

WARNERVALE TOWN CENTRE

DEVELOPMENT CONTROL PLAN 2012



Warnervale Town Centre
Development Control Plan
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NSW Department of Planning and
Infrastructure 2012
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Coloured Drawings

by Tim Throsby

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Introduction

1.1 PURPOSE

This Development Control Plan (DCP) has been prepared in accordance with Part 3, Division 6 of the Environmental Planning and Assessment Act 1979 (the Act), and Part 3 of the Environmental Planning and Assessment Regulation 2000. The DCP provides more detailed provisions to expand upon the relevant provisions of the Wyong Local Environmental Plan 1991 for development of the Warnervale Town Centre (WTC) Site.

Under Section 79C of the Act, the consent authority is required to take into consideration the relevant provisions of this DCP in determining an application for development of the WTC.

Variations to the controls in this DCP will be considered on merit, subject to justifications being provided in a Development Application for the departure from the controls, and demonstration that the impacts will be adequately managed.

1.2 NAME OF PLAN AND COMMENCEMENT

This plan is called the Warnervale Town Centre Development Control Plan (WTC DCP). This DCP was originally adopted by the Director-General of the Department of Planning and Infrastructure on 11 November 2008. A revised version was adopted on 7 September 2012. This development control plan repeals the Warnervale Town Centre Development Control Plan (WTC DCP) 2008 dated 11 November 2008.

1.3 LAND AND DEVELOPMENT COVERED BY THIS PLAN

This DCP applies to all development on certain land at Warnervale as shown in **Figure 1.1**. This DCP applies to all development permissible on the land covered by this plan under the Wyong Local Environmental Plan 1991.



FIGURE 1.1 LAND AND DEVELOPMENT COVERED BY THIS PLAN

1.4 RELATIONSHIP WITH OTHER PLANNING DOCUMENTS

This DCP should be read in conjunction with the relevant provisions of the Wyong Local Environmental Plan 1991 and other relevant state planning policies. This DCP should also be read in conjunction with relevant policies and chapters of Wyong Shire DCP 2005 (see Section 8.5). In the event of any inconsistency between this DCP and any other DCP or policy of council, this DCP will prevail.

State Environmental Planning Policies (SEPPs) apply to the WTC, where relevant.

The NSW Government's State Plan and Metropolitan Strategy and the Central Coast Regional Strategy 2006-31 provide the strategic planning framework and context to this DCP.

1.5 THE CONSENT AUTHORITY

Wyong Shire Council is the consent authority for all development on the WTC, except for State significant development (SSD) and State significant infrastructure (SSI), as provided under State Environmental Planning Policy (State and Regional Development) 2011 (the SEPP).

Projects that fall into these categories will be assessed by the Department of Planning and Infrastructure.

Projects will only be assessed as SSD if they meet or exceed a specified threshold. The SEPP has identified that development for retail premises having a floor space area of more than 5,000 square metres and a Capital Investment Value of more than \$10 million at Warnervale Town Centre will be assessed under the SSD system.

Compliance with the provisions of this DCP does not necessarily guarantee that consent will be granted to a Development Application (DA). Every DA will be assessed with regard to the aims and objectives of the Act, other matters listed in section 79C of the Act, this DCP, and any other relevant and applicable policies adopted by the consent authority.

1.6 EXPLANATORY NOTES

Terms used in this DCP are defined in the Wyong Local Environmental Plan 1991 and in the Glossary in Section 8 of this DCP. Section 8 also provides guidance to applicants on the lodgement of DAs.

Further advice on lodgement procedures can be obtained from Council, additional explanatory notes and policies issued by Council, and from the Department of Planning and Infrastructure.

1.7 MONITORING AND REVIEW

Wyong Shire Council is required to keep the LEP provisions and DCP under regular and periodic review under Section 73 of the Act. Wyong Shire Council is committed to this process to ensure that the Plans continue to be useful and relevant.

Wyong Shire Council will review the LEP provisions and DCP every five years to ensure the objects of the Act are achieved to the maximum extent possible, having regard to relevant changing circumstances.

2.1 REGIONAL CONTEXT

The Central Coast Regional Strategy recognises the regional significance of the Warnervale Town Centre as a new retail, commercial and community growth centre to be developed over the next 25 years.

The WTC is located 5 km north of Wyong in the Wyong Local Government Area. It straddles the northern regional rail corridor and is approximately 1km east of the Wyong Employment Zone. It is bound by Hiawatha, Hakone and Sparks Roads and east of Bruce Crescent.

The WTC is 119 hectares and will service a broader future catchment of approximately 40,000 residents. It will accommodate between 6,000 residents and offer jobs, diverse community facilities, retail and commercial uses and public transport.

The WTC location plan is shown in **Figure 2.1**.



FIGURE 2.1 TOWN CENTRE LOCATION

2.2 VISION

The WTC will be a compact, well connected, high quality urban area linked to the new North Warnervale railway station, encouraging use of public transport and pedestrian activity.

A Town Centre Civic Precinct complementing the railway station will provide a range of retail, commercial, and community facilities.

A broad range of dwelling types will be provided across the WTC site to provide for different household needs and higher housing densities than those traditionally delivered in Wyong Shire.

The site will retain or enhance its vegetated and natural characteristics, offering a high quality living environment. Large areas of open space will be provided, including Hill Top Park.

Key objectives are:

- To create a vibrant, pleasant safe town centre with housing, jobs, services, community facilities and entertainment for residents and visitors.
- To achieve a high standard public domain and architectural design quality.
- Integrate community facilities with the town centre.
- Encourage the use of walking, cycling and buses.
- Provide comfortable access grades throughout the town centre to ensure equity in accessibility.
- Provide a built form in a treed setting and reflect the topography and environmental and visual features.
- To facilitate urban development that achieves highest environmental sustainability objectives.
- To provide a variety of housing types to cater for different household types and demographics, and improve affordability.
- Provide housing with a high standard of residential amenity.
- Promote recreation opportunities.
- Protect and enhance riparian corridors, nature conservation areas, significant trees and local vegetation.



Overview

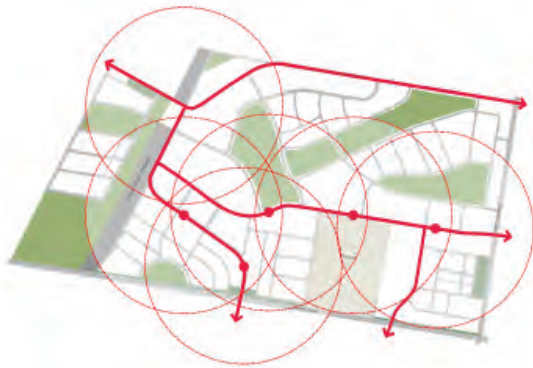


Figure 2.2: Well connected
The WTC will be serviced by a new railway station and bus routes to surrounding districts. The permeable street layout will promote walking to local services and attractions.



Figure 2.3: Protection of the environment
Protected riparian corridors, nature conservation areas and habitat trees will contribute to the landscape character of the WTC.

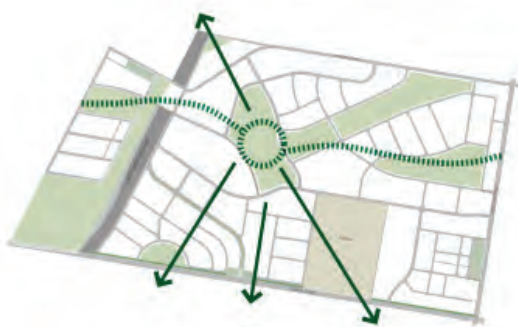


Figure 2.4: Hill top location
The Town Centre Civic Precinct will be established on the elevated plateau focusing on the hill top park.



Figure 2.5: Complementary mix of uses
The Town Centre will have a good provision of community, retail and entertainment facilities.

FIGURES 2.2-2.5: DESIGN PRINCIPLES



FIGURE 2.6 ARTIST'S IMPRESSION OF CIVIC CENTRE



FIGURE 2.7 ILLUSTRATIVE TOWN CENTRE PLAN

2.3 CHARACTER PRECINCTS

The WTC has the following distinct character precincts as shown in **Figure 2.8**:

- a) Town Centre Civic and Civic Fringe Precincts
- b) Town Centre Western Precinct
- c) Residential Northern Precinct
- d) Residential Western, Eastern and Southern Precincts
- e) Open Space, Conservation Areas and Detention Basins

The precinct character objectives are described below, and the controls in this DCP provide specific measures to reinforce the character of each precinct.

Town Centre Civic and Civic Fringe Precincts

The Town Centre Civic Precinct will be the heart of the Warnervale Town Centre. The focus will be on a well designed Main Street running east to west, linking the new railway station to Hill Top Park.

The Main Street will be framed by 4-6 storey mixed use buildings providing a range of retail and commercial uses with active street frontages. Pedestrian amenity will be enhanced by the provision of awnings, tree lined footpaths, and space for outdoor dining.

Community facilities are to be fully integrated with the town centre functions to optimise safety and access.

A Civic Square will be provided off Main Street providing a space for people to meet and gather.

The northern end of the town centre, on the eastern side of the rail line is favoured for bulky goods and other functions.

The Civic Fringe Precinct will allow for a mix of uses, including higher density residential dwellings, to complement the Civic Precinct and provide a transition to residential areas further south.

Town Centre Western Precinct

This precinct will have a range of uses and will be situated directly to the west of the proposed North Warnervale railway station. It will provide a mix of uses complementary to the Town Centre Civic Precinct. It will have its own identity focusing on the ridge top public park and small area of commercial, retail and residential development to the west of the railway station.

A new bridge north of the train station will connect the Town Centre Civic Precinct to this precinct and provide direct connection to the transport interchange and commuter parking. A footbridge will connect to Main Street and the Civic Precinct.

Buildings will be built to the street alignment with ground floor retail/commercial uses.

Residential Northern Precinct

The precinct has a significant number of habitat trees requiring protection. This precinct will have a natural landscape character with sensitively designed residential buildings.

Buildings will step down the hill from narrow local streets. Driveways will be narrow and discrete and car parking will be located within building footprints.

Residential Western, Eastern and Southern Precincts

The three precincts will be characterised by well designed dwellings offering diverse housing choice on landscaped streets. The precincts will be within walking distance of public transport and local parks.

Open space, conservation areas and detention basins

These areas encompass the Riparian Corridor, Western Ridge Park, Eastern Ridge Park, Heath Wrinklewort Environmental Conservation Reserve, Hill Top Park and other, smaller, local open space, some of which will act as stormwater detention areas.

These areas will offer recreation opportunities for local residents and the wider community. The WTC’s vegetated character including the ridgeline on the northeastern side of the school and the Heath Wrinklewort Reserve will be protected. Significant habitat trees are to be retained where possible and substantial tree planting will reinforce the area’s vegetated character.



FIGURE 2.8 TOWN CENTRE PRECINCTS

2.4 DEVELOPMENT TARGETS

Residential Density

The population target for the WTC is 4,200 people and 1,646 dwellings. A mix of housing types and forms are to be provided across the WTC.

Objectives

- To provide appropriate densities in proximity to the Town Centre Civic Precinct and railway station in order to promote walking and cycling.
- To ensure the residential density targets identified in the NSW Government’s Metropolitan Development Program and confirmed in the Central Coast Regional Strategy 2006-31 are achieved.
- To provide a range of residential development densities and types including housing for seniors or people with a disability, to cater for changing demographics.

Controls

- In order to ensure the population target is achieved, applicants are required to demonstrate to the consent authority (as part of a subdivision or development application), that the density targets shown in **Table 1** will be achieved.
- Where variation to the density target is proposed, an applicant is to demonstrate to the consent authority that those targets can be achieved on a per hectare basis, as a minimum.
- The net residential densities for mixed use, medium and low density housing, and the indicative % target for each housing form and each precinct at **Table 1**.

Table 1: Net Residential Density Targets

Precinct	No. of lots/dwellings			Total
	Single	Attached	Apartment	
1*	120	10	0	130
2	200	110	0	310
3	270	0	0	270
4	85	40	0	125
5	0	0	44	44
6a			376	376
6b		56	104	160
7a			136	136
7b	95	0	0	95
Total	770	216	660	1646

*excludes 1.3ha Medical Centre

Retail, business and bulky goods uses

Objectives

- To provide a range of retail, business, bulky goods and support uses to service the needs of people living, working and visiting the town centre, as well as the broader Warnervale area.
- To provide an impetus for the relocation of Warnervale railway station to the north of Sparks Road to provide an integrated public transport interchange for the North Wyong release areas.
- To maximise public transport access to the WTC.

Employment

Objectives

- To provide new jobs in a concentration of retail, community, entertainment, health and professional services servicing the local and broader population.
- To facilitate the achievement of the NSW Government's regional centres and employment hierarchy.

Controls

- a) Provide services including supermarkets, discount department store, shops, child care centres, schools, community facilities, banks, library, professional services, and medical centres.
- b) Provide details with DAs (over \$5 million and 1,000 m²) on the number and type of employment (operational and construction) to be generated.

Community Facilities

Objectives

- To provide a range of community facilities in locations accessible to residential areas and public transport.
- To provide a range of community facilities appropriate to the needs and demographics of the local population.

Controls

Community facilities including a library, community centre and cultural space are to be provided on the WTC site. The preferred location is within the Town Centre Civic or Civic Fringe Precincts.

Open Space

Objectives

- To provide a variety of open spaces to cater for a range of recreational, social and cultural activities.
- To develop designs for open spaces in recognition of their different functions, characteristics and environmental and natural qualities of the WTC.

Controls

- a) Public open space to be provided include the following:
 - Local parks (including Hill Top Park): 13ha
 - Heath Wrinklewort Daisy Reserve: 8.4ha
 - Riparian corridor: 5.7ha
 - Civic Square: up to 2,700m²
- b) Wyong Council's Public Domain Plan is to be used for detailed design for parks, riparian corridors and environmental conservation areas.



Traffic and Movement

This section contains the objectives and development controls relating to the street network, street design standards, the pedestrian and cycleway network, and the public transport network.

3.1 REGIONAL TRAFFIC

Warnervale Town Centre will provide a major node for regional traffic, this will generally occur via Hakone Road, Town Centre Entry Road and Sparks Road.

Links are also anticipated to the west (Warnervale Employment Zone) - for commercial purposes. The main traffic generation occurs from the south and south-east regions, particularly private vehicles.

3.2 STREET HIERARCHY AND DESIGN

Objectives

- To provide a hierarchy of interconnected streets for safe, convenient, functional and legible access within and beyond the WTC.
- To ensure a hierarchy of streets clearly discernible through variations in carriageway width, on-street parking, incorporation of water sensitive urban design, street tree planting, pedestrian and cycling amenities.
- To provide comfortable gradients to ensure equitable access to residents and visitors.
- To retain views and vistas to landscape features and visual connections to nodal points and centres.
- To ensure street design and character responds to existing environmental conditions including significant vegetation, topography and views.
- To minimise the need for cut and fill to assist in reducing subsoil and natural subsoil drainage disturbance.
- To optimise solar access opportunities for dwellings.

Controls

- a) The street network is to be provided generally in accordance with the street hierarchy map at **Figure 3.1** and street types map at **Figure 3.2**. First and second tier streets are required as shown. Variations to third tier streets are subject to consent of Council.
- b) Street design is to be provided to generally reflect the cross-sections shown in **Figures 3.3–3.15**. Widening of roads may be required at intersections, curves, for utility services etc.
- c) Design all residential streets (minor collector roads, access road/places, and minor access road/places) for 50km/h maximum. Applicants should consider traffic management in a subdivision application by either, road layout or appropriate speed reducing devices to reduce traffic speed.
- d) Any proposal for street tree planting within a road carriageway is to be in accordance with **section 3.3** of this DCP, and include:
 - detailed design addressing access and manoeuvrability of articulated vehicles, service vehicles street sweepers and cars;
 - consideration of safety for motorists, cyclists and pedestrians;
 - the impact of the root system on the carriageway;
 - ongoing maintenance of trees and carriageway; and
 - the relationship with future driveway access points.
- e) Footpaths are to be provided with a minimum width of 1.5m, and are to be setback 1m from the carriageway and 450mm from property boundaries.
- f) Street lighting is to comply with the relevant standards.



