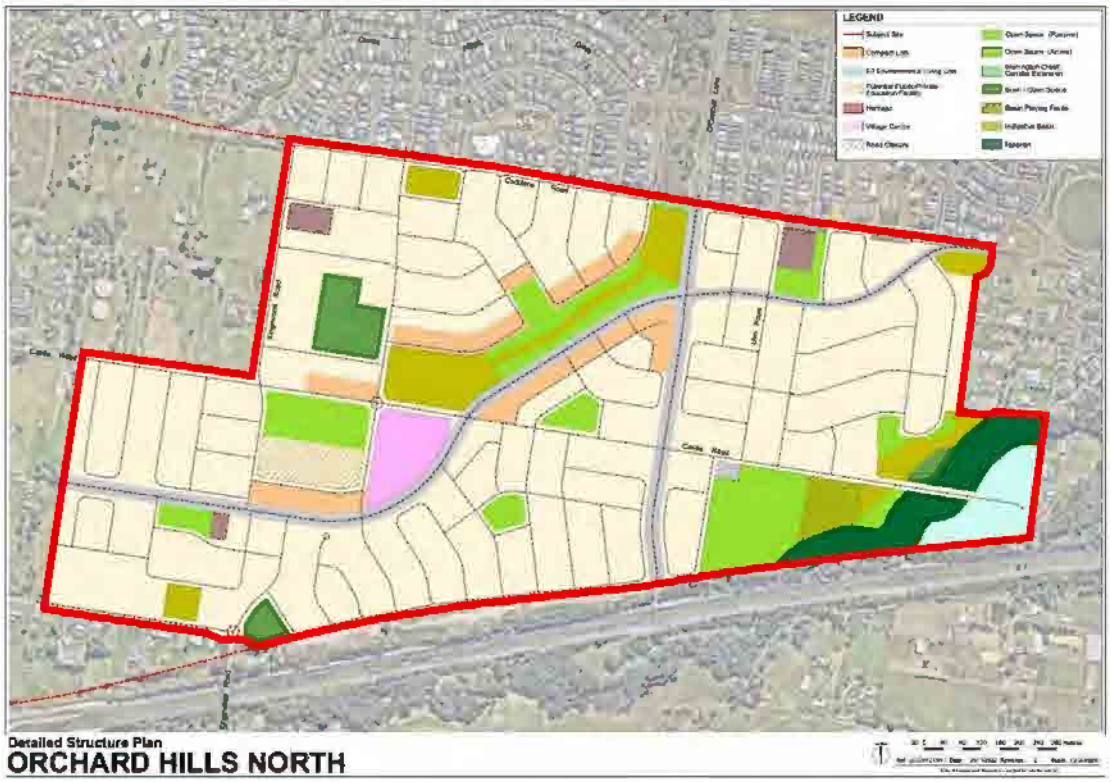
REZONING AREA (AREA A)

*Note that Area B is not subject to the proposed rezoning

Source: Design and Planning

It is important to note that this Chapter only applies to the Rezoning Area (Area A) as shown in **Figure 2** above; and the Detailed Master Plan in Figure 3 below.

Figure 3: Detailed Master Plan



Source: Design and Planning

1.1 Aims of this chapter

The aims of this chapter are to:

a) Support the objectives of Penrith Local Environmental Plan 2010.

b) Facilitate the sustainable development of the residential, retail, open space and conservation areas of Orchard Hills North.

1.2 Relationship to other parts of Penrith DCP

Part D of the Penrith DCP provides specific development controls for key precincts. This chapter should be read in conjunction with the relevant city-wide sections of the Penrith DCP.

2. Structure Plan – Orchard Hills North

2.1 Vision

Orchard Hills North will be a residential community set amongst rolling hills in the rich natural landscape of Penrith, Western Sydney and offering panoramic views to the Blue Mountains and surrounding areas. The development will incorporate a diverse mix of housing types, focused around a new Village centre that forms the focal point of the future community and offers a high level of convenience for residents.

The overarching objective of Orchard Hills North is to provide a contemporary lifestyle supported by a wide variety of green spaces and links, connecting each of the future residential precincts with one another and to the wider regional community, thereby placing a focus on active transport such as walking and cycling.

2.2 General objectives

The objectives of Orchard Hills North Chapter are:

a) Create a vibrant and well-connected community with a focus on enhancing the relationship with the existing place and natural characteristics of the area, the creek corridors and ridgelines.

b) New development will take account of the natural topography and allow for suitably graded lots to minimise cut and fill.

c) Provide diversity and good quality housing types which respond to the topography and maximise access to sunlight through suitable orientation.

d) Medium density housing to be located adjacent to the central creek, the village centre and open space.

e) Facilitate strong internal and external views from the site, as well as delivering strong visual linkages to surrounding established urban areas.

f) Develop open space parks to enhance the existing value of the natural landscape, such as hill tops, creek lines, and the highest level of amenity for future residents.

g) Provide key north-south and east west arterial road network that link the new growth area in the south and to the key university, hospital and education precinct to the north.

h) Retain and realign the low-lying riparian corridor of Werrington Creek (also identified as College Creek in Council's Floodplain Risk Management Plan) as a key drainage and open space green link as a feature of the site, to manage heat island effect and facilitate pedestrian and cycle connections for the community.

i) Create a green active open space edge linking the natural Claremont Creek and planned open space recreational spaces in the south east of the site.

j) Create a central village centre that supports activity and convenience and connects with adjacent open space and Werrington Creek.

k) Retain and restore existing significant vegetation as natural bushland parks to provide a reflection of the history of the site and to provide informal open space for the community.

l) Protect and restore biodiversity and natural ecosystems within the site.

m) Contribute towards the Greater Sydney Region Plan (GSRP) and Western City District Plan's (WCDP) identified target of 40% tree canopy

n) Respect heritage buildings and enable their integration into the surrounding area.

o) Improve and manage water quality through water sensitive urban design, detention basins and improved water flow.

p) Incorporate opportunities for the following ecologically sustainable development approaches/principles:

q) Passive design for residential development

r) Water conservation measures including potential greywater and black-water reticulation systems in the neighbourhood centre and rainwater harvesting for public open space and toilet flushing

s) Renewable energy and energy efficiency measures e.g. BASIX and LED street lighting (subject to Council approval).

2.3 Character areas

The site has key features of the landscape that influence the urban design and assist to establish a strong sense of identity for future residents.

The identified elements such as prominent ridgelines and valleys, creek lines, significant trees and view corridors together with an existing fabric of local heritage buildings create a hierarchy and contrast between the natural environment and the new urban environment. These formed the basis of the character areas shown on Figure 4 below.

Figure 4: Character areas



Source: WSP

Residential areas

The residential areas have a strong focus to Werrington Creek and Claremont Creek which provide the various residential areas within the Master Plan area. The residential areas will have a diversity of housing product with medium density areas focussing on the key land use features like neighbourhood centre and creek environs.

The interface with the existing residential lots to be retained through maintaining meaningful transitions to the future urban environment. This attention to interface treatment ensures that visual connection to amenity spaces can be maintained and enabling people to comfortably integrate with public spaces.

Objectives and attributes

a) Allow for a variety of housing types suitable for small and large lots.

b) Allow for passive surveillance of the open space areas.

c) Allow for the integration of the existing housing with other contemporary housing types

d) Residential areas provide for key view corridors within and external to the site.

e) Provide medium density housing within or in close walking distance (i.e. 400 – 600 metres) of the neighbourhood village centre.

Claremont Creek Area

The eastern precinct which includes an integration of active playing fields adjacent to Claremont Creek provides a high level of amenity and attraction for the residents, as well as creates amenity for the large residential lots with high quality housing to the east of the creek.

Objectives and attributes

f) Create a green active open space edge linking the natural Claremont Creek and planned open space recreational spaces in the south east of the site.

g) Develop open space parks to enhance the existing value of the natural landscape of Claremont Creek and the highest level of amenity for future residents.

h) Improve and manage water quality through water sensitive urban design and improved water flow.

i) Allow for passive surveillance of the open space areas by maintaining the interface with adjacent housing.

Neighbourhood Village Centre

A local centre precinct which is to provide everyday convenience to the community, reinforced by compatible surrounding land uses including more compact housing forms to capitalise on the amenity created together with an adjacent primary school and the central riparian corridor which will provide pedestrian and cycleway connections through the centre of the development and to the adjoining Caddens development. The local centre will also offer a range of employment opportunities for new residents and the surrounding community.

Objectives and attributes

j) Supports activity and connects with adjacent open space areas and Werrington Creek.

k) Encourages mixed use development to foster a lively, human scale environment, active street frontages and improvements to pedestrian linkages throughout the centre.

l) Provides on and off-street parking in suitable locations to enhance the centre as a general destination rather than a predominantly car-dependent retail venue.

m) Encourages night-time activities such as restaurants, outdoor cinema and a range of community facilities to enliven the centre.

Werrington Creek Corridor Area

This is the low-lying precinct within the site, where it is important to protect and retain Werrington Creek riparian corridor and vegetation as a key drainage and open space green link of the site. The environmental and spatial qualities of the creeks contribute to the creation of a sustainable residential community that is connected to the environment.

Objectives and attributes

n) Minimise heat island effect and facilitate pedestrian and cycle connections for the community by protecting the existing vegetation.

o) Consider opportunities for passive recreational pursuits.

p) Improve and manage water quality through water sensitive urban design and improved water flow.

q) Create active open space areas and recreational spaces to support the medium density housing along the creek.

r) Link the creek to the neighbourhood village centre through natural landscape and open space areas.

3. Transport, mobility and street network

3.1 Street network

Objectives

a) To create a hierarchy of streets to encourage safe and efficient movement through and within the site and connect with adjacent collector routes and neighbouring streets to maximise movement efficiency.

b) Streets should be visually contained to promote steady, predictable traffic speeds by:

- Clearly defining the boundary between pedestrian, cycle and vehicle zones.
- Providing on-street parking.
- Planting street trees at regular spacing within the verge and median islands.

c) Provide convenient, safe and publicly accessible bicycle and pedestrian paths.

d) Provide convenient and functional public transport routes.

e) Plant street trees to create "cool" streets and assist to minimise the heat island effect.

f) Street network is functional and responds to the prevailing topography, desirable views and safety for vehicles.

g) Bus routes along east-west and north-south routes shall be identified, subject to consultation with the relevant authorities (e.g. TfNSW and Council).

h) To enhance the biodiversity benefits of the street network.

Controls

1. A hierarchy of streets should reflect the function and traffic load of each street in a network, minimise travel distances, maximise access to facilities and services and assist people find their way. The street network and road hierarchy is to be in accordance with Figure 5 below.

2. Where any variation to the residential street network indicated in Figure 5 is proposed, the street network is to be designed to achieve the following principles:

    i. Establish a direct and open network based on a modified grid system.

    ii. Encourage walking and cycling and reduce travel distances.

    iii. Maximise connectivity between residential areas, open space, community facilities and the Village centre.

    iv. Align with the topography and accommodate significant vegetation.

    v. Provide frontage to and maximise surveillance of open space and the riparian corridor.

    vi. Provide views and vistas to landscape features.

3. Streets are to be provided in accordance with the cross sections in Figure 6 – Figure 12 below. The dimensions shown on these diagrams are minimums only. In terms of the existing Caddens Road, Kingswood Road, Ulm Road, Frogmore Road and Castle Road, the relevant local road cross

section is to be adjusted to provide for landscaped verges to fill the existing road corridor width, if required.

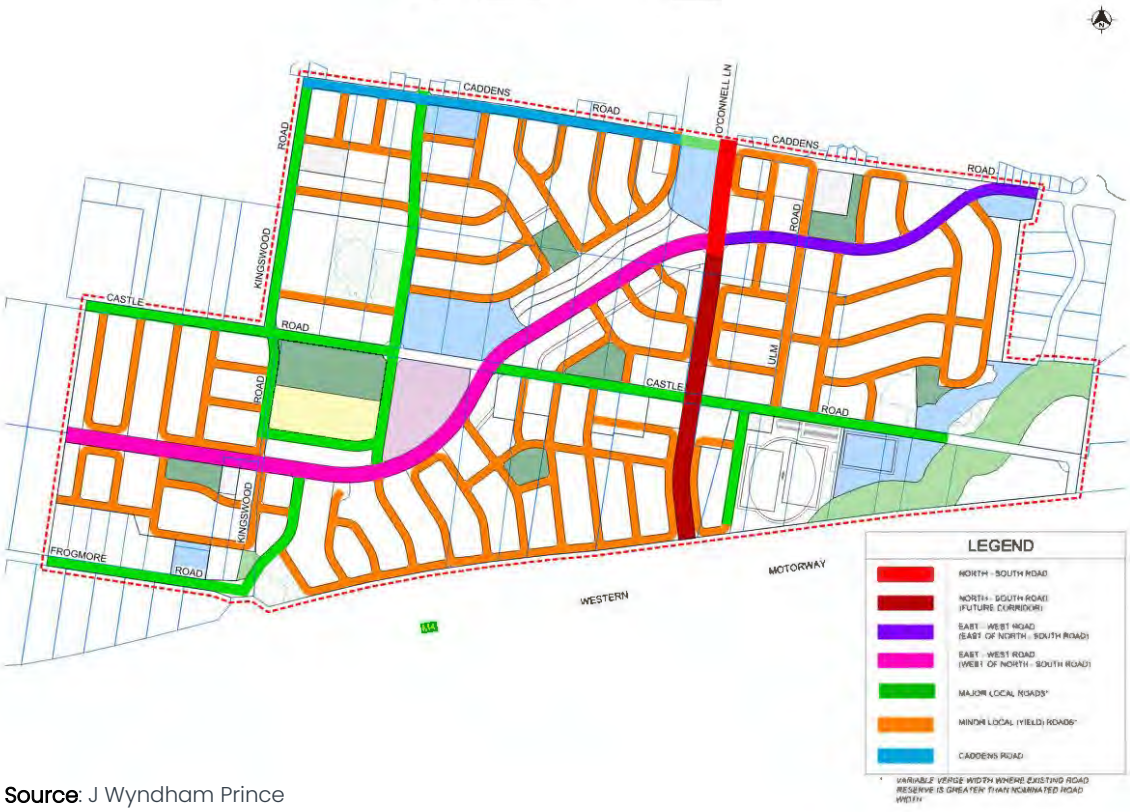
4. Split-level roads are provided as local roads if topographical constraints allow and shall provide wider verges in order to enhance biodiversity values, accommodate additional landscaping as well as pedestrian and vehicular safety barriers. No locations for these are specifically nominated, but the form is provided if required to be implemented to assist in "taking up grade" across a development site.

5. The minimum median width of split-level roads should be 8.0m to allow landscaping and safety barriers.

6. Retaining walls for split level roads shall be full masonry construction and no timber is to be used.

7. The street design has taken into consideration the existing topography and vegetation.

Figure 5: Road hierarchy plan



Source: J Wyndham Prince

8. Traffic management and provision of infrastructure should be in general accordance with the "Orchard Hills North Rezoning – Traffic Management and Accessibility Plan" by SCT Consulting (April 2021).

9. Clear delineation is provided between where vehicles can be parked, cyclists can ride and where pedestrians should walk.

10. Walking and cycling paths are to be integrated with the road reserve and open space network.

11. Where the provision of parking "lanes" is included in the street reserve width, they are line-marked as parking bays.

12. Speed control devices are to be provided to achieve target speeds, where required. Any speed control devices, inclusive of road narrowing, are to be designed to take into account the needs of cyclists.

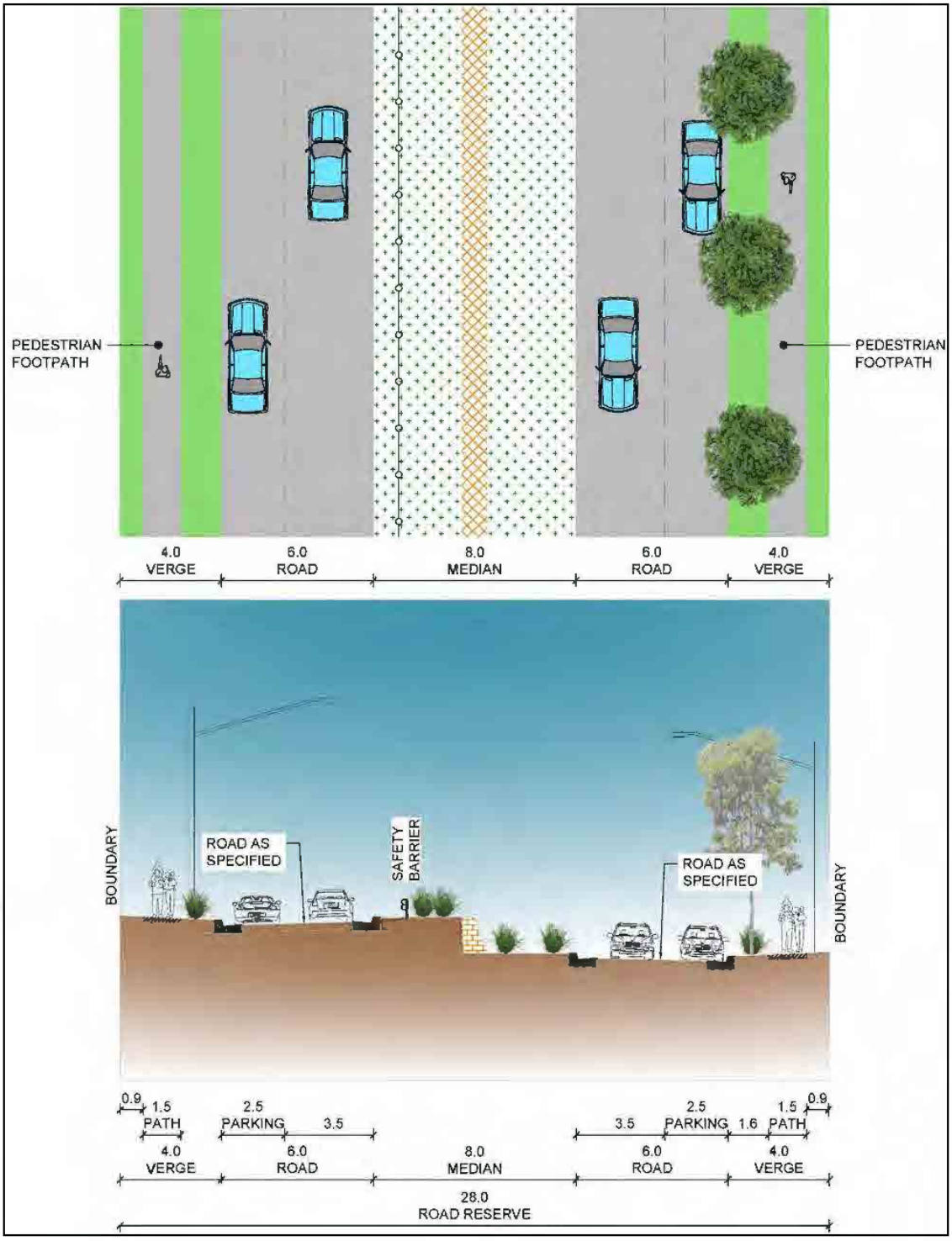
13. Design details such as footpath and driveway crossovers are uniformly applied to make the street character more consistent.

