



CESSNOCK
DEVELOPMENT CONTROL PLAN 2010

PART E
SPECIFIC AREAS



E17: HUNTLEE

Amendment History

Version No.	Nature of Amendment	Date in force
1	Draft	

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1 Glossary of Terms

Definitions

Active frontage	Continuous ground level business and/or retail land uses that visually engage with the public domain. Building entries are oriented and open toward the street with transparent street frontage that provides an attractive environment for pedestrians, increase the perception of safety and encourage higher levels of pedestrian activity.
Building line or setback	The horizontal distance between the property boundary or other stated boundary (measured at 90 degrees from the boundary) and the predominant line formed by the main external face of the building.
Communal open space	As defined by the Apartment Design Guide: <ul style="list-style-type: none"> a) Outdoor space located within the site at ground level or on a structure that is within common ownership and for the recreational use of residents of the development. Communal open space may be accessible to residents only, or to the public.
Community facility	A building or place: <ul style="list-style-type: none"> a) owned or controlled by a public authority or non-profit community organisation, and b) used for the physical, social, cultural or intellectual development or welfare of the community, <p>But does not include an educational establishment, hospital, retail premises, place of public worship or residential accommodation.</p>
Corner lot	A lot located at the intersection of two roads.
Landscaped area	Means a part of a site used for growing plants, grasses and trees, but does not include any building, structure or hard paved area.
Outbuilding	As defined by the Codes SEPP 2008, meaning any of the following: <ul style="list-style-type: none"> a) balcony, deck, patio, pergola, terrace or verandah that is detached from a dwelling house, b) cabana, cubby house, fernery, garden shed, gazebo or greenhouse, c) carport that is detached from a dwelling house, d) farm building, e) garage that is detached from a dwelling house, f) rainwater tank (above ground) that is detached from a dwelling house, g) shade structure that is detached from a dwelling house, h) shed.
Principal private area	Means an area of private open space which is directly accessible from the main living areas of the dwelling it serves, with an average slope no greater than 1 in 5.
Private open space	Means an area external to a building (including an area of land, terrace, balcony or deck) that is used for private outdoor purposes ancillary to the use of the building
Rainwater tank	Means a tank designed for the storage of rainwater gathered on the land on which the tank is situated.
Site coverage	Means the proportion of a site area covered by buildings. However, the following are not included for the purpose of calculating site coverage: <ul style="list-style-type: none"> a) Any basement, b) Any part of an awning that is outside the outer walls of a building and that adjoins the street frontage or other site boundary, c) Any eaves, d) unenclosed balconies, decks, pergolas and the like.
Streetscape	The aesthetic values of groups of buildings, their context and their predominant scale, forms, styles, textures, colour, as perceived from the public domain. Elements beyond the boundaries of a property also contribute to the streetscape, including footpaths, nature strips, kerbs and channels and street trees, and are also be affected by topography and by street curves and alignment.

1 Introduction

1.1 Application

This chapter of the DCP applies to land in the Cessnock Local Government Area at the Huntlee New Town Site ('Huntlee') as shown at Figure 1.

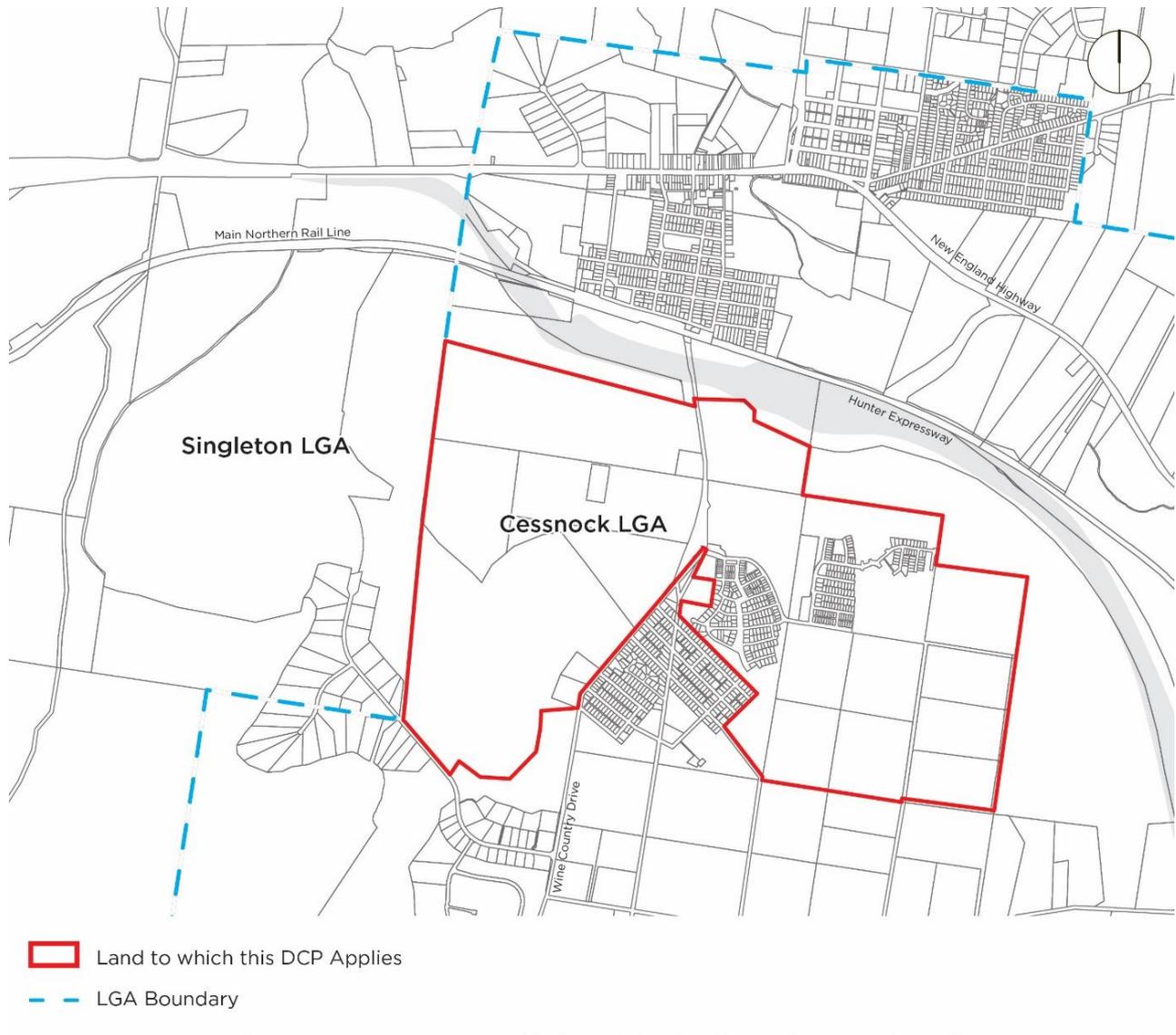


Figure 1: Land application map

1.2 Purpose of this DCP chapter

The purpose of this DCP chapter is to:

- communicate the planning, design and environmental objectives and controls against which Council will assess development applications;
- consolidate and simplify the planning controls for Huntlee;
- ensure the orderly, efficient and environmentally sensitive development of Huntlee; and
- promote high quality urban design outcomes within the context of environmental, social and economic sustainability.

1.3 Relationship to other chapters of this DCP

This DCP chapter should be read in conjunction with the *Cessnock Local Environmental Plan 2011* and other relevant State environmental planning policies. This section forms part of Part E – Specific Areas of the Cessnock Development Control Plan 2010 (Cessnock DCP 2010). It sets out specific controls to guide the future development of Huntlee. Development within the precinct will need to have regards to this section of the DCP, in addition, to the provisions from the following sections of Cessnock DCP 2010:

- Part B.2 Public Notification and Advertising
- Part C.9 Development on Flood Prone Land
- Part D.8 Temporary Events
- Part D.9 Outdoor Dining

In the event of any inconsistency between this section and other sections of the Cessnock DCP 2010, this section will prevail to the extent of the inconsistency.

1.4 Structure of this DCP chapter

This DCP is structured as follows:

Section 1	Introduction Sets out the administrative provisions of the DCP.
Section 2	Vision and Character Relates to the overall layout and vision for the future development of the site and development targets for town and village centres, employment area and residential precincts.
Section 3	Managing the Environment Relates to the general environmental issues that apply across the site including riparian corridors, flooding salinity, Aboriginal and European heritage, bushfire management, contamination and mine subsidence.
Section 4	Subdivision Design Relates to the overall design of subdivisions including character, road layout, public domain and minimum lot sizes.
Section 5	Residential Development Relates to the design controls for dwelling houses, multi-unit housing and residential flat buildings. It also includes residential amenity controls such as streetscape, safety, visual and acoustic privacy and sustainable building design.
Section 6	Town and village Centre Relates to the design controls for the village centres and the town centre including controls for the core retail and main street.
Section 7	Employment Area Relates to the design controls for industrial and business park development.
Appendix 1	Site Characteristics Relates to existing conditions and characteristics of the Huntlee New Town Site

1.5 Review of this Plan

The Director General may review this Plan from time to time to ensure that the State Government's objectives continue to be met.

2 Vision and Character

2.1 Regional context

The Hunter Regional Plan 2036 recognises the regional significance of the Huntlee site, identified as a centre of local significance and an area for future housing and urban renewal opportunities. Huntlee will contribute 7,300 dwellings and 200 hectares of employment land to the region, which is capable of generating over 3,000 jobs.

Huntlee is located 20km north of Cessnock and 25km southeast of Singleton. It straddles Wine Country Drive, which links Cessnock with the New England Highway at Branxton. The site is generally bounded by the Main North Railway and Hunter Expressway to the north and east, the existing North Rothbury village to the south and the Black Creek floodplain to the west. The Huntlee location plan is shown in Figure 2.

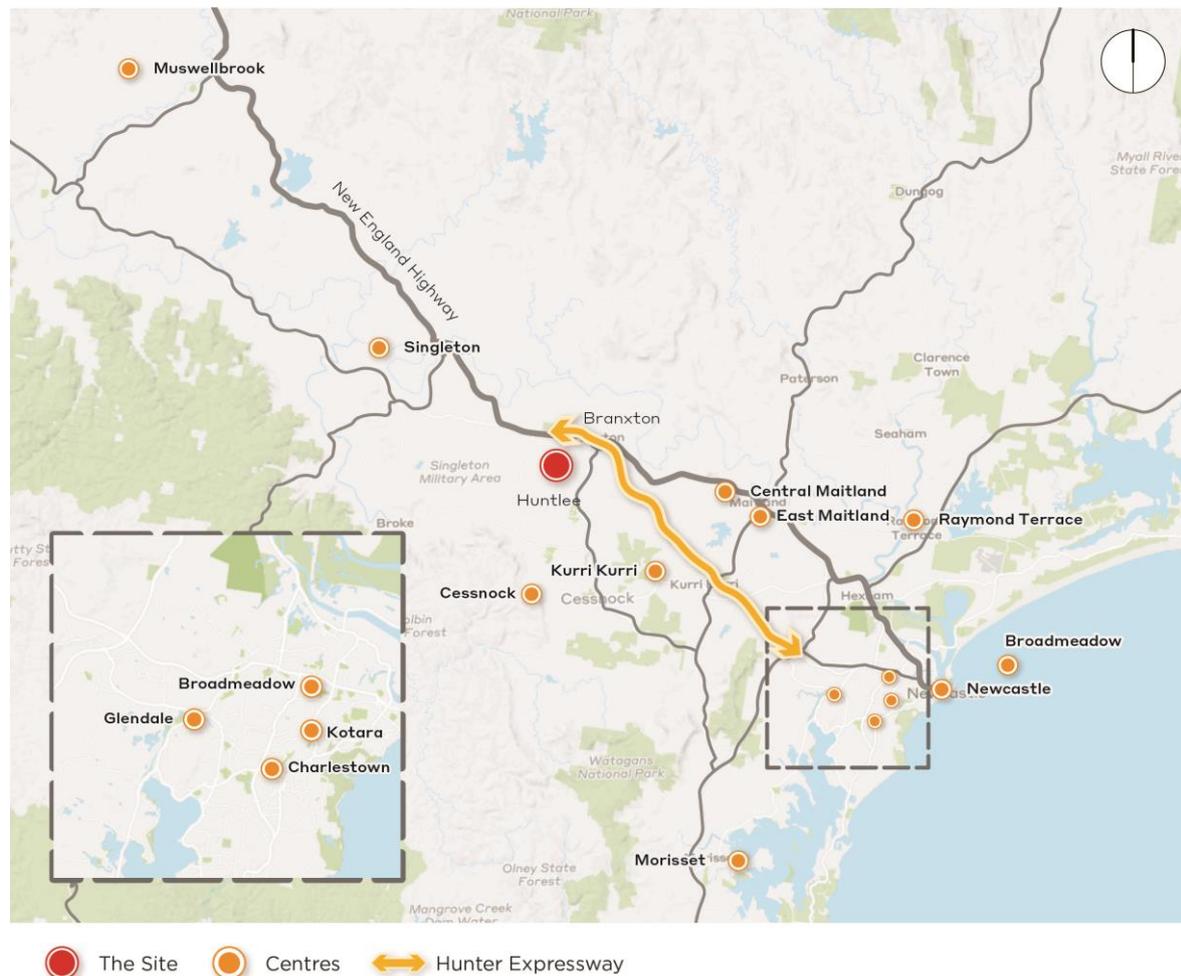


Figure 2: Huntlee location plan

2.2 Vision and development objectives

The vision for Huntlee is to create a new Hunter Valley town that retains the character of the place. The new town will comprise a town centre, residential precincts, open spaces, recreation areas and supporting employment lands. It should reflect its natural attributes and rich Aboriginal and European past. It should establish an active and memorable urban core, surrounded by well-connected neighbourhoods, each with an identifiable

centre that is within easy and safe walking and cycling distance from the houses in that neighbourhood. Huntlee will have a high quality public domain of connected streets, parks, and recreational open space links.

The natural attributes of the site include an undulating topography affording panoramic views, extensive areas of vegetation including dedicated conservation areas. The man-made heritage of the site includes pre-European remnants as well as the memory of the site's significant industrial past – an important part of the Hunter's development as an industrial mining centre in New South Wales. While parts of the site's topography have been significantly altered by mining activity, these areas offer the opportunity to create interesting places.

The Huntlee Town Centre is to create an exciting township in the Hunter Valley combining community, commercial, local shopping and educational facilities that is well connected to open space, Branxton and public transport, including the rail station. Supporting this will be a series of residential neighbourhoods each connected to the Town Centre via the road network. Each neighbourhood will be distinctive in character, being located within a different landscape within the larger site. Some neighbourhoods will be on ridge tops, others along watercourses and areas of vegetation.

The Huntlee Town Centre comprises a mixed use area of approximately 200 hectares catering for a range of uses including retail, service industries, bulky goods, commercial, entertainment, residential, educational and community including open space. The Town Centre will ultimately serve the residents of Huntlee and surrounding areas.

The Town Centre will be laid out with defined centres and edges. Within the Town Centre, streets will be laid out as a permeable network that promotes movement between key destinations. Community oriented buildings and uses shall be distributed throughout the Town Centre.

Village centres will provide for low level retail and community facilities and complement the Town Centre. The village centres will be approximately 5 hectares in area and contain uses including neighbourhood retail premises, community facilities, a primary school and a village centre park. There will be four village centres in the overall Huntlee development.

The key development objectives for Huntlee are:

- To facilitate urban development that meets environmental sustainability objectives.
- To promote housing diversity by providing a range of lot and housing types.
- To create walkable neighbourhoods, with good access to public transport.
- To maximise opportunities for local employment and business.
- To create vibrant, successful town and neighbourhood centres.
- To provide social infrastructure that is flexible and adaptable.
- To maximise opportunities for future residents to access and to enjoy the outdoors.
- To protect and enhance riparian corridors, significant trees and vegetation.

2.3 Design principles

The Indicative Layout Plan proposes four residential villages connected to each other and the town centre by a network of open space, pedestrian and cycleways, local roads and bus routes.

The Indicative Layout Plan is underpinned by a number of key design principles that relate principally to the creation of the public domain. These include:

- Adopting a Main street approach to the Town Centre to create an active centre.
- Creating a well-connected street pattern that responds to the site's topography.
- Streets that generally terminate on an open space.
- Creating streets in residential villages with generous green verges with street trees and footpaths where required.
- A series of linked open space areas, generally along riparian corridors and ridgetops, that preserve ridges, hilltops and significant areas of vegetation, and heritage.
- *Persoonia pauciflora* should be retained including and where possible incorporated into public open space areas.
- Open spaces generally surrounded by public streets.
- Neighbourhoods where residents can easily walk or cycle to the town centre, neighbourhood core, local shops, open space and schools.
- Provide a mixture of lot and housing options to create diversity in the built form and accommodation choice.
- Rehabilitation of former mine working areas and infrastructure.
- Low density residential area adjacent to the existing township of North Rothbury and the rural-residential development known as Hanwood Estates.
- Large residential lots adjacent to the outer rural boundary of the development area.
- Smaller residential lots and medium density residential development in the vicinity of the town and village centres, open spaces and recreation areas.
- Service industry and/or bulky goods retailing uses adjacent to the Hunter Expressway and railway line.
- Promoting connection to broader transport networks such as rail and high-speed arterial road infrastructure.

2.4 Indicative Layout Plan and Staging

An Indicative Layout and Staging Plan is contained in Figure 3 and illustrates the broad level development outcomes for the Huntlee New Town. It outlines the development footprint, land uses, open space, major transport linkages and location of neighbourhood villages that will contain community facilities and schools as well as when each area is expected to be developed in order to ensure an efficient roll out of infrastructure.

Objectives

- (1) To ensure development of the precinct is undertaken in a co-ordinated manner generally consistent with the Indicative Layout and Staging Plan.

Controls

- (1) Development Applications for subdivision and infrastructure are to be generally in accordance with the Indicative Layout and Staging Plan in Figure 3.

- (2) When assessing development applications, Council will consider the extent to which the proposed development is consistent with the Indicative Layout and Staging Plan.
- (3) Any proposed variations to the general arrangement of the Indicative Layout and Staging Plan must be demonstrated by the applicant, to Council's satisfaction, to be consistent with the Design Principles in Section 2.3.
- (4) Any proposed variation to the order of staging of development in the Indicative Layout and Staging Plan must be justified, to Council's satisfaction.
- (5) The overall residential yield of land subject to this DCP must not exceed 7,300 dwellings.

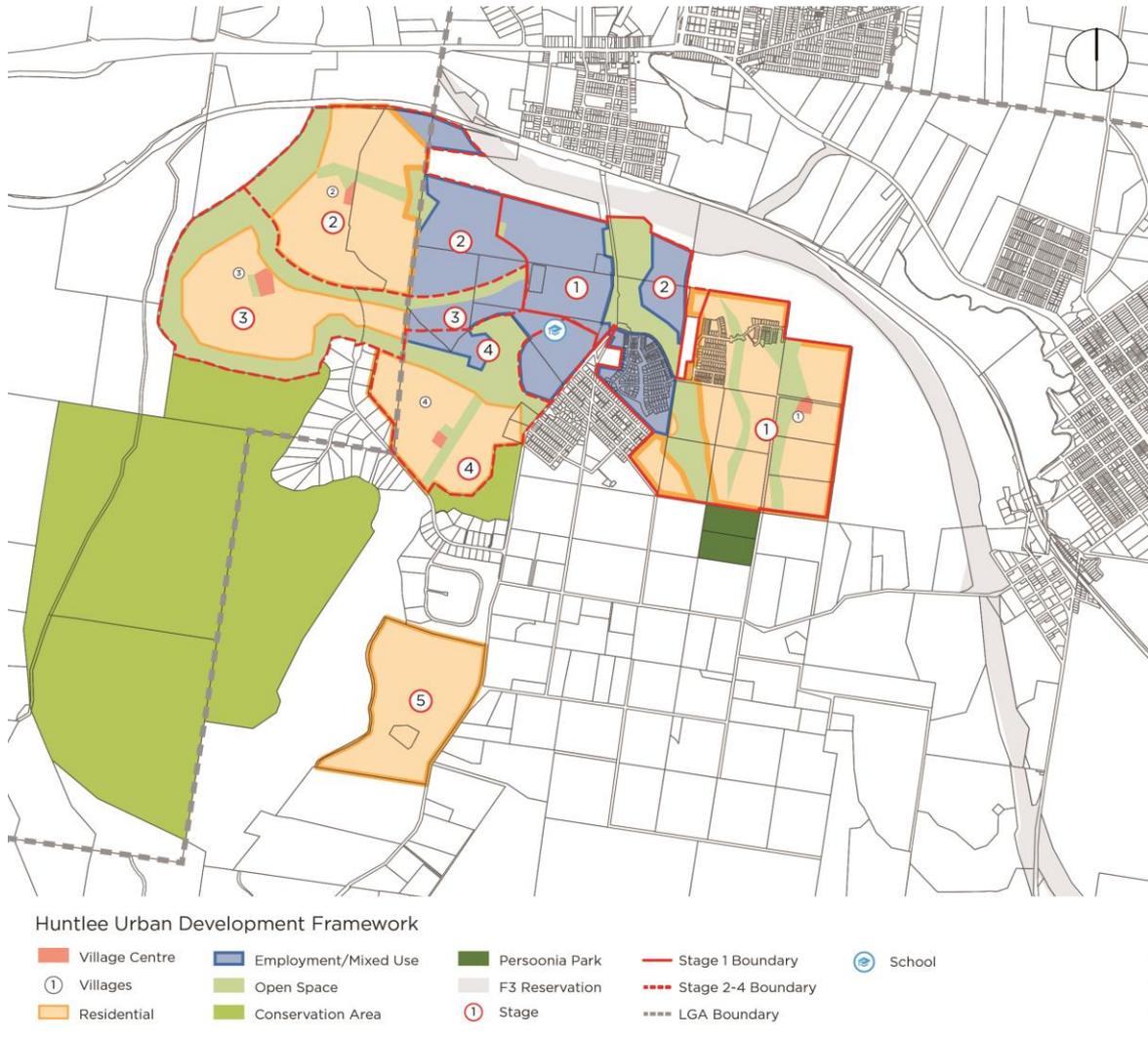


Figure 3: Indicative Layout and Staging Plan

3 Managing the Environment

This section outlines the objectives and development controls relating to general environmental management of issues that apply across the entire site including conservation areas, integrated stormwater management, Aboriginal and European heritage, bushfire hazard management, tree and bushland protection, contamination, earthworks, soils and salinity, waste, riparian corridors and acoustics.

3.1 Riparian corridors

Objectives

- (1) To protect, restore and enhance the environmental values and functions of water courses and riparian corridors.
- (2) To ensure that the development has a neutral or beneficial impact on the quality and quantity of water and water courses.
- (3) To allow for some limited use of riparian corridor buffers for low impact recreation activities such as walking and cycling.
- (4) To maintain a stable naturally functioning watercourse that supports a viable naturally occurring local aquatic community.
- (5) To provide, restore, rehabilitate and maintain the riparian corridor with the local provenance vegetation community.
- (6) To provide a continuous riparian corridor that links to established stands of remnant vegetation and provides extensive habitat and connectivity for naturally occurring terrestrial fauna.
- (7) To ensure vegetation in the core riparian zone (CRZ) is at a density that would occur naturally for the riparian ecotone.
- (8) To minimise the number of road crossings to maintain riparian connectivity.

Controls

- (1) Riparian corridors are to be provided generally in accordance with Section 3 Hydrology of **Appendix 1** and designed in accordance with the controls below and generally comply with the '*Guidelines for Riparian Corridors on Waterfront land*' (DPI-Office of Water, 2012).
- (2) The vegetated riparian zone (VRZ) setbacks should generally comply with the '*Guidelines for Riparian Corridors on Waterfront land*' (DPI-Office of Water, 2012).
- (3) Infrastructure services, stormwater infrastructure, water quality treatment ponds, flood compatible activities (i.e. playing fields), pedestrian paths and cycleways, and asset protection zones are to be located outside of the VRZ unless otherwise allowed for in the aforementioned guidelines.
- (4) The location of access ways to and within a riparian buffer is not to compromise the ecological integrity of any existing riparian vegetation, the streambed or bank stability.

- (5) The impact of pedestrian paths and cycleways, general access points to riparian corridors and road crossings is to be minimised by using ecologically informed design principles (for example, elevated accessways that allow sunlight to penetrate and vegetation to grow beneath).
- (6) The impact of salinity on the landscape and watercourses shall be managed.
- (7) All VRZs are to be rehabilitated and revegetated with appropriate native vegetation having regard to its drainage function and vegetation management for bushfire protection.
- (8) Where wetlands are proposed, a management strategy outlining ownership, ongoing management, annual maintenance costs and initial development costs shall be prepared.

3.2 Flooding and water cycle management

Objectives

- (1) To minimise the potential impact of flooding on development.
- (2) To incorporate best practice stormwater management principles and strategies in development proposals.
- (3) To mitigate the impacts of urban development on stormwater quality.
- (4) To control the impacts of urban development on channel bed and bank erosion by controlling the magnitude and duration of sediment-transporting flows.
- (5) Limit changes in flow rate and flow duration within the receiving waterway as a result of development.

Controls

- (1) All habitable rooms shall have floor levels of a minimum of 500mm above the 1% Annual Exceedance Probability (AEP).
- (2) Management of 'minor' flows using piped systems for the 5 year ARI (residential land use) and 10 year ARI (commercial land use) shall be in accordance with Council's engineering requirements. Management measures shall be designed to:
 - prevent damage by stormwater to the built and natural environment,
 - reduce nuisance flows to a level which is acceptable to the community,
 - provide a stormwater system which can be economically maintained and which uses open space in a compatible manner,
 - control flooding and enable access to lots, stabilise the land form and control erosion,
 - minimise urban water run-off pollutants to watercourses, and
 - meet the standards for a 20% AEP flood.
- (3) Management of 'major' flows using dedicated overland flow paths such as open space areas, roads and riparian corridors for all flows in excess of the pipe

drainage system capacity and above the 5 year ARI shall be in accordance with Council's engineering requirements. Management measures shall be designed to:

- prevent both short term and long term inundation of habitable dwellings,
 - manage flooding to create lots above the designated flood level with flood free access to a public road located above the 1% AEP flood,
 - stabilise the land form and control erosion, and
 - meet the standards for a 1% AEP flood.
- (4) Where practically possible, development shall attenuate up to the 2 year ARI peak flow for discharges into the local tributaries, particularly 2nd Order and 3rd Order Streams. This will be achieved using detention storage within water quality features and detention basins.
- (5) The developed 100 year ARI peak flow is to be reduced to the pre-development flows through the incorporation of stormwater detention and management devices.
- (6) All development is to incorporate 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.
- (7) A Water Sensitive Urban Design (WSUD) Strategy is to be submitted as part of any subdivision DA and shall include:
- an identification of water management and other relevant objectives (relating, for example, to salinity hazard, mosquito risk);
 - an identification and assessment of relevant site characteristics and constraints;
 - an identification of potentially feasible (storm) water management strategies, which may comprise stormwater reuse options, best planning practices, stormwater treatment measures (in both public and private domain) and indicative maintenance requirements;
 - an assessment of the potential strategies, including the nature, basis and outcomes of stormwater modelling used to assess alternative solutions. This assessment of alternative strategies should address compliance with management objectives, life cycle costs, ongoing operations and maintenance requirements, land take requirements, expected reliability, likely level of community acceptance and future management responsibilities; and
 - a suitably detailed description of the preferred WSUD strategy and elements therein, in the form of documents, plans and conceptual diagrams (as appropriate).
- (8) The WSUD Strategy shall demonstrate how the stormwater quality targets set in Table 3 will be achieved.
- (9) Compliance with the targets at Table 2 is to be determined through stormwater quality (MUSIC) modelling.

Table 1: Water quality objectives

Percentage reduction in pollutant loads			
	Total suspended solids	Total phosphorus	Total nitrogen
Objective	85%	45%	45%

- (10) The WSUD strategy is to take into account riparian zone and creek management and include the following measures:
- the ephemeral hydrology of creeks is to be maintained or restored, where possible, by diverting excess flow via intercepting stormwater pipes to downstream storages for reuse,
 - flow attenuation and/or diversion via the intercepting stormwater pipes will be required to meet the stream erosion index objectives within the 'Water Sensitive Urban Design – Book 2 – Planning and Management' guidelines produced by Landcom (2009)
 - flow in excess of the 5 year ARI peak flow may flow into the creek and be conveyed to detention basins that form part of the major drainage system, and
 - erosion control and bank stabilisation measures shall be incorporated within the waterway where required.

3.3 Biodiversity

Objectives

- (1) To improve or maintain biodiversity values through habitat conservation, wildlife corridors and habitat linkages through the siting and design of open space networks and riparian corridors.
- (2) To reduce impacts of runoff from roads and impervious areas on adjacent lands.
- (3) To manage weeds on the site during and after construction, to prevent the spread of weeds.
- (4) To manage environmental protection zones, passive open space and riparian corridors to reduce erosion, feral animals and loss of essential habitat features such as understorey and tree hollows.
- (5) To ensure consideration of groundwater dependent ecosystems in land use planning.
- (6) To protect regionally significant vegetation and habitat of threatened species, communities and populations, where possible.
- (7) To ensure that the urban / conservation area interface and management regime for conservation areas (including access through development precincts, recreational infrastructure etc.) are appropriately addressed.

Controls

- (1) Riparian buffers are to be established through future applications for subdivision and infrastructure works in accordance with the *Water Management Act* and guidelines.
- (2) Existing significant trees, in particular large hollow bearing trees, are to be retained wherever practicable within public and community parks, streetscapes and riparian corridors.
- (3) Existing *Persoonia pauciflora* plants are to be conserved in situ with a 30m curtilage of existing native vegetation and incorporated into public open space networks and riparian corridors and not within private property.
- (4) Native vegetation (canopy level) shall be provided, where appropriate for biodiversity outcomes, within pocket parks, riparian corridors and street verges to create a 'stepping-stone corridor' for terrestrial bio-diversity.
- (5) Where development is located within or close to a known biodiversity corridor, fencing shall be sympathetic to that passage of native fauna.
- (6) Ensure provision and maintenance of wildlife corridors and connectivity with adjoining Office for Environment and Heritage (OEH) managed conservation land (such as *Persoonia* Park and the proposed addition to the National Park).
- (7) Development that adjoins conservation land managed by the OEH should address the relevant requirements within the '*Guidelines for developments adjoining land and water managed by Department of Environment, Climate Change and Water*' (DECCW 2010).

3.4 Salinity and soil management

Objectives

- (1) To ensure development will not significantly increase the salt load in existing watercourses within the site.
- (2) To ensure measures are implemented as part of the development to prevent any degradation of the existing soil and groundwater environment.
- (3) To minimise the damage caused to property and vegetation by existing saline soils, or processes that may create saline soils.
- (4) To minimise erosion and sediment loss during and after construction.
- (5) To minimise water pollution due to erosion siltation and sedimentation.

Controls

- (1) All development must incorporate soil conservation measures to minimise soil erosion, siltation and salinity impacts during construction and following completion of development. Soil and Water Management Plans, prepared in accordance with *Managing Urban Stormwater - Soils and Construction* (NSW Department of Housing 3rd Edition March 2004 ('*The Blue Book*')) are to be submitted prior to construction.

- (2) All sediment and erosion controls are to be installed prior to the commencement of any construction works and maintained throughout the course of construction until disturbed areas have been revegetated/ established. The applicant will be required to present certification to this effect, to be lodged with Council prior to construction.
- (3) Vegetation cover, including groundcover, should be retained on highly erodible soils to keep them stable and minimise risk of erosion.
- (4) Groundwater recharge is to be minimised, and preferably maintained at pre-development levels, by:
 - directing runoff from paved areas (roads, car parks, domestic paving etc) into lined stormwater drains rather than along grassed channels as necessary,
 - lining or locating any pondages higher in the landscape to avoid recharge where proximity to the water table is likely to create groundwater mounding,
 - encouraging on site detention of roof runoff and use of low water demanding plants, and
 - encouraging tree planting especially adjacent to watercourses.

3.5 Aboriginal heritage

Objectives

- (1) To require the further investigation of the Aboriginal archaeological significance of the precinct.
- (2) To ensure that any Aboriginal heritage significance is appropriately incorporated into the redevelopment of the precinct.

