

Orchard Hills North – Site Specific DCP

DRAFT Development Control Plan – Part E16

Client: Legacy Property

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Version Draft

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1 Introduction

This part of the Penrith Development Control Plan (DCP) 2014 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 Part is used as a guideline to facilitate development controls and objectives that are not covered by other controls within Penrith DCP 2014.

1.1 Land to which this DCP applies

This part of the DCP applies to the land bound in red in Figure 1.

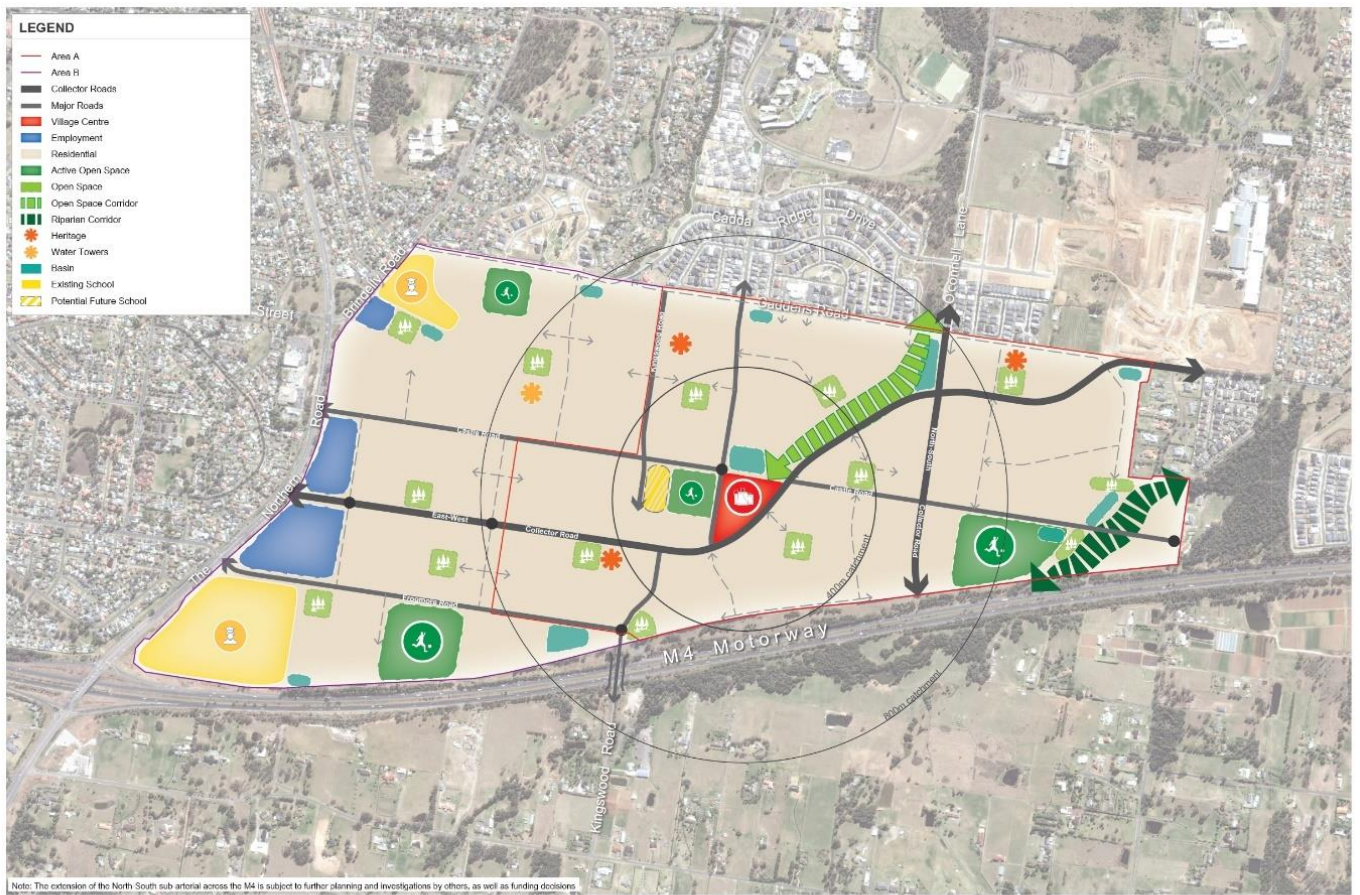
Figure 1 Land to which this part of the DCP applies (outlined in red)



Source: Design and Planning

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**. The Orchard Hills North precinct is bound by the M4 Motorway, The Northern Road / Bringley Road, Caddens Road and land to the east, which is subject to this part of the DCP.

Figure 2 Orchard Hills North Precinct Structure Plan



**Indicative Structure Plan
ORCHARD HILLS NORTH PRECINCT**

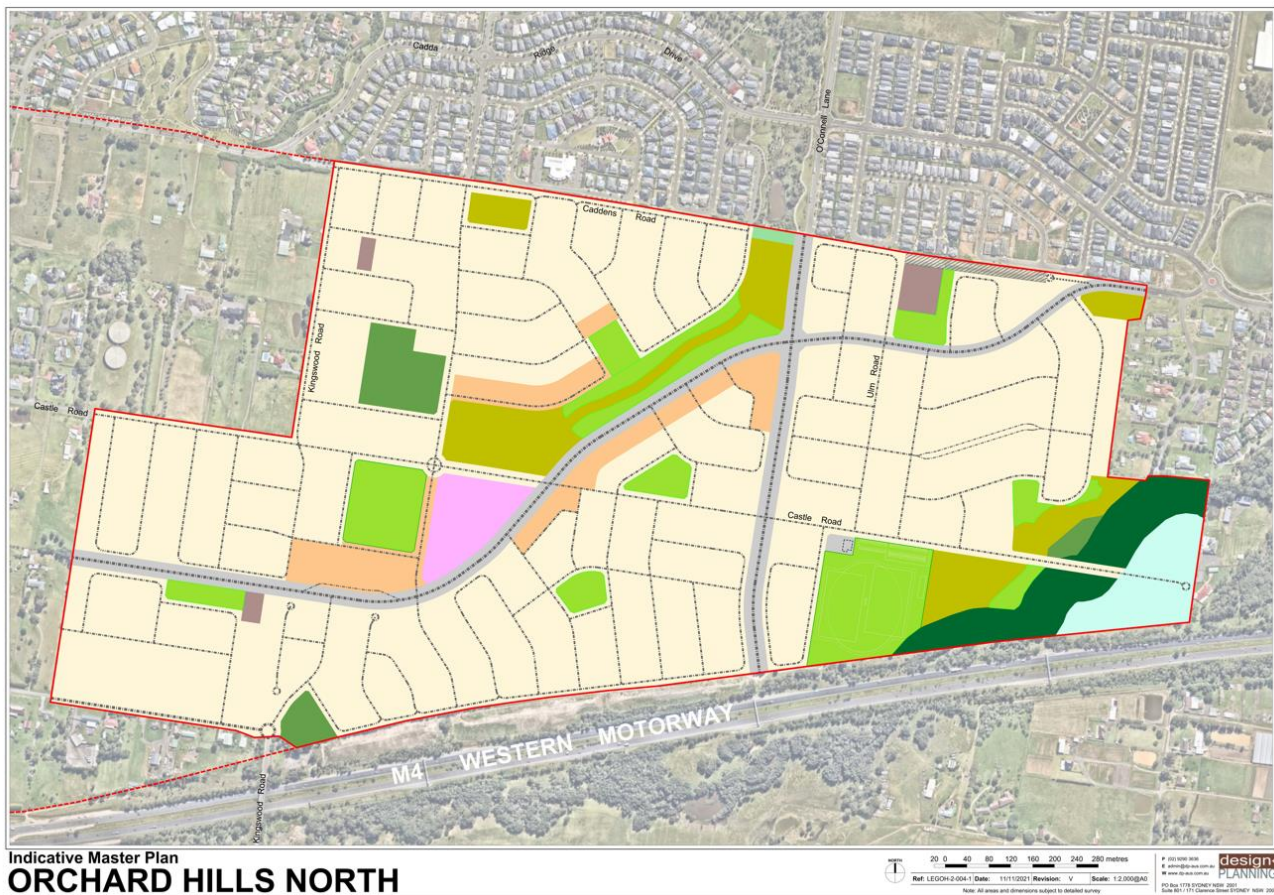
50 0 100 200 300 400 500 metres
 Ref: LE02011-074 | Rev E | Date: 28/11/2021
 Note: All areas and dimensions are subject to final design.
 LEANERS GROUP design PLANNING

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

Source: Design and Planning

Figure 3 Detailed Structure Plan



LEGEND

 Subject Site	 Open Space (Passive)
 Compact Lots	 Open Space (Active)
 E3 Environmental Living Lots	 Werrington Creek Corridor Extension
 Potential Public/Private Education Facility	 Bush / Open Space
 Heritage	 Basin Playing Fields
 Village Centre	 Indicative Basin
 Road Closure	 Riparian

Source: Design and Planning

1.2 Aims of this Section

The aims of this Section are to:

- a. support the objectives of Penrith Local Environmental Plan 2010; and
- b. facilitate the sustainable development of the residential, retail, open space and conservation areas of Orchard Hills North.

1.3 Relationship to other parts of Penrith DCP

Part E of the Penrith DCP 2014 provides specific development controls for key precincts. This chapter should be read in conjunction with the relevant city-wide sections of the Penrith DCP 2014.

2 Structure Plan – Orchard Hills North

2.1 Vison

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 DCP are:

- 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.
- New development will take account of the natural topography and allow for suitably graded lots to minimise cut and fill.
- Provide diversity and good quality housing types which respond to the topography and maximise access to sunlight through suitable orientation.
- Medium density housing to be located adjacent to the central creek, the village centre and open space.
- Facilitate strong internal and external views from the site, as well as delivering strong visual linkages to surrounding established urban areas.
- 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.
- 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.
- Retain and realign the low-lying riparian corridor of Werrington Creek 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.
- 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.
- Create a central village centre that supports activity and convenience and connects with adjacent open space and Werrington Creek.
- 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.
- Protect and restore biodiversity and natural ecosystems within the site.
- Respect heritage buildings and enable their integration into the surrounding area.
- Improve and manage water quality through water sensitive urban design, detention basins and improved water flow.
- Incorporate opportunities for the following ecologically sustainable development approaches/principles:
 - Passive design for residential development

- 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
- 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**.

Figure 4 Character Areas



Legend

-  Lots
-  Residential areas
-  Claremont Creek
-  Werrington Creek Corridor
-  Neighbourhood Centre
-  Claremont Creek Area Impact
-  Werrington Creek Corridor Area Impact
-  Neighbourhood Centre Impact

Residential areas: the residential areas have a strong focus to Werrington and Claremont Creeks 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

- a. 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.
- b. 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.
- c. Improve and manage water quality through water sensitive urban design and improved water flow.
- d. 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

- a. Supports activity and connects with adjacent open space areas and Werrington Creek.
- b. Encourages mixed use development to foster a lively, human scale environment, active street frontages and improvements to pedestrian linkages throughout the centre.
- c. 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.
- d. 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

- a. Minimise heat island effect and facilitate pedestrian and cycle connections for the community by protecting the existing vegetation.

- b. Consider opportunities for passive recreational pursuits.
- c. Improve and manage water quality through water sensitive urban design and improved water flow.
- d. Create active open space areas and recreational spaces to support the medium density housing along the creek.
- e. 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

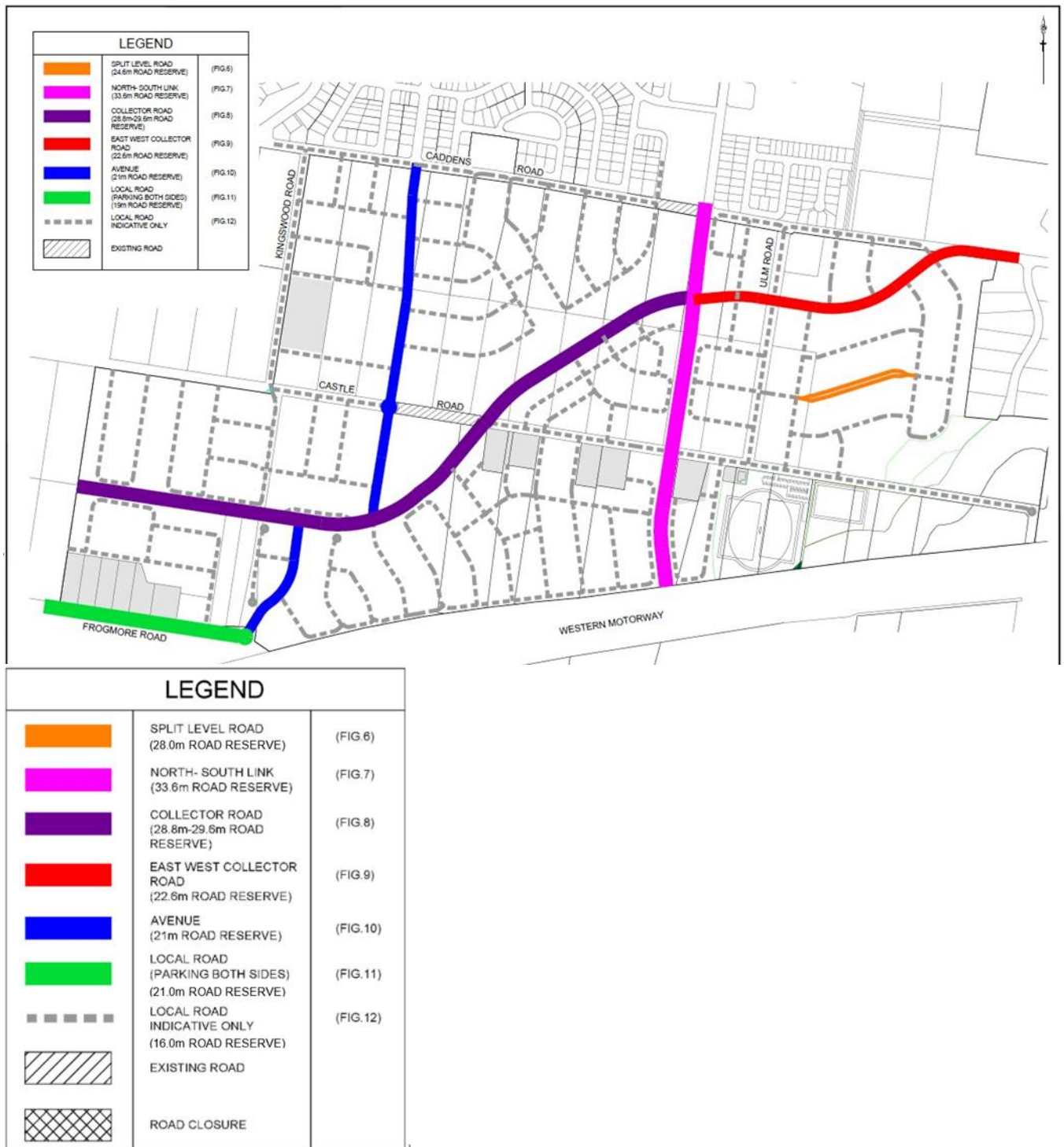
Objectives

- 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:
 - i. Clearly defining the boundary between pedestrian, cycle and vehicle zones.
 - ii. Providing on-street parking.
 - iii. Planting street trees at regular spacing within the verge.
- c. Provide convenient, safe and publicly accessible bicycle/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).