Table 1: Road typologies

Street/RoadType	Verge	Road	Median	Road	Verge	Road Reserve	Parking	Pathways	Figure Ref
Split-level	4m	6m	8m	6m	4m	28m	2.5m x 2*	1.5m x 2	Figure 6
Caddens Road	5.5m**	6m (south side)	N/A	3.5m (north side)	4m**	19m+	2.5 x 1*	1.5m x 2	Figure 7
North-South Road	5.8m	9m***	5m	9m***	4.8m	33.6m	N/A	2.5m x 1 1.5m x 1	Figure 8
East-West Road [Western Section]	4.8m ****	7m	5m	7m	5.8m	29.6m	N/A	1.5m x 1**** 2.5m x 1	Figure 9
East-West Road [Eastern Section]	4.8m	7m	N/A	7m	5.8	24.6m	3.5m x 2*	1.5m x 1 2.5m x 1	Figure 10
Major Local Road	4m	6m	N/A	6m	5m	21m	2.5m x 2*	1.5m x 1 2.5m x 1	Figure 11
Minor Local Road	3.5m	4.5m	N/A	4.5m	3.5m	16m	2.5m x 2*	1.5m x 2	Figure 12

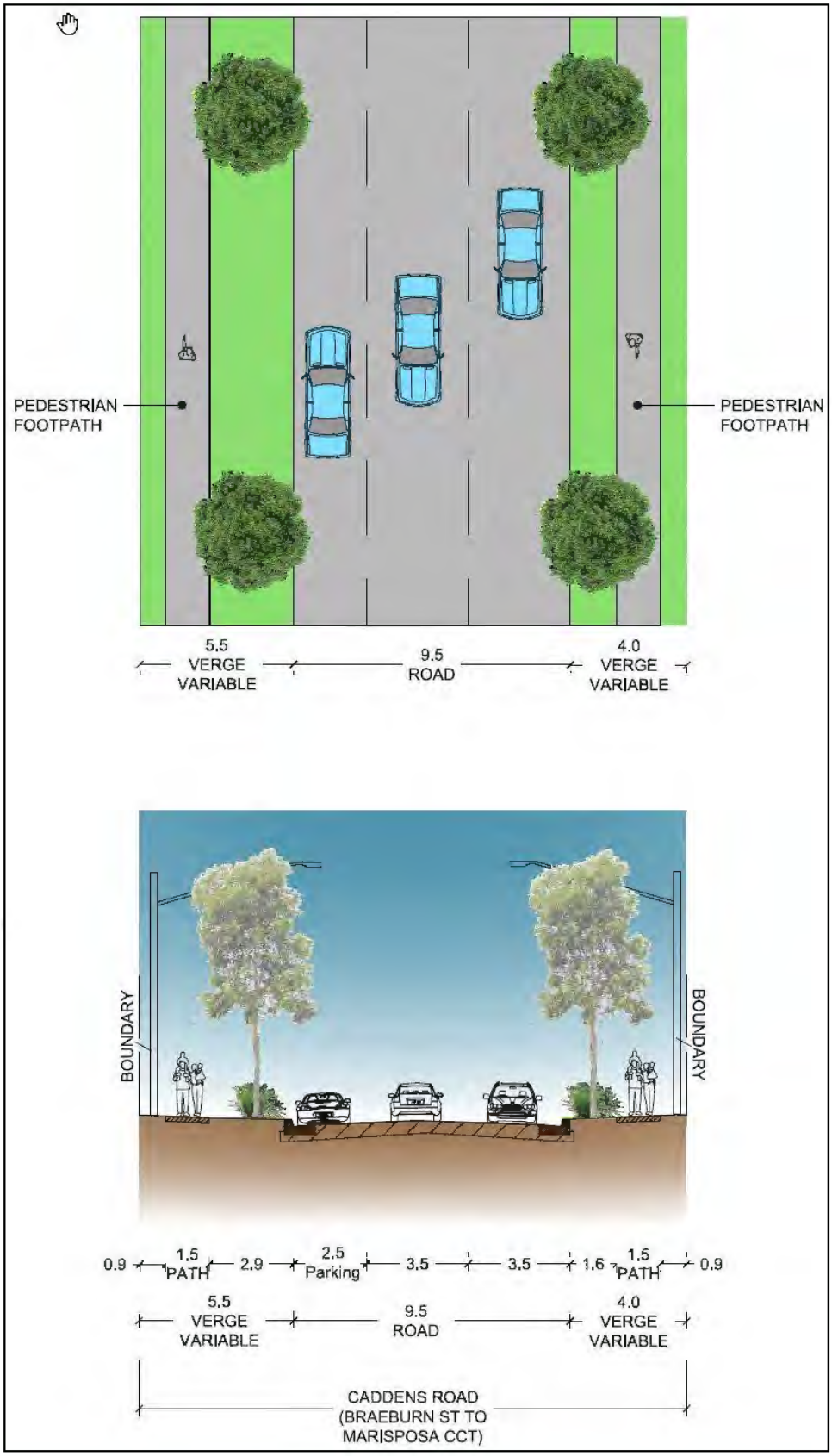
* parking lane within road – refer relevant figures.
** verge variable width
*** includes 2m x 2 on-road cycle lane.
**** where road adjoins Werrington Creek riparian corridor

Figure 6: Typical street cross section - Split-level road



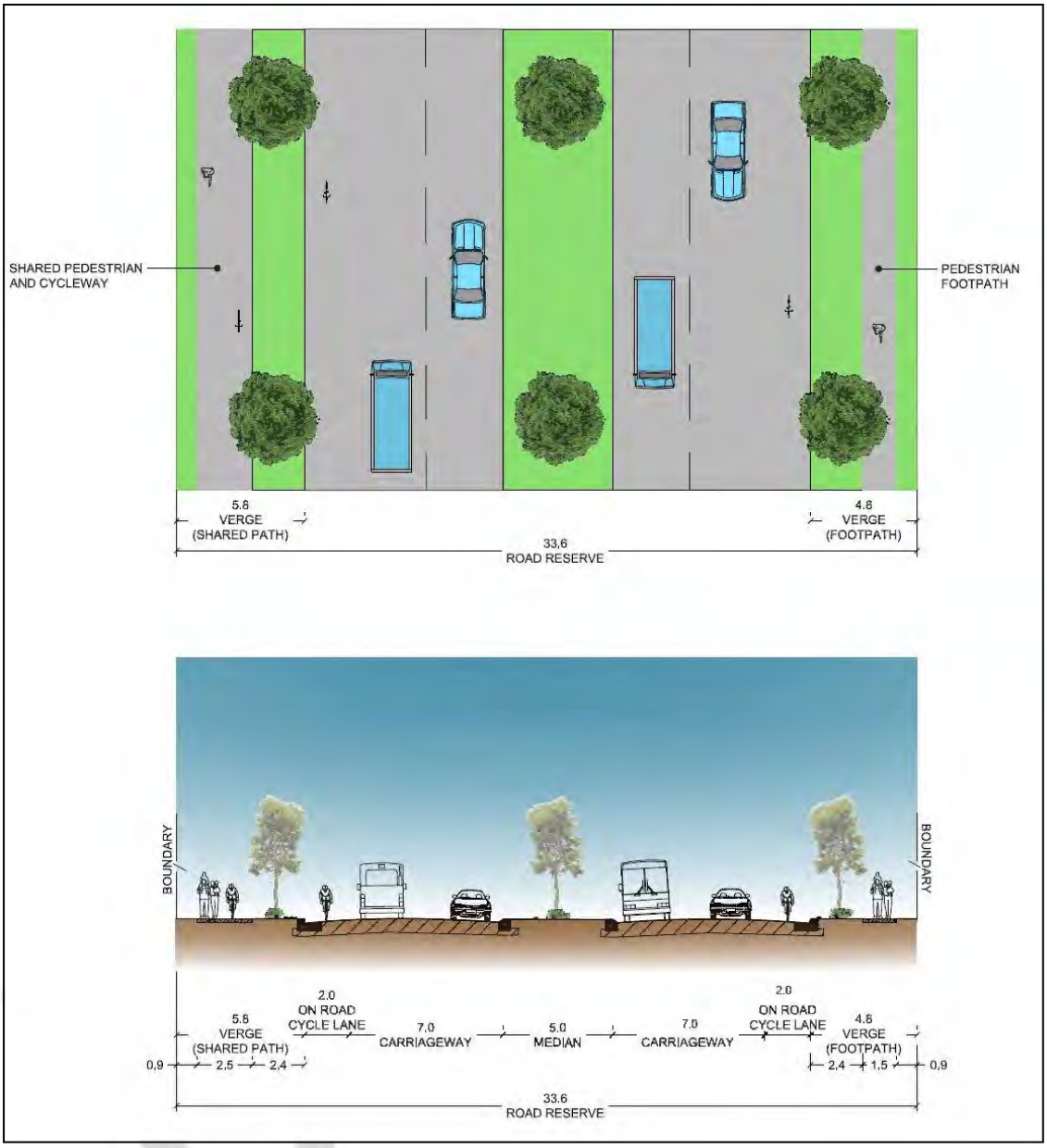
Source: J Wyndham Prince

Figure 7: Typical street cross section – Caddens Road



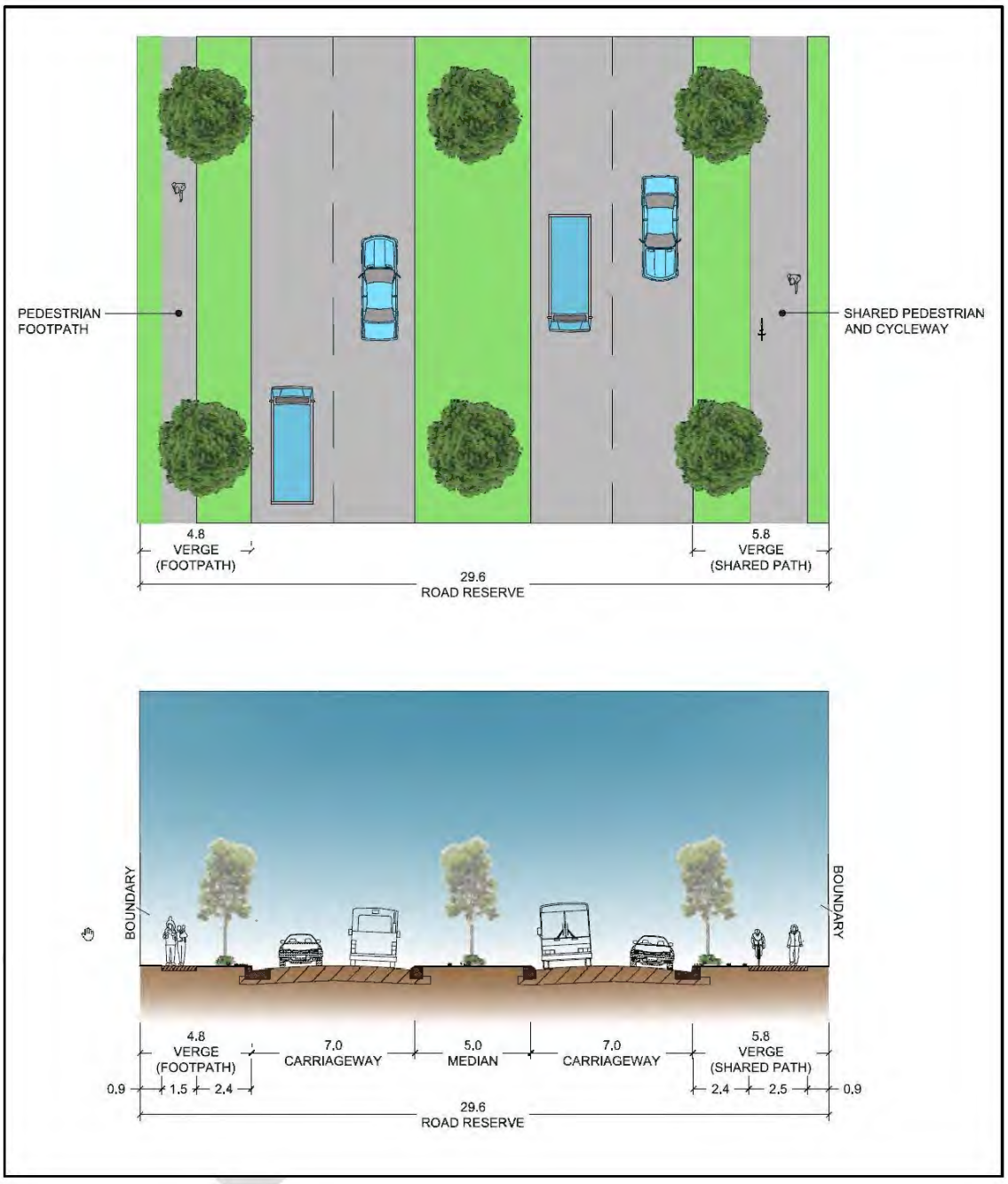
Source: J Wyndham Prince

Figure 8: Typical street cross section – North-South Road



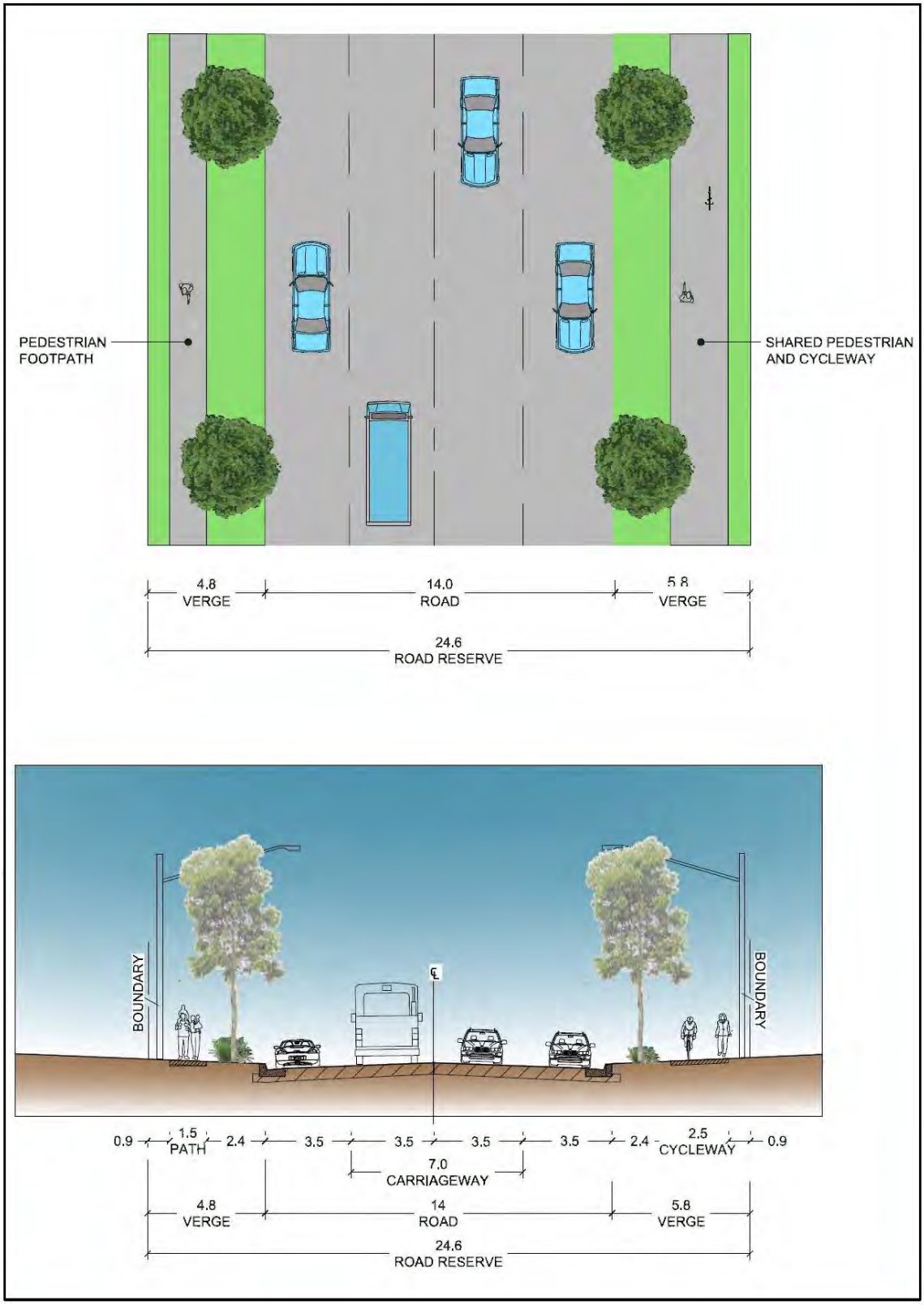
Source: J Wyndham Prince

Figure 9: Typical street cross section – East-West Road (Western Section)



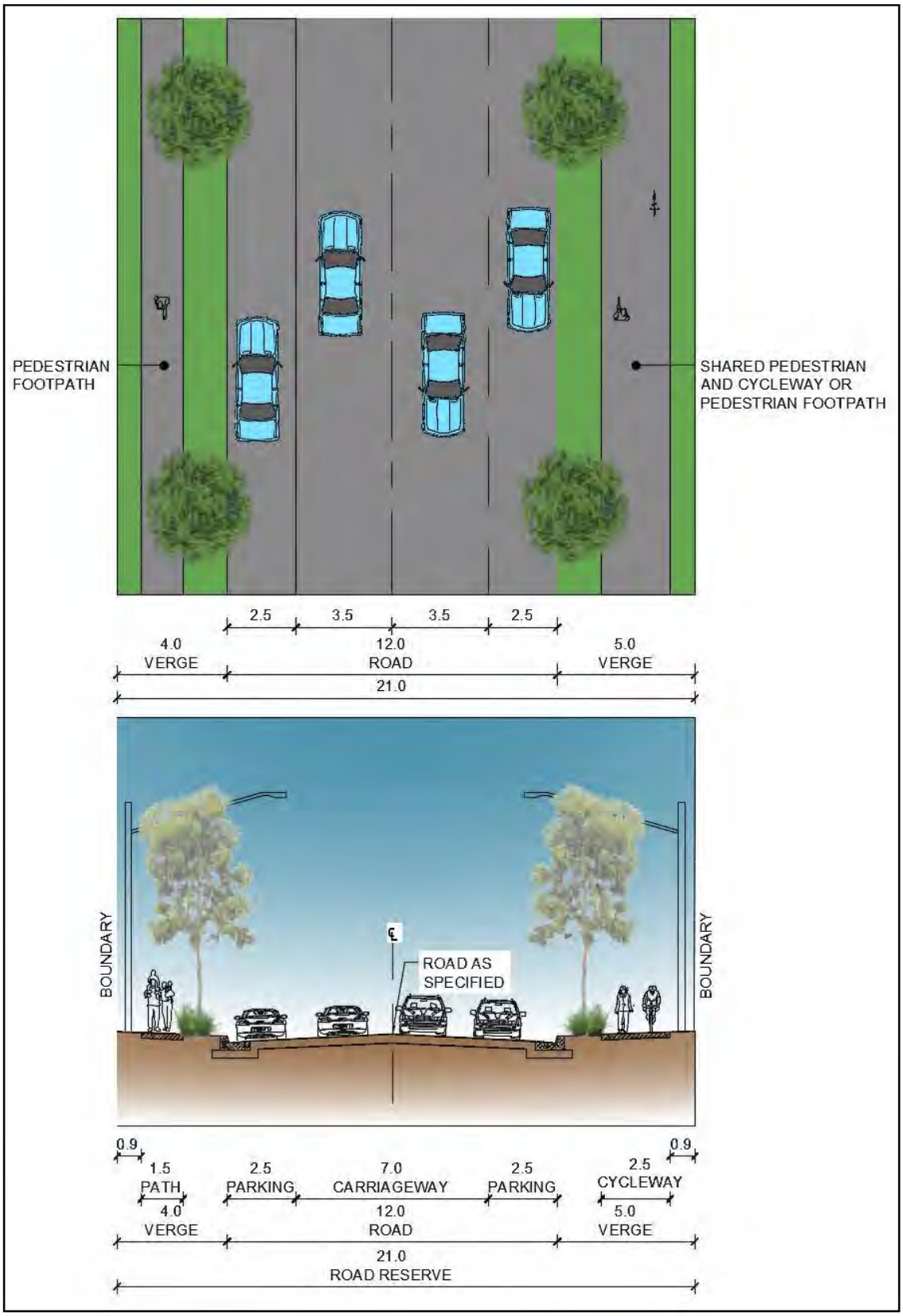
Source: J Wyndham Prince

Figure 10: Typical street cross section – East-West Road (Eastern Section)