Controls

- (1) Development shall not proceed within areas known to contain Aboriginal objects without appropriate investigation and consultation with the relevant local Aboriginal groups. The investigations are to identify, where required, conservation areas for the protection and management of archaeological deposits.
- (2) A Plan of Management is to be prepared to address the ongoing protection and management of the archaeological deposits. Any DA for development which affects Aboriginal objects is to be accompanied by an Aboriginal Archaeological Report that is supported by the comments of the local Aboriginal groups.
- (3) Where development impacts upon on Aboriginal sites previously not identified, Consent to Destroy Permits will need to be sought under Section 90 of the NSW National Parks & Wildlife Act 1974.
- (4) Interpretive signage, that provides information on the history and heritage significance of the sites, is to be provided within the public domain areas. Where possible, such signage should be provided in close proximity to the site of any relics or remains that have been uncovered.

3.6 European heritage

Objectives

- (1) To conserve and interpret the Rothbury Mine and the site of the Rothbury Riot in the context of its historical, technological and social significance.
- (2) To ensure that information regarding the archaeological heritage significance of the precinct is incorporated into the development of the precinct.

Controls

- (1) Prior to any development that affects relics associated with the Rothbury Mine or the site of the Rothbury Riot, a detailed assessment of heritage significance is to be undertaken which addresses the significance assessment criteria contained in the *NSW Heritage Manual*.
- (2) Any proposed development that affects the identified heritage sites must respond to any identified archaeological constraints. If any relics are to be retained in situ, an applicant is to outline all management measures to ensure ongoing protection of the relics.

3.7 Bushfire hazard management

Objectives

- (1) To prevent loss of life and property due to bushfires, by discouraging the establishment of incompatible uses in bushfire-prone areas.
- (2) To encourage sound management of bushfire-prone areas.

Controls

- (1) Subject to detailed design at DA stage, the location and widths of APZs:
 - are to be consistent with the requirements in *Planning for Bushfire Protection 2006*;
 - are to be located wholly within the precinct, and indicated on subdivision plans;
 - may incorporate roads and flood prone land;
 - are to be located wholly outside of a core riparian zone (CRZ) but may be located within the buffer areas to the CRZs;
 - may be used for open space and recreation subject to appropriate fuel management;
 - are to be maintained in accordance with the *Planning for Bushfire Protection 2006*;
 - are to be located in the public road reserve where possible and encroach onto no more than 1/3 of the lot length of private lots; and
 - are to be generally bounded by a perimeter road that is linked to the public road system at regular intervals in accordance with *Planning for Bushfire Protection*.

- (2) Reticulated water is to meet the standards contained within *Planning for Bushfire Protection 2006*. Water supply is to be via a ring main system, engineered to the requirements of *Australian Standard 2419.1- 2005 Fire Hydrant Installations*.
- (3) Vegetation within public and community parks and 1st Order watercourses is to be managed as a 'fuel reduced area'.
- (4) Dwellings adjacent to APZs are to be constructed in accordance with the requirements of Appendix 3 of *Planning for Bushfire Protection 2006* and *Australian Standard 3959-1999 - Construction of Building in Bushfire Prone Areas*.
- (5) Temporary APZs, identified through a Section 88B instrument, will be required where development is proposed on allotments next to undeveloped land. Once the adjacent stage of development is undertaken, the temporary APZ will no longer be required and shall cease.
- (6) School buildings, and other 'special fire protection purpose' developments, fronting areas of bushland shall be setback 35 metres from the boundary or in accordance with Rural Fire Service requirements in *Planning for Bushfire Protection* guidelines or its equivalent.

3.8 Contamination management

Objectives

- (1) To minimise risk to human health and the environment from the development of potentially contaminated land.
- (2) To ensure that potential site contamination issues are adequately addressed at the subdivision stages.

Controls

- (1) Development Applications for development in areas identified in Figure 4 shall be accompanied by a Stage 2 Detailed Site Investigation.
- (2) A Remediation Action Plan (RAP) will be required for areas identified as contaminated land in the Stage 2 Site Investigation.
- (3) When redevelopment is proposed on a site where Council suspects that contamination may be present or for applications proposing a change of use to a more sensitive land use (e.g. residential, education, public recreation facility etc), Council may request a Stage 1 Preliminary Site Contamination Investigation.
- (4) All investigation, reporting and identified remediation works must be in accordance with the protocols of the NSW EPA's (now OEH) *Guidelines for Consultants Reporting on Contaminated Sites* and *SEPP 55 – Contaminated Land*.

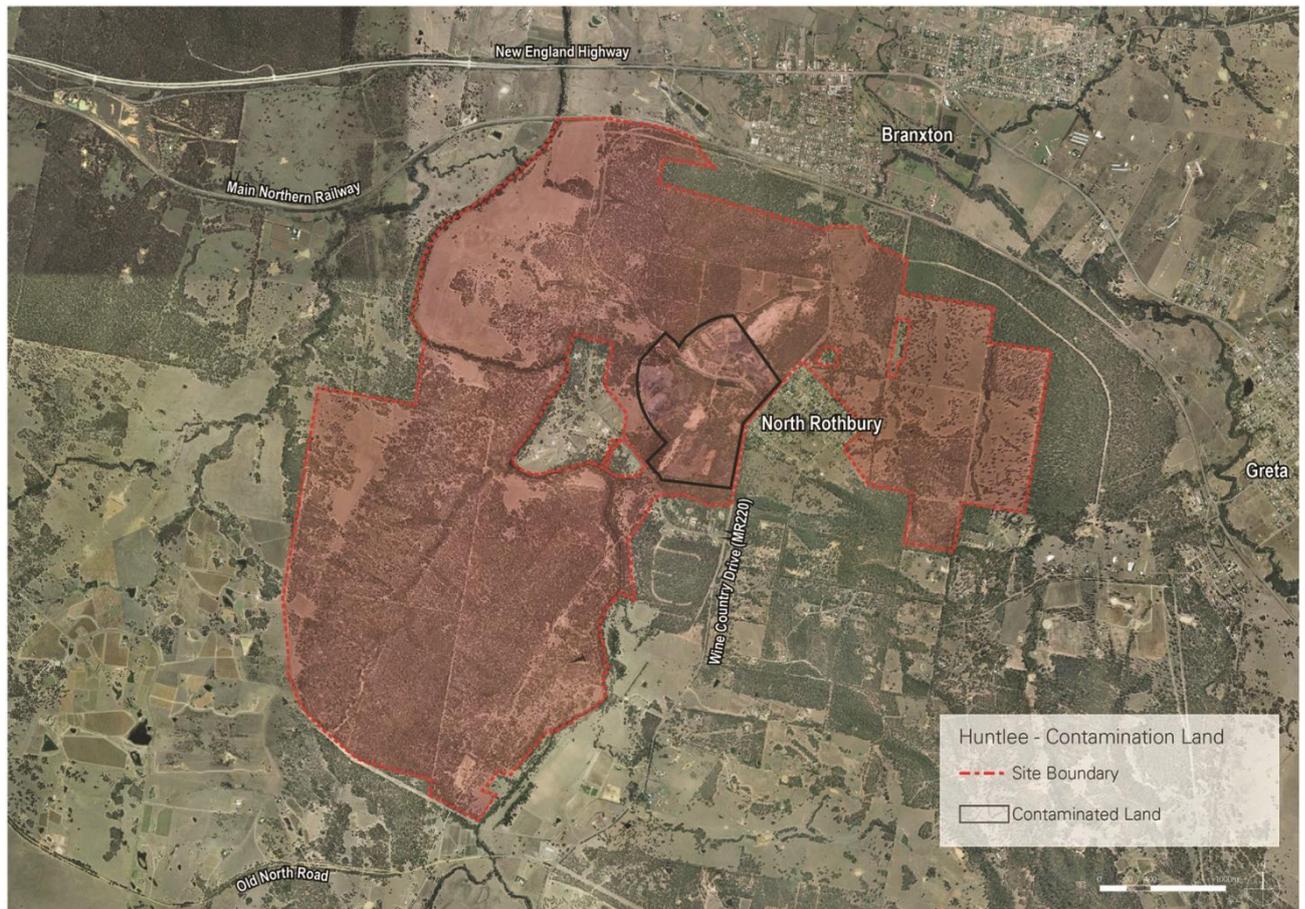


Figure 4: Contaminated areas

3.9 Mine Subsidence Management

Objectives

- (1) To minimise risk to property arising from development on land with potential mine subsidence issues.
- (2) To ensure that potential mine subsidence issues are adequately addressed at the subdivision stages.

Controls

- (1) Areas of potential mine subsidence are shown in Section 6 Mine subsidence of **Appendix 1** and the following lots are affected (as at March 2013):
 - a. Lot 200 DP828486
 - b. Lot 240 DP 1105591
 - c. Lot 2 DP 1211767
 - d. Lot 1 DP 1211767
 - e. Lot 231 DP 879198

- (2) Prior to any development applications for structures within these lots, the applicant must undertake and submit further geotechnical assessment to verify the depth of cover to mine workings in the location of the proposed development.
- (3) As there are mine workings beneath part of the site (where the coal seams dip steeply and the shallow mined areas have a history of mine subsidence potholes), the following restrictions on residential development should be applied:
 - Where there is less than 25m of cover to the mine workings, structures are not permitted unless the risk of mine subsidence is removed.
 - Between 25m to 50m depth of cover to mine workings, further geotechnical assessment would be required. Building restrictions would apply and this may limit the type and density of structures.
 - Between 50m and 75m of cover to mine workings, residential structures not to exceed two storey brick veneer with a maximum length of 30m.
 - Where the depth of cover to mine workings is greater than 75m, there would be no restrictions, provided structures do not exceed two storey brick veneer and the upper storey is limited to length of 30m.
 - Shafts and mine entries are to be identified and sealed off as required by the Department of Trade and Investment – Minerals and Energy Division. Structures should not be built over these locations.
- (4) Infrastructure, such as main pipelines, transmission cables and telecommunications, should not be located over shallow workings unless the risk of mine subsidence has been eliminated and/or specific design is implemented to prevent damage.
- (5) Large, higher density structures within the town centre, should be located away from shallow mined areas unless the risk of subsidence has been removed.
- (6) The proponent should prepare a long term management plan to deal with the risks associated with the development of potholes and cracks across the site and consider isolating these areas from development.

4 Subdivision design

4.1 Street network and design

Objectives

- (1) To provide a hierarchy of interconnected streets that gives safe, convenient and clear access.
- (2) To ensure that the hierarchy of streets is clearly discernible through variations in carriageway width, on-street parking, street tree planting, and pedestrian amenities.
- (3) To provide a legible and permeable movement network for pedestrians and cyclists along streets and paths to points of attraction within and adjoining any development.
- (4) To ensure sufficient carriageway and verge widths are provided to allow streets to perform their designated functions within the street network and to accommodate public utilities, drainage systems and the majority of Asset Protection Zones.
- (5) To encourage the use of streets by pedestrians and cyclists, and to allow cars, buses and other users to proceed safely without unacceptable inconvenience or delay.
- (6) To promote passive surveillance of publicly accessible areas thereby increasing safety.
- (7) To provide an appropriate buffer between the rail corridor and sensitive land uses.

Controls

- (1) The street network is to be provided generally in accordance with Figure 5.
- (2) Road and intersection upgrades are to be generally in accordance with Figure 6 and Figure 7.
- (3) Streets are to be provided in accordance with the cross-sections at **Figure 8: Wine Country Drive** to **Figure 19: Local Park Edge Streets**
- (4) "Park Edge" roads (**Figure 19: Local Park Edge Streets**) should accommodate the majority of the required Asset Protection Zone (APZ) within the road reserve, with APZs encroaching on to no more than 1/3 of the lot length of private lots. Where there is a slope or change in level at the boundary of the development, 'Park Edge' roads should also incorporate a battered slope within the road reserve to accommodate the changes in level.
- (5) Alternative street designs for local streets and accessways may be permitted on a case by case basis to accommodate local features if they preserve the functional objectives and requirements of the design standards.

- (6) Where any variation to the residential street network is proposed, the alternative street network is to be designed to achieve the following principles:
- a permeable network that is based on a modified grid system;
 - encourage walking and cycling and reduce travel distances;
 - maximise connectivity between residential areas and community facilities, open space and centres;
 - take account of topography and accommodate significant vegetation;
 - optimise solar access opportunities for dwellings;
 - provide frontage to and maximise surveillance of open space and riparian corridors;
 - provide views and vistas to landscape features and visual connections to nodal points and centres;
 - maximise the use of water sensitive urban design measures; and
 - minimise the number of road crossings of riparian corridors and ensure riparian connectivity is maintained.
- (7) Except where otherwise provided for in this DCP, all streets and intersections are to be designed and constructed in accordance with Austroads Guide to Traffic Management and Australian Standards AS 1742, 1743 and 2890.
- (8) For road works within areas identified as a salinity hazard, the following must occur as a minimum:
- roads should be perpendicular to the contours as much as possible;
 - minimum disturbance of subsoil;
 - engineering designs incorporating considerations of salinity impacts are required; and
 - subsoil drainage is to be installed along both sides of all roads.
- (9) Street trees are generally required for all streets. Street tree planting is to:
- be consistently used to distinguish between public and private spaces and between different classes of street within the street hierarchy;
 - minimise risk to utilities and services;
 - be durable and suited to the street environment and, wherever appropriate, include endemic species;
 - maintain adequate lines of sight for vehicles and pedestrians, especially around driveways and street corners;
 - provide appropriate shade; and
 - provide an attractive and interesting landscape character and clearly define public and private areas, without blocking the potential for street surveillance.
- (10) Signage and lighting is to be:
- designed to reinforce the distinct identity of the development;

- coordinated in design and style;
- located so as to minimise visual clutter and obstruction of the public domain; and
- of a colour and construction agreed by Council.

(11) Locating entry signage and the like within a public road reserve is subject to Council's agreement.

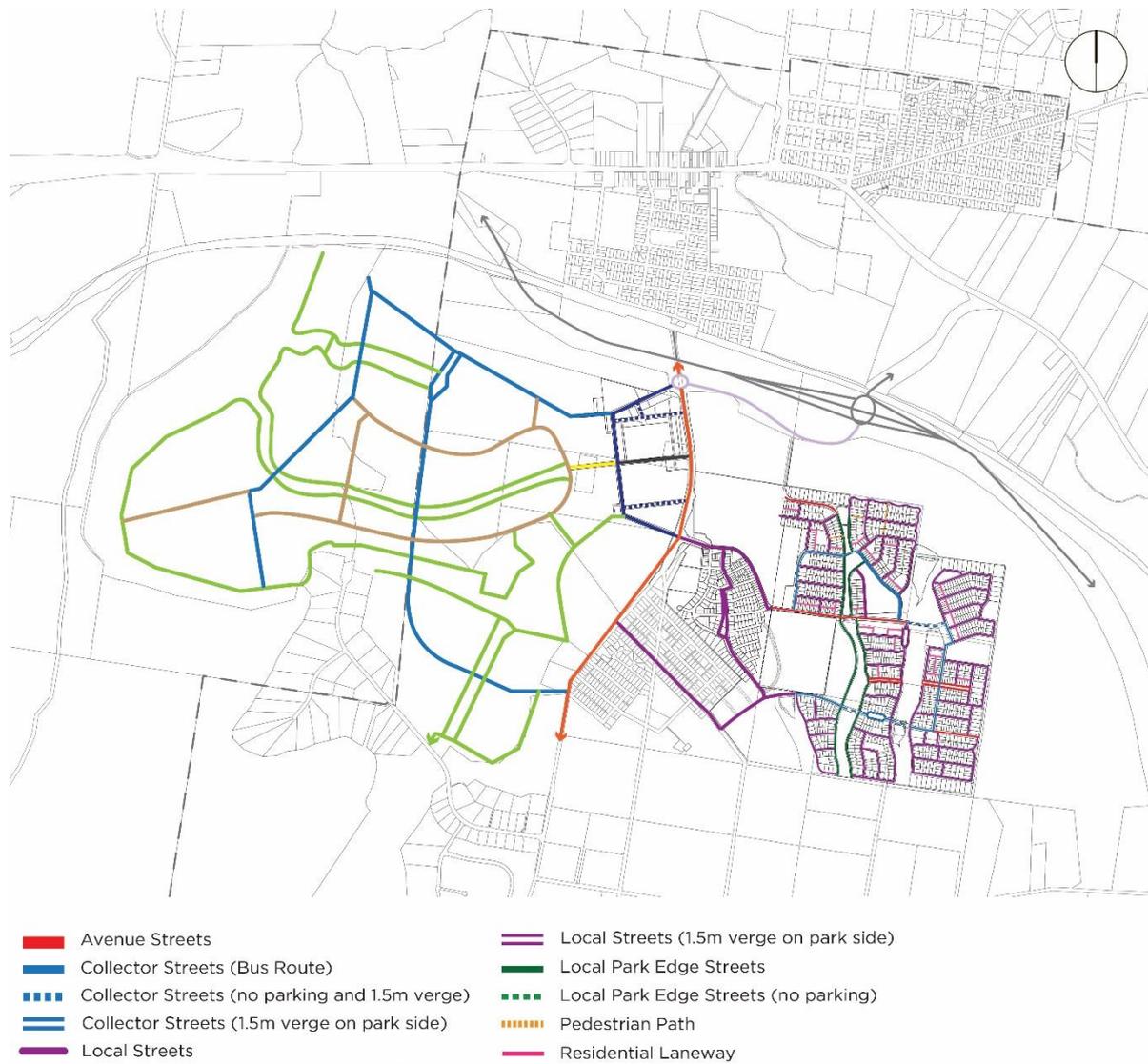


Figure 5: Overall road network and hierarchy

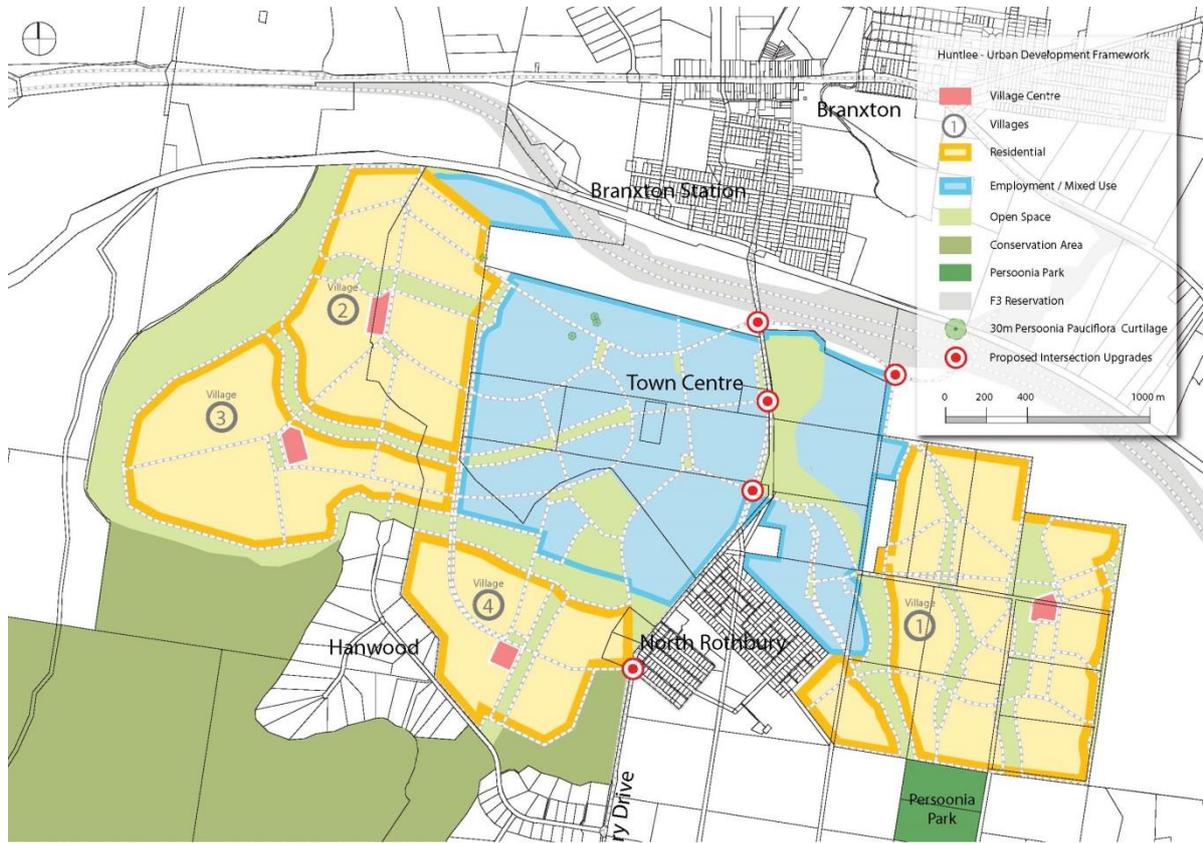


Figure 6: Key road and intersection upgrades

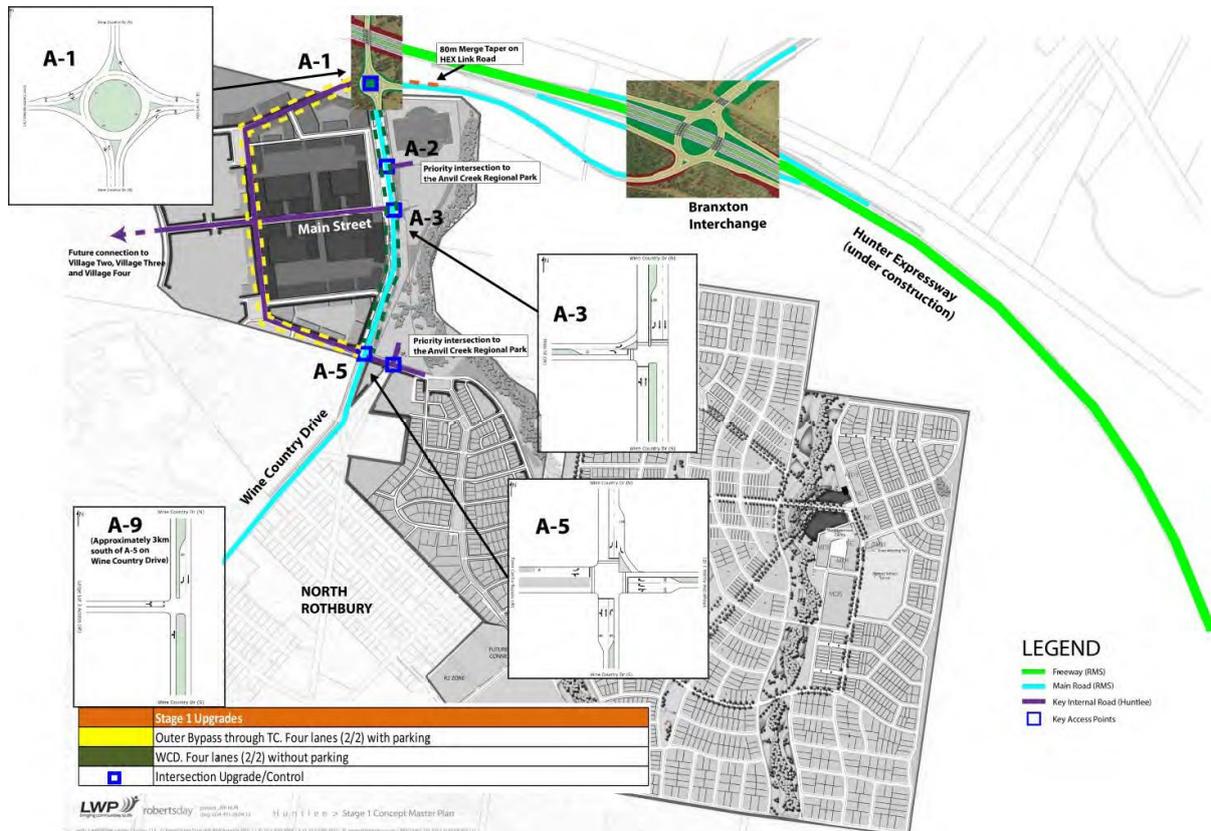


Figure 7: Detail of road and intersection upgrades

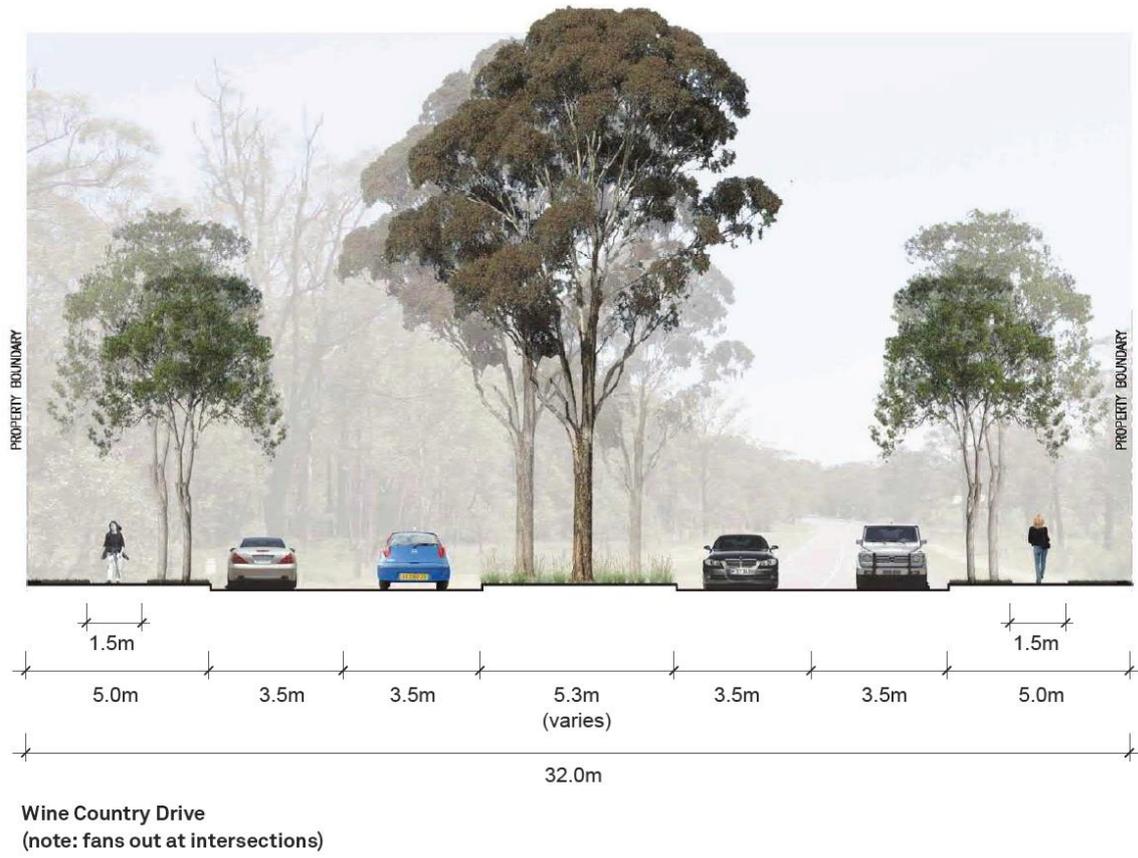


Figure 8: Wine Country Drive

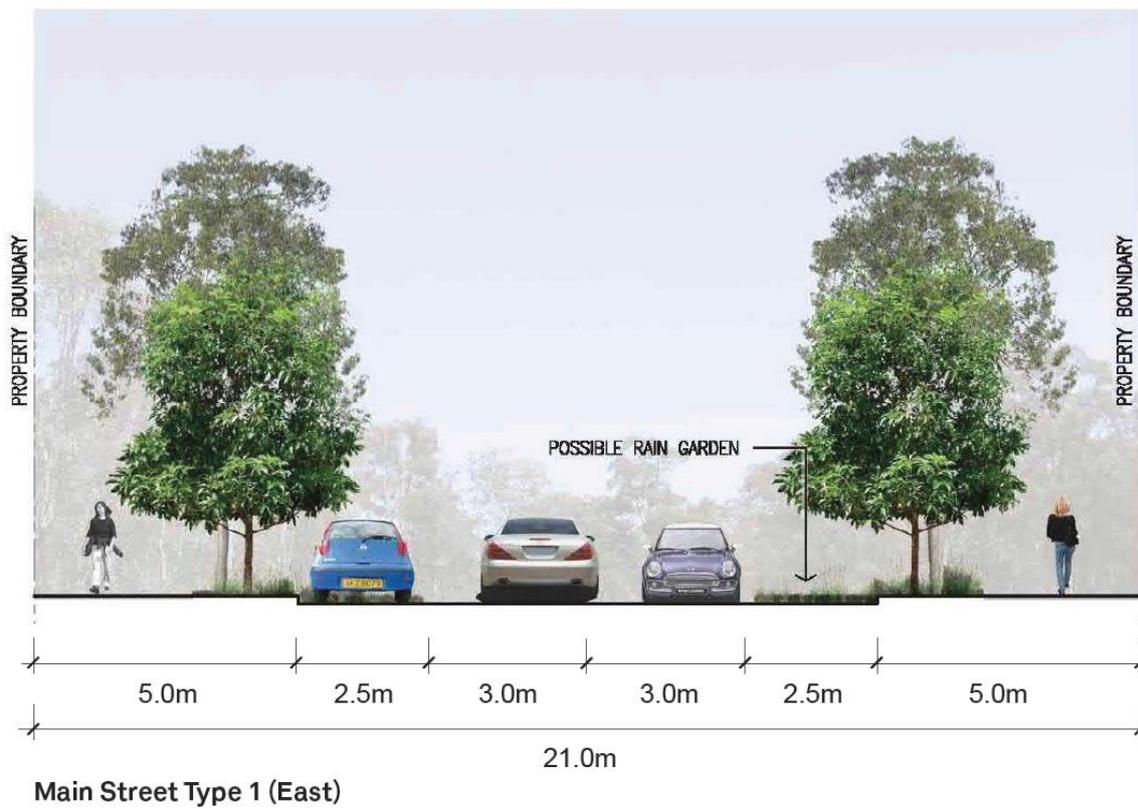
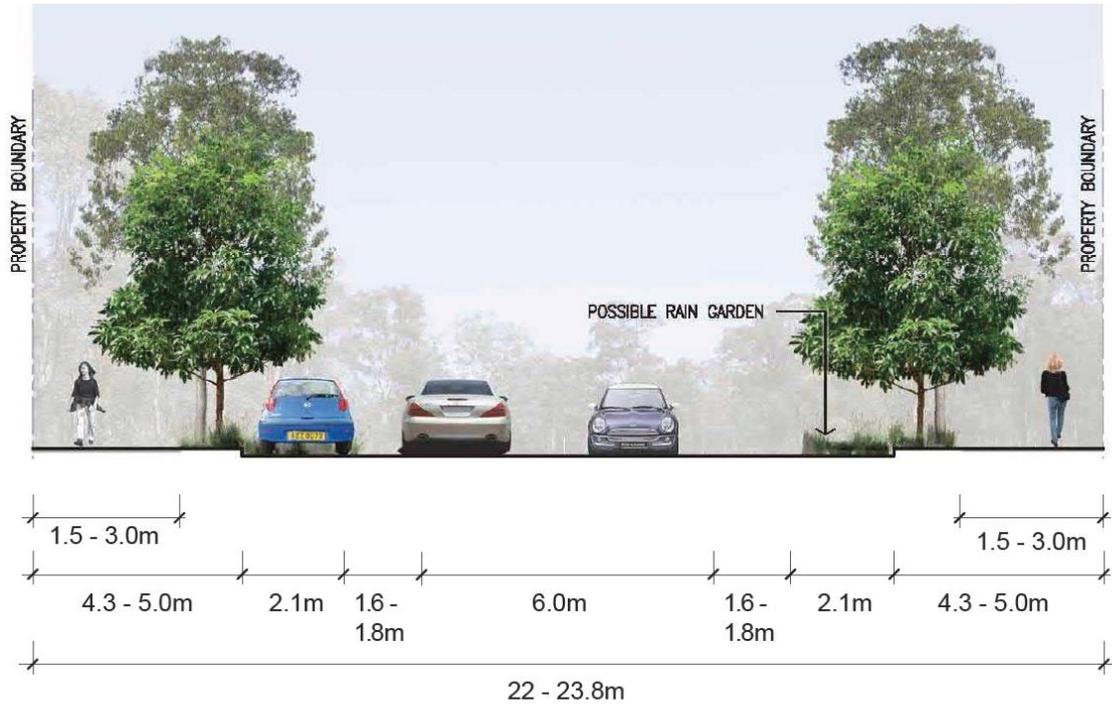
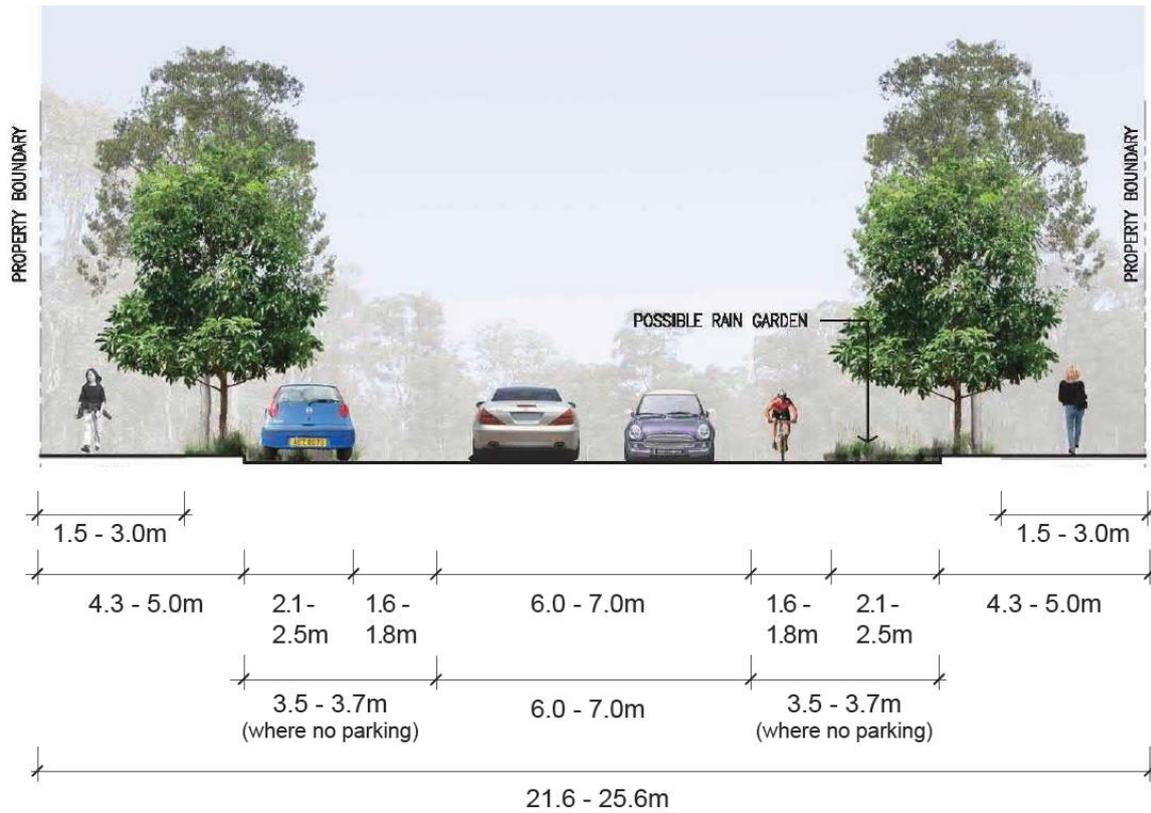