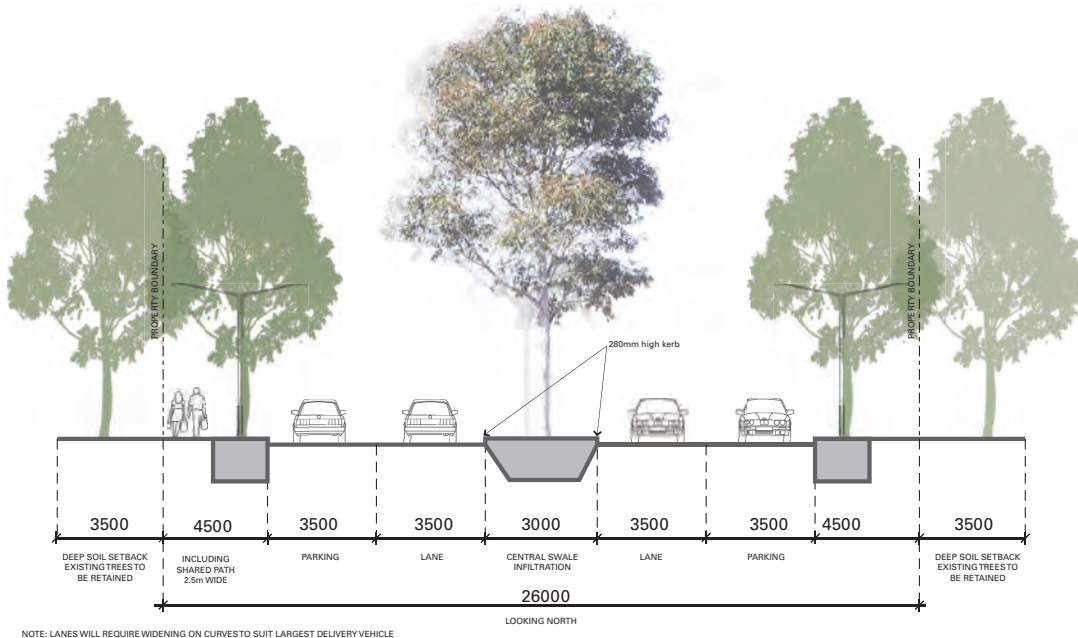
Traffic and Movement



FIGURE 3.1 STREET HIERARCHY



FIGURE 3.2 STREET TYPES



NOTE: LANES WILL REQUIRE WIDENING ON CURVES TO SUIT LARGEST DELIVERY VEHICLE

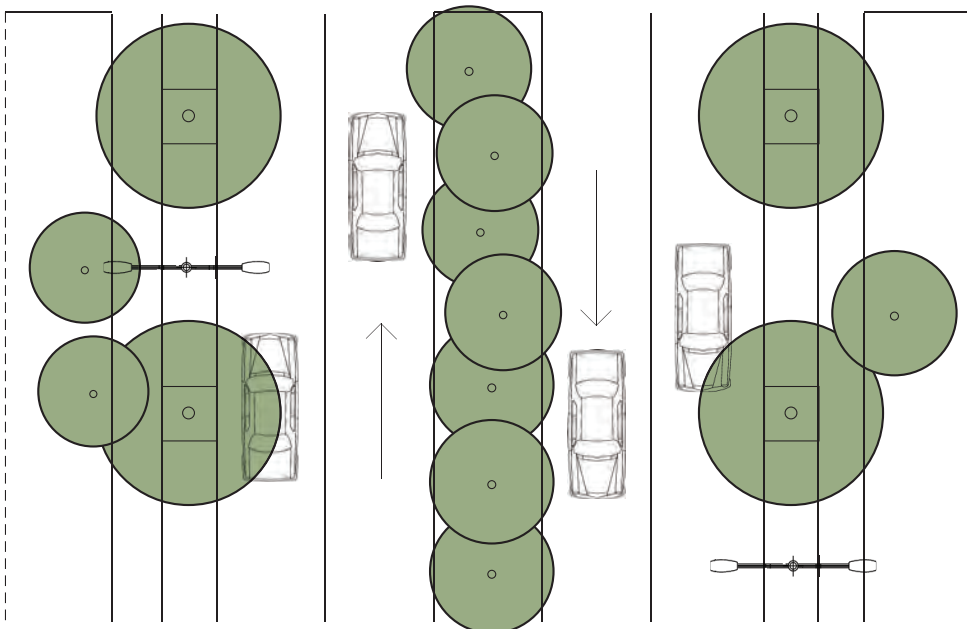


FIGURE 3.3 TYPE 1: TOWN CENTRE ENTRY STREET



Traffic and Movement

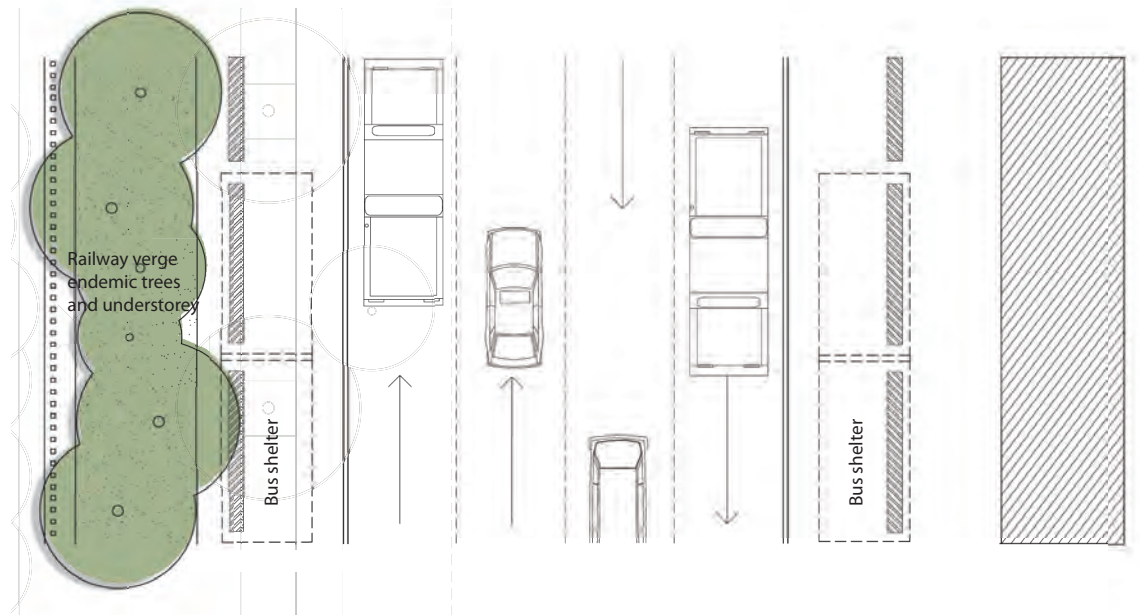
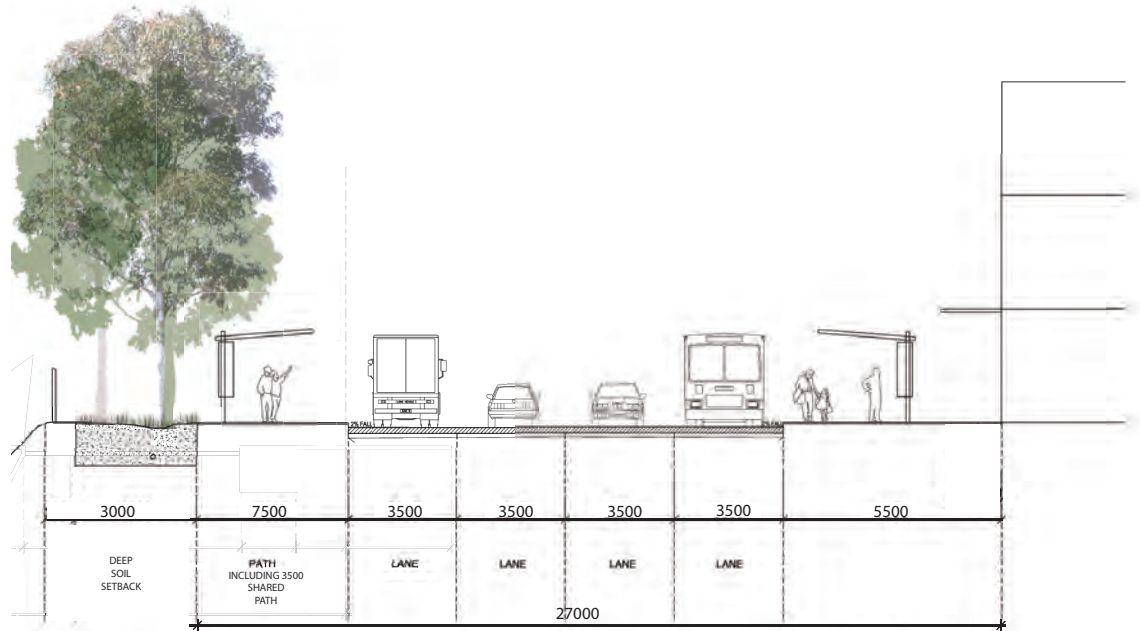


FIGURE 3.4 TYPE 2: TRANSPORT INTERCHANGE

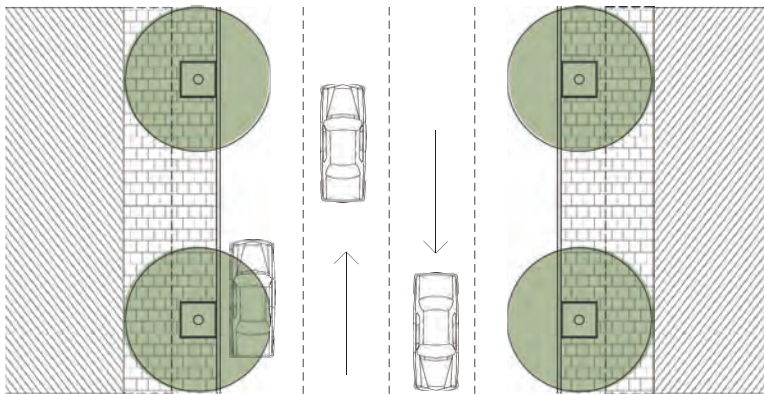
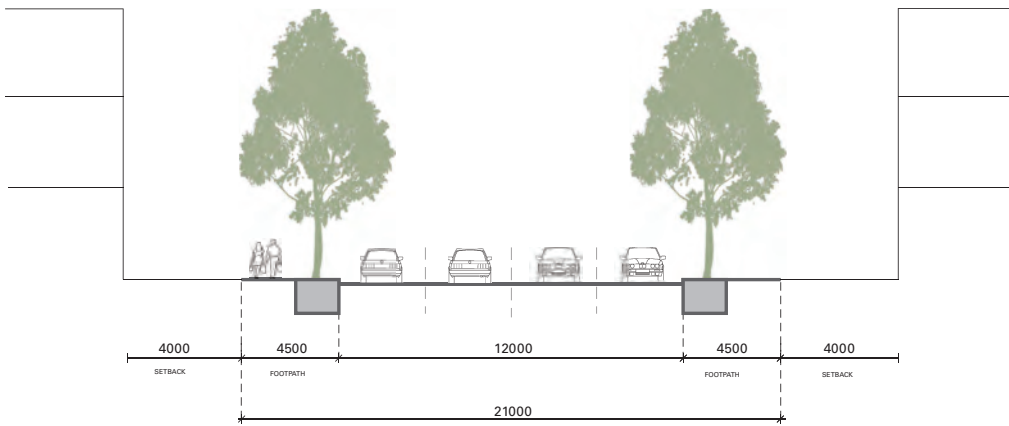


FIGURE 3.5 TYPE 3: MIXED USE/COMMERCIAL STREET



Traffic and Movement

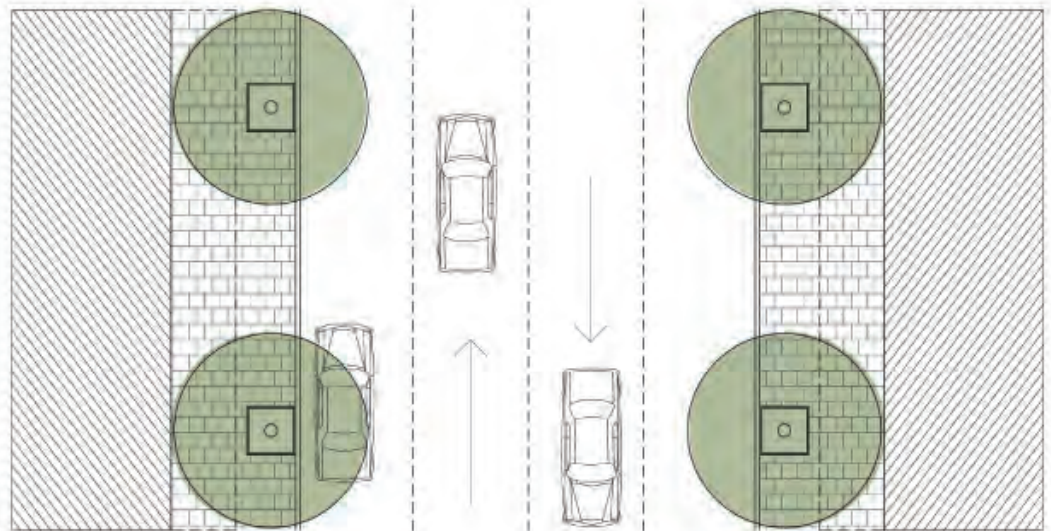
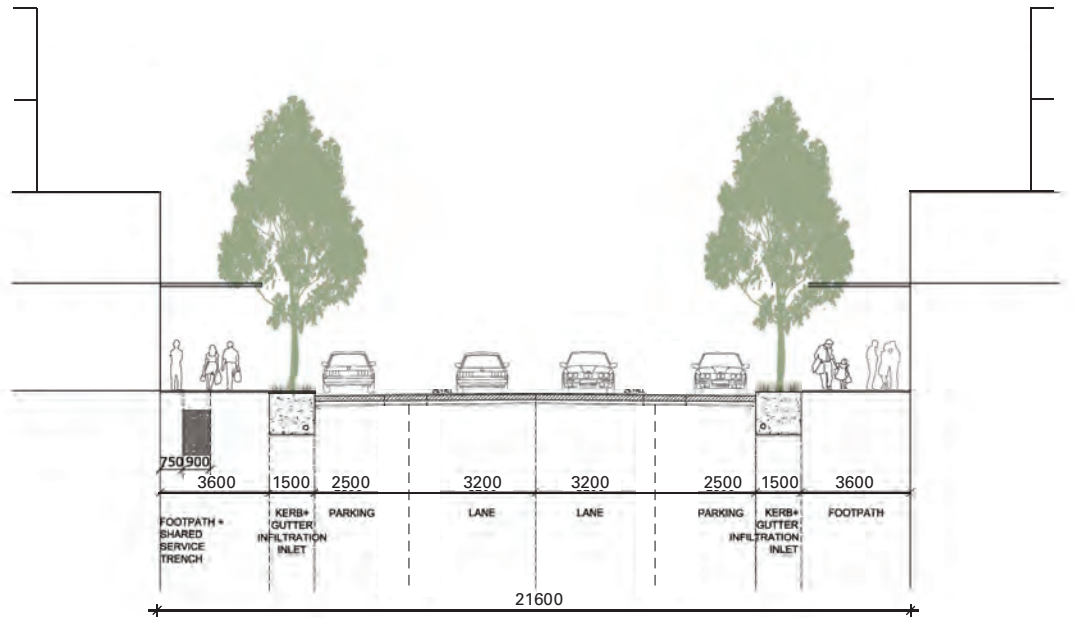


FIGURE 3.6 TYPE 4: TOWN CENTRE MAIN STREET

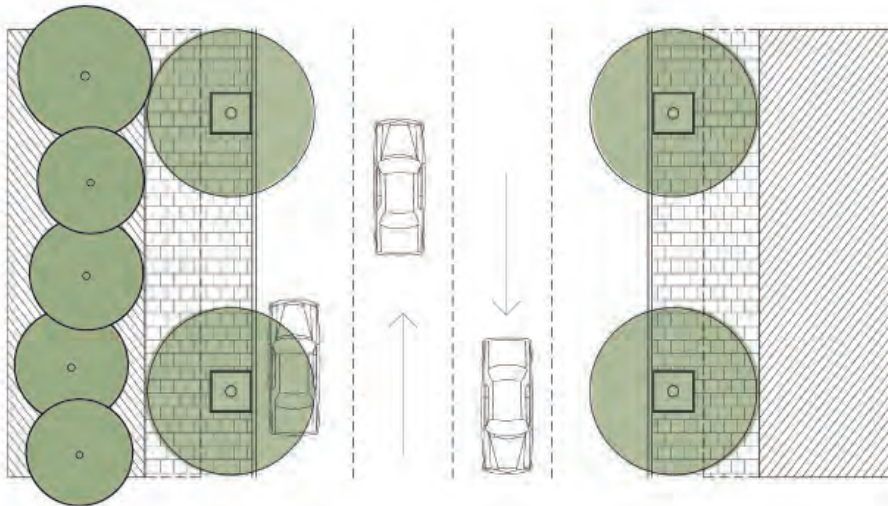
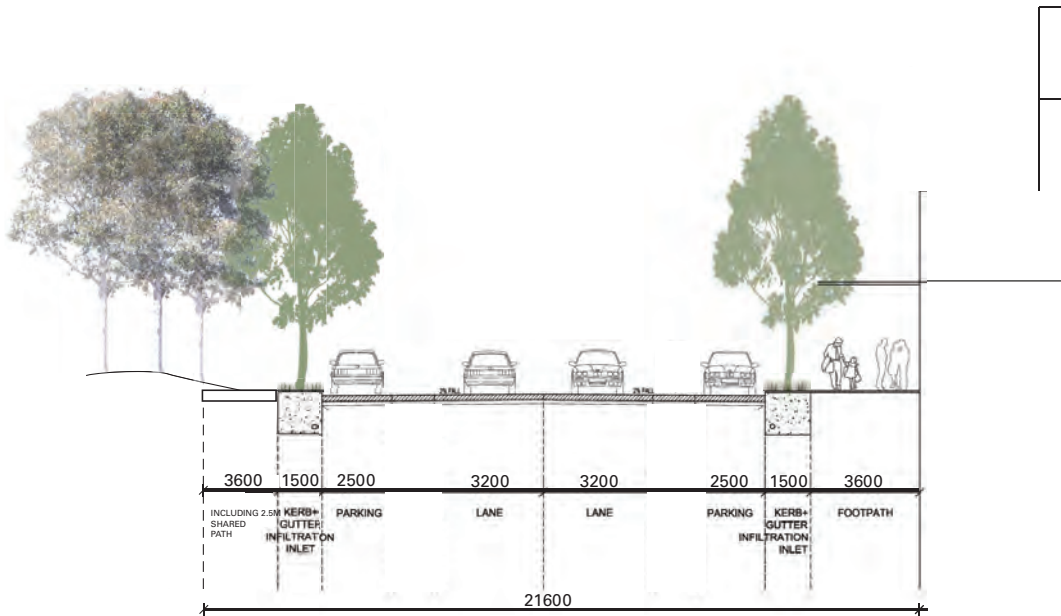