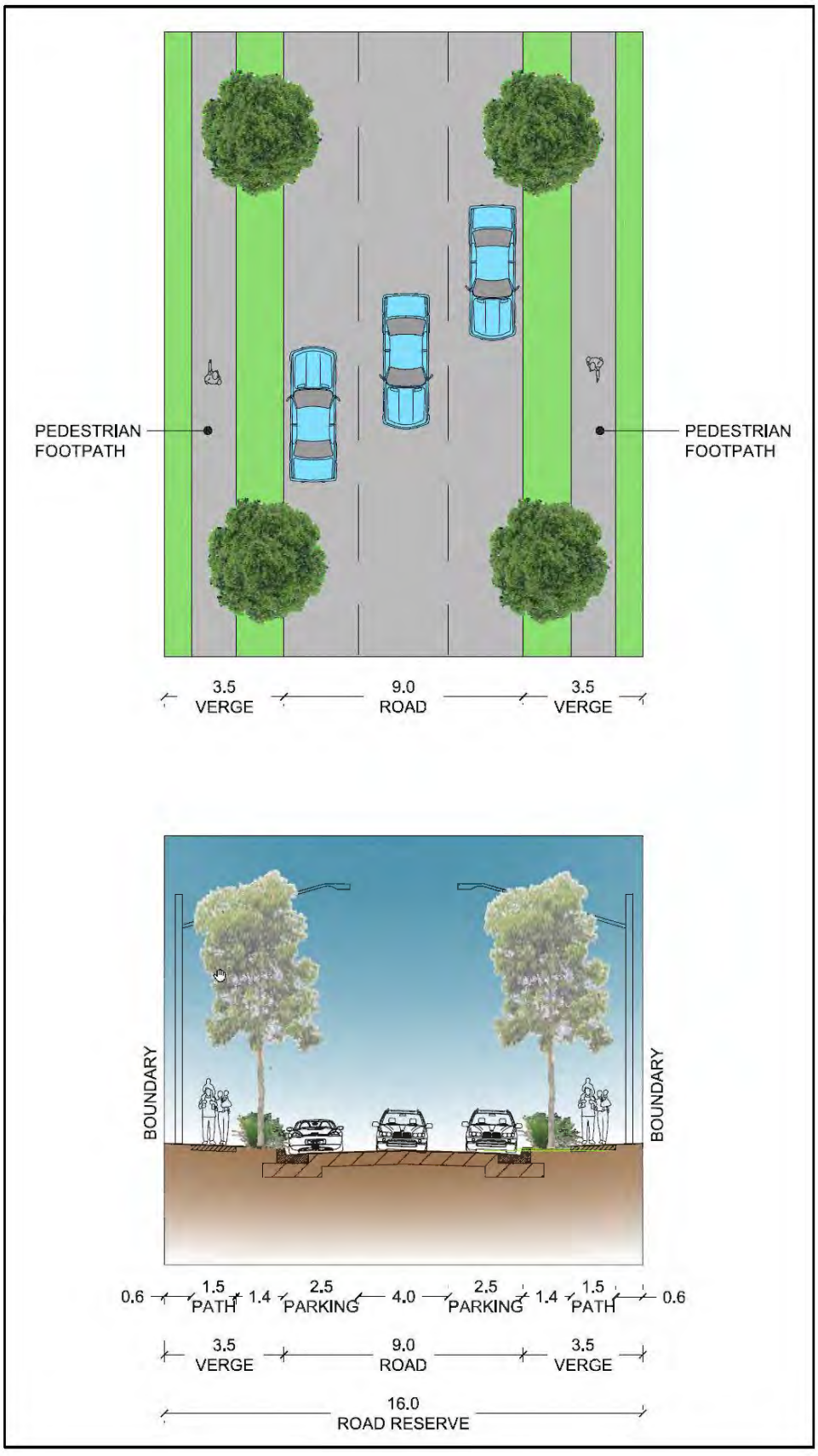
Source: J Wyndham Prince

Figure 11: Typical street cross section – Major Local Road



Source: J Wyndham Prince

Figure 12: Typical street cross section – Minor Local Road



Source: J Wyndham Prince

3.2 Caddens Road

The existing Caddens Road is a rural road located along the northern boundary of the Orchard Hills North development. With the reconfiguration of the road network to focus through traffic on the East-West Road (within Orchard Hills North) and Cadda Ridge Drive (within Caddens), the role of Caddens Road will be predominantly retained as a moderately low volume local road. Notwithstanding this, Caddens Road is an important servicing corridor which carries significant utility services owned by a number of service authorities, which should be maintained.

As part of the Orchard Hills North development, full construction and/or reconstruction will be required for portions of Caddens Road (as set out below). The extent of works includes full width pavement reconstruction, stormwater drainage and kerb and gutter to both sides of the road and intersections. The works shall include appropriate street lighting, footpath construction and street trees. The works required for the northern side of the road and fronting the detention basins are incorporated into the Section 7.11 Contributions Plan. Works on the southern side of the road are at the cost of the adjacent development.

Objectives

a) Maintain the servicing corridor along Caddens Road to provide authorities with unrestricted access to their assets.

b) Improve the safety and amenity of Caddens Road between the two intersections with Cadda Ridge Drive.

c) Upgrade Caddens Road as a local road within the broader road network that allows for access onto it.

Controls

1. For the various sections of Caddens Road, the following specific controls will apply:

    i. Kingswood Road to Braeburn Street – maintain the existing kerb and gutter on the north side and undertake half road

reconstruction on the south side (with all other appropriate works as indicated above).

ii. Braeburn Street to Mariposa Circuit – full reconstruction introducing appropriate priority adjustment at intersections and traffic calming measures to ensure that high speed travel is minimised. The alignment of the road within the existing 21m road reserve should be generally closer to the southern boundary.

iii. O'Connell Lane to Ulm Road – reconstruction as Local Minor Road as shown in the Road Hierarchy Plan with no intersections to O'Connell Lane. The alignment within the existing 21m road reserve should be generally closer to the southern boundary to provide clearer access to the major services.

2. The works in Caddens Road shall be undertaken in conjunction the works in the adjacent subdivision immediately to the south of that portion of Caddens Road.

3. Embellish through landscaping the closed portion of Caddens Road immediately to the east of Ulm Road and fronting Lot 1 DP583439 and maintain access to Lot 1 by providing a driveway within the road closure. Timing: This should be undertaken in conjunction with the timing of the adjacent subdivision works immediately to the south of that portion of Caddens Road.

4. Provide two new accesses:

   i. The eastern end near Hermitage Court (to access existing Gipps Street)

   ii. The western end near Cadda Ridge Drive (to access existing Bringelly Road / The Northern Road).

5. Street trees to be provided along the road reserve.

3.3 North-South road corridor

The North South Road will be built in two distinct phases: an initial Interim Phase, which will service the development of Orchard Hills North; and a longer term Ultimate Phase, which will service the broader subregion and supports movement to and from the future Orchard Hills South area and the educational and health specialist precinct in the north.

Objectives - Interim Phase

a) Create the first portion of a major north-south link road that supports movement within Orchard Hills North

Controls - Interim Phase

1. An initial element of the North-South Road to the north of the East-West Road will be constructed as part of the Orchard Hills North development
2. The North-South Road is to initially form a connection between O'Connell Lane at Caddens Road and the East West Road
3. In its initial form, the road shall comprise 3 x travel lanes: 2 x lanes travelling north and 1 x lane travelling south
4. The road reservation for the interim solution is to provide sufficient width for the delivery of the ultimate North South Road
5. No direct driveway access is to be permitted from the North-South Road (Interim Phase)
6. The section of the North-South Road to the south of the East-West Road is not required as part of the Orchard Hills North development, but the land is to be preserved for future works. The design of the subdivisions adjacent to this section of road reservation must take account the potential future construction of this road.

Objectives - Ultimate Phase

a) The North-South Road is to ultimately form a connection between O'Connell Lane at Caddens Road (and beyond - to the north) and the M4 Motorway (and beyond - to the south)

b) The Orchard Hills North development is to assist in the creation of the ultimate phase of a major north-south link road that supports movement to and from the future Orchard Hills South with the educational and health specialist precinct in the north.

Controls - Ultimate Phase

1. Within Orchard Hills North, the road reservation for the ultimate solution of the North South Road is to provide sufficient width for 4 x travel lanes, a central median and 2 x cycleways – in accordance with Figure 8 above

2. No driveway access is to be permitted from the North South Road (Ultimate Phase)

3. The section of the North-South Road to the south of the East-West Road is identified as a longer term strategic transport corridor and is to be preserved for future works.

4. The design of the subdivisions adjacent to this section of road reservation must:

    i. take account the potential future construction of this road

    ii. confirm the route alignment of the North-South Road

    iii. confirm the boundaries of any M4 Western Motorway bridge abutments on the southern boundary of the site

5. When constructing the North-South Road (Ultimate Phase) the relevant delivery authority will need to take account of the road reservation width identified in Figure 8 above and take account of the potential impact on adjoining properties (residential and open space), in terms of:

    i. Minimise the requirement for additional lands.

    ii. Minimise to loss of significant vegetation.

    iii. Riparian integrity, drainage / overland flows.

    iv. Possible over-shadowing.

    v. Acoustic impact.

6. Should the North-South Road (Ultimate Phase) be approved, designed and constructed prior to the residential subdivision along its western and/or eastern boundary, then the relevant applicant for the residential subdivision and associated works will need to take account of the potential impact on adjoining properties (residential and open space), in terms of:

    i. Any required amendments to the proposed local road network.

    ii. Riparian integrity, drainage / overland flows.

    iii. Possible over-shadowing.

    iv. Acoustic impact.

Note: Refer also to Section 5.18: Road Traffic Noise

3.4 East-West Road corridor

Objective

a) Create the first portion of a major east-west road that supports movement though the site, from The Northern Road to Kent Road/Gipps Street.

Controls

1. The East-West Road will ultimately connect between The Northern Road in the west with the intersection of Caddens Road/Cadda Ridge Drive to the east.

2. The Road is to provide a road reservation for 4 lanes, median and footpath and shared cycleway (refer to Figure 9 and Figure 10 above)

3. No driveway access is to be provided from the East West Corridor (west of the North-South Road/O'Connell Lane extension.

4. To facilitate effective development patterns, interim road connections from new local streets may be provided to the East-West Road with all movements permitted.

3.5 Intersection treatments

Objective

a) To ensure that the intersection treatments provide safe intersections and clear way-finding within the estate.

Controls

1. The intersection of any Minor Local Road and a Major Local Road shall give priority to the Major Local Road.

2. The intersection of East-West Road with the North-South Road shall be designed to take account of the future signalisation of the "T" intersection. Initially it shall be operated as a priority control "Give Way" (subject to detailed traffic assessment at the time of its construction).

3. All intersection designs shall comply with the standard engineering practice and traffic requirements.

4. Where roundabouts are shown on the structure plan, they shall be designed to accommodate suitable pedestrian/cyclist crossings.

5. Traffic management at the intersection of the east-west road and retail centre is to include traffic control measures, including a roundabout.

3.6 Existing roads – Castle Road, Ulm Road, Kingswood Road

Objectives

a) Maintain these existing roads as a local major road form through the development.

Controls

1. The existing roads are to be reconstructed in association with the adjacent residential subdivision. Where development is planned for on both sides of the road, the works are to provide for half road construction with kerb and gutter, stormwater drainage, footpath, street trees and street lighting, in conjunction with the development on that side of the road.

2. Where these roads are indicated as Major Local Roads in the Road Hierarchy, the verge widths will be adjusted to maintain the existing road reserve width (where the nominated width in Figure 11 is wider than the existing road reserve).

3. For Castle Road (west of Kingswood Road to the boundary of the Orchard Hills North Precinct – approximately 350m) and Kingswood Road (between Castle Road and Caddens Road – approximately 490m) the upgrades shall include full width construction. The northern side of Castle Road and the western side of Kingswood Road in these sections are included within the Orchard Hills North S7.11 CP.

4. Between Castle Road and the East-West Road, Kingswood Road will be widened to the nominated Major Local Road width and formation.

5. North of the East-West Road, Ulm Road is nominated as a Minor Local Road and the verge widths will be widened appropriately (with no reduction in overall existing road reserve).

3.7 Pedestrian and cycle network

Objectives

a) To promote active transport options by providing safe and convenient routes to and from key focal points within the site and beyond to existing and/or new connections.

b) To provide convenient, safe and publicly accessible bicycle/pedestrian paths so to promote an active and healthy lifestyle.

c) To provide a connection to the Caddens development to the north.

Controls

1. Key pedestrian and cycleway routes are to be provided generally in accordance with Figure 13 below.

2. The minimum width of off-street shared cycle and pedestrian pathways is to be 2.5m.

3. The minimum width of pedestrian footpaths is 1.5m.

4. All pedestrian and cycleway routes and facilities are to be consistent with the Planning Guidelines for Walking and Cycling (DOP & RTA 2004).

5. Pedestrian and cycle routes and facilities in public spaces are to be safe, well lit, clearly defined, functional and accessible to all.

6. Pedestrian and cycle pathways, and pedestrian refuge islands are to be designed to be fully accessible by all in terms of access points and gradients, generally in accordance with Australian Standard 1428:1-4.

7. Pedestrian and cycle pathways are to be constructed as part of road infrastructure works with detailed designs to be submitted with DAs.

Figure 13: Pedestrian and cycle network plan



Source: Design and planning

3.8 Public transport

Objectives

a) To promote the use and expansion of public transport opportunities through the site

b) To ensure clear and safe pedestrian links to public transport stops.

c) Allow for the majority of residential lots to be within 400m walking distance from an existing or proposed bus stop.

Controls

1. As per the standard approach by TfNSW for greenfield residential development, the location and number of bus stops/shelters will be determined in consultation with the relevant authorities (e.g. TfNSW and Council). A minimum carriageway width of 3.5m is to be provided along all bus routes and roundabouts on bus routes are to be designed to accommodate bus manoeuvrability.

2. Bus stops are to be provided on-street with shade. Bus shelters are to be provided at all bus stops and installed at the subdivision construction stage.

3. Subject to consultation with the relevant authorities (e.g. TfNSW and Council), every bus stop along east- west and north-south routes shall be provided with bus shelters.

4. Bus stops are to be located in areas of high pedestrian and vehicle activity and designed to ensure a high level of passive surveillance, such as north south link and east west road, and at the Village centre.

5. Bus stops are to be compliant with the Disability Discrimination Act 1992 and installed at subdivision construction stage

6. The location of bus stops is to achieve a high level of access to key places of interest such as the Village Centre, Claremont Creek corridor and playing fields, as well as surrounding residential and commercial development.

7. Pedestrian Connections and Bicycle Facilities are to be provided in accordance with the Transport, Access and Parking Chapter of the Penrith DCP.

8. A Travel Plan shall be developed and monitored for the Orchard Hills North development. The Travel Plan will include key initiatives and measures designed to reduce the need to travel, re-think the mode of travel and to

re-time and re-route journeys. Special emphasis shall be placed on active travel options (eg walking and cycling) and trips to / from the proposed primary school and the Village Centre. The Travel Plan is required to be lodged with the subdivision DA for the proposed public primary school site and/or the Village Centre site.

4. Public realm

4.1 Public realm

Objectives

a) The public realm spaces shall comply with the NSW Government Architect Greener Places, draft Greener Place Design Guide and the Penrith Sport and Recreation Strategy.

b) Create a strong integrated landscape network that capitalises on the sites' physical attributes, heritage values and integrates street landscaping with public open space areas.

c) Preserve and enhance existing areas of significant ecological value such as riparian corridors, wetlands and habitat vegetation and integrate them into open space areas where possible.

d) Capitalise on the views and vistas shaped by the existing topography to create a variety of spatial experiences that exploit view opportunities from and within the site.

e) Provide a diverse mix of open space and public domain amenity for the community, with active open spaces and well embellished local parks.

f) Open space should be provided on or along ridge line high points to enhance the ridgeline vegetation and preserve views.

Controls

1. A concept landscape master plan is to be provided for the site with the first development application and detailed with each separate development application a landscape plan for each of the public realm areas. An indicative landscape master plan is shown at Figure 14 below.

2. The riparian park and detention basins are to be located within low lying areas and should include the integration of rain gardens and detention basins within these parkland environments with WSUD principles.

3. Maintain and improve the existing stands of threatened ecological communities, namely the Cumberland Plain Woodland (CPW) in the Riparian Park and the Sydney Coastal River Flat Forest (SCRFF) along the riparian corridor by incorporating and consolidating the existing vegetation into the landscaped open space.

4. The location of furniture and facilities are to consider Crime Prevention through Environmental Design (CPTED) Principles and passive surveillance is achieved.

5. Provide for the location and quantity of public open space in general accordance to Table 2 below.

Table 2: Quantum of open space/public realm

Land use	Approximate area (hectares)
Active open space 7.26	7.26
Passive open space	8.51
Total	**15.77**

Figure 14: Public realm: indicative landscape master plan



Source: Place Design

4.2 Active local open space

Objectives

a) To provide for the active recreational district park facilities to support an active and healthy lifestyle of the community.

b) To provide one primary multipurpose sporting and recreational activities open space that reflects seasonal demands.

c) Active playing areas are provided with facilities and infrastructure to support various sporting events, including amenities for spectators.

d) Active playing areas are differentiated as separate places by plantings, paths and other landscape elements.

e) Connect the active open space areas with the broader site through a network of pedestrian and cycle pathways.

f) To include gender friendly and accessible facilities that support training, competition and events.

g) Define the interface between the active local open space areas and the residential lots to benefit passive surveillance while maintaining the amenity of the residents.

h) Ensure better maintenance and orderly conservation of active open space areas by encouraging the frequent use of these spaces by the residents and visitors.

Controls

1. The active sports field should provide for two playing fields with an oval overlaid, car parks and amenities for spectators and users, and may encroach, to the satisfaction of council, into the riparian corridor as outlined in Figure 15.

2. An amenities building of a minimum 557m2 (inclusive of 50m2 covered area) in size is to be provided that is accessible and gender friendly.

3. All Playing Fields must be floodlit consistent with the OHN Open Space Strategy.

4. Sports fields must be level and have no slopes greater than 1:100 for active use areas.

5. The active open space sport fields should include automated subsurface irrigation as well as harvesting and reuse of stormwater as outlined in the OHN Stormwater Strategy.