Figure 9: Main Street Type 1 (East)



Main Street Type 2 (West)

Figure 10: Main Street Type 2 (West)



Town Centre Link Road

Figure 11: Town Centre Link Road

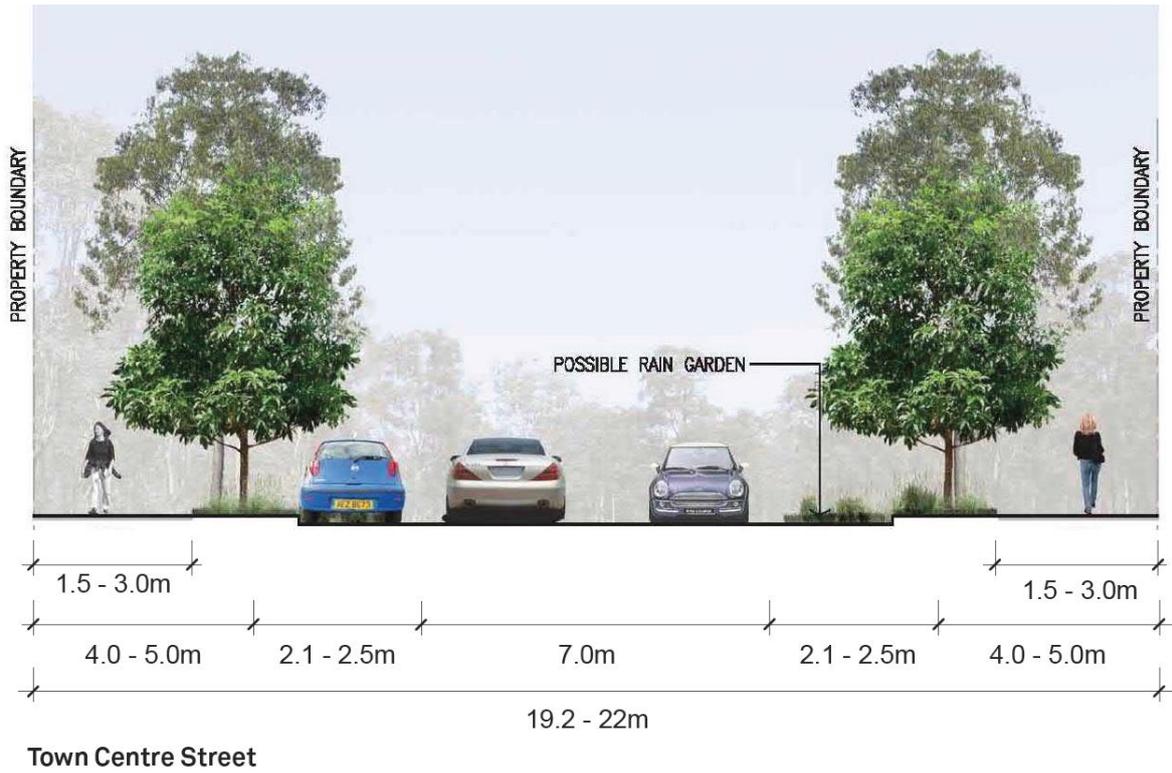


Figure 12: Town Centre Street

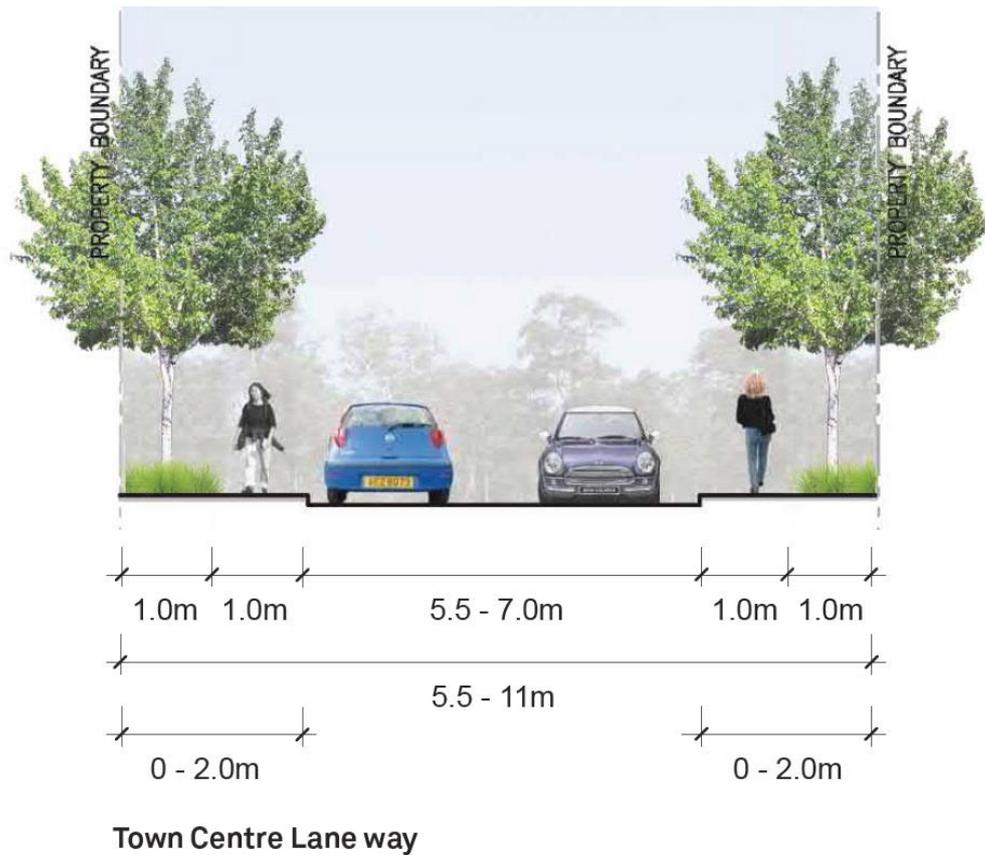


Figure 13: Town Centre Laneway



Figure 14: Village 1 Entry Road

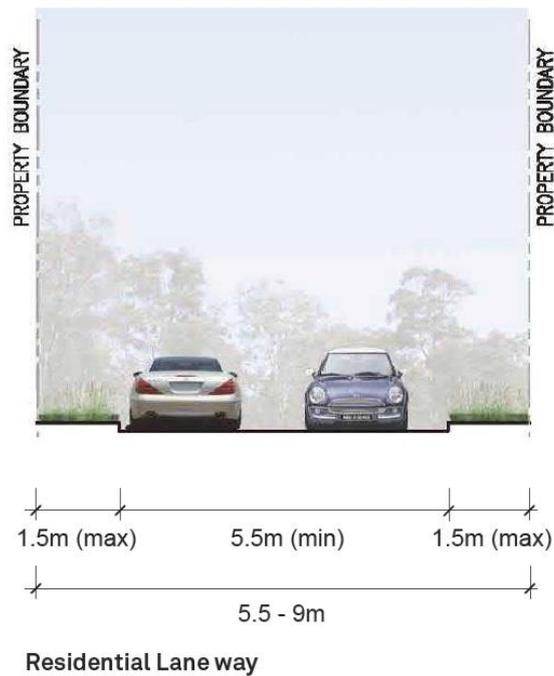


Figure 15: Residential Laneway

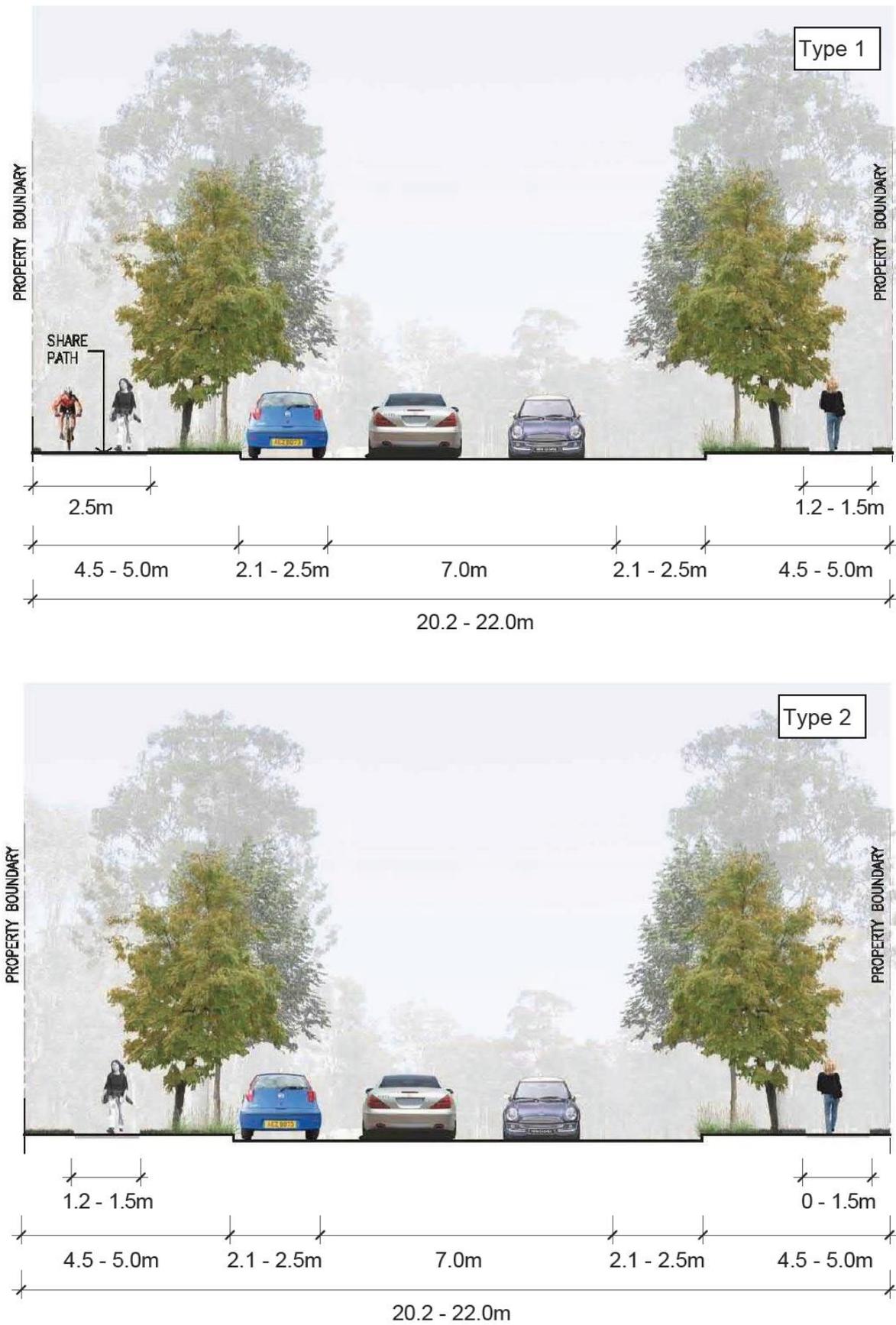


Figure 16: Collector Streets

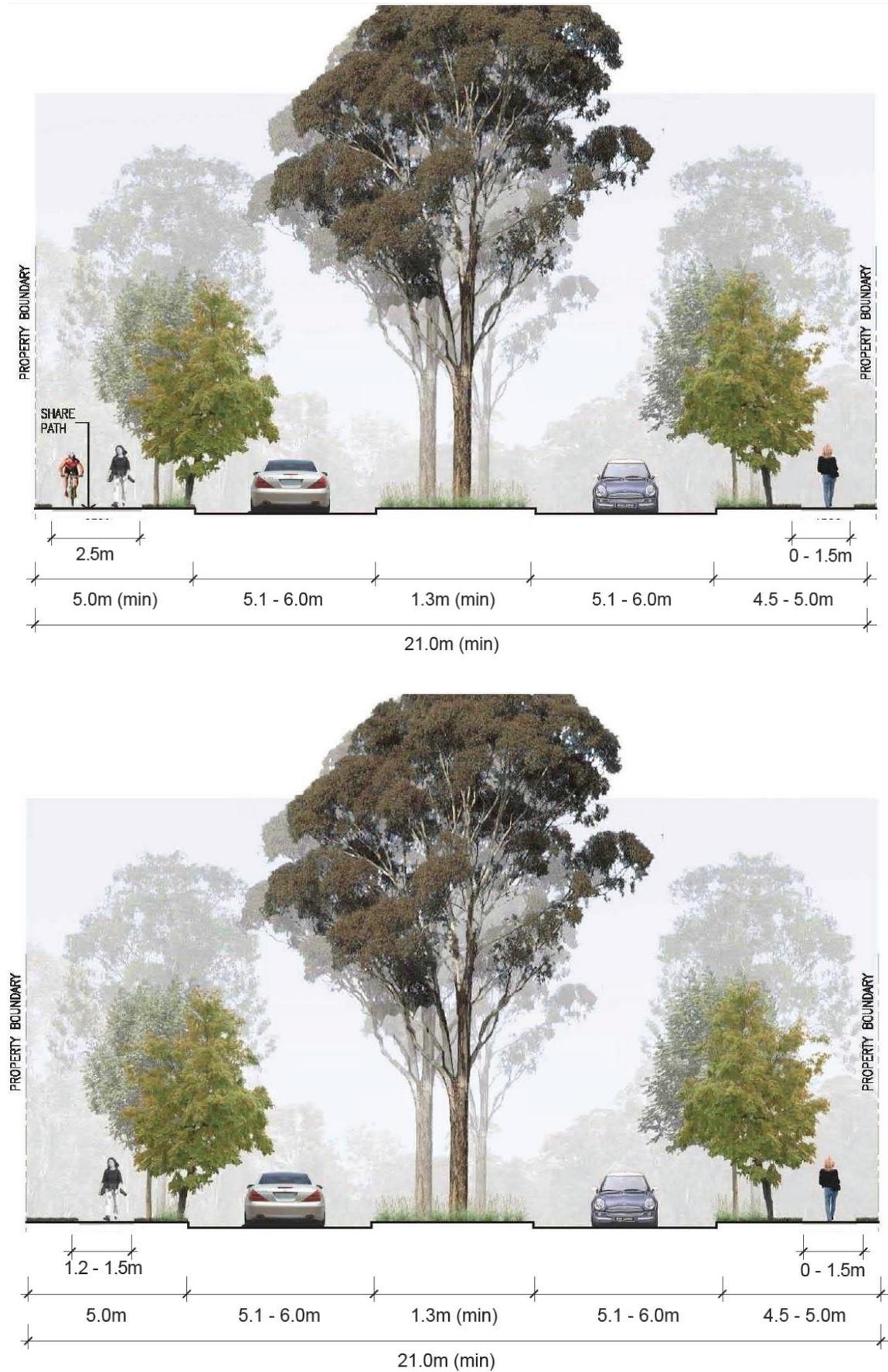


Figure 17: Avenue Streets



Figure 18: Local Streets

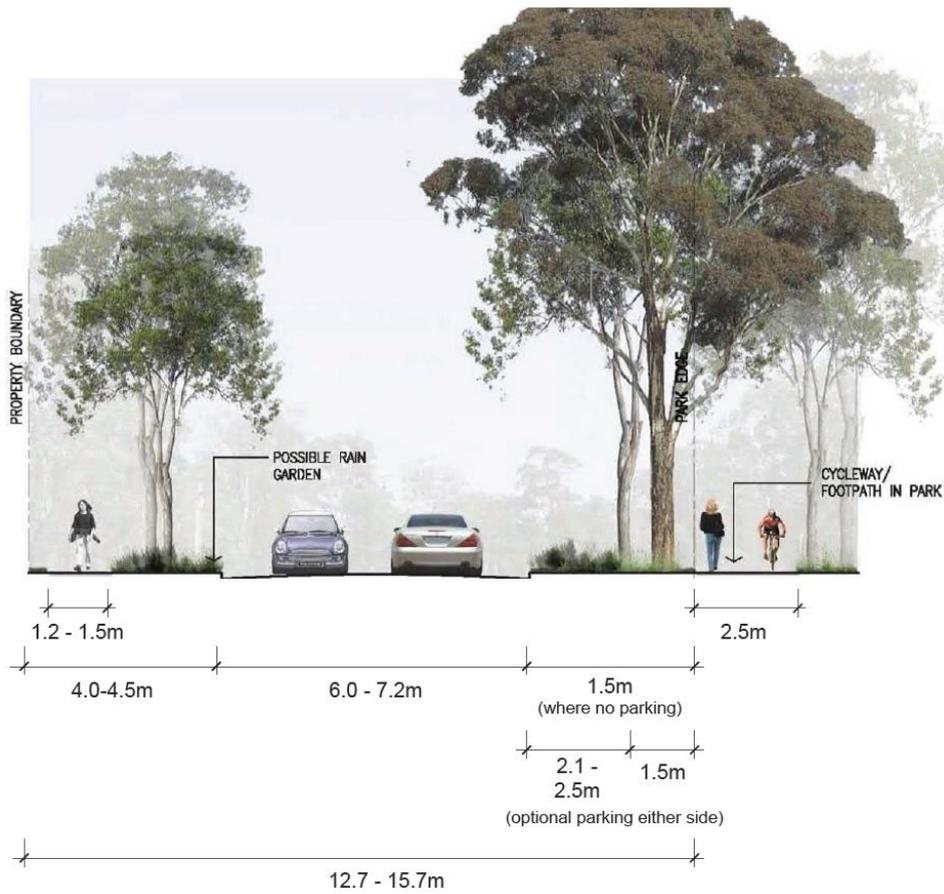


Figure 19: Local Park Edge Streets

4.2 Pedestrian and cycle network

Objectives

- (1) To provide a convenient, efficient and safe network of pedestrian and cycleway paths for the use of the community, within and beyond the site.
- (2) To encourage residents to walk or cycle, in preference to using motor vehicles, as a way of gaining access to the schools, shops, and local community and recreation facilities.
- (3) To avoid duplication by allowing pedestrian pathways and cycleways to be located within parks and corridors wherever practical.

Controls

- (1) Footpaths and cycle paths are to be provided in accordance with street sections provided in Section 4.1. Verge areas may be more generous in order to accommodate local features such as existing trees or provide visual interest.
- (2) Pedestrian paths, cycle routes and facilities in public spaces are to be safe, well lit, clearly defined, functional and accessible to all.
- (3) Pedestrian paths, cycle paths and pedestrian refuge islands are to be designed to be fully accessible by all in terms of access points and gradients, generally in accordance with Australian Standard 1428:1-4.
- (4) Pedestrian and cycle pathways are to be constructed as part of the infrastructure works for each residential stage with detailed designs to be submitted with the construction certificate application. Concept approval will be required at DA stage.
- (5) Pedestrian and cycle routes shall be in accordance with Figure 20.
- (6) Minimum footpath width is to be 1.2m and a shared cycle/pedestrian path is to be 2.5m.

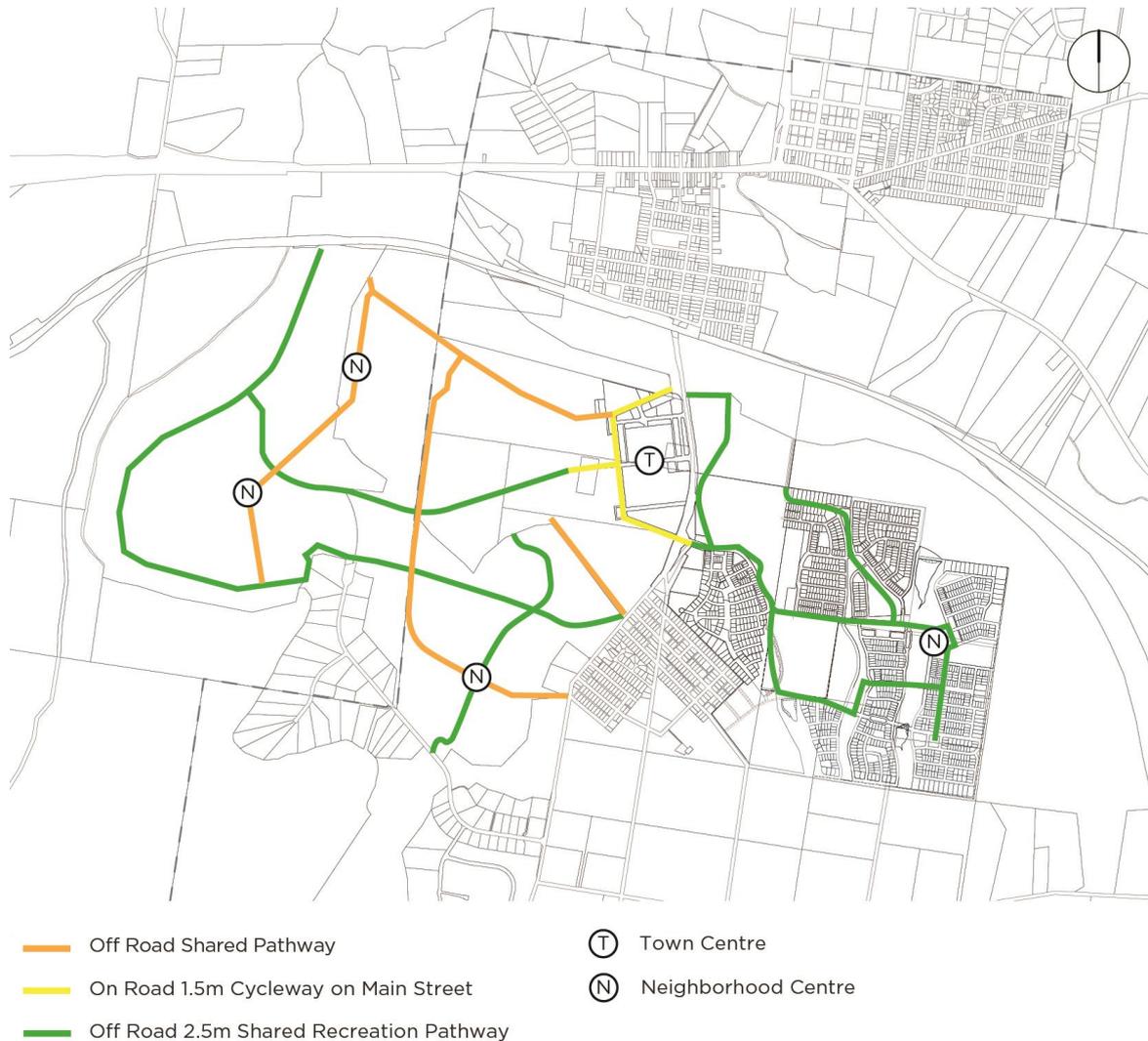


Figure 20: Overall cycleway network

4.3 Public domain works

Objectives

- (1) To provide public open space that meets the recreational needs of residents.
- (2) To provide an equitable distribution of public open space and recreation opportunities.
- (3) To ensure a good quality of design and embellishment of the public domain.
- (4) To ensure environmentally and visually sensitive land contributes to the landscape character of the precinct.
- (5) To ensure that public domain elements contribute to a consistent street character.
- (6) To ensure that adequate provision is made for utilities.
- (7) To ensure that all utilities are integrated into the development and are unobtrusive.

- (8) To ensure that all parks are managed to the extent required to provide acceptable asset protection to adjoining dwellings.
- (9) To encourage passive surveillance and safety of the public domain.
- (10) To create an attractive and comfortable streetscape for pedestrians that comprise consistent and high quality street tree plantings.
- (11) To provide a variety of open spaces to cater for a range of recreational, social and cultural activities.
- (12) To develop designs for open spaces in recognition of their different function and characteristics and the environmental and natural qualities of the area.

Controls

4.3.1 Public parks and landscape

- (1) Open space is to be generally located in accordance with the Indicative Open Space Plan at **Figure 21**: Indicative open space network.
- (2) Open space will be provided in the following forms:
 - Urban squares within the Town Centre;
 - Neighbourhood and village parks; and
 - Active recreation and playing fields.
- (3) Provide appropriate car and bicycle parking for active recreation and playing fields (refer to Section 7.10).
- (4) Parks, open space areas and riparian corridors are to be provided generally in accordance with **Figure 21**: Indicative open space network.
- (5) Public parks are to:
 - be co-located with community and education facilities where appropriate;
 - be generally bordered by streets on all sides with houses oriented towards them to encourage passive surveillance;
 - be highly accessible and linked by pedestrian and/or cycle routes;
 - be linked to and integrated with riparian corridors where possible;
 - be located and designed to accommodate remnant vegetation, where possible;
 - where applicable incorporate interpretative signage detailing local history and environmental education themes; and
 - provide a range of play spaces and opportunities and cater for a range of ages.
- (6) Street furniture is to be incorporated into the design of public and community parks and should include seating, shade structures, drinking fountains, lighting, and information signs.

- (7) Riparian corridors and conservation areas are to provide opportunities for pedestrian paths and cycleways, fitness trails and additional open space in a manner that maintains the environmental significance of these areas. Themed elements such as boardwalks, eco-pathways, and educational tracks should be utilised in appropriate locations.
- (8) The selection of landscape species for public open space areas should incorporate locally endemic species with low water needs.
- (9) A Landscape Plan is required to accompany any Development Application for subdivision creating a public park and is to provide details on elements such as:
 - asset protection zones;
 - earthworks;
 - furniture;
 - plant species and sizes (with consideration for bush fire risks);
 - play equipment;
 - utilities and services;
 - public art;
 - hard and soft landscaping treatments;
 - signage;
 - any entry statements;
 - waste facilities; and
 - any other embellishment.

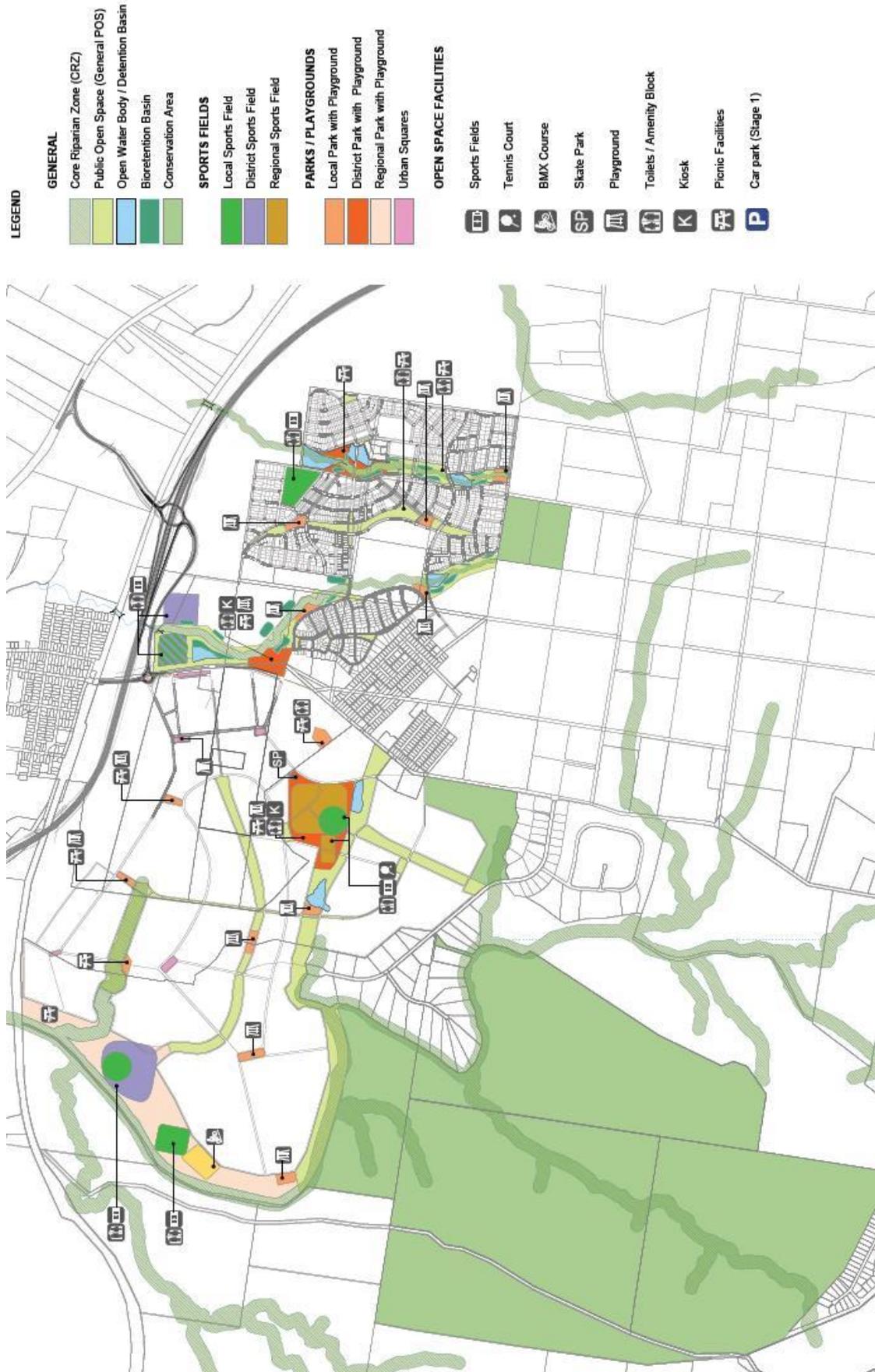


Figure 21: Indicative open space network

4.3.2 Street tree planting

- (1) Street trees are preferred for all streets. Street tree species should be generally in accordance with the list of preferred planting species in Table 2: Preferred Street trees species list. The tree canopy should comprise predominantly native species.
- (2) Street tree planting is generally to be provided at one tree per lot frontage.
- (3) Corner lots will have two street trees if space allows.
- (4) The location of street trees must complement proposed driveway locations and not compromise sight lines.
- (5) Landscape works in roundabout islands may include low-maintenance groundcover planting and native grasses with a mature height of up to 0.5 metres, as well as mature clear-stemmed tree planting, where sight lines are not compromised.
- (6) Access streets located adjacent to arterial roads are to include landscape treatment of the verge adjoining the arterial road. Road verges provide opportunities for unifying the appearance and landscape character of the area and should be provided as a continuous design feature along the length of the arterial road.
- (7) All street trees should be protected with root barriers to ensure that potential impact on infrastructure is mitigated as far as practicable.