FIGURE 3.7 TYPE 5: TOWN CENTRE PARK EDGE STREET



Traffic and Movement

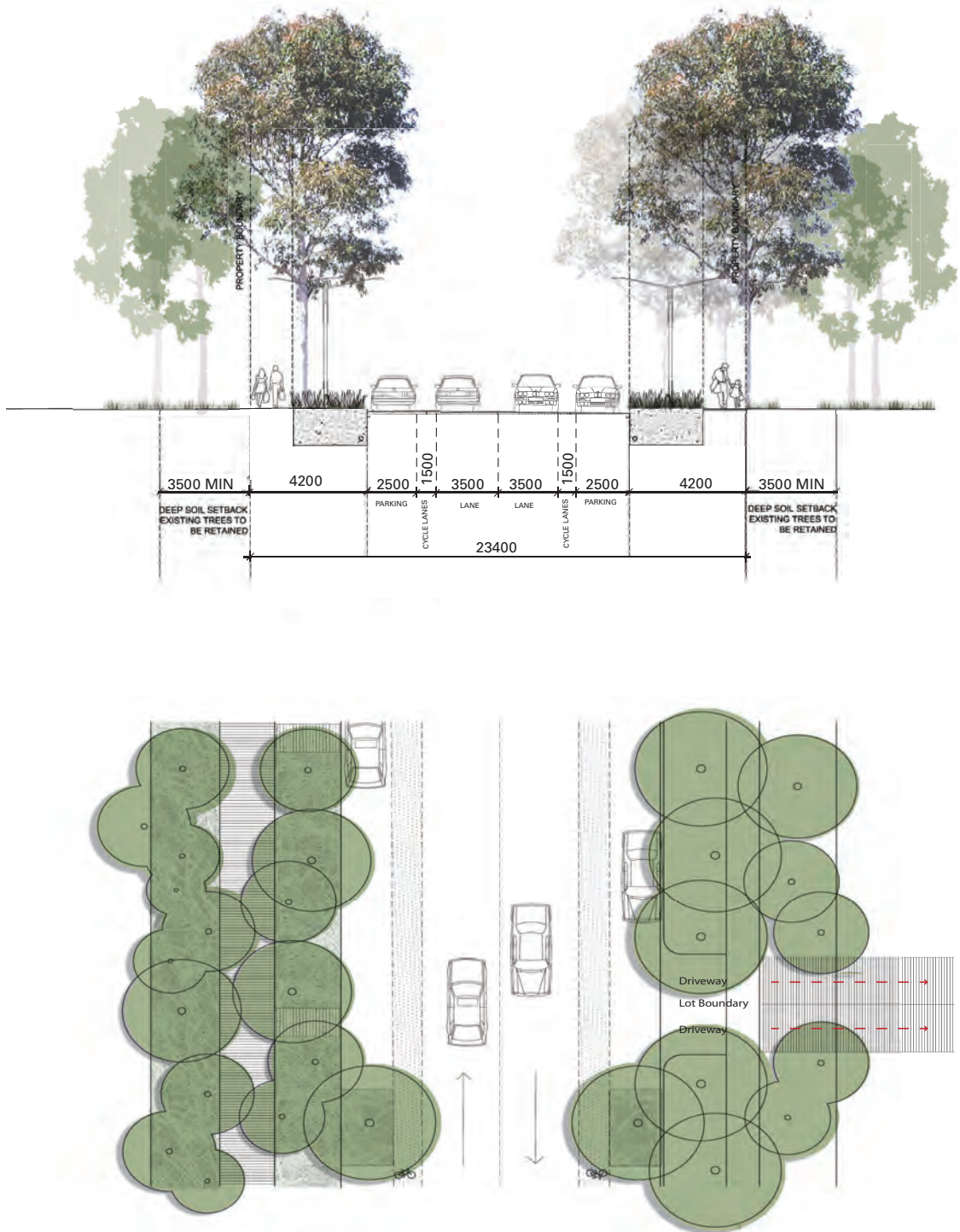


FIGURE 3.8 TYPE 6: MAIN STREET

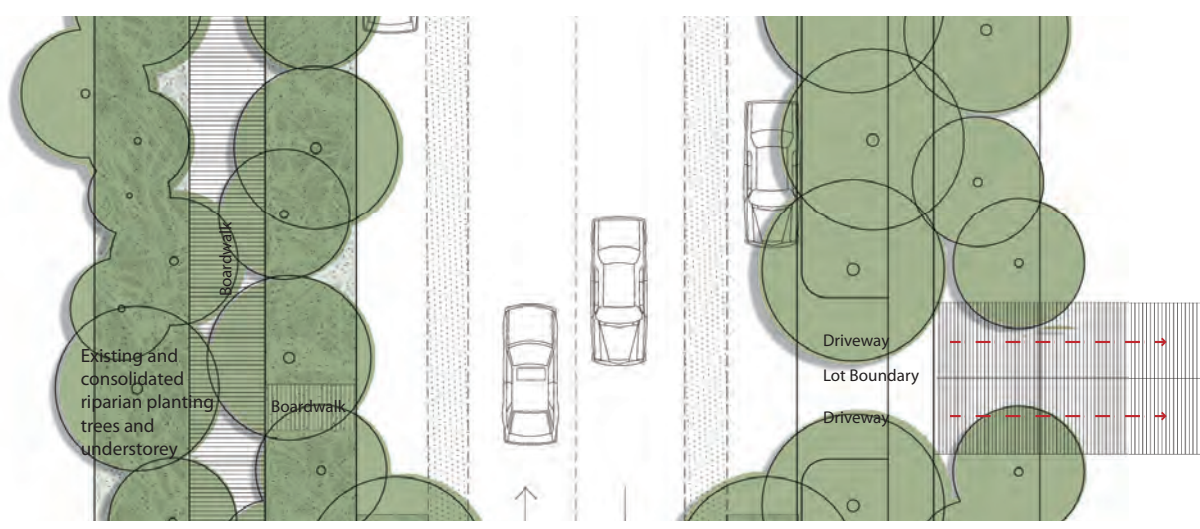
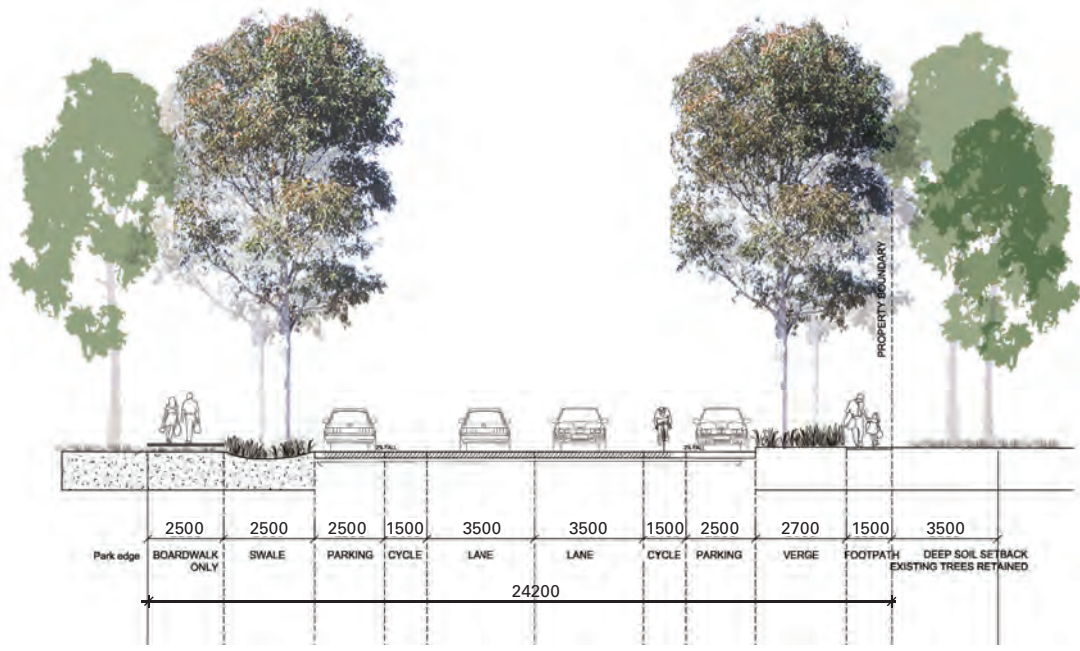


FIGURE 3.9 TYPE 7: PARK EDGE STREET



Traffic and Movement

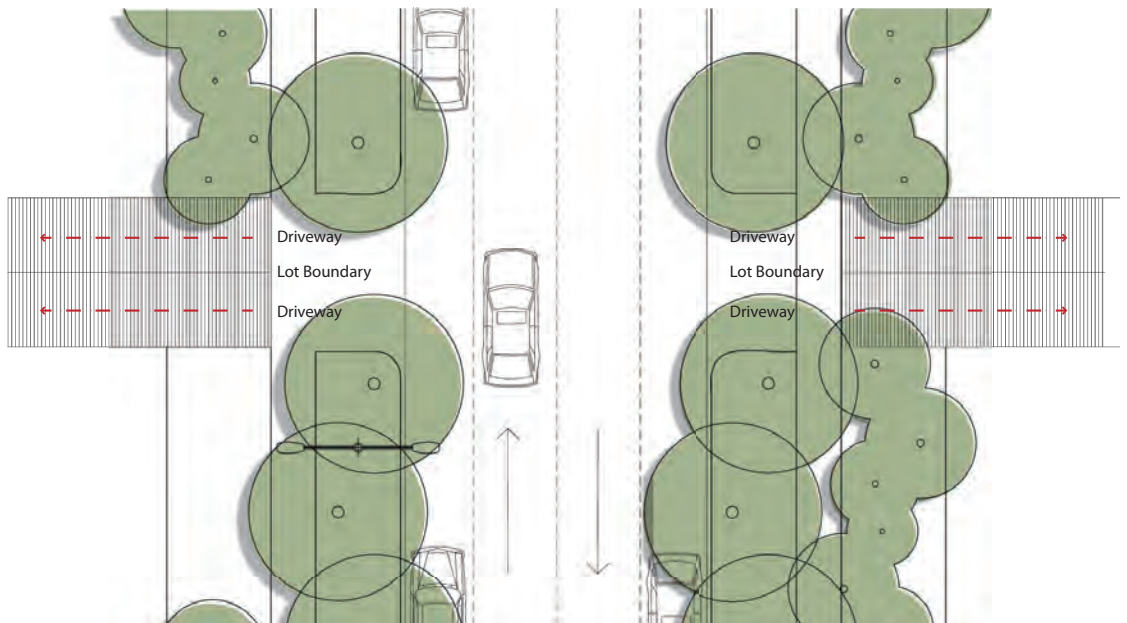
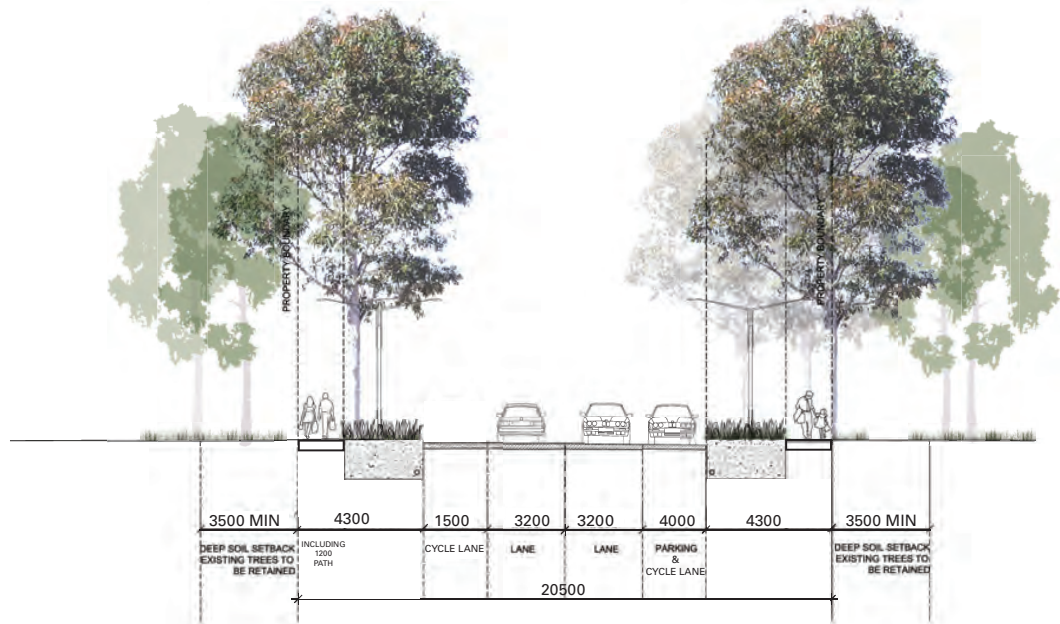


FIGURE 3.10 TYPE 8 CONNECTOR STREET

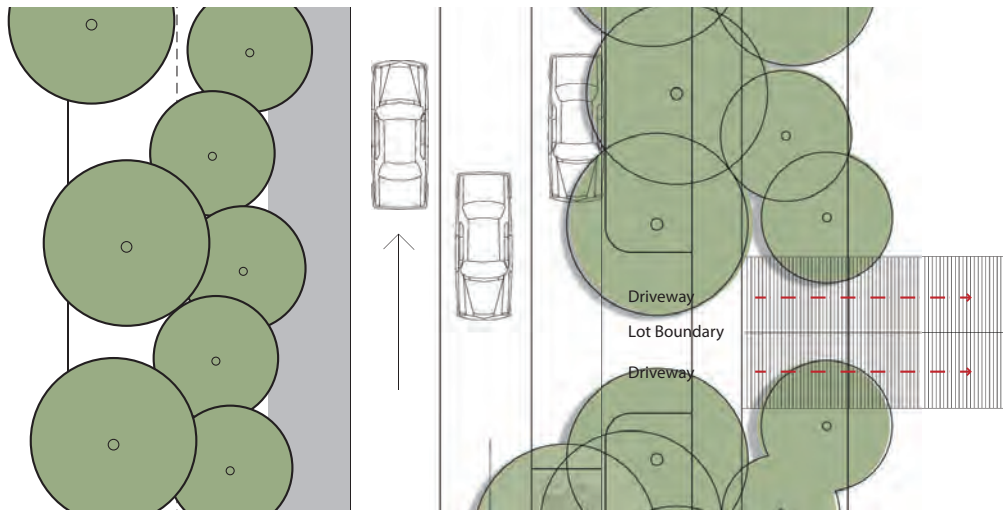
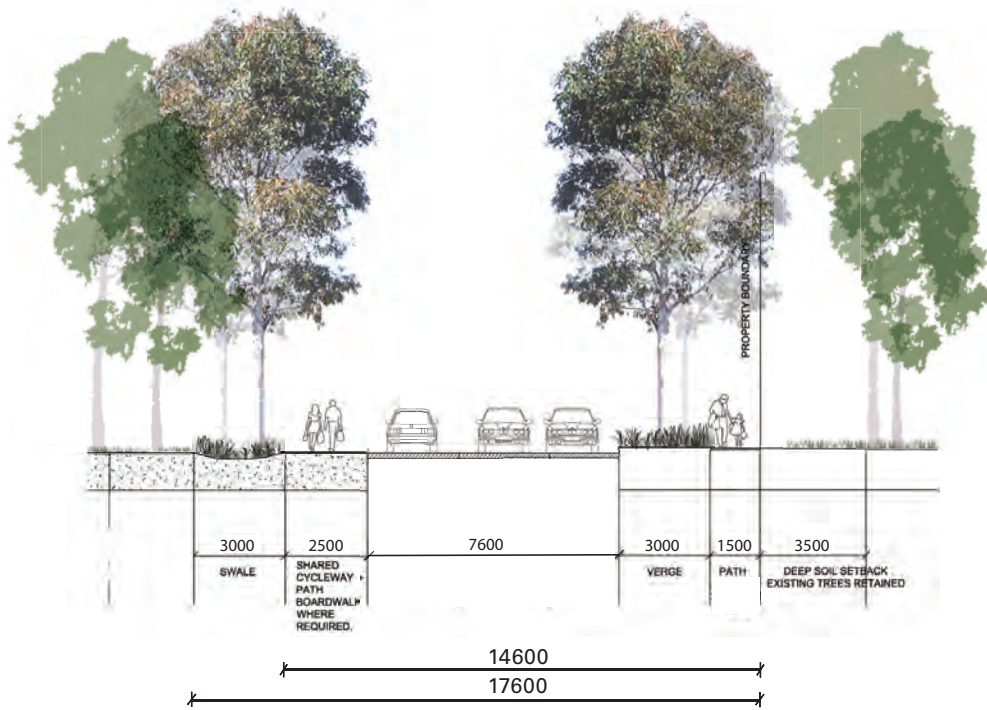


FIGURE 3.11 TYPE 9: LOCAL STREET WITH PARK



Traffic and Movement

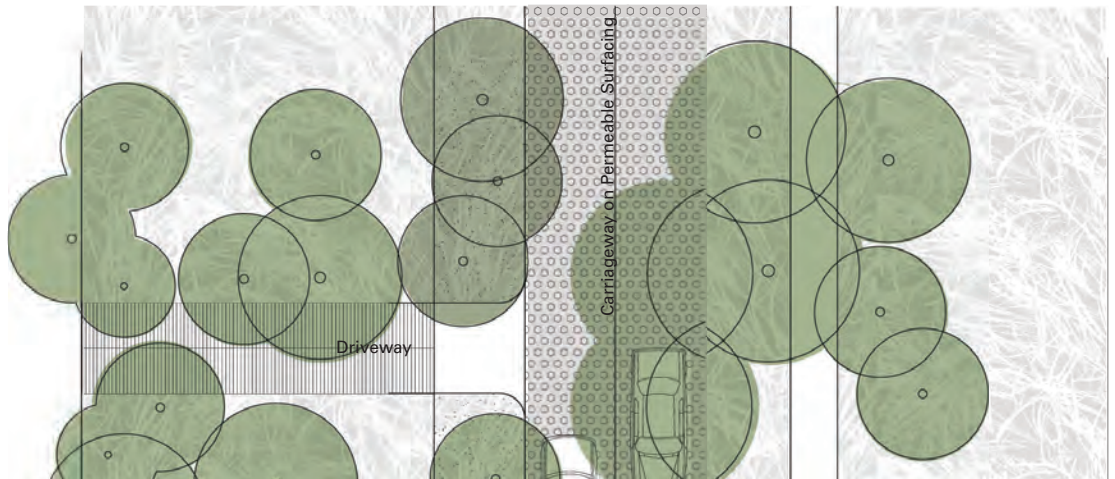
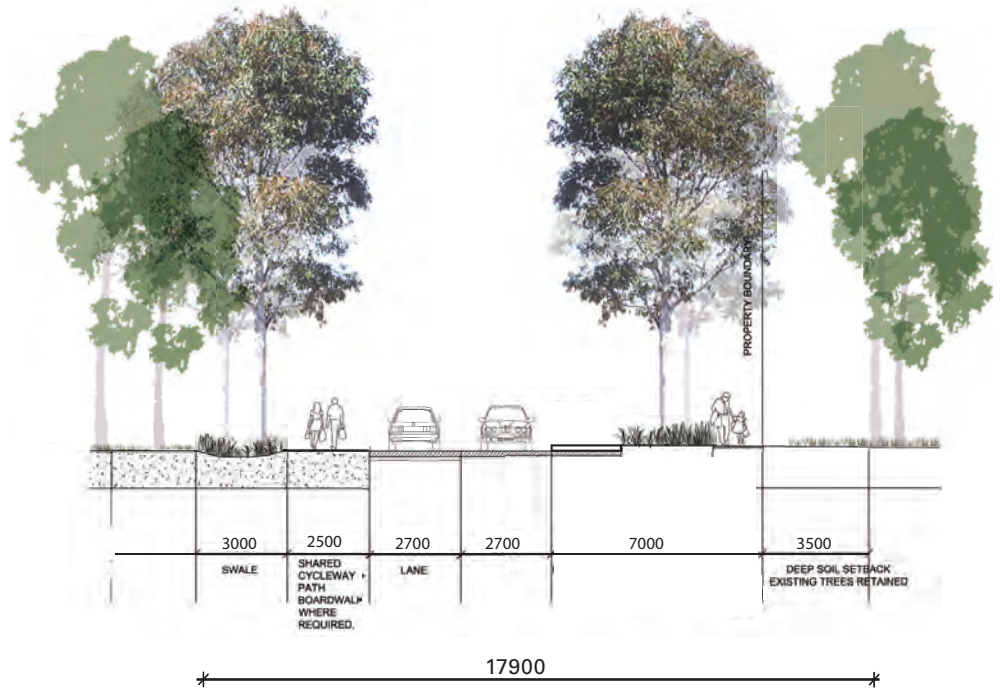


FIGURE 3.12 TYPE 10 FOREST STREET

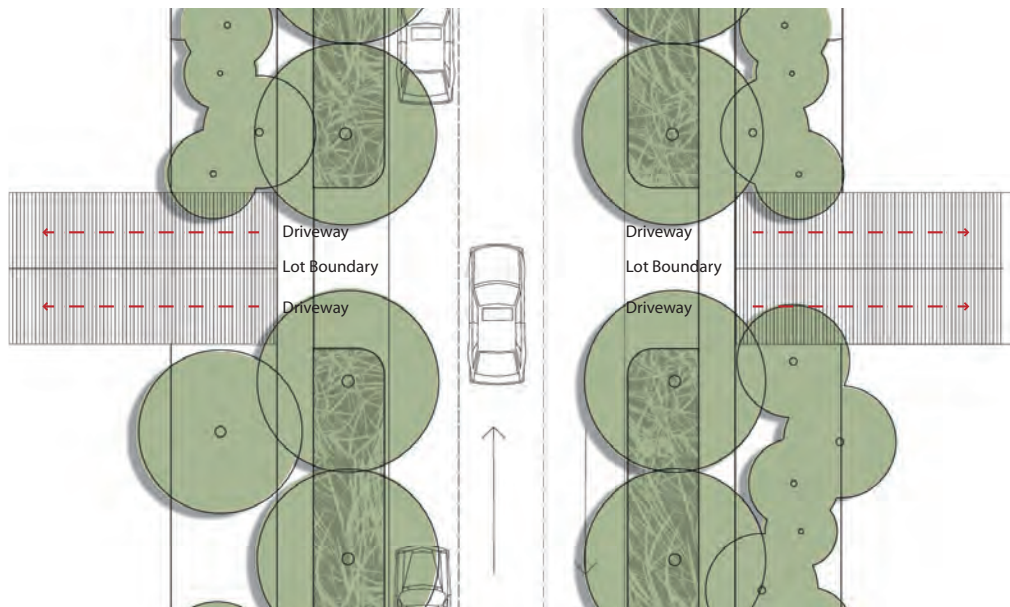
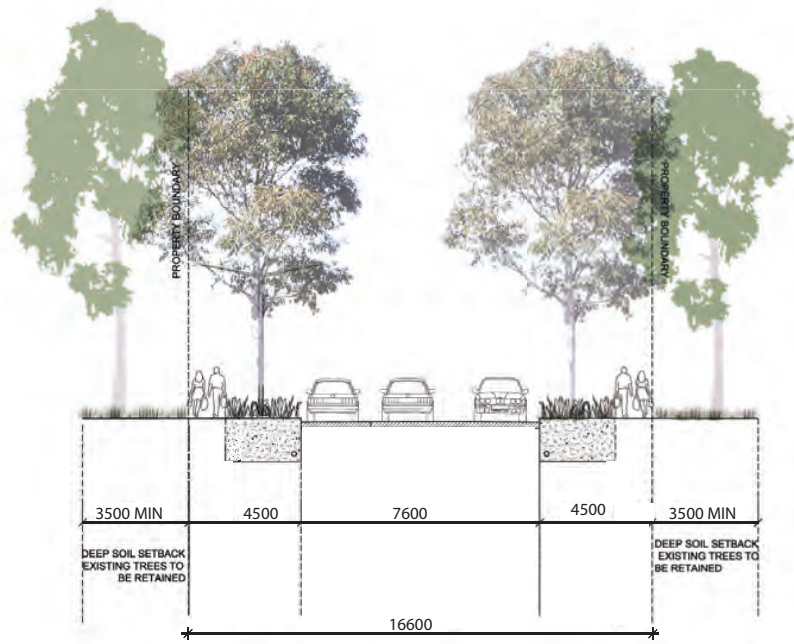