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 is to be in accordance with Figure 5.
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:
 - a. Establish a direct and open network based on a modified grid system;
 - b. Encourage walking and cycling and reduce travel distances;
 - c. Maximise connectivity between residential areas, open space, community facilities and the Village centre;
 - d. Align with the topography and accommodate significant vegetation;
 - e. Provide frontage to and maximise surveillance of open space and the riparian corridor;
 - f. Provide views and vistas to landscape features.

Figure 5 Road Hierarchy Plan



- Streets are to be provided in accordance with the cross sections in Figures 6 - 12. 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 median islands and wider landscaped verges to fill the existing road corridor width.
- 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.

5. The minimum median width of split-level roads should be 8.0m to allow landscaping and safety barriers.
6. The street design has taken into consideration the existing topography and vegetation.
7. 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).
8. Clear delineation is provided between where vehicles can be parked, cyclists can ride and where pedestrians should walk.
9. Walking and cycling paths are to be integrated with the road and open space network.
10. Where the provision of parking “lanes” is included in the street reserve width, they are landscaped as parking bays.
11. 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.
12. Design details such as footpath and driveway crossovers are uniformly applied to make the street character more consistent.
13. Access arrangements onto The Northern Road requires consultation and is to be to the satisfaction of TfNSW.
14. As part of the redevelopment of the site, full construction and/or reconstruction will be required for Kingswood Road, Castle Road, Frogmore Road, Ulm Road and Caddens Road including but not limited to full width pavement reconstruction to both sides, stormwater drainage and kerb and gutter to both sides of the road and intersections apportioned appropriately as per the relevant road cross section. Each of these roads shall be upgraded and reconstructed in association with an adjoining subdivision or when a new local/collector road is connected to that road.
15. Retaining walls for split level roads shall be full masonry construction and no timber is to be used.

Table 1: Road typologies

Street/Road Type	Parking Lane (m)	Verge (m)	Road (m)	Median (m)	Road (m)	Verge (m)	Road Reserve width (m)	Concrete Pathway (1.5m min.)	Figure Ref
Split-level	[2.5 x 2]*	4	6	8	6	4	28	Both sides	Fig 6
North-Southlink	N/A	5.8	9**	5	9**	4.8	33.6 Max.	Both sides	Fig 7
Collector 3 [west of N/S corridor]	N/A	5.8	7	5	7	4.8	29.6 variable	Both sides	Fig 8
Collector 4 [east of N/S corridor]	[2.5 x 2]*	4.8	6	0	6	5.8	22.6	Both sides	Fig 9
Avenue	N/A	4	6	0	6	5	21.0	Both sides	Fig 10
Local with parking on both sides	[2.5 x 2]*	4	6	0	6	5	21	Both sides	Fig 11
Local	[2.5 x 2]*	4	4	0	4	4	16	Both sides	Fig 12
Existing Roads (Approx.)	[2.5 x 2]*	6	4	0	4	6	20	Both sides	Fig 13

*[2.5 x 2] parking lane within road – refer relevant figures.