Table 2: Preferred Street trees species list

BOTANICAL NAME	COMMON NAME
WINE COUNTRY DRIVE	
<i>Corymbia maculata</i>	Spotted Gum
<i>Quercus palustris 'Pringreen'</i>	Green Pillar
TOWN CENTRE & CIVIC STREETS	
<i>Acmena smithii</i>	Common Lilly Pilly
<i>Araucaria cunninghamii</i>	Hoop Pine
<i>Brachychiton populneus</i>	Kurrajong
<i>Elaeocarpus reticulatus</i>	Blueberry Ash
<i>Ficus microcarpa var. hillii</i>	Hill's Weeping Fig
<i>Lophostemon confertus</i>	Queensland Brush Box
<i>Magnolia gradiflora</i>	Bull Bay Magnolia
<i>Platanus x hybrida</i>	London Plane Tree
<i>Pyrus calleryana cvrs</i>	Bradford Pear

<i>Syzygium australe</i>	Brush Cherry
<i>Corymbia maculata</i>	Spotted Gum
<i>Eucalyptus fibrosa</i>	Red Ironbark
<i>Largestroemia indica</i> 'Natchez'	White flowering Crepe Myrtle
<i>Liriodendron tulipifera</i>	Tulip Tree
<i>Ulmus parvifolia</i> 'Todd'	Chinese Elm
COLLECTOR / AVENUE	
<i>Corymbia maculata</i>	Spotted Gum
<i>Eucalyptus fibrosa</i>	Red Ironbark
<i>Quercus palustris</i>	Pin Oak
LOCAL STREET	
<i>Corymbia maculata</i>	Spotted Gum
<i>Eucalyptus fibrosa</i>	Red Ironbark
<i>Acer buergerianum</i>	Trident Maple
<i>Acer freemanii</i> 'Autumn Blaze'	Autumn Blaze
<i>Acer negundo</i> 'Sensation'	Sensation
<i>Acer rubrum</i> "October Glory"	October Glory
<i>Cupaniopsis anacardioides</i>	Tuckeroo
<i>Elaeocarpus reticulatus</i>	Blueberry Ash
<i>Fraxinus pennsylvanica</i> 'Urbanite'	Urbanite Green Ash
<i>Largestroemia indica</i> 'Natchez'	Crepe myrtle
<i>Liriodendron tulipifera</i>	Tuilp poplar
<i>Magnolia grandiflora</i> 'Exmouth'	Magnolia
<i>Pyrus calleryana</i> cvrs	Bradford Pear
<i>Pyrus ussuriensis</i>	Manchurian Pear
<i>Quercus palustris</i>	Pin Oak
<i>Tristaniopsis laurina</i> 'Luscious'	Kanooka
<i>Waterhousia floribunda</i>	Weeping Lilly Pilly
LOCAL PARK EDGE (Ridgelines)	
<i>Corymbia maculata</i>	Spotted Gum
<i>Eucalyptus fibrosa</i>	Red Ironbark

<i>Eucalyptus glaucina</i>	Slaty Red Gum
<i>Angophora costata</i>	Smooth barked apple myrtle
<i>Eucalyptus microcorys</i>	Tallowood
<i>Ficus microcarpa</i> var. <i>hillii</i>	Hill's Weeping Fig
<i>Fraxinus pennsylvanica</i> 'Urbanite'	Urbanite Green Ash
<i>Jacaranda mimosifolia</i>	Jacaranda
<i>Quercus palustris</i>	Pin Oak
<i>Quercus suber</i>	Cork Oak
LOCAL PARK EDGE (Creeklines)	
<i>Allocasuarina luehmannii</i>	Bull-oak
<i>Elaeocarpus reticulatus</i>	Blueberry Ash
<i>Melaleuca decora</i>	White Feather Honeymyrtle
<i>Melaleuca nodosa</i>	Prickly-leaved Paperbark
<i>Tristaniopsis laurina</i> 'Luscious'	Kanooka Gum
<i>Agathis robusta</i>	Kauri Pine
<i>Corymbia maculata</i>	Spotted Gum
<i>Eucalyptus fibrosa</i>	Red Ironbark
<i>Eucalyptus microcorys</i>	Tallowood
<i>Eucalyptus punctata</i>	Grey Gum
<i>Ficus microcarpa</i> var. <i>hillii</i>	Hill's Weeping Fig
<i>Jacaranda mimosifolia</i>	Jacaranda
<i>Largestroemia indica</i> 'Biloxi'	Crepe myrtle
<i>Livistona australis</i>	Cabbage Palm
<i>Pyrus calleryana</i> cvrs	Bradford Pear
<i>Quercus suber</i>	Cork Oak
<i>Ulmus parvifolia</i> 'Todd'	Chinese Elm
<i>Waterhousia floribunda</i>	Weeping Lilly Pilly

4.3.3 Utilities and services

- (1) Gas and water services may be located in a shared trench on one side of the street or rear lane and electricity power and telephone located in a shared

trench on the other side of the street or rear lane. Trenches should be designed and located to allow for adequate street tree planting.

- (2) All development shall incorporate underground electricity reticulation and telecommunications.
- (3) Subject to Ausgrid requirements, any existing aboveground electricity reticulation services shall be relocated underground with the exception of main transmission lines.
- (4) Where agreement to develop shared trench practices cannot be met, or location of services are unable to be limited to one side of the road, the alignment of services shall be to a standard acceptable to Council and allow for the inclusion of street trees.
- (5) Utilities and services are to be supplied and constructed in accordance with the requirements of the relevant authority.
- (6) Pipes and conduits through bushland areas and areas with significant vegetation cover are to be avoided, where possible.
- (7) Development is to have a water supply for fire-fighting purposes in accordance with the NSW Rural Fire Service's requirements.

4.4 Public transport network

Objectives

- (1) To encourage the use of public transport.
- (2) To ensure clear, safe pedestrian links to public transport stops.

Controls

- (1) Bus routes and bus stops are to be provided generally in accordance with the Hyder Stage 1 Bus Servicing Strategy as shown in **Figure 22: Overall public transport network (indicative)** .
- (2) Residential lots should be located generally within a safe walking distance of 800m from an existing or proposed bus stop.
- (3) A minimum carriageway width of 3.5m is to be provided along all bus routes. Roundabouts on bus routes are to be designed to accommodate bus manoeuvrability.
- (4) Bus stops are preferred to be on-street and generally not within indented bays. Bus shelters can be provided at key stops and installed at the subdivision construction stage or at a time agreed with service providers and/or Council.

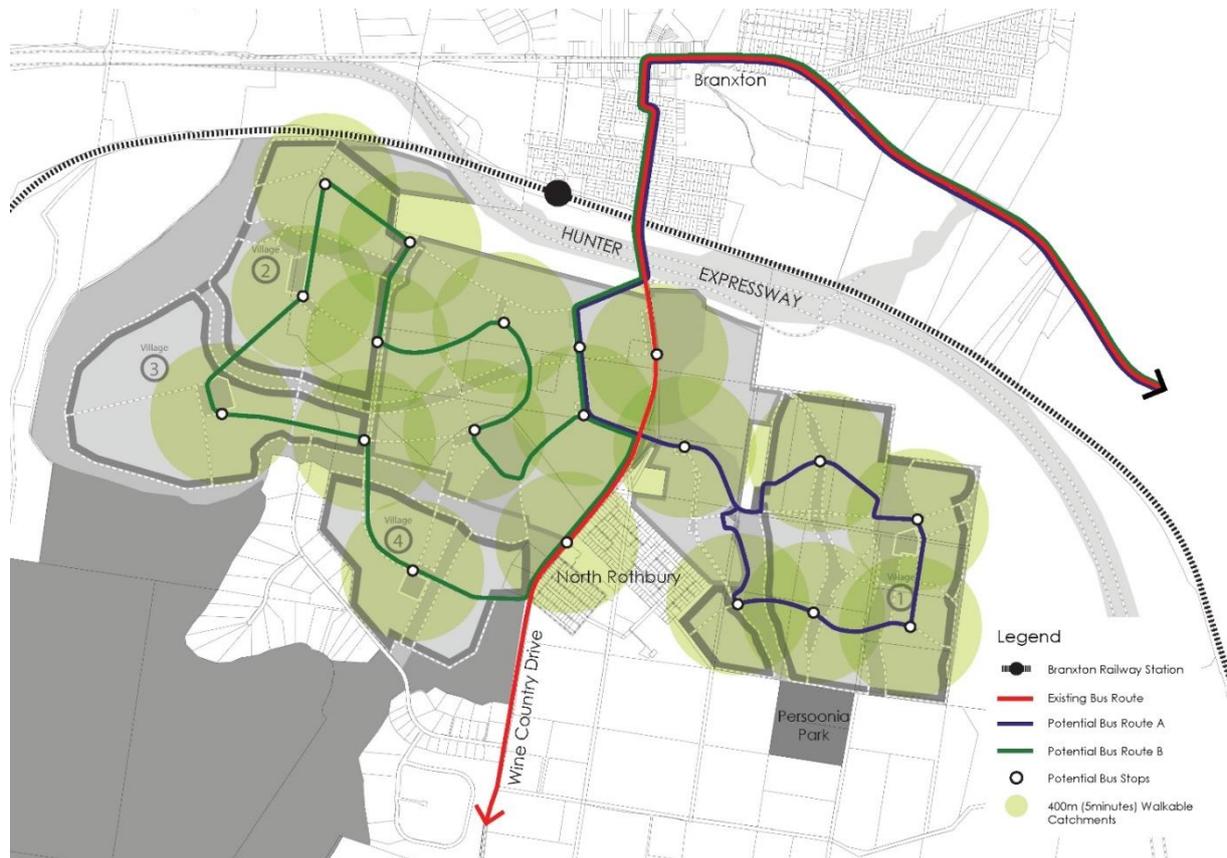


Figure 22: Overall public transport network (indicative)

4.5 Residential neighbourhoods

4.5.1 Residential character

Objectives

- (1) To establish a clear urban structure that encourages walking and cycling.
- (2) To emphasise the natural attributes of the site and reinforce neighbourhood identity through the placement of visible key landmark features, such as parks, squares and landmark buildings.
- (3) To ensure that all residential lots are afforded a high level of amenity in terms of solar access, views, outlook and proximity to public and community facilities and parks.
- (4) To ensure that the siting and design of buildings minimises noise impacts from abutting busy roads, rail corridors and other noise-generating land uses.
- (5) To ensure that commercial or industrial development does not unreasonably diminish the amenity of nearby residential uses from noise intrusion.
- (6) To accommodate a mix of lot sizes and dwelling types.
- (7) To encourage variety in dwelling sizes to promote housing choice and create interesting streetscapes.

Controls

- (1) Residential neighbourhoods are to be focused on elements of the public domain such as a school, park, retail, or community facilities that are typically within walking distance.
- (2) Subdivision is to be consistent with the most recent Project Approval for the Huntlee Town Centre. (Note: this can be found on Council's online mapping website located at www.cessnock.nsw.gov.au).
- (3) 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.
- (4) Pedestrian connectivity is to be maximised within and between each residential neighbourhood with a particular focus on pedestrian routes connecting to public open space, bus stops and railway stations, educational establishments and community/recreation facilities.
- (5) Street blocks are to be generally 150m to 180m long. Block lengths and widths in excess of 180m may be considered where pedestrian connectivity, stormwater management and traffic safety objectives are achieved.
- (6) Residential lots should generally be rectangular in geometry.
- (7) Battle-axe lots are not permitted.
- (8) The orientation and configuration of lots is to be generally consistent with the subdivision principles shown at Figure 23 and Figure 24.
- (9) Preferred lot siting is either on a north-south or east-west orientation.
- (10) Alternative lot orientation may be considered where topography is a constraint or where other amenities such as views and outlook over open space are available, and providing appropriate solar access and overshadowing outcomes can be achieved.
- (11) Residential subdivision applications should:
 - Incorporate a mix of lot sizes for detached dwellings to provide a range of housing choice within the lower density areas.
 - Provide cottage lots around open space and village centres
 - Provide country lots around the perimeter of the site and where environmental constraints are managed within lots (i.e. Flooding, bushfire APZ etc.).
 - Be designed to provide for activation of the public domain, including streets and public open space through the orientation and design of buildings and communal spaces.
 - Ensure that pedestrian, cyclist and road links provide legible and direct access to the town centre, public transport and areas of public open space.
- (12) Residential development adjacent to sub-arterial roads, arterial roads and the rail line are to consider the effects of road and rail traffic noise, vibration and air

quality on residential amenity and, where necessary, should include measures to ameliorate any adverse impacts.

- (13) The provisions of the *State Environmental Planning Policy (Infrastructure) 2007* and "*Development near Rail Corridors and Busy Roads Interim Guideline*" 2008 must be taken into consideration, to minimise impacts of busy roads and railway corridors on residential and other sensitive development such as schools, child care centres, places of public worship and health services facilities.
- (14) Non-residential development is not to adversely affect the amenity of adjacent residential development as a result of noise, odour, hours of operation and/or service deliveries.
- (15) Non-residential development in the residential areas is encouraged where it:
- contributes to the amenity and character of the residential area within which it is located;
 - provides services, facilities or other opportunities that meet the needs of the surrounding residential population and contributes to reduce motor vehicle use;
 - will not result in detrimental impacts on the amenity and safety of surrounding residential areas, including factors such as noise and air quality; and
 - is of a design that is visually and functionally integrated with the surrounding residential area.

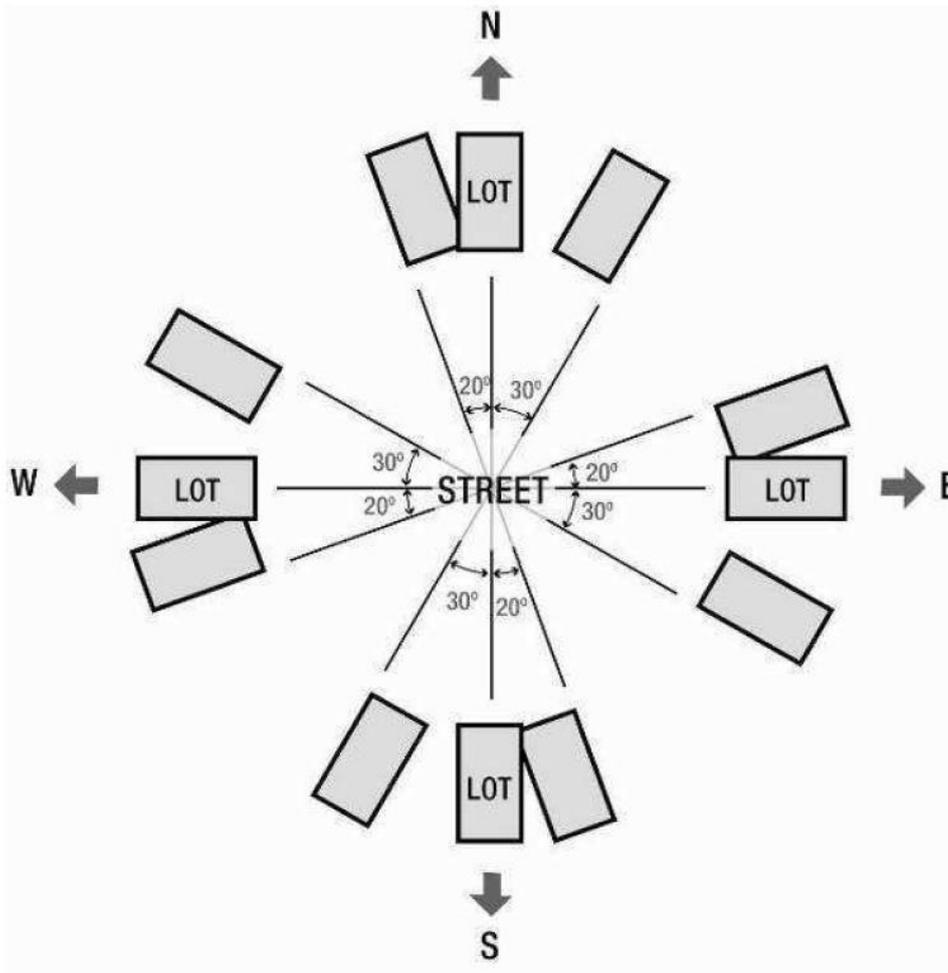


Figure 23: Lot orientation principles



Figure 24: Subdivision principles

4.5.2 Minimum subdivision lot size and frontage

Objective

- (1) To provide for a mix of lot frontage widths and lot sizes to enable the development of a range of housing types and sizes.

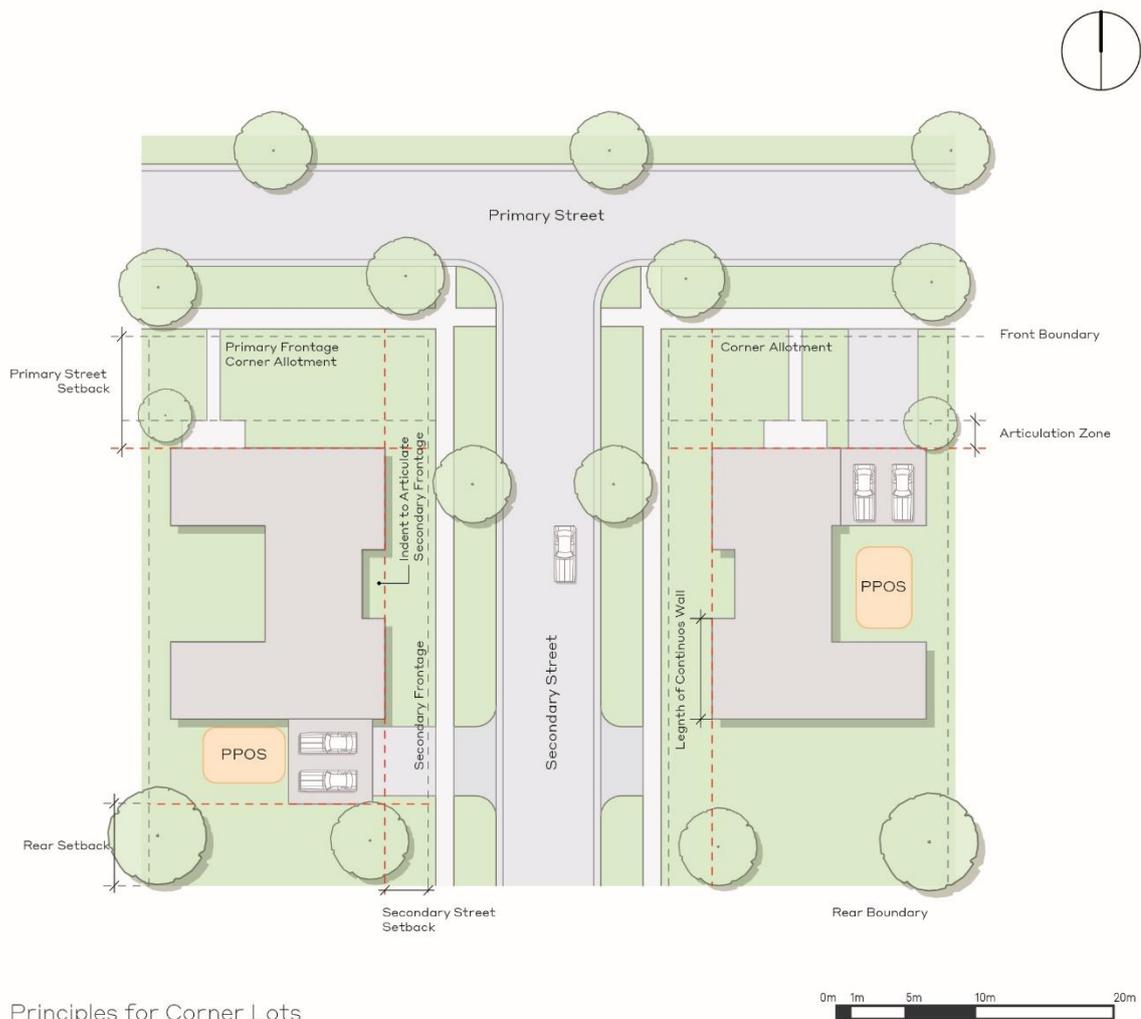
Controls

- (1) The minimum subdivision lot size and dimensions is to be consistent with the Lot Type Map. (Note: this can be found on Council's online mapping website located at www.cessnock.nsw.gov.au).
- (2) Lots should be rectangular. Where lots are an irregular shape, they are to be large enough and oriented appropriately to enable dwellings to meet the controls in this DCP.
- (3) Battle-axe lots are not permitted.

4.5.3 Corner lots

Controls

- (1) Corner lots are to be designed to allow dwellings to positively address both street frontages as indicated in Figure 25.



Principles for Corner Lots

Figure 25: Principles for corner lots

4.5.4 Country lots

Controls

- (1) Country lots should be provided around the perimeter of the site to provide an appropriate transition to adjoining rural land uses, in terms of character, scale and density.
- (2) Country lot dwellings should be provided on all residential lots which are affected by the 1:100 flood level and/or require bushfire asset protection zones.

4.6 Town centre subdivision design

Objectives

- (1) To allow for a range of allotment sizes that caters for a diversity of land uses and employment opportunities.
- (2) To ensure allotments are oriented and aligned to enable buildings to appropriately address streets and the public domain.

Controls

- (1) Lots are to be relatively regular in shape. Irregular shaped allotments with narrow street frontages should be avoided.
- (2) Lots should be orientated and aligned:
 - so that future buildings can face the arterial, sub-arterial, collector and local streets to increase visual surveillance and to avoid streetscapes with loading docks and long blank walls,
 - to facilitate solar efficiency, and
 - to encourage building design that has frontage to landscaped areas and riparian corridors.
- (3) Access to lots shall be sited to ensure unimpeded sight lines for exiting vehicles.
- (4) Subdivision of roads should incorporate a road hierarchy that will accommodate the anticipated traffic volumes and vehicle types and be practical and legible for users.
- (5) Battle-axe lots are not permitted unless in the opinion of Council, exceptional circumstances arise that justify their use.

4.6.1 Strata or Community Title

Controls

- (1) Where a Strata or Community Title subdivision is proposed, any space for parking or other purposes forming part of a sole occupancy unit required by Council must be included in the same strata lot as the unit.
- (2) All landscaping, access areas and directory board signs not forming part of an individual unit are required by Council to be included in any strata plan of subdivision as common property.

5 Residential Dwellings

5.1 Introduction

This Part sets out the objectives and development controls that relate to the design of all residential dwellings across the Huntlee site. This Part is to be used to design buildings using principles that apply to all residential development and specific controls for certain types of housing.

5.2 Site analysis

Site analysis for each individual lot is an important part of the design process. Development proposals need to illustrate design decisions which are based on analysis of the site conditions and their relationship to the surrounding context. By describing the physical elements of the locality and the conditions impacting on the site, opportunities and constraints for development can be understood and addressed in the design.

The Site Analysis Plan should show the existing features of the site and its surrounding area, together with supporting written material. At minimum the Site Analysis Plan must show the following features:

- the position of the proposed building in relation to site boundaries and any other structures and existing vegetation and trees on the site,
- aspect,
- any easements over the land,
- the location, boundary dimensions, site area and North Point of the land,
- location of existing street features adjacent to the property, such as trees, planting, street lights,
- contours and existing levels of the land in relation to buildings and roads, and whether the proposed development will involve any changes to these levels, and
- a stormwater concept plan (where required).

5.3 Residential amenity and sustainability

5.3.1 Cut and fill

Objectives

- (1) To manage the extent of cut and fill within residential allotments in order to reflect the existing topography the desired future character for Huntlee.
- (2) To protect and enhance the aesthetic quality of the area by controlling the form, bulk and scale of land forming operations.
- (3) To ensure that filling material is satisfactory and does not adversely affect the fertility or salinity of soil, or the quality of surface water or groundwater.
- (4) To ensure that the amenity of adjoining residents is not adversely affected by any land forming operation.

- (5) To ensure that adequate provision is made for drainage in relation to cut and fill practices.

Controls

- (1) Development Applications are to illustrate where it is necessary to cut and/or fill land and provide justification for the proposed changes to the land levels. Cut and fill shall be generally consistent with Figure 26 and Table 3.
- (2) Proposals requiring significant moving and filling of earth will be considered if they contribute to the overall quality of the development and the urban design outcomes for the area. A Validation Report will be required to be submitted to Council prior to the placement of imported fill on site. All fill shall comply with the Department of Natural Resources (now Office of Environment and Heritage - OEH) – *“Site Investigation for Urban Salinity”* and the DECC (now OEH) Contaminated Sites Guidelines – *“Guidelines for the NSW Site Auditor Scheme (2nd edition) – Soil Investigation Levels for Urban Development Sites in NSW.”*
- (3) Earth moved from areas containing noxious weed material must be disposed of at an approved waste management facility, and transported in compliance with the *Noxious Weeds Act 1993*.
- (4) Lot benching may be used selectively to create diversity in character and streetscapes. On steeply sloping sites, site disturbance is to be reduced by use of split level or pier foundation housing designs.
- (5) For sites with a fall over the area of the proposed house pad, the maximum permitted cut and fill is outlined in **Table 3: Cut and fill permitted**.

Table 3: Cut and fill permitted

Fall Across House Pad	Maximum Cut & Fill Permitted
Up to 1.5m	600mm cut and 600mm fill
1.5m to 2m	800mm cut and 800mm fill
Over 2m	1,000mm cut and 1,000mm fill

* Note: Earthworks exceeding the above controls may be permitted by Council.

- (6) Where a retaining wall is located forward of the building line or visible to the public, this shall be constructed of masonry, rock or stone. Retaining walls on the boundary must be constructed to engineered design in masonry, rock or stone to enable the erection of boundary fencing above.
- (7) The maximum height of voids within individual allotments is 3m.
- (8) All drainage works associated with retaining walls are to be located within the property boundary.
- (9) Where co-operation between landowners to achieve a single retaining wall cannot be achieved, the retaining of cut and fill will need to be achieved by two separate structures.
- (10) All retaining walls proposed for the site are to be identified within a site plan as part of any development application.

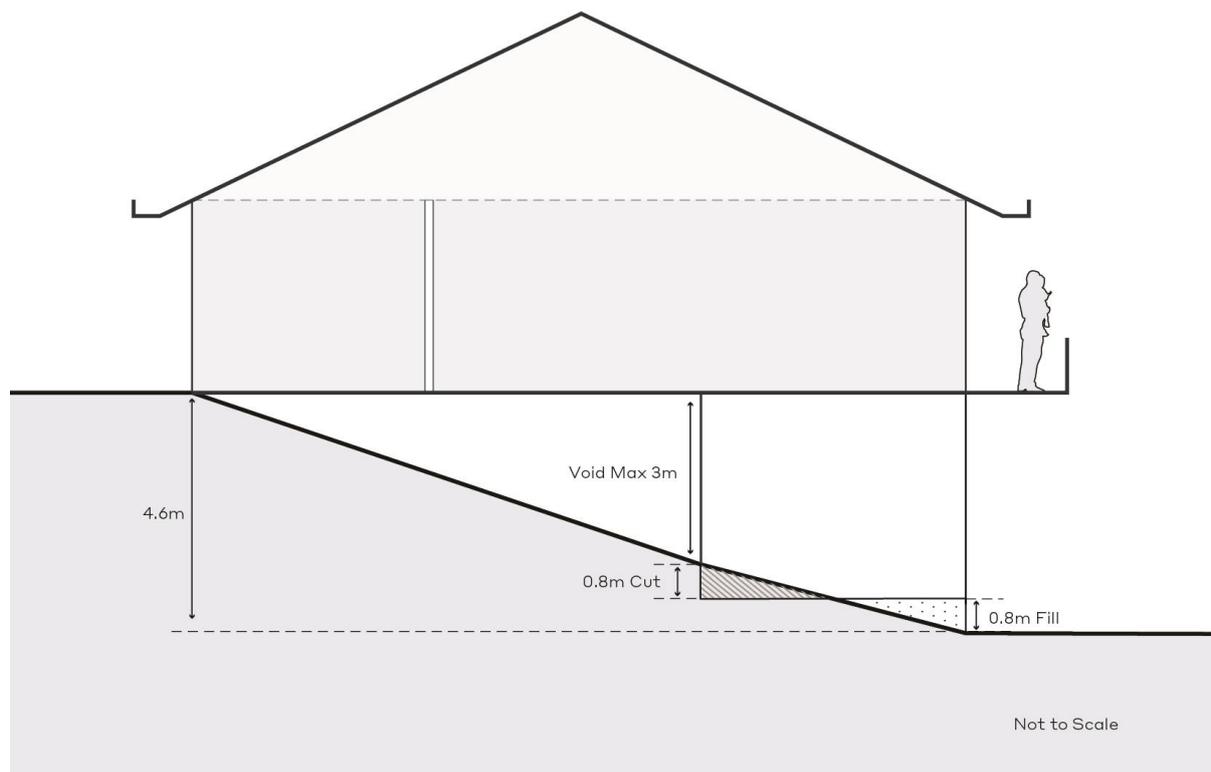


Figure 26: Sample cut and fill within residential lots

5.3.2 Fencing

Objectives

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

Controls

- (1) Front fencing is not encouraged, however, where proposed, it is:
 - a. a maximum height of 1.2 metres;
 - b. of open appearance for at least 20% of the area of the fence that is more than 400mm above ground level; and
 - c. not made of sheet metal or timberlap materials.
- (2) Front fences and walls are not to impede safe sight lines for traffic.
- (3) Side and rear fencing are generally to be a maximum of 1.8m high on all sides, except within the front setback area (some areas of increased height may be considered for privacy on a case by case basis).
- (4) Side fences shall not be made of sheet metal or timberlap materials. Areas of open fencing are encouraged to promote boundary planting.
- (5) On corner lots or lots adjoining open space:

- a. the front fencing style and height is to be continued along the secondary street frontage or open space frontage to at least 4m behind the building line of the dwelling, and
 - b. fencing that address the secondary frontage is to avoid continuous lengths of blank walls at street level.
 - c. boundary fencing is to be of a high-quality material and finish. The design of the fencing is to permit casual surveillance of the open space from within the dwelling and provide the dwelling with outlook towards the open space.
 - d. Where cut is proposed on the boundary of a lot, retaining walls are to be constructed with side fence posts integrated with its construction (relevant construction details are required with retaining wall approval). Otherwise retaining walls must be located a minimum of 500mm from the side or rear boundary of the lot containing the cut.
- (6) All side return panels or gates between the side boundary and the principal dwelling are to be:
- a. complementary or compatible with the boundary fencing
 - b. positioned 1m behind the main building line.

5.3.3 Safety and Surveillance

Objectives

- (1) To ensure that the siting and design of buildings and spaces decreases the opportunities for committing crime through casual surveillance.
- (2) To ensure that development encourages people to use streets, parks and other public places without fear of personal risk.

Controls

- (1) Dwellings should be designed to overlook streets, lanes and other public or communal areas to provide casual surveillance. In the case of corner lots, habitable windows are to be oriented to overlook the side street.
- (2) The design of all development, in particular, the public domain and community facilities is to enhance public surveillance of public streets, laneways and open space/conservation areas.
- (3) Encourage a sense of community ownership of open and public spaces (eg parks, footpaths, etc.) through appropriate design of publicly accessible areas. This may include areas for the community to meet, areas to sit in the sun and the shade, areas to play and interact, accessible areas and paths for mobility impaired, artwork, signage regarding history of area and community gardens. Design should aim to use materials that reduce the opportunity for vandalism and ensure areas can be maintained and cleaned easily.
- (4) Use of roller shutters other than garages is not permitted on doors and windows facing the street. Any security railings must be designed to complement the architecture of the building.