6. Ensure passive surveillance of active open space areas is provided by maintaining visual connection between adjoining uses.

7. Facilitate pedestrian access and public use of the active open space areas through the provision of suitable lighting and accessible footpaths to inspire the sense of ownership and belonging.

8. A Ball Stop Fence shall be provided in front of Claremont Creek.

9. Develop the pedestrian and active cycle network as outlined in Figure 16.

DRAFT

Figure 15: Active local open space



Source: Place Design

Figure 16: Pedestrian and active pathway network



Source: Place Design

4.3 Passive local open space

Objectives

a) Local open spaces will be designed with the NSW Government's best practice inclusive play guidelines 'Everyone Can Play'.

b) To create accessible and a diversity of public open spaces that provides both passive and informal active open spaces.

c) Retain, within the identified bushland open space areas, existing vegetation so to conserve the natural features of the park, and supplement with suitable complementary plantings.

d) To provide high amenity areas for adjacent residential development.

e) Parks are to be located as focal points within residential neighbourhoods and be designed with facilities to accommodate a range of age groups and abilities, as outlined in Figure 17 and Figure 18.

f) Local open space creates linkages with the broader pedestrian and bicycle networks.

g) Where open space areas adjoin heritage items, their relationship should be considered and reflected in the design and use of the open space area

Controls

1. Where possible, passive local open space should be co-located with community and education facilities, be highly accessible and linked by pedestrian and / or cycle routes

2. Local open space should be bordered by streets on all sides with houses oriented towards them for surveillance

3. Ensure surveillance of passive open space areas is provided by maintaining visual connection between adjoining uses and the provision of suitable lighting.

4. Preserve the curtilage of heritage items adjoining the open space areas by maximising surveillance of the heritage buildings through more pedestrian movement in the vicinity and around the sites.

5. Parks integrated with the natural landscape should allow for active and passive use and achieve NSW Government "Everyone Can Play Guidelines".

6. Parks should be provided with trees and shade structures/sails and be designed to take into account the hot days through the selection of trees, durable material selection and lighter colours for play equipment and park furniture.

7. Local open space should include furniture to support accessibility, accessible paths, play spaces and signage for way finding.

8. Play spaces should be provided in local and district open space within approximately 5-minute walking distance.

9. Shade sails are to be provided over all play equipment and address Council's Shade Facilities at Play spaces Policy.

10. The design and planning of open spaces should include public art and landscaping to reflect/interpret the Aboriginal/environmental awareness/European heritage and be placed sensitively to minimise disturbance to this area.

11. Open space and community centre north of the village centre should be designed to integrate and link the riparian open space to the village centre and provide space for activation, such as markets, outdoor cinema and the like.

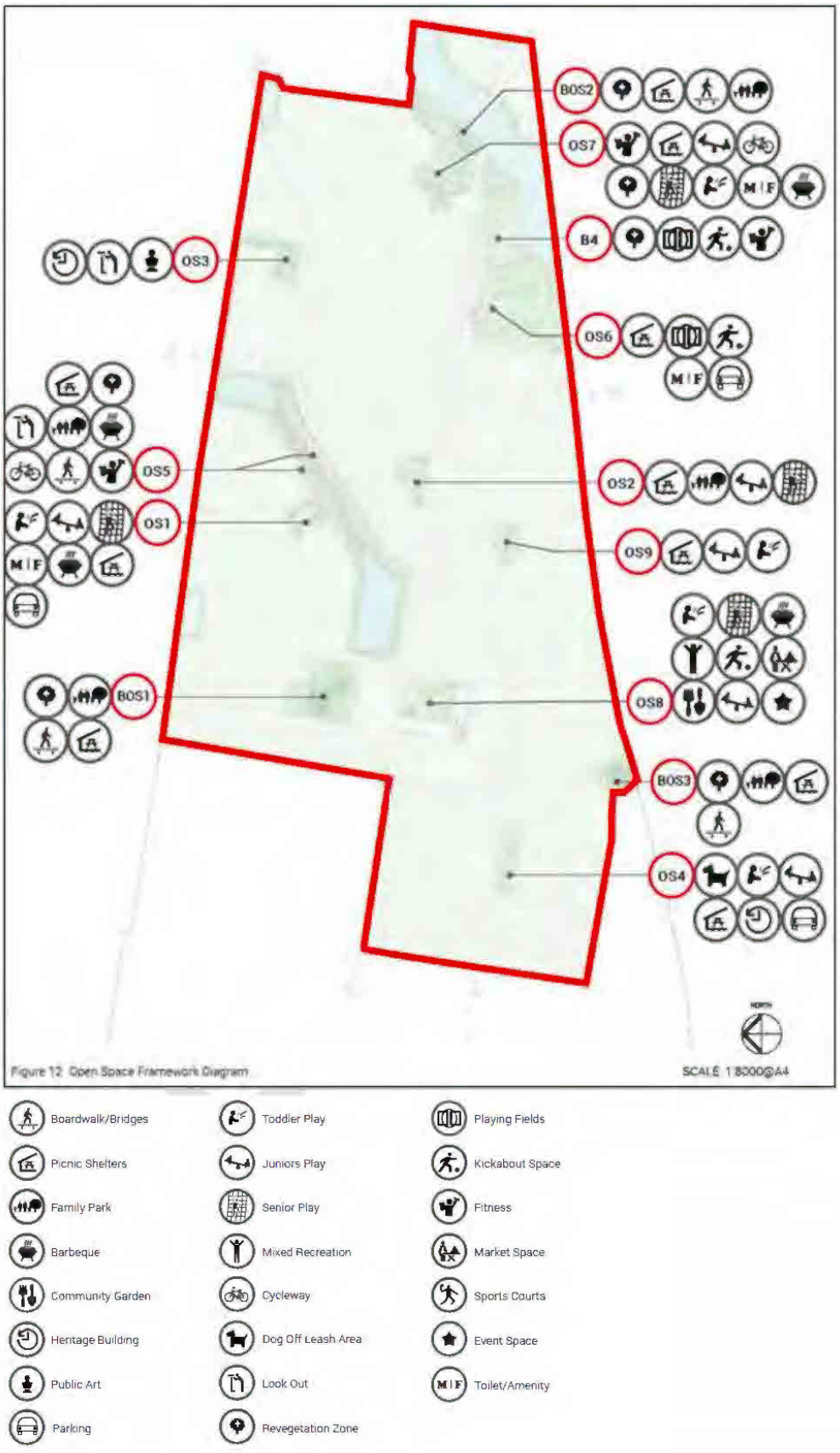
12. Local open space should be provided with a range of activities to be used by all age groups and abilities, and generally in accordance with the framework outlined in Figure 18, and as outlined in Orchard Hills North – Open Space Strategy by Place Design Group October 2021.

Figure 17: Passive local open space



Source: Place Design

Figure 18: Open space activation



Source: Place Design

4.4 Bushland open space

Objectives

a) Protect and conserve existing stands of remnant vegetation communities within a local open space with low levels of passive interaction in the open space.

b) Consider the opportunities for providing interpretive signage in bushland open space to acknowledge the history and importance of the natural assets.

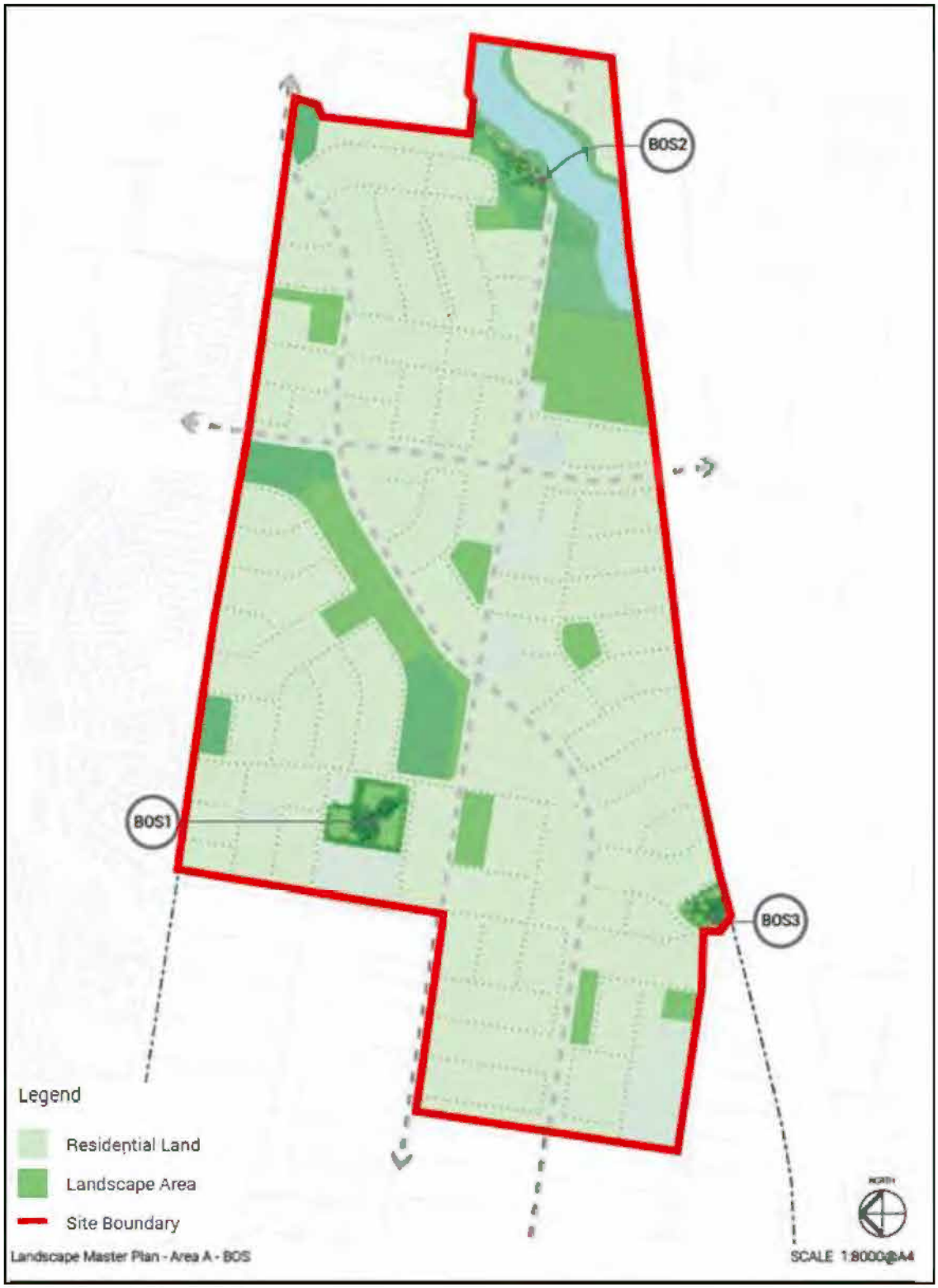
Controls

1. Retain the existing endangered and critically endangered communities as a natural bushland open space, refer to Figure 19.

2. Provide additional supplementary planting, natural pedestrian walkways through the natural environment and places for respite.

DRAFT

Figure 19: Bushland open space



Source: Place Design

4.5 Riparian corridor open space

Objectives

a) Riparian corridor open space complements and supports the public realm

b) Enhance the character of major drainage routes through revegetation of those corridors to retain the conservation value of the landscape.

c) To link and extend the access and movement network for bicycles and pedestrians, where practicable.

d) Provision of contiguous corridors of public open space with an expanded urban tree canopy positively contributing to mitigating the urban heat island effect.

e) Retain vegetation with significant conservation value

Controls

1. Werrington Creek and tributaries are first order streams and require a 20m wide Vegetated Riparian Zone (VRZ) centred over the new creek.

2. Claremont Creek is a fourth order stream and requires a 40m wide VRZ. The creek is to be maintained as a natural open channel and offsetting is permitted within the site for the establishment of a riparian corridor, so to manage the biodiversity value and still deliver the necessary flood management outcomes

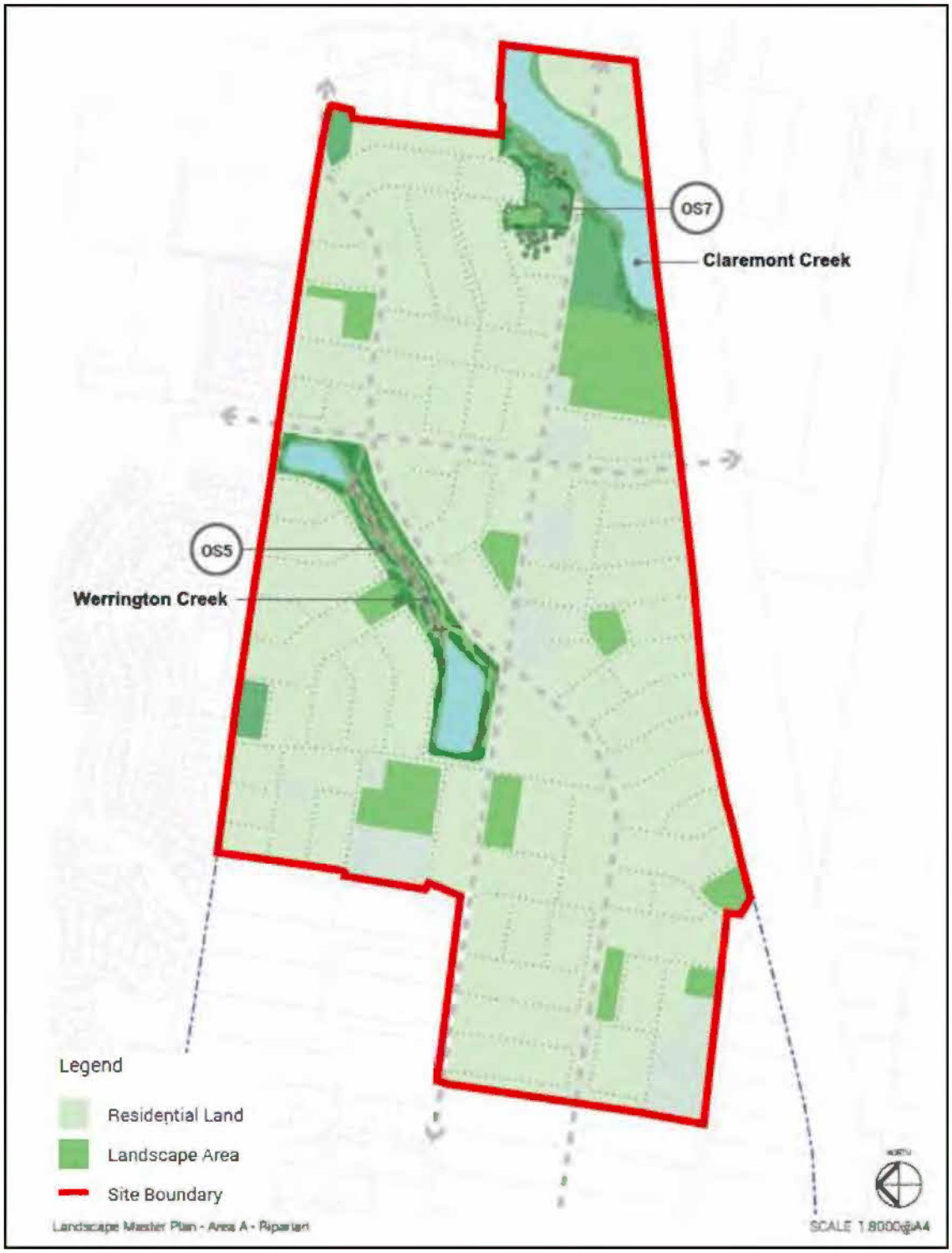
3. Shared pedestrian and cycle paths should be designed and located to retain significant vegetation and provide a definitive edge to the riparian planting.

4. Planning and design of the riparian corridor open space shall include WSUD so to retain water within the landscape to provide a cooling effect.

5. The width of Werrington Creek is to match the existing width at the interface with Caddens Road.

6. The development should be generally consistent with Figure 20.

Figure 20: Riparian corridor open space



Source: Place Design

4.6 Biodiversity

The Orchard Hills North Investigation Area is known to contain areas of Cumberland Plain Woodland and River-flat Eucalypt Forest. Cumberland Plain Woodland is listed as a critically endangered ecological community under both the NSW Biodiversity Conservation Act 2016 (BC Act) and Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), while River-flat Eucalypt Forest is listed as an endangered ecological community under both the BC Act and critically endangered under the EPBC Act.

Objectives

a) To ensure that important natural features inform the urban structure of the place.

b) To protect, restore and enhance the environmental values and functions of the environmental biodiversity areas, watercourses and riparian corridors and open space.

c) Protect remnant vegetation to preserve threatened flora and fauna species and threatened communities and provide additional pockets of native vegetation that inter-connects with the open space areas

d) Develop land consistent with the required outcomes of the Cumberland Plain Conservation Plan

Controls

1. Significant flora and fauna species, ecological communities and their habitats are to be preserved.

2. Development shall be designed to retain existing bushland and fauna habitats, including where corridors and linkages are determined as habitats.

3. Werrington Creek is regarded as a first order watercourse. The overall width of riparian zone will be 20m centred over the new creek.

4. A Vegetation Management Plan (VMP) is to be prepared for Werrington and Claremont Creeks.

5. Claremont Creek is regarded as a fourth order watercourse. Existing native vegetation within the riparian corridor is to be retained and no works are proposed within 40m of top of bank. Isolated drainage outlets may encroach upon creek in which case a rehabilitation plan will be prepared for any disturbed areas in accordance with the guidelines of NRAR.

6. Future development applications (DA) within land identified as 'Certified – Urban Capable Land' in the State Environmental Planning Policy (Biodiversity and Conservation) 2021 shall be required to demonstrate that specific mitigation measures for threatened ecological communities and species will be implemented.

7. If future DAs are progressed outside of the Biodiversity and Conservation SEPP and an assessment finds that there is likely to be a significant effect on threatened species, applicants will be required to submit a Biodiversity Development Assessment Report (BDAR), with reference to the specific requirements under the BC Act 2016.

DRAFT

Figure 21: Biodiversity Areas



Source: Place Design

4.7 Street furniture and public art

The proposed open spaces within Orchard Hills North can be enriched by a public art strategy which reflects local heritage and cultural values. Public art can take a number of forms including permanent, temporary, ephemeral, and performance art.

Objectives

a) To visually define and promote attractive public spaces.

b) Celebrate the history, sense of place and locality of Orchard Hills North.

c) To enhance public spaces so that they are vibrant, safe and welcoming.

d) To create a sense of identity for Orchard Hills North by creating open space as distinctive places which reflect local heritage and the local environment.

e) To ensure that high quality furniture is provided in open space areas to provide a consistent and clear identity.

Controls

1. Street furniture is to enhance pedestrian comfort, convenience and amenity and to form an integral element of the streetscape.

2. The design and selection of materials for street furniture should be sustainable, low maintenance and resistant to graffiti and vandalism, and where possible include smart technology.

3. The provision of street furniture in public spaces must include, as appropriate:

    i. Seats/benches.

    ii. Litter bins.

    iii. Drinking fountains, water refill and dog bowl.

    iv. Lighting.

    v. Information signs.

vi. Bicycle racks.

vii. Planter boxes.

viii. Tree guards.

ix. Other items suitable to the function of each public space.