**Includes 2m on-road cycle lane.

Figure 6 Typical street cross section - Split-level road

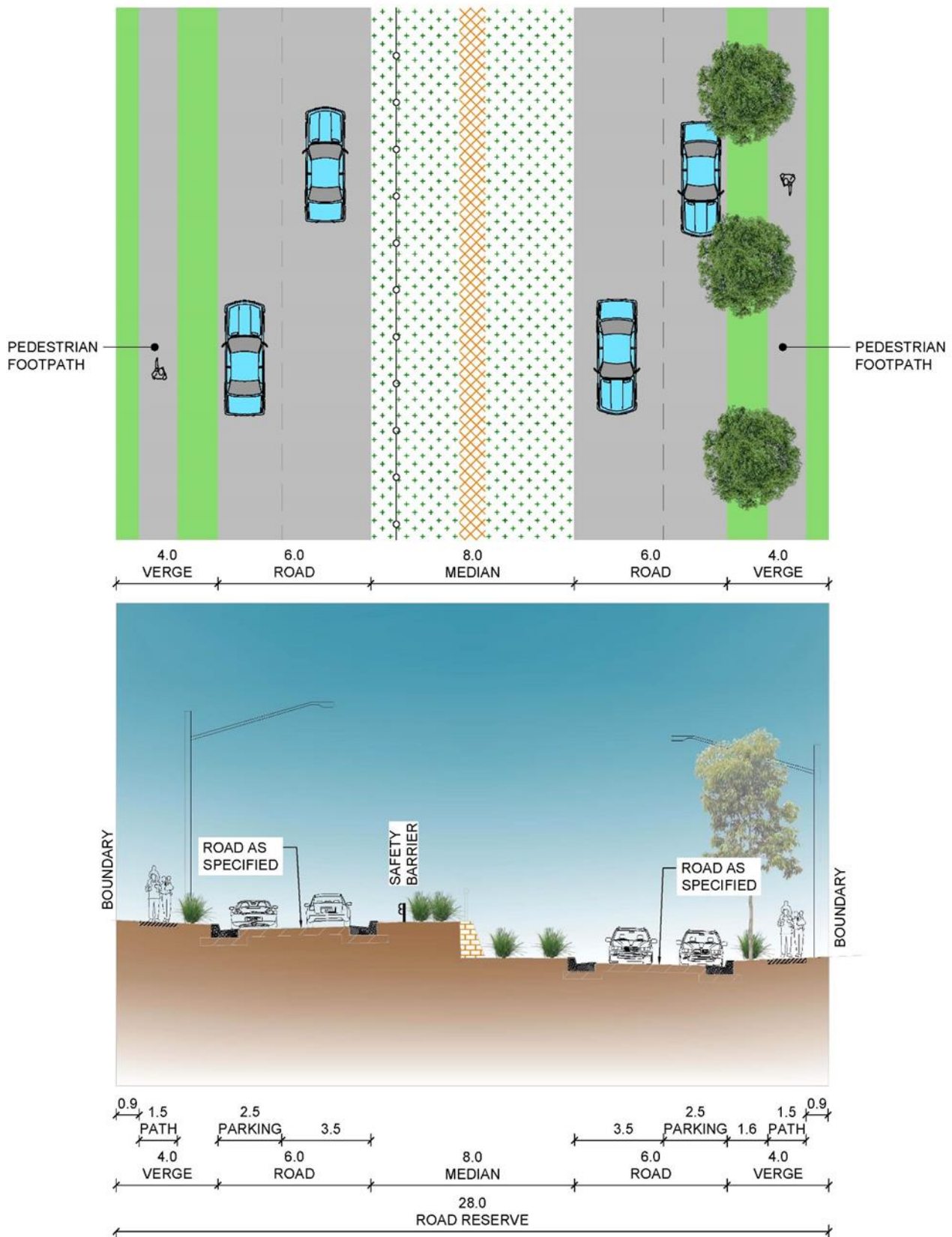


Figure 7 Typical street cross section – North-South Link

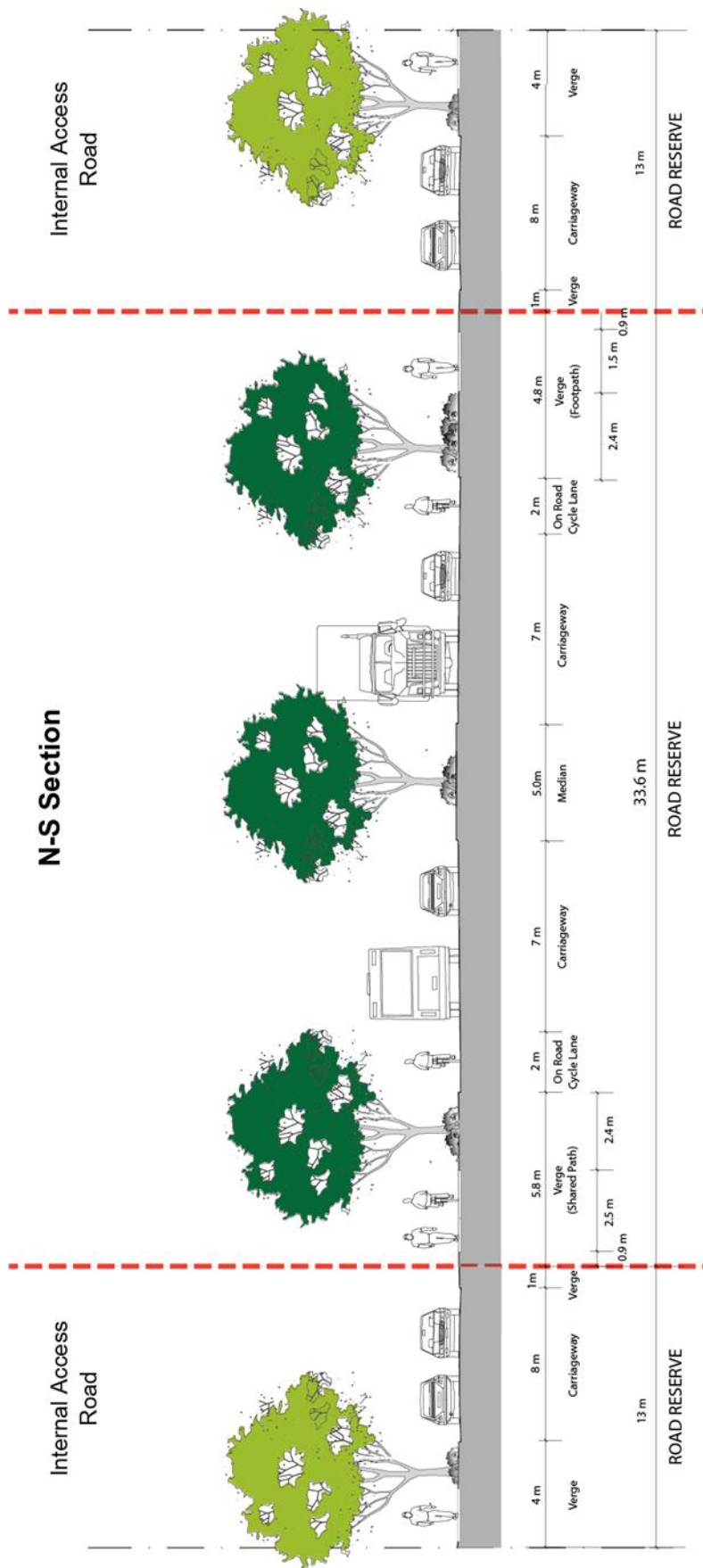


Figure 8 Typical street cross section – Collector Road 3

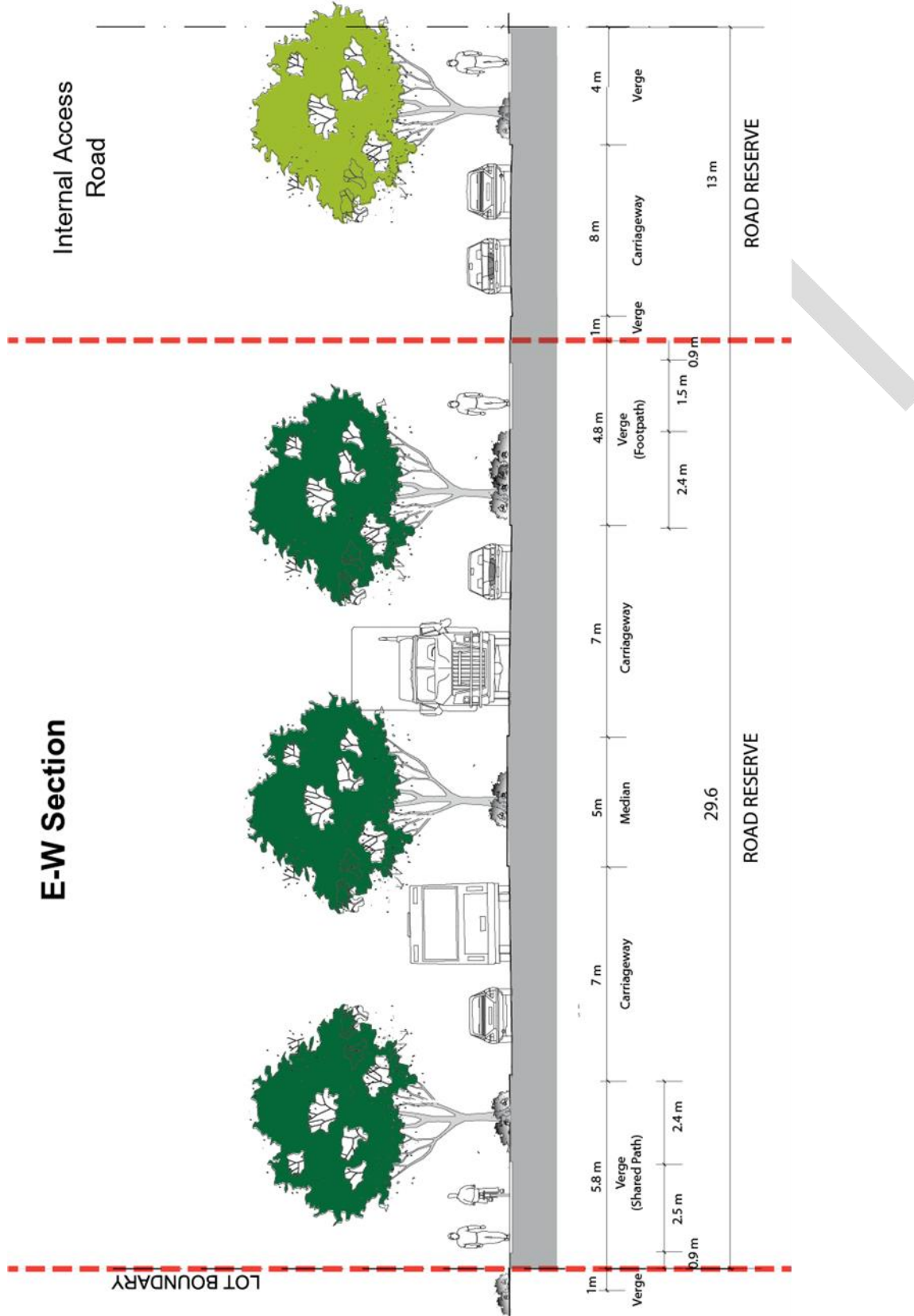


Figure 9 Typical street cross section – Collector Road 4

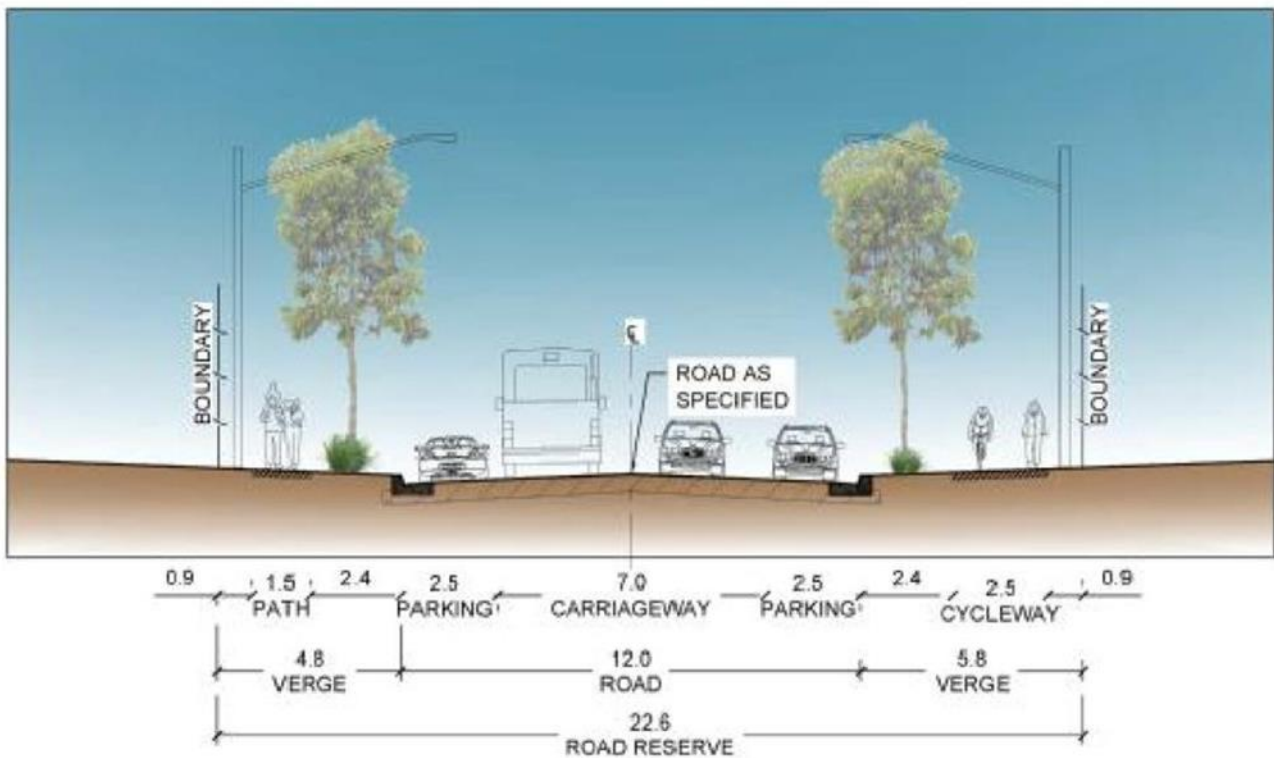
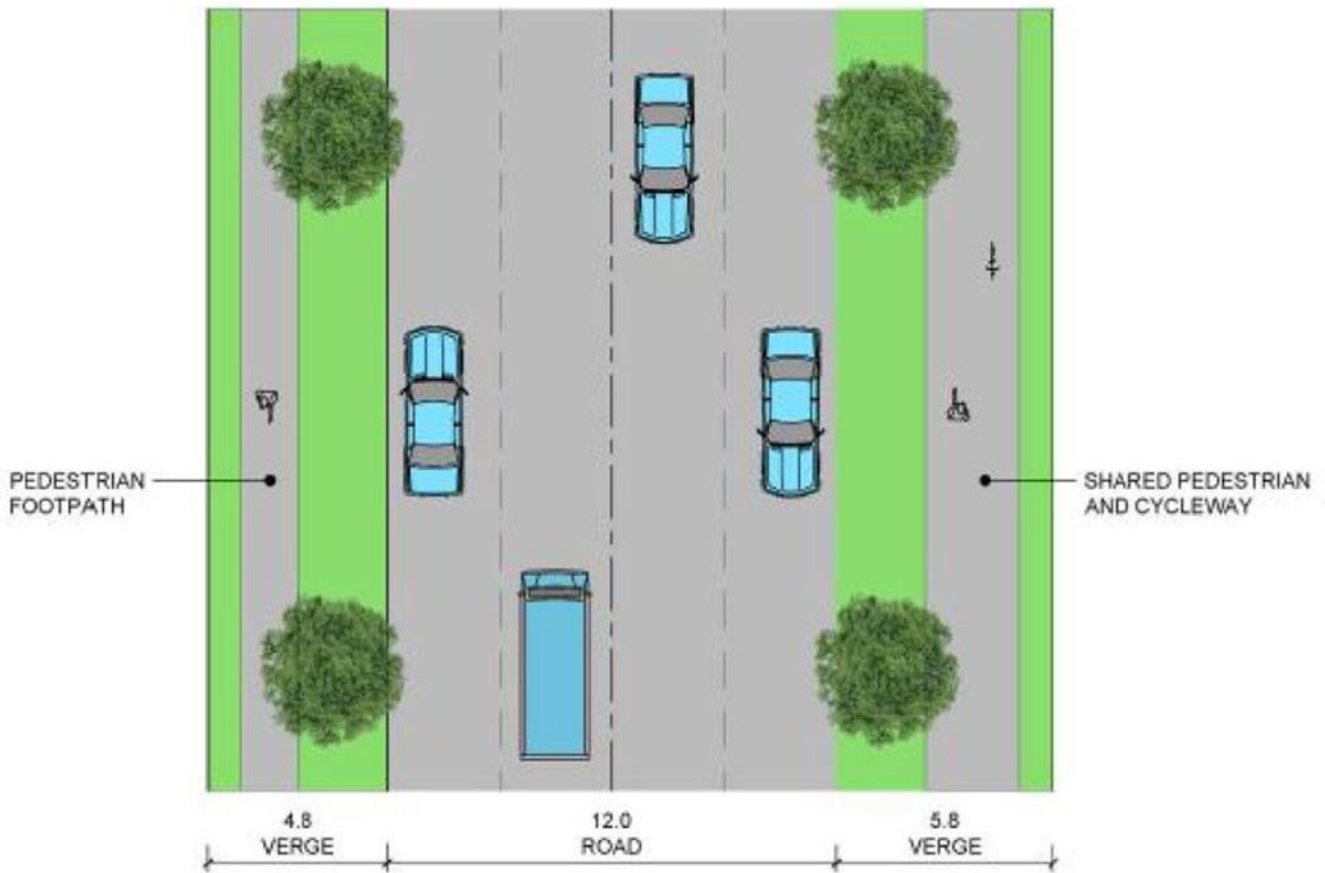