- (5) Developments are to avoid the creation of areas for concealment and blank walls facing the street.
- (6) Pedestrian and communal areas are to have sufficient lighting to ensure a high level of safety. These areas must be designed to minimise opportunities for concealment.
- (7) All development should aim to provide casual surveillance of the street as a means of passive security. This should be achieved by maximising outlooks and views, but minimising the overlooking of neighbouring properties. Opportunities for casual surveillance from dwellings are to be incorporated into the design of shared driveways and where rear access is proposed from laneways.
- (8) All developments are to incorporate the principles of Crime Prevention through Environmental Design (CPTED).

5.3.4 Visual and Acoustic Privacy

Objectives

- (1) To site and design dwellings to meet projected user requirements for visual and acoustic privacy, whilst minimising visual and acoustic impacts of development on adjoining properties.

Controls

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

5.4 Dwelling design controls

5.4.1 Summary of key controls

Objectives

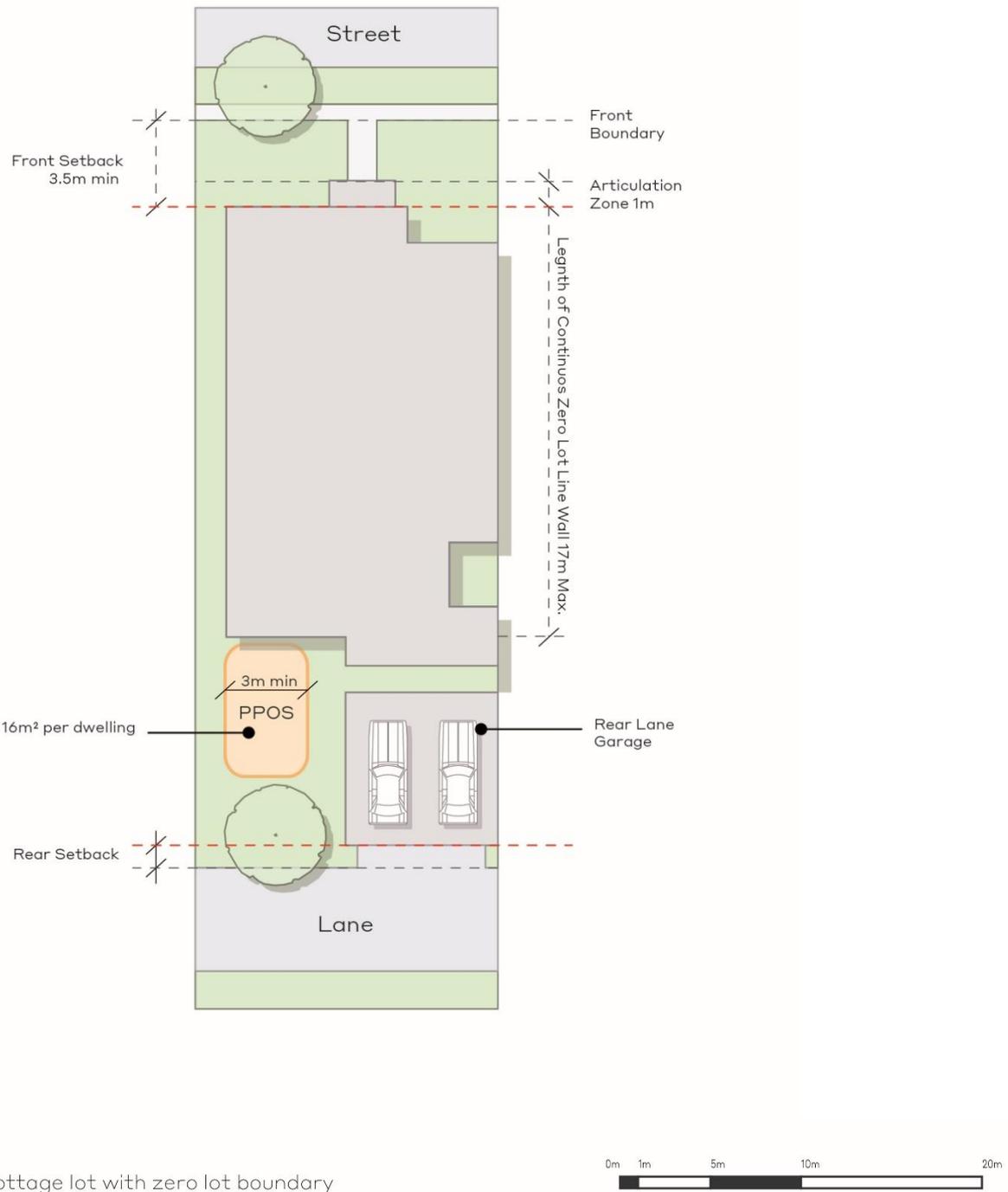
- (1) To encourage the development of a diversity of dwelling types within low density residential areas.
- (2) To promote innovative housing solutions that are compatible with the surrounding residential environment.

Controls

- (1) The following table and figures summarise the key controls that apply to residential development on certain lot types.
- (2) The applicable Lot Type is that shown on the Lot Type Map within the most recent Project Approval for the Huntlee Town Centre. (Note: this can be found on Council's online mapping website located at www.cessnock.nsw.gov.au).

Table 4: Summary of key controls for Cottage Lot dwelling

COTTAGE LOT DWELLING	
ELEMENT	CONTROL
Minimum Lot Width to House Width Ratio	1:0.75 <i>Interpretation: A ratio of 1:0.75 means that for every 1m of lot frontage, the width of the house shall be 0.75m</i>
Maximum Site Coverage	70% of site area
Landscape Area	20% of site area
Private Open Space	20% with min. dimension of 2.5m
Principal Private Open Space	16m ² per dwelling with min. dimension of 3m
Front Setback	3.5m 1m articulation zone
Corner Lot Secondary Street Setback (min)	1m single storey 2m second storey and above
Side Setback (min)	Nil side setback where the side wall is integrated with a retaining wall – or a minimum of 900mm
Length of Zero Lot Line Wall	17m (Maximum cumulative length of façade without articulation). Articulation in the façade should be a minimum 450mm deep.
Rear Setback (min)	3m (excludes detached garages and other ancillary structures such as pools and outbuildings)
Car Parking Spaces	1 space (min)
Pools and garden structures	Garden structures and/or a swimming pool and all associated pipework are to be wholly contained within the lot boundaries.



Cottage lot with zero lot boundary and 900mm side setback

Figure 27: Indicative layout for cottage lots (rear loaded) nil side setback

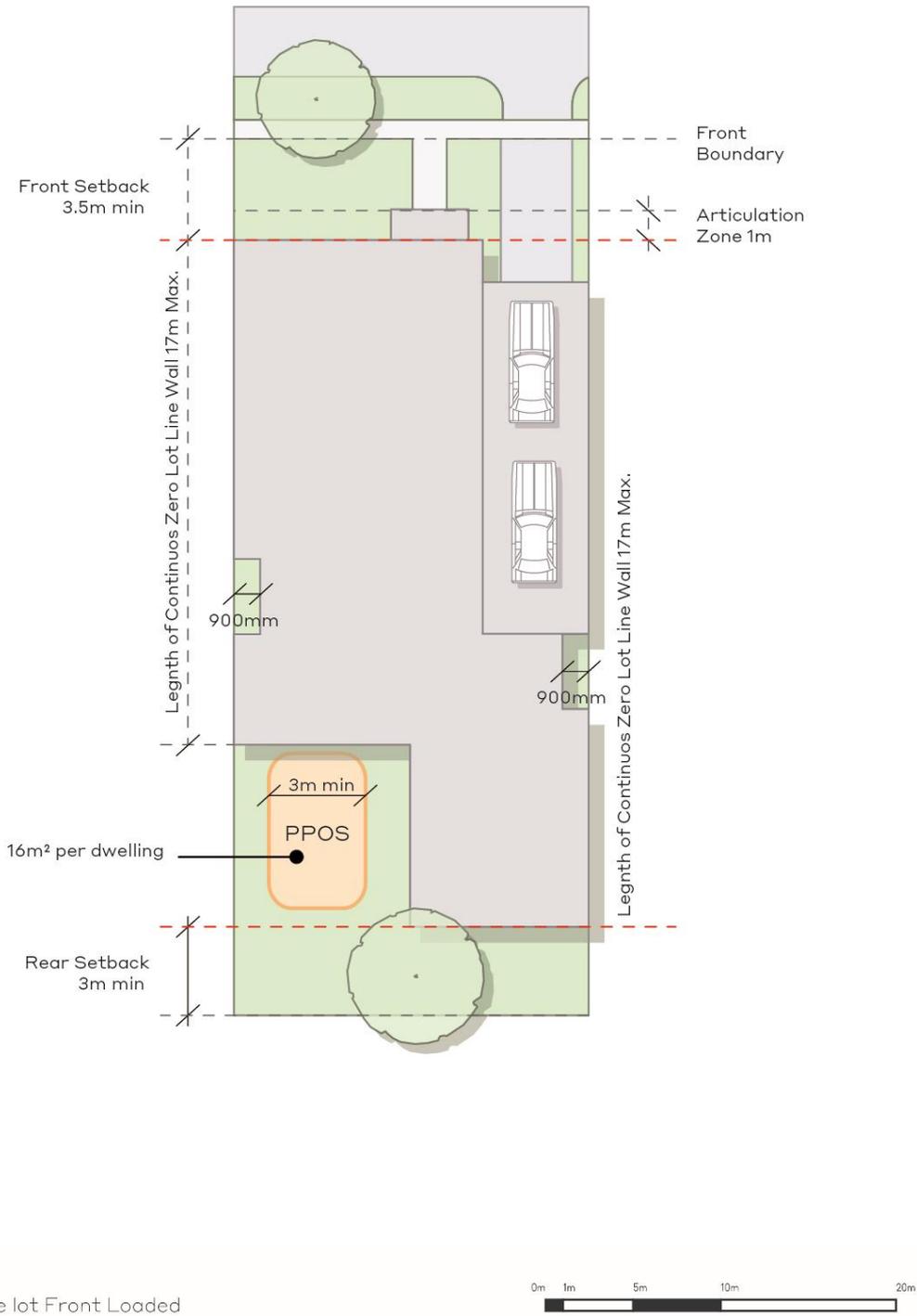
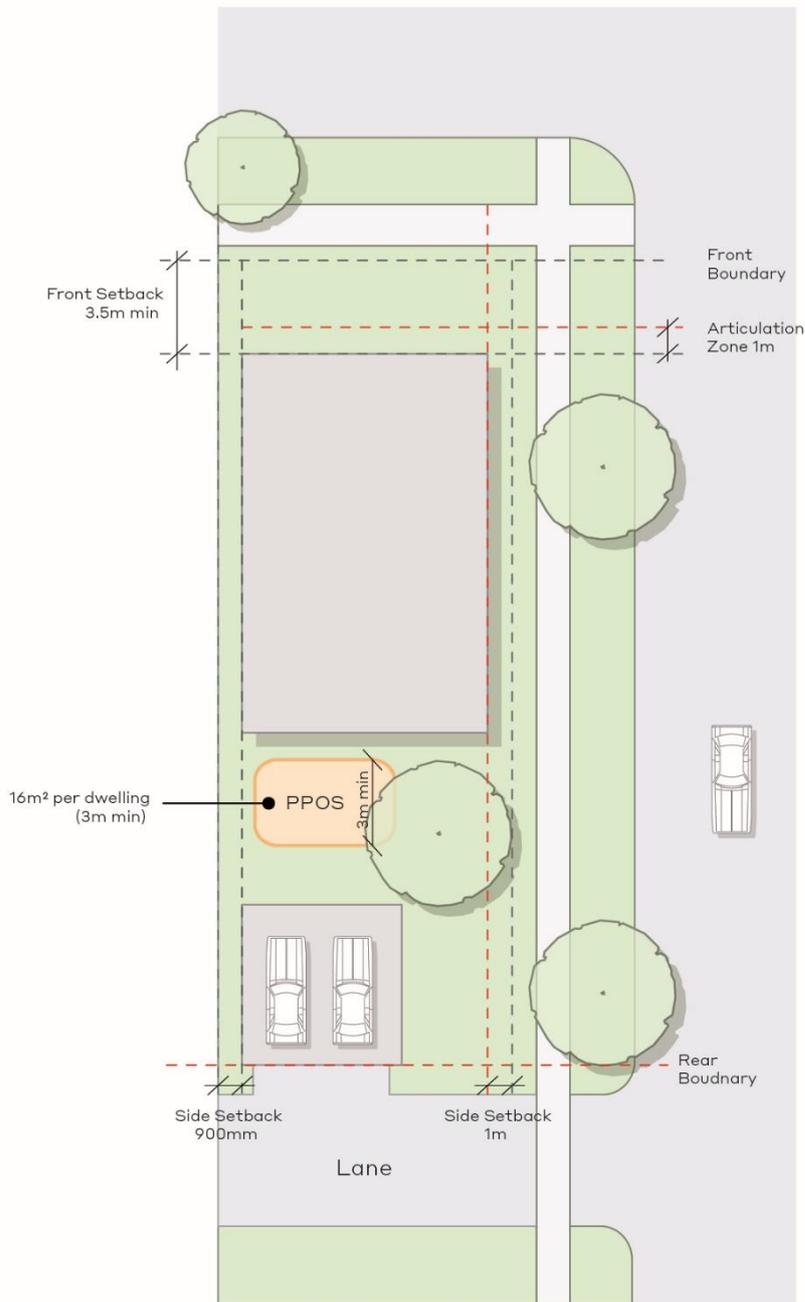


Figure 28: Indicative layout for cottage lots (front loaded) nil side setback



Cottage lot with both side setbacks 900mm



Figure 29: Indicative layout for a cottage lot dwelling (rear loaded)

Table 5: Summary of key controls for small Traditional lot dwelling (detached dwelling)

SMALL TRADITIONAL LOT DWELLING	
ELEMENT	CONTROL
Minimum Lot Width to House Width Ratio	1:0.65 <i>Interpretation: A ratio of 1:0.65 means that for every 1m of lot frontage, the width of the house shall be 0.65m</i>
Maximum Site Coverage	70% of site area
Landscape Area (min)	20% of site area
Private Open Space (min)	20% of site area with min. dimension of 2.5m
Principal Private Open Space (min)	16m ² per dwelling (min. dimension of 4m)
Front Setback (min)	4.5m (building façade) 1m (articulation zone) 5.5m (garage)
Corner Lot Secondary Street Setback (min)	1m – single storey 2m – second storey and above
Side Setback (min)	1m – single storey 1.5m – second storey 0m – on one side for garages – where frontage is 15m or less
Rear Setback (min)	3m (excludes detached garages and other ancillary structures such as pools and outbuildings)
Car Parking Spaces	1 space (min)
Pools and garden structures	Garden structures and/or a swimming pool and all associated pipework are to be wholly contained within the lot boundaries.

Table 6: Summary of key controls for Traditional lot dwelling (detached dwelling)

TRADITIONAL LOT DWELLING	
ELEMENT	CONTROL
Minimum Lot Width to House Width Ratio	1:0.65 <i>Interpretation: A ratio of 1:0.65 means that for every 1m of lot frontage, the width of the house shall be 0.65m</i>
Maximum Site Coverage	55% of site area for two storeys plus 65% of site area for single storey
Landscape Area (min)	20% of site area
Private Open Space (min)	20% of site area with min. dimension of 2.5m
Principal Private Open Space	24m ² per dwelling (min. dimension of 4m)
Front Setback (min)	4.5m (building façade) 1m (articulation zone) 5.5m (garage)
Corner Lot Secondary Street Setback (min)	1m single storey 2m second storey and above
Side Setback (min)	1m – single storey 1.5m – second storey 0m – on one side for garages – where frontage is less than 15m
Rear Setback (min)	4m (excludes detached garages and other ancillary structures such as pools and outbuildings)
Car Parking Spaces	2 spaces (min)
Pools and garden structures	Garden structures and/or a swimming pool and all associated pipework are to be wholly contained within the lot boundaries.

Table 7: Summary of key controls for large Traditional lot dwelling (detached dwelling)

LARGE TRADITIONAL LOT DWELLING	
ELEMENT	CONTROL
Minimum Lot Width to House Width Ratio	1:0.60 <i>Interpretation: A ratio of 1:0.60 means that for every 1m of lot frontage, the width of the house shall be 0.60m</i>
Maximum Site Coverage	50% of site area for two storey 60% of site area for single storey
Landscape Area (min)	30% of site area
Private Open Space (min)	20% of site area with min. dimension of 2.5m
Principal Private Open Space	24m ² per dwelling (min. dimension of 4m)
Front Setback (min)	4.5m (building façade) 1m (articulation zone) 5.5m (garage)
Corner Lot Secondary Street Setback (min)	1m single storey 2m second storey and above
Side Setback (min)	1m – single storey 1.5m – second storey 0m – on one side for garages – where frontage is less than 15m
Rear Setback (min)	4m (excludes garages and other ancillary structures such as pools and outbuildings)
Car Parking Spaces	2 spaces (min)
Pools and garden structures	Garden structures and/or a swimming pool and all associated pipework are to be wholly contained within the lot boundaries.

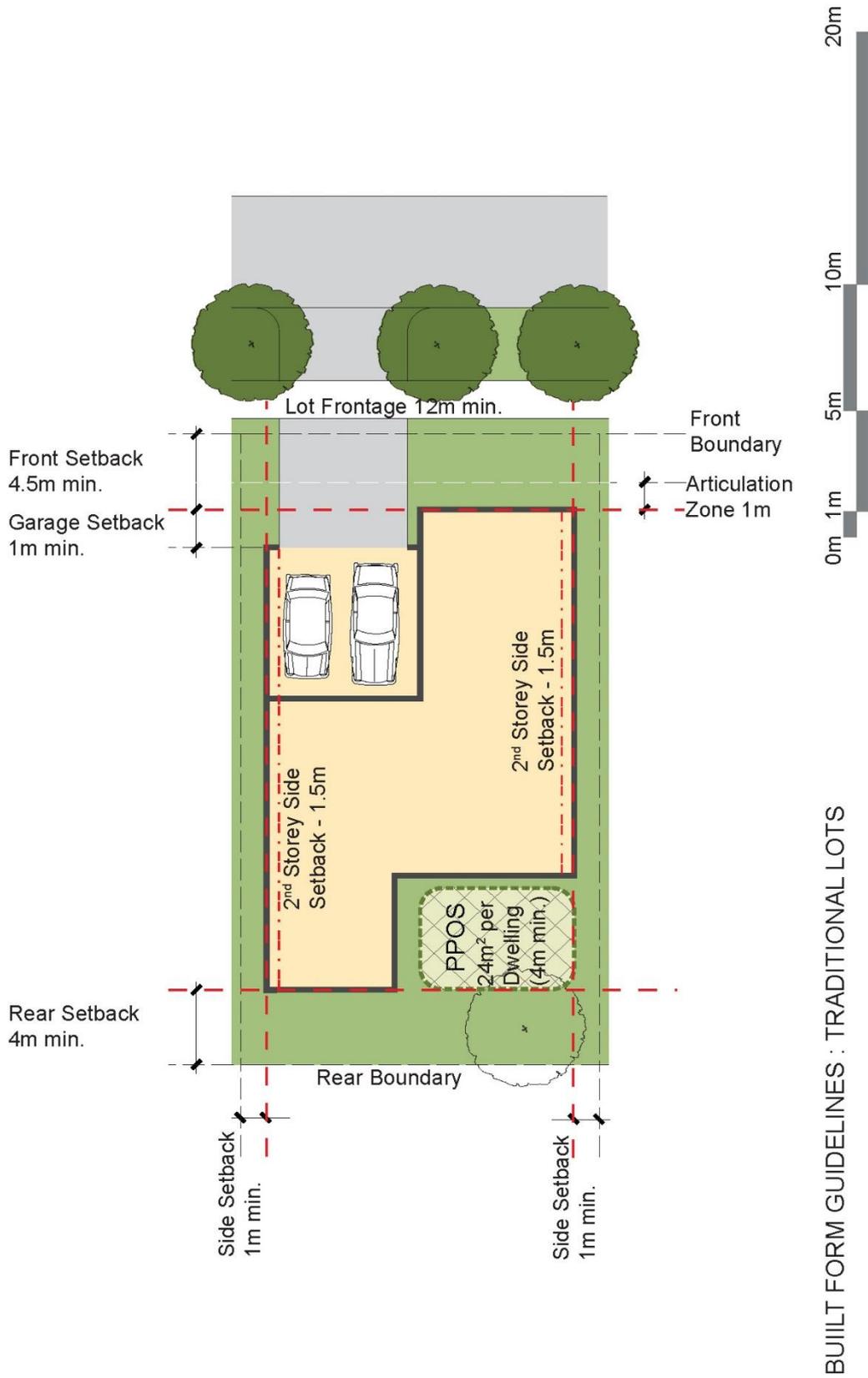


Figure 30: Indicative layout for traditional lot (detached dwelling)

Table 8: Summary of key controls for Country Lot dwellings

COUNTRY LOT DWELLING	
ELEMENT	CONTROL
Maximum Site Coverage	50% of site area
Landscape Area (min)	30% site area
Private Open Space (min)	20% of site area with min. dimension of 2.5m
Principal Private Open Space	24m ² per dwelling min. dimension of 6m
Front Setback (min)	6m 1m articulation zone
Corner Lot Secondary Street Setback (min)	3m
Side Setback (min)	1.5m to both sides
Rear Setback (min)	6m (excludes garages and other ancillary structures such as pools and outbuildings) 3m for "Ranch" style lots
Car Parking Spaces	2 spaces (min)
Pools and garden structures	Garden structures and/or a swimming pool and all associated pipework are to be wholly contained within the lot boundaries.

Note: "Ranch" style lots are lots where the area of the lot is greater than or equal to 1,000m², and:

- the depth of the lot is less than 23m, or
- the frontage is a minimum 1.6 times the depth of the lot.

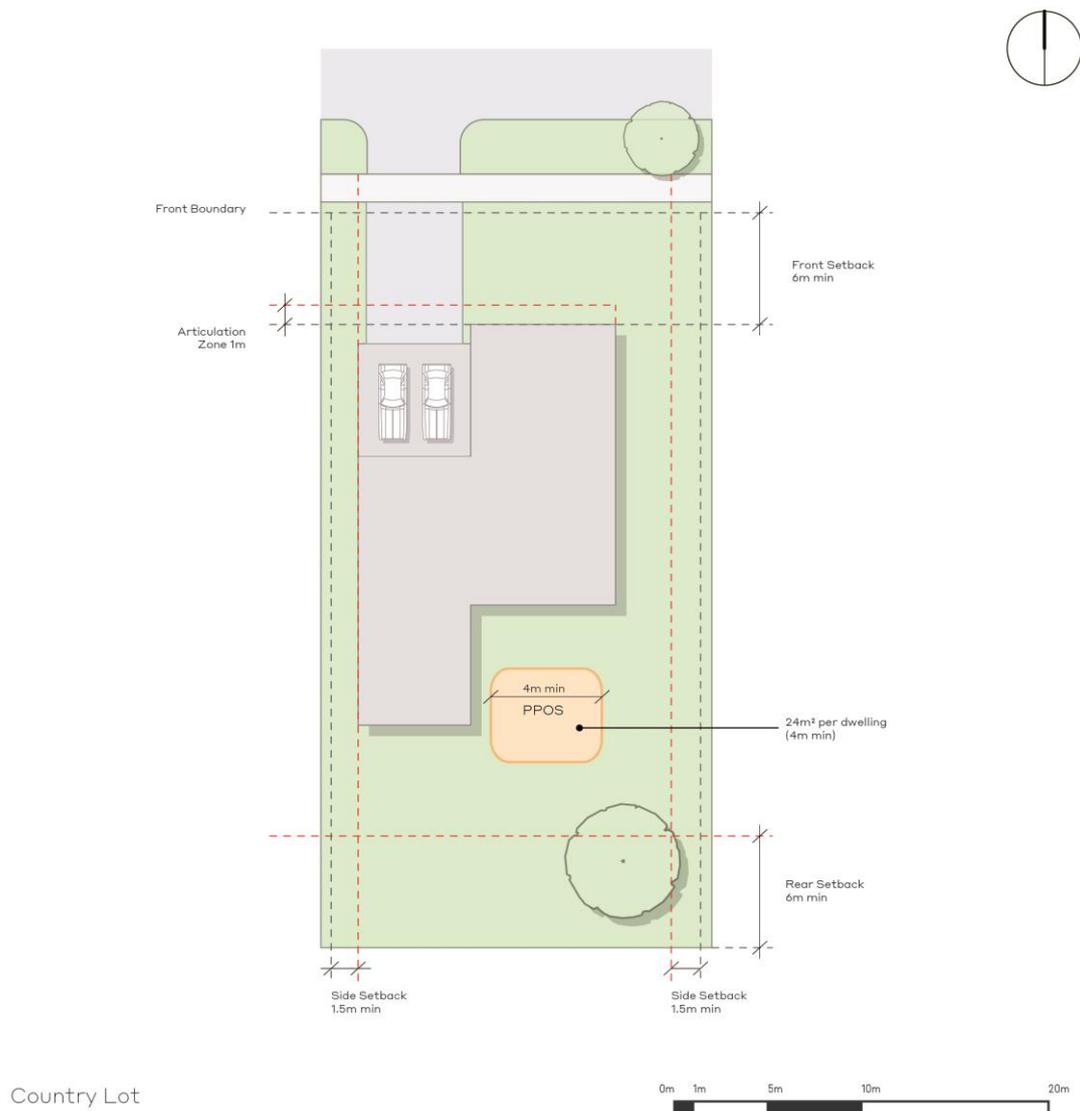


Figure 31: Indicative layout for country lot dwelling

5.4.2 Residential streetscape and architectural design

Objectives

- (1) To ensure that buildings are designed to enhance the built form and character of the neighbourhood by encouraging innovative and quality designs that fit harmoniously with their surroundings.
- (2) To encourage a diversity of house types, densities and architectural styles within the residential neighbourhood.
- (3) To ensure the provision of equitable access to natural light and ventilation for the occupants of all residential buildings.
- (4) To provide a clear distinction between private and public space and to encourage casual surveillance of the street.

- (5) To reinforce significant street intersections particularly on open space and other key strategic areas through articulation of corner buildings.

Controls

- (1) Dwellings are to consider the streetscape design principles illustrated at Figure 32.
- (2) The primary street facade of a dwelling should address the street and must incorporate a mixture of building materials, porch, verandah or deck to the primary façade, articulated façade and at least two of the following design features:
 - The inclusion of modern federation piers or double post supports with a step up/raised porch or verandah.
 - A roof feature for example but not limited to: gable, gambrel, dormer windows, bell tower or a separately pitched roofline or gable feature to a porch, verandah or balcony.
 - Provide a minimum ground floor plate / ceiling height of 2570mm for the majority of rooms / areas comprising the front elevation.
 - Rendered plinth to a minimum height of 340mm and up to 600mm above floor level with weatherboard cladding above.
 - A chimney feature located within the street elevation.
 - The incorporation of sandstone or approved cultured stone to an architectural element.
 - A corrugated metal deck roof.
 - Decorative window hoods, awnings or other features over windows.
- (3) The secondary street facade for a dwelling on a corner lot is to incorporate at least one of the following design features:
 - the inclusion of modern federation piers or double post supports with a step up/raised porch or verandah;
 - a roof feature for example but not limited to: gable, gambrel, dormer windows, bell tower or a separately pitched roofline or gable feature to a porch, verandah or balcony;
 - provide a minimum ground floor plate / ceiling height of 2570mm for the majority of rooms / areas comprising the front elevation;
 - rendered plinth to a minimum height of 340mm and up to 600mm above floor level with weatherboard cladding above;
 - a chimney feature located within the street elevation;
 - the incorporation of sandstone or approved cultured stone to an architectural element;

- a corrugated metal deck roof; or
 - decorative window hoods, awnings or other features over windows.
- (4) Articulation of the façade should be integral to the design of the building.
 - (5) Eaves are to provide sun shading and protect windows and doors and provide aesthetic interest. Except for walls built to the boundary, eaves should have a minimum of 450mm overhang (measured to the fascia board). Council may consider alternative solutions to eaves so long as they provide appropriate sun shading to windows and display a high level of architectural merit.
 - (6) Proposed dwelling colours, materials and finishes are to be consistent with the character of the neighbourhood. Bright and highly reflective colours are to be avoided. Multicoloured roof tiles are not permitted.
 - (7) Exact mirror-imaging of dwelling facades to form dual occupancy or semi-detached housing is not permitted. However, symmetrical design is permitted where each dwelling can satisfy two different design features as listed in sub-clause (1) above and where the overall design of the buildings is appropriate in the streetscape having regard to design, building form and bulk.
 - (8) The repetition of identical housing designs and colour palette in a group of dwellings, other than for attached dwellings will not be permitted.
 - (9) Complex roof forms should be avoided. Skillion roofs, roofs hidden from view by parapet walls, roofs on detached garages, studios and ancillary buildings on the allotment are excluded from this control.
 - (10) Low-pitched roofs behind a parapet need to successfully integrate with the side and rear elevations.
 - (11) All main entries to dwellings should be orientated to the front / primary street only and not to side streets.
 - (12) Upper level wall lengths are not to exceed 15m in continuous length.
 - (13) Windows to living area are to be directed either to the street or rear private open space (and private driveway) to provide visual surveillance to the street and or private open space areas.
 - (14) Bathroom, ensuite or Laundry windows are to be well disguised into the Primary elevation or areas on the secondary elevation that are visible to the public i.e. no highlight windows or obscure, translucent, opaque or frosted glass. Communication devices, including antennae, satellite dishes and similar elements are not to be visible from the street.
 - (15) Carports and garages are to be constructed of materials that complement the colour and finishes of the main dwelling.
 - (16) Where possible, garages/carports must be located for access from the rear laneway where one is provided.
 - (17) Triple garages (not carports) may be permitted, subject to:

- the frontage width of the triple garage does not exceed more than 50% of the dwelling frontage;
 - the third garage component is set back a minimum of 600mm from the double garage to lessen the impact from the street;
 - integrated storage areas are located so not to widen the garage unnecessarily.; and
 - the roof and design features of garages and carports are consistent with the main dwelling and doors shall be coloured to integrate seamlessly and reduce the dominance of the garage on the primary elevation.
- (18) For corner lots, garages/carports shall be located on the lot boundary opposite the corner truncation. For all other lots, garages should be located on the low side of the lot.
- (19) Carports on the primary or secondary street frontage are permitted, however shall be fitted with a sectional garage door. Carports wholly within the backyard do not require a garage door.