FIGURE 3.13 TYPE 11: LOCAL STREET



Traffic and Movement

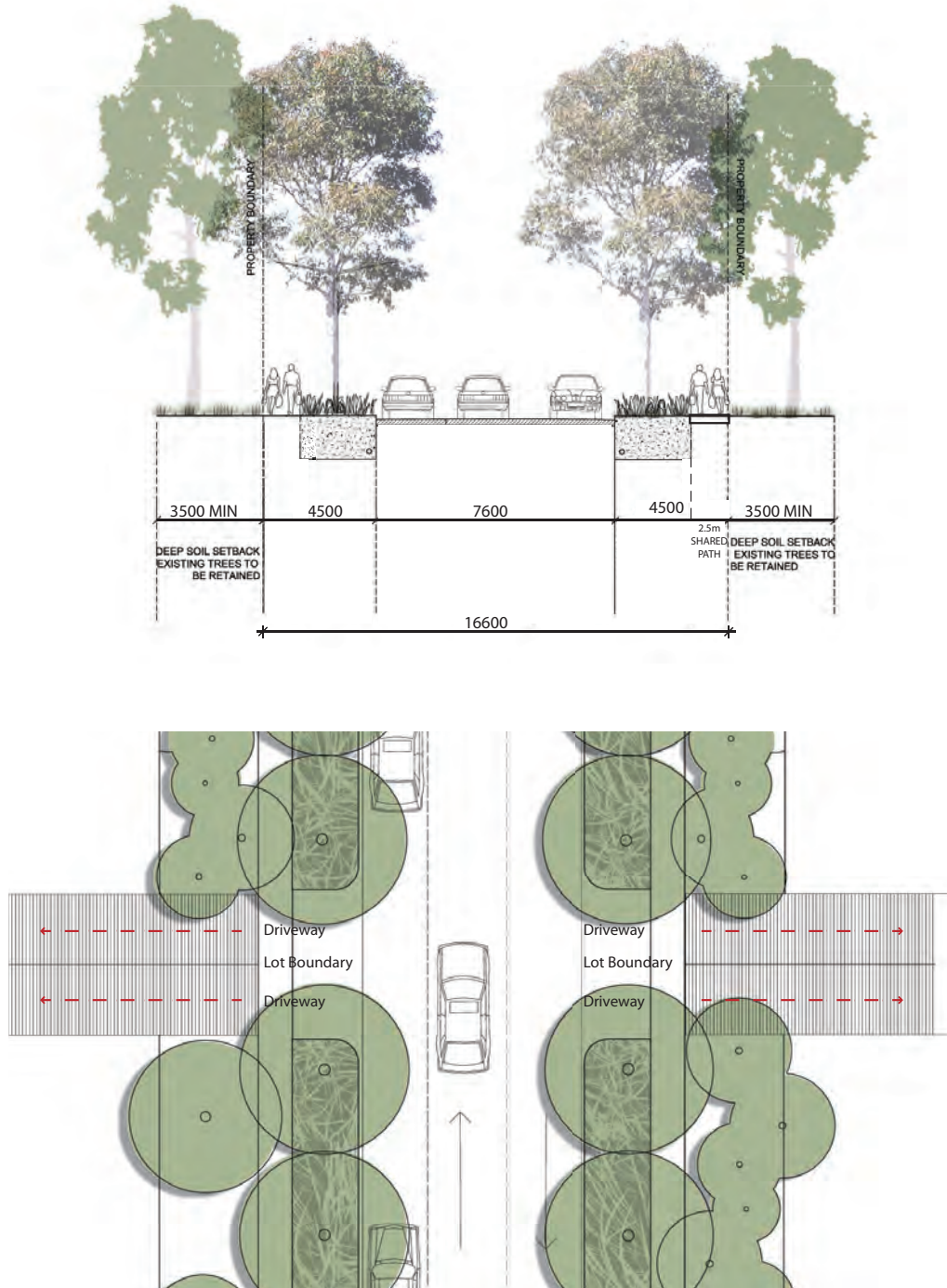


FIGURE 3.14 TYPE 11A: LOCAL STREET WITH SHARED PATH

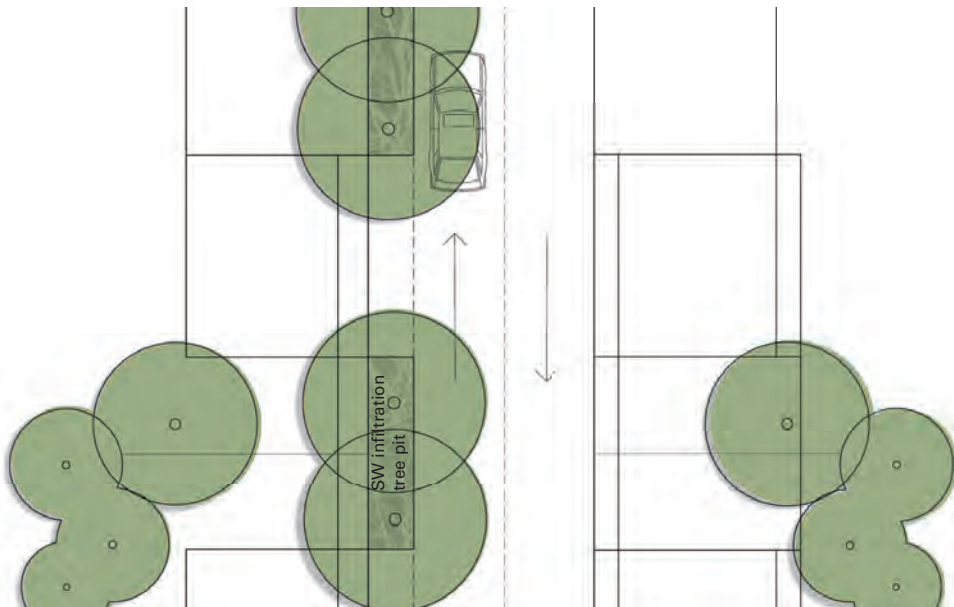
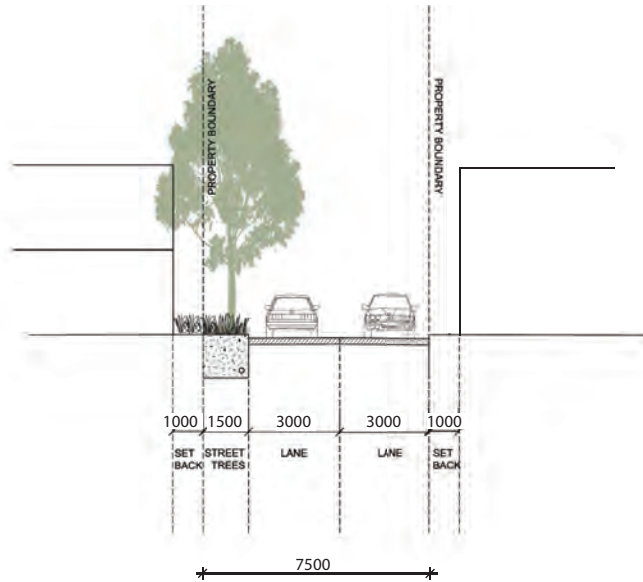


FIGURE 3.15 TYPE 12: LANE



3.3 LANDSCAPING IN THE ROAD RESERVE

Objectives

- To integrate with the biodiversity values of the WTC.
- To contribute to high quality streetscapes.
- To consider public safety in the provision of landscaping.
- To consider stormwater drainage impacts.
- To ensure landscaping is considered at the development planning stage.

Controls

- a) Provide street tree plantings in locations identified in Figure 3.16 and in accordance with Figure 3.16.
- b) Provide landscaping that:
 - Distinguishes between public and private spaces and between different streets within the street hierarchy.
 - Minimises the risk to utilities and services.
 - Is durable and suited to the street environment.
 - Maintains adequate sight lines for vehicles and pedestrians, especially at driveways and intersections.
 - Does not obscure street lighting, or traffic signals, or overhang the road carriageway so as to interfere with vehicles.
 - Provides appropriate shade.
 - Provides an attractive and interesting landscape character.
- c) Landscaping details are to be submitted with proposals for road construction and include the following:
 - General layout of planting locations.
 - Earthworks.
 - Plant species and sizes (at time of planting and at maturity).
 - Vehicles, cyclist and pedestrian safety.
 - Relationship to utilities and services.



FIGURE 3.16 STREET TREE PLANTING STRATEGY

1. Key endemic vegetation communities

Alluvial Floodplain Shrub Swamp Forest
Narrabeen Blackbutt Shrubby Forest
Narrabeen Buttenderry Foothills Forest
Dooralong Spotted Gum - Ironbark Forest

2. Local streets + medians
East West Streets
Ridge Roads

Evergreen species, endemic to area, high canopy and dappled light

Suggested species	Common Name
Botanical Name	
<i>Corymbia maculata</i>	Spotted Gum
<i>Eucalyptus paniculata</i> subsp <i>paniculata</i>	Grey Iron Bark
<i>Eucalyptus sideropholia</i>	
<i>Eucalyptus umbra</i>	Broad leaved Mahogany
<i>Eucalyptus teriticornis</i>	Forest red gum
<i>Eucalyptus citriodora</i>	Lemon scented Gum
<i>Eucalyptus robusta</i>	Swamp Mahogany
<i>Melaleuca quinquenervia</i>	Broad-leaved Paperbark



Grove of Spotted Gums

Avenue planting of *Corymbia maculata*

Eucalyptus robusta

3. Local streets
Lanes

Narrow habit, evergreen, Native and non endemic species

Suggested species	Common Name
Botanical Name	
<i>Eleocarpus reticulatus</i>	
<i>Eleocarpus eumundi</i>	
<i>Tristania laurina</i>	
<i>Backhousia citriodora</i>	
<i>Backhousia myrtifolia</i>	



Eleocarpus reticulatus

Tristania laurina

Tristania laurina

Backhousia citriodora

4. Main streets
Nikko Street
Commercial streets

Medium scaled trees, mix native + non native species, foliage or flower, hardy

Suggested species	Common Name
Botanical Name	
<i>Lophostemon confertus</i>	Brush Box
<i>Flindersia australis</i>	
<i>Stenocarpus sinuatus</i>	
<i>Pyrus ussuriensis</i>	



Lophostemon confertus

Flindersia australis

Pyrus sp.

Pyrus sp.

5. Central median planting

Moore Park Road - example
 280mm high kerb x 200mm wide
 total width of median 3100mm



Median planting Moore Park Road, Sydney

Median planting Moore Park Road, Sydney

Median planting St Kilda Road, Mel



Median planting St Kilda Road, Melbourne

Median planting Victoria Park, Sydney

Median planting, Victoria Park, Syd

FIGURE 3.17: SUGGESTED STREET TREE SPECIES



3.4 VEHICLE FOOTPATH CROSSINGS

Vehicular footpath crossings disrupt pedestrian movement and threaten safety. The design of vehicle access to buildings also influences public domain quality.

Overly wide and high vehicle access points detract from the streetscape and the active use of street frontages. The design and location of vehicle access to buildings should minimise conflicts on footpaths, particularly along pedestrian priority places, and visual intrusion and disruption of streetscape continuity.

Driveways and vehicle access should be designed in accordance with the provisions of Section 3.5 of this DCP and are to comply with AS and AS/NZS 2890.

Objectives

- Reduce vehicular access impacts on the public domain.
- To make vehicle access to buildings compatible with pedestrian movements.

Controls

- One vehicle access point only (including service vehicle access and non-residential parking within retail/residential developments) will be generally permitted per development site.
- Vehicular entries in the Town Centre Civic Precinct are restricted in Street Types 1-5.
- Provide vehicle access points capable of shared access at a later date.
- Vehicle access ramps parallel to the street frontage are not permitted.
- Integrate vehicle entry points into the building design.
- Doors to vehicle access points are to be roller shutters or tilting doors fitted behind the building facade.
- Vehicle entries are to have high quality finishes to walls and ceilings, as well as high standard detailing. No service ducts or pipes are to be visible from the street.
- Porte cocheres are not favoured and may only be permitted for hotels subject to urban design, streetscape, and pedestrian amenity considerations. Where practicable, porte cocheres are to be internal to the building, with one combined vehicle entry and exit point, or one entry and one exit point on two different frontages of the development.
- An indented porte cochere, with separate entry and exit points across the footpath, may be permitted in exceptional circumstances for buildings with one street frontage. This is provided that it is constructed entirely at footpath level and provides an active frontage at its perimeter.
- Adhere to relevant standards for pedestrian sight distances.

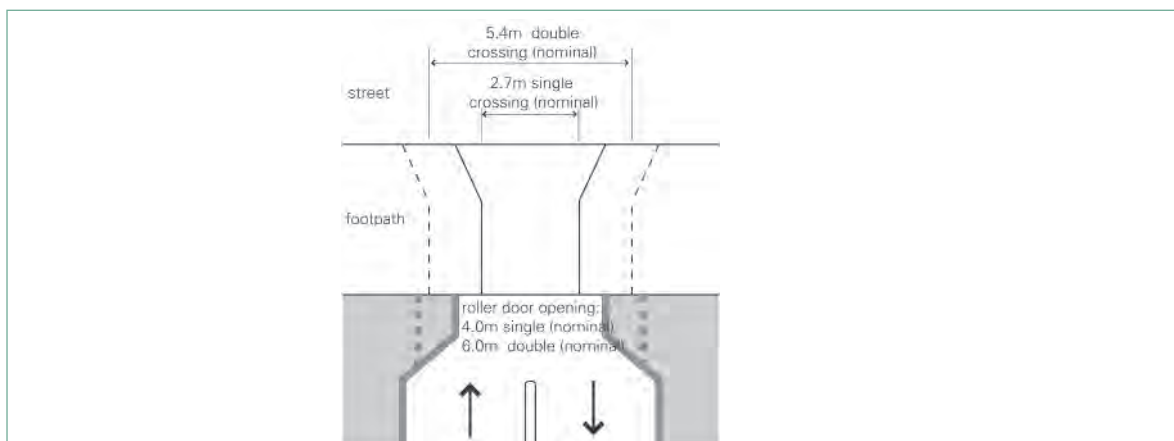


FIGURE 3.18 VEHICLE FOOTPATH CROSSINGS

3.5 DRIVEWAYS AND MANOEUVRING AREAS

Objectives

- To ensure vehicle access to buildings is compatible with pedestrian movements and the public domain.
- To provide vehicle entry points integrated into building design and architecture.
- To design vehicle access to appropriate traffic and safety management standards.
- To minimise the number and width of vehicle crossings to retain streetscape continuity and reinforce a high quality public domain.
- To provide clear separation of usages for service vehicles private cars, and pedestrians/cyclists.
- To consider pedestrian safety in siting car park entries and, where practicable, allow for trolley storage bays.
- To minimise stormwater runoff from uncovered driveways and parking areas.

Controls

- a) Driveways should be:
 - Located in accordance with AS/NZS 2890.1:2004 and where possible sight distance should comply with Safe Intersection Sight Distance in accordance with Austroads (2009), Guide to Road Design Part 4A: Unsignalised and Signalised Intersections Table 3.2.
 - Provided from lanes and secondary streets rather than the primary street, wherever practical.
 - Located taking into account any services within the road reserve, such as power poles, drainage inlet pits and existing street trees.
 - Set back a minimum of 1.5m from the relevant side property boundary where adjacent to residential development.
- b) Integrate vehicle access with the building design so it is visually recessive.
- c) Use high quality materials and finishes.
- d) Clearly differentiate vehicular and pedestrian access.
- e) Provide for all vehicles to enter and leave in a forward direction.
- f) Comply with relevant Australian Standards for driveway widths and grades, car space dimensions, vehicular ramp width/grades, and passing bays.
- g) Vehicular ramps less than 20m long within developments and parking stations must have a maximum grade of 1 in 5 (20%).
- h) Site access ways to underground parking to minimise noise impacts on adjacent habitable rooms, particularly bedrooms.

3.6 ON-SITE PARKING

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

Objectives

- To provide adequate on-site parking for all land uses.
- Minimise the visual impact of on-site parking.
- To provide adequate space for parking and manoeuvring of vehicles (including service vehicles and bicycles).



Traffic and Movement

- To enable the interim use of certain sites for at grade parking
- To promote the use of public transport, bicycles and walking.

Controls

- On-site parking must meet the relevant Australian Standard (AS/NZS 2890.1 2004 and AS 2890.2:2002).
- On-site vehicle, motorcycle and bicycle parking is to be provided in accordance with **Table 2 and 3** below.
- Provide appropriately designated and signed disabled parking spaces for people with disabilities in accordance with **Table 4** below.
- Provide bicycle parking/storage in developments, where indicated in **Table 3**.
- Accommodate on-site parking underground, otherwise integrated into the building design.
- Above ground parking is to be at the rear of shops, restaurants and the like. It is to be located behind the building line and screened from the public domain, where possible.
- Natural ventilation should be provided to underground parking areas where possible, with ventilation grilles and structures integrated into the building façade and not located on the primary street façade.

Table 2 : Required parking rates

Land use	Parking requirement	
Residential		
Backpackers' accommodation	1 space/ 5 occupants/lodgers plus 1 space for resident manager, plus 1 space/ 2 employees.	
Dual occupancy	1 space/ 1 and 2 bedroom dwellings; 2 spaces/ 3 bedroom dwelling or larger.	
Dwelling houses	1 space/ 1 and 2 bed. dwelling; 2 spaces/ 3 bed. dwelling or larger(min 1 garaged); 2 spaces/ 3 bed. dwelling permitted on lots <200m ²	
Residential flat buildings	1 space/ 1 and 2 bed. dwelling; 2 spaces/ 3 bed. dwelling and larger; Visitor parking: 1 space/ 5 dwellings.	Bicycle parking: 1 space/2 dwellings Visitor bicycle parking: 1 spaces/ 12 dwellings
Seniors' Living	As per Seniors' Living SEPP	
Tourist and visitor accommodation	1 space/ unit; Plus 1 space for the manager; Plus 1 space/ 2 employees; Additional space per 3 seats if public restaurant included.	
Recreation		
Aquatic centre	30 spaces 500sqm GFA.	
Bowling green	30 spaces for first green, plus 15 spaces/ additional green. Motorcycle parking: 1 space/25 car spaces, or part thereof.	
Entertainment facility	1 space/10 seats for 75% of total seats, and 1 space/4 seats for 25% of total seats.	

Registered club & pub	<p>Car parking:</p> <p>1 space/4sqm of bar area, plus</p> <p>1 space/6sqm of lounge, beer garden, gambling area, plus</p> <p>1 space/10 seats or 20sqm area of auditorium, plus</p> <p>1 space/resident manager, plus 1 space/ 2 employees</p> <p>NOTE: Restaurants and dining rooms require additional parking at the relevant rate specified in this Table below.</p> <p>Motorcycle parking: 1 space/ 25 car spaces, or part thereof</p>
Recreation facility	<p>7 spaces/100sqm GFA</p> <p>Motorcycle parking: 1 space/25 car spaces or part thereof.</p> <p>Bicycle parking: 1 space/200sqm GFA.</p>
Squash & tennis courts	3 spaces per court
Health & community services	
Art & craft centre	1 space/15sqm GFA.
Child care centre	1 space/40sqm GFA.
Educational Establishments	<p>1 space/ 2 staff;</p> <p>plus 1 space/ 30 students for high schools</p> <p>plus 1 space/ 5 students for higher education establishments;</p> <p>plus 1 bus standing area/ 200 students.</p>
HACC facility	1 space/25sqm.
Hospitals	<p>1 space/ 3 bed,</p> <p>plus 1 space/ 3 employees,</p> <p>plus 1 space/ professional staff.</p>
Library	1 space/100sqm GFA.
Medical Centre	1 space/25sqm GFA.
Place of public worship	1 space/ 10 seats, or 1 space/ 10sqm GFA, whichever is greater.
Youth centre	1 space/15sqm GFA.
Retail & business premises	
Bulky goods	1 space/ 50sqm GFA.
Business premises	1 space/ 30sqm GFA.
Neighbourhood shop	1 space/ 20sqm GFA where the GFA of a neighbourhood shop, or cluster of shops, exceeds 200sqm. Otherwise no off-street parking is required.
Restaurant	15 spaces/ 100sqm GFA, or 1 space/ 3 seats, whichever is lesser.
Retail premises	1 space/20sqm GFA
Service stations	<p>Minimum 4 spaces plus 6 spaces/service bay</p> <p>NOTE: Convenience stores and restaurants attached to a service station require additional parking at the relevant rate specified in this Table.</p>



Traffic and Movement

Access for the disabled

1 space/100 parking spaces; minimum 3.2m width.