Figure 10 Typical street cross section – Avenue

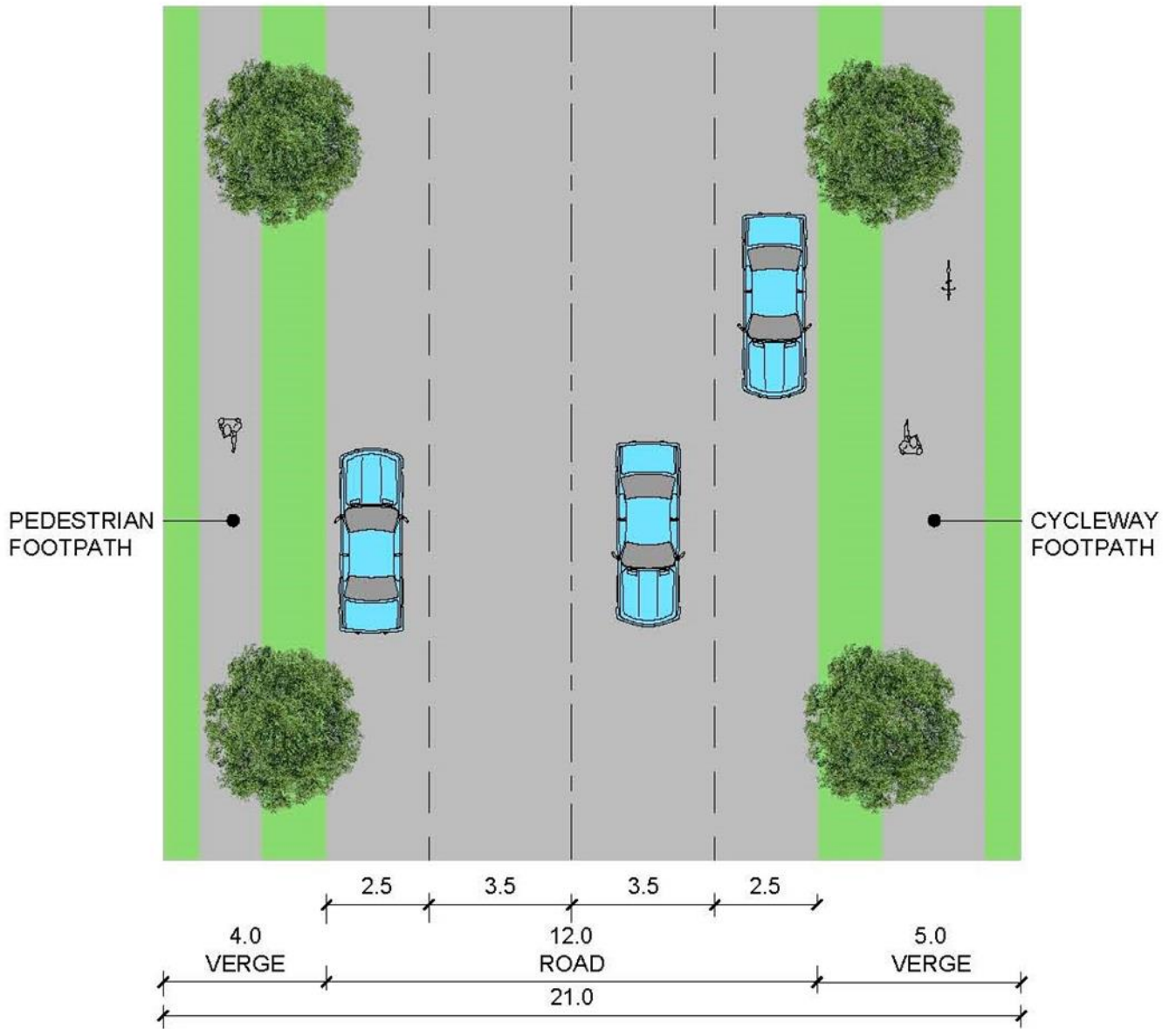


Figure 11 Typical street cross section – Local Road with Parking both sides

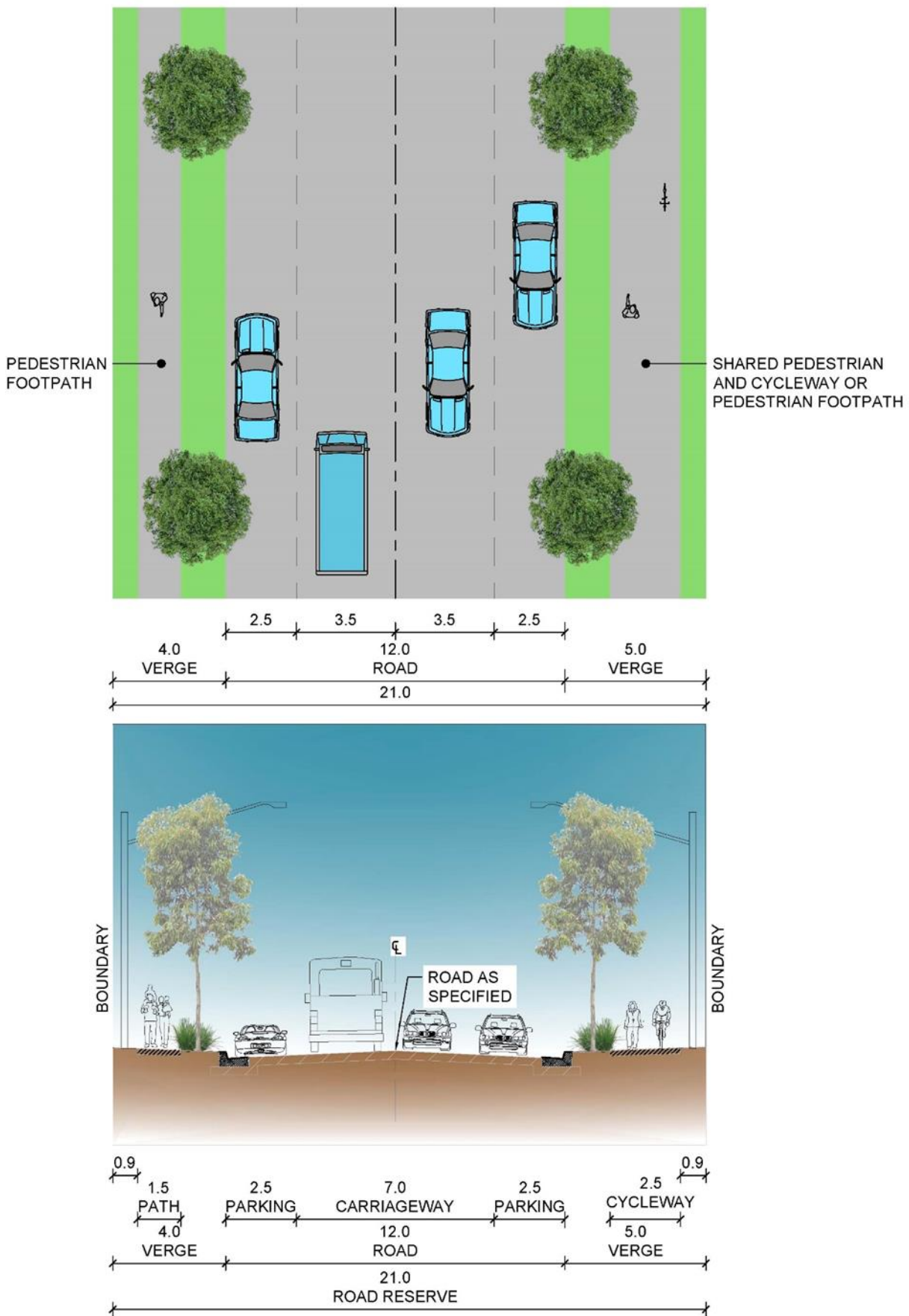


Figure 12 Typical street cross section – Local roads

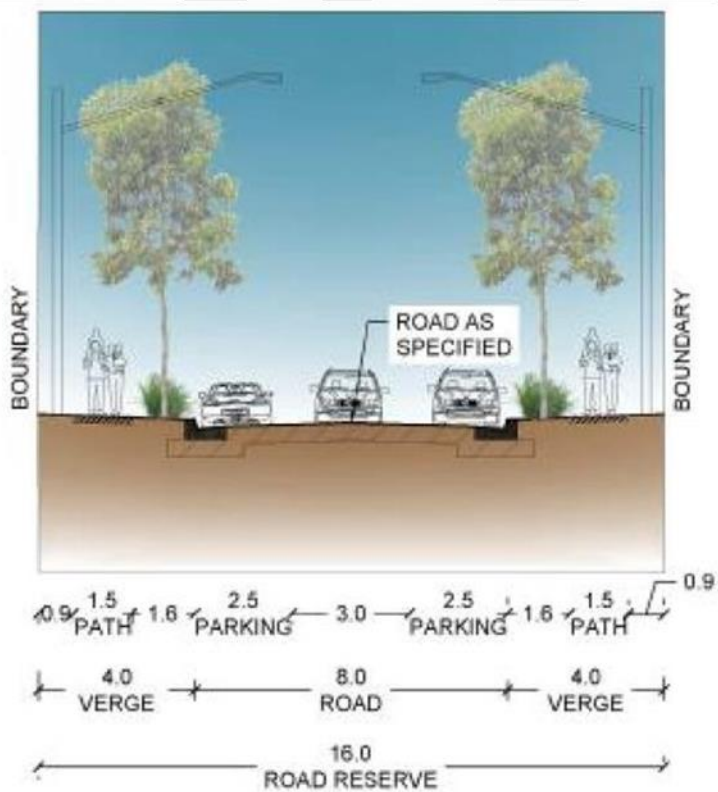
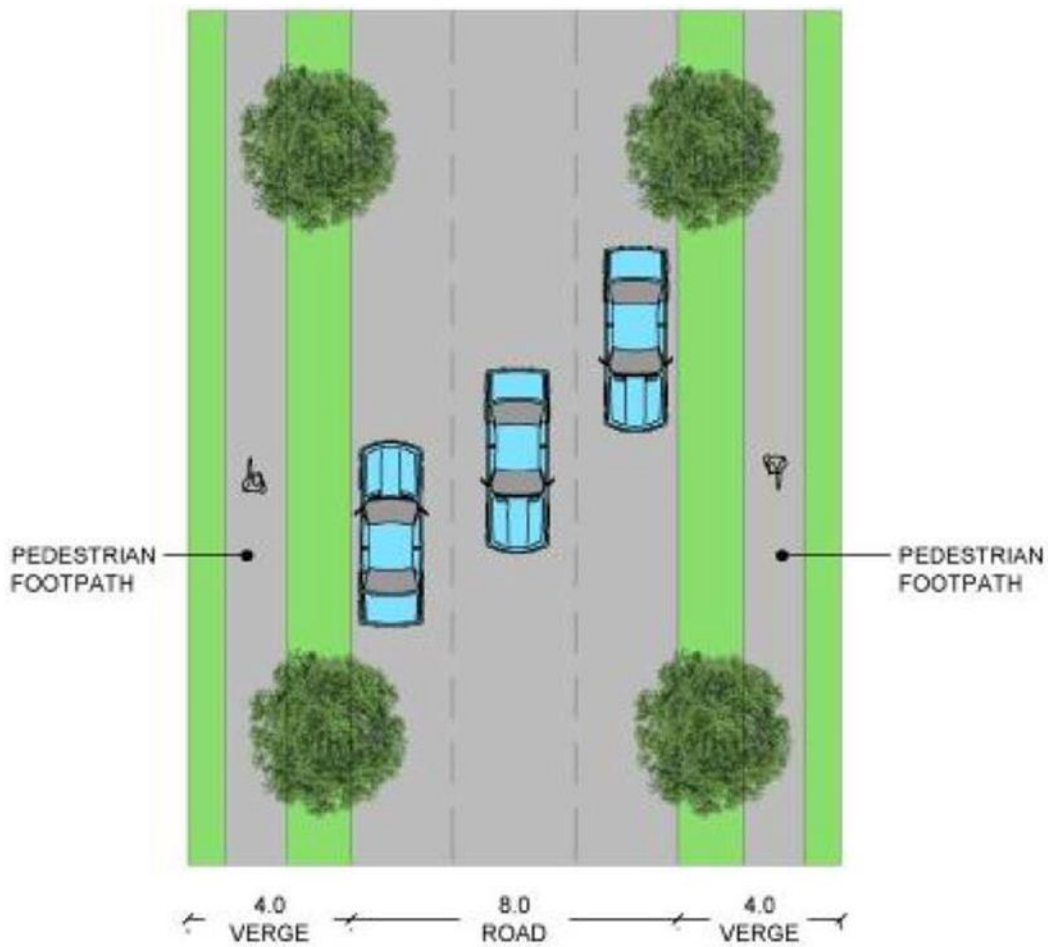
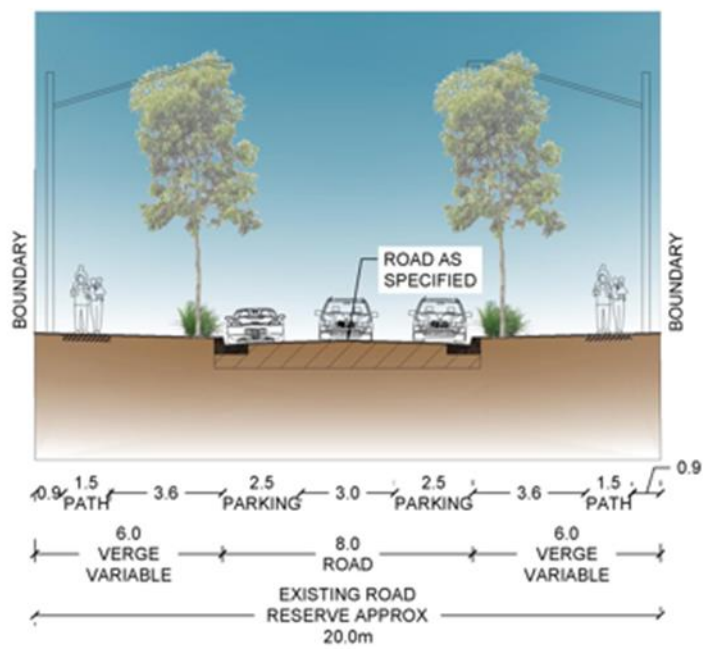
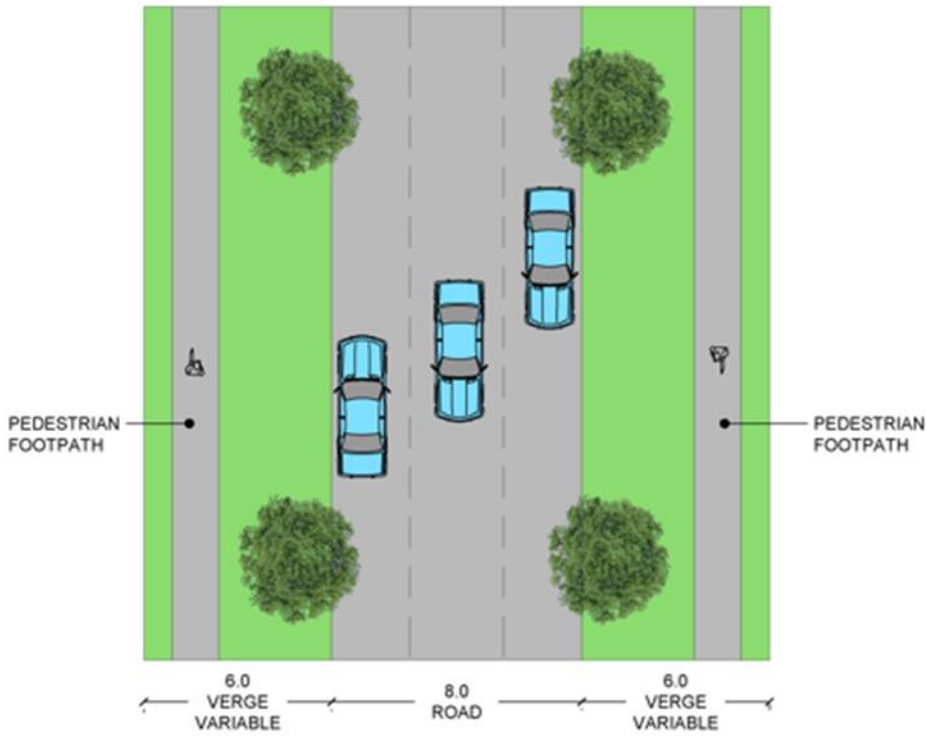


Figure 13 Typical street cross section – Existing roads



3.2 Street network

3.2.1 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 Cadda Ridge Drive, the role of Caddens Road will be retained as a 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 redevelopment, full construction and/or reconstruction will be required for Caddens Road including but not limited to full width pavement reconstruction to both sides, stormwater drainage and kerb and gutter to both sides of the road and intersections apportioned appropriately (refer Table 1 and Figure 13).

Caddens Road shall be upgraded and reconstructed in association with an adjoining subdivision or when a new local/collector road is connected to that road.

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 for road users.
- c. Upgrade Caddens Road as a local road within the broader road network that allows for access onto it (Refer Section 3.1)

Controls

1. Timing for the road works, as identified in TMAP, are as follows:
 - Integrate Caddens Road west as a local road within the new subdivision street network. Timing:
 - This should be undertaken in conjunction with the timing of the adjacent subdivision works.
 - Introduce suitable traffic control measures along the existing Caddens Road to eliminate the opportunity for high speed travel (chicanes and priority intersections). Timing: This should be undertaken in conjunction with the timing of the adjacent subdivision works.
 - Embellish 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.
2. Lots are to front onto Caddens Road. A traffic assessment is to be prepared with any subdivision proposing access onto Caddens Road.
3. Provide two new accesses:
 - a. the eastern end near Hermitage Court.
 - b. the western end near Cadda Ridge Drive (to access existing Gipps Street and Bringelly Road / The Northern Road respectively).
4. Street trees to be provided along the road reserve.
5. Upgrades to Caddens Road, including street lighting, will be carried out at the time of the relevant subdivision stage.

3.2.2 North-South Road and East-West Road Corridor

Objectives

- a. Create a major north-south link road that supports movement to and from Orchard Hills South with the educational and health specialist precinct in the north.
- b. Create a major east-west road that supports movement though the site, from The Northern Road to Kent Road.

Controls

1. The North-South Road to form a connection between O'Connell Street and terminate at the M4 Motorway;
2. The East-West Road should connect a new signalised intersection at The Northern Road with the intersection of Caddens Road/Cadda Ridge Drive to the east;
3. Each road is to provide a road reservation for 4 lanes, median and cycleway;
4. No driveway access is to be provided from the North South Road;
5. No driveway access is to be provided from the East West Corridor;
6. Access restrictions are to be applied near the new intersection with The Northern Road
7. Intersections at The Northern Road with Castle Road and Frogmore Road should be restricted to left-in, left- out
8. The North-South Road corridor should have an intersection with Cadda Ridge Drive, the east-west road corridor.

3.3 Pedestrian and cycle network

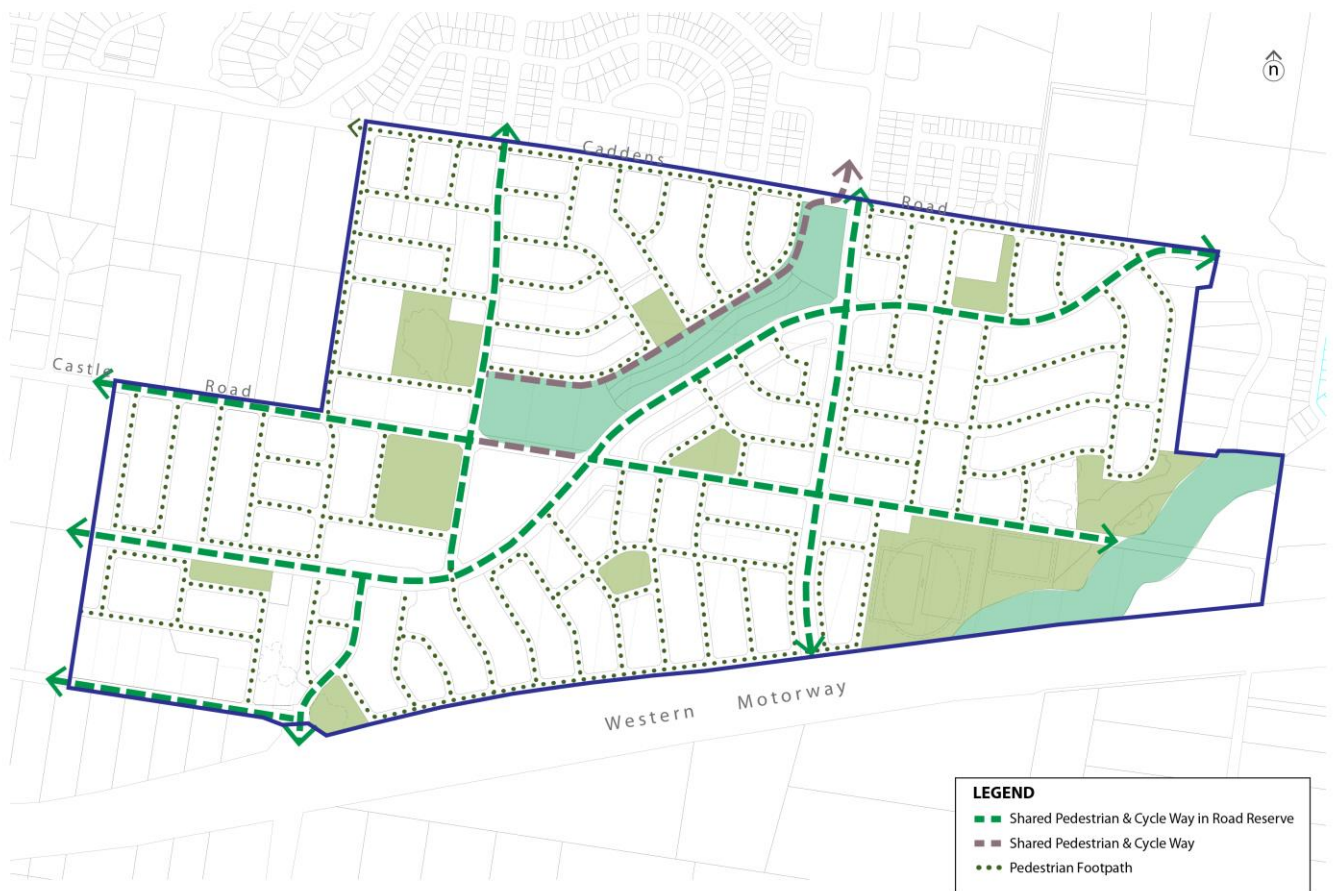
Objectives

- 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 14.
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 14 Pedestrian and cycle network plan



Source: Design and Planning

3.4 Public transport

Objectives

- To promote the use and expansion of public transport opportunities through the site
- To ensure clear and safe pedestrian links to public transport stops.
- Allow for the majority of residential lots to be within 400m walking distance from an existing or proposed bus stop.

Controls

- 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.
- Bus stops are to be provided on-street with shade (whether bus shelter or trees). Bus shelters are to be provided at key stops and installed at the subdivision construction stage. Bus boarding points shall be provided where shelters are not provided.
- 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.
- 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. Traffic management at the intersection of the east-west link and retail centre is to include traffic control measures, including a roundabout.
8. Pedestrian Connections and Bicycle Facilities are to be provided in accordance with the Transport, Access and Parking Section of the Penrith DCP.

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 in Figure 14.
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. Provide for the location and quantity of public open space in general accordance to the table below.

Table 2: Quantum of open space/public realm

Land use	Approximate area (hectares)
Active Open space	7.26
Passive Open space	8.51
Total	15.77

Figure 15 Public open space








Legend

- Residential Land
- Landscape Area
- Site Boundary
- Master Plan Area
- Collector Road

Figure 16 Active local open space



Legend

-  Residential Land
-  Landscape Area
-  Site Boundary
-  Master Plan Area
-  Collector Road

Source: Place Design

4.1.1 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 Claremont Creek riparian corridor.
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.
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 passive irrigation as well as harvesting and reuse of stormwater as outlined in the Orchard Hills North 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. Develop the pedestrian and active cycle network as outlined in **Figure 17**.