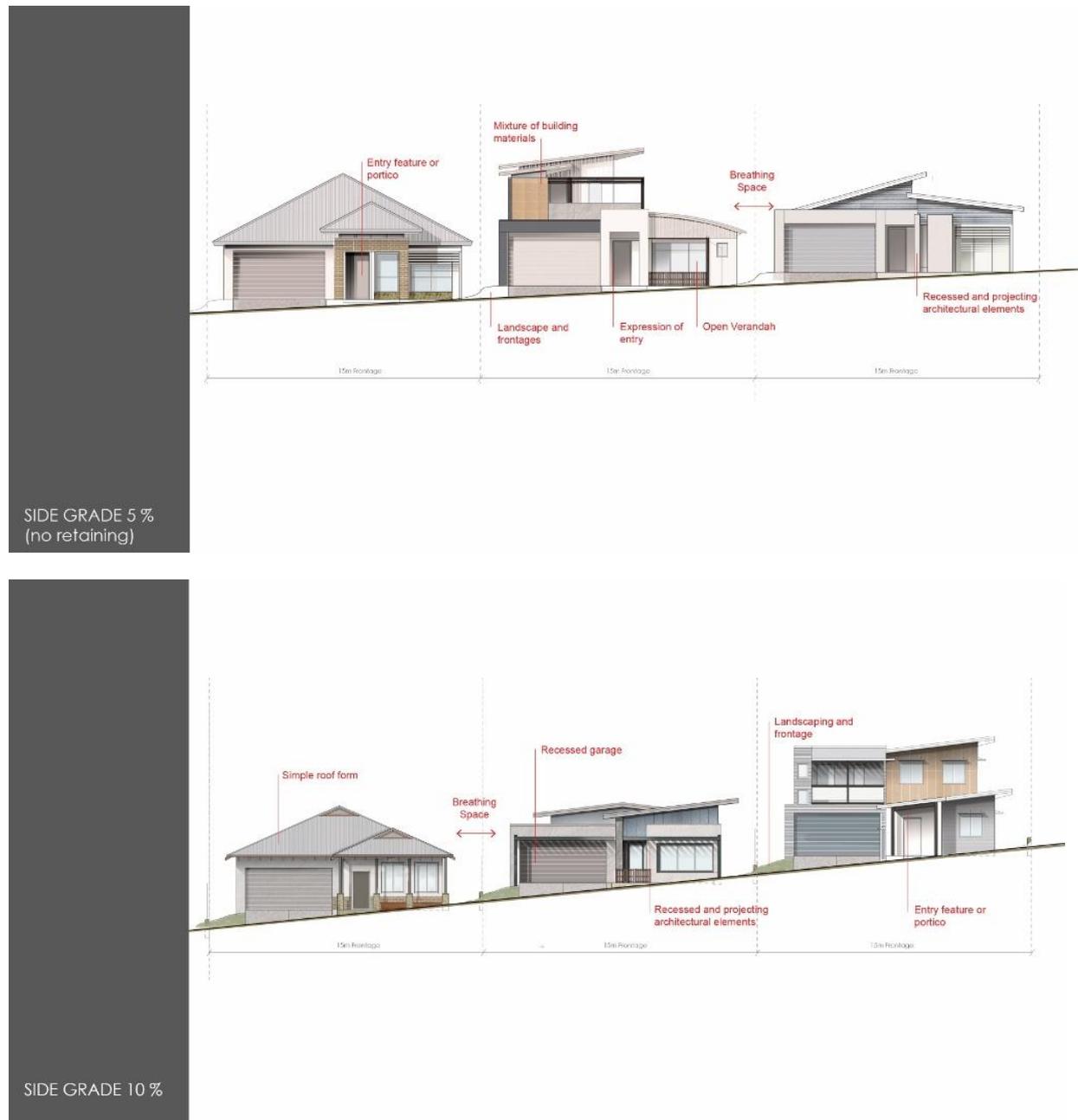


Figure 32: Streetscape design principles

5.4.3 Front setbacks

Objectives

- (1) To enable the integration of built and landscape elements in the streetscape.
- (2) To encourage simple and articulated building forms.
- (3) To ensure garages do not dominate the streetscape.

Controls

- (1) All development is to be consistent with the front setback controls in Section 5.4.1.

- (2) Elements permitted in the articulation zone include those items listed in Section 5.4.2.
- (3) Except for rear loaded garages, the garage line is to have a front set back that is at least 1m behind the building front facade line.

5.4.4 Side and rear setbacks

Objectives

- (1) To create an attractive and cohesive streetscape that responds to the character areas.
- (2) To minimise the impacts of development on neighbouring properties.
- (3) To provide appropriate separation between buildings.
- (4) To create opportunities for articulation on the side walls.

Controls

- (1) All development is to be consistent with the side and rear setback controls in Section 5.4.1.
- (2) For attached or semi-detached dwellings the side setback only applies to the end of a row of attached housing, or the detached side of a semi-detached house.
- (3) Projections permitted into side and rear setback areas include eaves (up to 450mm wide), fascia's, sun hoods, gutters, down pipes, flues, light fittings, electricity or gas meters, rainwater tanks and hot water units.
- (4) Pergolas and other landscape features/structures are permitted to encroach into the rear setback.
- (5) Applicants must demonstrate that the use of a zero lot line will not adversely affect the privacy and solar access of an adjoining property.

5.4.5 Dwelling height and massing

Objectives

- (1) To ensure development is of an appropriate scale to protect residential amenity.
- (2) To ensure building heights achieve built form outcomes that reinforce quality urban and building design.
- (3) To protect residential amenity.

Controls

- (1) Dwellings are to be generally a maximum of 2 storeys in height. A 3rd storey may be permitted where a dwelling is located:
 - on a prominent street corner, or

- adjacent to a neighbourhood or local centre or public open space, or a golf course, or riparian corridors, or
- on land with a finished ground level slope equal to or more than 15%, and is not likely to impact adversely on the existing or future amenity of any adjoining land on which residential development is permitted, having regard to overshadowing, visual impact and any impact on privacy, or
- in other circumstances approved by Council.

5.4.6 Landscaped area

Objectives

- (1) To encourage the use of native species of flora and low maintenance landscaping.
- (2) To contribute to effective stormwater management and energy efficiency.
- (3) To ensure a balance between built and landscaped elements in residential areas.
- (4) To provide for canopy tree planting that provides natural shade to houses.

Controls

- (1) Landscaped area is to be provided within each residential lot in accordance with the controls in Section 5.4.1.
- (2) A minimum of one tree is to be provided on the lot.
- (3) Drains are to be installed and be connected to the stormwater system as necessary to prevent accumulation of water and concentration of salts.
- (4) Use of low flow watering devices is encouraged to avoid over watering. Use of low water demand drought resistant vegetation is encouraged.

5.4.7 Private open space

Objectives

- (1) To provide a high level of residential amenity with opportunities for outdoor recreation and relaxation.
- (2) To enhance the spatial quality, outlook, and usability of private open space.
- (3) To facilitate solar access to the living areas and private open spaces of the dwelling.

Controls

- (1) Each dwelling is to be provided with an area of Private Open Space (POS) that contains an area of Principal Private Open Space (PPOS) consistent with the requirements in Section 5.4.1.
- (2) The location of PPOS is to be determined having regard to dwelling design, allotment orientation, adjoining dwellings, landscape features, topography.

- (3) 50% of the area of the required PPOS should receive at least 2 hours of sunlight between 9am and 3pm at the winter solstice (21 June).
- (4) Development shall not prevent 50% of the required PPOS of adjacent properties from receiving at least 2 hours of sunlight between 9am and 3pm at the winter solstice (21 June).
- (5) The PPOS is required to be conveniently accessible from the main living area of a dwelling or alfresco room and have a maximum gradient of 1:10.

5.4.8 Garages, site access and parking

Objectives

- (1) To control the number, dimensions and location of vehicle access points. To reduce the visual impact of garages, carports, and parking areas on the streetscape.
- (2) To provide safe, secure and convenient access to parking within garages, carports and parking areas, with casual surveillance of private driveways from dwellings and from the street.
- (3) To minimise conflict between pedestrians and vehicles at the junction of driveways and footpaths and within the lot.
- (4) To provide predominantly onsite parking for residents and visitors.

Controls

- (1) The driveway crossing the verge between the property boundary and the kerb shall have the smallest configuration possible to serve the required parking facilities and vehicle movements or a maximum of 6m.
- (2) Where possible, garages / carports must be located for access from the rear laneway where one is provided.
- (3) Driveway crossings are to be consistent with the design requirements illustrated in Figure 33.
- (4) Driveways are to have the smallest configuration possible to serve the required parking facilities and vehicle turning movements.
- (5) The location of driveways is to be determined with regard to dwelling design and orientation, street gully pits and tree bays and is to maximize the availability of on-street parking.
- (6) On corner allotments, driveways are not to be within 6m of the tangent to the kerb return. Access from secondary streets is preferred.
- (7) Planting and walls adjacent to driveways must not block lines of sight for pedestrians, cyclists and vehicles.
- (8) Driveways are to have soft landscaped areas on either side, suitable for water infiltration.
- (9) Driveways must be in accordance with the relevant Australian Standards for vehicular turning circles, visibility distances and gradients.

- (10) Garages are to be designed and located in accordance with the controls in Section 5.4.1.
- (11) Garage design and materials are to be similar with the dwelling design.
- (12) Garage doors are to be visually recessed through use of materials, colours, and overhangs.

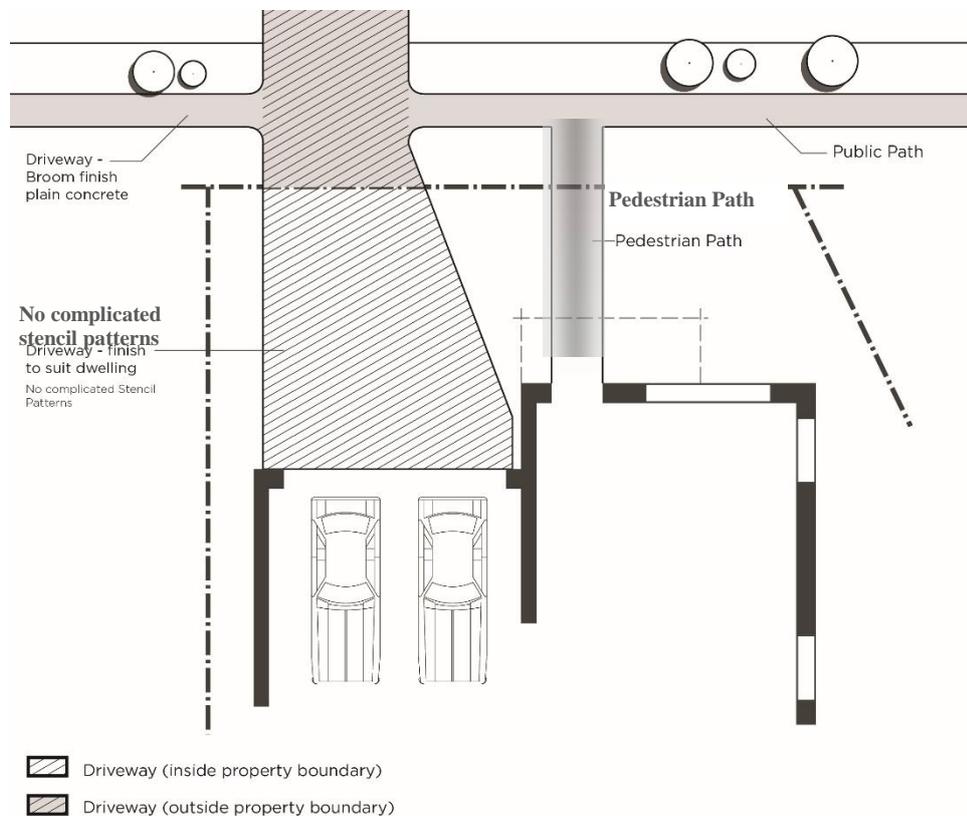


Figure 33: Driveway crossing requirements

5.4.9 Detached Secondary dwellings

Objectives

- (1) To ensure that detached secondary dwellings are integrated with the overall design of the principal dwelling.
- (2) To ensure that detached secondary dwellings are designed to be subordinate to the principal dwelling.
- (3) To ensure that detached secondary dwellings are sited to reduce apparent scale of the overall residential development from the streetscape.
- (4) To maintain a reasonable level of amenity to the principal dwelling, the site and surrounding properties.

Note: Attached secondary dwellings must comply with the controls for residential dwellings.

Controls

- (1) Detached secondary dwellings are to be subordinate in height and scale to the principal dwelling.
- (2) The maximum floor area of a detached secondary dwelling is not to exceed 60m² or 50% of the total floor area of the principal dwelling, whichever is the greater.
- (3) Development of a detached secondary dwelling is to be sited behind the front or secondary elevation building line.
- (4) A detached secondary dwelling is to be constructed of the same materials, finishes and colour scheme of the principal dwelling.
- (5) Where visible to the public, detached secondary dwellings are to be designed with vertically proportioned windows or dormer windows are to address the road, street, parkway or laneway.
- (6) A roof feature, verandah, porch or balcony and a garden bed and / or feature planting / planter box is to be incorporated into the design of a detached secondary dwelling.
- (7) Roof pitch of detached secondary dwellings is to complement the principle dwelling.
- (8) Detached secondary dwellings are not to increase site coverage or reduce landscaped areas for the property to less than the minimum required in section 5.4.1 of this DCP.

5.4.10 Outbuildings

An outbuilding is defined under the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.

Objectives

- (1) To minimise the visual impact of outbuildings and ancillary buildings.
- (2) To ensure that outbuildings visually integrate with the overall design of the principal dwelling.
- (3) To ensure that outbuildings are designed to be subordinate to the principal dwelling.
- (4) To maintain a reasonable level of amenity to the principal dwelling, the site and surrounding properties.

Controls

- (1) The maximum floor area of an outbuilding is not to exceed the areas shown below:

Lot size	Maximum gross floor area
<300m ²	36m ²
>300m ² –600m ²	45m ²
>600m ² –900m ²	60m ²
>900m ²	100m ²

- (2) Development of an outbuilding is to be sited behind the front or secondary elevation building line.
- (3) An outbuilding is to be constructed of materials that complement the colour and finishes of the main dwelling.
- (4) The appearance of an outbuilding is not to detract from the visual amenity of the development on the site and surrounding locality.
- (5) The visual impact of an outbuilding should be mitigated using landscaping and other suitable screening measures, where practical.
- (6) Where an outbuilding is proposed on a dual frontage lot, the use of a single, two single or a double garage door is permitted.
- (7) Outbuildings are not to increase site coverage or reduce landscaped areas for the property to less than the minimum required in Section 5.4.1 of this DCP.
- (8) Outbuildings are not to interfere or alter existing retaining walls, drainage and fencing.

Additional controls for other dwelling types

5.4.11 Multi-dwelling housing

Objectives

- (1) To ensure that the design of multi-dwelling housing is consistent with the character of the residential areas
- (2) To ensure the quality of multi-dwelling housing is of a high quality and contributes to the amenity of residents.

Controls

- (1) Multi-dwelling housing is to be located on sites with a minimum street frontage of 30m and a minimum depth (from front to rear) of 25m.
- (2) Garages and car parking areas are to be located at the rear of the lot with access provided from a lane to activate building facades.

- (3) Multi-dwelling housing sites should incorporate canopy trees within the landscaped area.
- (4) Multi-dwelling housing is to comply with the controls in Table 9.

Table 9: Key controls from multi-dwelling housing

Element	Controls
Site coverage (max)	70% of site area
Landscaped area (min)	30% of site area
Communal open space (min)	15% of site area
Private open space (min)	10m ² per dwelling with min. dimension of 2.5m
Front setback (min)	4.5m 1m articulation zone
Corner lots secondary street setback (min)	3m
Side setback (min)	1m
Rear setback (min)	4m (excluding garages)
Car parking spaces	1-2 bedrooms: up to 2 spaces 3 or more bedrooms: 2 spaces Visitor parking: 1 space per 5 dwellings Bicycle parking: 1 space per 2 dwellings

5.4.12 Residential flat buildings and shop top housing

Objectives

- (1) To establish a high quality residential environment where all dwellings have a good level of amenity.
- (2) To encourage a variety of housing forms within residential areas.
- (3) To ensure the provision of housing that will, in its adaptable features, meet the access and mobility needs of any occupant.

Controls

- (1) Residential flat buildings are to:
 - be located on sites with a minimum street frontage of 30m and minimum depth (from front to rear boundaries) of 30m, and
 - have direct frontage to an area of the public domain (including streets and public parks), and

- not adversely 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.
- (2) All residential flat buildings are to be consistent with:
 - the guidelines and principles outlined in SEPP No. 65 – Design Quality of Residential Apartment Development, and
 - the primary controls set out in Table 10.
 - (3) In all residential flat building developments containing 10 dwellings or more, a minimum of 10% of all apartments are to be designed to be capable of adaptation for disabled or elderly residents.
 - (4) Dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995), which includes ‘pre-adaptation’ design details to ensure visitability is achieved.
 - (5) Where possible, adaptable dwellings are to be located on the ground floor. Dwellings located above the ground level of a building may only be provided as adaptable dwellings where lift access is available within the building. The lift access must provide access from the basement to allow access for people with disabilities.
 - (6) The development application must be accompanied by certification from an accredited Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Adaptable Housing Standard (AS 4299-1995).
 - (7) Car parking and garages allocated to adaptable dwellings must comply with the requirements of Australian Standards for disabled parking spaces.

Table 10: Key controls for residential flat buildings and shop top housing

Element	R1 zone	B4 zone
Site coverage (max)	70% of site area	85% of site area
Landscaped area (min)	30% of site area	15% of site area
Private open space (min)	10m ² per dwelling with min. dimension of 2.5m	10m ² per dwelling with min. dimension of 2.5m
Front setback (min)	6m	0m for first floor 3m from 3rd floor
Corner lots secondary street setback (min)	6m	0m for first floor 3m from 3rd floor
Side setback (min)	2m	0m

Rear setback (min)	6m	3m
Height	4 Storeys	
Car parking spaces	<p>1-2 bedrooms: up to 2 spaces</p> <p>3 or more bedrooms: 2 spaces</p> <p>Visitor parking: 1 space per 5 dwellings</p> <p>Bicycle parking: 1 space per 2 dwellings</p>	<p>1-2 bedrooms: up to 2 spaces</p> <p>3 or more bedrooms: 2 spaces</p> <p>Visitor parking: 1 space per 5 dwellings</p> <p>Bicycle parking: 1 space per 2 dwellings</p>

5.5 Other development in residential areas

The residential zones permit a range of non-residential land uses which, depending on their scale, suitability, location and design, may be compatible with adjoining residential uses.

Allowing non-residential development in the residential zones is appropriate providing that controls are in place to minimise the negative impacts of noise, loss of privacy, traffic, parking and other nuisances on local residential amenity.

5.5.1 General requirements

Objectives

- (1) To establish appropriate controls to minimise the adverse effects of non-residential development on surrounding residential development.
- (2) To maintain consistency in development standards between non-residential and residential land uses and ensure that buildings are similar in height, bulk and scale to surrounding buildings.
- (3) To ensure that non-residential development is appropriately located.
- (4) To avoid concentrations of non-residential uses in any particular area where the cumulative impact on residential amenity would be unacceptable.

Controls

- (1) Site analysis information as required by Section 5.2 is to be submitted with all applications for non-residential development in residential zones.
- (2) Non-residential development on residential zoned land is to comply with the requirements of Section 5.3 of this DCP in relation to residential amenity and sustainable building design.
- (3) The maximum site coverage of buildings is 60% of the total site area.

- (4) The minimum landscaped area for non-residential development is 20% of the total site area of the allotment.
- (5) Provision of car parking for non-residential uses will be assessed by Council on an individual basis but must be sufficient to meet demand generated by staff and visitors.
- (6) Where there is an inconsistency between the general requirements of this clause and the specific controls in the following sections, the specific controls prevail.
- (7) Council will have particular regard to the effects of non-residential development in the residential zones. Council will consider whether:
 - the proposed development will be out of character with surrounding residential development, particularly in relation to the height and/or scale of any proposed buildings and the controls in Section 5.4,
 - the proposed development will contribute to an undesirable clustering of that type of development, or non-residential uses in general, in the area,
 - an undesirable effect on the amenity of the surrounding area will be created,
 - the proposed use will draw patronage from areas outside of the surrounding neighbourhood, and the extent to which that patronage might impact on the amenity of residents through factors such as traffic generation, noise or the overall scale of the non-residential use,
 - a noise nuisance will be created,
 - the development will generate traffic out of keeping with the locality,
 - adequate facilities are provided for the purposes of parking, loading and deliveries, and
 - adequate provision is made for access by disabled persons.
- (8) Non-residential development in residential zones should be similar in bulk, scale, height and siting to the surrounding buildings.
- (9) Finishes, materials, paving and landscaping are to be consistent with those of surrounding residential development.

5.5.2 Education establishments and places of public worship

Objectives

- (1) To encourage the appropriate location of facilities to create community focal points, centres of neighbourhood activity and enhance community identity.
- (2) To mitigate the impacts of noise, privacy, increased traffic and nuisance on surrounding residential development.

Controls

- (1) Development for the purpose of an educational establishment are to satisfy the provisions of the *State Environmental Planning Policy (Education and Child Care) 2017*.

- (2) Places of worship are to be located within centres or co-located with other community facilities in residential areas so as to create a community focal point, to share facilities such as parking, and to minimise impacts on residential areas.
- (3) Places of public worship and educational establishments are preferably to be located on land with frontage to a collector road. Corner sites are preferred.
- (4) In assessing applications, Council will consider the following:
 - the privacy and amenity of adjoining developments,
 - the need and adequacy for provision of buffer zones to surrounding residential development,
 - urban design,
 - location,
 - the size of the land where the development is proposed,
 - traffic generation and the impacts of traffic on the road network and the amenity of nearby residents,
 - the availability of parking,
 - the scale of buildings and their capacity, and
 - hours of operation and noise impacts.
- (5) A traffic and transport report/statement is to accompany the Development Application addressing the impact of the proposed development on the local road system and defining car parking requirements.
- (6) A landscape plan and associated documentation is to be submitted with the Development Application identifying existing vegetation and community plant species and/or existing design elements of the site layout, and the proposed landscaping treatment of the development.
- (7) Car and bicycle parking spaces for places of public worship and educational establishments shall be provided on site in accordance with Table 11 .

Table 11: Car and bicycle parking for places of public worship and educational establishments

Land use	Parking requirement
Places of public worship	1 space per 4 seats or 1 space per 10m ² of seating area (whichever is greater) and 1 bicycle parking space per 10 seats
Primary and secondary schools	1 space per staff member; and 1 space per 100 students
Senior high school	1 space per staff member; and

	1 space per 5 students in Year 12
Tertiary and adult education establishments	1 space per 5 seats or 1 space per 10m ² of seating area (whichever is greater)
All Educational Facilities	1 bicycle parking space per 5 students

- (8) Development must be designed to minimise the possibility of noise disturbance to the occupants of adjoining or neighbouring dwellings.
- (9) Development must be designed to minimise the possibility of noise to the occupants of adjoining or neighbouring dwellings.
- (10) Where appropriate buffers should be put in place to limit noise impacts on the surrounding area.
- (11) Sources of noise such as garbage collection, machinery, parking areas and air conditioning plants are sited away from adjoining properties and screened/insulated by walls or other acoustic treatment.
- (12) The general hours of operation for places of public worship and educational establishments are between 7am and 9pm. Variation to the approved hours of operation may be approved by Council subject to other requirements or a merit assessment.

5.5.3 Neighbourhood shops

Objectives

- (1) To ensure the appropriate provision of retail uses to serve the needs of the local community.
- (2) To minimise the impacts of retail activities on surrounding residential areas.
- (3) To ensure that retail activities in residential areas do not detract from the function or viability of nearby centres.
- (4) To ensure the appropriate location of neighbourhood shops.

Controls

- (1) For neighbourhood shops, the controls in the following sections of this DCP apply:
 - Section 5.4.2 - Streetscape and architectural design,
 - Section 5.4.4 - Side and rear setbacks,
 - Section 5.4.5 - Dwelling height, massing and siting, and
 - Section 5.4.8 - Garages, site access and parking.
- (2) Shops fronts are to encourage active and interactive street frontages that are sympathetic to the streetscape with similar materials to adjoining buildings to be used.

- (3) Neighbourhood shops must have a minimum 1m setback, unless on a corner site, and footpath activation is required within any setback provided.
- (4) Address and entry points for any residential use on the same allotment of land are to be separate from the retail use access points and be readily identifiable.
- (5) Design of the building frontage, front and side setbacks are to include safe and convenient pedestrian facilities such as weather protection, shade, seating and landscaping.
- (6) On corner sites, shop fronts are to wrap around the corner and zero setbacks are permitted.
- (7) Entrances are to be visible from the street and well lit.
- (8) Car parking areas are to be located at the side or rear of the site.
- (9) The site should not gain direct access to:
 - A road with clearway or other parking restrictions, or
 - An arterial road.
- (10) Plant and equipment (particularly cooling or heating plant), is to be located so as to not cause noise annoyance to neighbours.
- (11) Waste storage areas must be designed to minimise visual impact and should be screened and properly positioned so as to not to attract pests and cause odour problems for neighbours.
- (12) All goods storage is to be internal.

5.5.4 Seniors housing

Objectives

- (1) To ensure that the design of seniors housing is consistent with the character of surrounding residential areas.

Controls

- (1) Applications for seniors housing are to comply with the controls for multi-dwelling housing in Section 5.4.11 of this DCP and the controls within *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004*.

6 Town and Village Centres

This part of the DCP outlines the objectives and design principles for the town centre retail, commercial and service uses within the B4 Mixed Use zone and neighbourhood shops and services within the village centres. The overall controls in Section 6.1 apply to retail and commercial development within both the town and village centres with more specific controls for the town centre in Section 6.2 and village centres in Section 6.3.

Overall objectives

- (1) To provide a range of retail, business, bulky goods retailing, service commercial and support uses to service the needs of people living, working and visiting the town centre, as well as the broader area.
- (2) To provide new jobs in a concentration of retail, community, entertainment, health and professional services for the local and broader population.
- (3) To ensure a high level of self-sufficiency in employment within the region, with opportunities for maximising home based and localised employment.

6.1.1 Active street frontages

Objectives

- (1) To promote pedestrian activity and safety in the public domain.
- (2) To maximise active street fronts in the town and village centres.
- (3) To define areas where active streets are required.
- (4) To provide an identifiable and desirable street address to residential buildings outside of areas where active street fronts are required.
- (5) To clearly and consistently define the street edge.
- (6) To allow for outlook to and surveillance of the street.

Controls

- (1) Active frontage uses are defined as any of the following at street level:
 - entrance to retail,
 - shop front,
 - glazed entries to commercial and residential lobbies,
 - café or restaurant if accompanied by an entry from the street,
 - active office uses, such as reception, if visible from the street, and/or
 - public building if accompanied by an entry.
 - Alfresco dining areas visible from the street
- (2) Active street fronts, built to the street alignment, are required on the ground level of all retail and commercial development

- (3) Large format retail such as supermarkets and parking areas are to be sleeved or hidden by retail and commercial uses as shown in Figure 34.
- (4) Ground floor residential uses (other than entries to lobbies to residential uses above ground level) are not permitted along Empire Street in the retail core area.
- (5) Restaurants, cafes and the like are to consider providing openable shop fronts.
- (6) Only open grill or transparent security shutters (at least 50% visually transparent) are permitted to retail and commercial frontages.
- (7) On corner sites, shop fronts are to wrap around the corner.
- (8) Entrances are to be visible to the street and well lit.

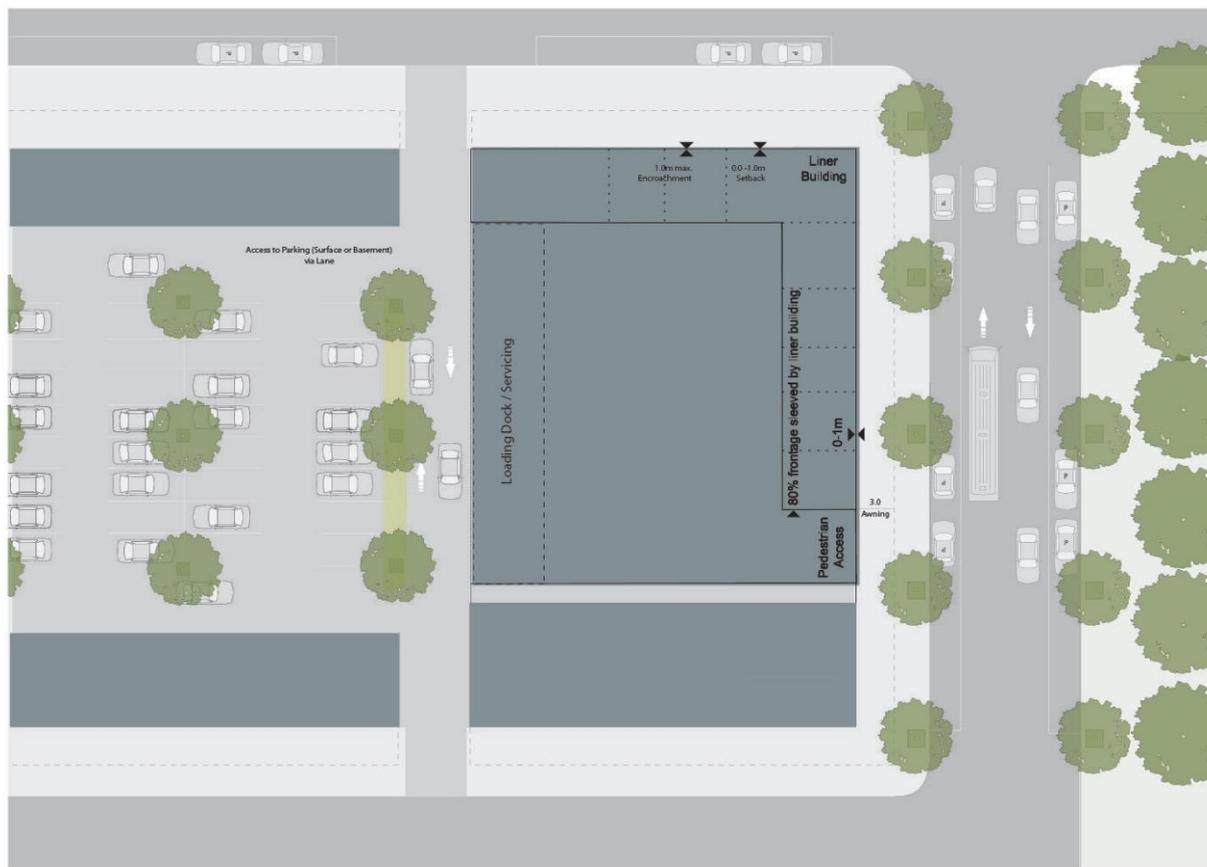


Figure 34: Large format building and liner

6.1.2 Awnings

Objectives

- (1) To provide shelter for public streets where most pedestrian activity occurs.
- (2) To address the streetscape by providing a consistent street frontage in the centres.

Controls

- (1) Provide street frontage awnings to all new commercial and retail developments within the town centre and village centres of varying styles.
- (2) Wrap awnings around corners on street corner buildings.
- (3) Cantilever awnings from buildings are to have a minimum soffit height of 3.2m and a maximum of 4.5m.
- (4) Low profile awnings with slim vertical fascias and/or eaves (not to exceed 300 mm) are encouraged.
- (5) Awnings are to be a minimum of 2.5m deep (dependant on street width) and setback from the kerb a minimum of 500mm to allow clearance for street furniture, trees etc.
- (6) Steps for design articulation or to accommodate sloping streets are to be integrated with the building design and should not exceed 700mm.
- (7) Provide under awning lighting to facilitate night use as well as improve public safety. Lighting is to be recessed into the soffit of the awning, or wall mounted onto the building.
- (8) Any under awning signage is to maintain a minimum clearance of 2.7m from the level of the pavement.

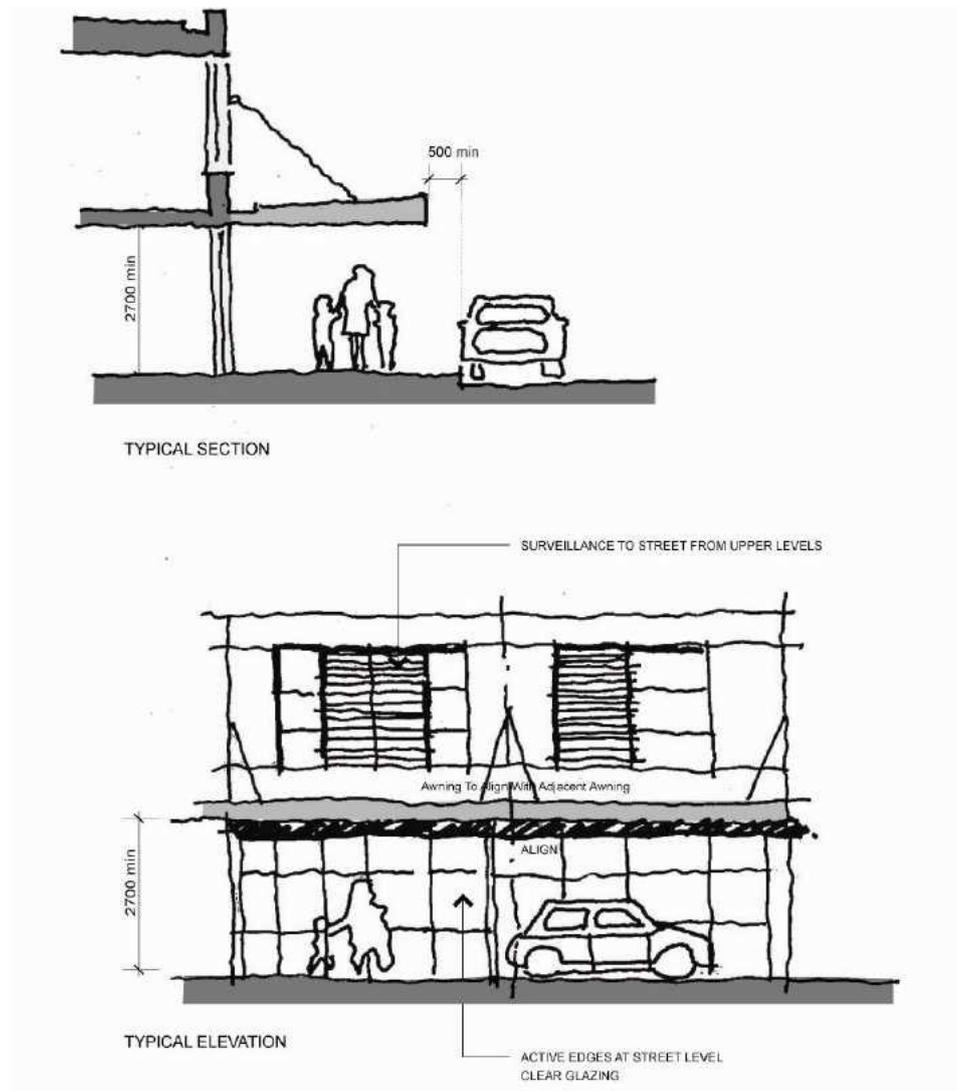


Figure 35: Awnings

6.1.3 Signage

Objectives

- (1) To permit adequate identification and business advertising that achieves a very high level of design quality in terms of graphic design, its relationship to the architectural design of buildings and the character of streetscapes.
- (2) To promote signage that complements the scale and character of a building.
- (3) To avoid the creation of visual clutter on buildings and streetscapes.
- (4) To ensure compatibility with the desired urban character of adjacent land uses.
- (5) To consider the amenity of residential development and the visual quality of the public domain.
- (6) To ensure that advertising signs do not adversely affect the safety of motorists and other road users.