4. Street furniture throughout precincts should be consistent in design and style and have a distinct rural character and be of natural materials and finishes.

5. Street furniture is to be located and designed to allow accessibility, in accordance with AS1428:1-4 and the Disability Discrimination Act 1992.

6. Location and detailing of all proposed street furniture and public art is to be indicated on the Landscape Plans submitted with Development Applications.

7. Public art to be provided in open spaces should reflect the local heritage and cultural values of the site, and suitable for the chosen site and low maintenance.

8. The location of furniture and facilities are to consider Crime Prevention through Environmental Design (CPTED) Principles and passive surveillance is achieved.

4.8 Street landscaping

Objectives

a) Streetscape character and tree species should reflect the natural character and landform of the site, while accommodating the functional needs of pedestrian, cycle and vehicle movement along each of the roads.

b) The streetscape character should reinforce and enhance the road hierarchy.

c) The street tree character and indicative species for the various street types should be in accordance with those identified in the Open Space Strategy.

Controls

1. Street trees should be in accordance with the requirements set out in the Penrith DCP.

2. Existing mature trees located within developable areas should be conserved on site as part of the landscaped area of future development.

3. No disturbance to existing ground levels should occur within the drip line of any significant trees.

4. Existing native vegetation in riparian corridors will be protected and corridors revegetated to provide habitat and movement for flora and fauna species.

5. Street trees should be provided at a rate of one tree for every 10m of site frontage. Species selection should be appropriate to the character and constraints of the precinct, drought tolerant with low water requirements and provide canopy for shade.

6. Street trees are provided at minimum size of 75 litres and fitted with tree guards.

7. Split road medians are to be planted with low maintenance native planting species at the base and the top of the retaining wall.

8. Native endemic riparian species are planted along the local roads near the open spaces and within the low- lying areas adjacent to the riparian corridors and various detention basins.

9. Deciduous tree species to be planted along the east – west roads to ensure access to winter sun and native evergreen trees have been proposed to the north – south streets.

10. Street trees adjacent Bushland Open Spaces are to have a tighter spacing to deter vehicular entry.

4.9 Rural Fire Service facility

The existing Rural Fire Service (RFS) facility is located on Council-owned land, on an existing rural road (Castle Road) within the Orchard Hills North development area. The land is zoned RE1 Public Recreation and is bounded to the east and to the south by areas of Active Open Space. The RFS facility provides a valuable rural resource and the Council supports it continuing to operate in its current location for the foreseeable future. There are no plans for the RFS facility to be developed for any alternative use/s at this stage.

Objectives

a) The existing Rural Fire Service (RFS) facility shall be retained in its current location and continue to operate and provide services to the local community whilst the Orchard Hills North area transitions from a rural to an urban setting.

Controls

1. The design of Active Open Space areas immediately to the east and the south of the RFS facility should take into the account the zoning of the land and the potential for its use in the longer term for additional open space and public recreation use/s.

2. The potential future land use/s of the existing RFS facility will be determined by Council at the appropriate time.

4.10 Canopy cover

Objectives

a) Contribute towards the Greater Sydney Region Plan (GSRP) and Western City District Plan's (WCDP) identified target of 40% tree canopy.

b) Give effect to the objectives of the Greening our City Premier's Priority (2019) to plant one million trees and increase green cover by 2022, to combat the urban heat island effect and increase resilience to a changing climate.

c) Provide for new trees and where practical retain existing trees as landscape elements to ensure the community benefits from urban

amenity, cooler neighbourhoods, improved air and water quality and to enhance biodiversity on the site.

d) Ensure that opportunities for increased tree canopy cover are considered and provided for appropriately, to maximise comfort and enhance the liveability, health and well-being of both the community and the environment.

e) Create neighbourhoods with a distinctive character and support landscaped oriented development.

f) Increased tree canopy cover is to be targeted on both public and private land, specifically the following locations:

    i. Local open space parks and the boundaries of playing fields.

    ii. Riparian corridors and drainage reserves.

    iii. All street / road types.

    iv. Car parks in the village centre.

    v. Private residential allotments (front or rear garden - depending on lot size and orientation).

Controls

1. Development is to demonstrate alignment with the strategy to deliver 40% tree canopy.

2. Each individual residential allotment shall be required to contain a minimum of 1 tree (existing or new) with a minimum container pot size of 25L.

3. Street trees are required for all streets except for any perimeter roads located within APZ's. Street planting is to:

    i. Be in accordance with the preferred species published by Council.

    ii. Contribute to target goals for canopy cover and tree planting.

    iii. Be consistently used to distinguish between public and private spaces and between different classes of street within the street hierarchy.

iv. Minimise risk to utilities and services and comply with Council's specifications for installation of appropriate root barriers.

v. Have a minimum container pot size of 100L.

vi. Be durable and suited to the street environment and, wherever appropriate, include indigenous species (and preferably be Evergreen).

vii. Maintain adequate lines of sight for vehicles and pedestrians, especially around driveways and street corners.

viii. Provide appropriate shade and cooling in summer and solar access in winter.

ix. Provide an attractive and interesting landscape character, increase active transport amenity, and clearly define public and private areas, without blocking the potential for street surveillance.

x. Ensure that trees are not located within the carriageway. Blister construction with kerb and guttering located in the kerbside parking lane to accommodate canopy tree planting will be supported where appropriate; and

xi. A person will not cut down, fell, uproot, kill, poison, ringbark, burn or otherwise destroy a tree with a trunk diameter greater than 50mm without approval from Council authorising such works. This control extends to a public authority except in relation to the pruning of a tree growing on, overhanging, or encroaching onto land owned by Council or which is under its care, control and management.

4. For clearing not covered by a biodiversity certification approval, trees removed must be replaced at a ratio of at least 2:1 (new to existing) to contribute to canopy cover targets.

5. When assessing development, Council should consider:

    i. The opportunity to provide new trees, and retain existing trees on the proposed development site to contribute to canopy targets.

    ii. The proponent's approach to incorporating and protecting existing trees as part of the development design to enhance urban amenity and provide established urban canopy across the development.

iii. Whether an efficient water source for trees has been incorporated into the development design; and

iv. Provision of enough deep soil zones for trees.

6. Future development applications (DA) for land subdivision in Orchard Hills North shall be required to demonstrate the approaches and specific measures proposed in support of achieving a 40% canopy cover target, on both public and private land, including but not limited to, the location, species, and minimum pot size of proposed canopy cover trees for the following areas:

   i. Roads (both existing and proposed).

   ii. Areas of passive and active open space (including any areas of car parking).

   iii. Drainage basins and riparian corridors (existing and proposed).

   iv. The Village Centre (including any areas of car parking and urban plazas).

   v. The school site (including any areas of car parking and play spaces).

   vi. Individual residential allotments.

Refer also to Section 7.1 Urban heat island of this Chapter.

5. Residential development

Orchard Hills North will provide a broad mix of housing types ranging from larger environmental living lots (minimum of 2,000m2) to traditional detached residential lots (primarily 300-600m2) and smaller compact and attached housing lots (220m2) that will be designated for integrated housing.

Orchard Hills North will promote diverse housing forms that utilise the constraints and opportunities of the land and structure planning to meet the increasingly diverse demands of the local community.

5.1 Subdivision and neighbourhood design

Objectives

Provide a diverse range of housing forms and densities that respond to community needs with different dwelling sizes and to different household types.

a) To establish a clear urban structure that maximises the sense of neighbourhood and encourages walking and cycling.

b) To establish a subdivision layout that maximises the natural attributes of the land.

c) To ensure that all residential lots are afforded a high level of amenity in terms of solar access, views/outlook and/or proximity to public open space.

Controls

1. Subdivision layout should create a recognisable, open and networked street hierarchy that responds to natural topography, the location of existing significant trees and solar design principles.

2. Preferred lot orientation is either on a north-south or east-west axis. Where there are other forms of amenity available, such as views or an outlook over open space, an alternative lot orientation can be considered.

3. A diverse range of lot types and frontages should be provided in each street. The repetition of lots with the same frontage along a street is to be avoided. For lots 10m wide and above, no more than five lots in a row should have the same frontage.

4. Development consent for any development on land zoned R1 General Residential to which this clause applies must include a single development application that is both of the following:

    i. The subdivision of land into residential lots and/or

    ii. The erection of an attached dwelling or a dwelling house on each lot resulting from the subdivision, but only if the size of each lot is less than 300m2.

5. The minimum area for corner lots is 400m2.

6. Integrated housing applications are required for all development with a lot size less than 300m2.

7. All applications for subdivision proposing residential allotments with a site area less than 300m2 are to be accompanied by development plans for the proposed dwellings on those lots.

8. Council may waive the requirement in control 7 where an application for subdivision creates no more than 2 lots with a site area equal to or less than 300m2 per dwelling where it is satisfied that the subdivision application demonstrates (through use of restrictions such as Building Envelope Plans [BEPs] confirming the preferred locations for garages, driveways, and principle private open space and the like) will result in an appropriate built form that complies with the relevant provisions of this DCP. Where this occurs, these restrictions will be approved as part of the subdivision application and will be required to be complied with by any future application proposing a dwelling on that lot.

9. Indicative lot dimensions for all dwelling types are set out in Table 3 below.

10. On lots greater than 300m2 in size where a built to boundary (zero lot line) dwelling is permitted, the side of the allotment that may have a zero lot alignment shall be shown on the approved subdivision plan. The Section 88B instrument for the subject lot and the adjoining lot shall include a note identifying the potential for a building to have a zero lot line.

Table 3: Indicative lot dimensions

Dwelling Type	Lot area (m^2)	Lot width (m)
Detached	450	15+
Detached	312.5	12.5
Built to boundary	225	9 - 12.5
Semi-detached	225	8.5 - 10
Attached	220	7.5 - 10

5.2 Site grading, earthworks and retaining walls

Orchard Hills North is characterised by its topography, with prominent ridgelines and valleys, as well as creek lines. To achieve a site responsive and efficient urban design outcome, these features will need to be considered, with an appropriate site grading response.

Objectives

a) Development should respond to the site's natural topography and general landform, minimizing excavation and potential visual impacts.

b) Take into account and respond to site features such as riparian corridors, remnant bushland, heritage structures and prominent views i.e. The Blue Mountains.

c) Minimise the incidence of cut and full and alterations in finished ground levels after subdivision site grading works.

d) Encourage appropriate dwelling design to suit the topography of lots.

e) Protect adjoining properties from potential structural instability by proposed excavation.

f) Lessen the visual impact of retaining walls on allotment boundaries.

Controls

<u>General land subdivision</u>

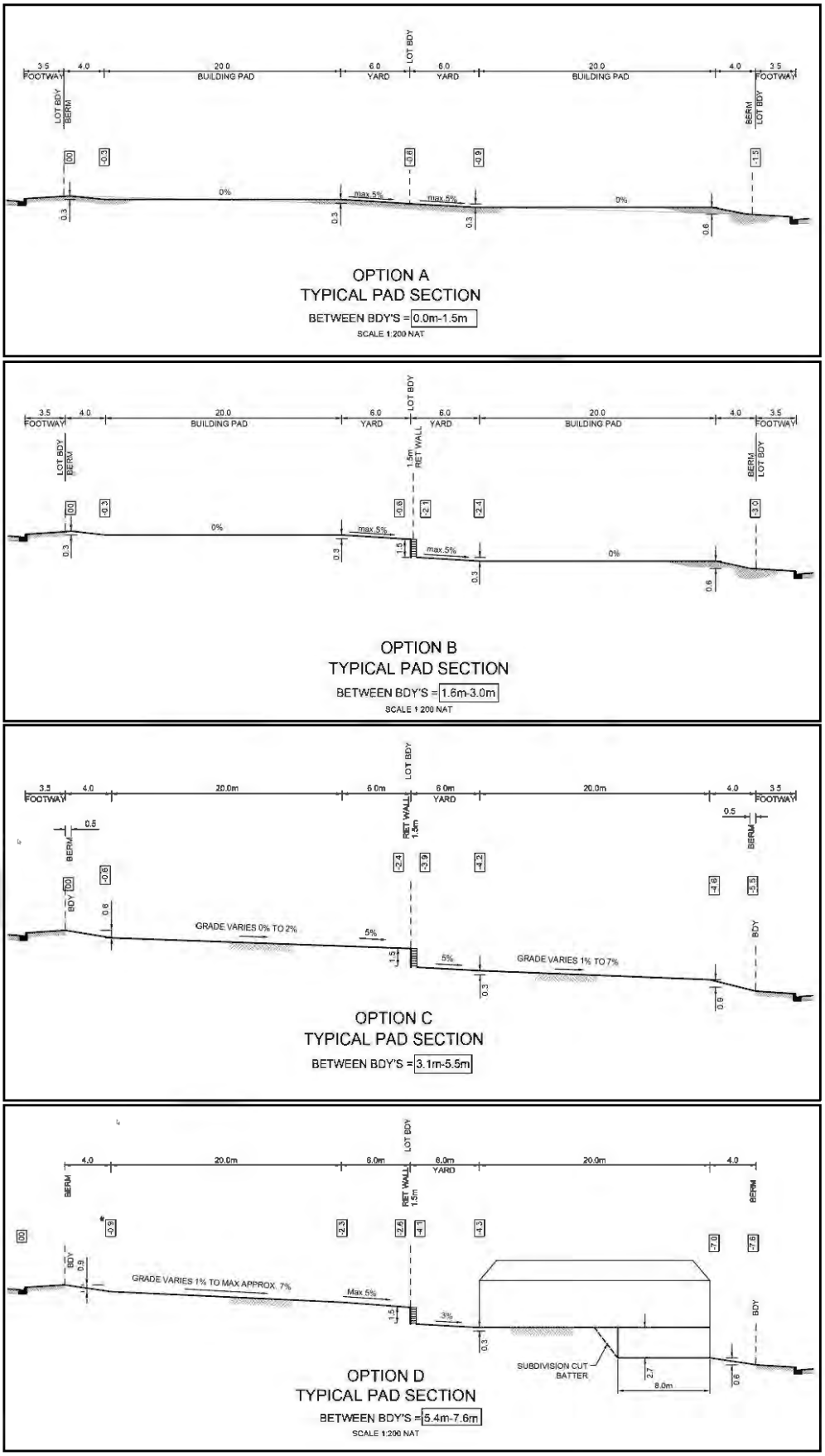
1. Fill is to ensure soil profiles provide for optimum planting conditions

2. Bulk earthworks excavation and retaining wall construction is to be completed as part of initial subdivision works as far as possible.

3. Lots with a side cross slope exceeding 5%, must respond to the slope of the land with either split level, drop edge beam, or bearer and joist design (or a combination of these).

4. Typical grading solutions should generally meet the following sections, set out in Figure 22:

Figure 22: Typical grading solutions



5. Retaining wall heights are measured from the top of the footing to the top of wall.

6. Rear boundary retaining walls for development on slopes should typically not exceed 1.5m in height.

7. Side boundary retaining walls for development on cross slopes should not exceed 1.5m in height.

8. For options B, C and D, no retaining wall shall be provided within 6m of the rear boundary, other than that constructed as part of the original subdivision. This will be created as a Restriction as to User on the associated Deposited Plan and Section 88b instrument.

9. Tiered retaining walls shall be a maximum height of 1.8m.

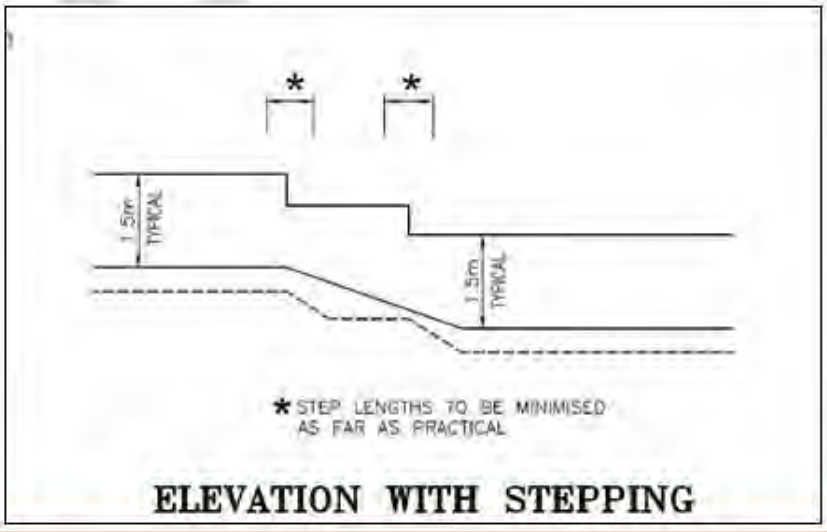
10. Lots with side retaining shall have the property boundaries aligned and not stepped. Where two adjoining (across rear boundary) lots both have side retaining walls, the property boundaries should preferably be aligned to minimise overall retaining wall heights.

11. Where tiered retaining walls are permitted, the minimum landscaped depth between each step is 1m.

12. The maximum height of a retaining wall on a front boundary should not exceed 1m. Retaining walls should not restrict access to a lot or impede service connections.

13. Steep lots (>10% grade after retaining walls are considered) should have a minimum lot size of 450m2.

Figure 23: General elevations



14. Steep lots will require the submission of a Building Envelope Plan (BEP) at the relevant Development Application stage.

15. In cases where the front to back gradient across a block exceeds 10%, split level dwelling construction is required in addition to the benching of lots.

16. Split level roads should be considered to reduce gradients through lots.

Additional Controls: related to Dwellings proposed on lots that already have retaining walls as part of the subdivision construction

17. Where a lot already has a side retaining wall (supporting the adjacent side lot), then the combined height of the existing wall and any proposed wall on that same side of the lot shall not exceed 1.5m. This will be created as a Restriction as to User on the associated Deposited Plan and Section 88b instrument.

18. Where a lot already has a rear retaining wall (supporting the adjacent rear lot), then the combined height of the existing wall and any proposed wall at the rear yard area shall not exceed 1.8m. The proposed wall shall be located at least 1m in front of the existing wall and shall have a maximum height of 1.0m. This will be created as a Restriction as to User on the associated Deposited Plan and Section 88b instrument.

Additional Controls: related to Dwellings once subdivision and earthworks has occurred

19. Any additional retaining walls to lift the levels of the rear yard or the dwelling shall not reduce (when considered with potential fencing on those walls) the solar access and privacy of any adjacent lots.

20. Dwelling construction may make appropriate use of Drop Edge Beams where required.

5.3 Developing on sloping land

Objectives

a) To ensure that dwellings are of high quality and respond to topography of the site.