Figure 17 Pedestrian and active pathway network

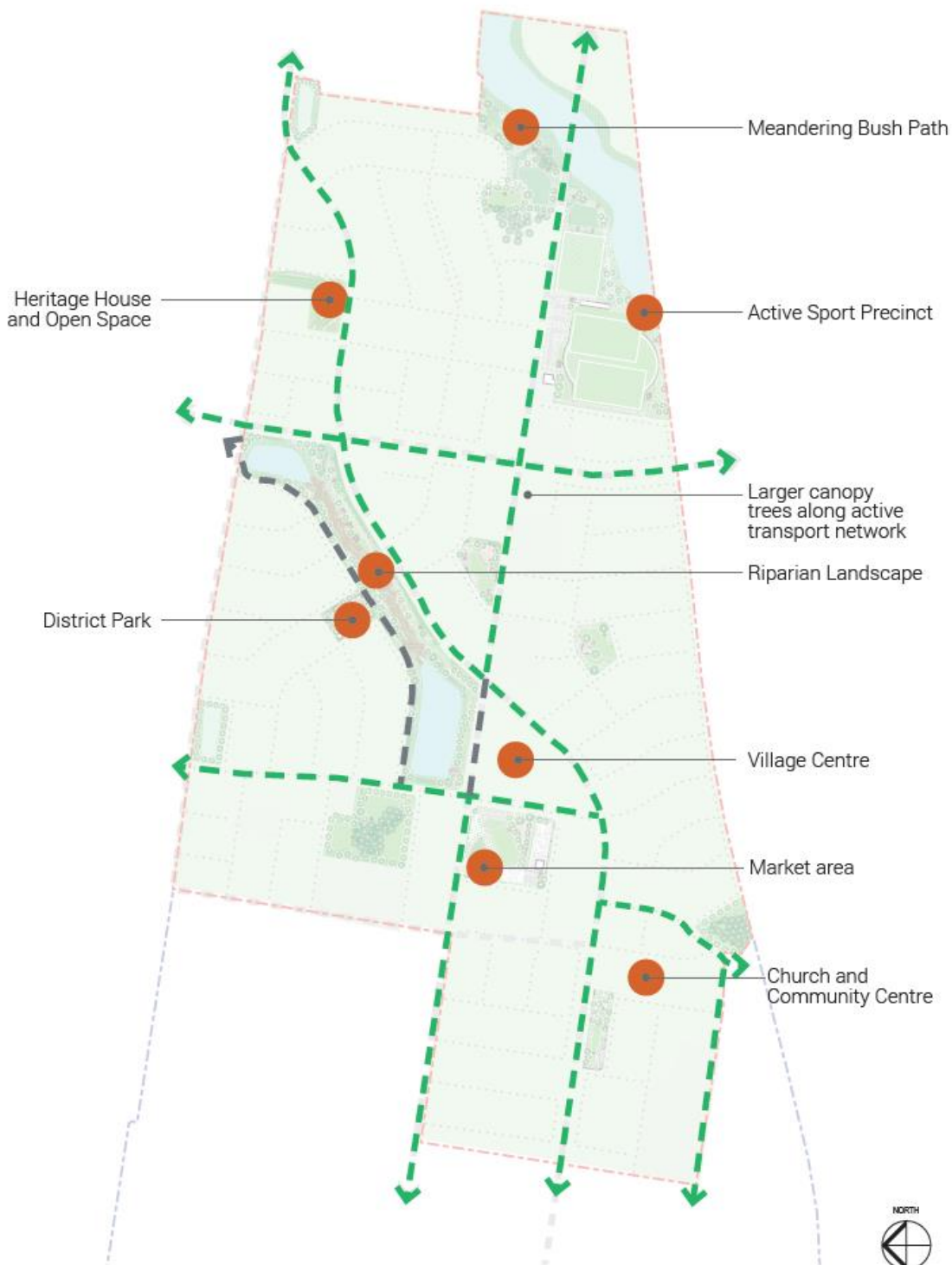


Figure 13 Active Transport Strategy Diagram

SCALE 1:8000@A4

Legend

- Shared Pedestrian & Cycle Way in Road Reserve
- Shared Pedestrian & Cycle Way
- · · Pedestrian Footpath

Source: Place Design

Figure 18 Passive local open space



4.1.2 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.
- 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 19 Open space activation

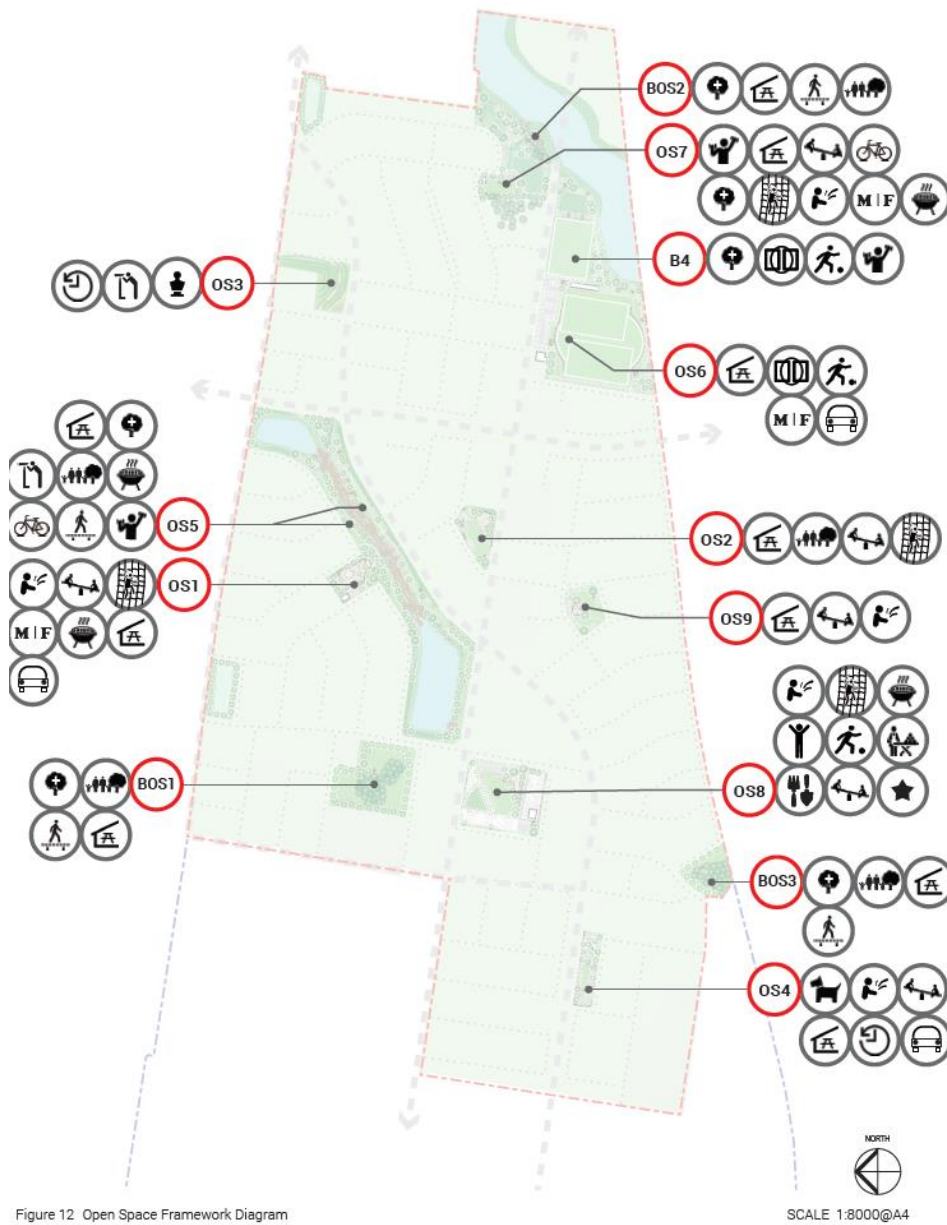
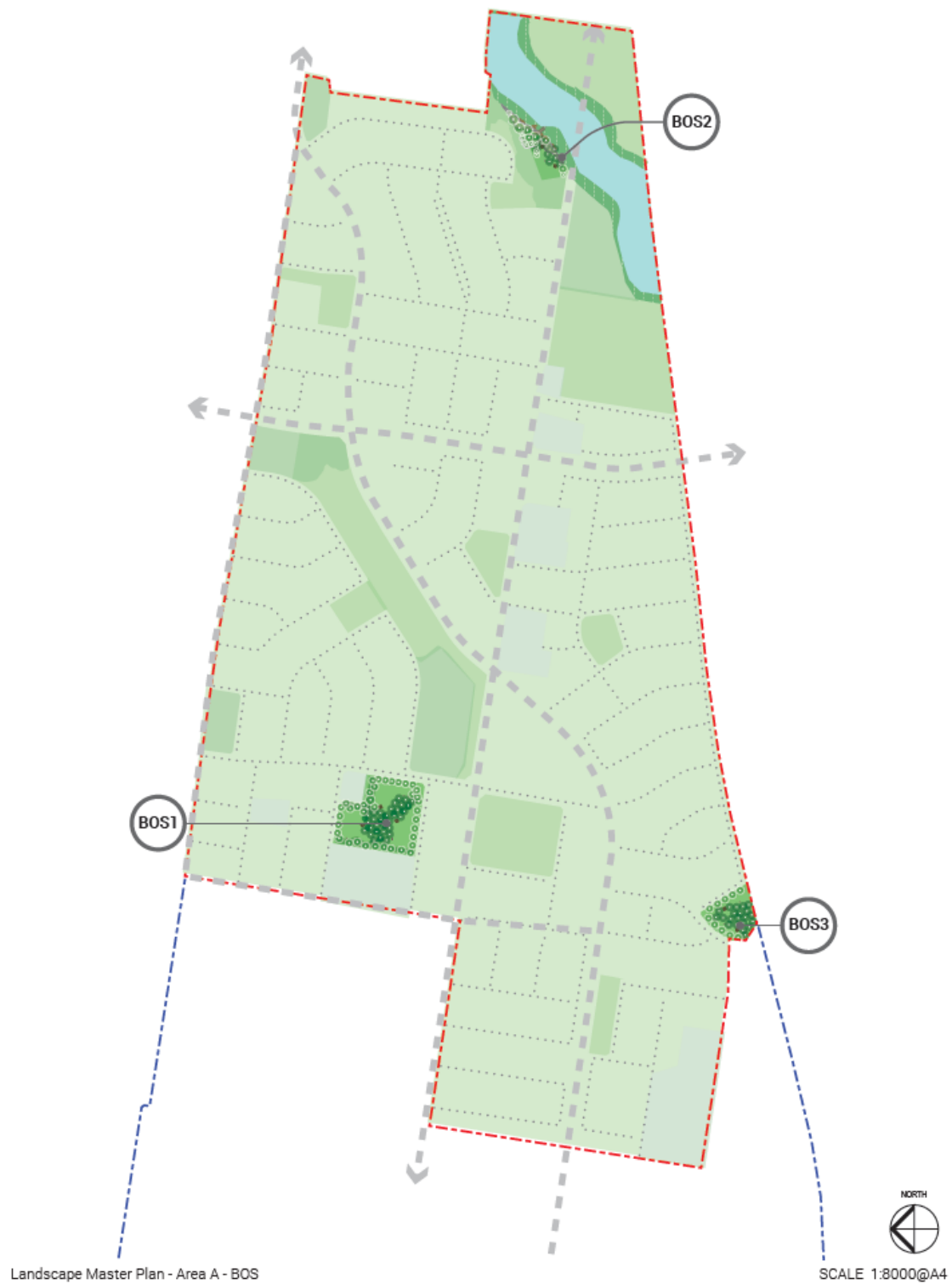


Figure 12 Open Space Framework Diagram





SCALE 1:8000@A4

- | | | |
|-------------------|--------------------|--------------------|
| Boardwalk/Bridges | Toddler Play | Playing Fields |
| Picnic Shelters | Juniors Play | Kickabout Space |
| Family Park | Senior Play | Fitness |
| Barbeque | Mixed Recreation | Market Space |
| Community Garden | Cycleway | Sports Courts |
| Heritage Building | Dog Off Leash Area | Event Space |
| Public Art | Look Out | MIF Toilet/Amenity |
| Parking | Revegetation Zone | |

Figure 20 Bushland open space



Legend

-  Residential Land
-  Landscape Area
-  Site Boundary
-  Master Plan Area
-  Collector Road

Source: Place Design

4.1.3 Bushland open space

Objective

- 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 quality of the natural assets.

Controls

1. Retain the existing endangered communities as a natural bushland open space
2. Provide additional supplementary planting, natural pedestrian walkways through the natural environment and places for respite.

Figure 21 Riparian corridor open space



Landscape Master Plan - Area A - Riparian

Legend

- Residential Land
- Landscape Area
- Site Boundary
- Master Plan Area
- Collector Road

Source: Place Design

4.2 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 10m wide Vegetated Riparian Zone (VRZ).
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 College Creek is to match the existing width at the interface with Caddens Road.

Figure 22 Biodiversity areas



Landscape Master Plan - Area A - Biodiversity

Legend

- Residential Land
- Landscape Area
- Site Boundary
- Master Plan Area
- Collector Road

Source: Place Design

4.3 Biodiversity

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 communities and provide additional pockets of native vegetation that inter-connects with the open space areas

Controls

1. Werrington Creek is regarded as a first order watercourse. The overall width of riparian zone will be 20m centred over the new creek.
2. A Vegetation Management Plan (VMP) is to be prepared for Werrington and Claremont Creeks.
3. 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.

4.4 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:
 - a. Seats/benches
 - b. Litter bins.
 - c. Drinking fountains, water refill and dog bowl
 - d. Lighting.
 - e. Information signs.
 - f. Bicycle racks.

- g. Planter boxes
 - h. Tree guards
 - i. 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 A51428:1-4 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.

4.5 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 Penrith DCP 2010.
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.

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

- a. Provide a diverse range of housing forms and densities that respond to community needs with different dwelling sizes and to different household types.
- b. To establish a clear urban structure that maximises the sense of neighbourhood and encourages walking and cycling.
- c. To establish a subdivision layout that maximises the natural attributes of the land.
- d. 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. The minimum area for corner lots is 400m².
5. The minimum lot dimensions for all dwelling types are set out in Table 3.

Table 3: Minimum 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	230	8.5-10
Attached	220	7.5-10

6. On lots greater than or equal to 350m² 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 subdivision plan.

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.