Comply with Australian Standard 2890.1.

Where access for the disabled is required, parking shall be located adjacent to the building's nearest disabled access. The path of travel from the parking area shall have adequate width and gradient.

Other uses

For land uses not specified in this Table, the Roads and Traffic Authority guidelines will be applied to developments of a minor nature including, extensions. However, a traffic impact statement (with recommendation for on-site car, motorbike and bicycle parking) is required with all major applications..

Table 3 On-site bicycle parking for non-residential development

Use	Requirement
Retail	Provide the following minimum rates of bicycle parking Supermarkets: 1 space 750sqm of GFA for employees 1 space 1000sqm of GFA for shoppers Specialty shops: 1 space 300sqm of GFA for employees 1 space 300sqm of GFA for shoppers Neighbourhood shops: 8 bicycle spaces minimum
Commercial	Provide the following minimum rates of bicycle parking. Employee: 1 space 150sqm of GFA Visitor: 1 space 750sqm of GFA
Community Centres	6 bicycle spaces at the community centre
Parks	16 bicycle spaces at sports grounds

3.7 PEDESTRIAN AND CYCLE NETWORK

Objectives

- To provide clear and safe pedestrian and cycleway access for the use of the community, within and beyond the WTC.
- To give priority to pedestrians.
- To promote walking and cycling in preference to motor vehicles.
- To provide walking trails in open space areas linking with residential and Town Centre Civic Precinct destinations.



FIGURE 3.19 BUS, CYCLE AND PEDESTRIAN ROUTES

Controls

- Key pedestrian and cycle routes are to be provided generally in accordance with **Figure 3.19**.
- The design of cycle ways located within the street reserve is to be in accordance with **Figures 3.3-3.15**.
- Provide footpath widths in accordance with street sections drawings in **Figures 3.3-3.15**.
- All pedestrian and cycleway routes and facilities are to be consistent with the Austroads guides for cycleways; Guide to Road Design Part 3 Geometric Design AGRD03-09 and Guide to Road Design Part 6A Pedestrian and Cyclist Paths AGRD06A-09.
- Pedestrian and cycle ways are to be constructed as part of the infrastructure works for each stage of development. The infrastructure staging needs to cover the primary routes as part of the essential street framework.
- Provide adequate change and shower facilities for cyclists in commercial and retail development providing employment for 20 persons or more. Locate those facilities close to bicycle storage areas.

3.8 PEDESTRIAN AMENITY

Pedestrian amenity incorporates elements of individual developments that directly affect the quality and character of the public domain. The following pedestrian amenity provisions are intended to achieve a high quality of urban design and pedestrian comfort in the public spaces of the WTC.

The pedestrian environment provides people with their primary experience of, and interface with the WTC. This environment needs to be safe, functional and accessible. It should also provide a wide variety of opportunities for social and cultural activities.

The pedestrian environment is to be characterised by design excellence, high quality materials and standards of finish appropriate to a town centre. Roads, arcades and through site links should form an integrated pedestrian network, providing a choice of ground level routes for pedestrians.

The controls in this section aim to increase the vitality, safety, security and amenity of the public domain by:

- encouraging ground level through site links;
- providing links between residential areas, community facilities, public transport and the Town Centre Civic Precinct;
- ensuring active street frontages and clear building street addresses;



Traffic and Movement

- ensuring awnings on the Town Centre Civic Precinct street frontages; and
- protecting significant views and vistas along streets.

3.9 SAFETY AND SECURITY

The design of buildings and public spaces has an impact on perceptions of safety and security, as well as providing potential opportunities for crime. A safe and secure environment encourages activity, vitality and viability, enabling a greater level of passive and active security.

Objectives

- Developments are to maximise safety and security for pedestrians.
- To reduce opportunities for crime through environmental design.
- To contribute to public domain safety.
- To encourage a sense of ownership of public and communal open spaces.

Controls

- a) Address 'Safer-by-Design' principles (including the NSW Police 'Safer by Design' crime prevention through environmental design (CPTED) principles) in public and private domain design, and in all developments generally.
- b) Provide a 'safety by design' assessment (CPTED) from a qualified consultant for large scale retail and commercial development with a construction value of \$10 million or over.
- c) Design for passive surveillance of public and communal spaces, access ways, entries and driveways in building design.
- d) Avoid blind corners and alcoves that provide concealment opportunities in pathways, stairwells, hallways and car parks.
- e) Maximise the number of residential 'front door', ground level entries in mixed use buildings.
- f) Provide entrances in visually prominent positions, which are easily identifiable, and with legible numbering.
- g) Clearly define the development boundary to strengthen the transition between public, semi-private and private space. This can be actual or symbolic, and can include landscaping, fences, and changes in paving material.
- h) Provide adequate lighting to the relevant Australian standards to all pedestrian access ways, parking areas and building entries.

3.10 EQUITABLE ACCESS AND MOBILITY

Any new development must be designed to ensure that safe and equitable access is provided. This is of particular concern in Warnervale given the significant percentage of the population aged 55 years or older, and the steep topography of parts of the WTC.

Objectives

- To provide safe and easy access to buildings.
- To enable use and enjoyment of spaces regardless of one's age and physical condition.
- To contribute to the vitality and vibrancy of the public domain.
- To ensure buildings and places are accessible to people with a disability.
- To provide a safe and accessible public domain.

Controls

- a) Make main building entry points clearly visible from primary street frontages.
- b) Enhance building entry points as appropriate, with awnings, building signage or high quality architectural features, to improve clarity of building address and contribute to user amenity.
- c) The design of facilities (including car parking requirements) for disabled persons must comply with the relevant Australian Standard (AS 1428 Pt 1 and 2, AS 2890-1 Off Street Carparking or as amended) and the Disability Discrimination Act 1992 (as amended).
- d) Provide barrier-free access for a minimum of 20% of dwellings (and associated common areas) for every application for development.
- e) Provide at least one main pedestrian entry with barrier free access to at least the ground floor in all development.
- f) Provide continuous paths of travel from all public roads and spaces, as well as unimpeded internal access.
- g) Provide durable materials commensurate with the standard of the adjoining public domain (street), with appropriate slip resistant materials, tactile surfaces and contrasting colours for all pedestrian access ways, entry paths and lobbies.

3.11 PUBLIC TRANSPORT NETWORK

Objectives

- To encourage the use of public transport within and beyond the WTC.
- To provide opportunities for transport choice and encourage easy transition between transport modes.
- To ensure clear, safe pedestrian and cycle links to public transport nodes.
- To ensure the railway station and associated development minimises impacts on the Heath Wrinklewort daisy.

Controls

- a) Provision of bus routes, bus stops, and bus shelters will be determined by the bus operator in consultation with Council. Applications which include new roads are to consult with the local bus operator, and Council (as the local road authority) to confirm potential bus routes and ensure the road carriageway is of suitable size to accommodate bus services.
- b) Indicative bus routes and stops are provided on Figure 3.1.

3.12 TRANSPORT INTERCHANGE

- a) A transport interchange is to be provided on the eastern side of the railway station, to include the following facilities:
 - Bus stops
 - Taxi ranks
 - "Kiss n' ride" drop off areas
 - Bicycle parking and storage
- b) Commuter carparking shall be provided in close proximity to the railway station, indicative locations are shown in **Figure 3.19**.
- c) Adequate lighting, shelters, and seating are to be provided at the transport interchange to maximise public amenity and safety.

4 Public Open Space

4.1 PUBLIC DOMAIN

Objectives

- To create a vibrant and safe areas of public open space.
- To provide public domain elements including public art in a coordinated manner with a unifying theme.
- To ensure high quality design and embellishment of all public open space.
- To provide a range of public open spaces to reflect different characteristics, environmental values and functions.
- To ensure the conservation values of the WTC are protected, where possible, in any use of public open spaces.
- To retain elevated, visually sensitive land that contributes to the landscape character of the WTC.
- To provide a focus for social and recreational activity and public life.
- To meet the public open space and recreational needs of residents in an equitable manner
- To protect ridgeline vegetation.

Controls

- a) Public open spaces are to be provided in accordance with the provisions at **Table 4**. Plans should be prepared in consultation with council, where council will be the owner of these areas of land.
- b) Address alternative water source options to reduce potable water consumption in Plans of Management adopted for the public domain and open spaces listed in **Table 4**.
- c) Provide easily accessible levels and coherent links between public squares and open space.
- d) Address 'Safer-by-Design' principles (including the NSW Police 'Safer by Design' crime prevention though environmental design (CPTED) principles) in public domain design.
- e) All signage is to comply with SEPP 64 and Wyong Advertising Signs DCP No. 50



FIGURE 4.1 OPEN SPACE PROVISION

Table 4: Public open space

Name	Objective	Controls
Hill Top Park	<ul style="list-style-type: none"> To provide for active open space and community uses in an accessible landscaped setting. 	<ul style="list-style-type: none"> Retain and enhance the existing canopy where possible. Provide community uses. Capitalise on views to and from the park. Maintain the landscaped, visual prominence of the hill. Provide pedestrian and cycle connections to the riparian corridor. Use the site's topography to advantage and provide landscaped public carparking at the lower level, adjoining the riparian corridor. Remediate former tip area. Provide a strong and distinct tree edge to the park. Provide good lighting to encourage night activities.
Riparian corridors	<ul style="list-style-type: none"> To provide for the protection and management of riparian values. To restrict development within the corridor to uses appropriate to riparian values. 	<ul style="list-style-type: none"> A Plan of Management is to be prepared in consultation with OEH for long term conservation and management of riparian corridors. The Plan of Management is to include: <ul style="list-style-type: none"> measures for the protection and rehabilitation of the riparian corridor; and siting, design and management of adjacent development to minimise impacts on the ecological and hydrological functions of the corridor buffer. No Asset Protection Zones (APZs) are to be located within the Core Riparian Zone. Provide limited, formal walking trails in the riparian corridor buffer only, not the core riparian corridor. These can comprise "eco"/nature pathways, and interpretive signage, where appropriate. Limit all non-pedestrian access (e.g. motor bikes, trial bikes, etc) and all informal access.
Heath Wrinklewort Reserve	<ul style="list-style-type: none"> To conserve the Heath Wrinklewort. 	<ul style="list-style-type: none"> A Plan of Management is to be prepared in consultation with OEH for long term conservation and management of riparian corridors. The Plan of Management is to include: <ul style="list-style-type: none"> protection of the Heath Wrinklewort; and management and monitoring arrangements. No APZs are to be located within the Heath Wrinklewort Reserve. Establish formal walking trails in the Heath Wrinklewort Reserve. These can comprise "eco"/nature pathways, and interpretive signage, where appropriate. Limit all non-pedestrian access (e.g. motor bikes, trial bikes, etc) and all informal access. Maintain existing landforms and minimise disturbance to existing vegetation. Undertake ongoing weed control in accordance with a Plan of Management. Orient adjoining development to the Heath Wrinklewort Reserve to provide passive surveillance.
Other public and private parks	<ul style="list-style-type: none"> To reinforce the vegetated character of the WTC. To provide visual and functional links with other adjacent open space areas where possible. To provide amenity to surrounding residential areas. To assist in providing connectivity for ecological values. 	<ul style="list-style-type: none"> Wyong Council is to prepare a Plan of Management for the Ridge Top Parks (East and West). Retain existing tree canopy in any development of parks. Supplement existing vegetation where necessary with native plantings (in accordance with Figure 4.2). Provide pedestrian and cycle connections (refer to Figure 3.14). Provide seating and other facilities in accordance with the specifications for a landscape plan set out below. Provide stormwater quality and quantity treatment in accordance with IWCM and best practice WSUD.

4 Public Open Space

4.2 LANDSCAPE STRATEGY & DESIGN

Objectives

- To retain existing, native vegetation in public open space areas, where possible.
- To minimise potable water consumption.
- To integrate with the biodiversity values of the WTC.
- To complement the existing natural and visual values of the WTC.
- To contribute to high quality streetscapes and public domain.
- To consider public safety in the provision of landscaping.
- To ensure landscaping is considered at the development planning stage.
- To allow for drainage, capture, recycling and reuse.

Controls

- a) Provide 50% minimum vegetation cover in landscaped public open space areas, comprising:
 - local indigenous species;
 - drought tolerant species; or
 - a mixture of indigenous and drought tolerant species.
- b) Provide water retaining media mixed into the soil for any exotic plantings.
- c) Provide water conserving mulch comprising sustainable organic materials such as municipal green waste collection processed to the Australian Standard for Composting (AS44540).
- d) Controls a) - c) above do not apply to water efficient lawn areas or water retention/treatment areas.
- e) Provide tree species requiring deep soil planting in public open space areas, and public facilities, (where possible).
- f) Provide landscape design that:
 - is consistent in distinguishing between public and private spaces;
 - minimises risk to utilities and services;
 - is durable and suited to the local environment;
 - provides appropriate shade; and
 - provides an attractive and interesting landscape character.
- g) Submit a landscape plan with a superlot subdivision application to detail the treatment of the public domain and open space within the land subject to the subdivision application. The following is to be included:
 - general layout
 - earthworks
 - plant species and sizes (at time of planting and maturity)
 - safety features & lighting
 - vehicular, cyclist and pedestrian safety
 - utilities and services
 - public art
 - hard and soft landscaping treatments

-
- street furniture
 - shade structures
 - drinking fountains
 - play equipment
 - signage
 - planter boxes
 - feature fencing
 - connections to cycleways and pedestrian paths
- i) Identify and retain existing native vegetation and fauna habitat (for example large hollow bearing trees, nest trees and those important for protection of habitat areas), where possible.
 - j) Protect native vegetation where possible prior to, during and post development.
 - k) Any public water features are to use re-circulated, treated rainwater. Any moving displays are to be designed for minimal evaporative and splash water loss without compromising the use of water.
 - l) Integrate landscape design with WSUD systems, as detailed in Section 6 of this DCP.

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

The building form development provisions in this section are intended to encourage high quality design for buildings primarily in the Town Centre Civic and Civic Fringe Precincts in the WTC. The resulting built form and character should contribute to an attractive public domain, and produce a desirable setting for its intended uses.

The controls in this section aim to:

- Establish the scale, dimensions and form of buildings appropriate for a town centre setting.
- Achieve an attractive and sustainable built form.
- Provide a strong definition of the public domain.
- Achieve active street frontages with good physical and visual connections between buildings and the street.
- Ensure consistent main street frontages for buildings with a common alignment.
- Provide for pedestrian comfort in all weather.
- Provide places that are easy to maintain.
- Ensure building depth and bulk is appropriate to the environmental setting and landform.
- Ensure building separation is adequate to protect amenity, daylight penetration and privacy between adjoining developments.
- Encourage mixed use development with residential components that achieve active street fronts and maintain good residential amenity.
- Achieve an articulation and finish of building exteriors that contribute to design excellence.
- Provide for a high quality landscape to contribute to the amenity of the WTC and a sustainable urban environment.
- Ensure building heights do not interfere with flight paths from Warnervale Aerodrome.

5.1 ACTIVE STREET FRONTAGES

Active street frontages promote an interesting and safe pedestrian environment. Busy pedestrian areas and non-residential uses such as shops, studios, offices, cafes, recreation and promenade opportunities, promote the most active street fronts.

Residential buildings contribute positively to the street by providing a clear street address, and direct access from, and outlook over the street.

Objectives

- To promote pedestrian activity and safety in the public domain.
- To maximise active street fronts in the Town Centre Civic Precinct.

Controls

- a) Active frontage uses at street level include the following:
- retail entries,
 - shop fronts,
 - glazed entries to commercial and residential lobbies, occupying less than 50% of the street frontage, to a maximum of 12 metres frontage,
 - cafés or restaurants if accompanied by a street entry,

- active office uses, such as reception, if visible from the street, and
 - entries to public buildings.
- Provide active street fronts on the ground level of all areas identified in **Figure 5.1**.
 - Encourage active street fronts in commercial and mixed use development, by providing non-residential uses on ground level.
 - Provide active ground floor uses at the same general level as the footpath and directly accessible from the street.
 - Encourage the provision of openable shop fronts for ground floor restaurants, cafes and the like.

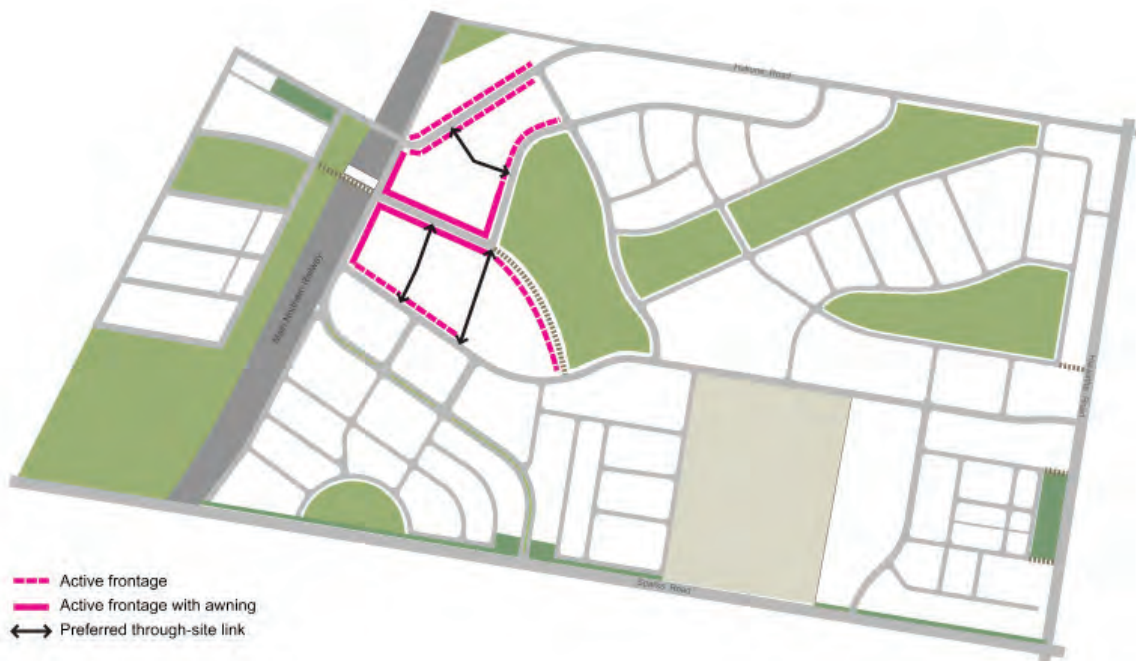


FIGURE 5.1 ACTIVE FRONTAGES

5.2 CIVIC SQUARE

Objectives

- To provide a generous, centrally located public square to cater for a variety of civic activities.

Controls

- Provide a north facing public square adjoining Main Street up to 2,700m².
- Activate the square with retail functions, cinema foyers and various community uses.
- Allow for outdoor dining on the square.
- Provide on grade pedestrian links through the retail centre and from adjoining sites to arrive at the square.
- Landscape the square to provide shade in summer and sun in winter.
- Provide good lighting of the square to encourage night time use.
- Integrate high quality public art into the square.

5.3 BUILDING TO STREET ALIGNMENT AND STREET SETBACKS

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

Street setbacks can also be used to enhance a building's setting and address. They provide for landscape areas, entries and deep soil zones. In the Town Centre Civic Precinct, buildings are to be built to the street alignment to reinforce urban character and improve pedestrian amenity and activity.

Street setbacks offer comfortable wind conditions, view corridors, appropriate pedestrian scale, and good growing conditions for street trees.

Objectives

- To provide front setbacks appropriate to building function and character.
- To establish a street's desired spatial proportions and define the street edge.
- To create a public and private space transition.
- To locate active uses, such as shopfronts, closer to pedestrian activities.
- To allow an outlook to, and surveillance of, the street.
- To maintain sun access to the public domain.

Controls

- Comply with street building alignment and street setbacks, as shown at **Figure 5.2**.
- Properties adjoining Sparks or Hakone Roads are to provide a landscaped buffer for the entire property boundary, as shown on **Figure 5.2**.
- Properties along Hakone Road are to allow for the widening of this road in accordance with specification provided by Wyong Council.
- Balconies may project up to 600mm into front building setbacks, provided the cumulative width of all balconies at that particular level totals no more than 50% of the horizontal width of the building façade, measured at that level.
- Minor projections into front building lines and setbacks for sun shading devices, entry awnings and cornices are permissible.