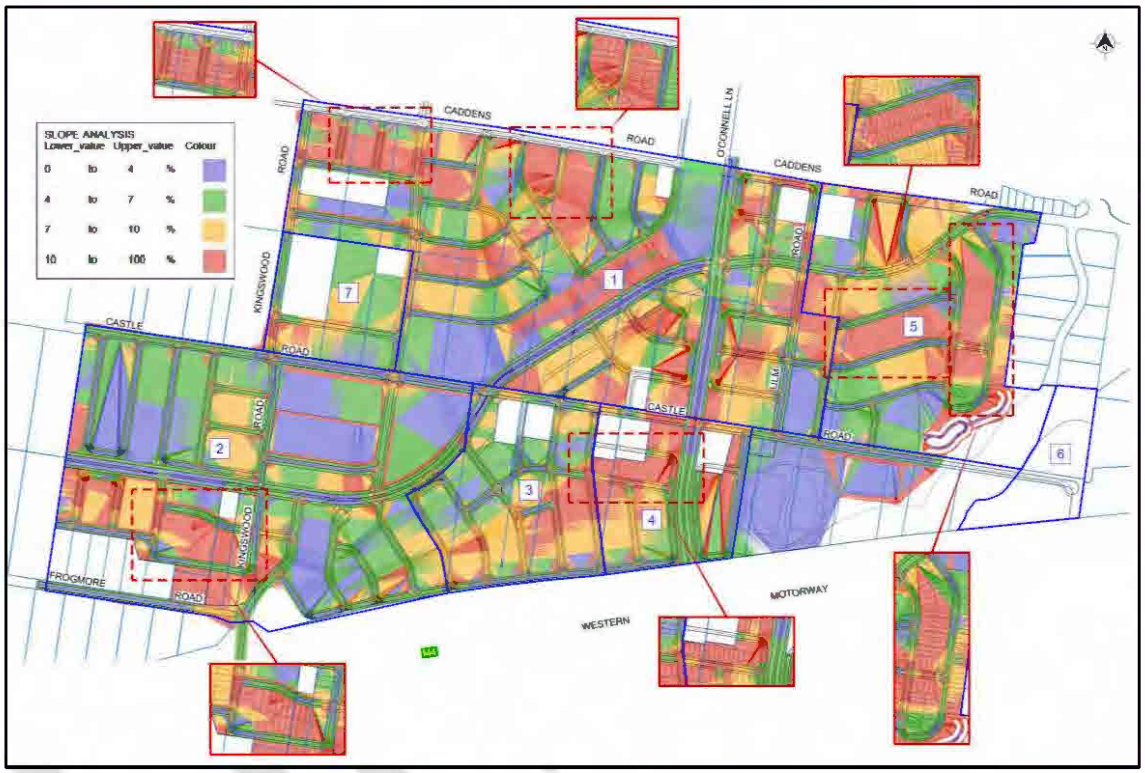
b) To provide appropriate bulk and scale of dwellings on slopes that exceed 10%.

c) To provide amenity for the residents of the dwelling due to good design of the built form and private open space.

Controls

1. The subdivision layout for slopes in excess of 10% is to be generally as depicted in Figure 24 below.

Figure 24: Indicative subdivision layout for slopes in excess of 10%



Source: J Wyndham Prince

2. For sites with significant slopes a split-level building design is to be used to minimise excavation and backfilling.

3. Floor levels/building platforms are to be stepped in response to the existing topography of the site.

4. All retaining walls forward of the garage line must be constructed with masonry materials and finished to complement the house design.

5. Lots must respond to the slope of the land with either split level, drop edge beam, or bearer and joist design (or a combination of these).

6. On lots sloping downhill from the street, dwellings shall be designed and constructed to optimise filling to achieve driveway and access gradients

of no greater than 20% slope. This may be achieved by elevating garage and entry features within the building footprint. Dwellings should be terraced down the slope with features such as decks and balconies located towards the rear of the dwelling.

7. On lots sloping downhill from the street, the privacy of adjoining dwellings down slope should be preserved by providing screening vegetation between observable platforms and adjoining private open space areas, or integrating features such as timber screens to decks, or partially opaque windows where privacy is essential and screening vegetation is impractical.

8. Variations in setbacks and building design may be considered where they will not compromise the objectives of this section and will contribute to a varied and attractive streetscape.

5.4 General residential built form design

Objectives

a) Buildings are to be high quality and be designed to enhance the desired built form so to respond to the topography.

b) Dwellings are environmentally sustainable and achieve benchmark sustainability outcomes.

c) Provide a clear distinction between private and public space and to encourage casual surveillance of the street.

d) To create an attractive and cohesive streetscape through the provision of simple and articulated building and roof forms in a contemporary style.

e) To encourage efficient and sustainable use of land.

Controls

1. The primary street facade of a dwelling must incorporate an entry feature or portico and at least two of the following design features:

    i. Balcony to any first-floor element.

    ii. A variation in scale to adjoining properties.

    iii. Architectural elements which recess or project by at least 600mm.

iv. Open verandah.

v. Mix of building materials or finishes.

vi. Bay windows or similar features.

vii. Pergola or similar feature above garage doors.

2. The secondary street facade on a dwelling on a corner lot must incorporate a window from a habitable room and at least two of the following design features:

   i. Verandah.

   ii. Vertical architectural elements to reduce the horizontal emphasis of the façade.

   iii. Balcony.

   iv. An architectural element which recesses or projects from the façade by at least 600mm.

   v. Landscaping and/or fencing compatible with the treatments that have or will occur on neighbouring sites.

3. Except on built to boundary (zero lot line) dwellings, eaves are to be provided on all roofs and should have a minimum overhang of 450mm (measured to the fascia board). Where practical, 600mm should be considered to achieve an increased degree of shading to windows. Council will consider alternative solutions to eaves as long as they provide appropriate sun shading to windows and display a high level of architectural merit.

4. Water tanks, air conditioning units, solar hot water tanks and roof clutter such as satellite dishes should not be prominent when viewed from any street.

5. Proposed colours, materials and finishes are to be from a predominantly neutral palette of colours and varied across the front elevations of buildings. Bright colours are to be avoided, except for architectural features, and dark coloured roofs are not supported.

6. Exact mirror-imaging of semi-detached dwelling facades is not permitted. However, symmetrical design is permitted where each dwelling can satisfy two different design features (as listed under the controls for

primary street facades above) and where the overall design of the dwellings is compatible with the streetscape in terms of design, built form, scale and bulk.

7. The repetition of identical housing designs in a group of dwellings, other than for attached dwellings, is not to be provided.

8. Garbage bin storage and clothes drying areas are to be concealed from view and shown on site plans.

9. Second storey side setbacks as per Table 4 below.

Table 4: Second storey side setbacks

Dwelling Type	Lot width (m)	2nd storey side setback
Detached	15+	1.2m
Detached	12.5	1.2m
Built to boundary	8.5 - 12.5	2.4m from the adjoining built to boundary side boundary
Semi-detached	8.5 - 10	1.2m on the unattached side
Attached	7.5 - 10	zero

Figure 25: Streetscape design principles



5.5 Residential typology and built form

Objectives

a) To provide a variety of housing typologies streetscapes that respond to the character of different precincts, the diversity of edge conditions, house types and road hierarchies.

b) To provide building setbacks to the street, side and rear of a residential lot to respond to the topography, contemporary housing type and provide variety to the streetscape.

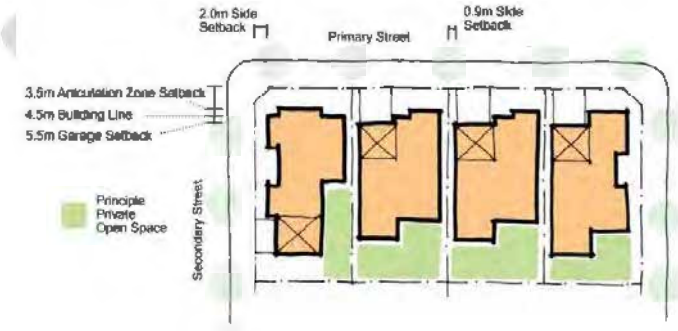
c) To reduce the dominance of garages on the streetscape.

d) To encourage eaves, verandahs, balconies and other feature elements on the front facades of dwellings.

e) To minimise the impacts of development on neighbouring properties in relation to views, privacy, and overshadowing.

f) To ensure that development on corner lots is visually significant and promotes a strong and legible character.

Table 5: Development type principles

Development Form Design Principles	Objectives
	**Detached** - Allow for landscaped side setbacks to provide visual separation between dwellings and more spacious streetscape environment

Development Form Design Principles	Objectives
	**Semi-detached** - Have the appearance of a larger home but are comprised of 2 dwellings on separate Title. - When located at a corner, have distinct entries for each dwelling, on different street frontages if there are opportunities to do so.
	**Built to boundary (Zero lot line)** - Allow separation between dwellings for access and servicing.
	**Attached** - Provide for parking with a rear loaded garage via laneway or shared driveway. - Rear of lot is generally orientated to the north. - Studios - Be located above garages that are accessed from rear lanes or shared driveways. - Provide casual surveillance over rear lanes or shared driveways.

Controls

Setback controls

1. Dwellings are to be consistent with the minimum front, side and rear setback controls in Table 77 to Table 10 and the front setback principles diagram at Figure 26 and Figure 27.

2. The controls are based on lot width and the type of housing as outlined in Table 6 below.

Table 6: Allotment requirements

Access	Lot Width	Reference
Rear Access	≥ 7.5m	Table 77
Front Access	8.5m – 10m	Table 8
	≥10 - 15m	Table 9
	15m	Table 10

Figure 26: Front setbacks

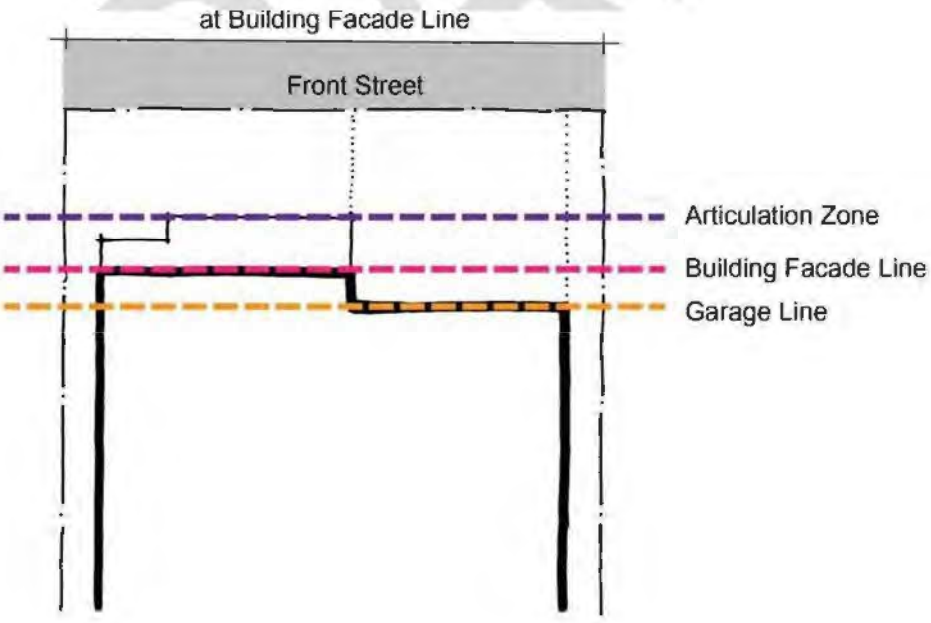


Figure 27: Front setback – Corner lot

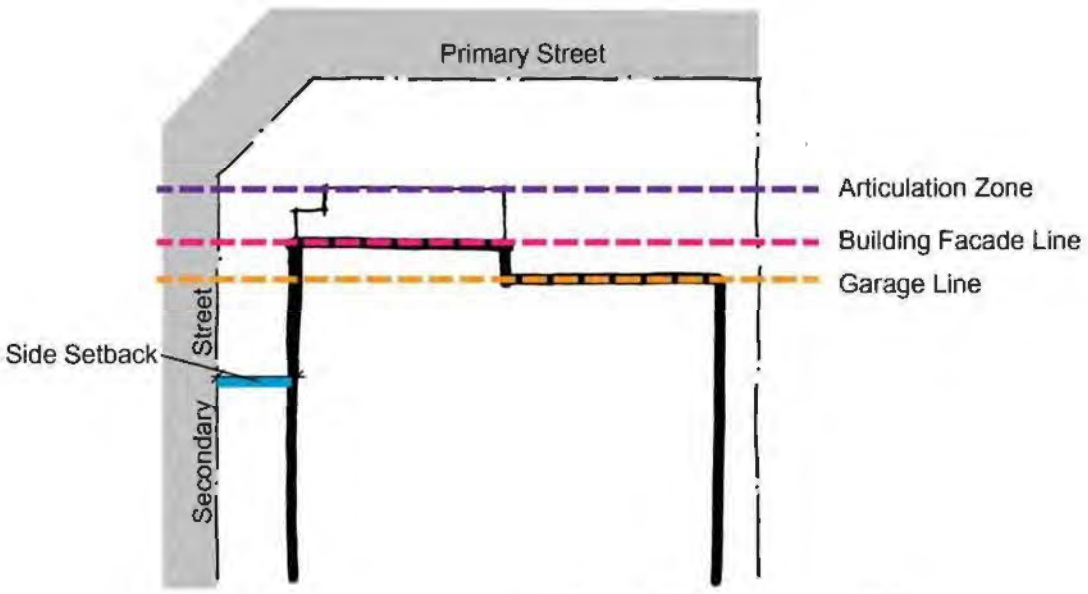


Table 77: Rear access dwellings lots

Element	Control	
Lot Frontage	≥ 7.5m	
Minimum Dwelling Setbacks		
Front setback	3.0m to building façade line 2.0m to articulation zone	
Side setback	0m – Zero Lot, attached/semi-detached dwelling	0.9m – Detached dwelling If a lot is burdened by zero lot boundary, the side setback must be within an easement: - 0.9m (single storey zero lot wall) - 1.2m (double storey zero lot wall)
Maximum length of zero lot line on boundary	18m (excludes rear garages) upper level only. No limit to ground floor	
Secondary Street Frontage (Corner Lots)	1.0m	

Element	Control
Rear setback	0.5m (rear loaded garages to lane, zero to articulation zone)
Other requirements	
Building Height	2 storeys
Soft Landscaped Area	Minimum of 15% of lot area. Minimum of one tree in the front and rear setback.
Principal Private Open Space	16m^2 minimum area and 3.0m minimum dimension
Garages and Car Parking	Rear loaded garage or car space only Minimum garage width 3m (single) and 5.5m (double) 1-2 bedroom dwelling will provide at least 1 car space 3 bedroom or more dwellings will provide at least 2 car spaces

Table 8: 8.5m - 10m wide lot - front access dwellings

Element	Control	
Lot Frontage	8.5m – 10m	
Minimum Dwelling setbacks		
Front setback	4.5m to building façade line; unless it is an attached dwelling then it is 3m to the building façade line 3.0m to articulation zone 5.5m to garage line and minimum 1m behind the building line	
Side setback *	0m – Zero Lot, attached/semi-detached dwelling	0.9m – Detached dwelling If a lot is burdened by zero lot boundary, the side setback must be within an easement: 0.9m (single storey zero lot wall)

Element	Control	
		1.2m (double storey zero lot wall)
Maximum length of zero lot line on boundary	15m	
Secondary Street Frontage (Corner Lots)	2.0m	
Rear setback	4.0m ground floor 6.0m upper floor However, if it is an attached dwelling then the rear setback is 0.5m	
Other requirements		
Building Height	2 storeys	
Soft Landscaped Area	Minimum of 15% of lot area. Minimum of one tree in the front and rear setback.	
Principal Private Open Space	16m^2 minimum area and 3.0m minimum dimension	
Garages and Car Parking	Single, tandem are permitted. Double garages are permitted where street infrastructure is not compromised.	

* Please refer to Table 4 Second storey side setbacks for 2nd storey side setbacks

Table 9: Greater than 10m - less than 15m wide lot - front access dwellings

Element	Control
Lot Frontage	> 10m and less than 15m
Minimum Dwelling Setbacks	
Front setback	4.5m to building façade line; unless it is an attached dwelling then it is 3m to the building façade line 3.0m to articulation zone 5.5m to garage line and minimum 1m behind the building line

Element	Control		
Side setback *	Detached boundary: 0.9m ground floor 1.2m upper floor	Lots with a zero lot boundary (side A): Ground Floor: 0m (side A), 0.9m (side B)	0m – semi-detached or attached dwelling Detached boundary: 0.9m ground floor 1.2m upper floor
Maximum length of zero lot line on boundary	11m		
Secondary Street Frontage (Corner Lots)	2.0m		
Rear setback	4.0m ground floor 6.0m upper floor However, if it is an attached dwelling then the rear setback is 0.5m		
Other requirements			
Site Coverage	Single storey buildings 60% Lot ≤350m^2, the upper level no more than 40% of lot area Lot ≥350m^2, the upper level no more than 35% of lot area		
Building Height	2 storeys		
Soft Landscaped Area	Minimum of 25% of lot area. Minimum of one tree in the front and rear setback.		
Principal Private Open Space	24m^2 minimum area and 4.0m minimum dimension		
Garages and Car Parking	Front or rear accessed single, tandem or double garages permitted. Triple garages are not permitted.		

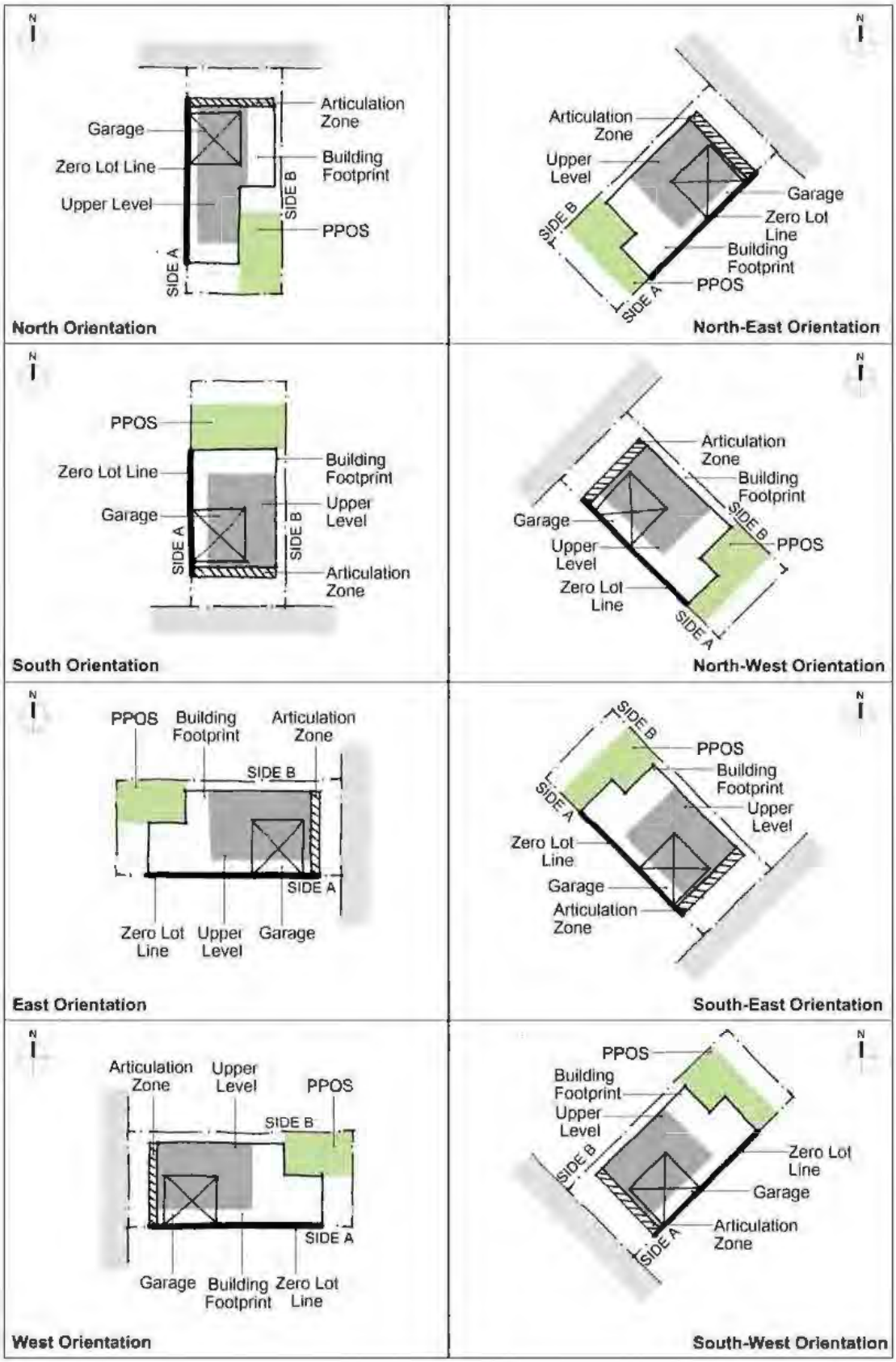
* Please refer to Table 4 Second storey side setbacks for 2nd storey side setbacks

Table 10: 15m+ wide lot – front access dwellings

Element	Control
Lot Frontage	15m+
Minimum Dwelling Setbacks	
Front setback	4.5m to building façade line; unless it is an attached dwelling then it is 3m to the building façade line 3.0m to articulation zone 5.5m to garage line and minimum 1m behind the building line
Side setback	0.9m at ground floor 1.2m upper floor
Secondary Street Frontage (Corner Lots)	2.0m
Rear setback	4.0m ground floor 6.0m upper floor
Other requirements	
Site Coverage	Single storey buildings 50% Upper level no more than 30% of lot area.
Building Height	2 storeys
Soft Landscaped Area	Minimum of 25% of lot area. Minimum of one tree in the front and rear setback.
Principal Private Open Space	30m^2 minimum area and 4.0m minimum dimension
Garages and Car Parking	Front or rear accessed single, tandem or double garages permitted. Triple garages are not permitted.