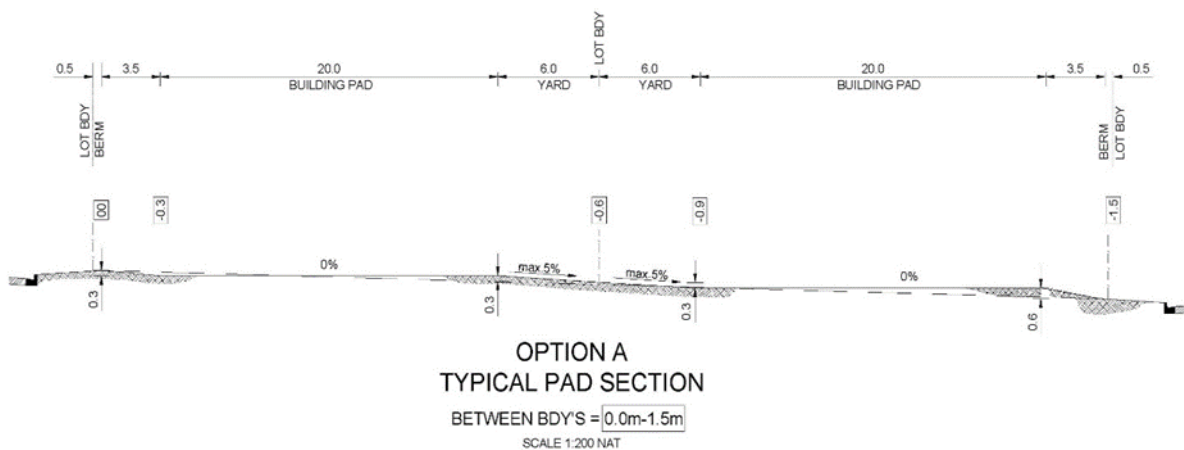
Objectives

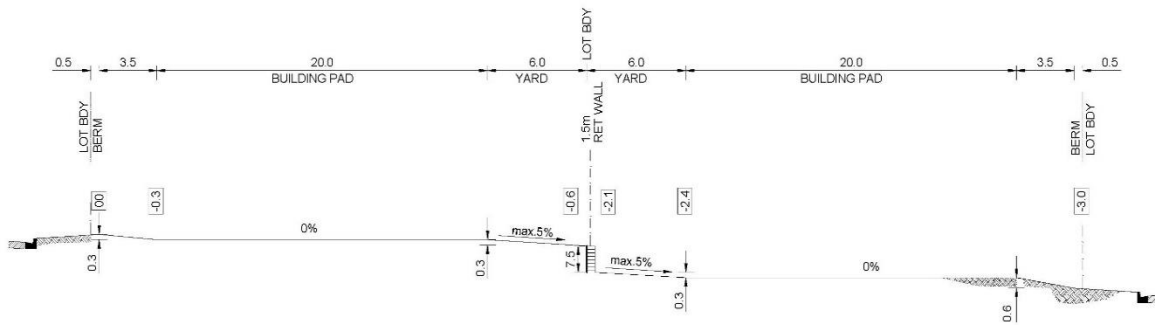
- Development should respond to the site's natural topography and general landform, minimizing excavation and potential visual impacts.
- Take into account and respond to site features such as riparian corridors, remnant bushland, heritage structures and prominent views i.e. The Blue Mountains.
- Minimise the incidence of cut and full and alterations in finished ground levels after subdivision site grading works.
- Encourage appropriate dwelling design to suit the topography of lots.
- Protect adjoining properties from potential structural instability by proposed excavation.
- Lessen the visual impact of retaining walls on allotment boundaries.

Controls - General land Subdivision

- Fill is to ensure soil profiles provide for optimum planting conditions
- Bulk earthworks excavation and retaining wall construction is to be completed as part of initial subdivision works as far as possible.
- Typical grading solutions should generally meet the following typical sections:

Figure 23 Typical Grading Solutions

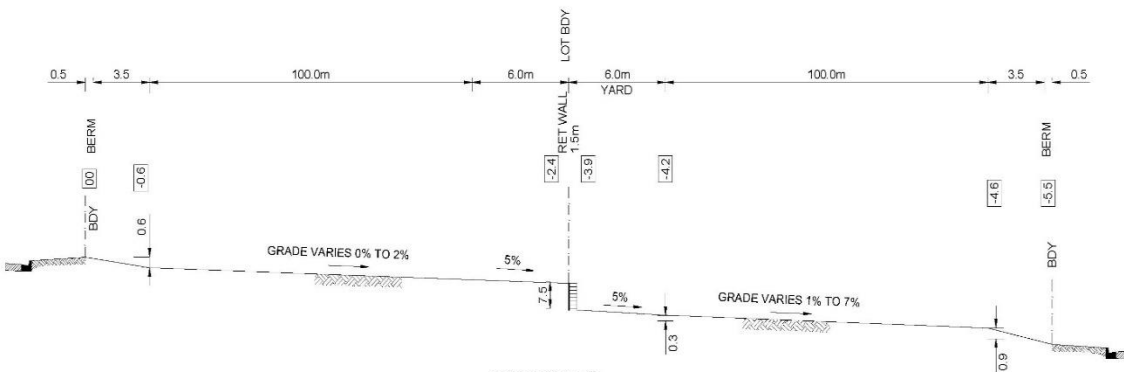




**OPTION B
TYPICAL PAD SECTION**

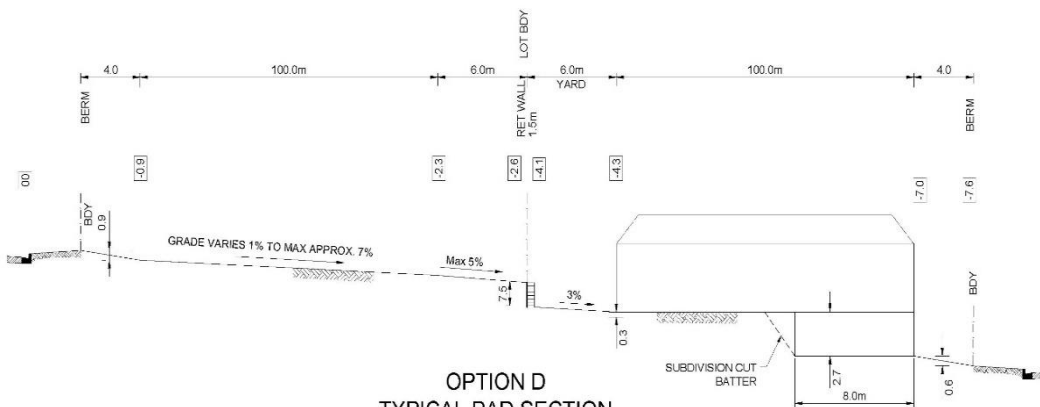
BETWEEN BDY'S = 1.6m-3.0m

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**OPTION C
TYPICAL PAD SECTION**

BETWEEN BDY'S = 3.1m-5.5m



**OPTION D
TYPICAL PAD SECTION**

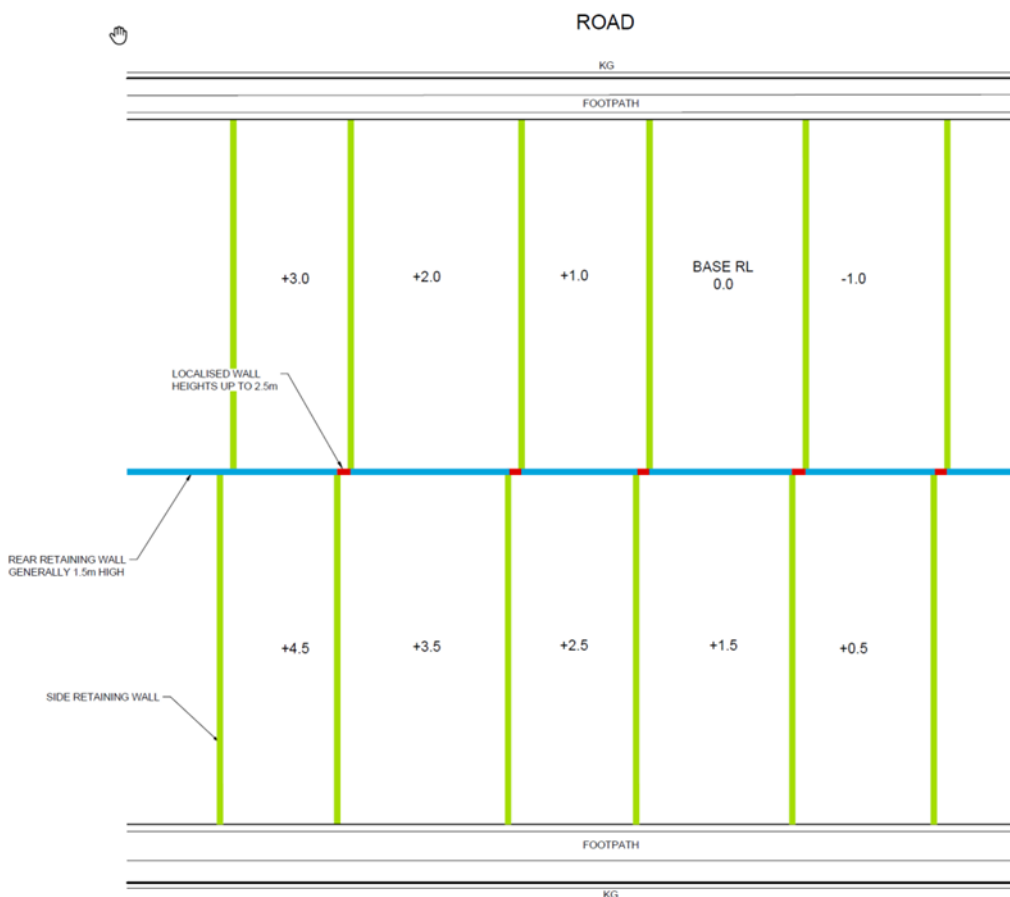
BETWEEN BDY'S = 5.4m-7.6m

SCALE 1:200 NAT

4. Retaining wall heights are measured from the top of the footing to the top of wall.
5. Rear boundary retaining walls for development on slopes should not exceed 1.5m in height.
6. Side boundary retaining walls for development on cross slopes should not exceed 1.5m in height.

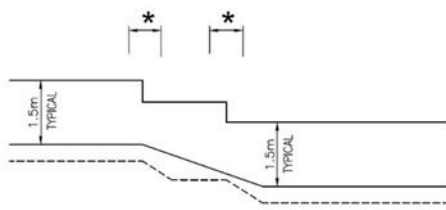
7. For options C and D, no retaining wall shall be provided within 6m of the rear boundary, other than that constructed as part of the original subdivision. This will be created as a Restriction as to User on the associated Deposited Plan and Section 88b instrument.
8. These heights can be exceeded to a maximum of 1.8m height, in cases as below:
 - Where retaining walls need to step to take account of ground slope along the length of the wall. In this situation the wall should be returned to its normal height as soon as practical.
 - Where lots are benched and opposing side boundaries are staggered, in which case the rear wall height should not exceed 2.5m, and only then may it exceed 1.5m for approximately 20% of its length within any lot. The diagram below outlines the situation and the accepted maximum retaining wall solution.
 - If any wall is permitted to be higher than 2.0m, then it shall be a tiered construction with the lower wall a maximum of 1.0m high and the upper wall a maximum of 1.5m. (This is to allow the space between the walls to be landscaped and maintained appropriately.)

Figure 24 General Retaining Wall height



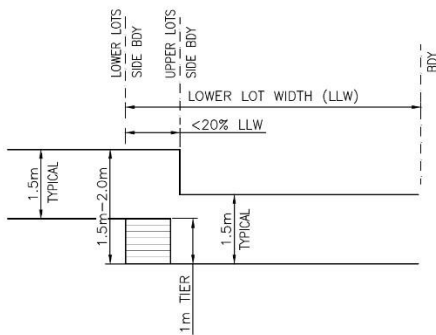
9. Where tiered retaining walls are permitted, the minimum landscaped depth between each step is 1m.
10. The maximum height of a retaining wall on a front boundary should not exceed 1m. Retaining walls should not restrict access to a lot or impede service connections.
11. Steep lots (>10% grade) should have a minimum lot size of 450m².

Figure 25 General Elevations

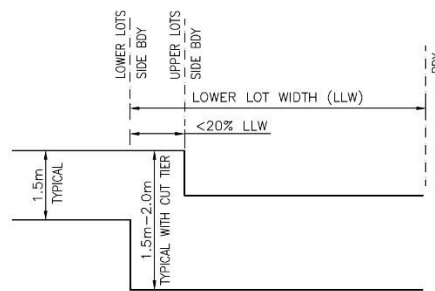


* STEP LENGTHS TO BE MINIMISED AS FAR AS PRACTICAL

ELEVATION WITH STEPPING



ELEVATION WITH TIER



ELEVATION WITHOUT TIER

12. Step lots will require the submission of a Building Envelope Plan (BEP) at the relevant Development Application stage.
13. 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.
14. 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

15. 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.
16. 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 2.0m. The proposed wall shall be located at least 600mm 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

17. 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.

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

The subdivision layout for slopes in excess of 10% is to be generally as depicted in Figure 25 below

Figure 26 Indicative subdivision layout for slopes in excess of 10%



Source: J Wyndham Prince

1. For sites with significant slopes a split-level building design is to be used to minimise excavation and backfilling.
2. Floor levels/building platforms are to be stepped in response to the existing topography of the site.
3. All retaining walls forward of the garage line must be constructed with masonry materials and finished to complement the house design.
4. 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).
5. 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.
6. 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.

7. 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:
 - a. balcony to any first-floor element
 - b. a variation in scale to adjoining properties
 - c. architectural elements which recess or project by at least 600mm
 - d. open verandah
 - e. mix of building materials or finishes
 - f. bay windows or similar features
 - g. 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:
 - a. verandah
 - b. vertical architectural elements to reduce the horizontal emphasis of the façade
 - c. balcony
 - d. an architectural element which recesses or projects from the façade by at least 600mm
 - e. 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 3 below.

Table 4: Second storey side setbacks

Dwelling Type	Lot width (m)	2 nd 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 27 Streetscape design principles

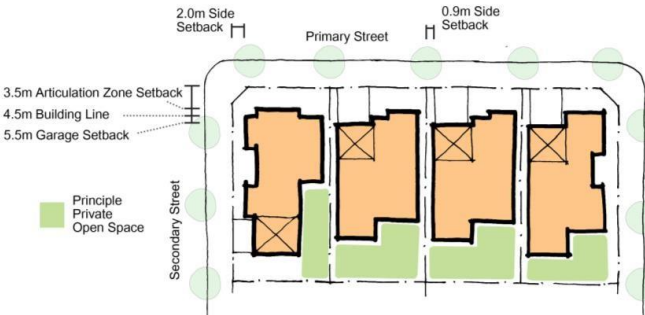

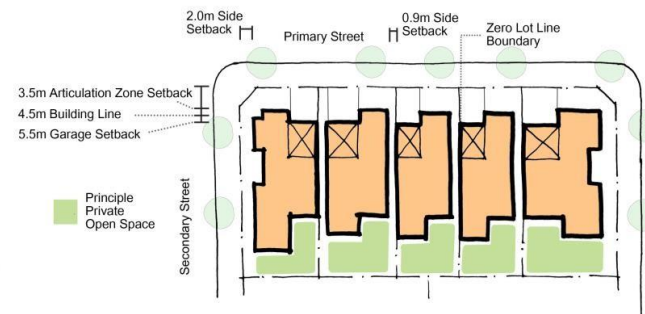


5.5 Residential typology and built form

Objectives

- 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.
- 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.
- To reduce the dominance of garages on the streetscape.
- To encourage eaves, verandahs, balconies and other feature elements on the front facades of dwellings.
- To minimise the impacts of development on neighbouring properties in relation to views, privacy, and overshadowing.
- 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
	<p>Detached</p> <ul style="list-style-type: none"> Allow for landscaped side setbacks to provide visual separation between dwellings and more spacious streetscape environment
	<p>Semi-detached</p> <ul style="list-style-type: none"> 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.
	<p>Built to boundary (Zero lot line)</p> <ul style="list-style-type: none"> Allow separation between dwellings for access and servicing.

Development Form Design Principles

Objectives



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 **Tables 7 - 10** and the front setback principles diagram at **Figures 28 and 29**. 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	
Rear Access	≥ 7.5m	Table 7
	8.5-10m	Table 8
Front Access	≥10-15m	Table 9
	15m	Table 10

The diagrams in **Figures 28 and 29** provide an explanation of the typology.