FIGURE 5.2 BUILDING TO STREET ALIGNMENT AND SETBACKS

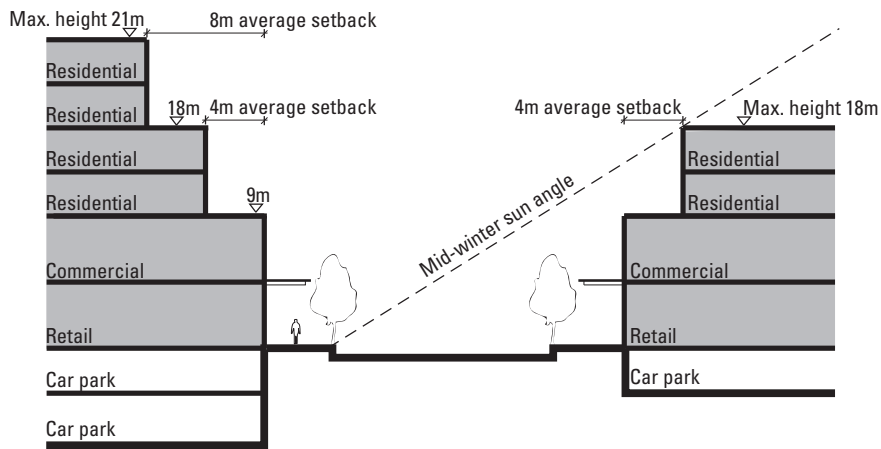


FIGURE 5.3 TYPE 4 STREET, SECTION THROUGH MIXED USE BUILDING

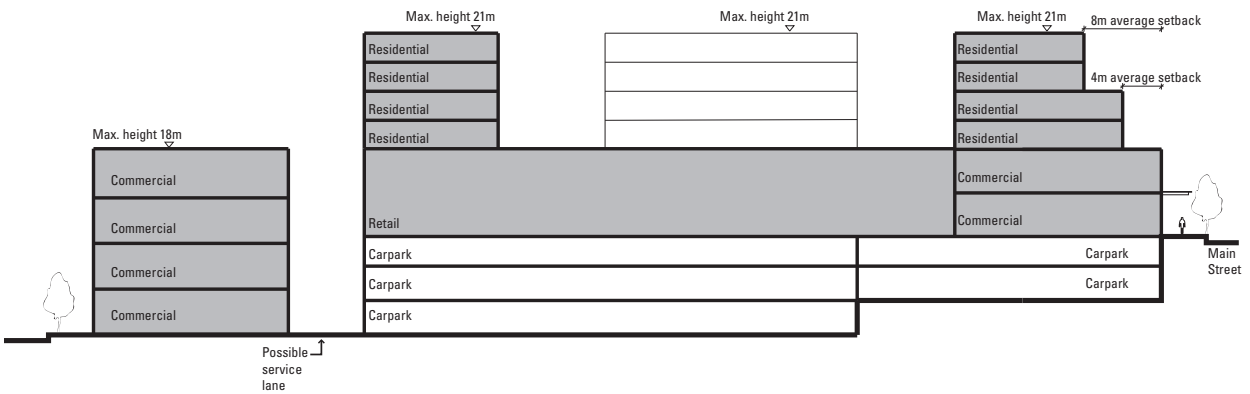


FIGURE 5.4 SECTION THROUGH RETAIL CENTRE (FROM TYPE 6 TO TYPE 4 STREETS)

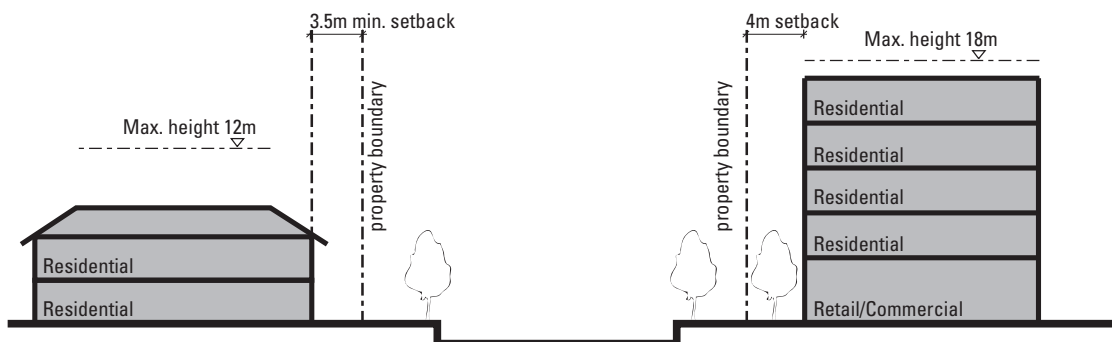


FIGURE 5.5 SECTION THROUGH MAIN STREET (TYPE 6)

5.4 STREET FRONTAGE HEIGHTS

Well framed streets are an important town centre characteristic. Street frontage heights are specified to achieve a sense of street enclosure appropriate to the WTC's natural setting, status as a town centre, and the function and character of different parts of the WTC.

Street frontage height controls apply within the Town Centre Civic Precinct. Street frontage heights refer to the height of the building directly addressing the street from the ground level up to the first (if any) setback.

Objectives

- To achieve comfortable, pedestrian, street environments in terms of daylight, scale, sense of enclosure and wind mitigation.
- To achieve a healthy environment for street trees.
- To reinforce the intrinsic character of the WTC whilst enabling flexible building design.
- To protect solar access to key streets and public spaces.
- To encourage a strong architectural expression of buildings fronting Town Centre streets.

Controls

- a) Comply with the minimum and maximum heights above ground level on the street front as shown in **Figures 5.3-5.5**.
- b) Heights of buildings and all structures are not to exceed the maximum building height standards provided on the *Obstacle Limitation Surface* (OLS) map for Warnervale Aerodrome. Any buildings within the Warnervale Town Centre site that exceed these height controls will require referral and consent from the Civil Aviation Safety Authority.

5.5 AWNINGS

Awnings increase the useability and amenity of public footpaths by protecting pedestrians from the weather. They encourage pedestrian activity along streets. They also support and enhance the vitality of areas in conjunction with active edges such as retail frontages.

Awnings provide a public presence and interface within the public domain, and contribute to a development's identity.

Objectives

- To provide shelter for public streets where most pedestrian activity occurs.
- To address the streetscape by providing a consistent street frontage in the Town Centre Civic Precinct.

Controls

- a) Continuous street frontage awnings are to be provided for all new developments as indicated in **Figure 5.1**.
- b) Awnings should be horizontal in form and generally comply with the following:
 - minimum 2.4m deep (dependent upon footpath width),
 - soffit height of between 3.2m and 4m,
 - integrate with steps (should not exceed 700mm) for design articulation or to accommodate sloping streets with the building design,
 - low profile, with slim, vertical fascias or eaves (generally not to exceed 300mm height), and

-
- set back from kerb to allow for clearance of elements including street furniture, and trees (minimum 0.6m, typically 1.2m).
 - c) Match awning design with building facades, be complementary to awnings on adjoining buildings to maintain continuity.
 - d) Wrap awnings around corners for a minimum 6m.
 - e) Location and design to consider mature street trees and access to services.
 - f) Provide under-awning lighting to facilitate night use and to improve public safety. Recess lighting into the awning soffit or, wall mount it onto the building.
 - g) Be self supporting not requiring posts, to minimise the impact on pedestrians.

5.6 BUILDING EXTERIORS

The creation of a high quality, public domain is dependent upon a consistent approach to the design of new development including, the articulation and finish to building exteriors.

Objectives

To ensure that new buildings in the WTC:

- contribute positively to the streetscape and public domain by means of high quality architecture, materials and finishes;
- provide richness of detail and architectural interest, especially at visually prominent parts, such as lower levels and roof tops;
- present appropriate design responses to adjoining development which complement the streetscape;
- clearly define adjoining streets, street corners and public spaces and avoid ambiguous external spaces with poor pedestrian amenity and security;
- maintain a pedestrian scale in the articulation and detailing of lower levels; and
- contribute to a visually interesting ridgeline.

Controls

- a) Consider adjoining buildings in the design of new buildings in terms of:
 - appropriate alignment and street frontage heights,
 - setbacks above street frontage heights,
 - appropriate materials and finishes,
 - facade proportions including, horizontal or vertical emphasis, and
 - the provision of enclosed corners at street intersections.
- b) Provide balconies and terraces, particularly on low rise parts and where buildings overlook parks. Gardens on the top of roof areas of buildings are encouraged.
- c) Articulate facades so that they address the street and add visual interest.
- d) Construct external walls of high quality, durable materials and finishes with self-cleaning attributes, such as face brick work, rendered brick work, stone, concrete and glass.
- e) Avoid finishes with high maintenance costs, those susceptible to degradation or corrosion, or finishes that result in unacceptable amenity impacts, such as reflective glass.
- f) Avoid expanses of single materials to assist articulation and visual interest. However, maximise glazing for retail uses, but break glazing into sections.
- g) Limit sections of opaque or blank walls greater than 4m in length along the ground floor, to a maximum of 30% of a buildings frontage.

- h) Highly reflective finishes and curtain wall glazing are not permitted above ground floor level (see Section 8.11).
- i) Submit a materials sample board and schedule with applications with a value in excess of \$1 million or, for part of any development built to the street edge.
- j) Minor projections up to 450mm from building walls above 3.6m (in accordance with those permitted by the BCA), may extend into the public space. This is provided that the projection is not defined as gross floor area, does not detract from significant views and vistas, and provides a public benefit, such as:
 - expressed cornice lines that assist in enhancing the streetscape, and
 - projections such as entry canopies that add visual interest and amenity.
- k) The design of roof plant rooms, antennas, ducting, compressors, utilities and lift over-runs are to be integrated into a building's architecture.

5.7 REFLECTIVITY

Reflective materials used on building exteriors can result in undesirable glare for pedestrians, and potentially hazardous glare for motorists. Reflective materials can also transfer additional heat load to other buildings. Thus, the excessive use of highly reflective glass is discouraged.

Buildings with glazed roofs, facades or awnings should be designed to minimise hazardous or uncomfortable glare arising from reflected sunlight.

Objective

- To restrict sunlight reflection from buildings to surrounding areas and other buildings.
- To ensure amenity and safety for pedestrians and motorists.

Controls

- a) New buildings and facades should not result in glare that causes discomfort or threatens safety of pedestrians or drivers.
- b) New buildings and facades should not result in glare that causes discomfort or reduces amenity in adjacent residential areas or public domain.
- c) Visible light reflectivity from building materials used on new building facades should not exceed 20%.
- d) A reflectivity report analysing the impacts of potential solar glare on pedestrians and motorists may be required - subject to a proposal's extent and nature of glazing and reflective materials.

5.8 MIXED USE BUILDINGS

Mixed use buildings provide for a variety of activities within town centres. Uses within a building are best located in a pattern and layout suitable to the use mix: retail and business activity at ground level to assist street activation; and residential uses, requiring privacy and noise mitigation, located above street level.

Mixed use development within the WTC is preferred in sustainable locations, close to public transport (the railway station and transport interchange), and central recreational areas such as the Hill Top Park.

Objectives

- To encourage a variety of mixed use developments in the Town Centre Civic Precinct.
- To create lively streets and public spaces in the town centre.
- To increase the diversity and range of shopping and recreational activities for workers, residents and visitors.
- To enhance public safety by increasing activity in the public domain.

- To minimise potential conflicts and achieve compatibility between different uses.
- To ensure that the design of mixed use buildings addresses residential amenity, the public domain and the street.
- To create separate, legible and safe access and circulation in mixed use buildings.



FIGURE 5.6 MIXED USE BUILDINGS

Controls

- Provide flexible building layouts for variable tenancies or uses within buildings for mixed use blocks as indicated in **Figure 5.6**.
- Provide minimum floor-to-ceiling heights of 3.3m for commercial office and other uses such as retail facing streets and pedestrian lanes, and 2.7m for residential.
- Avoid blank walls at ground level.
- Separate service requirements, such as loading docks, from residential access, and the main street frontage.
- Clearly separate and distinguish commercial and residential entries.
- Locate clear, residential and commercial entries directly from the public street.
- Provide security access controls to all entrances into private areas, including car parks and internal courtyards.

5.9 RESIDENTIAL FLAT BUILDINGS AND SHOP TOP HOUSING

Objectives

- To establish a high quality residential housing environment where all dwellings have a good level of amenity.
- To encourage a variety of housing forms.

Controls

- a) Shop top housing and residential flat buildings are to:
- be located generally within the Town Centre Civic and Civic Fringe precincts.
 - be consistent with the guidelines and principles outlined in SEPP 65 – Residential Flat Development, except where controls are provided in Table 5 below.
 - not significantly impact upon the existing or future amenity of any adjoining land upon which residential development is permitted, with respect to overshadowing impact, privacy impact or visual impact.
- b) Residential flat buildings are to have a direct frontage to an area of the public domain, including streets and public open space.

Table 5: Controls for Shop Top Housing (residential component only) and Residential Flat Buildings (RFBs)

Element	R1 zone	B2 and B4 zones
Street Frontage (min)	30m	30m
Primary Front Setback (min)	4.5m	Ground and first floor: refer to Section 5.3 of this DCP. Upper floors: 4m (average) up to 18m in height; 8m (average) above 18m Zero setback will be considered to service lanes subject to the application demonstrating a satisfactory level of amenity for residents and neighbours will be achieved.
Side Setback (min)	2m	0
Rear Setback (min)	6m	4m
Boundary to public open space area (min)	N/A	4.5m Buildings must address the adjoining public open space
Private Open Space (min)	10m ² per apartment Min. depth 2m	10m ² per apartment Min. depth 2m
Communal Open Space (min)	RFBs: 15% of site area	RFBs: 15% of site area
Landscaped Area (min)	20% of site area	No minimum, however landscaping should be achieved in setback areas at ground level where possible.
Car Parking	1 - 2 bedrooms: 1 space 3 or more bedrooms: 2 spaces 1 visitor space per 5 apartments Car parking spaces to be located below ground level or behind the building line and screened to minimise visual impact from the street. Bicycle parking spaces: 1 per 2 dwellings Visitor bicycle parking: 1 per 12 dwellings	1 - 2 bedrooms: 1 space 3 or more bedrooms: 2 spaces 1 visitor space per 5 apartments Car parking spaces to be located below ground level or behind the building line and screened to minimise visual impact from the street. Bicycle parking spaces: 1 per 2 dwellings Visitor bicycle parking: 1 per 12 dwellings

5.10 PLANTING ON STRUCTURES

The following controls apply in the Town Centre Civic Precinct where planting on roof tops or over car park structures are proposed. They apply particularly for communal open space required for mixed use and non-residential developments.

Objectives

- To contribute to the quality and amenity of open space on roof tops and internal courtyards .
- To encourage the establishment and healthy growth of trees and plantings.
- To minimise the use of potable water for irrigating planting on structures.

Controls

- Areas with planting on structures are to be irrigated with an alternative water source.
- Design for optimum conditions for plant growth by:
 - providing soil depth, volume and area appropriate to proposed plant size,
 - providing appropriate soil conditions and irrigation methods, and
 - providing appropriate drainage.
- Design planters appropriate to soil depth and plant selection by:
 - ensuring planter proportions accommodate the greatest possible soil volume and depths to ensure tree growth, and
 - providing square or rectangular planting areas rather than narrow linear areas.
- Increase minimum soil depths in accordance with:
 - the mix of plants in a planter, for example, where trees are planted in association with shrubs and groundcovers,
 - the level of landscape management particularly, the frequency of irrigation,
 - anchorage requirements of large and medium trees, and
 - soil type and quality.
- Provide sufficient soil depth and area to allow for plant establishment and growth. The following minimum standards are recommended:

Plant type	Min soil depth	Min soil volume
Large trees (over 8m high)	1.3 m	150 cu m
Medium trees (2m to 8m high)	1.0 m	35 cu m
Small trees (up to 2m high)	800 mm	9 cu m
Shrubs and ground cover	500 mm	n/a

- Provide a minimum 200sqm publicly accessible area as a rooftop garden for retail, commercial and public buildings, where practical, in the Local Centre zone. The rooftop garden should be designed and constructed according to best practice principles including access for maintenance. The building or strata manager, or the consent authority (if applicable), is to maintain the garden for the following purposes:
 - green space for public enjoyment;
 - demonstration of alternative, low water use agricultural practices; and
 - thermal insulation for uses within the building.

5.11 SITE FACILITIES AND SERVICES

Objectives

- To design urban infrastructure as an integral part of urban design.
- To achieve a planned system of services, integrated with streetscape design to reduce maintenance time, damage and repair costs and contribute to the public domain.
- To ensure site facilities (such as clothes drying areas, mail boxes, recycling and garbage disposal units/areas, screens, lighting, storage areas, air conditioning units and communication structures) are unobtrusively integrated into development.
- To ensure that site services and facilities are adequate for the nature and quantum of development.
- To establish appropriate access and location requirements for servicing.
- To ensure service requirements do not have adverse amenity impacts.

Controls

- a) Provide underground services for all domestic serving utilities, including electrical services.

Mail boxes

- b) Provide mail boxes for residential buildings and/or commercial tenancies in accessible locations adjacent to the main entrance to the development. Mail boxes should be integrated into a wall where possible and be constructed of materials consistent with the appearance of the building.
- c) Mail boxes shall be secure and large enough to accommodate articles such as newspapers.

Communication structures, air conditioners and service vents

- e) Locate satellite dishes and tele-communications antennae, air conditioning units, ventilation stacks and any ancillary structures:
- away from the street frontage,
 - integrated into the roofscape design and in a position where such facilities will not become a skyline feature at the top of any building, and
 - adequately setback from the perimeter wall or roof edge of buildings.
- f) A master antenna must be provided for residential apartment buildings. The antenna should be sited to minimise its visibility from surrounding public areas.

Waste (garbage) storage and collection

- g) All development is to adequately accommodate waste handling and storage on-site. The size, location and handling procedures for all waste, including recyclables, is to be determined in accordance with the consent authority's waste policies and advice from relevant waste handling contractors.
- h) Access for waste collection and storage is preferred from rear lanes, side streets or rights of ways.
- i) Waste storage areas are to be designed and located to:
- ensure adequate driveway access and manoeuvrability for any required service vehicles,
 - not create any adverse noise impacts on existing developments or sensitive noise receptors such as habitable rooms of residential developments, and
 - be screened from the public way and adjacent development that may overlook the area.
- j) The storage facility must be well lit, easily accessible, on-grade for movement of bins, free of obstructions that may restrict movement and servicing of bins or containers and designed to minimise noise impacts.
- k) Collection vehicles are to enter and depart in a forward manner. Reversing on site will only be permitted where there is no conflict with pedestrians or other vehicles.

Location requirements for waste storage areas and access:

- l) Where waste volumes require a common collection, storage and handling area, this is to be located:
 - for residential buildings, at ground behind the main building setback and façade, or within a basement or enclosed car park, and
 - for commercial, retail and other development, on-site in basements or at ground level within discrete service areas not visible from main street frontages.
- m) Where above ground garbage collection is prohibitive or impractical due to limited street frontage, or would create an unsafe environment, an on-site basement storage area must be provided.
- n) Where a mobile compaction vehicle is required to enter the site, the access and circulation area shall be designed to accommodate a vehicle with the following dimensions:

Position	Dimension
Vehicle length	12300mm
Vehicle width	3500mm
Vehicle height – travel (Safe height in confined areas – top door closed and forks down)	3800mm
Vehicle height – operation (Top door open with a bin at full tipping position)	6000mm

Service docks and loading/unloading areas

- o) Provide adequate space within any new development for the manoeuvring, loading and unloading of service/delivery vehicles.
- p) Preferably locate service access off rear lanes, side streets or rights of way.
- q) Screen all service doors and loading docks from street frontages and from active overlooking from existing developments.
- r) Design circulation and access in accordance with AS/NZS 2890.1 and AS 2890.2.
- s) Service/delivery vehicles need to enter and leave service area in a forward manner and are to be separate from general parking and pedestrian areas.