Controls

General Signage

- (1) Signage must be integrated into the building façade and achieve a high degree of compatibility with the architectural design of the supporting building having regard to its composition, fenestration, materials, finishes, and colours. Architectural features of the building are not to be obscured.
- (2) One under-awning sign is permitted on each shop or commercial premises.
- (3) Signs including real estate signs and temporary signs are not allowed to stand on the top of awnings.
- (4) The total area of all signs is not to exceed 1m² of advertising area per 1m of shop frontage. This includes signs painted on blinds or windows.
- (5) Signs that contain additional advertising promoting products or services not related to the approved use of the premises or site (such as the logos of brands or products) are not permitted.
- (6) Signs painted on or applied to the roof are not permitted.
- (7) Directional signage and public notices are to have a coordinated appearance and help to establish the town centre as a unique destination and place.

Illuminated Signs

- (1) Illumination (including cabling) of signs is to be
 - concealed, or
 - integral with the sign, or
 - provided by means of carefully designed and located remote or spot lighting.
- (2) Restricted hours shall be imposed on the operation of illuminated signs where continuous illumination is considered to impact adversely on the amenity of residential buildings, serviced apartments or other visitor accommodation, or have other adverse environmental effects.
- (3) Up-lighting of signs is prohibited. Any external lighting of signs is to be downward pointing and focused directly on the sign and is to prevent or minimise the escape of light beyond the sign.

Signage and Road Safety

- (1) Signs are regarded as prejudicial to the safety of road users if they:
 - are to obscure or interfere with road traffic signs and signals or with the view of a road hazard, oncoming vehicles, or any other vehicle or person, or an obstruction which should be visible to drivers or other road users,
 - give instructions to traffic by use of the word 'stop' or other directions, which could be confused with traffic signs,

- are of such a design or arrangement that any variable messages or intensity of lighting impairs drivers' vision or distracts drivers' attention, and
- are situated at locations where the demands on drivers' concentration due to road conditions are high such as at major intersections or merging and diverging lanes.

Vertical Blade Sign width must not exceed 315mm with a maximum height equalling the building's first floor height.

Under-Awning Sign height shall not be greater than 615mm.



Storefront Sign height shall not be greater than 615mm.

Under-Awning Sign



(Figure continued next page)

Storefront Signs
are limited to one
sign per facade
and one blade
sign per facade.



Under- Awning
Sign



Sign- Awnings
are not permitted.



Figure 36: Preferred location of signage

6.1.4 Parking

Objectives

- (1) To provide an appropriate level of on-site car and bicycle parking to cater for a mix of development types and location.
- (2) To minimise the visual impact of on-site parking.
- (3) To integrate parking facilities with the overall site planning and landscape.
- (4) To encourage the use of bicycles.

Controls

- (1) On-site car and bicycle parking for commercial and retail premises is to be provided in accordance with the standards set out in Table 12 and Table 13.
- (2) The parking area per vehicle is to be in accordance with Australian Standard AS 2890:1.
- (3) All outdoor parking areas shall be appropriately screened by planting and/or fencing.
- (4) At grade car parks shall provide landscaping and tree planting and consider providing weather protection.
- (5) Basement parking must not to be raised more than 1m above ground level.
- (6) In the Core retail precinct, town centre and all village centres, parking is not permitted within the front setback. Parking and servicing is to be located to the rear of buildings, or below grade, to minimise impacts on the streetscape and pedestrian amenity.
- (7) Rear lanes should be utilised where possible to access parking areas.
- (8) All bicycle parking is to be in secure and accessible locations. Bicycle parking for employees is to have weather protection.

Table 12: Car parking for commercial and retail premises

Use	Requirement
Retail uses	1 space per 25m ² GFA for supermarkets and discount department stores 1 space per 50m ² for main street, village centre and other retail
Commercial	1 space per 50m ²

Table 13: Bicycle parking for commercial and retail premises

Use	Requirement
-----	-------------

Supermarkets	1 space per 750m ² GFA for employees 1 space per 1000m ² GFA for shoppers
Specialty stores	1 space per 300m ² GFA for employees 1 space per 300m ² GFA for shoppers
Commercial	1 space per 150m ² GFA for employees 1 space per 750m ² GFA for shoppers
Community centres	6 spaces at community centre

6.1.5 Site servicing

Objectives

- (1) To ensure that site facilities are functional and accessible to all residents and are easy to maintain.
- (2) To ensure that site facilities are thoughtfully integrated into the development and are visually and physically unobtrusive.
- (3) To minimise the impact of service access on pedestrians and retail, commercial and residential frontage.
- (4) To minimise the visual and acoustic impact of site servicing.

Controls

- (1) Garbage, mail box structures, service meters, air conditioners and the like are to be integrated with the overall design of the buildings and/or landscaping. Garbage storage areas are not permitted along the primary and / or secondary street frontage.
- (2) Provide adequate space within any new development for the unloading and loading of service vehicles.
- (3) Loading facilities must be located to the rear of each development.
- (4) Ventilation stacks are to be utilised wherever possible to vent shops and basements.
- (5) All service areas are to be screened from existing developments.
- (6) Service access is permitted from rear lanes, side streets or right of ways.
- (7) Vehicles must be able to enter/exit in a forward direction.
- (8) Provide truck turning facilities.

6.2 Town Centre

Objectives

- (1) To create a vibrant Town Centre that provides a high level of amenity.
- (2) To ensure that the detailed design of the Town Centre is undertaken in a coordinated manner in order to achieve a high quality urban design outcome.
- (3) To create a sense of place through the relationship of the Town Centre to the landscape.
- (4) To promote a pedestrian friendly main street through the Town Centre.
- (5) To ensure that the Town Centre is centrally located and easily accessible by pedestrians, cyclists and public transport users.
- (6) To ensure that the Town Centre can be serviced by public transport.
- (7) To provide a good range of retail and commercial services for the future communities.
- (8) To promote a Town Centre that is financially viable and easy to stage.

Controls

- (1) The Town Centre and its various land use types are to be located generally in accordance with Figure 37. An indicative layout plan of the Town Centre core retail area is shown at Figure 38.
- (2) Any departure from Figure 37 or Figure 38 must demonstrate that the objectives for the Town Centre can be met, and show how the residual lots can be developed in the future.
- (3) The Town Centre is to be consistent with the following principles:

Function and uses

- (1) Incorporate a range of retail, commercial and community uses to serve the needs of the community.
- (2) Incorporate higher density housing and mixed use development.
- (3) Concentrate intensive retail uses along and fronting Empire Street.
- (4) Provide a mix of uses that promote an active and vibrant town centre.

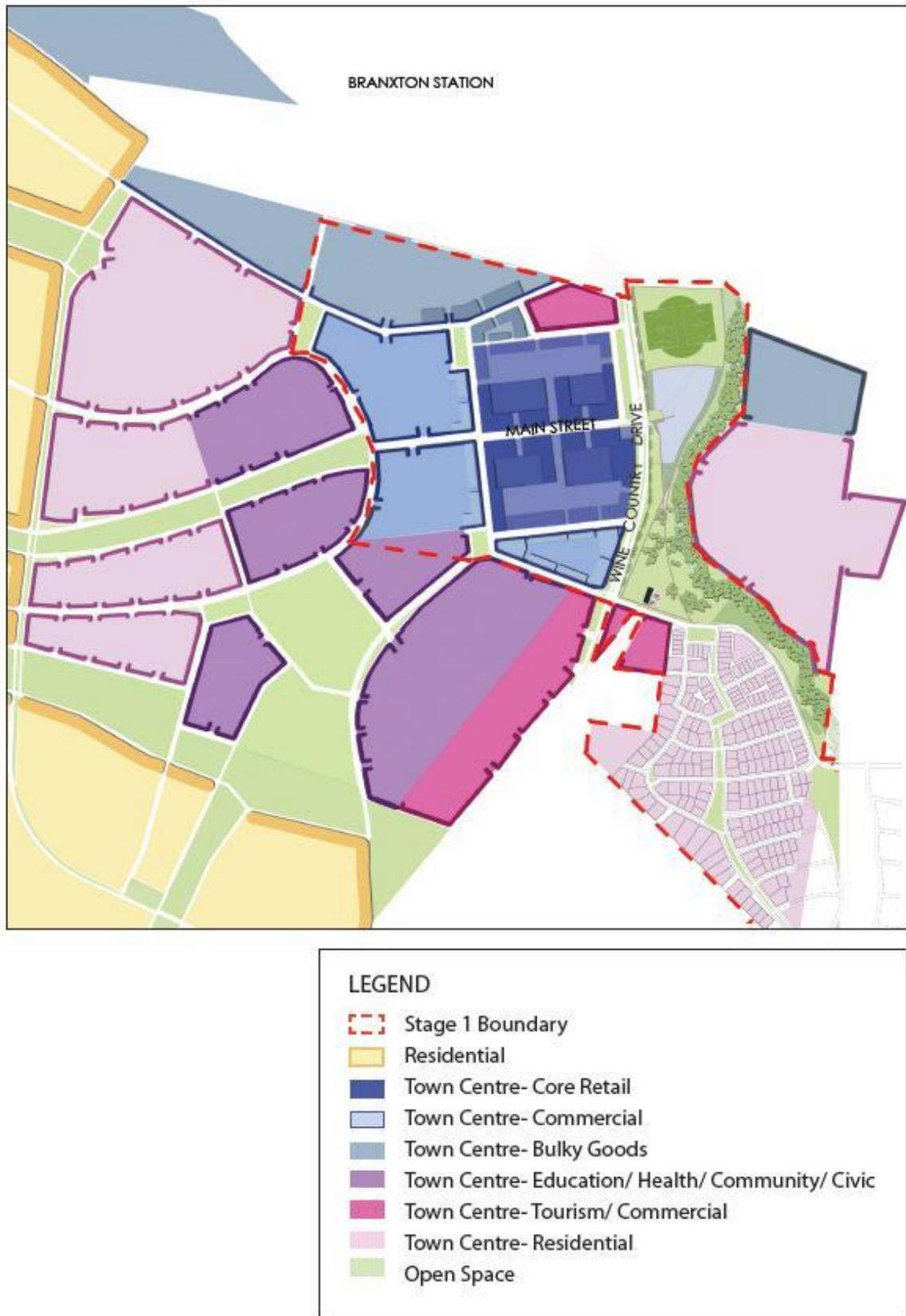


Figure 37: Huntlee Town Centre (indicative)



Figure 38: Huntlee Town Centre indicative retail core layout

Built form

- (1) Provide a range of building heights, up to a maximum of six storeys with a transition in heights to surrounding residential areas.
- (2) Relate building heights to street widths and functions to promote a comfortable urban scale of development.

- (3) Define streets and open spaces with buildings that are generally built to the street edge, have a consistent street wall height and provide a continuous street frontage along all key streets.
- (4) Sleeve all large format retail premises and decked parking areas with active uses. Blank walls visible from the public domain are to be avoided.
- (5) Promote diversity and activity along the main street with a variety of frontage widths for retail shops.
- (6) Building heights are to take into account view lines and solar access to the public domain.
- (7) A high quality built form and energy efficient architectural design that promotes a 'sense of place' and modern character for the Town Centre.
- (8) Waste storage and collection areas are to be accommodated and designed appropriately to minimise impacts, in particular within mixed use development.

Parking and access

- (1) Access to parking, loading docks and waste collection areas must not be provided from Main Street frontages.
- (2) At grade parking areas are to be generally located behind building lines and within the centre of street blocks away from street corners.
- (3) On-street parking is to be provided on all streets within the Town Centre to contribute to street life and surveillance.
- (4) Allowance should be made for potential direct pedestrian access to the train station from the town centre core retail area. Pedestrian access paths should be incorporated into the road layout for the service industry area north of the core retail area.

Public domain

- (1) Parks and plazas are to act as a focal point for the Town Centre and community activities and are to be designed to ensure adaptability and flexibility in use and function over time.
- (2) Incorporate a town square/civic plaza, adjacent to the main street which provides an urban landscape setting and a civic focus for the community.
- (3) Provide high amenity, pedestrian streets with generous footpath widths.
- (4) Incorporate the principles of 'Crime Prevention Through Environmental Design' and 'Safer by Design' into all development within the Town Centre.
- (5) Weather protection for pedestrians is to be provided in key locations.
- (6) Provide a high quality landscape design including a co-ordinated package of street furniture and lighting that enhances the character of the Town Centre.
- (7) Provide street tree and open space planting that establishes generous shade for pedestrians.

- (8) Design all signage and advertising in a co-ordinated manner.
- (9) Site servicing and loading facilities, waste storage and other infrastructure are to be designed to minimise visual impact on the public domain and impacts on neighbours.

6.3 Village centres

Objectives

- (1) To create a vibrant village that provides a range of small-scale retail, business and community uses which serve the needs of people who live and work in the surrounding area.
- (2) To ensure that the detailed design of the village is undertaken in a co-ordinated manner in order to achieve a high quality urban design outcome.
- (3) To create a vibrant village adjacent to residential areas and schools.



Figure 39: Village 1 centre layout (indicative)

Controls

- (1) The Stage 1 Village Centre is to be located generally in accordance with Figure 39.
- (2) The village centres, including Stage 1 and the remaining precincts, shall be generally consistent with the following principles:

Function and uses

Incorporate a range of local retail, commercial and community uses to serve the needs of the local community.

Built form

- (1) Provide a range of building heights, up to a maximum of four storeys.
- (2) Buildings are to define the entry to the residential areas and open spaces adjacent to the village and are to be generally built to the street edge.
- (3) Avoid blank walls visible from surrounding streets and the public domain.
- (4) Establish a high quality built form and energy efficient architectural design that promotes a 'sense of place' for the village.

Parking and access

- (1) Locate at grade parking areas behind building lines and screened from streets and public open space.
- (2) Opportunities for shared parking provision for complementary uses within the village centre are to be provided.
- (3) On-street parking is to be provided within the village centre.

Public domain

- (1) Provide a high quality landscape design including a co-ordinated package of street furniture and lighting that enhances the character of the village.
- (2) Provide street tree and open space planting that establishes generous shade for pedestrians.
- (3) Incorporate the principles of Crime Prevention through Environmental Design (CPTED) and Safer by Design (NSW Police) into all development within the village centre.
- (4) Site servicing and loading facilities, waste storage and other infrastructure are to be designed to minimise visual impact on the public domain and impacts on neighbours.

7 Employment Areas

7.1 Introduction

This section applies to the non-residential, non-retail uses within the employment areas of Huntlee Town Centre such as service industry and bulky goods uses.

7.2 Landscape design

Objectives

- (1) To ensure a balance between built form and landscaped elements
- (2) To encourage landscaping as a means of screening industrial development.
- (3) To enable landscaping to contribute to energy efficiency water management and amenity for employees.
- (4) To encourage a high standard of landscape design that enhances the streetscape and amenity of the zone.

Controls

7.2.1 Allotment frontages

- (1) Street tree planting is to be implemented at the subdivision stage to ensure plantings are visually consistent in height, spread and form across the zone.
- (2) A landscape area must be provided along the street front.
- (3) The selection of plant species for street tree planting must be in accordance with Table 2.

7.2.2 Allotment landscaping

- (1) A Landscape Plan must be prepared for all new industrial subdivisions and new buildings.
- (2) Landscaped areas are required between buildings.
- (3) Allotment landscape design is to be integrated with site planning and building design to:
 - reduce the perceived scale of built form from the street,
 - reduce visual impact and the extent of continuous building facades,
 - highlight architectural features and complement façade articulation,
 - identify site and building entries, car park entries and parking areas, in coordination with signage,
 - mitigate adverse site conditions through buffering of western sun, provision of shade, wind protection, and screening of poor views,
 - maximise northern sun exposure, and

- integrate usable and attractive external seating and amenity areas for staff incorporating paved areas, soft landscape, and shade planting (and canopies where necessary).
- (4) Allotment landscape should incorporate hard and soft landscape elements in pavements, retaining walls, low walls and terracing, trees, garden bed planting, turfed areas and irrigation.
 - (5) Indigenous species from the area are encouraged for all landscape plantings however, non-native species may be considered in limited use to external courtyard areas to achieve seasonal climate management. Trees should be a minimum height of one metre at the time of planting. Mass plantings may use a variety of sizes including viro tubes.
 - (6) The allotment landscape is to be provided with an automatic trickle irrigation system installed below mulch level. The system is to be supplied by rainwater collected from the site.
 - (7) Landscaped areas are to be separated from vehicular access areas by an appropriate edge, preferably a raised kerb.
 - (8) Landscaped areas are to be separated from storage areas by an appropriate edge, preferably low walls. Signage and management strategies are to be put in place to ensure that storage activities do not impact on, or extend into, landscaped areas. No storage is allowed in landscaped areas.

7.2.3 Landscaping of car park areas

- (1) Car parking areas are to be effectively landscaped to:
 - reduce their visual impact,
 - reduce heat generation and glare from hard paved surfaces,
 - provide shade for parked vehicles, and
 - maximise potential for soft drainage (non-piped) to soft landscaped areas or collection zones.
- (2) Car park lighting design is to be coordinated with the preferred tree layout.
- (3) Dividing zones between parking bays should be landscaped as applicable to specific site conditions:
 - where pedestrian access will generate desire lines across the dividing zone, pedestrian trafficable wearing surface is required (eg. stabilised gravel),
 - where pedestrian access is not required and some infiltration drainage may be provided, mass planted landscape areas (requiring flush kerb edge and wheel stops to car parking bays) must be provided, and
 - where a major drainage role is envisaged and pedestrian access is not required, a gravel surfaced trench with collection pipework draining to on site storage or stormwater must be provided.

- (4) Clearly defined and appropriately surfaced pedestrian access links from parking areas to building entry points must be provided, incorporating kerb crossing ramps as required.
- (5) Car park landscaping is to be provided with an automatic trickle irrigation system installed below mulch level. Irrigation services provision must be implemented before car park surfacing. The system is to be supplied by the rainwater tanks on site.

7.3 Built form and streetscape

7.3.1 Building setbacks

Objectives

- (1) To achieve attractive streetscapes by ensuring that buildings present an acceptable scale and bulk when viewed from the public domain.
- (2) To provide appropriate setbacks to the proposed use and characteristics of the location of the land.
- (3) To define building envelopes within each allotment by specifying minimum setbacks.

Controls

- (1) All buildings erected in employment areas are to be set back a minimum of 2m from the front property boundary.
- (2) No building or hardstand area (concrete or bitumen pavement) other than a public utility undertaking shall be erected within any setback.
- (3) All setback areas should be landscaped and maintained in accordance with the landscape provisions in Section 7.2.
- (4) Pedestrian access should be provided to all landscaped setback areas for maintenance and security purposes.

7.3.2 Building design and siting

Objectives

- (1) To activate streets and the public domain with building frontages.
- (2) To provide a variety of building orientations and create defined streetscapes that respond to site conditions.
- (3) To ensure that building design enhances the existing and future desired built form character by encouraging innovation and quality architectural design.

Controls

- (1) Blank building facades facing the primary street frontage are not permitted.
- (2) The built form and architecture of buildings located at street corners should enhance its location and positively respond to and emphasize the street corner.

- (3) Building orientation and siting should respond to natural elements such as topography, wind and sunlight.
- (4) Parking is not permitted in front of the building line.

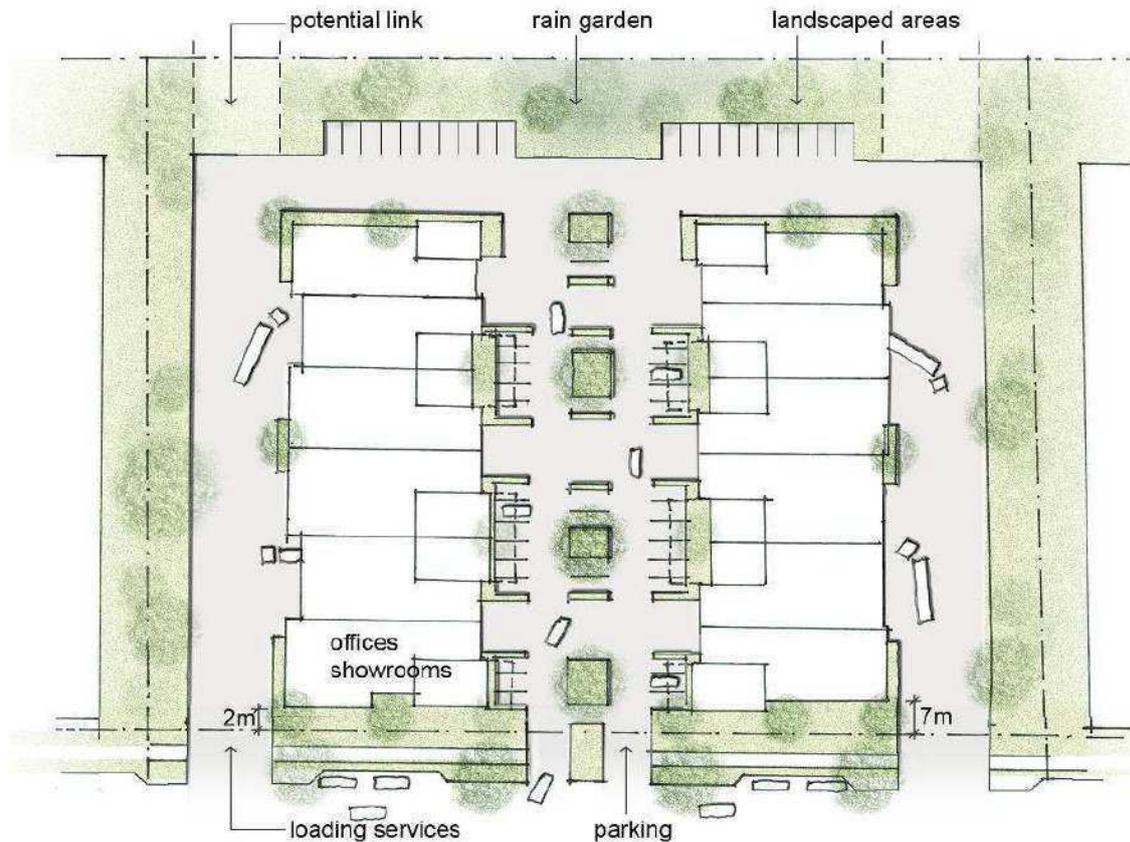


Figure 40: Typical building layout for light industrial area

- (5) Buildings should provide variety to facades by the use of projecting upper storeys over building entries, upper storey display windows, emphasizing street corners and varying roof forms.
- (6) Buildings should provide effective sunshading for windows, wall surfaces and building entries, (other than loading docks) by the use of design elements such as overhanging eaves and awnings, undercrofts, colonnades and external sunshading devices including screens.
- (7) Building design should be integrated with landscape elements.
- (8) Building facades should be articulated by elements such as:
 - external structures, finishes, etchings and recessed patterns,
 - decorative features, textures and colours,
 - locating offices and highlighting entries within front facades,
 - emphasized customer entries and service access doors, and
 - protrusions and penetrations in building elements.
- (9) Buildings with dual street frontage should be designed to ensure:

- the building addresses the primary street frontage, and
 - distinctive identifying architectural elements are incorporated to provide sufficiently interesting and varied facades.
- (10) The building design should consider the amenity of any landscaped or communal areas in adjoining properties.
- (11) The location of roller shutters, loading docks and other building openings should be so that they do not detract from the overall appearance of the building. Where possible, roller shutters and the like should not be located on the primary street frontage.
- (12) Roof design should be visually interesting and provide for natural lighting, and compatibility with the overall building design. Where visible from a public area, all rooftop or exposed structures (lift motor rooms, plant rooms etc), must be suitably screened and integrated with the building.

7.3.3 External building materials and colours

Objectives

- (1) To enhance the visual quality of development through the selection of appropriate materials and colours.
- (2) To encourage the use of materials that minimise impact on the environment.
- (3) To ensure that any reflective materials are used with sensitivity to neighbouring development, vehicular traffic and public domain areas.
- (4) Create identifiable, attractive and safe entrances to buildings.

Controls

- (1) External finishes should be constructed of durable, high-quality and low maintenance materials.
- (2) External finishes should contain a combination of materials and/or colours.
- (3) Any wall visible from the public domain must be finished with a suitable material to enhance the appearance of that façade.
- (4) Building materials should be selected to minimise reflection.

7.3.4 Entrance treatment

Objectives

- (1) To create clear and legible entries that address the street.

Controls

- (2) Entries to buildings should be clearly visible, well sign posted and lit to pedestrians and motorists.
- (3) Architectural features are to be provided at ground level giving an entrance element to the building and addressing the primary street frontage.

- (4) All entrance treatments, such as directory boards, must be located on private property, with appropriate positive covenants and restrictions on title to ensure the ongoing management of such treatments.
- (5) No third party advertising will be permitted on any entrance treatment facility.

7.3.5 Ancillary buildings, storage and service areas

Objectives

- (1) To ensure that ancillary buildings, storage and service areas are considered part of the overall design, and do not detract from the amenity and appearance of the development.
- (2) To ensure that site facilities are functional and accessible and are easy to maintain.
- (3) To ensure that site facilities are thoughtfully integrated into the development and are visually and physically unobtrusive.
- (4) To minimise the impact of service access on pedestrians and industrial, commercial and retail frontage.
- (5) To minimise the visual and acoustic impact of site servicing.

Controls

- (1) Ancillary buildings and storage sheds are to be located behind the setback lines and be consistent with the design of the main building.
- (2) Details of any proposed ancillary buildings, open storage and services areas must be submitted with all Development Applications.
- (3) Storage areas should be located within the confines of the primary building. Appropriate screening must be provided where this can not be achieved.
- (4) Above ground open storage areas visible from the public domain are not permissible.
- (5) Above ground open storage areas should not compromise truck or vehicle manoeuvring and car parking areas.
- (6) Vehicular access to loading facilities is to be provided from secondary and tertiary streets.
- (7) Rubbish and recycling areas must be provided. These areas must:
 - be integrated with the development,
 - minimise the visibility of these facilities from the street, and
 - be located away from openable windows to habitable rooms.
- (8) Sunken loading docks should be avoided.

7.4 Ecologically Sustainable Development

Objectives

- (1) To improve energy efficiency through the design and siting of buildings;
- (2) To ensure that developments are environmentally sustainable in terms of energy and water use, and management of waste and discharge.
- (3) To encourage the utilisation of materials and construction techniques with low energy inputs in their production for construction energy systems.

Controls

- (1) A Site Water Management Plan must be prepared.
- (2) Development Applications are required to demonstrate consideration of:
 - measures that will reduce waste and conserve water through water recycling,
 - measures to minimise run-off and stormwater generation,
 - implementing total water cycle management by including measures that reduce consumption of potable water for non-potable uses, minimise site run-off and promote stormwater re-use,
 - utilising recycled materials and renewable building resources,
 - promoting biological diversity through appropriate retention, planting and maintenance of indigenous flora of the area,
 - implementing a waste management strategy that promotes the overall reduction of waste levels, and
 - implementing energy conservation measures that include reducing energy consumption and increasing inherent energy efficiency through design and materials selection, and adopting energy management plans.
- (3) Roof stormwater should be collected in tanks or street level reticulation which would serve as a retention system. The water in the retention system would be available for use for non-potable uses such as the watering of landscaped areas and use in toilet and hot water systems.
- (4) Consideration should be given to the feasibility of any measures to substitute grid-source power with environmentally sustainable alternatives such as tri-generation (green transformers), co-generation (i.e. recovery of waste energy) or photovoltaics.
- (5) Development shall incorporate water efficient fixtures such as taps, showerheads, and toilets. The fixtures must be rated to at least AAA under the National Water Conservation Rating and Labelling Scheme. Where the building or development is water intensive (ie. high water user), specific water conservation objectives must be resolved with Council.
- (6) Appropriate use of energy efficient materials during construction is to be demonstrated.

- (7) Development should incorporate energy efficient hot water systems, air-conditioning, lighting and lighting control systems.

7.5 Waste water and sewage treatment

Objectives

- (1) To ensure best practice water management and sewerage treatment practices are implemented within Huntlee.

Controls

- (1) All sewage treatment plants should use best practice, and ensure design and capacity is adequate.
- (2) Appropriate use of grey water is encouraged in all new developments.

7.6 Fencing, Signage and Lighting

Objectives

- (1) To use fencing to define boundaries and provide security, as well as contribute to streetscape and amenity of the zone.
- (2) To enhance pedestrian safety, security and amenity within the precinct.
- (3) To ensure that signage and lighting supports the visual appearance of the building and the visual appeal of the zone.

7.6.1 Fencing

Controls

- (1) Low feature walls are encouraged at entry driveways. These walls should be used for retaining purposes, as garden beds or as landscaped features and should be integrated into the overall design of the development.
- (2) Front and side boundary fences forward of the building line should consist of an open style fence finished in a dark colour.
- (3) Side fencing behind the building line may comprise chain wire mesh or similar open style fence, plastic coated in dark green or black.
- (4) Pre-painted solid metal fencing and other solid fencing is not permissible.
- (5) High fencing should be located behind the building line. Where high fencing in the front setback cannot be avoided, Fencing must be set back 1m from the front property boundary to allow for perimeter landscaping.
- (6) Fencing should be sited so it does not impede sightlines for drivers.
- (7) Fencing along boundaries should not exceed a height greater than 3m, measured from finished ground level.

7.6.2 Signage and Lighting

Controls

- (1) Signage is to relate to the use occurring on the respective property, and should identify the relevant business name.
- (2) Business identification signage should be attached to the wall of the main building and be designed to complement the architectural style of the building. Free standing signs will only be permitted where signs are integrated with the landscaping and visual character of the site and surrounding area.
- (3) Directional signs for car parking areas, loading docks, delivery areas and the like should be located close to the main access of a development site. The design, colouring, type and scale of signage within individual properties should be consistent with signage across the zone as a whole.
- (4) Signage is only to display corporate logos and company names and is not to occupy more than 10% of any façade or wall of a building, unless it can be demonstrated that characteristics of the site or the building require a larger area of signage.
- (5) Details of all signage, including free standing, fascia, and wall signs must accompany Development Applications.
- (6) The design and lux of any internal or spot lighting shall be designed to avoid off-site or traffic safety impacts.
- (7) No form of moving or flashing signage or lighting is permitted.
- (8) Signage is not to have a detrimental impact on the visual character of the site or surrounding area.

7.7 Access and Parking

7.7.1 Vehicular Access

Objectives

- (1) To ensure that vehicles can enter and exit premises in a safe and efficient manner in a forward direction.
- (2) To minimise the impact of vehicle access points on the quality of the public domain and pedestrian safety.
- (3) To provide off-street manoeuvring, loading and docking facilities that are adequate for the operational needs of the activity and use.