Figure 28 Front setbacks



Figure 29 Front setback - corner

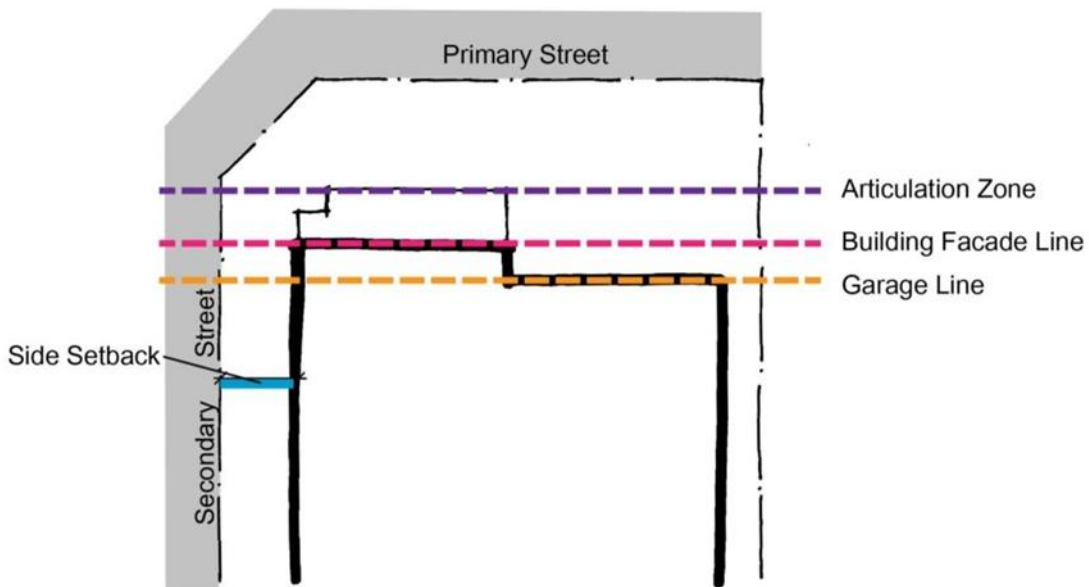


Table 7: Rear access dwellings lots

Element	Control
Lot Frontage	7.5 – 8.5m
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
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: 8.5-10m 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

Element	Control
	<p>If a lot is burdened by zero lot boundary, the side setback must be within an easement:</p> <ul style="list-style-type: none"> - 0.9m (single storey zero lot wall) 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 or double garages are permitted. NOTE: Double garages are only permissible on 10m wide lots.

Table 9: ≥10 - 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												
Side setback	<table border="0"> <tr> <td>Detached boundary:</td> <td>Lots with a zero lot boundary (side A):</td> <td>0m – semi-detached or attached dwelling</td> </tr> <tr> <td>0.9m ground floor</td> <td>Ground Floor: 0m (side A), 0.9 (side B)</td> <td>Detached boundary:</td> </tr> <tr> <td>1.2m upper floor</td> <td></td> <td>0.9m ground floor</td> </tr> <tr> <td></td> <td></td> <td>1.2m upper floor</td> </tr> </table>	Detached boundary:	Lots with a zero lot boundary (side A):	0m – semi-detached or attached dwelling	0.9m ground floor	Ground Floor: 0m (side A), 0.9 (side B)	Detached boundary:	1.2m upper floor		0.9m ground floor			1.2m upper floor
Detached boundary:	Lots with a zero lot boundary (side A):	0m – semi-detached or attached dwelling											
0.9m ground floor	Ground Floor: 0m (side A), 0.9 (side B)	Detached boundary:											
1.2m upper floor		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												

Element	Control
	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 $\leq 350\text{m}^2$, the upper level no more than 40% of lot area Lot $\geq 350\text{m}^2$, 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.

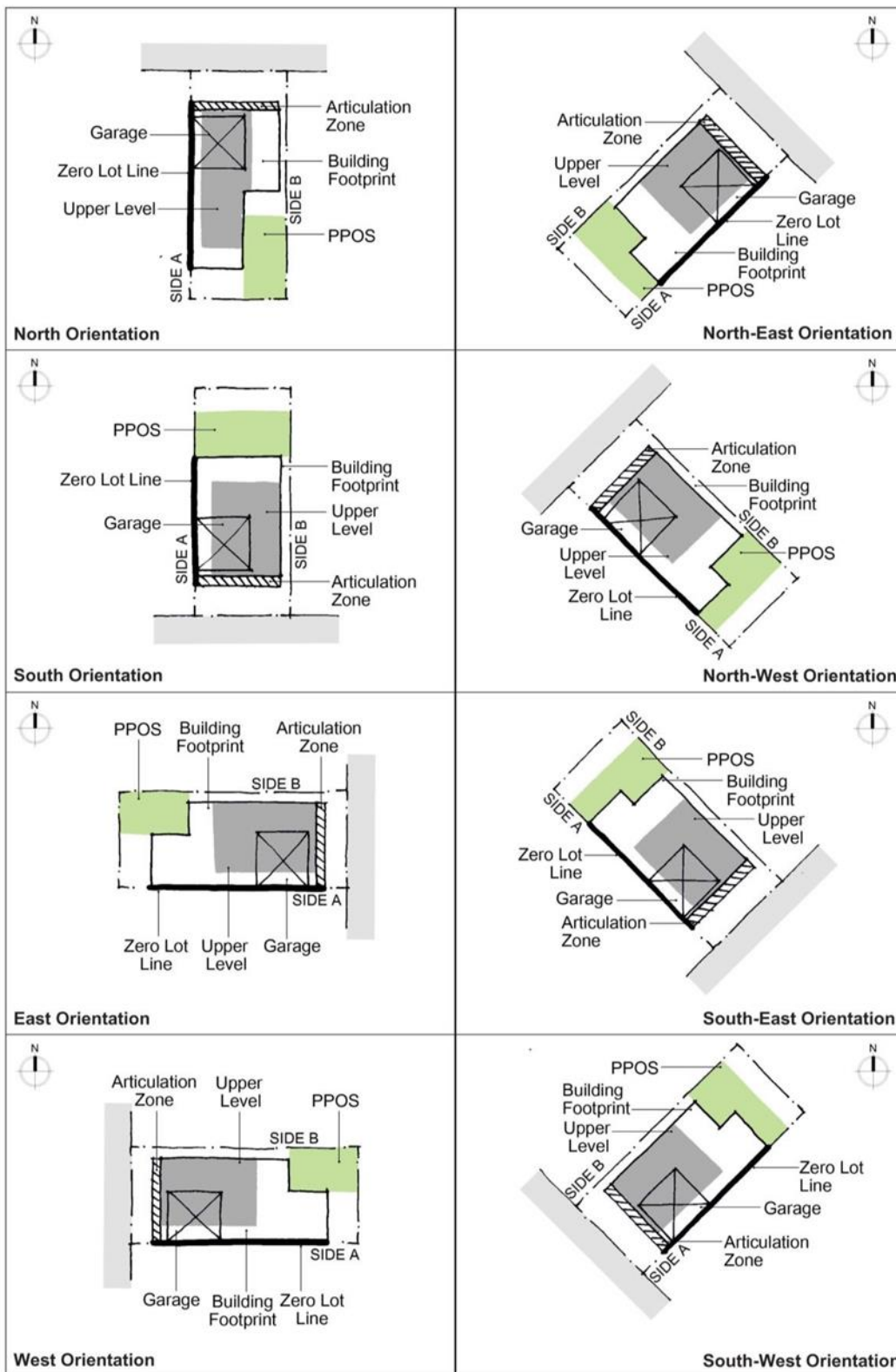
Table 10: 15m+wide lot – front access dwellings

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	4.5m to building façade line; 3.0m to articulation zone; 5.5m to garage line and minimum 1m behind the building line
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.

Element	Control
	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 diagram below.

Figure 30 Indicative illustrations of setbacks, private open space and building footprint



Articulation Zone

1. 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:

- a. entry features or porticos;
- b. awnings or other features over windows;
- c. leaves and sun shading;
- d. balcony or window box to any first-floor element;
- e. projecting architectural elements;
- f. open verandahs
- g. bay windows or similar features.

Corner Lots

1. On corner lots the setback for a secondary frontage is to be as follows:
 - a. 2m for all detached and semi-detached dwellings on lots less than 18m wide; and
 - b. 3m for dwellings on lots 18m and wider.
2. 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.
3. Any building contiguous (sharing a common border) with Caddens Road is to be set back 4.5m from the boundary to Caddens Road.
4. Garages are to be set back a minimum of 1m behind the front building facade line.
5. 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 (B2 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 31 Dwellings located in Precinct 6



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 10 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;

Element	Control
	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. 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 section 2.2 of Part D2 of the Penrith DCP 2014.

5.10 Multi dwelling housing

Refer to section 2.4 of Part D2 of the Penrith DCP 2014.

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 of the DCP should be read in conjunction with the controls in Table 6-10.

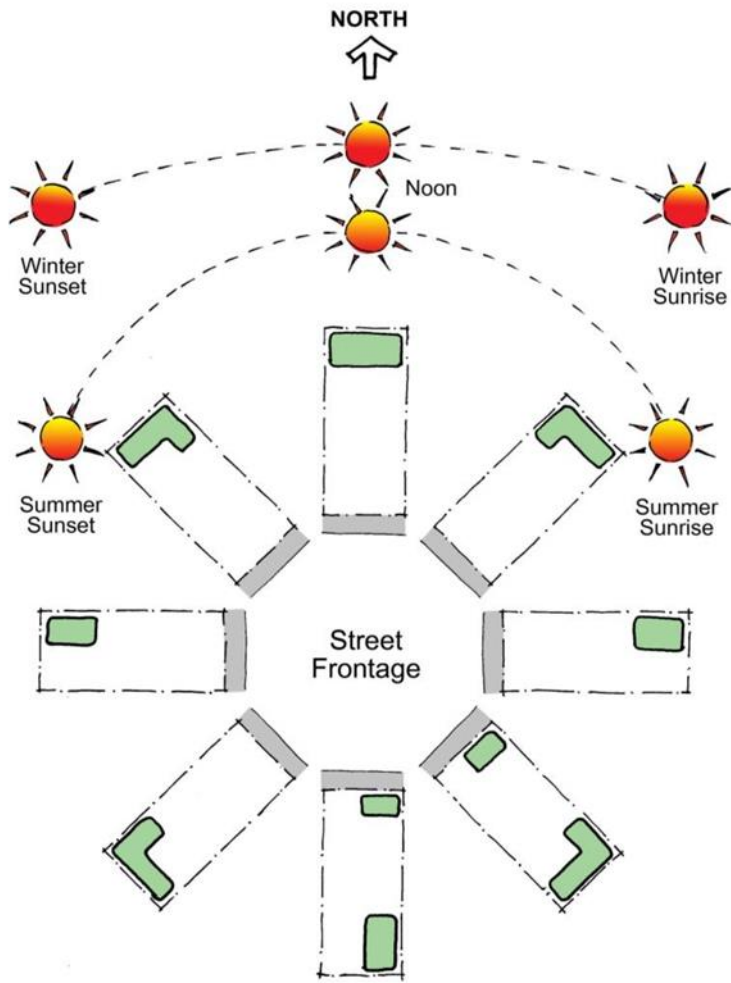
Objectives

- 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 28.
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 6-10. 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 32 Private open space siting diagram



This section of the DCP should be read in conjunction with the controls in Table 6-10 of this DCP.

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:
 - Promoting healthy growth of large trees with large canopies,
 - Protecting existing mature trees, and
 - 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.

5.12 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.

5.13 Garages, driveways, parking and access

Objectives

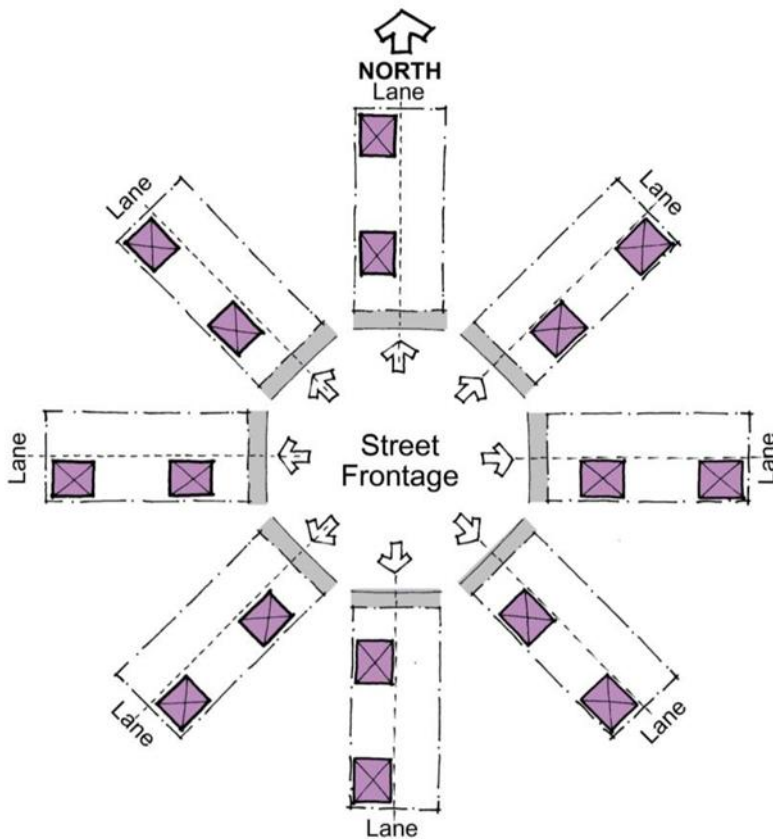
- a. Provide sufficient, safe and secure parking for residents and visitors.
- b. Reduce the visual impact of garages, carports and parking areas on the streetscape and improve dwelling presentation.
- c. Garages do not dominate the frontage of the house.
- d. Encourage the use of secondary dwelling 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 29.
2. No direct access is permitted to 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 10.
7. Garages are to comply with AS 2890.1 Off Street parking, including:
 - a. minimum internal width between main walls of 3m for a single garage;
 - b. 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 1.5m from street trees.
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 33 Garage Location Principles



5.14 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 30.
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 34 Shared Driveway Principles



5.15 Residential amenity

5.15.1 Privacy and acoustic 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.

Controls

- a. 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.
- b. Habitable room windows with a direct sightline to the habitable room windows in an adjacent dwelling within 3m are to:
 - c. be obscured by fencing, screens or appropriate landscaping; or
 - d. 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
 - e. have sill height of 1.7m above floor level; or
 - f. have fixed opaque glazing in any part of the window below 1.7m above floor level.
- g. 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.
- h. 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.
- i. 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.
- j. 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.
- k. Noise impact assessment prepared by a suitably qualified acoustic consultant considering acoustic impact and mitigation measures must be submitted for Subdivision Development Applications for all development located alongside the Western Motorway, north south road and east west road. Where relevant, Section 88B restrictions that impose noise criteria and controls may be required.
- l. To mitigate the impacts of traffic noise from the M4 Motorway, Northern Road, north south road and east west link on new development the following measures are to be used;
 - m. dwelling setbacks;
 - n. internal dwelling layouts designed to minimise noise in living and sleeping areas;
 - o. fencing constructed with a suitably solid mass, and
 - p. locating courtyards and principal private open space areas away from the noise source in order to comply with the NSW Road Noise Policy
- q. Subdivision proposals are to address the objectives and controls set out in the Noise and Vibration section of the Penrith DCP 2014

- r. Safety and surveillance
- s. Objectives
- t. Promote public safety and security through passive surveillance of public spaces.
- u. The siting and design of buildings and spaces reduces the opportunity for crime.
- v. Development encourages people to use streets, parks, cycleways, footpaths, the hilltop avenue and other public places without fear of personal risk.