Fire service and emergency vehicles

- t) For developments where a fire brigade vehicle is required to enter the site, vehicular access, egress and manoeuvring must be provided to, from and on the site in accordance with the NSW Fire Brigades (FB) Code of Practice – Building Construction – NSWFB Vehicle Requirements.

This section outlines objectives and development controls for environmental management issues.

This section applies only to non-residential (retail and commercial) development, the public domain, public and private parks, and community facilities. State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 applies to residential development.

The controls in this section aim to:

- ensure the environmental impacts of new development are managed in a sustainable and economical way;
- provide an adequate and renewable supply of natural resources; and
- ensure a healthy environment.

6.1 WATER CONSUMPTION

The Central Coast is currently subject to extreme water supply shortages. Combined with the changes predicted to occur as a result of climate change, developing a safe and secure water supply without compromising the health of the region's water sources is one of the region's greatest challenges. Hence, a range of options need to be considered to develop a more secure water supply system; and future growth must be carefully managed.

By integrating water use efficiency, water collection and water reuse measures into building and infrastructure design, development can help minimise demands on potable water supply.

Water can be conserved in two ways: by reducing mains water demand; and by re-using water otherwise lost as run off or wastewater.

This section includes controls relating to water consumption reduction, water capture, treatment options, and water re-use.

Objectives

- To reduce potable mains water demand from non-residential development by promoting water-efficient appliances, alternative water sources for appropriate purposes, and wastewater reuse.
- To reduce wastewater disposal and encourage its reuse in retail, commercial, community and public development.
- To lower greenhouse gas emissions.
- To encourage innovation in the collection and reuse of alternative water sources.

Controls

General

Applicants can submit alternative solutions to the controls in this section where it can be demonstrated that an equal or superior outcome will result.

Water consumption reduction

- a) Use an alternative water source for the irrigation of public or private open space.
- b) Provide all irrigation of public and private open spaces by sub-surface, drip irrigation systems controlled by timers and soil moisture or rainfall sensors.
- c) Provide for future supply of reticulated recycled water to non-residential development by installing:
 - a reticulated alternative (that is, a "third pipe") network to all non-residential allotment boundaries;
 - pipe network sizing capable of supplying:
 - all residential demand for toilet flush and laundry cold water;

-
- all non-residential toilets and urinals in the Local Centre zone; and
 - other non-potable water demands including, non-commercial car-washing, hose-down, laundry, and cooling towers.
- d) All water fixtures in non residential buildings including, public facilities should be rated to deliver maximum water flows of:
- 6 litres per minute for hand basins, and
 - 9 litres per minute for showers
- e) Provide other water efficiency measures in non-residential buildings and public facilities including:
- all toilets to be provided with dual flush systems of no more than 6 litres per full flush and 3 litres per half flush.
 - manual or sensor operated, low volume flush systems fitted to all urinals (excluding waterless, or ultra water-efficient urinals),
 - trigger nozzles on all hoses and kitchen dishwashing facilities, and
 - automatic shut off for all public hand basin taps.
- f) Locate all non-residential hot water systems as close as practical to the hot water end-use (for example, aquatic centre shower facilities).

Alternative water supplies and treatment options

- a) Potable water must not be drawn on for the following uses in non-residential development, unless as a backup supply:
- toilet and urinal flushing,
 - fire service testing,
 - clothes laundering,
 - hosing-down,
 - car washing.
- b) As long as “fit for purpose” treatment measures appropriate to the water source and the water end-use are applied, alternative water sources for non potable uses may include:
- rainwater harvested from roofs, or
 - treated
 - waste water,
 - stormwater or
 - greywater (such as collected from showers, hose-down, car-wash or laundry facilities).
- c) Gravity feed is a preferred characteristic of the treatment options. If it cannot be achieved, localised, modular treatment technologies should be used rather than centralised treatment, to avoid the use of unnecessary water pumping energy.
- Preferred localised, modular treatment options include:
 - subsurface flow wetlands;
 - suspended growth systems including, activated sludge systems;
 - fixed growth systems, including trickle filters, rotating biological contactors;
 - re-circulating media filters (fixed film bio-reactor);
 - sand and depth filtration;
 - membrane filtration including micro, ultra, nano filtration and reverse osmosis; and
 - membrane bioreactor.

Cooling towers

- a) Cooling towers, or other forms of evaporative coolers for the provision of cooled air to, or the rejection of heat from heating, ventilation, air conditioning, chilling or refrigeration systems, must (except in cases of emergency, such as failure of the particular water supply), draw 100% of their water use from an alternative water supply.

Suitable, alternative water supplies include:

- harvested rainwater or
- appropriately treated:
 - waste water,
 - stormwater or
 - greywater (such as collected from showers, hose-down, car-wash or laundry facilities).

6.2 INTEGRATED WATER CYCLE MANAGEMENT AND WATER SENSITIVE URBAN DESIGN

The WTC straddles the catchment divide between Porter's Creek and Wallarah Creek in the most upstream reaches of both catchments. A number of important aquatic ecosystems are present within and downstream of the WTC. Many of the systems are sensitive to changes in hydrology. Water quality and quantity are therefore important issues requiring at source treatment as well as measures to be implemented within drainage corridors to detain and treat stormwater before it leaves the site.

Development within Warnervale Town Centre is to be guided by the principles of Water Sensitive Urban Design (WSUD). WSUD is to be adopted throughout the development to promote sustainable and integrated management of land and water resources incorporating best practice stormwater management, water conservation and environmental protection.

A WSUD Strategy is to be prepared for each development, outlining how the following provisions are to be met and optimised through the development. The WSUD Strategy is to comply with the requirements and deliver the various elements of the *Warnervale Town Centre Integrated Water Cycle Management Strategy (IWCM)*, and other relevant council IWCM and WSUD Technical Guidelines.

As summarised in Table 5, various elements of the IWCM Strategy are categorised as 'Private' or 'Public' by their location (either, within the private allotment or, on public land), and responsibility/ownership (either, privately owned/operated or, Council owned/operated).

Individual developers or allotment builders will be responsible for the delivery (design, construction and establishment) of individual IWCM elements. The developer will then give the 'private' IWCM infrastructure to the owners or managers of the private land (owners' corporation or building managers), and the 'public' IWCM infrastructure to Council.

As part of the early conceptual design for individual development sites, developers must consult with the consent authority to resolve and confirm the preferred responsibility and requirements for delivering the IWCM infrastructure.

Objectives

- To protect the key hydrologic characteristics of Porter's Creek Wetland and Wallarah Creek.
- To recommend that hydrologic performance objectives for development within the Porter's Creek Wetland and Wallarah Creek catchments are listed and preliminary storage requirements are provided as indicated on **Figure 4.1 in section 4 Public Open Space**.
- To guide development consistent with the principles of Water Sensitive Urban Design (WSUD).
- To ensure that stormwater runoff achieves best practice standards, through the development of an appropriate treatment train at a lot scale and streetscape.
- To limit changes in flow rate and flow duration within the receiving waterways as a result of development.

- To protect the receiving wetlands and waterway ecosystems through:
 - Preservation of both the flooding and drying hydrology from the development area to the wetlands.
 - Preservation of the pre-development flows within Wallarah Creek which influence stream disturbance (3mth and 1.5yr ARI).
- To minimise impacts of flood flows discharging from the WTC on downstream waterways.
- To mitigate the impacts of urban development on stormwater quality through incorporating best practice stormwater management principles and strategies in development.
- To safeguard the environment by improving the quality of water run-off.

Controls

Wetland and Stream Hydrology Controls

- a) All development within the Porter's Creek and Wallarah Wetland Catchment, must attain the following:
- Preserve the pre-development 30 day low flow duration frequency curve for the dry season (October to January).
 - Preserve the low flow spells frequency curve for the dry season.
 - Preserve the pre-development 30 day high flow duration frequency curve for the dry season (October to January).
 - Maximise collection and reuse of stormwater in line with the above points.

The above requirements are deemed to be satisfied through the adoption of stormwater storages which are connected via pumps and pressure reticulation to the Regional IWCM Scheme.

- b) In addition to the above point, all development within the Wallarah Creek Catchments must attain the following:
- Maximise collection and reuse of stormwater. In order to preserve as far as practical the pre-development hydrology (such as low/high flow durations and frequencies).
 - Preserve the pre-development channel forming flows within Wallarah Creek for events up to and including the 2 year ARI storms.
 - Mimic the pre-development peak flows within the Wallarah Creek for events up to and including the 2 year ARI storm which tend to cause erosion of localised sections of the bed and banks and dictate stream health.
 - Post development flow duration should be no greater than 4 times the pre-development flow duration.

Stormwater Quality Controls

- a) All stormwater from the Warnervale Town Centre development discharging into the hydrologic management systems (ie. stormwater storage) is to be treated in accordance with best practice:
- 85% reduction in the mean annual load of Total Suspended Solids (TSS).
 - 65% reduction in the mean annual load of Total Nitrogen (TN).
 - 45% reduction in the mean annual load of Total Phosphorus (TP).
 - Retention of litter greater than 5mm for flows up to 50% of the one-year ARI peak flow.
 - No visible oils for flows up to 50% of the on-year ARI peak flow.
- b) All other stormwater from the Warnervale Town Centre development discharging directly into 'receiving environments' (i.e. 7G wetlands, Porters Creek Wetland, Wallarah Creek) is to be treated in accordance with Wyong Shire Council's Stormwater Management Plan:
- 90% reduction in the mean annual load of Total Suspended Solids (TSS).
 - 50% reduction in the mean annual load of Total Nitrogen (TN).
 - 50% reduction in the mean annual load of Total Phosphorus (TP).
 - Retention of litter greater than 5mm for flows up to 50% of the one-year ARI peak flow.
 - No visible oils for flows up to 50% of the one-year ARI peak flow.

- c) Compliance with these standards to be determined through stormwater quality (MUSIC) modelling in accordance with the IWCM Strategy.
- d) The configuration and sizing of appropriate WSUD measures to meet the stormwater quality objectives should be identified in accordance with the IWCM Strategy and documented for development application.

Appropriate Treatment Train

- A treatment train consists of a combination of treatment measures which address the range of particular size pollutants found in stormwater. The selection and order of treatment is important as well as the proximity of treatment to its source and the distribution of treatment throughout the catchment.
- For Warnervale Town Centre site a final mix of ‘At Source’, ‘Streetscape’ and end of pipe’ treatment is to be defined by individual developers with the overall aim to treat stormwater to the required levels prior to delivery to the stormwater storages.

Accepted treatment measures include: rainwater tanks and harvesting, forecourt wetlands and bioretention systems, bioretention pods within lots and streetscape, permeable paving in carparks and some roads, proprietary gross pollutant traps, buffer strips and grass verge treatment. Council Development staff are to be consulted whilst formulation the treatment train strategy.

Table 6: Summary of WTC IWCM Strategy

WATER CYCLE MANAGEMENT ELEMENT	Private (Private allotment owned and managed)	Public (Council owned and managed)
Demand management: AAA+ fixtures and appliances, dual flush toilets, waterless urinals, water efficient gardens (residential demand management in accordance with BASIX).	✓	
Rainwater Tanks: Residential tanks where required by BASIX to meet 40% potable water consumption reduction. Non-residential tanks where required to supply non-potable demand.	✓	
‘At Source’ Stormwater Treatment: For large retail, commercial and apartment allotments, treatment systems integrated into landscapes and forecourts to collect runoff and facilitate treatment prior to discharge form the allotment. Eg. Bioretention pods and systems, roof top gardens, WSUD carparks, stormwater harvesting.	✓	
‘Streetscape’ Stormwater Treatment: Integrated into road reserves to collect road and allotment runoff and facilitate treatment prior to discharge to stormwater drainage system and subsequently the stormwater storage eg. Bioretention pods, WSUD carparks, permeable paving (and swales where appropriate).		✓
Stormwater Storage: Stormwater Storage sized in combination with rapid drawdown pump rate to remove excess stormwater and deliver the wetland hydrologic objectives.		✓
Stream Disturbance Management Storage of 2 yr flows to preserve the current peak flows entering Wallarah Creek, ensure flow is delivered in a dispersed manner and protective of already scoured zones.		✓

Development Application

All uses

- a) Applicants must consult with the consent authority at an early, conceptual design stage to confirm the IWCM Strategy requirements in relation to their development site. Water conservation aspects of those requirements will not apply to private dwellings built to be compliant with BASIX. The IWCM Strategy discussions will provide the developer with the following:
 - Confirmation of the land use type to apply on the development site.
 - Detail the relevant IWCM objectives and identify any variations from the IWCM Strategy.
 - Details of the IWCM Infrastructure relating to the development and any variations from the IWCM Strategy
 - Method for stormwater treatment systems and stormwater storage design if the catchment/development areas vary from the IWCM Strategy.
 - Indication of preferred delivery (construction, establishment and handover) model for the IWCM elements.
- b) Following conceptual design, applicants must submit a WCM Plan to the consent authority as part of the Development Approval. The WCM Plan must provide the following:
 - Description of the existing WTC including topography, vegetation and soils.
 - Location in relation to the IWCM Strategy catchments and the stormwater storage to which the development drains.
 - Description of the proposed development including, roof areas, landscaped areas (for irrigation), ground level hardstand and uses through the development site.
 - Description of stormwater treatment strategy including, 'at source', 'streetscape' or 'precinct' scale elements to deliver the stormwater quality objectives. Results of performance assessment using the MUSIC model in accordance with the MUSIC Modelling Guidelines must be provided with the conceptual design including, size, depth, and landscape integration of the IWCM elements.
 - Drainage strategy for the site to ensure runoff is delivered to the relevant stormwater storage.

Construction Certification

- a) Undertake the design development and detailed design of the IWCM elements in accordance with Australian Runoff Quality and WSUD Technical Guidelines (ARQ, 2003), and with the design approach described in WTC IWCM Strategy.
- b) Submit the following documentation for the design development and detailed design for Construction Certification in addition to standard landscape and civil drawings:
 - IWCM/WSUD Functional Design Report (describe key functional elements and provide relevant WSUD/IWCM Specifications);
 - Construction and Establishment Methodology;
 - Monitoring and Maintenance Plan.

Construction and Establishment

- a) Applicants must submit a site specific construction and establishment methodology as part of design development and detailed design. The methodology must be submitted with the Construction Certification, and document the IWCM elements.

Hard paved surfaces

- a) Incorporate WSUD principles in the design of the public domain and private hard paved surfaces.
- b) Use pipes and pits to direct drainage from streets and other impervious surfaces (including, car parks, paved outdoor areas, footpaths) into gross pollutant traps and oil and grit/sediment separators.
- c) Pass collected stormwater through a filtration system for further treatment. Direct collected treated stormwater into bioretention trenches or holding tanks before reuse or, discharge to council's trunk stormwater drains or to natural watercourses.

- d) The types of pollutants, estimated pollutant loadings and level of pollutant retention of any stormwater discharged into natural watercourses should reflect current best practice, and be consistent with the objectives and recommendations of the Australian Runoff Quality and WSUD Technical Guidelines.

6.3 RIPARIAN CORRIDORS

Objectives

- To protect the ecological function of vegetated riparian corridors.
- To retain, and where appropriate, modify and/or rehabilitate existing watercourses and riparian zones.
- To reduce the risk of stream erosion within Wallarah Creek and Porter's Creek following development.
- To create a stable environment that enhances stream ecology.
- To provide habitat connectivity across the WTC.
- To allow for the use of the riparian corridor buffers for low impact recreational activities such as walking and cycling.

Controls

- a) The tributary to the west of the railway corridor is to be protected through a core riparian corridor width of 40m minimum, with 15m buffers either side, forming a total corridor of 70m.
- b) The Wallarah Creek tributary is to be protected through a core riparian corridor width of 60m minimum, with 10m minimum buffers either side, forming a total corridor of 80m minimum.
- c) The vegetated buffers either side of the Core Riparian Zone (CRZ) can include the Outer Protection Area of the Asset Protection Zone (APZ). Refer to **Figures 6.1 and 6.2**.
- d) Where there are important patches of vegetation, the setback width of CRZs should vary to incorporate existing endemic vegetation.
- e) Stormwater infrastructure, water quality treatment ponds, pedestrian and cycleways and asset protection zones are to be located outside of the CRZ. These uses are permitted within the non-core riparian buffer if the impact on riparian functions is minimal and its integrity maintained and where they have been specifically identified in the WSUD strategy for the site
- f) The understorey can be cleared in the riparian zone to satisfy the requirements for an Outer Protection Area of the APZ, and bushfire legislation.
- g) The location of access ways to and within a riparian buffer is not to compromise the ecological integrity of any existing riparian vegetation, the stream-bed or bank stability.
- h) The impact of pedestrian and cycleways and general access points to riparian corridors is to be minimised by using ecologically informed design principles (for example, elevated accessways that allow sunlight to penetrate and vegetation to grow beneath).
- i) Development adjoining the riparian corridors will need to provide a fence to the boundary with the riparian corridor.

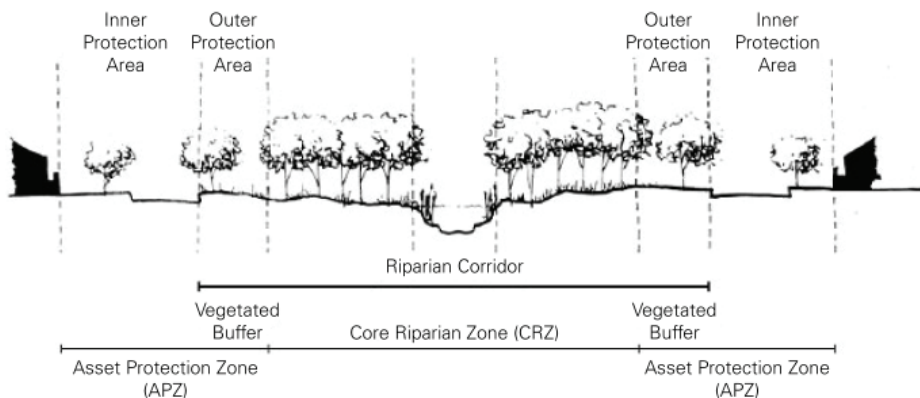


FIGURE 6.1 RIPARIAN CORRIDOR FEATURE ZONES

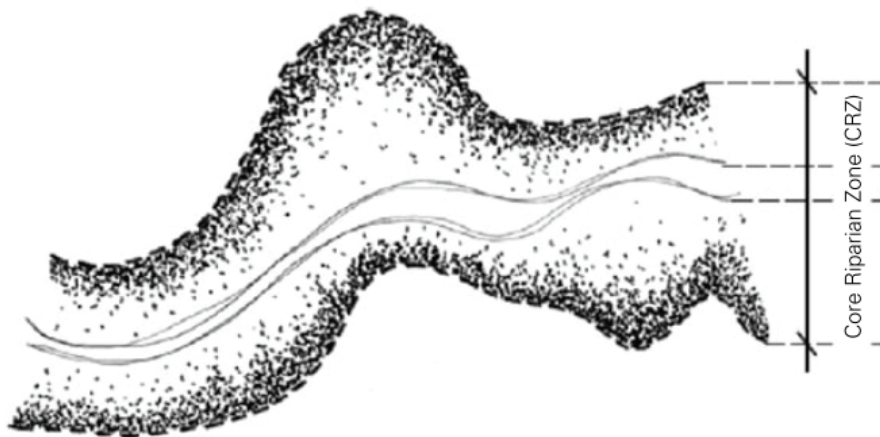


FIGURE 6.2 RIPARIAN CORRIDOR VARIABLE SETBACKS

6.4 TREE RETENTION AND BIODIVERSITY

Objectives

- Protection and enhancement of existing significant trees, where possible.
- To improve or maintain biodiversity values.
- To maintain or improve as much existing vegetation as practicable.
- To reduce impacts of runoff from roads and impervious areas on adjacent lands.
- To manage weeds during and after construction, to prevent the spread of weeds.