Controls

- (1) Applicants are required to submit plans and details of proposed vehicular access and circulation for Council's approval with the Development Application. Details must specifically relate to vehicular movement, layout and turning circles.
- (2) Adequate vehicular entrance to and exit from the development is to be provided and designed in order to provide safety for pedestrians and vehicles using the

- site and adjacent roadways. In some cases combined ingress and egress will be permitted.
- (3) Vehicular ingress and egress to the site must be in a forward direction at all times.
 - (4) Driveway crossovers accesses by heavy vehicles should be a minimum of 9m wide, when measured at the kerb alignment.
 - (5) Turning circles will not be permitted to encroach upon any building.
 - (6) Adequate space is to be provided within the site for the loading, unloading and fuelling (if applicable) of vehicles. These areas are to be screened from the road.
 - (7) All parking areas and access roadways must be provided with a drainage system comprising surface inlet pits. Details of pipe sizes (with calculations) and drainage layouts (including discharge points) must be submitted with the Development Application.
 - (8) Vehicular access should be designed to avoid conflicts with pedestrians.
 - (9) Adequate space shall be provided within any development site for the loading and unloading of service vehicles. The standard of loading facilities required will depend upon the nature of the development and the uses to be carried out.
 - (10) Council may require the provision of parking for courier vehicles. Loading facilities should be located at the rear of developments.
 - (11) Vehicular movements associated with loading facilities and customer/employee parking should be separated and all pedestrian movements should be segregated from vehicular movements to avoid possible conflict and congestion.
 - (12) Ingress to and egress from a site should be located where they will cause least interference with vehicular and pedestrian movement on public roads. Direct access will not be permitted off arterial and sub-arterial roads. Access to parking areas will not be permitted in close proximity to traffic signals, intersections or where sight distance is inadequate.
 - (13) The potential for on-street queuing should be eliminated by the provision of sufficient standing areas on-site for vehicles entering the car parking and loading areas.
 - (14) Provision is to be made for all vehicles to enter and leave a site in a forward direction.

7.7.2 Car parking

Objectives

- (1) To provide an appropriate level of on-site car and bicycle parking.
- (2) To minimise the visual impact of on-site parking.
- (3) To integrate parking facilities with the overall site planning and landscape.
- (4) To encourage the use of other modes of transport including bicycles and public transport.

Controls

- (1) The provision of car parking in employment areas must comply with Table 14 and otherwise specified in the relevant Precinct Schedule.
- (2) Secure bicycle parking is to be provided for employees at a rate of 1 space per 200m² GFA.

Table 14: Car and bicycle parking for employment areas

Use	Requirement
Light industrial	1 space per 75m ² up to 7500m ² GFA 1 space per 200m ² thereafter 1 space per 40m ² GFA (office component)
Bulky goods retailing	1 space per 45m ² GFA
Business park / offices	1 space per 40m ² GFA
Bicycle Parking for above uses	1 space per 200m ² GFA

- (3) At-grade parking areas are to be located so as to minimise visual impacts from the street, public domain and communal open space areas, using site planning and appropriate screen planting or structures.
- (4) Parking areas are to be located generally behind front building lines.
- (5) The car parking area should be accessible to all parts of the industrial development which it serves.
- (6) The use of stack parking is not permitted.
- (7) Parking facilities for commercial vehicles should be designed in accordance with Australian Standard 2890.2 to accommodate the largest type of truck which could reasonably be expected to park on the site.
- (8) Sufficient spaces should be provided for disabled parking and shall be clearly marked and signposted for this purpose and located as close as possible to the building's entrance.
- (9) All parking areas shall be constructed of hard-standing, all-weather material, with parking bays and circulation aisles clearly delineated.

7.8 Waste Management

Objectives

- (1) To maximise opportunities for re-use through source separation and on-site storage.
- (2) To minimise waste generation and maximise re-use and recycling.

- (3) To minimise waste generation through design, material selection and building practices.
- (4) To ensure efficient storage and collection of waste and quality design of facilities.

Controls

- (1) Facilities to allow on-site source separation and re-use of materials on-site should be provided.
- (2) The siting of any stockpile must take into account environmental factors such as slope, drainage, location of watercourses and native vegetation.
- (3) Sufficient space must be provided for the storage of garden waste and other waste materials on site.
- (4) Re-use of stockpile materials on-site should be facilitated.
- (5) Sufficient space for storage of recyclables and garbage should be provided on-site.
- (6) Adequate space should be provided for the temporary storage of recyclables, garbage and compostable materials in each unit.
- (7) Waste cupboards should be designed and located so as to be accessible, useable and cater for change of use.
- (8) The area or room allocated for garbage and recycling is to be of a sufficient size to store Council's standard bins in an efficient manner.
- (9) Garbage and recycling areas/rooms must be accessible to all users and have unobstructed access to Council's standard bins in an efficient manner.
- (10) Areas for the storage of bulky waste (e.g. clean up materials) should be provided.
- (11) Where the development is large or where the site characteristics warrant, multiple garbage and recycling areas should be provided.

7.9 Safety and Surveillance

Objectives

- (1) To ensure personal safety for workers and visitors to the development.
- (2) To ensure design minimises the opportunity for crime and maximises opportunities for passive surveillance.

Controls

- (1) Buildings should be designed to overlook public domain areas and provide casual surveillance.
- (2) Building entrances should be orientated towards the street to ensure visibility between entrances, foyers, car parking areas and the street.

- (3) Appropriate lighting should be provided to all cycle and pedestrian paths, bus stops, car parks and buildings.
- (4) Development should provide clear sight lines and well-lit routes between buildings and the street, and along pedestrian and cycle networks within the public domain.
- (5) Consideration should be given to the use of landscape elements so as to not compromise the perceived level of safety.

7.10 Additional Land Use Controls

7.10.1 Neighbourhood Shops

Objectives

- (1) To enable the provision of neighbourhood shops in business and industrial zones which serve the daily convenience needs of the local workforce, or for the benefit of the local workforce and businesses.

Controls

- (1) Neighbourhood shops within the employment area should serve the daily convenience needs of the workforce in the zone, or be for the benefit of the local workforce and businesses.
- (2) Neighbourhood shops must not detrimentally affect the viability of any other centre within a business zone.

7.10.2 Childcare centres

Objectives

- (1) To ensure all communities have access to a local child care centre and to minimise travel distances to and from child care facilities.
- (2) To provide communities with child care centres that are appropriate in size and scale to the surrounding neighbourhood and to reduce excessive built form within residential streetscapes.
- (3) To ensure the appropriate location and operation of child care centres in order to minimise any adverse impact on the amenity of residential areas.
- (4) To ensure that child care centres provide a safe, healthy and active environment for children of all ages.
- (5) To enable the provision of child care centres to address the needs of the local workforce within the zone.

Controls

- (1) Child care centres are to comply with the requirements of the *State Environmental Planning Policy (Education and Child Care) 2017* and Education and Care Services National Regulations.

7.10.3 Car Parking for Other Uses

Objectives

- (1) To ensure appropriate provision of car parking for uses not outlined specifically within this Development Control Plan (DCP).

Controls

- (1) The provision of car parking should generally be in accordance with the *RTA Guide to Traffic Generating Developments (2002)* where applicable.
- (2) The provision of car parking for uses that are not outlined in this DCP and not listed in the RTA guide noted in (1) above, may be individually assessed by Council as part of the development application assessment.

Appendix 1 - Site characteristics

1 Existing development

The site is predominantly characterised by areas of woodland vegetation and cleared areas used for agricultural purposes. The agricultural uses are generally limited to grazing and are largely located along the western boundary of the site along the Black Creek floodplain and to the east of the village of North Rothbury.

The key developed features of the site include infrastructure associated with the former Ayrfield Colliery including a number of buildings and structures, rail infrastructure and water storage dams. Areas of mine waste emplacement and land fill occur in the central section of the site.

Part of the former colliery area is used for the storage and restoration of historic train carriages, locomotives and other commercial vehicles such as decommissioned buses. To the south of the colliery area are gravel quarry operations.

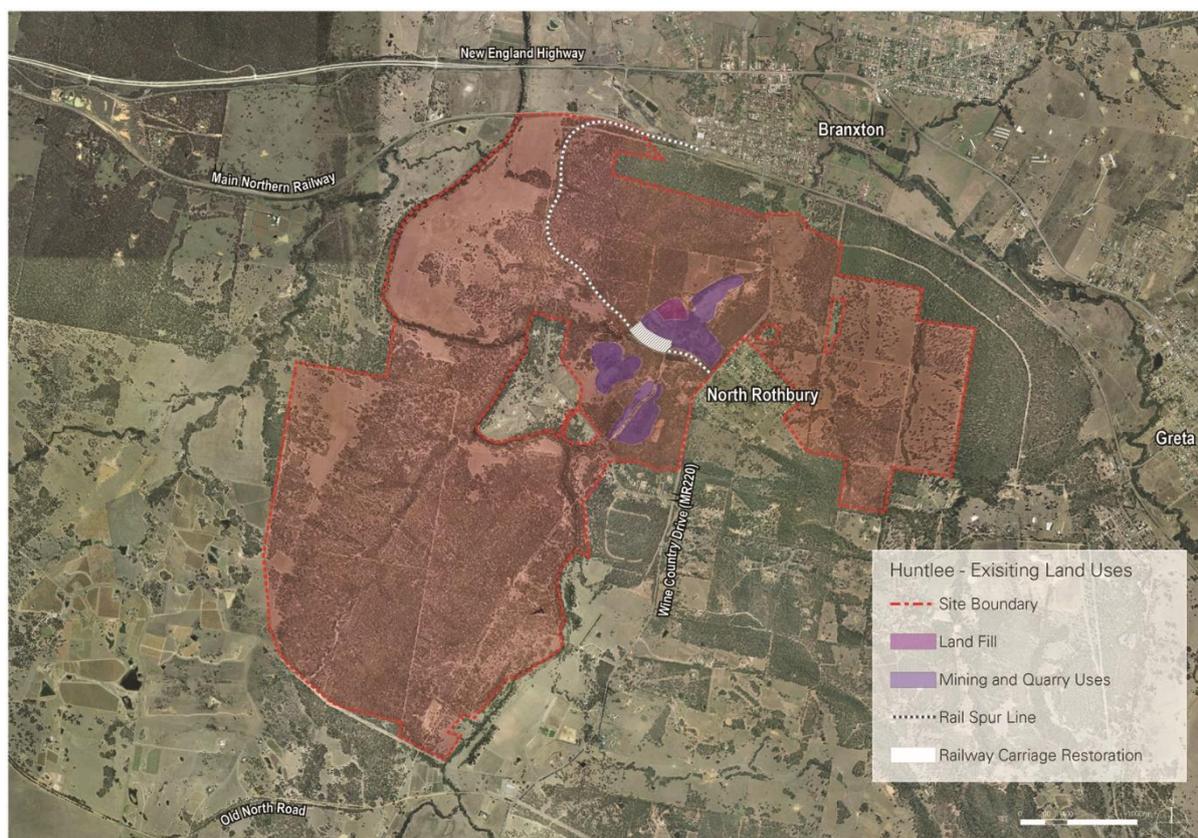


Figure 41: Existing development on the site

2 Topography and slope

The topography of the site is characterised by gently undulating terrain. Key features include the Terrace Ridge that runs along the western boundary of the site, with a secondary ridge that forms a steep valley containing a minor tributary to Black Creek.

The remainder of the site is generally undulating with a predominantly defined 5-10% grade. Flatter areas of 0-5% and various low ridgelines run north-south across the site.

The highest point on the site is located to the west of the site along Terrace Ridge and

reaches 121m AHD. The lowest point on the site is 22m AHD at the north-western boundary where Black Creek exits the site.

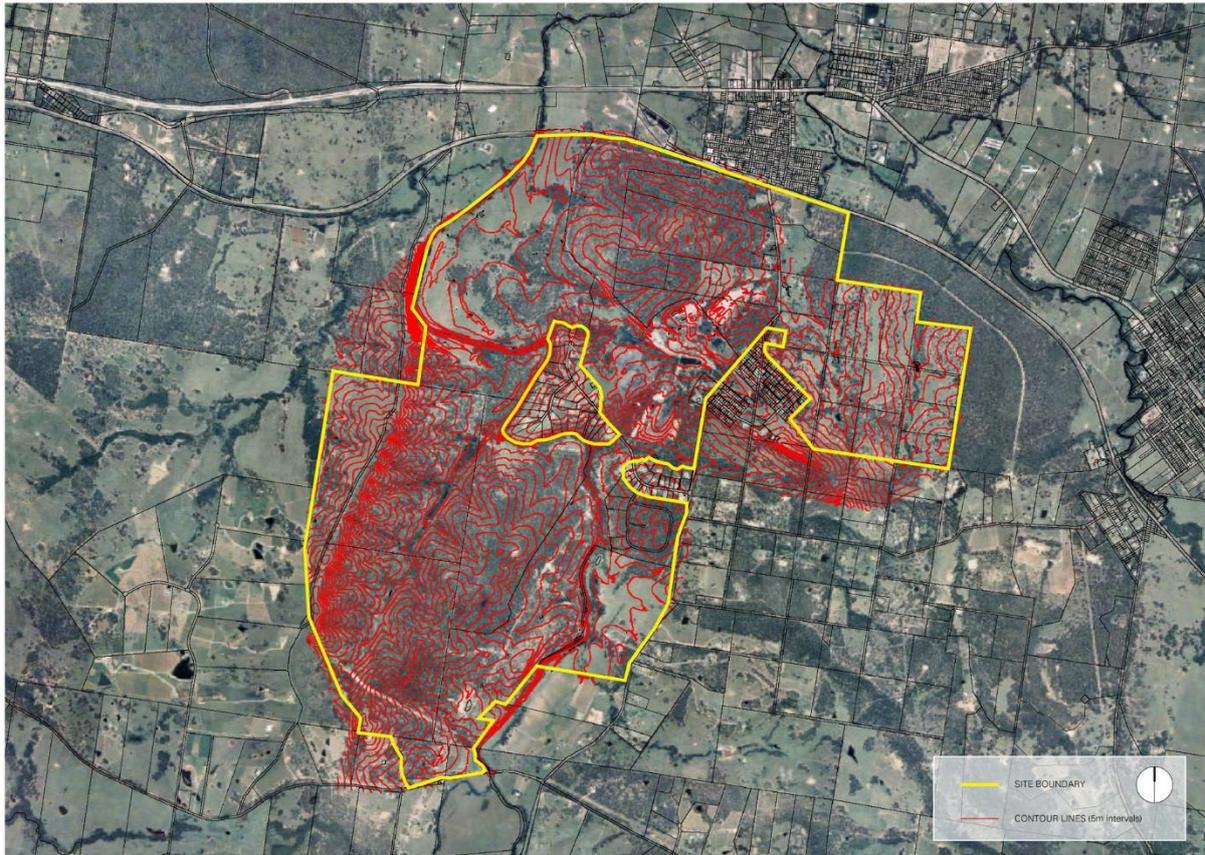


Figure 42: Topography

3 Hydrology

The site is located within the catchments of Black and Anvil Creeks which are tributaries of the Hunter River.

Black Creek is the largest of the two creek lines and runs north-south through the site and marks the north-western boundary. The entire catchment of Black Creek is approximately 304km² and extends from the Broken Back Range in the west to the Cessnock State Forest in the east. The catchment headwaters are in the Aberdare State Forest to the south of Cessnock. The junction of Black Creek with Hunter River is downstream of the site and to the north of the New England Highway.

Anvil Creek is located to the north-east of the site outside its boundary. However, three minor tributaries drain under the Main North Railway before meeting Anvil Creek which then drains into Black Creek north of Branxton.

Both Black and Anvil Creeks are 3rd order streams and generally sustain permanent flows. A number of minor tributaries drain across the site and into these creeks. These streams are ephemeral and of 1st and 2nd order. A number of water storage dams of varying sizes, associated with agriculture and mining are present across the site.

Patterson Britton & Partners Pty Ltd has prepared a flood study of the site. The study models the flooding across the site to determine the 100 year and 20 year ARI (average recurrence interval) peak flows.

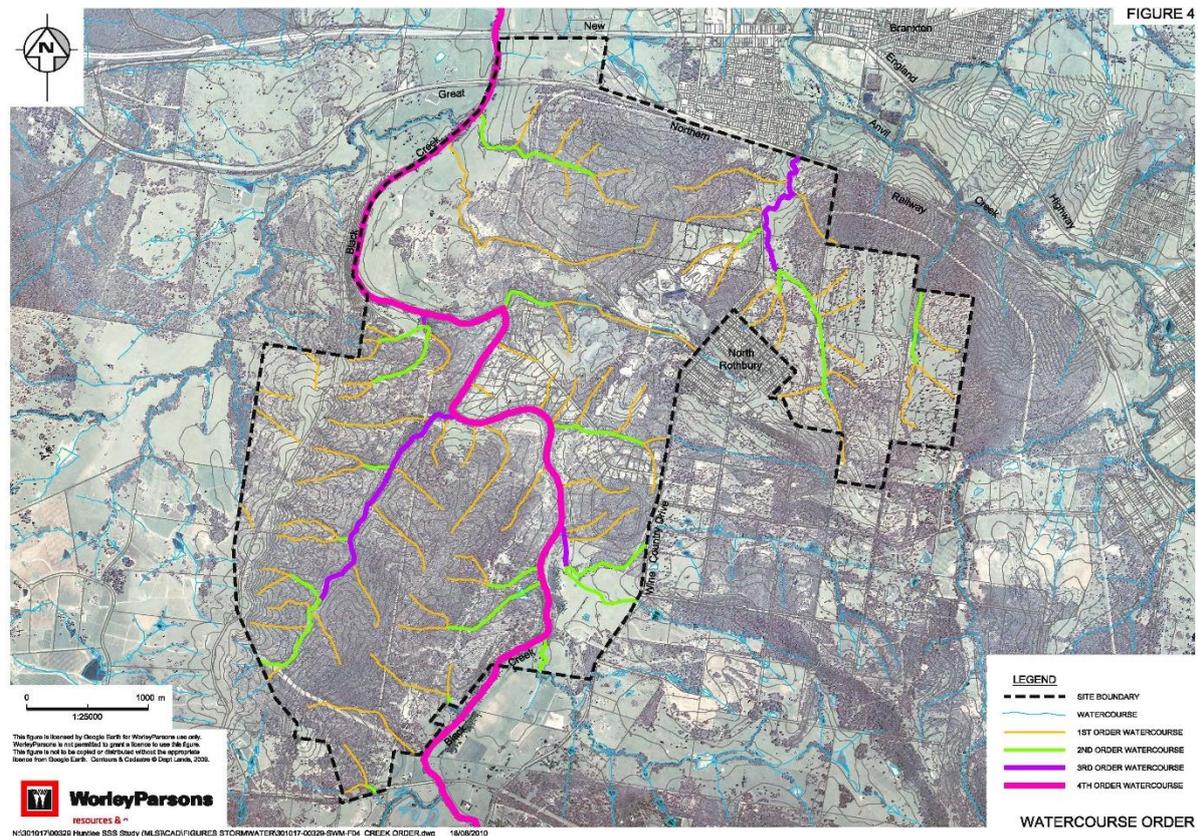


Figure 43: Hydrology

4 Geology

The geology of the site is relatively complex, with steeply dipping strata with a number of faults leading to changes in geology over a small distance. The key features are:

- The Greta Fault which trends south-east across the north of the site.
- The Rothbury Fault which runs north-south through the site to the west of Black Creek.
- The Greta Coal Measures which typically consist of conglomerate, sandstone, siltstone and coal and outcrop in a 200m-600m wide strip west of the Rothbury Fault.
- Areas to the west of the Greta Coal Measures and to the north of the Greta Fault that are underlain by Branxton Formation which typically comprises conglomerate, sandstone and siltstone.
- Areas to the east of Rothbury Fault and south of the Greta Fault that are underlain by Farley Formation and the Dalwood Group which comprise silty sandstone.

The site is divided into four zones:

- Hill slopes and gullies where it is anticipated that residual soils are underlain by shallow bedrock (possibly at depths less than 1m).
- Undulating landforms in the north, where there is evidence of both rock outcrops and areas of deeper alluvial / residual soils with varying depth to bedrock.
- Low lying areas associated with Black Creek which possibly contain alluvial soils and some colluvium.

- The former Ayrfield Colliery which is characterised by large areas of disturbed ground and fill including mine waste emplacements.

5 Contamination

The key areas where there is observed or potential contamination present on the site are:

- The landfill operations in the former Ayrfield Colliery fines settling pond areas.
- The 400m² area to the south of the fines settling ponds where sandblasting has occurred.
- Asbestos sheeting and friable insulation materials.
- Stained soil material in and around a storage area containing fuels, lead acid batteries, oils and greases.
- Hydrocarbon stained areas in and around the railway vehicle storage areas and workshops likely to contain Total Petroleum Hydrocarbons TPH's and inorganics.
- Potential contaminants in sludge contained in the main dam to the west and downstream of the colliery pit top area.
- Leachate water draining from the coal fine cells downstream from a storage dam potentially discharging highly saline water into the aquatic environment.
- The Bath-house complex of the Maitland Extended No. 2 Colliery, including materials within buildings, surrounding soils and open land fill used for rubbish dumping.
- General contamination of areas associated with mining activities including haul roads, emplacement areas and coal handling areas.
- Mounds of fill in locations across the site including building rubble that may contain asbestos, hydrocarbons and car tyres.
- Discarded asbestos brake linings adjacent to rail lines.

6 Mine subsidence

Extensive mining activities took place at the Ayrfield / Maitland extended area to the west of North Rothbury village from 1908 until 1974. Mining activity occurred along a band that runs northeast – southwest through the length of the site associated with where Greta coal measures outcrop at the surface.

Areas where mine workings and subsidence risks are located are shown in **Figure 44: Mine subsidence**.



Figure 44: Mine subsidence

7 Vegetation

Vegetation on the site consists largely of regrowth forest following the extensive clearing of vegetation associated with mining activities and agriculture.

There are six native vegetation communities identified on the site, five of which are listed as an Endangered Ecological Community (EEC) under the *NSW Threatened Species Conservation Act 1995*. Where significant vegetation and threatened species habitat exists attempts to conserve these where possible are encouraged. However, the entire development area of Huntlee has been appropriately offset as part of the Voluntary Planning Agreement at the time of rezoning.

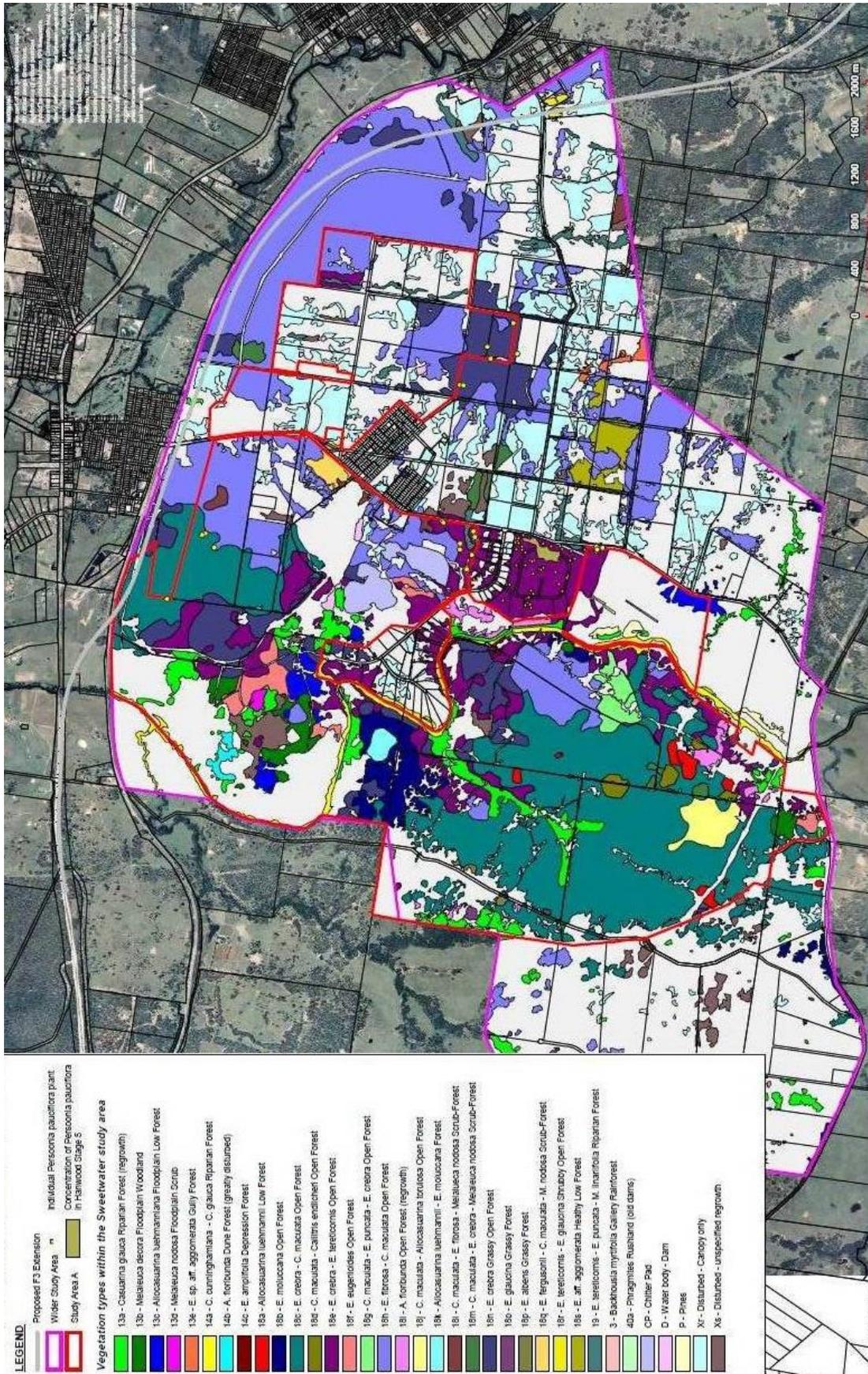


Figure 45: Vegetation Types

8 Flora, fauna and aquatic habitat

Flora and fauna species listed under the *NSW Threatened Species Conservation Act 1995* and the *Environmental Protection and Biodiversity Conservation Act 1999* have been identified on the site in various historical studies, including studies undertaken as part of the rezoning of the site. Where significant vegetation and threatened species habitat exists, attempts to conserve these where possible are encouraged. Water courses present on the site are unlikely to contain threatened species. However, the habitat value they provide at a local level is important.

The entire development area of Huntlee has been appropriately offset as part of the Voluntary Planning Agreement at the time of rezoning. This agreement between the Developer, the Minister for Environment and Climate Change and the Minister for Planning was executed in connection with the rezoning of the site under the Major Development SEPP (State Environmental Planning Policy). The Planning Agreement provided that the Developer make various environmental conservation offset contributions including:

- Transfer of up to 5,612 hectares of environmentally significant land for environmental conservation purposes which is proposed to be dedicated under the *National Parks and Wildlife Act 1974* comprising:
 - approximately 607 hectares of conservation land within Huntlee;
 - “Persoonia Park” (approximately 17 hectares) within Huntlee; and
 - up to 4988 hectares of conservation land elsewhere within the Lower Hunter Region.
- \$100,000 contribution towards the conservation of *Persoonia pauciflora*; and
- \$1 million contribution towards the management of the conservation offset lands.

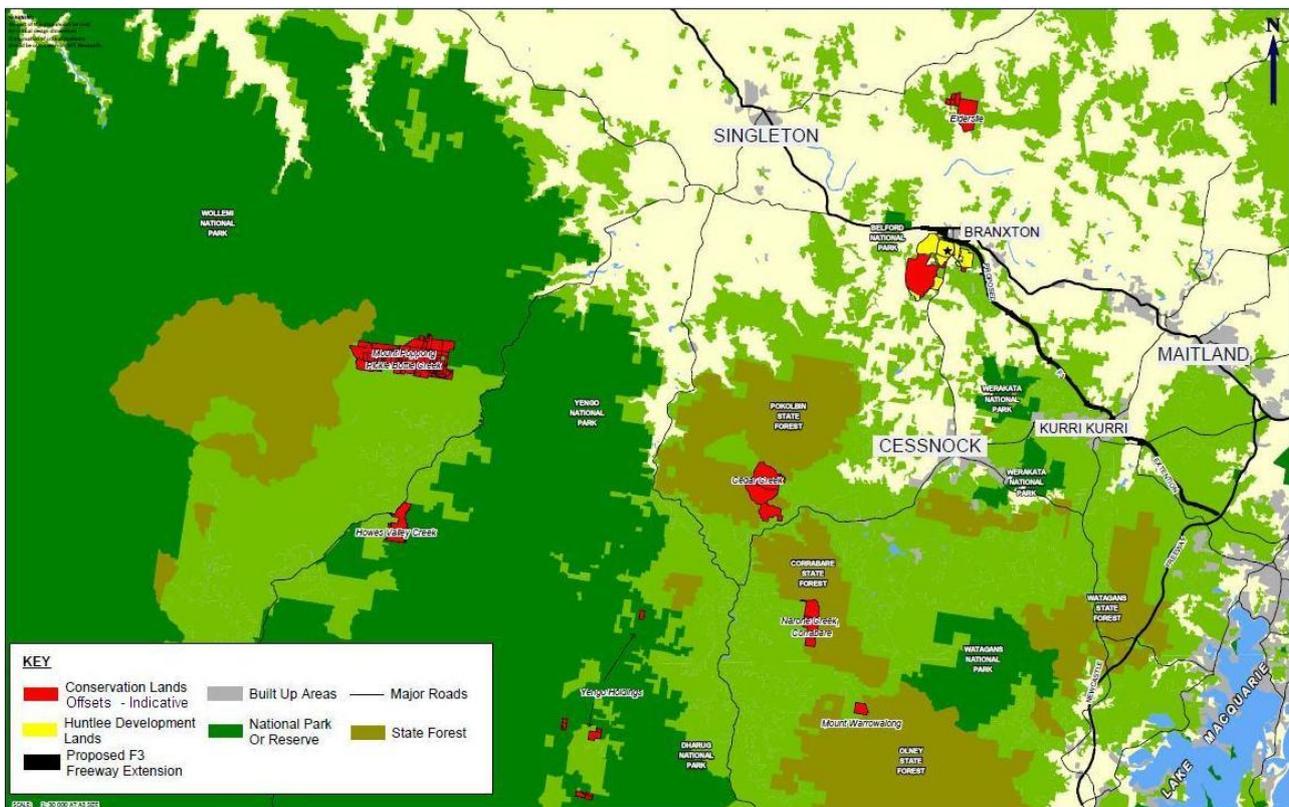


Figure 46: Environmental offsets plan

The offset agreement provides robust ecological outcomes for threatened species and ecological communities and is consistent with the outcomes proposed in the Lower Hunter Regional Strategy and ensuring that environmental conservation lands identified in the Lower Hunter Regional Conservation Strategy will be transferred into public ownership.

9 Aboriginal and European heritage

The areas of Aboriginal heritage significance on the site include:

- Black Creek and its tributaries where a number of artefacts have been identified which are not rare or unusual but may assist in highlighting the history and culture of Aboriginal people.
- A rock outcrop in the south-western portion of the site parallel with a tributary of Black Creek that is considered to be of great significance to Aboriginal people and is retained in the Conservation Area to be dedicated to State Government.

Potential European heritage and archaeological sites within Huntlee include:

- Bentham Farm – established by Joshua Thorpe around 1860s and remains of the farmhouse, barn, milking shed and farming activities are evident.
- North Rothbury Colliery – the mine operated from 1908 until the early 1980s and buildings, footings and structures are evident on the site.
- Rothbury Riot site– an important industrial action in 1929 resulting in a riot after months of widespread strikes and the introduction of the ‘Unlawful Assembly Act’.

10 Access and transport

The key features of the road system are the New England Highway, Wine Country Drive and Hunter Expressway. The Main North Rail Line and Branxton Railway Station are located to the north of the site.

The Hunter Expressway is the main arterial road connecting the Upper Hunter Valley with Newcastle and provides regional and interstate connections to the New England, north-west regions of NSW and Brisbane. Wine Country Drive provides the main connection between Branxton and Cessnock and serves the village of North Rothbury. It is generally a two lane road.

The Hunter Expressway is a dual carriageway link between the M1 Motorway at the Newcastle Link Road and the New England Highway approximately 2km west of Branxton. The Branxton Interchange is located just immediately north of the site and connects to New England Highway and Wine Country Drive.