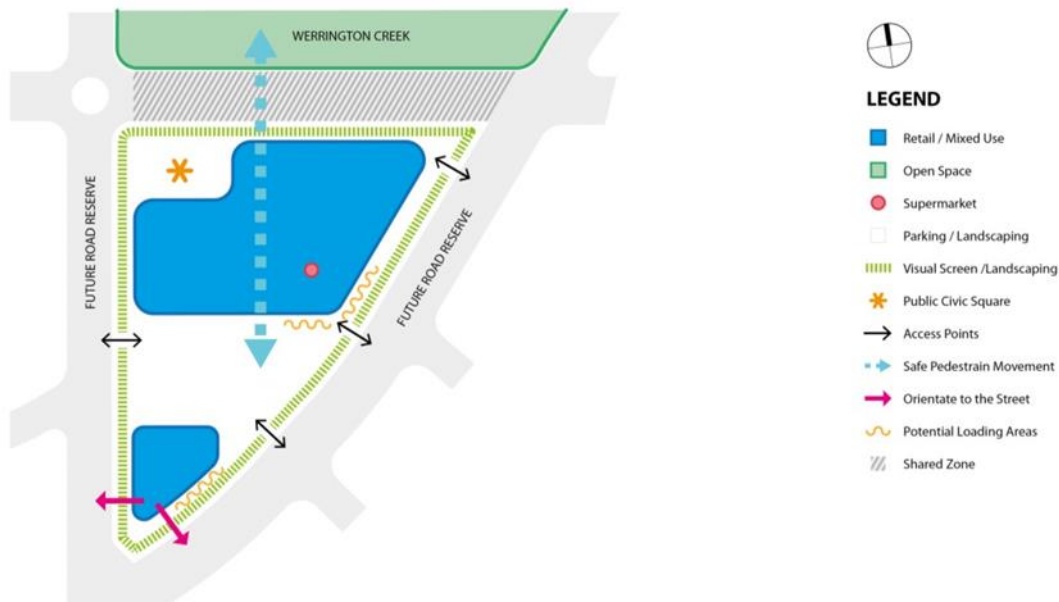
Controls

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.

6 Village Centre

This section applies to development on land covered by the Orchard Hills North Village Centre, as shown in **Figure 35** below.

Figure 35 Village Centre



6.1 Urban Layout Context

Objectives

- Create a vibrant focal and gathering point of the Orchard Hills North community.
- Develop a local centre that is of high quality, functional and provides for a mix of uses for the local community.
- Create a landscaped edge with a safe public domain/community facility linking the Werrington Creek open space to the retail centre.
- Ensure the scale of retail is complementary to local and regional retail hierarchy.
- Provide retail and mix of uses surrounded by adequate parking that facilitate safe pedestrian and public transport access to the centre.
- Provide active uses at street level which facilitate safety and passive surveillance.

Controls

- Development of the village centre shall generally be in accordance to the concept shown in **Figure 35**.
- The local centre will be established with a primary anchor and built form elements surrounding it, such as a pedestrian plaza, which will create permeability and amenity between the centre and the surrounding area.
- Primary vehicular access will be along the eastern boundary, and secondary access will be on the northern boundary of the centre.
- The centre shall include an open space in the northern area adjacent to the Werrington Creek open space.

5. Active frontages should define the central public places within the Village Centre.
6. Off-street parking areas, are to be defined by, and separated from public roads by vegetation.

6.2 Land use and place

Objective

- a. The development of a Village Centre will accommodate retail, shop top housing, commercial, mixed use areas and other community uses for the residents of Orchard Hills North.
- b. The Village centre is to be accessible and provide an attractive interface with the surrounding uses and major road corridors.
- c. The area of open space will create a northern interface between Werrington Creek and the village centre.
- d. Convenient and safe access for pedestrian, cyclists, public transport/taxis and motor vehicles
- e. Ensure that commercial development is designed so that any potential adverse impact on the amenity of neighbouring residential development and other sensitive land uses are managed and minimised.

Controls

1. To provide for a local Village centre with uses that is generally consistent with the Concept Plan in Figure 34.
2. The location of a supermarket should be in accordance with the indicative Context Plan.
3. Community uses are adjacent to the Werrington Creek frontage open space to maximise use of the amenity and contribute to passive surveillance.
4. Development applications for the Village Centre are to demonstrate how potential conflicts between uses and activities are to be managed and minimised.
5. Residential uses can be located towards the perimeter of the Village Centre to provide passive surveillance and define the edge of the Village Centre.
6. Development Applications may be required to address the objectives and controls set out in the Noise and Vibration section of the Penrith DCP 2014
7. Development Applications for the relevant commercial, mixed-use and other non-residential development may require the submission of a Noise Impact Assessment.

6.3 Built form

Objective

- a. To encourage a high standard of built form to support a quality and attractive environment within the Village Centre.
- b. The built form and character of the new development should contribute to an attractive public domain and produce a desirable setting for its intended uses.
- c. Provide innovative and environmentally responsible design that achieves energy efficiency and renewable energy outcomes.
- d. To ensure that external materials and finishes complement the landscaping and urban design of the development.

Controls

1. Long continuous walls and facades are to be avoided. All walls, particularly those addressing the peripheral road boundary, are to incorporate architectural design treatments to reduce the visual mass and bulk.

2. Setbacks from the public roads are to be generally consistent with those shown in Figure 34. Access internal roads, architectural features and other projections such as car park ramps, which may encroach into this setback area, are subject to appropriate design guidance by council officers and assessment.
3. Incorporate a diversity of renewable energy systems to ensure the Village centre can achieve a 100% renewable energy supply by 2030, and buildings are designed to minimise energy demand.
4. Building design and construction materials and techniques minimise waste and ensure resource efficient construction.
5. Built form, including shop top housing on the southern part of the site should not orientate its building rear to the public roads.
6. Buildings utilise smart technologies to promote performance, sustainability, resilience and resource management throughout their operational lives.
7. Built form adjacent to Werrington Creek is to address the open space areas to maximise amenity and contribute to passive surveillance.
8. Façade/landscape treatment for the interface of the council facility with the riparian zone shall be sensitively designed taking into account adjoining development. Hard concrete edges should be avoided.
9. Maximise glazing for retail uses but break glazing into modulated rhythmic sections to avoid long expanses of glass.
10. Village centre built form shall be sleeved on two sides in order to ensure relationship to the place around the centre and ensure surveillance of the public domain. Opportunities to be considered, include:
 - - Passive design
 - Water conservation – incorporation of grey-water and black-water reticulation systems; rainwater harvesting and reuse for toilet flushing
 - Renewable energy and energy efficiency
 - Indoor environment quality

6.4 Access

Objectives

- a. To ensure appropriate safe and efficient vehicular access to the site.
- b. To implement effective traffic calming measures to promote a pedestrian friendly zone.

Controls

1. Access in and out of the site is to be informed by a traffic assessment.
2. Loading areas are to be accessed primarily from the eastern road and loading areas are to include visual and acoustic screening to protect the amenity of residents.

6.5 Public Domain

Objectives

- a. As a major public community hub, the public realm shall be open, safe, attractive and offer a variety of spaces to activate the Village Centre.

Controls

1. The current council road reserve along the northern boundary shall be closed and form part of an open space and community facility that forms the northern part of the village centre.

2. A landscape plan, including lighting, is to be submitted with the development application, and it is to include street tree planting capable of providing shade.
3. Landscaping forms an entry on the southern corner of the village to create an aesthetic visual attraction.
4. The site shall provide a landscaped edge to provide an attractive and cooler environment for the centre, with landscaping throughout the at grade car parking areas.
5. A public plaza shall be provided within/adjacent to the retail centre to provide a hug or place for the community to meet and relax.
6. Good quality street furniture, lighting, paving, planting and the like should be provided on the site, and consider more sustainable design features such as LED lighting, permeable paving, WSUD for planting and smart poles.
7. Public art is to be incorporated at key focal points to promote community identity.
8. Development applications for subdivision, public open space and community facilities are to incorporate the principles of Crime Prevention Through Environmental Design (CPTED).

6.6 Parking and loading

Objectives

- a. Parking is provided on site so to not affect the traffic on the adjacent streets
- b. Onsite parking includes undercroft and surface (at-grade) parking for vehicles and bicycles.

Controls

1. Off-street basement or undercroft parking areas are to be appropriately screened from public streets and residential areas.
2. Off-street surface parking areas are to provide an adequate amount of shade, either by trees or shade canopies to provide amenity and minimise microclimate (heat island) impacts.
3. Electric vehicle charging point parking spaces are to be provided on site.
4. Car parking is to be provided generally in accordance with the rates outlined in the Transport, Access and Parking Section of the Penrith DCP.
5. Accessible car parking spaces are to be provided and designed in accordance with the requirements with the Building Code of Australia and AS2890 (Parking facilities – Off Street Parking) and, where appropriate AS 1428.
6. The car park and all its components including but not limited to driveway, aisle and ramp widths, ramp grades, and car space dimensions are to comply with the relevant Australian Standard (AS 2890.1 2004) – Parking Facilities – Off-Street Car Parking, as amended.
7. Natural ventilation is to be provided to underground parking areas with ventilation grills and structures that are integrated into the overall façade of the development and located away from the primary street frontage.
8. Proposals for basement parking areas are to be accompanied with a geotechnical report prepared by appropriately qualified professional and other supporting information to the Development Application.
9. Parking signage is to be provided in the Village Centre precinct.
10. Loading docks associated with the development shall be provided on-site, with all loading and unloading activities occurring on-site.
11. All loading and 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) provided separately for commercial/retail and residential uses, where part of a mixed use development, and
- v) designed for commercial vehicle circulation and access complying with AS 2890.2.

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.

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 irrigation in open space parks should be considered as a means to mitigate urban heat.
8. Incorporate Water Sensitive Urban Design (WSUD) elements to manage the urban heat island by having:
 - Two open water bodies of area;
 - Parks, green open spaces and playing fields;
 - Vegetations along the proposed roads and streets and basins
 - Vegetated drainage corridor
 - WSUD measures
 - 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 (December 2021)
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.
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
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

Where applicable, Subdivision Development Applications will need to be assessed against the requirements of section 4.4 Contaminated Land of Part C4 of the Penrith Development Control Plan 2014.

Where applicable Subdivision Development Applications will be accompanied by a Stage 1 Preliminary Investigation report as part of the submission documentation.

If required, a Remedial Action Plan will be provided prior to issue of the Construction Certificate to remediate contamination.

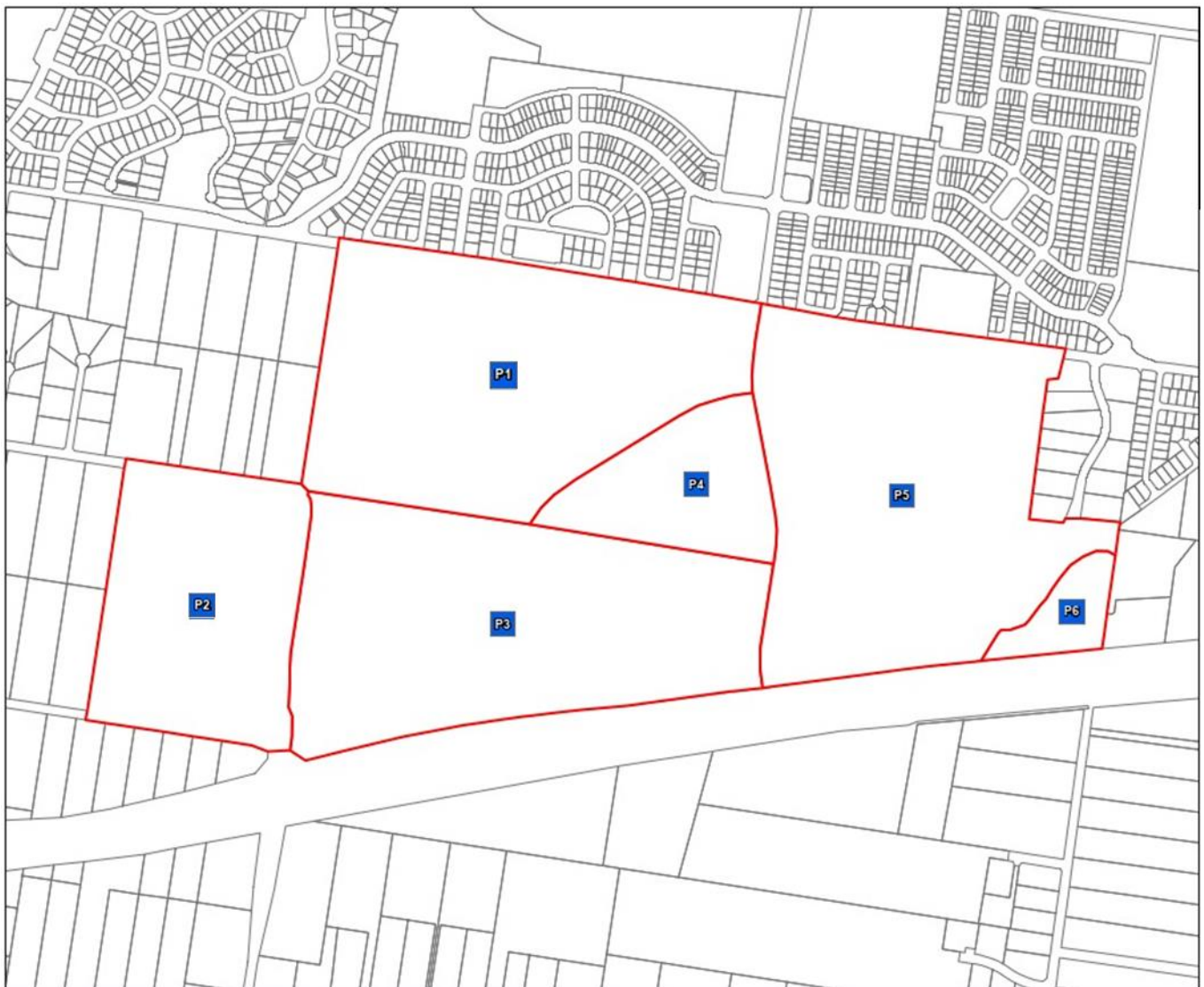
7.4 Development staging

It is envisaged that the development will be staged generally in accordance with the indicative staging plan, Figure 32, subject to infrastructure availability/provision and market demand.

The delivery of individual developments must be considered in the context of:

- a. Available and future infrastructure;
- b. Site access;
- c. Flood control;
- d. Public domain delivery;
- e. Traffic and parking limits; and
- f. As each development is delivered, the supporting infrastructure must be provided. All relevant supporting studies must be completed with each major development application.

Figure 36 Indicative staging plan



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:
 - a. Power,
 - b. Water and gas supply,
 - c. Drainage works,
 - d. Flood control works,
 - e. 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 **Transport Assessment Report**.
6. Generally, land adjacent to existing rural areas are to be delivered last.

8 References

1. Place Design Group - Orchard Hills North – Open Space Strategy (October 2021).
2. J. Wyndham Prince - Orchard Hills North Precinct - Stormwater and Flood Management Strategy (December 2021)
3. SCT Consulting - Orchard Hills North Rezoning – Traffic Management and Accessibility Plan (April 2021).