Indicative illustrations of the controls are outlined in the Figure 28 below.

Figure 28: Indicative illustrations of setbacks, private open space and building footprint



Articulation zone

3. Architectural elements which address the street frontage should be incorporated in the 'articulation zone'.

   These may extend beyond the front façade by a maximum of 1m. The following elements are permitted:

   i. Entry features or porticos.

   ii. Awnings or other features over windows.

   iii. Leaves and sun shading.

   iv. Balcony or window box to any first-floor element.

   v. Projecting architectural elements.

   vi. Open verandahs.

   vii. Bay windows or similar features.

Corner lots

4. On corner lots the setback for a secondary frontage is to be as follows:

   i. 2m for all detached and semi-detached dwellings on lots less than 18m wide; and

   ii. 3m for dwellings on lots 18m and wider.

5. Corner lots are to be splayed with the indent on both the primary and secondary street to be generally 5m. The building setback from the splayed corner boundary is to be a minimum of 2m.

6. Any building contiguous (sharing a common border) with Caddens Road is to be set back 4.5m from the boundary to Caddens Road.

7. Garages are to be set back a minimum of 1m behind the front building facade line.

8. Garages on secondary streets are to be set back 1m behind the dwelling façade on the secondary street.

5.6 Shop top housing

All shop top housing must comply with the requirements of the relevant State Environmental Planning Policy (SEPP) for apartment design.

Objectives

a) To establish a high-quality medium density housing environment where all dwellings have a good level of amenity.

b) To support a variety and choice of housing forms close to the Village centre and open space.

c) To encourage active street frontages and activate streets.

Controls

1. Mixed use and shop top housing developments are to be located within the village centre (E2 zone) and comply with the Apartment Design Guide planning and design standards.

2. To provide visual interests and reduce building bulk, facades are to be articulated (via balconies, blade walls, stepped facades and the like).

3. Balconies are to orientate to the public open space areas to provide surveillance.

5.7 Dwellings located in Precinct 6

Figure 29: Dwellings Located in Precinct 6



Source: Design and Planning

Objectives

a) Larger lot housing to reflect the environmental sensitivity and visual character of the area.

b) High quality housing design to make the most of the environmental characteristics of the surrounding area including public open space and drainage infrastructure.

c) Designed and located to minimise impacts on flood prone land, and risks to property from flooding.

Controls

1. Table 11 contains the main development controls for residential development in Precinct 6. They key controls should be read in conjunction with the relevant controls in this DCP.

Table 11: Residential development in the Precinct 6

Element	Control
Minimum Dwelling setbacks	
Front setback	4.5m to building façade line 3.0m to articulation zone 5.5m to garage line and minimum 1m behind the building line
Side setback	Ground floor: 1.5m if lot width less than 24m, 2.5m if lot width greater than 24m Upper floor: 1.5m (Side A) if lot width less than 24m and 3m (Side B) 2.5m (Site A) if lot width greater than 24m and 3m (Side B)
Secondary Street Frontage (Corner Lots)	4.5m
Rear Setback	6.0m ground floor 10.0m upper floor
Other Requirements	
Site coverage	Single storey buildings 35% Two (or more) storey dwellings: 25% ground floor and 15% upper floors
Building height	2 storeys
Soft landscape area	Minimum of 25% of lot area
Principal Private Open Space	$30m^2$ minimum area and 4.0m minimum dimension
Garages and Car Parking	Front or rear accessed single, tandem or double garages permitted Triple garages permitted where at least one garage door is not visible from the street or where the total width of the garages is less than 50%of the total width of the building façade.

5.8 Secondary dwellings

Objectives

a) To encourage a diversity of affordable housing product.

b) To provide housing and accommodation options for a range of family types and age groups.

c) To promote innovative housing solutions compatible with the surrounding residential environment.

d) To provide passive surveillance of rear lanes and shared driveways.

Controls

1. The maximum floor space for a secondary dwelling is 60m2.

2. The secondary dwelling is to be located above the garage, carport or similar structure of the principal dwelling or be part of a corner lot development.

3. A secondary dwelling must incorporate design and construction features, finishes, materials and colours similar to, or complementary with, the principal dwelling.

4. An application for a secondary dwelling development is to have regard to its suitability in the context of neighbouring dwellings and local character.

5. Windows and private open spaces must not overlook the private space of any adjacent dwelling. Windows to common boundaries must either have obscured glazing, be screened or have a minimum sill height of 1.7m above floor level.

6. Design is to generally maximise solar access to internal living areas and minimise overshadowing of outdoor areas of the principal and adjacent dwellings.

7. Private open space in the form of a balcony should preferably be provided in addition to the private open space area requirements for the principal dwelling.

8. Access to the secondary dwelling is to be separate from the principal dwelling and is to front a public street, lane or shared private accessway, either at or above ground level.

5.9 Dual occupancy

Refer to the Dual Occupancies section within the Residential Chapter of the Penrith DCP.

5.10 Multi dwelling housing

Refer to the Multi dwelling housing section within the Residential Chapter of the Penrith DCP.

5.11 Private open space

Private open space (POS) means the portion of private land which serves as an extension of the dwelling to provide space for relaxation, dining, entertainment and recreation. It may include an 'alfresco room'.

Principal private open space (PPOS) means the portion of private open space which is conveniently accessible from a living zone of the dwelling, and which receives the required amount of solar access.

This section should be read in conjunction with the controls in Table 6 to Table 10.

Objectives

a) To provide a high level of residential amenity with the opportunity for outdoor recreation and relaxation within the property.

b) To enhance the spatial quality, outlook and useability of private open space.

c) To enhance and contribute to streetscape amenity.

d) To optimise solar access to the living areas and private open spaces of dwellings.

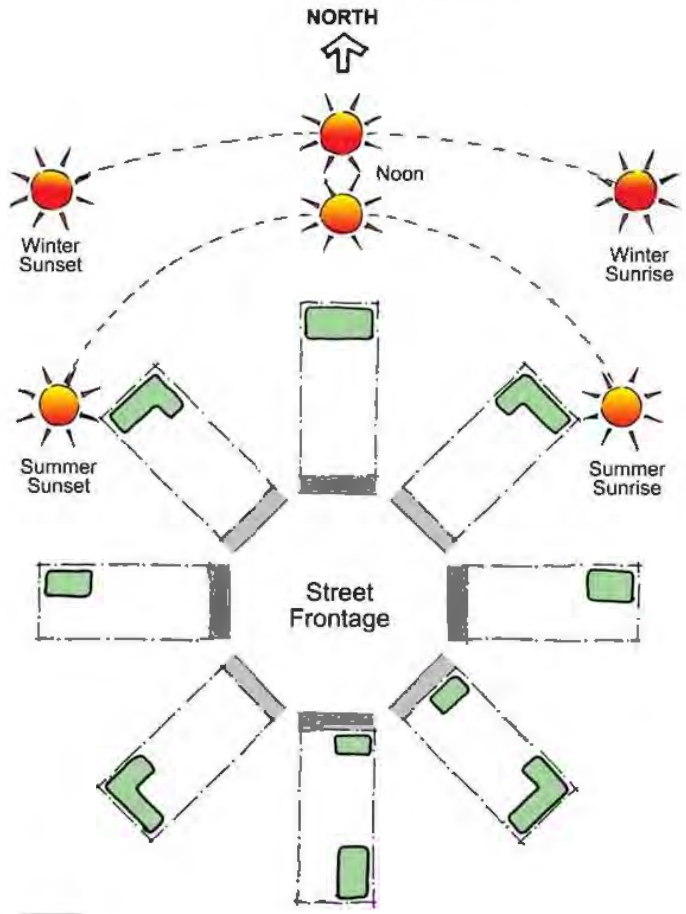
Controls

1. The location of PPOS is to have regard to dwelling design, allotment orientation, adjoining dwellings, landscape features, topography and the preferred locations of PPOS illustrated at Figure 30.

2. 50% of the area of the required PPOS (of both the proposed development and the adjoining properties) must receive at least 3 hours of sunlight between 9am and 3pm at the winter solstice (21 June).

3. For a secondary dwelling that incorporates one dwelling substantially above the other, the ground level dwelling is to comply with the controls in Table 6 to Table 10. The upper-level dwelling is to have a balcony accessed directly off the living space with a minimum area of 8m2 plus a minimum 5m2 at the ground level with space for clothes drying.

Figure 30: Private open space siting diagram



This section should be read in conjunction with the controls in Table 6 to Table 10 of this Chapter.

5.12 Landscape design

Objectives

a) To enhance the landscape character of the area.

b) To provide permeability and limit stormwater runoff.

Controls

1. A Landscape Plan is to be submitted with all DAs for residential development. The DA plans must indicate the extent of hard and soft landscaped areas, tree sizes and locations and other requirements for landscaped plans contained in the other relevant sections of this DCP.

2. Note: For the purpose of this section, soft landscaping is essentially permeable soft soil areas but may include gardens over basements and the like. Deep soil zones are areas of natural ground retained within a development, uninhibited by artificial structures and with relatively natural soil profiles. Deep soil zones have important environmental benefits, including:

   i. Promoting healthy growth of large trees with large canopies

   ii. Protecting existing mature trees; and

   iii. Allowing infiltration of rainwater to the water table and reduction of stormwater runoff.

3. The front setback area of a dwelling is to be landscaped with the treatment to clearly delineate between the private and public domain. The front setback is to incorporate two trees. The rear garden must include at least one tree that will achieve a height of 6m at maturity. These may include existing trees that are to be retained.

4. A deep soil zone should be provided to accommodate trees and significant planting, contiguous with the adjacent property. The minimum pot size of trees to be planted is 45 litres.

5. To prevent accumulation of water and concentration of salts, subsoil drains are to be installed for each residency and connected to the stormwater system.

6. Low water demand drought resistant vegetation is to be used in common landscaped areas, including native salt tolerant trees.

7. Garbage bin storage and clothes drying areas are to be concealed from public realm and shown on site plans.

5.13 Fencing

Objectives

a) Provide privacy to both residents and neighbours.

b) Boundary fencing is of a high quality and does not detract from the streetscape.

c) Fencing is consistent with the street and the design and style of the dwelling.

d) Ensure casual surveillance of open space.

Controls

1. Front and side fencing must be constructed with masonry piers that complement the streetscape and dwelling finish. Infill panels are to consist of open slats, palisades or pickets.

2. Fencing should be a maximum of 1.8m

3. Metal sheet style fencing is not permitted anywhere.

4. Where a dwelling is located adjacent to open space, boundary fencing is to be of a high-quality material and finish and the design is to permit casual surveillance of the open space. Fencing adjoining rear access ways is to permit casual surveillance.

5. The type, style and design of the fencing must complement surrounding buildings and the landscape design.

5.14 Garages, driveways, parking and access

Objectives

a) Provide sufficient, safe and secure parking for residents and visitors.

b) Reduce the visual impact of garages, carports and parking areas on the streetscape and improve dwelling presentation.

c) Garages do not dominate the frontage of the house.

d) Encourage the use of secondary dwelling over garages to facilitate surveillance, and opportunities to work from home and for residential accommodation.

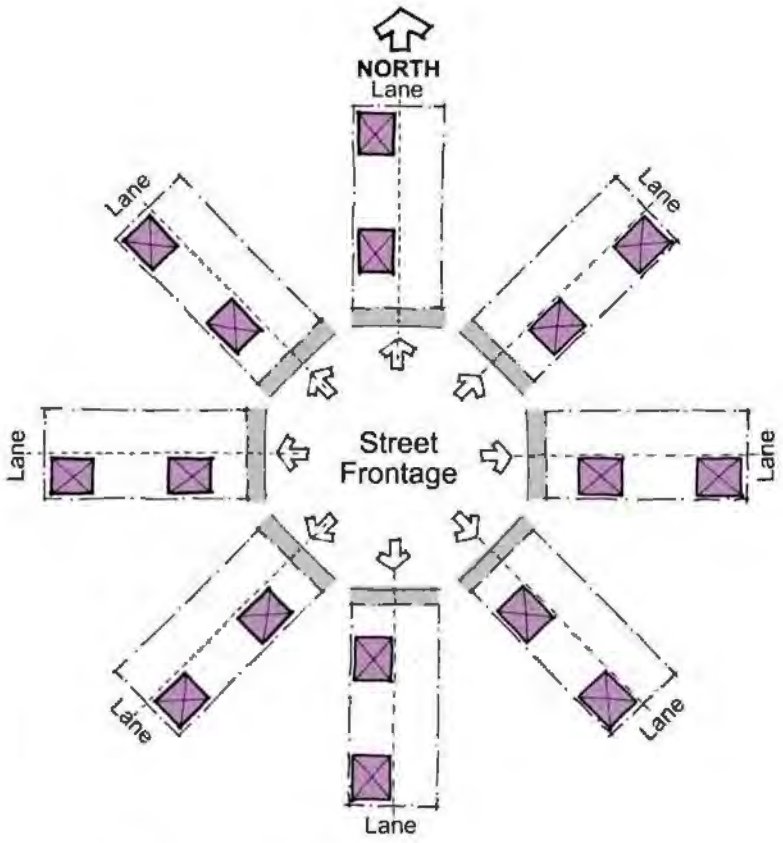
Controls

1. Garages are to be sited as per the preferred siting diagram at Figure 31.
2. No direct access is permitted to the North South, East West Roads and the M4.
3. At least one car parking space must be located behind the building façade line where the car parking space is accessed from the street on the front property boundary.
4. Where a carport or garage entry forms part of the front façade of a dwelling, it is to be set back a minimum of 5.5m from the front boundary and at least 1m behind the building façade.
5. Carports and garages are to be treated as an important element of the dwelling facade and are to be integrated with, and complementary to, the dwelling design in terms of design and materials. Garage doors are to be visually recessed through use of materials, colours, and overhangs.
6. The maximum number of dwellings to be serviced from a shared driveway is 2.
7. Garages are to comply with AS 2890.1 Off Street parking, including:
    i. minimum internal width between main walls of 3m for a single garage
    ii. minimum internal width between main walls of 5.5m for a double garage.
8. Stencil-Crete or dark coloured surfaces on driveways is not permitted.
9. Driveways are to be no wider than 4.5m at the front boundary and should be a minimum of 3m from street trees (for new plantings). Note that existing street trees are not to be removed to conform to this requirement.
10. Driveways must comply with relevant Australian Standards (AS 2890.1).

11. Entry and access from sites should provide for appropriate traffic sight distance in both directions.

12. Where possible, the garage for a corner lot should be accessed from the secondary street.

Figure 31: Garage Location Principles



5.15 Shared driveways

Controls

1. Shared driveways are to be constructed as one of three general types, depending on block geometry and garages to be accessed. Refer to examples in Figure 32 below.

2. Shared driveways are to have the smallest configuration possible to serve the required parking facilities and vehicle turning movements.

3. The driveway crossing the verge between the property boundary and the kerb is to have a maximum width of 5.4m.

4. The location of driveways is to be determined with regard to dwelling design and orientation, and tree bays and is to maximise the available on-street parking.

5. Driveways are not to be within 0.5m of any drainage facilities on the kerb and gutter.

6. Shared driveways are to have soft landscaped areas on either side, suitable for infiltration.

Figure 32: Shared driveway principles



5.16 Residential amenity

Objectives

a) Minimise the impacts of development on the visual privacy and acoustic amenity of adjoining properties, the streetscape and public domain

b) Protect the acoustic amenity of dwellings on collector roads and adjacent to the M4.

c) To manage and address the land use interface between Orchard Hills North and properties fronting Hermitage Court.

Controls

1. Direct overlooking of main habitable areas and private open spaces of adjacent dwellings should be minimised through building layout, window and balcony location and design, and the use of screening devices, including landscaping.

2. Habitable room windows with a direct sightline to the habitable room windows in an adjacent dwelling within 3m are to:

    i. Be obscured by fencing, screens or appropriate landscaping or

    ii. Be offset from the edge of one window to the edge of the other by a distance sufficient to limit views into the adjacent window or

    iii. Have sill height of 1.7m above floor level or

    iv. Have fixed opaque glazing in any part of the window below 1.7m above floor level.

3. The design of dwellings must minimise the opportunity for sound transmission through the building structure, with particular attention given to protecting bedrooms and living areas.

    i. In attached dwellings, bedrooms of one dwelling are not to share walls with living spaces or garages of adjoining dwellings, unless it is demonstrated that the shared walls and floors meet the noise transmission and insulation requirements of the Building Code of Australia.

    ii. The internal layout of residential buildings, window openings, the location and design of outdoor living areas and elements (i.e.

courtyards, balconies and retaining walls), and building plant equipment should be designed to minimise noise impact and transmission and enhance visual amenity.

4. A 1.0m wide continuous landscape buffer is to be provided, at subdivision stage, at the shared boundary between Orchard Hills North and the rear of properties fronting Hermitage Court.

5.17 Safety and surveillance

Objectives

a) Promote public safety and security through passive surveillance of public spaces.

b) The siting and design of buildings and spaces reduces the opportunity for crime.

c) Development encourages people to use streets, parks, cycleways, footpaths, the hilltop avenue and other public places without fear of personal risk.

Controls

1. Dwellings should be designed to overlook streets, lanes and other public or communal areas to provide casual surveillance.

2. For passive surveillance, at least one living area of a dwelling should overlook the street or public open space. In the case of corner lots habitable windows are also be oriented to overlook the secondary street or any cycleway or pedestrian path.

3. Casual surveillance from dwellings/studios are to be incorporated into the design of shared driveways and, where rear access is proposed, from laneways.