Controls

- Submit a tree survey plan with all subdivision applications. The tree survey plan is to identify the location, type and condition of all existing trees, and trees proposed to be removed and retained. Where trees are to be maintained, details of protection methods, during and after construction, are also required. Details are also to be provided to address wildlife that may be displaced and relocation of habitat (eg. fallen logs, hollows etc) into the riparian corridor and other suitable areas on the WTC site.

- b) Where earthworks necessitate the removal of existing trees, applicants are required to comply with section 6.8 of this DCP.
- c) Plant a range of endemic tree and shrub species throughout the WTC, in accordance with the landscape specification.
- d) Native vegetation (canopy level) shall be provided, where possible, within neighbourhood parks, riparian corridors and street verges to create a 'stepping-stone corridor' for terrestrial biodiversity. Details of any planting shall be provided within a detailed Landscape Plan submitted at DA stage.
- e) Submit a weed management plan (if required by the consent authority), for subdivision applications which:
 - identifies weed control measures during and after development,
 - requires land to be revegetated after disturbance or construction activities to reduce the likelihood of weed species growing on the WTC, and
 - topsoils brought onto the WTC to be free of weeds before use.

6.5 BUSHFIRE HAZARD MANAGEMENT

Objectives

- To prevent the loss of life and property due to bushfires, by discouraging the establishment of incompatible uses on bushfire prone land.
- To encourage sound management of bushfire prone land.
- To implement fire management activities that reduce threats to life and property.
- To ensure ecological thresholds are not exceeded.

Controls

- a) Asset Protection Zones (APZs):
 - are to be located wholly within a development site;
 - may incorporate roads;
 - are to be located wholly outside of a Core Riparian Zone (CRZ), and outside the Heath Wrinklewort Reserve;
 - may be located within the CRZ buffer but must not compromise the tree canopy;
 - may be used for open space and recreation subject to appropriate fuel management;
 - are to be established and maintained in accordance with the Planning for Bushfire Protection 2006;
 - may incorporate private residential land, but only within the building setback (no dwellings are to be located within the APZ), and
 - are to be generally bounded by a perimeter fire trail/road that is linked to the public road system at regular intervals in accordance with Planning for Bushfire Protection 2006.
- b) DAs for the WTC, and residential development or Special Fire Protection Purpose developments are subject to s100B of the Rural Fires Act 1997, and s 79BA of the EP&A Act 1979.
- c) DAs are to address the requirements of Planning for Bushfire Protection 2006.
- d) Meet the standards of Planning for Bushfire Protection 2006 for reticulated water. Water supply is to be via a ring main system, engineered to the requirements of Australian Standard 2419.1-1994 Fire Hydrant Installations.
- e) Bushfire Hazard Management measures are to be incorporated into Council's Plans of Management for public domain and open space.

-
- f) Where an allotment fronts and partially incorporates an APZ, it shall have an appropriate depth to accommodate a dwelling with private open space and the minimum required APZ. The APZ will be identified through a Section 88B Instrument (Conveyancing Act 1919, as amended).
 - g) Temporary APZs, identified through a Section 88B Instrument, will be required where development is proposed on allotments next to undeveloped land. The temporary APZ will not be required, and shall cease upon, development of the adjacent stage.
 - h) School buildings fronting bushland areas shall be setback 35 metres from the bushland boundary.

6.6 CONTAMINATION MANAGEMENT

Objectives

- To ensure that changes to land use do not increase the risk to public health or the biophysical environment.
- To avoid inappropriate restrictions on land use.
- To provide advice to support decision making and inform the community.
- To consider the likelihood of land contamination as early as possible in the planning process.
- To link decisions about the development of the land with the information available about contamination possibilities.

Controls

- a) DAs for development on land identified in **Figure 6.3** need to be accompanied by a preliminary investigation in accordance with the contaminated land planning guidelines (under s145C of the AP&A Act).
- b) In considering a DA, the consent authority must be satisfied that land, where it is contaminated, is suitable in its contaminated state, or will be suitable after remediation, for the purpose for which the development is proposed to be carried out.
- c) If land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, the consent authority must be satisfied that a site will be remediated before the land is used for that purpose.
- d) Comply with a maximum 1 in 3 grade for embankments.
- e) Submit a geotechnical assessment to the consent authority with a DA for development on land indicated in **Figure 6.4**.
- f) If, under extraordinary circumstances, approval is given by the consent authority for cut and fill to exceed 1m in height:
 - a report is required from a qualified geotechnical engineer certifying the stability of the resulting slope and adequacy of retention therein;
 - all details regarding proposed lot reshaping shall be shown on engineering plans submitted for approval including, but not limited to the following:
 - i) the proposed finished and existing surface levels of each lot. Lots shall be graded in accordance with the consent authority's requirements for drainage.
 - ii) the location and type of all proposed retaining structures in accordance with the consent authority's requirements for methods for retaining fill.
 - iii) where existing trees cannot be retained, comply with the consent authority's requirements.
 - iv) batters generally in accordance with the consent authority's requirements for the retention and extent of fill.
 - v) all longitudinal sections (sewer and inter-allotment drainage longitudinal sections) within terraced developments must reflect the proposed finished surface levels and be designed accordingly.



FIGURE 6.3 LAND REQUIRING CONTAMINATION INVESTIGATION



FIGURE 6.4 LAND REQUIRING FURTHER GEOTECHNICAL INVESTIGATION

-
- vi) the proposed earthworks for preparation prior to cut and fill, fill material, compaction and testing of material, topsoiling, stabilising and revegetation, must comply with the above requirements.
 - g) Where earthworks necessitate the removal of existing trees, the site is required to be replanted with a minimum of six advanced saplings of suitable species. Planting is to be clear of the likely building location, a minimum of 2m from side or rear boundaries, and shall not be commenced until the earthworks have been completed and topsoiled.

6.7 RETAINING WALLS AND EARTHWORKS

Objectives

- To provide a consistent treatment for the provision of retaining walls.
- To accommodate proposed development on site without the need for excessive cut and fill or construction of high retaining walls.
- To encourage designs conforming to natural land forms.
- To ensure that building design is appropriate.

Controls

- a) Construct retaining walls in consistent, visually recessive materials and colours.
- b) Encourage landscaped embankments in preference to retaining walls and similar garden wall.

6.8 SOILS

Objectives

- To implement measures as part of development to prevent any degradation of the existing soil and groundwater environment.
- To minimise erosion and sediment loss during and after construction.
- To minimise water pollution from erosion siltation and sedimentation.
- To ensure that development does not contribute to environmental damage of water-courses and vegetation on the WTC and beyond.
- To minimise air and water pollution due to soil loss either through erosion or poor site practices

Controls

- a) Development should be designed and constructed to effectively integrate with the natural topography of the site, minimising the need for excessive sediment disturbance.
- b) Soil loss from a development site should be prevented through the installation and maintenance of effective site management practices.
- c) An erosion and sediment control plan (ESC Plan) is required to be submitted with all DAs (including complying development) where the proposal involves site disturbance, excavation or filling (other than for minor building modifications) including:
 - demolition
 - excavation
 - trenching
 - building

- d) The ESC Plan must make reference to the entire construction and post construction period. All devices must be installed prior to commencement of any other demolition or construction works on-site.
- e) The ESC Plan is to be prepared according to the requirements of the NSW Department of Housing, Managing Urban Storm water: Soils and Construction, 2004, and Council's Policy E1: Erosion and Sediment Control from Building Sites.
- f) For large scale developments (greater than 5000sq m), more extensive controls will be required according to the requirements of the NSW Department of Housing's controls referred to in (e) above.
- g) Suspended solid concentrations in storm-water leaving the site shall not exceed more than 50mg/l.
- h) All controls are to be maintained through the life of the works and shall be inspected and repaired at the end of each working day.
- i) Dust control measures should be applied to reduce surface or airborne movement of sediment from exposed areas of the site.
- j) All DAs for land identified in **Figure 6.4** require the submission of a geotechnical study to the consent authority.

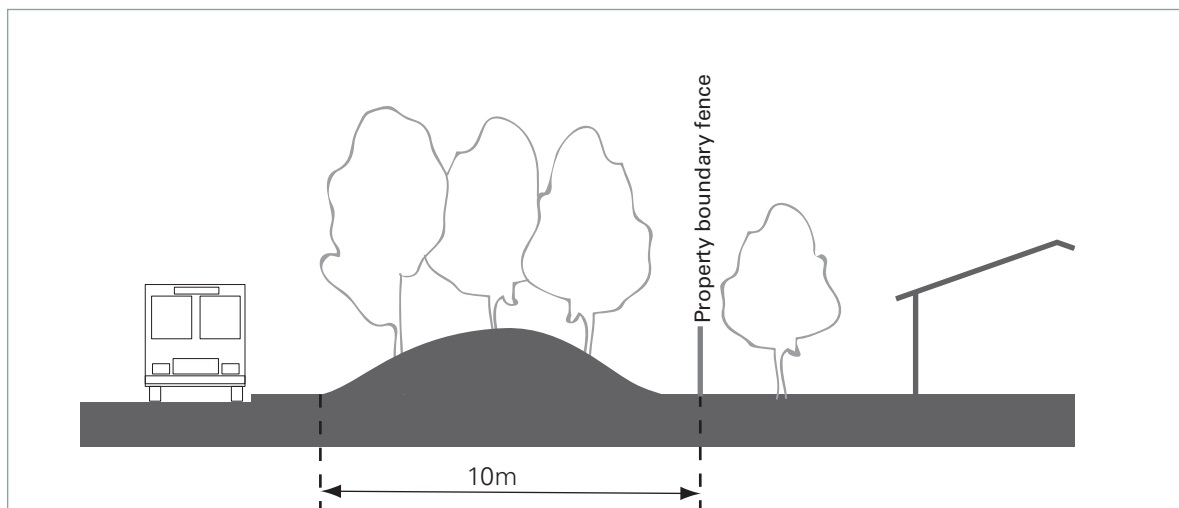


FIGURE 6.5 NOISE MITIGATION MEASURES IN NOISE AFFECTED AREAS

6.9 ACOUSTICS

Objectives

- To minimise noise and vibration impacts from the railway corridor and Sparks Road.
- To establish appropriate built forms to mitigate noise and vibration impacts.
- To minimise noise impacts on residential uses, places of public worship, hospitals, educational establishments and other noise sensitive buildings in proximity to the railway corridor.

Controls

- a) Provide noise mitigation measures to minimise noise from the railway corridor and Sparks Road. A landscaped acoustic buffer is to be provided between building boundary fences and the nearest road kerb along Sparks Road (refer to **Figure 6.5**).

-
- b) Provide all practicable mitigation measures for rail noise and vibration as per the Rail Infrastructure Corporation and State Rail Authority Interim Guidelines for Councils: Consideration of Rail Noise and Vibration in the Planning Process, 2003, for development on land within 60m of the north-south rail corridor.
 - c) Reduce road noise impacts in accordance with the Roads and Traffic Authority Environmental Noise Management Manual, 2001.
 - d) The environmental noise goal for new dwellings shall be 60dB(A) L10 18 hours at 1 metre from the facade of future dwellings or 45dB(A) L10 18 hours within those dwellings when tested in accordance with the Environmental Protection Authority's Environmental Criteria for Road Traffic Noise, May 1999. The consent authority may consider a variation of the external noise goal, based on an applicant's sound economic and technical considerations and evidence that the internal noise standard specified in AS/NZS 2107-2000 can be reasonably achieved for all affected new dwellings.
 - e) Submit a noise study prepared by an appropriately qualified acoustic consultant with DAs for properties fronting Sparks Road and in the vicinity of access roads. The noise study is required to identify appropriate noise amelioration measures including dwelling design and acoustic buffer design. The design noise level shall be based upon estimated traffic flows, speeds and percentage of heavy goods vehicles expected in the next ten years (this information will be supplied by Council).
 - f) A landscaped acoustic buffer is to be provided along the southern boundary of the school on Sparks Road.
 - g) Noise amelioration mounds should be treated with stepped construction of subgrade to enable better keying of top soil to the sub-grade mounds. Top soil depth should be 200mm minimum and no slope should have a batter greater than 1:3. Mounds should be constructed with tree planting within batter grass treatments. Grasses should only be planted as a temporary measure so that tree establishment is not hindered by competition with grassing.
 - h) Any noise mitigation measures are to be located outside the Heath Wrinklewort Reserve.
 - i) Adopt other mitigation measures, where relevant in consultation with the consent authority.
 - j) Mitigate noise impacts on residential areas from non-residential uses by imposing operating hours and other operational measures, as appropriate.

6.10 WASTE AND RECYCLING

The minimisation of waste from development can reduce impacts on the public domain, contribute to building amenity and limit potential, harmful impacts on the environment. Waste management covers all development stages, from construction and use, to demolition. It also includes waste storage and collection.

Objectives

- To minimise waste generation and disposal to landfill by careful source separation, reuse and recycling.
- To avoid waste generation through design, material selection and building practices.
- To plan for the types, amount and disposal of waste generation during demolition, excavation and construction of developments.
- To ensure the efficient storage and collection of waste, and the quality design of facilities.

Controls

Non-residential development

- a) DAs/PAs for all non-residential development must be accompanied by a waste management plan that addresses:
- best practice recycling and reuse of construction and demolition materials,
 - use of sustainable building materials that can be reused or recycled at the end of their lives,
 - handling methods and waste storage area locations such that handling and storage has no negative impact on the streetscape, building presentation or, amenity of occupants and pedestrians,
 - procedures for the on-going sustainable management of green and putrescible waste, garbage, glass, containers and paper including, estimated volumes, required bin capacity and on-site storage requirements.

The waste management plan is to be prepared by a specialist waste consultant and is subject to approval by the consent authority.

Residential development

- a) In developments not exceeding four dwellings, individual waste storage facilities may be permitted.
- b) In development of more than six dwellings or, where the topography or distance to the street collection point makes access difficult for individual occupants, a collection and storage area is required. The storage area must be located in a position which is:
- not visible from the street,
 - easily accessible to dwelling occupants,
 - accessible by collection vehicles or adequately managed by the owners' corporation to permit removal of bins to an approved collection point,
 - has water and drainage facilities for cleaning and maintenance; and
 - does not immediately adjoin private open space, windows or clothes drying areas.
- c) Subject to Council's collection policy, common garbage storage areas must be sized to accommodate either the number of individual bins required or a sufficient number of larger bins of minimum dimensions as required by Council.
- d) The size and number of the waste bins shall be determined having regard to the need for either, on-site access by collection vehicles or, the requirement for bins to be wheeled to the street for collection by a contractor. If transferred to the street for collection, the owners' corporation or, a caretaker must be responsible for the movement of bins to the collection point.

Residential Development Controls

The controls in this section relate to detached, semi-detached and multi-unit dwellings.

7.1 NEIGHBOURHOOD AND SUBDIVISION DESIGN

Objectives

- To establish a clear urban structure that maximises the 'sense of neighbourhood' and encourages walking and cycling over private car use.
- To establish a subdivision layout that utilises the residential development areas efficiently, maximises the natural attributes of the site and clearly defines and reinforces the public domain.
- 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 and community facilities and parks.
- To provide a range of densities, lot sizes and house types to foster a diverse community and interesting streetscapes.

Controls

- a) Residential neighbourhoods to have a mixture of lot sizes as shown in the examples in **Figure 7.1**.
- b) Subdivision layout is to create a legible and permeable street hierarchy that responds to the natural site topography, the location of existing significant trees and solar design principles.
- c) Pedestrian connectivity within each residential neighbourhood is to be provided between the residential areas and public open space areas, public transport nodes, education and community/recreation facilities.
- d) Street blocks are to be generally a maximum of 250m long. Block lengths and widths are to be provided generally in accordance with the principles in **Figure 7.1**.
- e) Lot orientation and configuration is to be generally consistent with the subdivision principles shown at **Figure 7.1**. The preferred lot orientation is either on a north-south or east-west orientation as per **Figure 7.1**). Where other amenities such as views and outlook over open space are available, an alternative lot orientation can be considered.
- f) The minimum lot size for standard dwelling lots is 250m². The minimum depth of a lot is 17m.
- g) Lots smaller than 250m² are to be accompanied by plans for the proposed dwellings on these lots (ie. an Integrated Development Application) to demonstrate that dwellings can be located in these lots to comply with the controls in this DCP.

Residential Development Controls

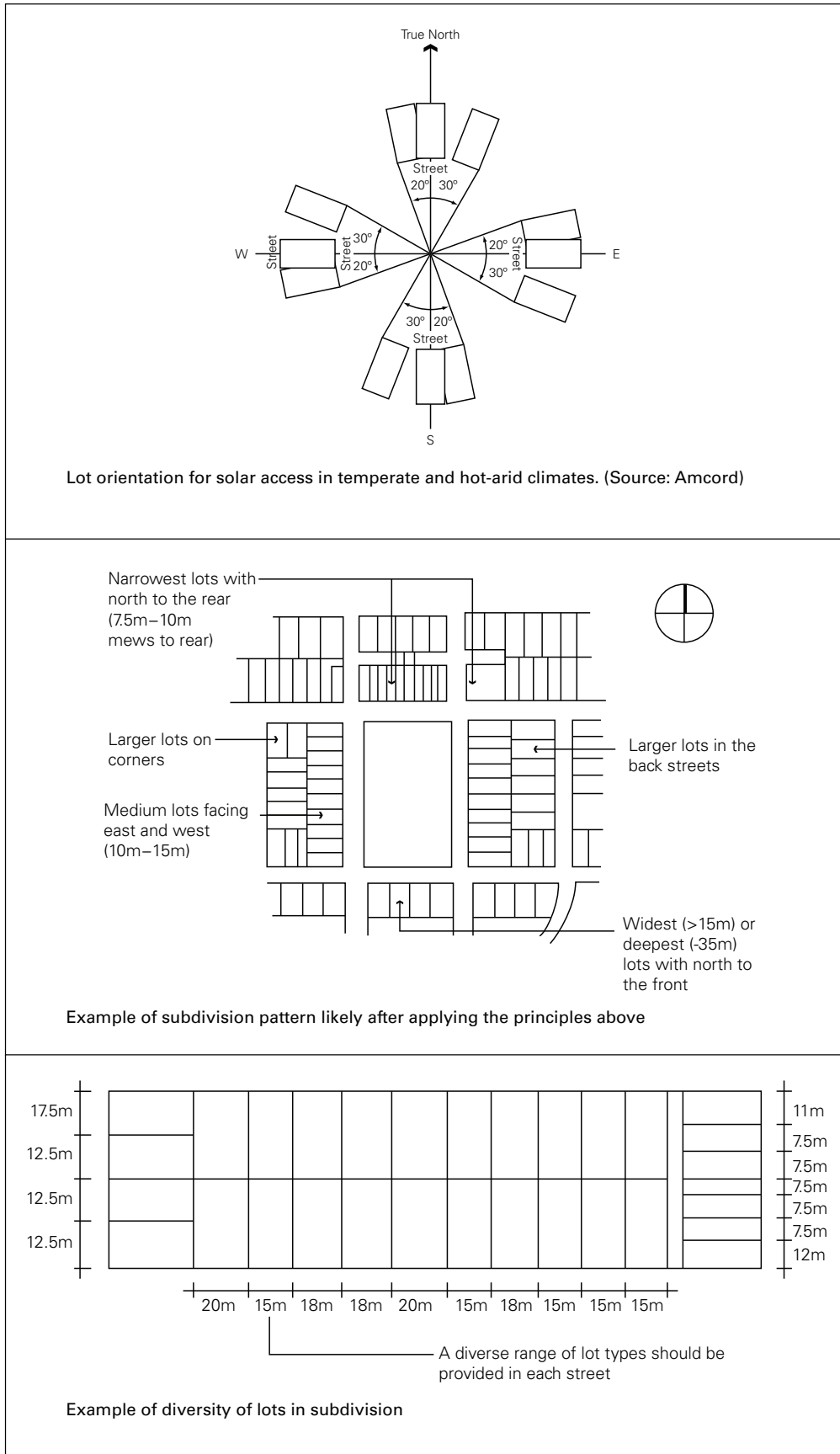


FIGURE 7.1 SUBDIVISION, LOT ORIENTATION AND LOT FRONTAGE VARIATION PRINCIPLES