4. Developments, including open space, are to avoid creating areas for concealment and blank walls facing the street.

5. Pedestrian and communal areas are to have sufficient lighting to ensure a high level of safety and must be designed to minimise opportunities for concealment.

5.18 Road traffic noise

Objectives

a) Ensure that the amenity of all residential development and other sensitive land uses is not significantly affected by road traffic noise

b) Ensure that the traffic associated with development does not significantly impact upon the amenity of surrounding land uses;

c) Ensure that any subdivisions are designed to minimise the impact of road traffic noise on any residential development or other sensitive land uses.

d) Protect the acoustic amenity of all sensitive receivers within 100m of the East West Road, the North-South Road and the M4.

Controls

1. For all development applications that propose residential subdivision and/or the development of sensitive receivers within 100m of the East West Road, the North-South Road, or the M4 Western Motorway, the applicant is required to provide a Noise Impact Statement prepared by a suitably qualified acoustic consultant in accordance with the requirements set out in the DA Submission Requirements within the Appendices of Penrith DCP. Subdivision proposals are to address the objectives and controls set out in the Noise and Vibration section within the Environmental Management Chapter of Penrith DCP.

2. Residential subdivision and development must be designed to comply with the NSW Road Noise Policy, Development near Rail Corridors, Busy Roads Interim Guideline and AS/NZS 2107:2000 Acoustics – Recommended design sound levels for reverberation times for building interiors and other standards that may apply at the time. Where relevant, Section 88B restrictions that impose noise criteria and controls may be required.

3. To mitigate the impacts of traffic noise from the East West Road, the North-South Road, or the M4 Western Motorway on new development, the following measures are to be used:

    i. Subdivision layout that positions sensitive receivers such as active and passive recreational space away from locations highly noise affected by road traffic noise.

    ii. Dwelling setbacks.

iii. Internal dwelling layouts designed to minimise noise in living and sleeping areas.

iv. Fencing constructed with a suitably solid mass; and

v. Locating courtyards and principal private open space areas away from the noise source in order to comply with the NSW Road Noise Policy.

4. The Noise Impact Statement should demonstrate acoustic protection measures necessary to achieve relevant internal and external acoustic goals for all sensitive receivers, in accordance with EPA and NSW Department of Planning criteria, as well as relevant Australian Standards.

5. The Noise Impact Assessment should set out the separate architectural and physical treatments proposed for the following:

   i. Each individual residential lot / dwelling within 10m of the East West Road, the North-South Road and the M4 (likely to be highly noise affected during peak traffic periods).

   ii. Each individual residential lot / dwelling within 50m of the East West Road, the North-South Road and the M4 (likely to be noise affected).

   iii. Each individual residential lot / dwelling within 100m of the East West Road, the North-South Road and the M4 (also likely to be noise affected, but to a lesser extent).

6. The separate architectural and physical treatment of each individual residential lot / dwelling identified in control 3 above, should assess internal and external measures required to achieve required noise mitigation, including but not limited to:

   i. External wall construction.

   ii. Roof / ceiling construction.

   iii. Minimum glazing thicknesses.

   iv. Entry doors.

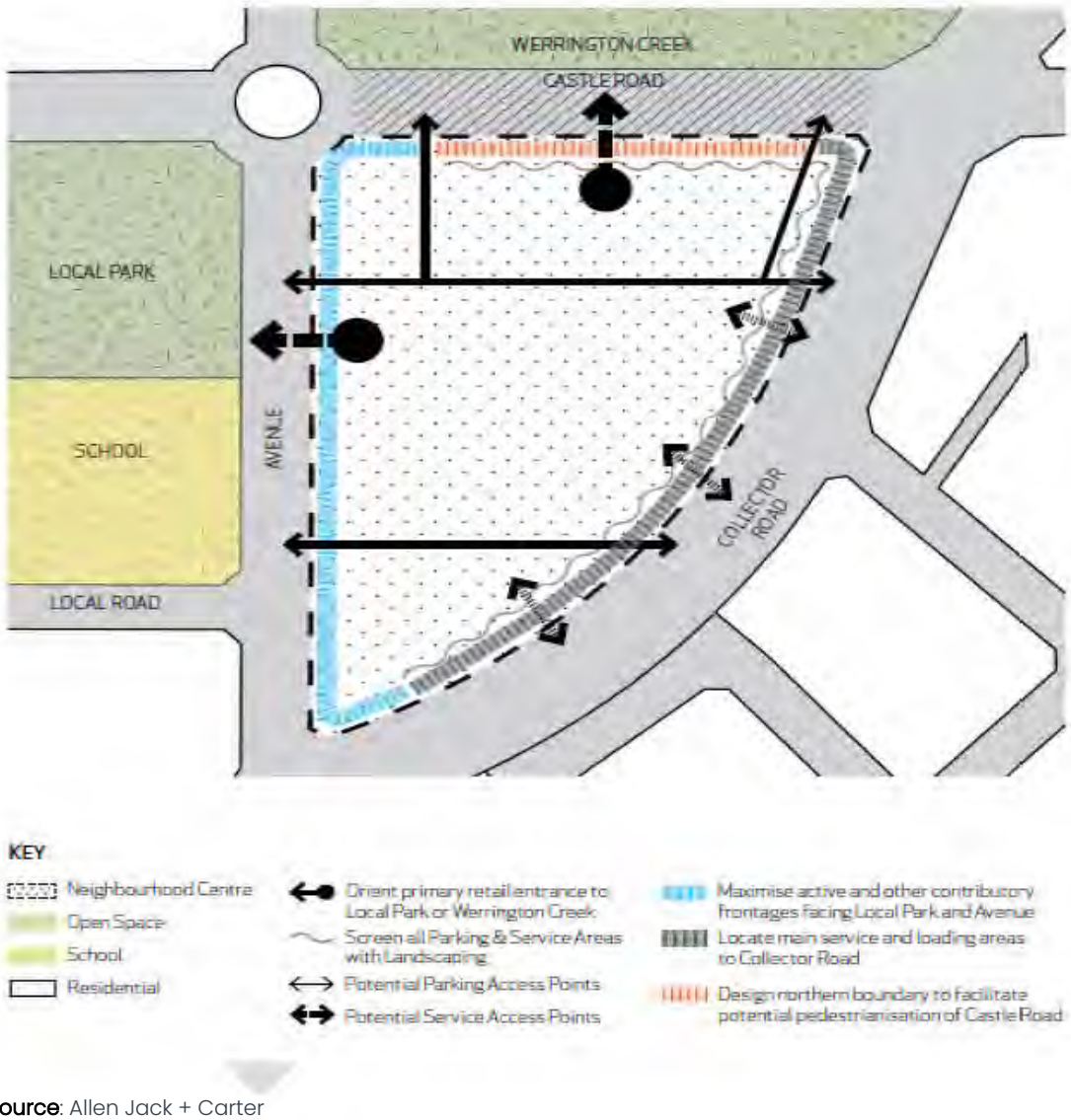
   v. Ventilation options.

   vi. Acoustic barriers along lot boundaries (side and rear).

6. Village centre

This section applies to development on land covered by the Orchard Hills North Village Centre, as shown in Figure 33 below.

Figure 33: Village centre



Source: Allen Jack + Carter

6.1 Urban layout context

Objectives

a) Create a vibrant focal and gathering point of the Orchard Hills North community.

b) Develop a local centre that is of high quality, functional and provides for a mix of uses for the local community.

c) Create a landscaped edge with a safe public domain/community facility linking the Werrington Creek open space to the retail centre.

d) Ensure the scale of retail is complementary to local and regional retail hierarchy.

e) Provide retail and mix of uses surrounded by adequate parking that facilitate safe pedestrian and public transport access to the centre.

f) Provide active uses at street level which facilitate safety and passive surveillance.

6.2 Land use and built form

Objectives

a) To provide an attractive, accessible and lively community focal and gathering point for Orchard Hills North based on D1 Caddens.

b) To provide appropriate interfaces from the centre to surrounding uses.

c) To provide active uses at street level which facilitate safety and passive surveillance based on D1 Caddens.

d) To ensure appropriate safe and efficient vehicular access to the site.

e) To ensure that urban design and landscaping encourages pedestrian amenity and community activity based on D1 Caddens.

f) The design of the village should acknowledge and celebrate the rural nature and recent historic / agricultural land uses of the area.

Controls

1. Orient major entrances to surrounding public streets and public open spaces.

2. Provide direct pedestrian access into the main retail centre entrance from an adjoining public street, without needing to cross the car park.

3. Accentuate main entrance with an activated plaza, pavement widening or other pedestrian-oriented open space.

4. The main entrance is to be fully accessible from the street into the centre, without the use of a lift.

5. Minimise surface parking adjoining the 'Avenue'.

6. Maximise active and other contributory frontages facing the 'Avenue' and the Local Park.

7. Where possible, sleeve or screen parking and service areas on other streets with contributory development (such as retail, commercial, community and/or residential uses).

8. Position necessary parking entrances away from the centre of the northern boundary, to facilitate the future pedestrianisation of Castle Road.

9. Provide service access off the Collector Road only. Avoid any circulation strategy that requires large trucks to navigate using the Avenue or surrounding Local Roads.

10. Loading [requirements] associated with the development shall be provided on-site[1], with no reliance on public roads for queuing space or the unloading of goods.

11. Provide acoustic screening to loading and service areas.

12. Screen all street-facing surface parking, blank walls and loading/service areas with architectural design treatments, the use of public art and/or dense perimeter landscaping.

13. Off-street surface parking areas are to provide an adequate amount of shade, either by trees or shade canopies, to provide amenity and minimise micro climate (heat island) impacts.

14. Provide 1 medium tree (minimum 8-metre height at maturity) per 8 car spaces on site, not counting car spaces otherwise covered by canopies, solar arrays, or other fixed shading.

15. Retaining walls must be a maximum of 1.5m in height, located within the lot boundaries, using materials that are appropriate for the public domain.

16. Development applications for the village centre should demonstrate how they acknowledge the rural nature and recent historic / agricultural land

uses of the area in their urban design approach and architectural form, material selection; and/or nomenclature.

7. Other

7.1 Urban heat island

The urban heat island effect is a local climate phenomenon where urbanised areas typically experience higher air temperatures than corresponding rural areas, especially during heatwave events. Refer also Section 4.10 (Canopy cover) above.

Objectives

a) Mitigate the urban heat island effect and reduce people's vulnerability to extreme heat through the inclusion of Green Infrastructure, Water Sensitive Urban Design (WSUD) and appropriate materials.

b) Manage Urban Heat Island effect by implementing strategies that will increase tree canopy cover potential and sustain long term tree health.

Controls

1. Provide shade tree planting within main streets and parks
2. Incorporate street pavements that are pervious and of low reflectivity.
3. Buildings are to be designed and incorporate materials to take into account climate change, urban heat and thermal comfort.
4. Suitable shade structures, shelters and awnings are to be provided within parks and publicly accessible areas.
5. Parking areas are landscaped through appropriate tree selection and/or shade shelters where on surface parking area at the local Village Centre.
6. Buildings must incorporate increased albedo/reflective roofing materials (dark colours not permitted) and/or a range of materials that do not absorb heat in the public and private community areas.
7. Passive and automated subsurface irrigation in open space parks shall be provided.
8. Incorporate Water Sensitive Urban Design (WSUD) elements to manage the urban heat island by having:

i. Two open water bodies of area.

ii. Parks, green open spaces and playing fields.

iii. Vegetations along the proposed roads and streets and basins.

iv. Vegetated drainage corridor.

v. WSUD measures.

vi. Light colour hard surfaces such as cool pavements, cool roofs.

7.2 Water cycle management, basins and flooding

Objectives

a) Ensure that development meets sound environmental and flood planning practices and standards.

b) Ensure Werrington Creek and Claremont Creek are able to function as healthy, natural riparian corridors.

c) Maintain the stability and integrity of the finished creek profile.

d) Ensure the quality of water leaving the urban areas does not adversely impact upon the health of Werrington Creek and Claremont Creek.

e) Ensure that the quantity of water leaving the urban area is managed and does not impact adversely on downstream creeks and properties.

f) Ensure the design and delivery of infrastructure, servicing and development is sustainable through encouraging the use of recycled water, optimising stormwater management and maximising efficiency in the use of potable water.

g) Ensure the design and delivery of the interface between the residential areas and the basins considers the safety and security of the residents and users.

Controls

1. Achieve an acceptable level of quality and management of water from the site in accordance with the prescribed statutory or Council guidelines for water management, and generally as outlined in the J. Wyndham

Prince – Orchard Hills North Precinct - Stormwater and Flood Management Strategy - Final - June 2024.

2. No residential allotment is to be located at a level lower than the 1% AEP flood level plus a freeboard of 500mm. Pedestrian and cycle pathways and open space may extend within the 1% AEP flood level, provided that the safe access criteria contained in the NSW Floodplain Manual are met.

3. The detention basins adjacent to Claremont Creek and Werrington Creek should be located outside 1% AEP flood levels and above mainstream event from Claremont Creek and Werrington Creek.

4. Stormwater management plans are to be prepared for the catchments covering Orchard Hills North and are to demonstrate how the quantity and quality of urban run-off as a result of development will be managed.

5. Stormwater detention is to reduce post development flows to less than pre-development levels at key comparison locations. It should be demonstrated that there will be no increase in runoff from the site as a result of the development under all durations for all storm events up to and including the 1% AEP.

6. All development is to incorporate water sensitive urban design (WSUD). A WSUD Strategy is to be submitted as part of any subdivision DA in accordance with Council's Water Sensitive Urban Design Policy (December 2013).

7. Bioretention systems are to facilitate water harvesting and reuse for open space to be assessed as part of future development applications (DA).

8. Water quality is to be managed by on-lot rainwater tanks, gross pollutant trap, ponds and rain gardens.

9. Erosion control and bank stabilisation measures are to be incorporated within the riparian corridor where required.

10. Secure the perimeter of the basins through suitable landscape treatment or fencing and sufficient lighting.

11. Ensure the safety and security of residents and pedestrians by providing necessary signage.

12. Subject to detailed design, additional lands may be required outside of the RE1 zone to provide for basins.

13. Subdivision and Development Applications are to address the objectives and controls set out in the Flood Planning section of the Penrith DCP 2014.

7.3 Contaminated land management

Subdivision Development Applications, and all Development Applications, will need to be assessed against the requirements of the Contaminated Land section within the Environmental Management Chapter of Penrith DCP.

Subdivision Development Applications will be accompanied by a Stage 2 Detailed Site Investigation report as part of the submission documentation.

If the Stage 2 Detailed Site Investigation determines that a Remedial Action Plan is required, it shall be submitted as part of the application Development Application.

All remediation work shall require development consent and is Category 1 works under SEPP (Resilience and Hazards).

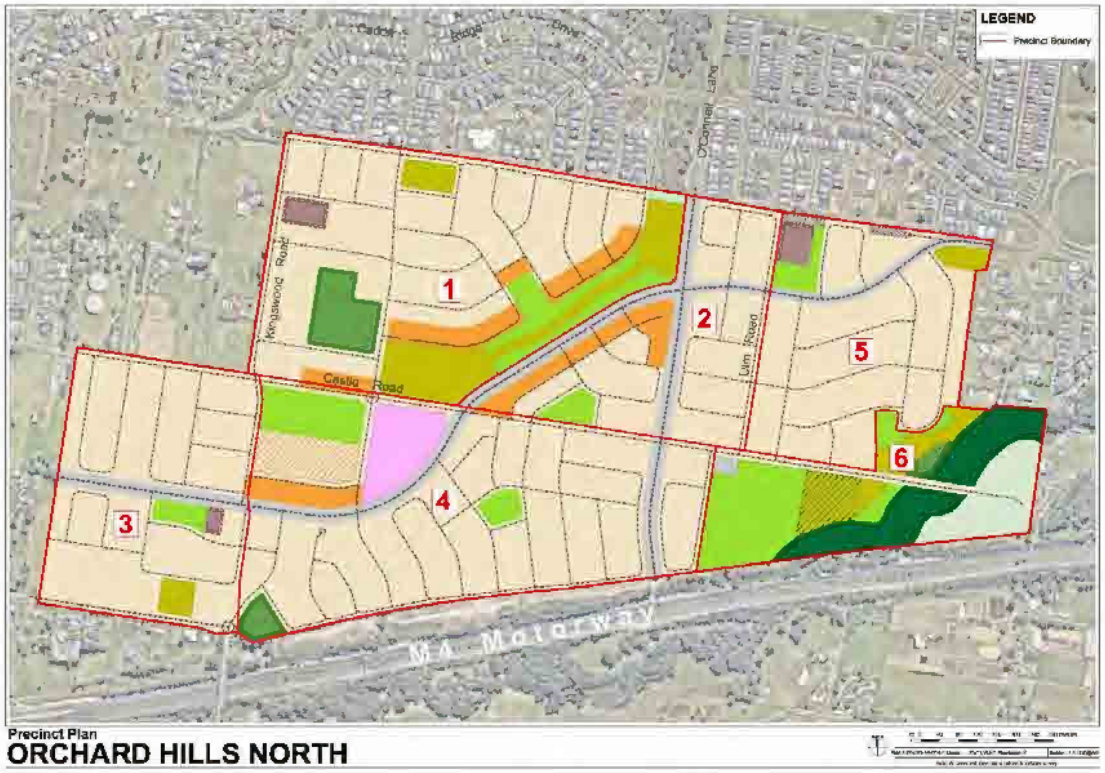
7.4 Development staging

It is envisaged that the development will be staged generally in accordance with the indicative staging plan, Figure 34 below, subject to infrastructure availability/provision and market demand.

The delivery of individual developments must be considered in the context of:

1. Available and future infrastructure.
2. Site access.
3. Flood control.
4. Public domain delivery.
5. Traffic and parking limits; and
6. As each development is delivered, the supporting infrastructure must be provided. All relevant supporting studies must be completed with each major development application.

Figure 34: Indicative staging plan



Source: Design and Planning

Objectives

a) To facilitate the orderly delivery of the site.

b) To ensure that adequate services are provided at each stage of development.

c) To ensure that infrastructure anticipates future development.

d) To manage and minimise potential adverse impacts of each major development application, including on adjoining land.

e) To ensure that development does not exceed floor space or traffic and parking limits identified for the area.

Controls

1. A concept plan is required to accompany the development application for each stage of development, demonstrating no adverse impacts on the proposed subdivision or adjoining land.

2. Each development application for each stage of development is to identify the infrastructure provision necessary to service the development. This includes, but is not limited to:

    i. Power.

    ii. Water and gas supply.

    iii. Drainage works.

    iv. Flood control works.

    v. Roadworks.

3. Infrastructure provision is to anticipate future development adjacent and linked to the site. The provision is to ensure that any disruption to new roads and services is minimized as future projects are brought online.

4. Consideration of any flood studies undertaken to determine, in particular, the timing and delivery of any flood mitigation works.

5. Major new development will require evaluation of parking and traffic generation based on the findings and limits identified in the Traffic Management and Accessibility Plan.

6. Generally, land adjacent to existing rural areas are to be delivered last.

7. Staging is indicative only and subject to provision of servicing infrastructure, earthworks strategy and drainage catchments.

8. References

- Place Design Group - Orchard Hills North – Open Space Strategy (October 2021).

- J. Wyndham Prince – Orchard Hills North Precinct Stormwater and Flood Management Strategy - Final - June 2024.

- SCT Consulting - Orchard Hills North Rezoning – Traffic Management and Accessibility Plan (April 2021).